CHRONOLOGY OF THE MIDDLE PALEOLITHIC IN THE CARPATHIAN AREA – PAST AND PRESENT

Marian COSAC[*]

Cuvinte-cheie: *Paleolitic mijlociu, 14 C, peșteri, Cheile Vârghiș.*
Keywords: *Middle Paleolithic, 14C, caves, Gorge Vârghiș.*

Rezumat: *Munții Carpați din spațiul României prezintă un număr considerabil de peșteri active și fosile cu un potențial arheologic ridicat pentru perioada paleolitică. Dacă în statisticile din anul 1976 era înregistrat un număr de 1.884 de peșteri, recent, în anul 2019, sunt menționate aproximativ 12.000 de peșteri, dintre care 2.908 peșteri sunt fosile și au depuneri sedimentare ce pot păstra indicii privind activitățile antropice. Dintre toate acestea, doar aproximativ 10 peșteri au beneficiat de cercetări arheologice sistematice. Peșterile în care au fost identificate mărturii din Paleoliticul mijlociu păreau, până de curând, concentrate în zona Carpaților Meridionali, însă rezultatele obținute recent în zona carstică din Cheile Vârghișului, Munții Perșani (Carpații Orientali), atrag atenția asupra necesității extinderii cercetărilor arheologice în întreaga zonă a Munților Carpați din zona României.*

Abstract: *The Romanian Carpathians have a considerable number of active and fossil caves, with a high archaeological potential for the Paleolithic period. If in the statistics of 1976, a number of 1.884 caves were recorded, recently, in 2019, approximately 12.000 caves are mentioned, of which 2.908 are fossils and have sedimentary packages that can archive human activity. From all these, only about 10 caves have benefited from systematic archaeological research. Caves with evidence from the Middle Paleolithic seemed, until recently, to be concentrated in the Southern Carpathians, but the results obtained recently from the karst of the Vârghiş Gorge, the Perşani Mountains (Eastern Carpathians), draw attention to the necessity to expand archaeological research in the entire area of the Romanian Carpathians.*

The history of cave research in the Carpathian area

The identification and research of the Middle Paleolithic in the Carpathian area is due to the archaeologist Márton Roska (1880–1961), as well as the first chronological dating, based on the stratigraphic position, the description of the lithic material and the faunal associations[1]. The Roska stage was continued by Constantin S. Nicolăescu-Plopşor (1900–1968), considered the founder of the Romanian archaeological school of Paleolithical research. The most famous caves were identified and

[*] Marian COSAC: Valahia University of Târgoviște, Department of History, Târgoviște; e-mail: cosac_marian@yahoo.com.

[1] ROSKA 1925.

researched by the team coordinated by C. S. Nicolăescu-Plopşor in the 50s and 60s of the last century. Nicolăescu-Plopşor had the same approach as M. Roska in his chronological dating, but he also used the opportunities offered by interdisciplinary research[2]. C. S. Nicolăescu-Plopşor adopted the Alpine geochronological scheme and considered that the Middle Paleolithic in the Carpathian area evolved from the beginning of Würm I to the end of Würm II[3]. This chronological framework allowed the definition of a Late Middle Paleolithic, partly contemporary with the Aurignacian technocomplex, a hypothesis also taken over by the students of C. S. Nicolaescu-Plopşor, Florea Mogoşanu (1929–1986), Alexandru Păunescu (1931–2003) and Maria Bitiri. The discovery in 1952 of the skull from the Muierilor Cave, during the excavations carried out by C. S. Nicolăescu-Plopşor, attributed to *Homo sapiens*, associated with lithic material characteristic for the Middle Paleolithic, seemed to support the particular evolution of the Middle Paleolithic in the Romanian Carpathians[4].

The new regional geochronological scheme

In the 70s of the last century the necessary samples for pollen analyses were collected by Marin Cârciumaru from all the Paleolithic sites researched by C. S. Nicolăescu-Plopşor and his disciples. Caves with lithic material attributed to the Middle Paleolithic represented the backbone of this endeavor. The results were the basis for the creation of an own scheme of paleoclimate evolution in the Upper Pleistocene in Romania[5] and seemed to confirm the short chronology of the Middle Paleolithic in the Carpathian area. The arguments provided by M. Cârciumaru's studies were the basis for the foundation of a so-called "Carpathian facies": "*Son individualisation comme faciès à part repose sur le caractère techno-typologique de l'inventaire lithique avec sa combinaison de caractères d'éclatement, lamellaires et bifaciaux, sa position chronologique transitoire du Paléolithique moyen vers le Paléolithique supérieur, la prédominance des roches locales (quartzite, diorite, etc.) comme matières premières*"[6].

Application of the ^{14}C method – past and present

The first application of the ^{14}C method in Paleolithic/Prehistoric Archeology in Romania was carried out in 1968, the year of the disappearance of the archaeologist C. S. Nicolaescu Plopsor. It was a bone sample-*Ursus spelaeus*, evaluated at the "V. I. Vernadsky" Institute of Geochemistry and Analytical Chemistry Academy of Sciences, USSR, Moscow and published in "Radiocarbon Magazine", Vol. 10, No. 2, 1968. It is mentioned that the sample comes from the excavations realized in 1951, from the Muierilor Cave, coordinated by C. S. Nicolăescu-Plopşor, and it was associated with quartzite lithic material. The age obtained is >29000 (Mo–105), but the results were communicated in the Romanian archaeological environment only recently[7].

[2] NICOLĂESCU-PLOPȘOR 1957.
[3] NICOLĂESCU-PLOPȘOR 1961.
[4] NICOLĂESCU-PLOPȘOR 1961.
[5] CÂRCIUMARU 1980.
[6] CÂRCIUMARU, PLEȘA 2004, p. 226.
[7] COSAC 2006.

In fact, in the 70s and 80s of the last century, discussions were opened regarding the application of the ^{14}C method to Paleolithic sites. The initiator of the dating program was the American anthropologist Kenneth Honea, who initially worked as archaeologist at the National Academy of Sciences (USA)[8], later as anthropologist at Northern Illinois University (USA). K. Honea was present in Romania, in 1977 – 1978, 1982 – 1983, 1984 and 1987 within the "Vasile Pârvan" Institute of Archeology. His activity is known to us from published studies[9], but particularly from the archive of the former Department of State Security, accessible in the Archive of the National Council for the Study of Security Archives, as well as from the general documents regarding the research activity of the "Vasile Pârvan" Institute of Archeology, but also from the file of the archaeologist who was initially responsible for coordinating Honea's activity in Romania[10].

The ^{14}C dating program started in 1977, when samples were taken from the Paleolithic site of Ripiceni Izvor, located on a terrace of the Prut river, during the excavations carried out under the coordination of Al. Păunescu, *"to determine in the laboratories of the aM SUA... the first samples for the Carbon 14 bombardment of objects"*[11], but also in the Netherlands[12], and later samples were taken from the main caves in the area of the Southern Carpathians: Bordul Mare, Gura Cheii-Râşnov and Boroşteni. Regarding the first two sites, it was a matter of a post-excavation sampling, by cleaning the profiles and opening the boxes.

The results obtained and their interpretation led to the emergence of a scientific dispute, between K. Honea and the archaeologist Al. Păunescu, the coordinator of his activity in Romania, because "*these refuted some assumptions previously communicated by the Romanian researcher*"[13], a fact which is reflected by the publication in separate studies of the ages obtained and of cultural associations[14]. The dispute is amply reflected in the notes provided by the informative sources from the "Vasile Pârvan" Institute of Archaeology and they draw attention to a reality which was not reflected in the scientific studies, regarding the method of taking the samples, their transportation, the existence of possible additional contaminations post sampling[15].

This stage of the chronological evaluation was followed by the resumption of research in the caves of Ohaba Ponor, Curată, Spurcată, Liliecilor, Coacăzei, Gura Cheii-Râşnov, under the coordination of Al. Păunescu, and Boroşteni, under the coordination of M. Cârciumaru.

The results obtained (Table 1):

– Gura Cheii Cave (Râşnoavei Gorge, Braşov county). It was researched by

[8] HONEA 1984a, p. 51.

[9] HONEA 1981; HONEA 1982; HONEA 1984a; HONEA 1984b; HONEA 1986; HONEA 1991; HONEA 1993.

[10] ACNSAS, *Referitor la Învățământul Superior*, *Institutul de Arheologie*, Dosar nr. 10948, vol. 13, 15; ACNSAS, *Dosar personal al „Păun"*, Dosar nr. 302829, vol. 1, 2.

[11] ACNSAS, *Dosar personal al „Păun"*, Dosar nr. 302829, vol. 1, f. 8.

[12] ACNSAS, *Dosar personal al „Păun"*, Dosar nr. 302829, vol. 1, f. 17.

[13] ACNSAS, *Dosar personal al „Păun"*, Dosar nr. 302829, vol. 1, f. 17

[14] HONEA 1984a; PĂUNESCU 1984.

[15] ACNSAS, *Referitor la Învățământul Superior*, *Institutul de Arheologie*, Dosar nr. 10948, vol. 13, f. 291, vol. 15, f. 116–117.

Alfred Prox (1934 – 1935), C. S. Nicolaescu-Plopsor (1959), Al. Păunescu (1983 – 1985) and M. Cârciumaru (2007). A first sample, taken in 1982, with a content of burnt organic material (GrN–11619) sparked a series of discussions between Al. Păunescu and K. Honea. The reason was the placement of the sample in relation to the habitation level[16]. Four other samples were taken in the years 1983 – 1985 (GrN–13008, GrN–13009, GrN–14620, GrN–13010) by Al. Păunescu[17].

– Mare Cave/Liliecilor/Bădichii (Peştera village, Dealul Bisericii, Bran-Dragoslavele depression, Braşov county). It was researched by a team under the coordination of C. S. Nicolaescu-Plopşor (1957 – 1958), later by Al. Păunescu (1984 – 1985, 1988, 1998) and M. Cârciumaru (2009 – 2010). Only one sample, collected by Al. Păunescu in 1985[18], was dated (GrN –14618).

– Coacăzii Cave/Coacăzei Cave/from Coacăzii Valley (Gaura Sbârcioarei, Bran-Dragoslavele depression, Braşov county). The first research was carried out by A. Prox (1934), C. S. Nicolaescu-Plopsor (1958), Al. Păunescu (1984 – 1985) and M. Cârciumaru (2008). Al. Păunescu collected two samples during his research, GrN–14642 and GrN–16141, the first sample, with burnt organic material, indicated an erroneous age, and the second sample, from bone, provided an age considered correct[19].

– Bordul Mare Cave (Ohaba Ponor village, Pui commune, Hunedoara county). The site was investigated by M. Roska (1923 – 1929), C. S. Nicolaescu-Plopşor (1954, 1955), Al. Păunescu (1983, 1986, 1993) and M. Cârciumaru (2009, 2010, 2011). All the currently known samples are based on burnt organic material, charcoal and bone. Two samples were taken in 1982[20] and estimated in the Honea stage[21] (1984), GrN–11618 and GrN–11617, and the rest (GrA–6036, GrN–12676 and GrN–14626), taken by Al. Păunescu in 1994[22]. The ages obtained, with one exception, are at the limit of the estimation possibilities of the method.

– Curată Cave (Nandru village, Peştişu Mic commune, Hunedoara county). It was, initially, researched during the pioneering period of prehistoric archeology in Transylvania, by Zsofia Torma (1877 and 1879 – 1880), and after by Jozsef Mallasz (1932), C. S. Nicolăescu-Plopşor (1955, 1956) and Al. Păunescu (1997, 1998). Ten radiocarbon dating were made, all samples being collected by Al. Păunescu in his excavation campaigns. We notice an obvious contradiction between the ages indicated by the bone samples (GrN–23407, GrA–13948, GrN–24221, GrN–24222, GrN–24223, GrN–24224) and those on burnt organic material (GrN–24326, GrA–13249, GrA–13250) and in the situations where different samples were dated from the same level, the differences are notable (GrN–24222/Gr-N24326, GrN–24223/ GrA–13249, GrN–24224/GrA–13250). The ages obtained on the bone are at the limit of the dating possibilities of the method, and those on burnt organic material are imprecise.

– Spurcată Cave (placed in the proximity of the Curată Cave). The first

[16] PĂUNESCU 1984, p. 237; HONEA 1984a, p. 56.
[17] PĂUNESCU 1991, p. 13.
[18] PĂUNESCU 2001, p. 323.
[19] PĂUNESCU 2001, p. 334.
[20] PĂUNESCU 1984, p. 237.
[21] HONEA 1984a.
[22] PĂUNESCU 2001, p. 397.

excavations were carried out by Jozsef Mallasz (1932), followed by C. S. Nicolăescu-Plopşor (1955, 1956) and Al. Păunescu (1986, 1994). Two samples were collected and dated, the first in 1986 and the second in 1994. Only the result provided by sample GrN14622 is considered correct by Al. Păunescu[23].

– Cioarei Cave (Boroşteni village, Peştişani commune, Gorj county). It was first researched by C. S. Nicolăescu-Plopşor in 1954, followed by M. Cârciumaru and M. Bitiri, and later only by M. Cârciumaru, between 1979 and 2001. For the Middle Paleolithic, there are 11 radiocarbon dating, six were collected in 1983 and were published by K. Honea in 1986[24] (GrN–13005, GrN–13000, GrN–13001, GrN–13002, GrN–13003, GrN–13004), and the rest, collected in 1985, were published in 1993[25] (GrN–15046, GrN–15052, GrN–15053, GrN–15054, GrN–15048). All dated samples contained organic material only[26], and the obtained radiocarbon ages are at the limit of the method.

After 2007, only in the case of two sites were collected bone samples associated with materials attributed to the Middle Paleolithic:

– Muierilor Cave (Baia de Fier), Main Gallery, bone samples resulting from the research carried out under the coordination of C. S. Nicolăescu-Plopşor in the period 1950–1953, Middle Paleolithic cultural context. Results: 40960 +/–450 uncal BP (OxA–16381), 47500 +/–900 uncal BP (OxA–16380), 42700 +/–550 uncal BP (OxA–16382), 40850 +/–450 uncal BP (OxA–15530)[27].

– Hoţilor Cave (Băile Herculane), bone sample was collected, but there are no data about the archaeological research from which it resulted and the laboratory where it was evaluated. We believe that it is the excavation coordinated by Fl. Mogoşanu, in the period 1968–1971; cultural context, Middle Paleolithic. Results: 27,400 ±500 BP (uncal BP-uncalibrated), 32,024 ±500 BP (cal BP-calibrated)[28]. The chronological estimation of the Middle Paleolithic from the Muierilor Cave suggests the need to re-evaluate the concept of retarded/delayed Mousterian and the result from the Hoţilor Cave cannot be brought into discussion, as an evaluation of new evidence is needed in order to confirm/deny the result. At this moment, from our point of view, the Hotilor Cave is the only one researched by C. S. Nicolăescu-Plopşor and Fl. Mogoşanu, which has a sedimentary reserve that can provide additional information, according to current standards in paleolithic archeology research.

Present and perspectives

Since 2014, under our coordination, a series of caves from the Vârghiş Gorge, Perşani Mountains (Harghita county) have been researched. This area was developed by the Vârghiş, a right affluent of the Cormoş (river which flows into the Olt valley on the right side), in its lower sector, when passing through the calcareous formations accumulated in the second half of the Jurassic. The karstification process

[23] PĂUNESCU 2001, p. 264.
[24] HONEA 1986.
[25] HONEA 1993.
[26] HONEA 1986, p. 327.
[27] DOBOŞ 2017, p. 6.
[28] ALEXANDRESCU *et alii* 2011, p. 18.

started at the beginning of the Quaternary and evolved in several stages that led to the individualization of 4 karst levels, in which more than 122 caves were identified[29].

Chronological estimation of the presence of the Middle Paleolithic in the karst area of the Vârghişului Gorge raises a number of problems. For radiocarbon dating, charcoal and bone samples from Abri 122/1200 were processed at the Hertelendi Laboratory in Debrecen, Hungary, while the Mare Cave and the Gabor Cave samples were analyzed at the National Institute of Physics and Nuclear Engineering "Horia Hulubei" from Bucharest. The results show quite confusing time intervals, of infinite/close ages[30]. The bone samples, mainly belonging to herbivores, provided ages estimated at the upper limit of the method, while charcoal samples, from the same archaeological contexts, provided younger ages[31] (**Table 2**).

The argument for resuming these chronological values is provided by the situation in Abri 122, where IRSL and OSL samples from the lower half of the profile (250–260 cm), associated to archaeological materials, provided the following ages: 71 ± 7 ka (BT 1416 IRSL PM), 106 ± 11ka (BT 1416 OSL), 124 ± 16 ka (BT 1415 IRSL PM), 123 ± 21 ka (BT 1415 IRSL FS), 141 ± 12 ka (BT 1415 OSL)[32].

Discussions

The Romanian archaeologists gave *stricto senso* value to the results obtained by the radiocarbon method, in the total absence of collaboration with the specialists of the laboratories where the samples were dated and they estimated both the period of sedimentation of the layers associated or not with the archaeological materials attributed to the Middle Paleolithic, as well as the age of the occupational stages from the caves. The minimum radiocarbon ages were considered the *post quem* limit, and the maximum, the *ante quem* limit, even in the situation where they had two such ages. All these discussions were conducted in the obvious absence of questions related to the composition of the dated samples (charcoal, burnt bone, herbivore/carnivore bone), and possible post-depositional contamination or occurred during sampling.

Moreover, until recently, no new sites were researched to bring an additional degree of credibility. It should be mentioned that the ^{14}C method was applied, at that stage, mainly to charcoal or burnt bone samples, with the exception of the Cioarei Cave, hence the apparent contradiction with the results from the other caves, as well as the departure from the accepted chronological pattern for the general evolution of the Middle Paleolithic; the credibility of the estimated age is questionable[33]. It should be mentioned that the entire chronology of the Middle Paleolithic in the Carpathian area is based, in the overwhelming majority, on the results obtained in the Honea stage, namely the 80s of the last century.

It is true that archaeological research was resumed in sites researched previously, in the Gura Cheii Cave (Râşnoavei Gorge, author M. Cârciumaru–2007), Mare/

[29] MURATOREANU *et alii* 2015.
[30] COSAC *et alii* 2021, p. 33.
[31] COSAC *et alii* 2022, p. 66–67.
[32] COSAC *et alii* 2021.
[33] DOBOŞ 2017, p. 8.

Liliecilor/Bădichii Cave (Peştera village, Church Hill, Bran-Dragoslavele Depression, author M. Cârciumaru–2009–2010, Coacăzii/Coacăzei Cave/from Coacăzii valley/ Sbârcioara Hole (Bran-Dragoslavele Depression, author M. Cârciumaru–2008), but, unfortunately, no ^{14}C samples from anthropogenic agglomerations were collected and dated[34].

Apparently, no solid chronology can be built for the Middle Palaeolithic assemblages and sediment samples in the Vârghiş karst system based on radiocarbon dating of charcoal samples, and the obvious cause seems to be the post-depositional contamination of the samples. Also, the collagen scarcity in bone remains and age of samples near or beyond the limit of the radiocarbon dating method raise significant obstacles to a reliable chronology system. At the same time, more information to compile an articulated chronological picture could soon become available by involving other methods, such as OSL and ISL[35]. A series of recent determinations using these methods showed surprisingly early dating that could push the age of the presence of the first people in the karst system of Vârghiş to 100 kyr.

BIBLIOGRAPHY

ALEXANDRESCU *et alii* 2011 – E. Alexandrescu, A. Olariu, G. Skog, K. Stentstrom, *Observații cronologice asupra musterianului de la Peștera Hoților, Băile Herculane*, Buletinul Muzeului „Teohari Antonescu" 17/13 (2011), p. 9–19.

ACNSAS – Arhiva Consiliului Național pentru Studierea Arhivelor Securității, *Referitor la Învățământul Superior, Institutul de Arheologie*, Dosar nr. 10948, vol. 13, 15.

ACNSAS – Arhiva Consiliului Național pentru Studierea Arhivelor Securității, *Dosar personal al „Păun"*, Dosar nr. 302829, vol. 1, 2.

CÂRCIUMARU 1980 – M. Cârciumaru, *Mediul geografic în Pleistocenul superior și culturile paleolitice din România*, București, 1980.

CÂRCIUMARU, PLEȘA 2004 – M. Cârciumaru, M. Pleșa, *Le paléolithique moyen tardif en Roumanie*, in: E. Fülöp, J. Cseh (eds.), *Topical Issues of Middle Palaeolithic period in Central Europe*, Tata, 2004, p. 221–232.

CÂRCIUMARU *et alii* 2010 – M. Cârciumaru, E. C. Nițu, R. Dobrescu, R. Ștefănescu, *Paleoliticul din județul Brașov*, Târgoviște, 2010.

COSAC 2006 – M. Cosac, *Une réévaluation du contexte des découvertes d'ossements humains de la galerie M de la grotte Muierilor à Baia de Fier*, Annales d'Université Valahia Târgoviște (Section d'Archéologie et d'Histoire) 6–7 (2005–2006), p. 99–205.

COSAC *et alii* 2017 – M. Cosac, G. Murătoreanu, D. Vereș, L. Niță, Chr. Schmidt, U. Hambach, A. Radu, R. Cuculici, D. L. Buzea, M. Mărgărit, V. Dumitrașcu, Ș. Vasile, A. Petculescu, *Multi-proxy archaeological investigations of a Middle Palaeolithic occupation context in Eastern Transylvania, Romania*, Quaternary International 485 (2017), p. 115–130.

COSAC *et alii* 2021 – M. Cosac, G. Murătoreanu, D. Vereș, L. Niță, Chr. Schmidt, U. Hambach, A. Radu, R. Cuculici, D. L. Buzea, D. Ștefan, M. Mărgărit, Ș. Vasile, V. Dumitrașcu, M. Robu, A. Petculescu, T. Sava, V. Georgescu, G. Șerbănescu, I. Geambașu, *Recent archaeological researches in the Vârghiş gorges karst area (Eastern Carptians, Romania). A synthesis of the 2014–2020 campaigns*, *Scripta Praheistorica Miscellanea in Honorem Mariae Bitiri Dedicata*, MCA S.N. 17 (2021), Târgoviște, p. 325–350.

COSAC *et alii* 2022 – M. Cosac, G. Muratoreanu, D. Ștefan, D. L. Buzea, *First humans in*

[34] CÂRCIUMARU *et alii* 2010.

[35] COSAC *et alii* 2017; VEREȘ *et alii* 2017.

the South-Eastern Carpathians. Mountains and Caves, in: V. Sîrbu, D. Ștefan, M. M. Ștefan (eds.), *HIDDEN LANDSCAPES. The Lost Roads, Borders and Battlefields of the South-Eastern Carpathians,* Târgoviște, 2022, p. 59–74.

DOBOȘ 2017 – A. Doboș, *The Middle Palaeolithic research in Romania. Past an current issue*, MCA S.N. 12 (2017), p. 5–14.

HONEA 1981 – K. Honea, *New Romanian Radiocarbon Dates: Middle Palaeolithic, Mesolithic, Neolithic,* American Journal of Archaeology 8/4 (1981), p. 483–486.

HONEA 1982 – K. Honea, *Noi date radiocarbon: Ripiceni Izvor și Ostrovul Corbului*, SCIVA 33/2 (1982), p. 216–221.

HONEA 1984a – K. Honea, *Cronologia paleoliticului mijlociu și superior în România: implicațiile rezultatelor actuale ale datării cu carbon radioactiv*, Revista Muzeelor și Monumentelor 3 (1984), p. 51–68.

HONEA 1984a – K. Honea, *Chronometry of the Romanian Middle and Upper Paleolithic: implications of Current Radiocarbn Dating results*, Dacia N.S. 17/1–2 (1984), p. 23–39.

HONEA 1984b – K. Honea, *Rezultatele preliminare de datare cu carbon radioactiv privind Paleoliticul mijlociu din peștera Cioarei de la Boroșteni (jud. Gorj) și Paleoliticul superior timpuriu de la Mitoc Malu Galben (jud. Botoșani)*, SCIVA 37/4 (1986), p. 326–332.

HONEA 1991 – K. Honea, *Perspective of the Romanian Paleolithic*, in: V. Chirică, D. Monah (eds.), *Le Paléolithique et le Néolithique de la Roumanie en contexte européen*, IV, Bibliotheca Archaeologica Iassiensis, Iași, 1991, p. 7–15.

HONEA 1991 – K. Honea, *Southeast Charentian Technocomplex in Romania: Boroșteni, Cioarei Cave, Gorj County; Radiometric Values*, in: J. Pavúk (ed.), *Actes du XIIe Congrés Intérnational du Sciénces Préhistorique et Protohistorique*, Bratislava, 1993, p. 66–72.

MURĂTOREANU *et alii* 2015 – G. Murătoreanu, R. Cuculici, M. Cosac, A. Radu, L. Niță, D. Vereș, D. L. Buzea, *Potențialul arheologic al carstului din Cheiele Vârghișului-Munții Perșani. Etape preliminare în realizarea unui Sistem Informațional Geografic*, Arheovest. Interdisciplinaritate în Arheologie III/2 (2015), p. 591–603.

NICOLĂESCU-PLOPȘOR 1957 – C. S. Nicolăescu-Plopșor, *Le Paléolithique dans la R. P. Roumaine a la lumiére des rechercheres*, Dacia N.S. 1 (1957), p. 41–60.

NICOLĂESCU-PLOPȘOR 1961 – C. S. Nicolăescu-Plopșor, *Geochronology of the Paleolithic in Romania*, Dacia N.S. 5 (1961), p. 5–19.

PĂUNESCU 1984 – Al. Păunescu, *Cronologia paleoliticului și mezoliticului din România în contextul paleoliticului central-est și sud european*, SCIVA 35/3 (1984), p. 235–265.

PĂUNESCU 1991 – Al. Păunescu, *Paleoliticul de la Gura Cheii-Râșnov și unele considerații privind cronologia locuirilor paleolitice din sud-estul Transilvaniei*, SCIVA 42/1–2 (1991), p. 5–20.

PĂUNESCU 2001 – Al. Păunescu, *Paleoliticul și mezoliticul din spațiul transilvan*, București, 2001.

ROSKA 1925 – M. Roska, *Rapport préliminaire sur les fouilles archéologiques de l'anne 1925*, Dacia II (1925), p. 404–409.

VEREȘ *et alii* 2017 – D. Vereș, M. Cosac, Chr. Schmidt, G. Murătoreanu, C. Hubay, S. Wulf, D. Karátson, *New chronological constraints for Middle Palaeolithic (MIS 6/5–3) cave sequences in Eastern Transylvania, Romania*, Quaternary International 2017, http://dx.doi.org/10.1016/j.quaint.2017.07.015.

Table 1

Site/type of research	Research campaigns	Archaeological context	Dating protocol	Sampling/ dating year	Code	Age uncal BP	Sample type	References
Gura Cheii – Râșnov Cave/ excavation	Alfred Prox 1934–1935 Nicolăescu – Plopșor 1959 Păunescu 1983–1985 Cârciumaru 2007	Middle Paleolithic	CR	1982	GrN–11619	29.700 +1.700/–1.400	charchoal	Honea, 1984 Păunescu, 1984
			CR	1983/1984	GrN–13008	30.450 ±300	bone	Păunescu 1991
			CR	1983/1984	GrN–13009	33.300 ±900	bone, charchoal	Păunescu 1991
			CR	1983–1985/ 2001	GrN–14620	28.900 +2.400/–1.800	bone, charchoal	Păunescu 2001
			CR	1983–1985/ 2001	GrN–13010	44.900 +1.800/-	charchoal	Păunescu 2001
Mare/ Liliecilor Cave/ excavation	C.S. Nicolăescu – Plopșor 1957–1958 Păunescu 1984–1985, 1988,1989 Cârciumaru 2009–2010	Middle Paleolithic	CR	1984–1985, 1988, 1989?/2001	GrN 14618	38700 ± 850	bone	Păunescu 2001
Coacăzei Cave/ excavation	Nicolăescu – Plopșor 1958 Păunescu 1984–1985 Cârciumaru 2008	Middle Paleolithic	CR	1984–1985/2001	GrN 14642	15710 ± 310	charchoal	Păunescu 2001
					GrN 16141	34400 ± 500	bone	Păunescu 2001
Bordul Mare Cave/ excavation	Roska 1923–1929 Nicolăescu – Plopșor 1954, 1955 Păunescu 1983, 1986, 1993	Middle Paleolithic	CR	1982	GrN–11617	>41.000	charchoal	Honea, 1984 Păunescu, 1984
					GrN–11618	39.200 +4.500/–2.900	charchoal	
			CR	1986, 1993/2001	GrA – 6036	>40.000	charchoal, bone	Păunescu, 2001
			CR	1986, 1993/2001	GrN–12676	43.600 +2.800/–2.100	charchoal, bone	Păunescu, 2001
			CR	1986, 1993/2001	GrN–14626	45.500 +3.500/–2.400	bone	Păunescu, 2001

Site/type of research	Research campaigns	Archaeological context	Dating protocol	Sampling/ dating year	Code	Age uncal BP	Sample type	References
Curată Cave/ excavation	Zsofia Torma 1877, 1879–1880 Jozsef Mallasz 1932 C.S. Nicolăescu – Plopșor 1955, 1956 Al. Păunescu 1997, 1998	Middle Paleolithic	CR	1997/2001	GrN 23406	> 47800	bone, charchoal	Păunescu 2001
			CR	1997/2001	GrN 23407	> 45000	bone	Păunescu 2001
			CR	1998/2001	GrA 13948	40800 +1050/- 930	bone	Păunescu 2001
			CR	1998/2001	GrN 24221	44600 +1900/ – 1500	bone	Păunescu 2001
			CR	1998/2001	GrN 24222	+ 4200 / – 2700	bone	Păunescu 2001
					GrN 24326	> 31700	charchoal	Păunescu 2001
			CR	1998/2001	GrN–24223	>36300	bone	Păunescu 2001
					GrA 13249	29940 +420 / – 400	charchoal	Păunescu 2001
			CR	1998/2001	GrN 24224	>39600	bone	Păunescu 2001
					GrA 13250	28250 +350 / – 530	charchoal	Păunescu 2001
Spurcată Cave/ excavation	Nicolăescu – Plopșor, Păunescu 1955–1956 Păunescu 1986, 1994	Middle Paleolithic	CR	1986/2001	GrN 14622	30.000 +1900 / – 1500	bone	Păunescu 2001

Site/type of research	Research campaigns	Archaeological context	Dating protocol	Sampling/ dating year	Code	Age uncal BP	Sample type	References
Muierii Cave/ excavation	Nicolăescu – Plopșor 1950–1953	Middle Paleolithic	CR	1952/1968	Mo 105	>29000	bone –*Ursus spelaeus*	Cosac 2006
			CR	1952/ 2000	GrN 16977	42560 + 1310/ – 1120	bone	Păunescu 2000
			CR	1952/ 2006	OxA 15530	40850 +/- 450	bone	Soficaru *et alii* 2006
			AMS	1950–1953/ 2009	OxA 16381	40950 +/- 450	bone	Doboș *et alii* 2009
			AMS	1950–1953/ 2009	OxA 16380	47500 +/- 900	bone	Doboș *et alii* 2009
			AMS	1950–1953/ 2009	OxA 16382	42700 +/- 550	bone	Doboș *et alii* 2009
			AMS	1950–1953/ 2009	OxA 15530	40850 +/- 450	bone	Doboș *et alii* 2009
Boroșteni Cave/ excavation	C.S. Nicolăescu – Plopșor 1954 M. Cârciumaru, M.Bitiri/ M. Cârciumaru 1979–2001	Middle Paleolithic?	CR	1983/1983	GrN 13005	37750 +/- 950	bone	Honea, 1986
			CR	1983/1983	GrN 13000	>46000	bone	Honea, 1986
			CR	1983/1983	GrN 13001	43000 +1300/ – 1100	bone	Honea, 1986
			CR	1983/1983	GrN 13002	49500 +3200/ – 1100	bone	Honea, 1986
			CR	1983/1983	GrN 13003	>50000	bone	Honea, 1986
			CR	1983/1983	GrN 13004	>45000	bone	Honea, 1986

Site/type of research	Research campaigns	Archaeological context	Dating protocol	Sampling/ dating year	Code	Age uncal BP	Sample type	References
			CR	1985/?	GrN 15046	50900 +4400/ – 2800	bone	Honea, 1993
			CR	1985/?	GrN 15052	47200 +2900/ – 2100	bone	Honea, 1993
			CR	1985/?	GrN 15053	48900 +2100/ – 1700	?	Honea, 1993
			CR	1985/?	GrN 15054	48000 +1800/ – 1500	bone	Honea, 1993
			CR	1985/?	GrN 15048	51900 +5300/ – 3200	bone	Honea, 1993
Hoților Cave/ excavation		Middle Paleolithic?	CR	1968–1970, 1972?/ 2011	?	27.400±500	bone	Alexandrescu *et alii* 2011

Table 2

Site	Sampling depth	Code	Age uncal BP	Sample type
Abri 122	27–37 cm	DeA–8904	>42,200	bone (*Bison*)
	260 cm	DeA–5868	>43,400	tooth (*Ursus sp*)
	250 cm	DeA–24660	13,503±74	charcoal
	260 cm	DeA–5957	38,900±1100	charcoal
	264 cm	DeA–24856	22,696±277	charcoal
Gabor Cave	90–100 cm	RoAMS 1010.97	43,547±1316	bone
Mare Cave	119 cm	RoAMS 1548.97	59,654±5478	bone
	150 cm	RoAMS 1549.97	56,699±3069	bone
	170 cm	RoAMS 1551.97	57,297±3051	bone

SAISONS, CALENDRIER ET VIE RELIGIEUSE DANS LES CITÉS GRECQUES DU PONT-EUXIN. UN REGARD PARTICULIER SUR LES COLONIES MILÉSIENS

Remus Mihai FERARU[*]

Cuvinte-cheie: *anotimpuri, calendar, sărbători, colonii milesiene, Pontul Euxin.*
Keywords: *seasons, calendar, feasts, Milesian colonies, Pontos Euxeinos.*

Rezumat: *Studiul nostru are ca obiect relația dintre anotimpuri, calendare și ciclul sărbătorilor în coloniile milesiene din Pontul Euxin. De asemenea, ne propunem să reconstituim succesiunea și durata anotimpurilor în coloniile milesiene din Pontul Euxin, precum și calendarul navigației care era strâns legat de anotimpuri. Cercetarea noastră se bazează pe interpretarea izvoarelor literare și a documentelor epigrafice. Anotimpurile erau puncte de referință fundamentale pentru organizarea calendarului grec. Timpul era măsurat în funcție de succesiunea anotimpurilor determinată de rotația Pământului în jurul Soarelui. Documentele epigrafice și arheologice atestă cunoașterea ciclului anotimpurilor de către coloniștii greci instalați pe țărmurile Pontului Euxin. Tradiția celor patru anotimpuri a coexistat în viața grecilor de la Pontul Euxin cu tradiția mitologică și religioasă a împărțirii anului în trei anotimpuri. Diferitele tradiții mitologice legate de cele trei anotimpuri se regăsesc în ritualurile de celebrare ale sărbătorilor. Cele trei anotimpuri ale anului agricol erau marcate în coloniile milesiene, ca și în Atena, prin trei sărbători fundamentale existente în calendarul lor civic: Pyanepsia, Anthesteria și Thargelia. Sezonul navigației în Marea Neagră începea primăvara, cel mai devreme la începutul lunii aprilie, și dura până în jurul datei de 8 noiembrie, care marca începutul iernii.*

Abstract: *Our study focuses on the relationship between seasons, calendars and the cycle of celebrations in the Milesian settlements of the Pontos Euxeinos. We also aim to reconstruct the sequence and duration of the seasons in the Milesian settlements of the Pontos Euxeinos, as well as the navigation calendar which was closely linked to the seasons. Our research is based on the interpretation of literary sources and epigraphic documents. The seasons were fundamental reference points for the organization of the Greek calendar. Time was measured by the sequence of seasons determined by the rotation of the Earth around the Sun. Epigraphic and archaeological documents attest to the knowledge of the cycle of the seasons by the Greek settlers on the shores of the Pontos Euxeinos. The tradition of the four seasons coexisted in the life of the Greeks of Pontos Euxeinos with the mythological and religious tradition of dividing the year into three seasons. The different mythological traditions related*

[*] Remus Mihai FERARU: Université de l'Ouest, Timișoara; courriel: remusferaru@yahoo.fr.

to the three seasons are reflected in the rituals of the celebrations. The three seasons of the agricultural year were marked in the Milesian colonies, as in Athens, by three fundamental feasts in their civic calendar: Pyanepsia, Anthesteria and Thargelia. The sailing season in the Black Sea began in spring, at the earliest in early April, and lasted until around 8 November, which marked the beginning of winter.

Mesurer le temps a été l'une des préoccupations importantes des anciens Grecs étant donné qu'elle était étroitement liée aux multiples aspects de la vie religieuse, économique et sociale des *polis*. Pour mesurer l'écoulement du temps, les Grecs employaient comme points de repère l'alternance de la journée et de la nuit, les équinoxes et les solstices, la succession des saisons, les cycles et les phases de la lune de même que la position de différents astres[1]. Les saisons étaient des repères fondamentaux pour l'organisation du calendrier grec. Le temps était mesuré en fonction de la succession des saisons déterminées par le mouvement de rotation de la Terre autour du Soleil. Puisque, d'une cité à l'autre, il y avait des différences concernant le premier mois de l'année, le nom et la succession des mois, les limites marquées par les saisons quant à la position des mois du calendrier étaient des critères plus stables pour dater les événements publics, du moins à l'époque classique. Hérodote lui-même critique les lacunes des calendriers grecs, proposant les avantages de mesurer le temps annuel en fonction des saisons[2]. Ainsi, le « père de l'histoire » souligne la principale lacune des calendriers lunaires grecs et montre l'avantage des saisons comme indicateur temporel. D'ailleurs, les Grecs se sont efforcés de résoudre les difficultés créées par le décalage entre le calendrier lunaire et les saisons.

Notre étude porte sur la relation entre les saisons, les calendriers et le cycle des fêtes dans les colonies milésiennes du Pont-Euxin. Notre recherche se repose sur l'interprétation de sources littéraires et de documents épigraphiques. À titre subsidiaire, nous nous proposons à reconstituer la succession et la durée des saisons dans les colonies milésiennes du Pont-Euxin, ainsi que le calendrier de navigation qui était étroitement lié aux saisons.

Les saisons entre la tradition mythologique, leur mise en évidence dans les documents écrits et la réalité

Les mois de l'année jouaient un rôle déterminant dans l'organisation de la vie cultuelle des cités grecques. À l'origine, les Grecs nommaient les mois d'après les principales fêtes dont les rituels et les cérémonies se réalisaient les jours du mois consacrés à chaque divinité importante. De même, la vie religieuse des *poleis* était étroitement liée à la succession des saisons selon lesquelles le calendrier des travaux agricoles était fixé; d'ailleurs, les limites des saisons marquaient le début et la fin des travaux agricoles. Ainsi, toutes les fêtes n'étaient pas obligatoirement liées aux mois fixes du calendrier. La célébration de certaines de ces fêtes, surtout celles à caractère agraire, était étroitement liée à des saisons (*ὧραι*) spécifiques. Il semble que certaines des fêtes d'origine agraire étaient, à l'origine, des fêtes sans date fixe;

[1] JACQUEMIN 2005, p. 2113.
[2] HÉRODOTE, II, 4.

autrement dit, elles pouvaient être célébrées à des dates variables, mais qui ne dépassaient pas les limites des saisons.

À l'origine, les Grecs ne percevaient que deux saisons, l'une chaude et fructueuse, l'été (*θέρος*), l'autre mauvaise et froide, l'hiver (*χειμών*)[3]. Cette conscience « primitive » de la dualité des saisons trouve son correspondant mythique dans l'enlèvement de Coré Perséphone. Selon la tradition, l'été et l'hiver correspondaient à l'apparition et à la disparition de Perséphone et, respectivement, à son séjour partagé entre les morts et les vivants: la fille de Déméter passait une demi-année dans le monde des morts, et l'autre moitié sur terre, parmi les vivants[4]. Tandis que Perséphone vit en compagnie d'Hadès, Déméter cherche désespérément sa fille, détruisant la terre qui ne porte plus de fruits; pendant toute cette période, qui correspond à la saison froide (*χειμών*), le froid et l'incertitude règnent sur la terre. Le retour de Perséphone parmi les vivants coïncide avec l'arrivée de la saison chaude (*θέρος*), quand tout bourgeonne et la nature revient à la vie[5].

Dès l'époque archaïque, les Grecs connaissaient la simple division des saisons: moments du printemps (*ἔαρ*), de l'été (*θέρος* / *ὀπώρα*), de l'arrière-saison (*μετόπωρον*) et de l'hiver (*χειμών*), saisons à l'intérieur desquelles le ciel, les astres, les animaux et les plantes donnent le signal des travaux agricoles à entreprendre[6]. Hésiode évoque le cycle annuel des saisons, en mentionnant les moments favorables ou défavorables à la réalisation des travaux agricoles et à la pratique de la navigation et du commerce[7].

Mais les saisons des Grecs ne correspondent pas totalement à nos saisons « traditionnelles ». En fonction du calendrier des travaux agricoles et du moment de la célébration des fêtes et des rituels associés, l'année grecque était divisée en trois et non pas en quatre saisons, ayant des limites fluctuantes. Cette division tripartite de l'année ne tenait pas compte des solstices et des équinoxes, mais du moment et de la séquence des travaux agricoles, marqués, à leur tour, de manière spécifique par les rituels agraires qui avaient lieu au début ou à la fin de chaque saison; car la plupart des fêtes marquent des moments importants dans la succession des saisons, ainsi que dans la vie et le travail de la terre. Par conséquent, chacune des trois saisons ne peut être réduite à un certain nombre de mois; de même, la limite entre les saisons ne peut pas être tracée de manière précise[8].

Dans cette perspective agraire et rituelle, l'hiver (*χειμών*) se manifestait au début

[3] NILSSON 1962, p. 24–25; HILD 1900, p. 252.

[4] À l'insu de Déméter, Zeus avait promis la main de Perséphone à Hadès. Lorsque Perséphone cueillait des fleurs, la terre s'est ouverte sous elle et la jeune femme a été enlevée par Hadès. Déméter a appris l'enlèvement de Perséphone du Soleil. La colère de Déméter a ravagé la terre qui ne portait plus de fruits. Zeus a demandé à Hadès de rendre sa fille à Déméter. Hadès a accepté la demande de Zeus, mais à condition que Perséphone passe un tiers de l'année avec lui dans le monde souterrain, et qu'elle passe le reste de l'année sur terre avec sa mère, Déméter, FERRARI 2003, p. 276 (s.v. Demetra).

[5] FERRARI 2003, p. 276, (s.v. Demetra), p. 656 (s.v. Persefona); CAMPS-GASET 1994, p. 20.

[6] Homer, Iliade, XVI, vv. 641–643; XXI, vv. 345–347; Hésiode, Travaux et Jours, vv. 383–694; ALCMAN, Fragment 12, (trad. de C. Calame, Rome, 1983), *apud* CAMPS-GASET 1994, p. 25, n. 23; HILD 1900, p. 252; voir aussi GUNNING 1918, col. 1165–1166.

[7] HÉSIODE, Travaux et Jours, vv. 663–687.

[8] CAMPS-GASET 1994, p. 20–21, 23.

de novembre et se terminait au début de mars. L'hiver est une saison désagréable et inhospitalière. Selon le mythe, pendant cette période Perséphone vit en compagnie d'Hadès, et Déméter pleure son absence. L'hiver est la saison du labour et des semailles, un temps de travail et d'attente. L'ensemencement qui symbolise l'enterrement et la mort du grain est bientôt suivi de la germination de la semence cachée dans le sol: le grain est enterré et meurt pour germer. Pour le monde des champs et des céréales, l'hiver est une saison positive, étant perçue comme le moment d'une maturation indispensable à la vie et non comme une période de décadence. Selon le mythe, le temps que Perséphone passe dans l'au-delà garantit la germination et le développement du grain. En revanche, pour la vie des gens, l'hiver aura une connotation négative, car, par la descente de Perséphone chez Hadès, cette saison deviendra le compagnon de la mort (*θάνατος*). D'ailleurs, la référence à l'au-delà et aux décédés est constante tout au long de l'hiver, une période où les morts règnent sur les vivants[9].

Le printemps (*ἔαρ*) s'étendait du début mars à la mi-mai. Le début du printemps coïncidait avec le retour de Perséphone sur la terre; maintenant tout fleurit, la nature revient à la vie et on entrevoit une saison de la récolte.

L'été (*θέρος*) au sens strict du terme durait de la mi-mai à la fin juillet. *Theros* est la saison de la chaleur, de la moisson, de la récolte et du battage[10].

L'automne (*ὀπώρα*, *μετόπωρον*) est perçu par les Grecs comme un interlude ou plus précisément comme une saison qui passe entre l'été et l'hiver. Eschyle et Aristophane mélangent l'été et l'automne, faisant de celles-ci une saison unique, à laquelle il ajoute le printemps comme un prélude et l'hiver en guise de conclusion[11]. L'automne est dénommé *ὀπώρα*, qui correspond à une partie de l'été, désignant l'intervalle de temps entre fin juillet et mi-septembre, et *μετόπωρον*, qui désigne plutôt la fin de l'automne entre mi-septembre et début novembre; donc *ὀπώρα* et *μετόπωρον* représentent les deux moments de l'automne qui sont décalés dans le temps par notre propre perception de cette saison qui commence le 22 ou le 23 septembre au moment de l'équinoxe d'automne et se termine le 21 ou le 22 décembre, la date du solstice d'hiver[12].

Comme saison des fruits, *θέρος* coïncide avec le sens de *ὀπώρα*, un terme qui désigne une partie prolifique de l'été; mais dans le cas de *ὀπώρα*, ces fruits ne sont plus représentés par les céréales spécifiques de l'été proprement-dit (*θέρος*), mais il s'agit des fruits des arbres et des vendanges. D'ailleurs, chez Homère, *θέρος* et *ὀπώρα* apparaissent avec des sens identiques[13]. *Opora* caractérise donc le début de l'automne ou l'*après-été*[14] et c'est la saison des fruits mûrs[15]. En ce qui concerne le *μετόπωρον*, celui-ci désigne du point de vue étymologique la période d'après *l'opora*, plus précisément « la fin de l'automne »[16]. Cependant, le terme *ὀπώρα*, qui est

[9] CAMPS-GASET 1994, p. 28, 42–43; 99–100.

[10] CAMPS-GASET 1994, p. 22–23.

[11] CAMPS-GASET 1994, p. 22; HILD 1900, p. 252.

[12] KOSSAIFI 2007, p. 19.

[13] Voir HOMÈRE, Iliade XXII, v. 27 pour opora et ses dérivés; Odyssée, XI, v. 192; XIII, v. 384 pour theros; Odyssée, XI, v. 192; XII, v. 76 pour opora.

[14] CHANTRAINE III (1974), p. 813 (s.u. *ὀπώρα*).

[15] KOSSAIFI 2007, p. 20–21; HOFINGER 1981, p. 84–87.

[16] Le mot *φθινόπωρον*, synonyme de *μετόπωρον*, exprime la même idée de l'opora finissante

plus riche du point de vue sémantique, a fini par caractérise l'automne en général, alors que *μετόπωρον* désigne la fin de l'automne[17].

Pour les Grecs, l'automne n'implique pas l'idée de la décadence de la nature en raison du « grain qui meurt, mais dans cette mort il y a aussi la condition de sa naissance. Ce qui se succède, donc, c'est la moisson et la semence, sans décrépitude ni décadence »[18]. Par la suite, il n'y a pas de fonction spécifique de l'automne, car les vendanges ne sont qu'une forme particulière de la récolte, située en septembre pour des raisons biologiques, mais du point de vue de leur signification, elles sont identiques à la récolte des céréales ou des fruits. « Une fois la récolte terminée-toutes les récoltes-le cycle végétal est également terminé, et le cycle recommence alors que le grain est enterré et meurt pour germer. L'été (= le fruit) est suivi par l'hiver (= la graine) »[19].

Cette division de l'année en trois saisons trouve un parallèle dans le domaine du mythe: les trois saisons sont personnifiées par les trois Horae: Auxo, Thallo et Carpo. Auxo (du verbe *αὔξω*, *grandir, faire grandir*) incarne le temps de la germination des graines cachées dans la terre. Elle personnifie l'hiver, lorsque Perséphone est dans le monde des morts avec Hadès, et Déméter pleure sa fille; c'est un temps des graines et de l'attente. Thallo (formé du verbe *θάλλω*, *fleurir*, qui en fait la « saison des fleurs ») incarne la floraison de la nature, personnifiant le printemps; maintenant il n'y a plus rien à récolter, mais le retour de Perséphone sur la terre annonce la saison de la récolte. Enfin, Carpo (dérivé de κάρπω, *cueillir*) incarne le moment estival de la récolte des fruits de la terre, personnifiant l'été riche en fruits[20]. Ainsi, les trois Horae sont les représentantes mythiques de toute l'année. Chacune des trois saisons, qui règnent l'une après l'autre tout au long de l'année, incarne une des phases du cycle de la vie[21].

Reconstitution de la succession et de la durée des saisons dans les colonies milésiennes du Pont Euxin

L'introduction d'une année solaire a entrainé la division évidente de l'année en quatre saisons marquées par des solstices et des équinoxes. La tradition des quatre saisons, qui, en effet, trouve son parallèle dans le vocabulaire grec, coexiste, dans la vie des Grecs, avec la tradition mythologique et religieuse d'une division de l'année en trois saisons. D'ailleurs, la tradition des quatre saisons, « fabriquée » sur la grille du calendrier solaire, s'est superposée à la division de l'année en trois saisons qui tient compte des phases du cycle de la vie et du calendrier des rituels agricoles. Les noms des saisons sont entrés dans usage quotidien après la mort d'Alexandre le Grand[22]. Les quatre saisons commencent à prévale à l'époque romaine, avec l'utilisation du calendrier solaire[23].

---

ou « fin de l'automne » (cf. *φθίνω* qui signifie arriver à son terme, se flétrir, se consumer), voir CHANTRAINE IV–2, (1980), 1200 (s.u. φθίνω); LSJ, p. 1121, (s.u. *μετόπωρον* = *φθινόπωρον*, late autumn); HOFINGER 1981, p. 87–88.

17 KOSSAIFI 2018, p. 48.

18 CAMPS-GASET 1994, p. 23.

19 CAMPS-GASET 1994, p. 23.

20 KOSSAIFI 2018, p. 41; CAMPS-GASET 1994, p. 24; voir aussi JOLLES 1913, col. 2300–2313.

21 CAMPS-GASET 1994, p. 27–28.

22 HILD 1900, p. 253.

23 FERRARI 2003, p. 77 (s.,v. Anotimpuri).

Les documents épigraphiques et archéologiques attestent de la connaissance du cycle des saisons par les colons grecs installés sur les côtes du Pont-Euxin. Une dédicace découverte à Byzance, datant des II^e^-III^e^ siècles ap. J.-C., est consacrée aux quatre saisons: « Ἀγαθῶι Δαίμονι / Ἀγαθῆι Τύχηι / Καλῶι Καιρῶι / Ὄμβροις Ἀνέμοις / Ἔαρι Θέρει / Μετοπώρῳ / Χειμῶνι » (« Au bienveillant Daimon / Au bienveillant Destin / Au Beau Temps / Aux Pluies, aux Vents / Au Printemps, À l'Été / À l'Automne / À l'Hiver »)[24]. Il s'agit de la seule inscription du Pont-Euxin qui atteste de l'existence de quatre saisons personnifiées. Celles-ci sont désignées par des noms spécifiques.

Une inscription de Sinope des I^er^-II^e^ siècles ap. J.-C. contient une liste de noms, qui comprend, outre le nom de la déesse Thémis, la planète Hermès (Mercurius), le Soleil, la Lune, l'étoile Seirios et la constellation Hydrēchoos, un des douze signes du Zodiaque: « Θέμις / Ἥλιος / Σελήνη / Ἑρμῆς / Ὑδρηχόος / Σείριος »[25]. L'inscription nous fournit un témoignage important du culte des divinités astrales à Sinope. La même inscription, du point de vue de son contenu, révèle que les Grecs de Sinope avaient des connaissances astronomiques qui pouvaient les aider à délimiter les saisons, ainsi qu'à marquer les étapes importantes de l'année agricole.

Un cadran solaire découvert à Istros (datant de la fin du IV^e^ ou, au plus tard, du début du III^e^ siècle av. J.-C.) était utilisé en tant qu'instrument astronomique, indiquant les solstices, la position du soleil par rapport aux constellations, le début des mois et des saisons, ce qui prouve que les Istriens pouvaient déterminer la succession et la durée des saisons par les observations astronomiques[26].

Les dénominations des mois et leur succession dans les calendriers des colonies pontiques milésiennes, dont la structure est connue dans son intégralité, constituent des éléments de référence pour la détermination de la durée des saisons. À cet égard, il convient de mentionner deux documents épigraphiques très importants. Il s'agit d'un graffito découvert à Olbia, daté d'environ 450 av. J.-C., qui nous fournit une liste complète des mois du calendrier olbien; ce graffito indique que *Tauréôn* apparaît en tête de la liste des mois olbiens[27]. Un autre fragment d'une loi sacrée, découvert à Olbia, atteste du fait que *Tauréon*-le premier mois du calendrier olbien-était un mois de printemps: « μηνὸς· Ταορεῶνος τῶ π/ρώτῳ · ὑστεράῃ νεομη/νίης· ἦρι ‹ι› μισθῶ » (« Le premier mois Tauréôn; le second jour du mois; le printemps, solde (?) »)[28].

Les Grecs ont déterminé la durée des quatre saisons par l'intermède des observations astronomiques. En fonction des solstices et des équinoxes, mais surtout en fonction du cycle des étoiles, ils ont établi la succession, le début et la fin des saisons. Autrement dit, le lever et le coucher des étoiles (leurs premières apparitions ou disparitions de la voûte céleste juste avant l'aube) servaient de repères importants tant pour la délimitation des saisons que pour le marquage des étapes importantes de l'année agricole, comme la date du début des labours ou celle de la moisson. Il est clair que parallèlement au calendrier institutionnel, les Grecs

[24] IGSK 58-Byzantion, n° 13.
[25] IGSK 64-Sinope, n° 116.
[26] FERARU 2008, p. 76.
[27] IGDOP, 160–161, n° 99; Ehrhardt 1983, 118 et 413, n. 247 = SEG, XXX 977 c).
[28] IGDOP, p. 165, n° 100 = SEG, XXX, 980.

utilisaient également un calendrier astronomique basé sur des repères astrologiques, qui était indispensable.

Les jours du calendrier officiel, les levers et les couchers des étoiles, ainsi que les travaux agricoles sont consignés dans les soi-disant *parapegmes*, dont le plus connu est le parapegme d'Euctémon (seconde moitié du V^e^ siècle av. J.-C.) gardé dans l'ouvrage *Elementiae astronomiae* de Geminus de Rhodes[29]. Plus précisément, « le parapegme établit une correspondance entre deux sortes de calendriers: *le calendrier saisonnier*, basé sur les saisons et les constellations du zodiaque et important pour les paysans ou les marins, et *celui luni-solaire*, civil, qui régit les activités officielles »[30]. À son tour, Hésiode conçoit un véritable parapegme poétique, indiquant les moments d'exécution des travaux agricoles selon des repères astronomiques (le lever et le coucher des étoiles), de l'observation du climat (le déclenchement des phénomènes atmosphériques), ainsi que des repères naturels (le développement des plantes et le comportement des oiseaux, des insectes et des animaux[31]. Le calendrier agricole d'Hésiode et surtout le parapegme d'Euctémon sont indispensables pour délimiter et établir la durée des saisons, ainsi que pour les corréler avec le calendrier des travaux agricoles et le cycle des fêtes à caractère agraire.

Le calendrier solaire, construit sur l'année tropique, qui est basée sur l'équinoxe de printemps, fait revenir les saisons à la même date chaque année, ce qui permet la célébration périodique des fêtes, ainsi que l'accomplissement des rituels y afférents. Les équinoxes et les solstices, le lever et le coucher des étoiles étaient des repères fondamentaux pour la délimitation des saisons dont le début et la fin n'avaient pas été établis avec une certitude absolue.

Le Printemps

En principe, le printemps (*ἔαρ*) commençait à l'équinoxe de printemps (entre le 19 et le 21 mars), mais l'arrivée du printemps était annoncée par le lever du soir d'Arcturus qui avait lieu le 6 mars[32]. Arcturus est l'étoile la plus brillante de la constellation de Bouvier à laquelle on attribuait un rôle décisif dans la provocation des tempêtes[33]. Selon Hésiode, Arcturus rythme le travail de la vigne[34]. Pour le même Hésiode, ainsi que pour Eudoxe de Cnide, l'apparition de l'hirondelle coïncide avec le lever du soir d'Arcturus[35]. D'ailleurs, Aristote précise que la migration des oiseaux des pays

[29] Pour le parapegme d'Euctémon, voir PRITCHETT, VAN DER WAERDEN 1961, p. 32–39 (avec texte grec).

[30] KOSSAIFI 2018; pour des parapegmes, voir LEHOUX 2007.

[31] HÉSIODE, Travaux et Jours, vv. 383–394; vv. 414–420; vv. 448–451; vv. 504–505; vv. 571–575; vv. 597–600; vv. 609–617; KOSSAIFI 2018, p. 57–58; KRAVARITOU 2002, p. 32–33; CASEVITZ 1991, p. 110; AUJAC 1982, p. 3–15.

[32] PRITCHETT, VAN DER WAERDEN 1961, p. 35, (Parapegma of Euctemon): «*ἐν δὲ τῇ ιβ' Ἀρκτοῦρος ἑσπέριος / ἐπιτέλλει* (...)» «Le douzième jour [le 6 mars]. Le lever du soir d'Arcturus (...)"; cf. HÉSIODE, Travaux et Jours, vv. 564–567, qui situe le lever d'Arcturus soixante jours après le solstice d'hiver; voir aussi AUJAC 1982, p. 5–6.

[33] FERRARI 2003, p. 91, (s.v. Arcturos).

[34] HÉSIODE, Travaux et Jours, v. 569–570: «C'est le printemps nouveau qui nait pour l'homme; / Avant qu'il soit là, songe à tailler tes vignes; / C'est le bon moment» (trad. G. Aujac).

[35] HÉSIODE, Travaux et Jours, vv. 568–570 affirme que lever du soir d'Arcturus a lieu soixante jours après le solstice d'hiver; voir aussi, AUJAC 1982, p. 10.

chauds vers les régions situées au nord du Pont-Euxin, qui a lieu après l'équinoxe de printemps, annonce l'arrivée du printemps: « Après l'équinoxe d'automne, <les oiseaux migrateurs> quittent le Pont et les régions froides pour fuir l'approche de l'hiver; et après l'équinoxe de printemps, ils reviennent des pays chauds vers les contrées froides par crainte des chaleurs... »[36]. L'équinoxe de printemps marquait le début de l'année civile à Milet et dans les colonies pontiques milésiennes[37] (**Fig. 1**).

Anthestériôn (février-mars) était le premier mois du printemps dans les calendriers de Milet et de ses colonies pontiques. L'étymologie même du nom *Anthésteriôn*, qui provient du terme *ἄνθος*, fleur (*cf*. Anthésteriôn –, « le mois des fleurs »), indique que ce mois de printemps tombait vers fin février et début mars. D'ailleurs, la fête des Anthestéries, de laquelle le mois d'Anthestériôn tire son nom, marque le début du printemps et l'éveil de la nature à la vie[38]. Les Anthestéries étaient célébrées le 12 et le 13 du mois d'Anthestériôn à Milet et probablement à Istros[39] (**Fig. 2**).

Le mois de l'Artémision (mars-avril) succédait à l'Anthestériôn. Artémision correspond au mois athénien Elaphéboliôn, dont le nom dérive d'une épiclèse d'Artémis qui signifie « le mois du cerf »[40]. Le nom du mois Artémision dérive du nom de la fête d'*Artémisia* / *Artémitia* célébrée en l'honneur d'Artémis. Artémision était le dernier mois des calendriers de Milet et de ses colonies pontiques (**Fig. 2**).

Le dernier mois du printemps était *Tauréôn* (avril-mai). *Tauréôn* était également le premier mois de l'année tant à Milet que dans les colonies pontiques milésiennes (**Fig. 2**).

L'été

Le lever matinal des Pléiades[41] (le 8 mai ou le 13 mai) annonçait la fin du printemps et le début de l'été proprement dit[42] et, selon Hésiode, il donnait le signal pour

---

[36] ARISTOTE, Histoire des animaux, VIII, 12.

[37] TRÜMPY 1997, p. 93; IGDOP, p. 163 et n. 152; EHRHARDT 1983, p. 120–121, 125 et 415–416, n. 277; BILABEL 1920, p. 69 şi 80.

[38] CASEVITZ 1991, p. 110; TRÜMPY 1997, p. 17.

[39] EHRHARDT, 1983, p. 417, n. 295.

[40] TRÜMPY 1997, p. 16; KNOEFLER 1989, p. 43 et n. 81.

[41] Les Pléiades (Πλειάδες) forment une constellation de neuf étoiles visibles à l'œil nu. Selon la tradition mythologique grecque, les Pléiades sont les sept filles (Maïa, Électre, Taygète, Alcyone, Célaéeno, Mérope, Astérope) d'Atlas et de Pléioné. Elles formaient le cortège d'Artémis, qu'elles accompagnaient à la chasse. Puisqu'elles étaient poursuivies par le chasseur Orion, les Pléiades ont demandé aux dieux de les sauver; elles se sont transformées en colombes et se sont envolées dans le ciel où elles forment la constellation qui porte leur nom. Selon une autre légende, les Pléiades se sont transformées en étoiles, affligées par le châtiment que Zeus a imposé à leur père, Atlas; ce dernier a été condamné à porter la voûte céleste sur ses épaules, FERRARI 2003, p. 677 (s.v. Pleiade).

[42] PRITCHETT, VAN DER WAERDEN 1961, p. 36, (Parapegma of Euctemon): «*ἐν δὲ τῇ ‘ιγ’ Πλειὰς ἐπιτέλλει θέρους / ἀρχή* (...)» «Le treizième jour [le 8 mars]. Le lever des Pléiades. Début de l'été (…)"; 39 (Table of Euctemon's Seasons) et n. 1: «Our standard text G gives for MR (morning rising) Pleiades the date Taurus 13 = May 8. However, the weather sign accompanying this MR according to Euctemon is given by Ptolemy's parapegma 5 days later, corresponding to May 13»; cf. AUJAC 1982, p. 4–5: «D'après Hofmann, qui a calculé la date des levers et couchers héliaques des étoiles pour 430 av. J.-C. et une latitude de 38° N, le lever matinal des Pléiades avait effectivement lieu le 19 mai».

la moisson, qui commençait peu après la mi-mai [43]. En même temps, l'apparition des Pléiades à la fin du printemps annonçait aux marins la saison favorable pour la navigation[44].

L'été durait depuis le lever des Pléiades jusqu'à celui d'Arcturus (le 14 septembre)[45]. Mais l'été proprement-dit (*θέρος*) durait, en général, de la mi-mai à la fin juillet. Le lever matinal de l'étoile Seirios (le 23 juillet)[46] marquait le début d'une période estivale appelée par les Grecs *ὀπώρα*, qui faisait partie d'un cadre astronomique caractérisé par la canicule, entre le lever de Seirios et celui d'Arcturus[47]. Seirios est mentionnée pour la première fois par Hésiode[48]; elle était l'étoile principale de la constellation du Chien, étant, en général, désignée par le nom de la constellation « le Chien » ou « l'Étoile du Chien »[49]. Le lever de Seirios, un mois après le solstice d'été (le 20 ou le 21 juin)[50], coïncide avec le début de la canicule, marquant le début des grandes chaleurs[51] (**Fig. 1**).

Thargéliôn (mai-juin) était un mois panionien à la fin du printemps et au début de l'été, que l'on trouve et dans le calendrier ionien archaïque et dans les calendriers d'Athènes, de Milet et de ses colonies pontiques milésiennes. Le nom du mois

[43] HÉSIODE, Travaux et Jours, v. 383–384: «Au lever de Pléiades, filles d'Atlas, commencez la moisson, les semailles à leur coucher»; d'après Hésiode, le lever des Pléiades, qui font «fuir» l'escargot, annonce en effet le temps de la moisson, voir HÉSIODE, Travaux et Jours, v. 571–572.

[44] KOSSAIFI 2018, p. 57, n. 113.

[45] PRITCHETT, VAN DER WAERDEN 1961, p. 33, (Parapegma of Euctemon): «*ἐν δὲ τῇ ϗ' Ἀρκτοῦρος ἐκφανής· μετοπώρου ἀρχή* (...)» [« Le vingtième jour Arcturus apparaît; le début de l'automne (...)»]. Le lever matinal d'Arcturus a été fixé au 20 septembres; selon Eudoxe de Cnide, le lever d'Arcturus avait lieu dix jours avant l'équinoxe d'automne, tandis que le traité hippocratique du Régime rapproche, ou confonde, le lever matinal d'Arcturus avec l'équinoxe d'automne, voir AUJAC 1982, p. 6.

[46] PRITCHETT, VAN DER WAERDEN 1961, p. 32, (Parapegma of Euctemon): «*ἐν δὲ τῇ 'κζ' Κύων ἐπιτέλλει*» «Le vingt-septième jour [le 23 juillet] Seirios se lève»; 33 (Parapegma of Euctemon): «*Ἓν μὲν οὖν τῇ ᾱ ἡμέρᾳ Κύων μὲν ἐκφανής, πνῖγος δὲ ἐπιγίνεται*, (...)» «Le premier jour Seirios apparaît, et la chaleur étouffante commence, (...)"; 39 (Table of Euctemon's Seasons). À l'époque de Ptolémée, le lever matinal de Seirios avait lieu le 22 juillet à la latitude d'Alexandrie et le 28 juillet à celle de Rhodes, HOFINGER 1981, p. 84.

[47] KOSSAIFI 2018, p. 48; KOSSAIFI 2007, p. 20.

[48] HÉSIODE, Travaux et Jours, v. 418; vv. 583–584; vv. 609–610.

[49] LSJ, p. 1588, (s.u. *σείριος*): « name of the dog-star, Seirios, whose visible heliacal rising marked the season of greatest heat »; AUJAC 1982, 7–8; 14, n. 9; PRITCHETT, VAN DER WAERDEN 1961, p. 37, 39 (Table of Euctemon's Seasons).

[50] Eudoxe de Cnide situait le lever matinal de Seirios 27 jours après le solstice d'été, à savoir le 28 juillet, voir AUJAC 1982, p. 7.

[51] La relation entre Seirios et opora se reflète dans le mythe d'Opora, dont les éléments nous ont été transmis, sous le nom d'Amphis, écrivain de la moyenne comédie, par les commentaires sur les Phénomènes d'Aratos. « Venu sur la terre, Seirios (le Chien), s'éprend de la belle Opora mais il ne parvient pas à ses fins et le feu qui le consume et l'affole, a de fâcheuses conséquences pour les hommes: il leur „brûle la tête et les genoux, (sa) chaleur leur sèche la peau", (HÉSIODE, Travaux et Jours, vv. 583–584). Aratos souligne „l'ardeur pénétrante" avec laquelle il brûle toute vie, (ARATOS, Phainomena, vv. 329–332). L'éclat meurtrier qui irradie de Seirios brûlé par les feux d'Aphrodite, avive l'ardeur sexuelle des femmes, affaiblit celle des hommes (HÉSIODE, Travaux et Jours, vv. 586–587), ravage et assèche le sol » (HOMÈRE, Iliade, V, vv. 4–8; XI, v. 62; XXII, vv. 26–31), *apud* KOSSAIFI 2007, p. 22. Pour éviter ses éventuelles mauvaises influences sur la nature et les humains, il était nécessaire de gagner la bonne volonté de Sirius par des sacrifices.

Thargéliôn dérive de celui de la fête de *Thargélia* célébrée en l'honneur d'Apollon *Thargélios* et d'Artémis. Thargélia marque le début de l'été et est une fête de la purification, de l'expiation, et, en même temps, une « fête des prémices » de la terre données en offrande à Apollon[52]. La date de célébration de la fête des *Thargélies-le 7 Thargéliôn*-coïncide à Milet et dans sa colonie, Olbia (**Fig. 2**).

Le mois de *Kalamaiôn* (juin-juillet) semble se limiter au calendrier de Milet et de ses colonies, sa présence n'étant pas assurée dans les cités ioniennes[53]. Le nom du mois dérive de *καλάμη* (« paille ») et est associé à la fête de la paille (*Καλαμαῖα*) célébrée en l'honneur de Déméter et Coré Perséphone[54] (**Fig. 2**).

Panemos (juillet-août) était un mois panhellénique estival dont l'étymologie n'est pas claire. Il semble que ce mois faisait partie du calendrier ionien archaïque[55]. Le mois Panemos ne peut être lié à aucune divinité en particulier, ce qui n'exclut pas une liaison avec le culte dans la mesure où la plupart des mois sont intégrés dans un calendrier religieux. Selon C. Trümpy, Panemos aurait pu être, à l'origine, le nom du mois intercalaire[56] (**Fig. 2**).

L'automne

Le lever matinal d'Arcturus (le 14 septembre), qui avait lieu près de l'équinoxe d'automne (entre le 21 et le 23 septembre), marquait le début de l'automne (*μετόπωρον*)[57] qui durait jusqu'au coucher matinal des Pléiades (le 8 novembre)[58] (**Fig. 1**).

Le coucher des Pléiades donnait le signal pour les labours et les semailles d'automne, des travaux agricoles étaient annoncés également par le cri de la grue[59]. Selon Aristote, la migration des oiseaux de la région nordique du Pont-Euxin vers les pays chauds après l'équinoxe d'automne, annonçait l'approche de l'hiver: « Après l'équinoxe d'automne, <les oiseaux migrateurs> quittent le Pont et les régions froides pour fuir l'approche de l'hiver; (...) les uns émigrent de régions voisines, les autres vont pour ainsi dire d'un bout du monde à l'autre, comme font les grues que leur migration conduit des plaines de Scythie aux marécages de la Haute Egypte où le Nil a sa source »[60]. Ainsi, le coucher des Pléiades, au début de novembre, marquait le commencement des labours et des semailles d'automne, tout comme leur lever, à la mi-mai, annonçait le temps de la moisson[61]. Le coucher des Pléiades marque

[52] HERDA 2006, p. 221.

[53] KNOEPFLER 1989, p. 29 et n. 31.

[54] CASEVITZ 1991, p. 111.

[55] TRÜMPY 1997, p. 26–29.

[56] TRÜMPY 1997, p. 26–27.

[57] PRITCHETT, VAN DER WAERDEN 1961, p. 33 (Parapegma of Euctemon): « *Ἐν δὲ τῇ ϛ΄ Ἀρκτοῦρος ἐκφανής· μετοπώρου ἀρχή* (...) » (« Le vingtième jour [le 14 septembre]. Arcturus apparaît. Début de l'automne (metoporon) (…) »); 39 (Table of Euctemon's Seasons).

[58] PRITCHETT, VAN DER WAERDEN 1961, p. 29, 34, (Parapegma of Euctemon): « *ἐν δὲ τῇ ιε΄ Πλειάδες δύνουσι*, (...) » («Le quinzième jour. Le Coucher des Pléiades»); 39 (table of Euctemon's Seasons).

[59] HÉSIODE, Travaux et Jours, vv. 448–451.

[60] ARISTOTE, Histoire des animaux, VIII, 12.

[61] AUJAC 1982, p. 3–4; PRITCHETT, VAN DER WAERDEN 1961, p. 39 (table of Euctemon's Seasons), 41.

également la fin de la saison de navigation. D'ailleurs, Hésiode recommande aux navigateurs de rentrer au port dès le lever matinal d'Arcturus à la mi-septembre; à partir de ce moment-là, la mer devient dangereuse, et le commerce maritime sera de plus en plus dangereux pour devenir impossible vers le coucher des Pléiades, lorsque les vents du sud apporteront sur la mer la tempête et de violentes averses de pluie[62].

Métageitniôn (août-septembre) était un mois panionien de la fin de l'été et du début de l'automne qui faisait partie du calendrier ionien archaïque. Le mois de *Métageitniôn* est mentionné dans les calendriers de Milet et de ses colonies pontiques, ainsi que dans les calendriers d'Athéna et de Délos[63]. Le nom du mois dérive de celui de la fête de *Métageitnia* dédiée à Apollon Métageitnios (« le protecteur de l'alliance et de l'union entre les voisins »)[64] (**Fig. 2**).

Le mois de *Boédromiôn* (septembre-octobre) succédait à *Métageitniôn*. *Boédromiôn* est un mois d'automne panionien que l'on retrouve à la fois dans le calendrier ionien archaïque et dans les calendriers de Milet et de ses colonies pontiques. Le *Boédromiôn* est associé à la fête traditionnelle du Boedromios célébrée en l'honneur d'Apollon Boedromios, tant à Athènes (6 Boedromion) que dans d'autres villes ioniennes. Le *Boédromiôn* est associé à la fête traditionnelle des Boédromies célébrée en l'honneur d'Apollon *Boédromios*, à Athènes (le 6 *Boédromion*), ainsi que dans d'autres cités ioniennes (**Fig. 2**).

Le mois de Pyanepsiôn/Kyanepsiôn (octobre-novembre) est directement attesté à Milet, Thèbes du Mycale, Cyzique et Olbia. Pyanepsiôn est un ancien mois panionien qui se trouve dans le calendrier ionien archaïque; ce mois est attesté dans la même position dans le calendrier athénien[65]; en revanche, il n'apparaît pas dans les calendriers des autres cités ioniennes. Pyanepsiôn était le mois des Pyanepsies (*Pyanepsia*) célébrées en l'honneur d'Apollon à Athènes (le *7 Pyanepsiôn*), au cours desquelles on réalisait « la cuisson des fèves ». D'ailleurs, celui-ci était un élément caractéristique du rituel principal des Pyanepsies dont le nom de la fête est dérivé. Comme le nom de la fête l'atteste, la Pyanepsia était liée aux traditions de la société agricole, marquant la fin de l'automne et le début de l'hiver[66] (**Fig. 2**).

L'hiver

Enfin, le coucher des Pléiades marquait le début de l'hiver (*χειμών*) qui durait jusqu'au lever du soir d'Arcturus (**Fig. 1**). Hésiode, Hippocrate, et tous les auteurs de parapegmes, y compris Démocrite, Euctémon et Eudoxe sont d'accord que le coucher matinal des Pléiades (du 8 novembre) marque le début de l'hiver; selon Euctémon, le milieu de l'hiver était fixé 59 jours après le coucher des Pléiades, à savoir le 6 janvier[67]. Donc, la fin de l'hiver tombait probablement vers le 6 mars ou un jour avant ou après cette date. Dans le parapegme d'Euctémon, le lever du

[62] HÉSIODE, Travaux et Jours, vv. 674–677; HOFINGER 1981, p. 85–86.

[63] TRÜMPY 1997, p. 14.

[64] HERDA 2006, p. 226.

[65] TRÜMPY 1997 p. 14, §11.

[66] HERDA 2006, p. 153 et n. 1096.

[67] PRITCHETT, VAN DER WAERDEN 1961, p. 35: « *ἐν δὲ τῇ ϛιδ΄ μέσος χειμών·* », (« Le 6 janvier le milieu de l'hiver »); 39 (table of Euctemon's Seasons).

soir d'Arcturus tombait à la même date[68]. De même, selon Hésiode et Démocrite, le début du printemps coïncide avec le lever du soir d'Arcturus, qu'Hésiode place soixante jours après le solstice d'hiver[69]. Le même Hésiode affirme qu'au solstice d'hiver, il n'y a plus de temps pour labourer ou semer; l'étourdi qui aura attendu jusque-là n'aura que maigre récolte[70].

Le mois d'*Apaturéôn* (novembre-décembre) est attesté directement à Milet, Iasos, Aigialè, Cyzique, Odessos et Olbia. *Apaturéôn* se trouve dans le calendrier ionien archaïque. À l'exception de Milet et de ses colonies, *Apatouriôn* est bien attesté dans les calendriers des cités ioniennes (Délos, Smyrne, Samos, Kios, Chalcis, Érétrie, Paros, Thasos et Massalia)[71]; l'existence du mois d'Apaturéôn peut être supposée à partir de l'attestation des Apatouries, une fête ionienne spécifique, épigraphiquement attestée à Athènes[72], Lampsakos, Chalcis, Érétrie (sur l'Eubée), Délos, Ténos, Amorgos, Samos, Kios, Paros, Thasos et Massalia[73] (**Fig. 2**).

Posidéôn / *Poséidéôn* (décembre-janvier) est l'un des mois panioniens les plus répandus, se trouvant également dans le calendrier ionien archaïque; Posidéon apparaît dans la même position dans les calendriers d'Athènes, de Milet, de Délos et de Smyrne[74]. À l'exception de Milet et des colonies milésiennes, le mois de Posidéôn est documenté dans les calendriers des cités ioniennes de la Mer Égée et de l'Asie Mineure (Délos, Smyrne, Céos, Ténos, Paros, Kios, Samos, Érythrées, Théos, Ephèse, Magnésie du Méandre et Périnthe[75]. Poséidéon est le mois de la *Poséidéia*, une fête archaïque qui était célébrée en l'honneur de Poséidon, au solstice d'hiver[76] (**Fig. 2**).

Le mois *Lénaiôn* (janvier-février) est attesté directement à Milet, Skepsis, Cyzique, Kios, Tyras, Olbia et Naukratis; de même, ce mois se trouve dans la même position dans les calendriers de Milet, de Délos et de Smyrne, ce qui confirme son présence dans le calendrier ionien archaïque[77]. Le correspondant de *Lénaiôn* est le mois athénien *Gamélion*. L'équivalence du mois milésien *Lénaiôn* avec le mois athénien Gamélion est assurée par le fait qu'à Athènes la fête des Lénéennes (*Lénaia*), qui a donné le nom du mois de *Lénaiôn*, était célébrée en l'honneur de Dionysos *Lénaiôn* du 12 au 21 Gamélion[78] (**Fig. 2**).

---

[68] PRITCHETT, VAN DER WAERDEN 1961, p. 35.

[69] HÉSIODE, Travaux et Jours, vv. 564–567; AUJAC 1982, p. 5–6, 8, 13; PRITCHETT, VAN DER WAERDEN 1961, p. 30.

[70] HÉSIODE, Travaux et Jours, vv. 479–480; pour la succession et la délimitation des saisons, voir aussi CALAME 1996, p. 376, n. 1.

[71] TRÜMPY 1997, p. 14; KNOEPFLER 1989, p. 28 et n. 25; p. 41–42; SALVIAT 1992a, p. 263; SALVIAT 1992b, p. 145; SALVIAT 1958, p. 219–220.

[72] À Athènes, les Apatouria tombaient vers la fin de Pyanepsion (vers le début du mois de novembre), voir TRÜMPY 1998, p. 110; cf. MIKALSON 1975, p. 79, qui fixe la date de la célébration des Apatouries soit entre le 19 et le 21 Pyanepsion, soit entre le 26 et le 28 Pyanepsion.

[73] Voir aussi HÉRODOTE I, 147; HERDA 2006, p. 47; SALVIAT 2000, p. 25 et n. 3, 26; KNOEPFLER 1989, p. 41–42; SALVIAT 1958, p. 219–220; NILSSON 1906, p. 463.

[74] TRÜMPY 1997, p. 14.

[75] ROBERTSON 1984, p. 7.

[76] ROBERTSON 1984, p. 1–2.

[77] D'ailleurs, Hésiode, (Trav. et Jours, 504), nous fournit la première attestation documentaire du mois de Lénaiôn; voir aussi TRÜMPY 1997, p. 14.

[78] TRÜMPY 1998, p. 111; TRÜMPY 1997, p. 16 avec n. 60; une inscription de Mykonos datant de 200 av. J.-C. enregistre un sacrifice consacré à Dionysos Ληνεύς le 12 Lénaiôn (Syll^3 1024, l.

Les saisons et le cycle des fêtes agraires

La vie cultuelle-religieuse des cités grecques était étroitement liée au cycle des saisons. D'ailleurs, les Grecs ajoutaient des mois intercalaires à des intervalles, en principe, réguliers, afin de garder l'équivalence entre le cycle annuel des saisons et la célébration des fêtes. M. Blomberg et G. Henriksson ont démontré, d'un point de vue plutôt astronomique, l'utilisation des systèmes intercalaires pour la célébration des fêtes lors des saisons appropriées[79]. Selon les deux auteurs, l'importance du système intercalaire de huit ans (*ἐννεατερίς*) se justifie par le fait qu'il assure la présence des mois dans les limites des mêmes saisons; cette opération est nécessaire en raison de fins purement religieuses, à savoir le fait que les fêtes classifiées selon les mois tombaient lors de la saison appropriée[80].

La célébration des fêtes était dictée également par le calendrier agricole qui, à son tour, était fixé en fonction du cycle des saisons; d'ailleurs, les limites des saisons marquaient le début et la fin des travaux agricoles. Autrement dit, la date de célébration d'une fête était fixée en fonction du moment de l'année occupé par une activité agricole à laquelle cette fête était associée.

En fonction du calendrier des travaux agricoles et du moment de la célébration des fêtes et des rituels associés, l'année grecque était divisée en trois saisons. Les différentes traditions mythologiques liées aux trois saisons subsistent au niveau des rituels réalisés à l'occasion de la célébration des fêtes. Ainsi, le calendrier rituel des Grecs présente trois groupes de rituels assez bien définis, liés aux trois saisons. C'est surtout le cycle des fêtes agraires grecques qui reproduit par des rituels ce que la tradition a fixé à l'aide du mythe, c'est-à-dire la disparition et l'apparition de Perséphone et ses séjours successifs dans le monde des morts et parmi les vivants.

Tout au long de l'hiver, les morts règnent sur les vivants. C'est le temps des labours et des semailles, un temps de travail et d'attente, lorsque le monde des morts reçoit les honneurs des vivants. Dans la Grèce antique, l'hiver est marqué par une série de fêtes consacrées aux graines, au monde des morts et à la germination des champs. Les rituels de ces fêtes assurent la fertilité des champs et des graines[81].

La fête des Pyanepsies marque la transition entre l'été et l'hiver, le dernier étant perçu comme la saison des semailles. Le moment de la célébration des Pyanepsies consacrées à Apollon (le septième jour du mois de *Pyanepsiôn*, octobre-novembre) correspondait au moment de la récolte des légumes, ainsi qu'au début des semailles des céréales. À titre subsidiaire, les Pyanepsies était associées au culte des morts. À cette occasion, un bouillon traditionnel de grains était consacré en offrande (*panspermia*) à Apollon. L'offrande de la *panspermie* était un ancien rituel qui assurait la fertilité des champs et la germination des graines. La *panspermie* était étroitement liée au monde des morts, dont la commémoration et l'honneur sont des traits spécifiques aux rituels de fertilité, car les défunts contribuent à la fertilité du sol et garantissent

24), ce qui a déterminé J. D. Mikalson supposer que fête de Lénaia commençait à cette date, voir MIKALSON 1975, p. 104 et 110.

[79] BLOMBERG, HENRIKSSON 1996, p. 27–39.

[80] BLOMBERG, HENRIKSSON 1996, p. 28.

[81] CAMPS-GASET 1994, p. 20, 23, 28, 41–42.

ainsi l'abondance de la récolte[82]. Par sa signification de fête des morts, les *Pyanepsies* s'enchaînent à la fête des *Anthestéries*, dont le dernier jour (*Chytrai*) avait un caractère funèbre. En ce jour, les esprits des morts revenaient sur terre, et il était absolument nécessaire de prendre des mesures de protection. Le jour des pots (*Chytrai*) était considéré comme *impur*. L'impureté contaminait toute la cité. Les temples restaient fermés toute la journée, et les esprits des morts (*Kères*) circulaient dans la cité; on leur donnait une offrande de *panspermia* dont la signification est similaire à celle des Pyanepsies. Ainsi, les *Pyanepsies* et les *Anthestéries*, l'une au début et l'autre à la fin de l'hiver, signifient donc le souvenir et les honneurs dus aux morts qui deviennent les garants de la vie[83] (**Fig. 2**).

Par son lien avec le monde des morts, la fête des *Anthestéries* signifie le point final de l'hiver. En même temps, les *Anthestéries* marquent le début du printemps et le retour de la nature à la vie. La saleté (*le miasme*) qui souille la cité pendant les deux derniers jours des *Anthestéries* représente l'impureté qui sera purifiée à l'occasion de la célébration des *Thargélies*[84] (**Fig. 2**).

Les fêtes de printemps étaient dominées par des rituels de purification collective, de préparation à la moisson et d'offrande des premiers fruits de la terre. Elles anticipaient la moisson. La maturation des fruits de la terre représentait le point central de ces fêtes. C'était le premier épi ou fruit récolté qui était consacré à la divinité. Cette offrande est l'une des formes les plus simples de sacrifice et une propitiation de la divinité pour protéger la récolte, la rendre prospère et éviter sa perte. La caractéristique essentielle de l'offrande des prémices de la terre était d'offrir aux dieux la première et la meilleure part de la récolte pour qu'ils protègent le reste de celle-ci du mal[85].

La fête des *Thargélies* marque la fin du printemps et le début de l'été. Les *Thargélies* comprenaient des rituels de purification collective et d'offrande des prémices de la terre dédiées à Apollon pour assurer la protection du dieu pour faire mûrir les céréales cultivées et, implicitement, une riche récolte. Alors que les Anthestéries symbolisent la saleté et l'impureté qui souille la cité, le Thargélies signifient la purification collective, après quoi la cité était préparée à recevoir les récoltes (**Fig. 2**).

L'été s'étendait de juin à octobre. Les fêtes d'été étaient surtout liées à la récolte. Elles étaient dominées par des rituels de purification collective et d'offrandes de prémices consacrées aux divinités en remerciement pour l'abondance de fruits[86]. La Fête des *Pyanepsies* célébrée au début de novembre marque la transition entre la saison de l'été et le moment des semailles qui arrivent (**Fig. 2**). Ainsi, le cycle des trois saisons est complet.

[82] CAMPS-GASET 1994, p. 96–97; CALAME 1996, p. 292–310 et 374.
[83] CAMPS-GASET 1994, p. 99–100.
[84] CAMPS-GASET 1994, p. 102.
[85] CAMPS-GASET 1994, p. 23, 41, 53–54.
[86] CAMPS-GASET 1994, p. 23, 28, 41–42, 53, 59–60.

Les saisons et le calendrier de la navigation dans la Propontide et le Pont-Euxin

Le calendrier de la navigation dans la Propontide et le Pont-Euxin peut être reconstitué dans les grandes lignes à partir des informations lacunaires fournies par des sources littéraires et des documents épigraphiques. La fête de *Ploiaphésia* célébrée en l'honneur d'Isis au début du printemps (le 5 mars) marquait la réouverture officielle de la nouvelle saison de navigation tant dans la Mer Méditerranée que dans la Propontide et le Pont-Euxin, après les mois d'hiver où elle avait été presque complètement interrompue[87]. Les conditions favorables à la navigation du mois de mars permettaient aux navires qui naviguaient dans la Mer Méditerranée de traverser l'Hellespont et le Bosphore; la traversée des deux détroits était facilitée par le vent qui souffle assez souvent du sud. Quatre *graffiti* gravés sur un mur en stuc du deuxième quart du III^e^ siècle av. J.-C. (275–250 av. J.-C.), découverts dans le sanctuaire d'Aphrodite à Nymphaïon, présentent, apparemment, des dates calendaires qui ont été associées à la navigation[88]:

1. « ἠνοίξαμεν Καλαμαιῶνος ἑβδόμῃ στήσαντος » (« Nous sommes allés *le septième jour du commencement de Kalamaiôn* »)[89];

2. « ἠνοίξαμεν Θαργηλιῶνος εἰκάδι » (« Nous sommes allés *le 20 Thargéliôn* »)[90];

3. « ἐνάτη [T]αυρεῶνος, ἑνδεκάτη » (« neuf Tauréôn, onze »)[91] ou « ἐναρχ(ομένου sc. στόλου?) Ταυρεῶνος, ἑνδεκάτῃ » (Vinogradov): (« le voyage commence le 11 Tauréôn »)[92];

4. « [ἠνοίξαμεν μετὰ nomen Μολο]ρχίτου ἐν [ὀ]κτῷ (= ὀγδόῃ) [Καλα]μαιῶνος » (« [Nous sommes allés avec (?), fils de Molo]rchitos, le 8 Kalamaiôn »[93]).

Les inscriptions mentionnent les mois de printemps et d'été Tauréôn, Thargéliôn et Kalamaiôn, qui font partie du calendrier des colonies pontiques milésiennes (Fig. 2). L'éditeur des inscriptions, V. P. Jajlenko, propose d'identifier dans les deux premiers *graffiti* deux dates de départ successives du même navire, qui correspondraient donc à des courts voyages maritimes dans le Pont-Euxin; il semble que le deuxième *graffito* ait été gravé avant le premier, puisque dans le calendrier des colonies milésiennes, le mois de *Thargéliôn* précède le mois de *Kalamaiôn*. L'intervalle de temps entre les deux départs successifs d'un même navire est de 16 à 17 jours, ce qui correspondrait, y compris le chargement et le déchargement du navire, à un voyage aller-retour d'une semaine[94].

---

[87] BRICAULT 2006, p. 134–136.

[88] CASTELLI 2016, p. 237; les quatre graffitis sont gravés à gauche du dessin d'un navire, probablement une trière (?) portant, sur la proue, le nom Ἶσις; ce dessin reproduit très probablement le navire des ambassadeurs envoyés par Ptolémée II à la cour du roi du Bosphore Pairisadès II, voir BÉ, 1990, p. 555, n° 590.

[89] SEG, XXXIV, 756; VINOGRADOV 1990, p. 555, n° 590.

[90] SEG, XXXIV, 756; VINOGRADOV 1990, p. 555, n° 590.

[91] SEG XLIV, 997 (14); cf. SEG, XXXIV, 756 = SEG, XXXVIII, 752 = SEG, XXXIX, 701 (1): « *ἐνάρχι (= ἐνάρχει) Ταυρεῶνος ἑνδεκάτῃ* »; VINOGRADOV 1990, p. 555, n° 590.

[92] CASTELLI 2016, p. 237.

[93] SEG, XLV, 997(15); cf. SEG, XXXIX, 701 (2) = BÉ, 1990, p. 555, n° 590: « *[ἄ]ρχι (= ἄρχει) τοῦ ἐν[ο]ικίο[υ Καλα]μαιώνου* (sic) »; par ἐνοίκιον il faut entendre non pas le loyer, mais la cargaison du navire.

[94] JAJLENKO 1995, p. 259–263; CASTELLI 2016, p. 237.

Du troisième graffito ci-dessus il ressort que la navigation était déjà pratiquée dans le Pont-Euxin le *11 Tauréôn*, c'est-à-dire début avril. Dans son discours, *Plaidoyer contre Pantaenetos*, le rhéteur Démosthène consigne le départ d'un navire d'Athènes vers le Pont-Euxin au mois d'*Elaphéboliôn*, qui correspond à la deuxième moitié de mars et à la première moitié d'avril: « Cela fait, dans le mois d'Elaphéboliôn, sous l'archontat de Théophile (scil. en mars 347 av. J.-C.), je pris aussitôt la mer et partis pour le Pont-Euxin. Panténète resta ici avec Evergos»[95]. Ainsi, la saison de la navigation dans la Mer Noire ouvrait au début du printemps.

Les mois d'avril, mai et juin offrent des conditions de navigation favorables pour les navires entrant et sortant du Pont-Euxin par le détroit du Bosphore; c'est ce qu'on peut déduire d'une mention d'Hérodote selon laquelle, en 494 ou 493 av. J.-C., lors de la conquête de Milet par les Perses, Histiée inspectait dans les environs de Byzance les navires marchands ioniens venant du Pont-Euxin[96]. Peu de temps après, le même Histiée récoltera le blé du territoire de la cité d'Atarnée et de la vallée de la rivière Caïque pour approvisionner l'armée qui était sans vivres[97]. Cependant, la récolte du blé par Histiée, juste après l'inspection des navires ioniens venant du Pont-Euxin, indique clairement que ces dernières traversaient le Bosphore et entraient dans la Propontide à la fin du printemps ou au début de l'été[98]. C'est toujours Hérodote qui relate qu'au printemps de 480 av. J.-C., lorsqu'il se trouvait à Abydos, le roi perse Xerxès voit des convois de navires chargés de céréales venant du Pont-Euxin, qui passent à proximité d'Abydos, pour traverser ensuite l'Hellespont se dirigeant vers la Mer Égée[99].

L'été est la saison la plus favorable pour naviguer du Pont-Euxin vers la Mer Égée et vice versa. Pendant le mois d'août, les conditions météorologiques facilitent la navigation des navires du Pont-Euxin et de la Propontide vers la Mer Égée car les vents du sud soufflent moins souvent[100]. Un argument en ce sens peut être déduit d'une mention de Thucydide; selon celui-ci, vers la fin de juin ou le début d'août 428 av. J.-C. (« au moment de la maturité des blés »), la cité Mytilène a rompu l'alliance avec Athènes parce qu'elle n'avait pas reçu des Athéniens les approvisionnements promis qu'elle attendait du Pont-Euxin[101] et qui devaient probablement arriver à la fin

[95] DÉMOSTHÈNE 37 (Contre Pantænète), 6: « *Πραχθέντων δὲ τούτων Ἐλαφηβολιῶνος μηνὸς ἐπὶ Θεοφίλου ἄρχοντος, ἐγὼ μὲν ἐκπλέων εἰς τὸν Πόντον εὐθὺς ὡχόμην, οὗτος δ᾽ἐνθάδ᾽ἦν καὶ Εὔεργος* »; plus précisément, le départ du navire vers le Pont-Euxin aurait eu lieu en mars 347 av. J.-C.

[96] HÉRODOTE, VI, 26.

[97] HÉRODOTE, VI, 28; la cité d'Atarnée et la plaine du Caïque se situaient en Mysie, sur la côte ouest de l'Anatolie, voir aussi HÉRODOTE, I, 160.

[98] CASTELLI 2019, p. 35.

[99] HÉRODOTE, VII, 37 et 147; voir aussi CASTELLI 2019, p. 35.

[100] CASTELLI 2019, p. 35.

[101] THUCYDIDE III, 1, 2: « L'été suivant, au moment de la maturité des blés, les Péloponnésiens et leurs alliés firent une expédition en Attique. (…) Immédiatement après l'invasion péloponnésienne, l'île de Lesbos, à l'exception de la ville de Méthymne, fit défection aux Athéniens. Les Lesbiens dès avant la guerre auraient voulu exécuter ce dessein, mais comme les Lacédémoniens ne les avaient pas accueillis dans leur alliance, ils se virent contraints d'opérer cette défection plus tôt qu'ils n'auraient voulu. Ils désiraient n'entrer en jeu qu'après avoir obstrué leurs ports, élevé des fortifications, construit des vaisseaux et reçu du Pont-Euxin ce qu'ils avaient demandé, à savoir des approvisionnements et des archers. Mais des habitants de Ténédos, qui étaient leurs ennemis, des gens

de l'été[102]. Dans le même sens, dans son discours *Contre Polyclès*, Démosthène relate qu'au début d'août 362 av. J.-C., les Byzantins, les Chalcédoniens et les Cyziciens ont saisi les navires athéniens chargés de céréales qui revenaient du Pont-Euxin: « Voilà ce que vous apprîtes alors, dans l'assemblée, soit par les envoyés eux-mêmes, soit par les orateurs qui parlèrent pour eux. En même temps, les marchands et les capitaines de navires s'apprêtaient à revenir du Pont, et les gens de Byzance, de Chalcédoine et de Cyzique mettaient l'embargo sur les navires, ayant eux-mêmes besoin de blé chez eux »[103]. Ainsi, le mois d'août offre des conditions météorologiques favorables à la navigation des navires venant du Pont-Euxin.

De même, les navires naviguant vers le Pont-Euxin bénéficient au cours du mois d'août de conditions favorables pour traverser le détroit du Bosphore, à l'exception de la période comprise entre le 25 juillet et le 5 août; la traversée du Bosphore et la navigation dans la Mer Noire sont plus risqués en cette période de canicule, comme Démosthène laisse entendre dans son discours *Contre Lacrite*, à cause des vents peu favorables et, surtout, à cause des tempêtes qui peuvent se lever en mer. La grande difficulté de traverser la Propontide et probablement le détroit du Bosphore pendant la période de canicule pourrait d'ailleurs expliquer la recommandation, dans le contrat dont parle Démosthène dans *Contre Lacrite*, qu'un navire n'essaie pas d'entrer dans le Pont-Euxin, mais qu'il reste dans l'Hellespont pendant la canicule, entre le 25 juillet et le 5 août: « Si les emprunteurs n'entrent pas dans le Pont-Euxin, ils feront relâche dans l᾽Hellespont pendant les dix jours après le lever de Sirius[104], remettront les marchandises à terre dans un lieu contre lequel les Athéniens n'ont pas des représailles à exercer… »[105].

En automne, la sortie du Pont-Euxin est un peu plus difficile. En 361 av. J.-C., l'entrée dans le Bosphore Thrace des convois de navires chargés de céréales à destination

de Méthymne et même quelques particuliers de Mytilène, hommes du parti adverse et proxènes d'Athènes, firent savoir aux Athéniens que l'on forçait les Lesbiens à se concentrer dans Mytilène et que, d'accord avec les Lacédémoniens et les Béotiens, de même origine que les Lesbiens, on prenait toutes les mesures pour la défection; si l'on ne les devançait pas, Athènes perdrait Lesbos ». (traduction après http://remacle.org/bloodwolf/historiens/thucydide/livre3.htm).

[102] CASTELLI 2019, p. 35.

[103] DÉMOSTHÈNE 50 (Contre Polyclès), 6: « *ὧν ἀκούοντες τότε ὑμεῖς ἐν τῷ δήμῳ αὐτῶν τε λεγόντων καὶ τῶν συναγορευόντων αὐτοῖς, ἔτι δὲ τῶν ἐμπόρων καὶ τῶν ναυκλήρων περὶ ἔκπλουν ὄντων ἐκ τοῦ Πόντου, καὶ Βυζαντίων καὶ Καλχηδονίων καὶ Κυζικηνῶν καταγόντων τὰ πλοῖα ἕνεκα τῆς ἰδίας χρείας τοῦ σίτου* » (http://remacle.org/bloodwolf/orateurs/demosthene/polyclesgr.htm); selon Démosthène, le décret athénien voté à ce sujet date du 24 Métageitnion de l᾽archontat de Molon, soit le 12 septembre 362 av. J.-C., voir Dém. 50, 4. Les délais pour que l᾽information parvienne jusqu'à Athènes ainsi que la procédure législative ont pris quelques semaines, voir aussi CASTELLI 2019, p. 35.

[104] Le lever matinal de Sirius appelé également « L'Étoile du Chien » (le 23 juillet) coïncide avec le début de la canicule, marquant le commencement de la grande chaleur; cette relâche de dix jours, du 25 juillet au 5 août, est prescrite à cause des tempêtes qui sont fréquentes en ce moment de l'année; sur le lever matinal de Sirius, voir PRITCHETT, VAN DER WAERDEN 1961, p. 32, 33 (Parapegma of Euctemon), 39 (Table of Euctemon's Seasons). À l'époque de Ptolémée, le lever matinal de Sirius avait lieu le 22 juillet à la latitude d'Alexandrie et le 28 juillet à celle de Rhodes, HOFINGER 1981, p. 84.

[105] DÉMOSTHÈNE 35 (Contre Lacrite), 13: « ἐὰν δὲ μὴ εἰσβάλωσι, μείναντες ἐπὶ κυνὶ ἡμέρας δέκα ἐν Ἑλλησπόντῳ, ἐξελόμενοι ὅπου ἂν μὴ σῦλαι ὦσιν Ἀθηναίοις, … »; voir aussi CASTELLI 2019, p. 36; CASTELLI 2016, p. 236.

d'Athènes se fait surtout pendant 45 jours entre le lever d'Arcturos (vers le 14 ou le 17 septembre) et quelques jours avant le coucher des Pléiades (vers le 8 ou le 10 novembre), comme relaté par le triérarque du plaidoyer de Démosthène *Contre Polycles*. Ce dernier raconte qu'il a du se rendre à Hiéron – où l'entrée dans le détroit du Bosphore était fixée, pour ceux qui venaient du Pont-Euxin[106]-afin d'escorter pendant quarante-cinq jours les navires athéniens chargés de céréales qui avaient quitté le Pont-Euxin après le lever d'Arcturos, c'est-à-dire à l'équinoxe d'automne: « Quant à moi, je pris un autre officier de bord; je partis pour convoyer les blés, et je restais là quarante-cinq jours, tant que dura le passage des vaisseaux de commerce qui avaient quitté le Pont après le lever de l'Arcturos »[107]. Ainsi, les navires quittaient le Pont-Euxin en automne jusqu'au début du mois de novembre, à savoir, à une date très proche du coucher des Pléiades (le 8 novembre) qui marque le début de l'hiver et de la mauvaise saison: « Nous avions chaque nuit, dans cette saison de l'année, de la pluie, du tonnerre, un vent violent (car tout cela se passait au moment du coucher des Pléiades) »[108].

Pendant l'hiver, la navigation dans le Pont-Euxin était très limitée ou presque arrêtée en raison des conditions météorologiques défavorables. D'ailleurs, la Mer Noire a une particularité climatique liée à son caractère de mer septentrionale et continentale: le gel qui rend quasiment impossible la navigation sur les côtes nord et ouest du Pont-Euxin pendant une partie de l'hiver[109]. Le poète Ovide décrit les conditions de navigation défavorables sur la Mer Noire, pendant l'hiver, qu'il a dû affronter lorsqu'il est venu à Tomis; c'est pourquoi le poète lui-même préfère traverser la région du détroit par voie terrestre. Cela peut être interprété comme une précaution pour éviter les risques de la traversée des détroits en mer[110]. Selon Appien, pendant l'hiver de 73 av. J.-C., le roi Mithridate qui assiégeait la cité de Cyzique sur la côte sud de la Propontide ne pouvait compter sur aucun approvisionnement de nourriture pour son armée par voie de mer, pendant l'hiver: « D᾽ailleurs, l᾽hiver approchait et interromprait bientôt ses approvisionnements par voie de mer (…). Quand l'hiver arriva, Mithridate fut privé de ses approvisionnements par mer, si jamais il en eut, de sorte que son armée entière souffrit de la faim, et bon nombre d'entre eux moururent… »[111]. On ne sait pas si les difficultés de navigation que Mithridate a rencontrées étaient liées à la Mer Noire ou à la Mer de Marmara[112].

[106] CASTELLI 2019, p. 28–29.

[107] DÉMOSTHÈNE, Or. 50 (Contre Polycles), 19: « *αὐτὸς δὲ πεντηκόνταρχον ἕτερον λαβὼν ἀνηγόμην ἐπὶ τὴν παραπομπὴν τοῦ σίτου, καὶ ἐκεῖ περιέμεινα πέντε καὶ τετταράκοντα ἡμέρας, ἕως ὁ ἔκπλους τῶν πλοίων τῶν μετ᾽ ἀρκτοῦρον ἐκ τοῦ Πόντου ἐγένετο* ».

[108] DÉMOSTHÈNE, Or. 50 (Contre Polycles), 23: « *Ἔτι δὲ συνέβη τῆς νυκτὸς ὥρᾳ ἔτους ὕδωρ καὶ βροντὰς καὶ ἄνεμον μέγαν γενέσθαι ὑπ᾽ αὐτὰς γὰρ Πλειάδων δύσεις οἱ χρόνοι οὗτοι ἦσαν…* »; voir aussi Castelli 2016, p. 236.

[109] Strabon situe la limite sud de la formation de la glace dans le Bosphore cimmérien entre Korokondamé et Akra Strabon XI, 2, 8; à son tour, Ovide mentionne aussi de la glace aux alentours de Tomis, OVIDE, Epistulae ex Ponto, IV, 7, 7; 10, 32–34; Tristia, III, 10, 38–52; 4, 4 apud CASTELLI 2016, p. 226–227.

[110] OVIDE, Tristia, I, 10–11.

[111] APPIEN, Mith. XI, 72 et 76: « *Ὅ τε χειμὼν ἤδη πλησιάζων ἔμελλε καὶ τῶν ἀπὸ τῆς θαλάσσης αὐτὸν ἐν ἀπορίᾳ καταστήσειν (…). Μιθριδάτου δὲ χειμὼν ἐπιγενόμενος ἀφήρητο καὶ τὴν ἐκ τῆς θαλάττης ἀγοράν, εἴ τις ἦν, ὥστε πάμπαν ὁ στρατὸς ἐλίμωττε, καὶ πολλοὶ μὲν ἀπέθνησκον…* ».

[112] CASTELLI 2016, p. 236.

La saison de navigation dans la Mer Noire s'ouvrait au printemps, début avril, au plus tôt, et durait jusqu'au 8 novembre environ, qui marquait le début de l'hiver. La plupart des entrées des navires dans la Mer Noire avaient lieu au printemps, une période pendant laquelle les conditions de navigation étaient très favorables tout au long du parcours entre la Mer Egée et les cités pontiques. Les navires pouvaient sortir du Pont-Euxin pendant toute l'année, mais l'interférence avec d'autres facteurs, comme la période des récoltes dans les cités pontiques, contribuait à une concentration des flux en fin d'été et début d'automne; d'ailleurs, c'était la période où les navires chargés de céréales revenaient du Pont-Euxin. Pendant l'hiver, la navigation des navires dans la Propontide et le Pont-Euxin était très limitée ou presque arrêtée en raison des conditions météorologiques défavorables. Surtout dans la Mer Noire, le gel empêche la navigation et l'approche des navires des côtes nord et ouest du Pont-Euxin pendant une grande partie de l'hiver[113].

Conclusions

Les trois saisons de l'année agricole sont marquées dans les colonies milésiennes, tout comme à Athènes, par trois fêtes fondamentales de leur calendrier civique: les *Pyanepsies*, les *Anthestéries* et les *Thargélies*. Chacune de ces trois fêtes marque le passage d'une saison à l'autre. Cette division tripartite de l'année ne tenait pas compte des solstices et des équinoxes, mais du calendrier et de la succession des travaux agricoles, eux-mêmes marqués de manière spécifique par les rituels agraires qui se déroulaient au début ou à la fin de chaque saison; en effet, la plupart des fêtes marquent des moments importants dans la succession des saisons, ainsi que dans la vie et les travaux des champs. Par conséquent, chacune des trois saisons ne peut être réduite à un nombre spécifique de mois, pas plus que la frontière entre les saisons ne peut être tracée avec précision. La tradition des quatre saisons, « fabriquée » sur la grille du calendrier solaire, s'est superposée au découpage de l'année en trois saisons, qui tient compte des phases du cycle de vie et du calendrier des rituels agricoles.

BIBLIOGRAPHIE

AUJAC 1982 – G. Aujac, *Le calendrier agricole dans Les Travaux et les Jours d'Hésiode*, Pallas 29 (1982), p. 3–15.

BLOMBERG, HENRIKSSON 1996 – M. Blomberg, G. Henriksson, *Minos Enneoros: Archaeoastronomical light on the priestly role of the king in Crete*, dans: P. Hollström, B. Alroth (eds.), *Religion and Power in the ancient Greek World*, Uppsala, 1996, p. 27–39.

BRICAULT 2006 – L. Bricault, *Isis, Dame des flots*, Aegyptiaca Leodiensia, 7, C. I. P. L., Liège, 2006.

CALAME 1996 – Cl. Calame, *Thésée ou l'imaginaire athénien: légende et culte en Grèce antique*, Laussanne, 1996.

CAMPS-GASET 1994 – M. Camps-Gaset, *L'année des Grecs, la fête et le mythe*, Annales Littéraires de l'Université de Besançon, Paris, 1994.

CASEVITZ 1991 – M. Casevitz, *Le vocabulaire agricole dans le calendrier grec*, dans: M. Cl.

[113] CASTELLI 2016, p. 226–227.

Cauvin (coord.), *Rites et rythmes agraires*, (collection de *Travaux de la Maison de l'Orient* n° 20), GDR Maison de l'Orient Méditerranéen, Lyon, 1991, p. 109–112.

CASTELLI 2016 – Th., Castelli, *Les conditions de la navigation commerciale dans l'ouest de la Mer Noire aux époques classique et hellénistique*, dans: V. Cojocaru, A. Rubel (eds.), in collaboration with D. Stah, Th. Castelli, *Mobility in Research on the Black Sea Region*, Cluj-Napoca, 2016, p. 223–246.

CASTELLI 2019 – Th. Castelli, *Entrer et sortir du Pont-Euxin durant l'Antiquité (VIIe s. av. J.-C.-premier quart du IVe s. ap. J.-C.*, dans: V. Cojocaru, L. Ruscu, Th. Castelli, A.-I. Pázsint, (éds.), *Advances in Ancient Black Sea Studies: Historiography, Archaeology and Religion*, Cluj-Napoca, 2019, p. 27–54.

CHANTRAINE I 1968/II 1970/III 1974/IV–2 1980 – P. Chantraine, *Dictionnaire étimologique de la langue grecque*, t. I–IV, Paris, (1968–1980).

EHRHARDT 1983 – N. Ehrhardt, *Milet und seine Kolonien. Vergleichende Untersuchung der kultischen und politischen Einrichtungen*, I–II, Frankfurt am Main/Bern/New-York, 1983.

FERARU 2008 – R. M. Feraru, *Nouvelles contributions à l'étude des cadrans solaires découverts dans les cités grecques de Dobroudja*, Dialogues d`histoire ancienne 34/2 (2008), p. 65–80.

FERRARI 2003 – A. Ferrari, *Dicționar de mitologie greacă și romană*, Iași, 2003.

GUNNING 1918 – F. Gunning, *s.v. Jahreszeiten*, in: *Realencyclopädie der classischen Altertumswissenschaft, Supplementband III, Aachen–ad Iuglandem (1918)*, col. 1.164–1.175.

HERDA 2006 – A. Herda, *Der Apollon-Delphinios-Kult in Milet und die Neujahrsprozession nach Didyma: Ein neuer Kommentar der sog. Molpoi-Satzung*, Mainz am Rhein, 2006.

HILD 1900 – J.-A. Hild, *s.v. Horae,* dans: DAGR III/1, Paris, 1900, p. 249–256.

HOFINGER 1981 – M. Hofinger, *Études sur le vocabulare du grec archaïque*, Leiden, 1981.

JACQUEMIN 2005 – A. Jacquemin, *s.v. Temps*, dans: J. Leclant (coordonateur), *Dictionnaire de l'Antiquité*, Paris, 2005, p. 2.113.

JAJLENKO 1995 – V. P. Jajlenko, *Zhenshchiny, Afrodita i zhrica Spartokidov v novykh bosporskikh nadpisjakh* (*Les femmes, Aphrodites et la prêtresse des Spartocides dans de nouvelles inscriptions du Bosphore*), dans: L. P. Marinovich, S. Ju Saprykin (éds.), *Zhenshchina v antichnom mire (La femme dans le monde antique)*, Mouscou, 1995, p. 204–272.

JOLLES 1913 – A. Jolles, *s.v. Horai,* dans: RE VIII/2 1913, col. 2.300–2.313.

KNOEFLER 1989 – D. Knoefler, *Le calendrier des Chalcidiens de Thrace. Essai de mise au point sur la liste et l'ordre des mois eubéens*, Journal des savants 1–2 (1989), p. 23–59.

KOSSAIFI 2007 – Chr. Kossaifi, *Opora. L'automne entre mort et renaissance*, dans: A. Montandon (éd.), *L'Automne*, Clermont-Ferrand, 2007, p. 19–39.

KOSSAIFI 2018 – Chr. Kossaifi, *Vivre les saisons en Grèce ancienne. Au rythme des mots, des mythes et de l'art*, dans: A. Montandon (éd.), *Ecrire les Saisons. Culture, Arts et Lettres*, collection MeteoS, Paris, 2018, p. 29–76.

KRAVARITOU 2002 – S. Kravaritou, *La construction d'un « calendrier » en Grèce ancienne: temps du rituel et temps du récit*, Kernos 15 (2002), p. 31–40.

LEHOUX 2007 – D. Lehoux, *Astronomy, weather, and calendars in the ancient world: parapegmata and related texts in classical and Near Eastern societies*, Cambridges, 2007.

MIKALSON 1975 – J. D. Mikalson, *The Sacred and Civil Calendar of the Athenian Year*, Princeton, 1975.

NILSSON 1906 – M. P. Nilsson, *Griechische Feste von religiöser Bedeutung mit Ausschluss der attischen*, Lipsiae, 1906.

NILSSON 1962 – M. P. Nilsson *Die Entstehung und religiöse Bedeutung des griechischen Kalenders*, Lund, 1962.

PRITCHETT, VAN DER WAERDEN 1961 – W. K. Pritchett, B. L. Van der Waerden, *Thucididean time-reckoning and Euctemon's seasonal calendar*, Bulletin de Correspondance Hellénique 85 (1961), p. 17–52.

ROBERTSON 1984 – N. Robertson, « *Poseidon's Festival at Winter Solstice* », Classical Quarterly 34/1 (1984), p. 1–16.

SALVIAT 1958 – F. Salviat, *Une nouvelle loi thasienne: institutions judiciaires et fêtes religieuses à la fin du IVe siècle av. J.-C.*, Bulletin de Correspondance Hellénique 82 (1958), p. 193–267.

SALVIAT 1992a – F. Salviat, *Calendrier de Paros et calendrier de Thasos, Boedromia, Badromia et la solidarite des armes*, dans: M. M. Mactoux, E. Geny (éds.), *Mélanges Pierre Léveque 6*, *Religion*, (Centre de Recherche d'Histoire Ancienne, vol. 113), Annales Litteraires de l'Universite de Besançon, 463, Paris, 1992, p. 261–267.

SALVIAT 1992b – F. Salviat, *Sur la religion de Marseille grecque*, dans: M. Bats, G. Bertucchi, G. Congès, H. Tréziny (éds.), *Marseille grecque et la Gaule. Études Massaliètes* 3, Aix-en-Provence, 1992, p. 142–150.

SALVIAT 2000 – F. Salviat, *La source ionienne: Apatouria, Apollon Delphinios et l'oracle, l'Aristarcheion*, dans: A. Hermary, H. Tréziny (éds.), *Les cultes des cités phocéennes. Études Massaliètes 6, Actes du colloque international Aix en Provence, Marseille, 4–5 juin 1999*, Aix-en-Provence, 2000, p. 25–31.

TRÜMPY 1997 – C. Trümpy, *Untersuchungen zu den altgriechieschen Monatsnamen und Monatsfolgen*, Heidelberg, 1997.

TRÜMPY 1998 – C. Trümpy, *Feste zur Vollmondszeit: Die religiösen Feiern Attikas im Monatslauf und der vorgeschichtliche attische Kultkalender*, Zeitschrift für Papyrologie und Epigraphik 121 (1998), p. 109–115.

VINOGRADOV 1990 – Ju. G. Vinogradov, *Côte septentrionale du Pont, Caucase, Asie Centrale*, BÉ (1990), p. 531–560.

Sources littéraires

Appien, *Roman History*, II, Books VIII, Part II–XII, translated by Horace White, London, 1962.

Aratos, *Phainomena. Sternbilder und Wetterzeichen*, Herausgegeben und übersetzt von Manfred Erren, Düsseldorf, 2009.

Aristote, *Histoire des animaux*, vol 1–3, (Livres I–X), texte établi et traduit par Pierre Louis, Paris, 1964–1969.

Demosthenes, *Orationes*, ed. W. Rennie. Oxonii. E Typographeo Clarendoniano, 1921.

Herodot, *Istorii*, I–IV, studiu introductiv, traducere, notițe istorice și note de Adelina Piatkowski, București, 1998–1999.

Hérodote, *Histoires,* traduction par Ph.-E.-Legrand Paris, 1992.

Hésiode, *Théogonie; Les Travaux et les Jours; Le bouclier*, texte établi et traduit par Paul Mazon, Paris, 1993.

Homer, *Iliada*, vol. I–III, (ediția a II-a, bilingvă), traducere în metrul original de George Murnu, studiu introductiv și note de D. M. Pippidi, București, 1999.

Homère, *L'Odyssée*, T. 1–3 (Chants I–XIV), texte établi et traduit par Victor Bérard, Paris, 1987–1992.

Strabon, *Geografia*, vol. I, II, III, studiu introductiv, traducere, notițe introductive, note și indice de Felicia Vanț-Ștef, București, 1971–1983.

Dates du calendrier julien	**Des repères astronomiques pour le début et la fin des saisons**	**Durée de la saison**
Le 6 mars **Le 19–21 mars**	Le lever du soir d'Arcturus: début du printemps L'équinoxe de printemps: le début du printemps astronomique	Le printemps (*ἔαρ*) 6 mars–8/13 mai
Le 8 /13 mai	Le lever matinal des Pléiades: début de l'été (*θέρος*)	L'été (*θέρος*) 8 /13 mai–23 juillet
Le 23 juillet	Le lever de Seirios: début de l'*Opora*	L'été (*ὀπώρα*) 23 juillet–14 septembre
Le 14 septembre	Le lever matinal d'Arcturus: début de l'automne	L'automne (*μετόπωρον*) 14 septembre–8 novembre
Le 8 novembre	Le coucher des Pléiades: début de l'hiver	L'hiver (*χειμών*) 8 novembre–6 mars

Fig. 1. Le début et la durée des saisons dans les cités milésiennes du Pont-Euxin.

Saisons	**Fêtes dans les cités pontiques milésiennes**	**Mois du calendrier dans les cités pontiques milésiennes**	**Les mois du calendrier julien**
Printemps (Ear)	Anthesteria / Ἀνθεστήρια (12–13 Anthestériôn)	11. Anthestériôn	février-mars
	Dionysia ta Megala (Διονύσια τὰ μεγάλα)	12. Artémision	mars-avril
	Taurea / Ταύρεα (12–20 Tauréôn)	1. Tauréôn	avril-mai
Été (Theros/ Opora)	Thargelia / Θαργήλια (1 și 7 Thargéliôn)	2. Thargéliôn	mai-juin
	Kalamaia / Καλαμαῖα	3. Kalamaiôn	juin-juillet
	-	4. Panemos	juillet-août
Automne (Metoporon)	Metageitnia / Μεταγείτνια (12 Métageitniôn)	5. Métageitniôn	août-septembre
	Boedromia / Βοηδρόμια (6 Boédromiôn)	6. Boédromiôn	septembre-octobre
	Pyanepsia / Πυανέψια (7 Pyanepsiôn)	7. Pyanepsiôn	octobre-novembre
	Apatouria / Ἀπατούρια	8. Apaturéôn	novembre-décembre
Hiver (Cheimon)	Posideia / Ποσιδεία (12–14 Posidéôn)	9. Posidéôn	décembre-janvier
	Lenaia (Λήναια)	10. Lénaiôn	janvier-février

Fig. 2. Saisons, fêtes et calendrier dans les cités milésiennes du Pont-Euxin.

HISTRIA. NOUVELLES DONNÉES SUR LE TRAJET DU REMPART HELLÉNISTIQUE DE L'ACROPOLE

Mircea V. ANGELESCU[*]

Cuvinte-cheie: *Histria, zidul de apărare elenistic al Acropolei, fragment arhitectonic, incintă, fundație, elevație, tehnica de construcție.*

Keywords: *Histria, the Hellenistic defensive wall of the Acropolis, architectural fragment, precinct, foundation, elevation, construction technique.*

Rezumat: *Articolul își propune organizarea informațiilor de care dispunem cu privire la tehnica construcției și a modului în care fortificația Acropolei din perioada elenistică își îndeplinește rolul de element principal al apărării părții centrale a cetății, dar și de element principal al apărării militare a orașului din ultima treime a secolului al IV-lea a.Chr. până la începutul secolului al II-lea p.Chr. Nu știm care erau atribuțiile funcționarilor publici însărcinați cu paza zidurilor în inscripțiile vremii, dar existența lor dovedește, cel puțin în a doua jumătate a secolului al III-lea a.Chr., că au existat histrieni a căror misiune publică era legată de menținerea în stare bună a zidurilor de apărare ale orașului. Sunt prezentate și câteva dintre rezultatele săpăturilor efectuate în partea de sud a sitului.*

Abstract: *This article aims to organize the information at our disposal on the construction technique and how the Acropolis fortification of the Hellenistic period fulfills its role as the main element of the defense of the central part of the citadel, but also as the main element of the military defense of the city from the last third of the IVth century BC.-to the beginning of the IInd century AD. We do not know what were the responsibilities of the public servants called "wall watchmen" in the inscriptions of the time, but their existence proves it, at least in the second half of the IIIrd century BC., there were Histrians whose public mission was linked to maintaining the good condition of the city defense walls. Some of the results of the excavations made in the South of the site are also presented.*

Les circonstances historiques et les conditions naturelles[1] ont déterminé tout au long de l'époque grecque la construction et l'entretien d'un système défensif composé de doubles enceintes-une fortification de l'Acropole et une enceinte, plus large, contournant le Plateau occidental[2] (**Fig. 1**). Les fortifications de l'Acropole répondent aux besoins et à l'évolution, inclusivement politique[3], de la cité, modifiant leurs

[*] Mircea V. ANGELESCU: Institutul de Arheologie „Vasile Pârvan", București; e-mail: mircea.angelescu@gmail.com.

[1] VESPREMEANU-STROE *et alii* 2017, p. 38–61.

[2] ANGELESCU 2003–2005, p. 55–84; ANGELESCU 2018a.

[3] PETRE 2003–2005, p. 33–53.

trajets et les surfaces qu'elles entourent à chaque époque[4]. L'autre rempart délimite la cité de la *chora* entourant-l'enceinte du Plateau reste inchangée, avec des modifications mineures, pendant toute l'époque grecque (**Fig. 4, 5, 6**).

Des fouilles, plus anciennes et plus récentes, nous savons que les fortifications successives de l'Acropole ont été construites en blocs de pierre, tandis que les enceintes du Plateau étaient en pisé ou en briques d'argile séchées au soleil et édifiées sur un socle en pierre de quelques assises de haut seulement et qui était destiné à assurer l'isolement du massif de maçonnerie de briques brulées à l'humidité du sol[5].

Le mur de défense est, pour toutes les colonies, une structure constructive de première importance. Par ses dimensions et ses éléments constitutifs, la fortification d'un établissement urbain détermine tout son programme d'organisation spatiale et exerce des influences majeures sur sa structure urbaine. De plus, une fortification exploite le paysage de l'ensemble du territoire et marque de son empreinte l'évolution historique de ses différentes composantes par la multitude de fonctions qu'elle remplit-depuis l'incorporation des accès vers/depuis l'extérieur jusqu'à la délimitation juridique et religieuse d'un certain territoire[6].

L'enceinte urbaine[7] est une muraille qui entoure toute la zone habitée, mais qui peut aussi protéger des zones assez vastes dépourvues d'habitation, qu'il s'agisse de réserves pour une habitation future, d'espaces agricoles permettant d'assurer un minimum de subsistances et d'accueillir la population du territoire en cas de menace, ou simplement de zones importantes pour assurer la défense de la zone habitée[8].

Un rempart constitue, pour la cité, une structure constructive primordiale qui détermine le programme d'organisation spatiale et a des influences majeures sur la structure urbaine de la ville et, en même temps, met son empreinte sur l'évolution historique du paysage.

La relation biunivoque entre la cité, en tant que structure urbaine d'habitation et le paysage est très bien illustrée, à Histria ou le besoin d'utiliser un certain territoire avec ses caractéristiques a imposé des solutions adaptées à des différents besoins-voir l'emplacement du port[9] ou l'utilisation, dans certaines zones de la cité, du système des « fondations olbiennes »[10] pour répondre au besoin de renforcer un terrain humide et instable. Le même est vrai pour la réponse aux besoins de la défense du territoire de la cité à l'époque grecque.

L'enceinte archaïque de l'Acropole présumée comme entourant strictement le rocher du point de la presqu'île occupé par les colons milésiens, érigée, probablement,

---

[4] ANGELESCU 2018a, pl. 1 et 29–31.

[5] ANGELESCU 2018a, p. 79–200.

[6] MÜTH *et alii* 2016, *passim*.

[7] TRÉZINY 1999, p. 242.

[8] Ces enceintes datées vers la fin du VI[e] s. av. J. C. protègent généralement des espaces très vastes-ex: 150 ha (Vélia), 70 ha (Mégare), 50 ha (Syracuse), 40 ha (Massalia).

[9] ANGELESCU 2018b, p. 343–384.

[10] DIMITRIU 1966b, p. 473–489; WASOWICZ 1970, p. 39–61; conformable aussi l'analyse de DUPONT 2002, p. 294–296, fig. 100. À part les « fondations olbiennes » connues depuis longtemps dans le secteur X et au Sg sur le Plateau de l'ouest de la cité, récemment le même système a été mis au lumière par la fouille de I. Bîrzescu dans la Zone Sacrée.

pendant le deuxième quart du VI^e siècle av. J.-C[11] a fonctionné jusqu'au début du V^e siècle av. J.-C. quand, aux cours des troubles de la zone liés aux évolutions des conflits avec les Perses, des portions du trajet de l'enceinte autour du Plateau ont été désaffectées, aussi.

À l'époque classique, vers les milieux du V^e siècle av. J.-C., on assiste à un agrandissement spectaculaire de la surface entourée par le solide rempart de l'Acropole de cette époque, probablement dans les conditions des modifications politiques décrites par Aristote, dans sa *Politique*, dans tout le monde grec[12].

Enfin, à l'époque hellénistique on assiste à une restreinte importante de la superficie entourée par le rempart de l'Acropole de cette époque qui ne défend que la moitié de la superficie fortifiée à l'époque classique.

L'histoire des recherches de l'enceinte hellénistique doit, elle aussi mise dans le contexte de l'évolution des fouilles d'Histria.

La fortification romaine tardive, entourant le point de la péninsule jetée dans les eaux de la Mer Noire, été visible à la surface du terrain pour E. Desjardins[13] et aussi pour C. Moisil[14] bien avant le commencement des fouilles systématiques et ce fait a contribué à le transformer dans l'objectif des premières recherches menées à Histria par V. Pârvan commençant avec 1914[15]. D'ailleurs, il a commencé les fouilles avec la Grande Tour (« Turnul cel Mare »)[16] et avec la Grande Porte de la cité romaine du Bas-Empire.

S. Lambrino a été celui qui a commencé la recherche du rempart se trouvant environ 380 m à l'ouest, mais il n'a rien publié de ses fouilles[17]. Cela a permis, après 1949, l'attribution des mérites de la recherche du rempart romain du Haut-Empire à des romanistes comme Gr. Florescu et Gh. Cantacuzino[18]. Les recherches ont été complétées par les fouilles de M. Coja auxquelles nous devons la découverte, dans le mortier de la fondation de ce mur, d'une pièce de monnaie d'Hadrian qui assure la datation du moment de la construction de cet important monument d'Histria[19].

En plus, il faut mentionner que des diverses hypothèses (barrage érigé pour protéger la cité de l'avancement des bovins jusqu'à une fortification avec au moins deux phases constructives) ont visé ce rempart.

La destruction violente et radicale du rempart du Haut-Empire doit être mise en relation avec la construction de la nouvelle fortification post-gothique[20] qui restreint de nouveau la superficie défendue à seulement 7,5 ha. On constate que la nouvelle fortification romaine du Bas-Empire se déplace avec 380 m vers l'est et englobe

[11] COJA 1986, p. 98.

[12] PETRE 2003–2005, p. 33–53.

[13] DESJARDINS 1868, p. 270.

[14] MOISIL 1909, p. 166–168.

[15] PÂRVAN 1923, p. 32, fig. 14, offre une image du paysage (les vallums et les fossés de la cité tardive) au commencement des fouilles.

[16] PÂRVAN 1923, p. 90, fig. 53 (« la Grande Tour fouillée dès le début de la campagne 1914 ») et p. 42, fig. 22 (« le coté occidentale de la Grande Tour »).

[17] LAMBRINO 1931a, p. 5; conformable aussi ADAMEȘTEANU 1955, p. 219 pour les fouilles faites par V. Pârvan, S. Lambrino, E. Coliu.

[18] FLORESCU, CANTACUZINO 1954, p. 285–293.

[19] SUCEVEANU 1982, p. 79, n. 64.

[20] Connue comme la Phase A (première phase de l'enceinte romano-byzantine).

seulement l'extrémité orientale du promontoire initialement occupé par les colons milésiens à la moitié du VII[è] siècle av. J.-C. Une autre conséquence extrêmement importante est que pour la première fois, après dix siècles, le port n'est plus défendu à l'intérieur de la fortification de la cité, mais sa défense est assurée par sa présence dans la proximité du front méridional du rempart hellénistique de l'Acropole[21].

Bien sûr, toutes les retraites et les avancements des remparts de l'Acropole se déroulent sur le même territoire, défini par l'évolution de la ligne du littoral vers l'est et vers le nord et par l'évolution de la forme et de la surface du port vers le sud[22].

La zone située dans la proximité occidentale de l'enceinte du Bas-Empire a été affectée par les fouilles de V. Pârvan-l'étroite tranchée creusée à l'extérieur de l'enceinte et l'enlèvement des murs sans mortier a détruit toute possibilité de reconstitution des liaisons stratigraphiques[23]. Chronologiquement, les suivantes fouilles sont celles de S. et M. Lambrino de 1935 à l'extérieur du rempart pour l'aménagement de l'espace compris entre le rempart post-gothique et le premier des *vallums*[24].

Finalement, c'est seulement, en 1950, à l'occasion de la fouille de la section magistrale est-ouest (320 × 80 × 4 m) réalisée en 1949–1952[25] qu'au-dessous du *vallum n° III* (érigée juste en face du rempart post-gothique assurant la défense de la cité du Bas-Empire) des vestiges d'une importante fortification ont été découverts[26].

Les recherches se sont développées en partant de la fouille de la Coupe N-S (« La grande section N-S ») de 1950–1953-une tranchée qui a coupé la cité du bord du lac Sinoe (est) jusqu'au rempart romain du Haut-Empire érigé au temps du Hadrien, sinon même Trajan[27].

La coupe initiale a été placée à l'intérieur du *vallum* III, et puis les fouilles ont continué sous la coordination de V. Canarache et les résultats ont été publiés régulièrement[28]. Le résultat final des recherches a été publié par C. Preda et l'architecte A. Doicescu dans le volume Histria II[29] paru, en 1966 et la stratigraphie de la zone a été complétée par les recherches entreprises, ultérieurement, dans la zone par Nubar Hamparţumian[30]. La fouille n'a pas pu descendre au-dessous des niveaux hellénistiques à cause de la présence de l'eau phréatique[31], ce qui indique une zone plus basse du terrain. En retour, les niveaux hellénistiques ont été mieux observés à l'ouest de l'enceinte hellénistique. Après les coupes pour vérifier la stratigraphie

[21] ANGELESCU 2018b, p. 357–358.

[22] ANGELESCU 2018b, p. 353–354.

[23] PÂRVAN 1915a, p. 117; PÂRVAN 1916a, p. 190; PÂRVAN 1923, p. 39, fig. 20; voir aussi ANGELESCU 2019a, p. 181–198.

[24] VULPE 1935, p. 185.

[25] Les rapports des fouilles ont été publiées par: CONDURACHI *et alii* 1951, p. 146–147; CONDURACHI *et alii* 1952, p. 243–248; CONDURACHI *et alii* 1953, p. 104–113; *ŞANTIERUL HISTRIA* 1954, p. 71–79; *ŞANTIERUL HISTRIA* 1955, p. 520–526; CANARACHE 1954, p. 278–285; CONDURACHI 1957, p. 365–388.

[26] CANARACHE 1954, pl. XVI.

[27] CANARACHE, DIMITRIU 1954, p. 163–205 et pl. XVI.

[28] Voir les rapports publiés par CANARACHE 1952, p. 243–218; CANARACHE 1953, p. 104–113; CANARACHE 1954, p. 71–79; CANARACHE 1955, p. 520–526.

[29] PREDA, DOICESCU 1966, p. 295–334.

[30] NUBAR 1970, p. 191–199; NUBAR 1971, p. 199–215.

[31] NUBAR 1970, p. 196, fig. 13.

entre le III^e *vallum* et le rempart romain du Haut-Empire, des vestiges de cette époque ont été retrouvés: traces de murs ou de fondations appartenant à certaines habitations, quelques foyers, des dallages en pierre et même un tuyau pour l'eau[32]. Immédiatement à l'Ouest, l'habitation d'époque hellénistique devient plus intense-comme le prouvent les découvertes faites dans les secteurs BEM S.1 (2004–2010) et aussi en Z2 et X, en 1949–1950[33].

De la description de la fouille publiée, en 1966, résulte que le front occidental de la fortification hellénistique est superposé par le *valum III.* Après 167 m le rempart tourne vers l'est parce qu''elle a été reconnue à l'intérieur de la cité du Bas-Empire où il constitue la limite méridionale de l'édifice des Thermes[34] (**Fig. 1**, **2**).

À l'époque hellénistique le rempart de l'acropole avait une longueur que l'on estime à un peu plus de 1000 m et renfermait env. 7,5 ha et, en même temps, l'enceinte urbaine du Plateau située à l'Ouest renfermait une superficie que l'on estime à 32 ha et avait un périmètre de plus de 3 000 m. Donc, à l'époque hellénistique on assiste à une restreinte importante de la superficie entourée par le rempart de cette époque qui ne défend que la moitié de la superficie fortifiée à l'époque classique.

Les fouilles ont démontré[35] que le moment de construction du rempart hellénistique de l'acropole est à placer pendant le dernier tiers du IV^e s. av. J.-C. et a été mise en liaison avec de différents événements de l'époque[36]. Cette fortification, après des réparations successives, paraît rester en fonction jusqu'au début du II^e siècle ap. J.-C. quand ses fonctions défensives on était reprises par le rempart romain du Haut-Empire, construit à l'époque d'Hadrien[37] sinon même Trajan, qui se trouve a env. 400 m vers l'ouest.

Le front septentrional

En ce qui concerne le front septentrional de l'enceinte hellénistique de l'Acropole on va commencer par décrire la situation rencontrée lors de sa fouille par H. Nubar[38]. Sans avoir la prétention qu'on apporte des nouveautés, on croit que ce sera utile de revoir les donnes à notre disposition pour cette enceinte. Tout d'abord, il convient de mentionner l'observation faite concernant la situation rencontrée lors de la coupe faite devant la poterne qui se trouve au sud de la courtine *b* où a été identifié[39], à l'intérieur de l'*emplekton* de l'enceinte tardive un fragment de maçonnerie massif, composé uniquement de blocs de grandes dimensions et sans l'utilisation de mortier[40]-ce qui nous indique qu'il est un fragment de maçonnerie d'une enceinte datable à l'époque grecque. Les recherches faites à l'intérieur de la cité ont conduit à la découverte d'un autre fragment de mur massif (appelé mur X) qui est antérieur

[32] CANARACHE, DIMITRIU 1954, p. 173–180, pl. XIII, fig. 61–64 (sections S 3-S 5 de 1951).

[33] DIMITRIU 1954, p. 177–180, pl. XIII; DIMITRIU 1966a, p. 19–132; voir aussi RUSU-BOLINDEȚ *et alii* 2014, p. 199–219.

[34] SUCEVEANU 1982, p. 75–92.

[35] CANARACHE 1954, p. 278–285.

[36] COJA 1964, p. 383–400.

[37] SUCEVEANU 1982, p. 79.

[38] NUBAR, SION 1980, p. 19–31.

[39] FLORESCU 1954, p. 70.

[40] NUBAR, SION 1980, p. 27.

à la phase B de l'enceinte. Ce mur est orienté est-ouest et vient se coller à l'enceinte du Bas Empire, près de la tour C. La situation est presque identique avec la situation constatée immédiatement au sud de la tour I, où la phase B de l'enceinte romaine du Bas Empire vient se coller au mur de la phase A qui chevauche le front sud de l'enceinte hellénistique de l'Acropole. De plus, ici, le mur est-ouest semble également continuer vers l'ouest, au-delà de l'enceinte romaine tardive, sur au moins 4,65 m. La largeur du mur appelé « X » est de 2,60 m et il continue vers l'est après une interruption de 4 m. Il est considéré comme un fragment du front nord de la première étape d'existence de l'enceinte du Bas Empire (phase A). Semblable à la situation rencontrée dans l'angle sud-ouest de la cité, le mur de la phase A chevauche le front nord de l'enceinte hellénistique de l'Acropole[41]. La fouille du secteur A, de l'année 1983, a montré que le rempart hellénistique se dirige de la tour C vers l'est, pour arriver derrière (au nord) des temples de Zeus et A'. Quelques gros blocs calcaires appareillés et des traces d'aménagement du rocher, orientées est-ouest, pour recevoir le socle de l'enceinte hellénistique ont été découverts sous une plaque de mortier utilisée pour la construction du tronçon septentrional de la phase A[42].

En somme, on aurait le front septentrional de l'enceinte hellénistique de l'Acropole avec la même largeur que celle enregistrée sur le front méridional (2,60 m) et construit avec la même technique constructive-appareillage de gros bloc sans utiliser du mortier pour les parements et avec un *emplekton* réalisé dans une manière similaire, qu'au côté méridional. Cela signifie que la cité hellénistique était plus restreinte sur les côtés nord et sud et plus larges vers l'ouest-si on la compare avec la cité romaine du Bas Empire. Par contre les auteurs de la fouille nous disent rient sur la possibilité d'existence d'un point d'accès contemporain.

Le front septentrional de l'enceinte hellénistique entourait l'Acropole de son côté nord en arrivant jusqu'au coin nord-est du sanctuaire histrien (**Fig. 7**)[43]. Malheureusement le rapport archéologique de la fouille du Secteur A (la zone comprise entre la tour A et le sanctuaire histrien) a été publié seulement dans sa forme préliminaire et restreinte[44]. Cependant, cette découverte a démontré que l'enceinte hellénistique démarque le territoire de la cité-sans comprendre le quartier septentrional qui a été ajouté plus tard, dans une symétrie parfaite avec la situation constatée et enregistrée par nous au sud de la cité.

Le front occidental

Le plus connu est le front occidental, car il a été entièrement fouillé et étudié dans la période 1950–1964 et publié en 1966[45]. La recherche s'est étendue sur une longueur de 160 m et plusieurs secteurs du mur ont été discernés-différenciés par les moments chronologiques et des détails de la technique de construction.

Sur la plus grande partie du front ouest, la fondation est le seul élément

[41] L'hypothèse de FLORESCU 1954, p. 66–67 a été reprise par ȘTEFAN 1975, p. 53 et puis argumentée par DOMĂNEANȚU, SION 1982, p. 378 et DOMĂNEANȚU 1983, p. 357–360; voir aussi DOMĂNEANȚU 1990, p. 265–283.

[42] Fouille DOMĂNEANȚU 1982.

[43] DOMĂNEANȚU 1990, p. 265–283;DOMĂNEANȚU, SION 1982, p. 377–394.

[44] DOMĂNEANȚU 1983, p. 357–360.

[45] PREDA, DOICESCU 1966, p. 295–336.

constructif unitaire et qui implique non seulement la même technique de construction, mais probablement aussi le même moment chronologique. Implantée sur une épaisse couche d'env. 0,20 m de sable gris, la fondation du mur de défense de l'acropole chevauche un niveau contenant des matériaux archéologiques appartenant au V–IV^e^ siècles av. J.-C.[46].

Structurellement, la fondation est constituée d'un radier (lit d'attente) de dalles calcaires régulièrement disposées et qui sont posées très soigneusement sur le sable d'origine. Ces dalles de calcaire sont des réemplois de constructions antérieures-fait attesté par la présence sur celles-ci de traces de crampons en plomb, dont certains en forme de queue d'aronde, destinée à assurer leur cohésion dans les constructions dans lesquelles ils ont été utilisés à l'origine (**Fig. 21**). Certains blocs sont ornés d'une baguette de 0,02 m de large, vestiges d'un décor des constructions dont ils sont issus. C'est seulement dans la zone de la porte qu'un autre system pour renforcer le sol a été utilisé ce qui a été confondu par les éditeurs du monument avec un system de drainage[47].

Une observation importante faite dans plusieurs sections du mur confirme le fait que des blocs plus anciens sont réutilisés à l'occasion de la construction de ce rempart, mais uniquement pour les fondations. L'élévation conservée en certains endroits, sur le front occidental, nous montre sa réalisation dans une technique de construction, très répandue à l'époque.

Les deux parements sont réalisés en grand appareil de blocs parallélépipédiques en pierre calcaire avec des dimensions très variables, donc, un appareil rectangulaire irrégulier (mur en boutisse et panneresse). Il y a des endroits ou entre les deux parements étaient installées, entre des blocs se faisant face, des traverses en bois dont les aboutissements étaient logés dans des paires des cavités creusées dans les formes des extrémités des poutres utilisées[48]. L'espace entre les deux parements est rempli par l'*emplekton*-un massif de remplissage bien compacté, formé de terre, argile, sable, blocaille de schiste vert de différentes dimensions et éclats de calcaire ou de schiste. Pour assurer la stabilité de l'*emplekton*, des blocs de calcaire étaient disposés perpendiculairement sur la ligne de l'enceinte, en boutisse[49]. Les poutres assuraient, en même temps, la liaison entre les parements et l'*emplekton* mais aussi constitué une structure de résistance menée à renforcer les parements[50].

D'ailleurs, cette technique de construction des murs en boutisse et panneresse (deux blocs disposés longitudinalement le long de la ligne de mur, suivis d'un bloc perpendiculaire à la ligne d'enceinte) qui se retrouve également à Delos[51], en Asie Mineure à Pergame[52] ou Magna Graecia à Velia[53]-est caractéristique aux fortifications grecques des IV^e^-I^er^ siècles av. J.-C.

[46] CANARACHE 1956, p. 289–318.

[47] PREDA, DOICESCU 1966 et les corrections faites par APOSTOL 2011, p. 39–46.

[48] PREDA, DOICESCU 1966, p. 316; conformable aussi ŞTEFAN 1995, p. 467–492.

[49] TOMLINSON 1961, p. 139.

[50] Les armatures en bois préconisés par Philon de Byzance (GARLAN 1974, p. 342–344; GARLAN 1992, p. 55–56).

[51] DELORME 1953, p. 444.

[52] DAUX 1957, p. 598–599.

[53] NEUTCH 1956, p. 327–351, fig. 106.

Dans la région pontique le même type d'appareillage est rencontré aux remparts érigés à cette époque à Olbia et Panticapaion, mais aussi à Tiritake[54]. Le rempart de la cité Callatis, bâti au milieu du IV^e^ s. av. J.-C. est ressemblant à celui d'Histria et, aussi, il est refait sur le même trajet après le siège de Lysimaque[55].

Les fouilles anciennes ayant comme objet l'extrémité septentrionale du front occidental ont mis en évidence que la construction initiale a été, à un moment ultérieur peu éloigné dans le temps de l'époque de la construction d'origine, doublé, à l'Ouest, par la construction d'un autre corps de maçonnerie[56]. Ainsi, cette partie qui est la plus ancienne du front occidental de l'enceinte hellénistique de l'acropole présente une similitude importante avec l'enceinte classique, qui possède également une partie importante réalisée de la même manière[57]-deux massifs de maçonnerie construits successivement et qui ne sont pas structurellement liés[58]. Cette technique nous fait comprendre que, dans les deux moments historiques séparés par environ deux siècles, les bâtisseurs ont utilisé la même solution pour assurer la stabilité de la construction massive représentée par la fortification de l'acropole.

En ce qui concerne l'extrémité méridionale du front occidental les anciennes fouilles nous disent seulement que « la branche du mur, qui part perpendiculairement vers l'est, constituait probablement, au moins à une certaine date, la limite sud de l'enceinte » sans nous donner plus de détails. Les tranchées effectuées au sud de ce secteur n'ont pas permis de retrouver le tracé de ce mur, mais les auteurs considèrent que l'enceinte ne se termine pas dans ce secteur, soupçonnant une extension de celui-ci vers le sud puis vers l'est[59]. Nommé par les auteurs de la fouille «la quatrième phase » et entre les carreaux 109 A et 145 B (l'extrémité sud de leurs recherches) est daté, fondé sur la datation de certains fragments architecturaux, comme la partie la plus récente de l'enceinte-la seconde moitié du II^e^ siècle av. J.-C.

La quatrième phase de la chronologie des éditeurs, par ordre de succession, est très mal conservée. Il ressemble au reste de l'enceinte par la présence du radier-le seul élément conservé *in situ*. D'ailleurs, la destruction et la réparation d'un des secteurs sud de l'enceinte a été liée à l'épisode bien connu de l'expédition de Burebista entreprise dans la partie ouest et nord de la Mer Noire[60]. Les auteurs des fouilles pensent que parmi eux se trouve la ville d'Histria, dont le mur défensif démoli avait besoin d'une réparation immédiate. En relation avec ces aspects de la question, une importance très particulière est le décret en l'honneur d'Aristagoras. Daté de la seconde moitié du I^er^ siècle av. J.-C.[61], le document susmentionné revêt une importance particulière.

Dans ledit décret, il est indiqué qu'après le passage du malheur qui s'abattit sur la ville, la citadelle fut laissée sans mur défensif. Avec le travail de sa réparation, les habitants de la ville ont chargé Aristagoras, le fils d'Apaturios. Sans ménager

[54] GAIDUKEVICI 1958, p. 149–196.
[55] PREDA 1980, p. 19 et suivantes; conformable aussi IONESCU, GEORGESCU 1998.
[56] PREDA, DOICESCU 1966, p. 298–300.
[57] COJA 1959a, p. 300–303.
[58] PREDA, DOICESCU 1966, p. 298.
[59] PREDA, DOICESCU 1966, p. 306–307.
[60] PÂRVAN 1926, p. 74–84; VULPE 1938, p. 98–100.
[61] PIPPIDI 1983, p. 138–147, no. 54.

ses efforts, il réussit à reconstruire le mur et ainsi mettre la ville à l'abri du danger. Par conséquent, il ressort du document épigraphique en question que le mur défensif de la ville est détruit et qu'il est immédiatement refait. Selon toute probabilité, cette réfection peut être liée aux événements mentionnés et consignés dans le décret en l'honneur d'Aristagoras-même si le lien avec l'expédition de Burebista reste à démontrer[62].

Un *terminus post quem* pour la destruction de l'enceinte a été établi sur la base d'observations stratigraphiques-il a été constaté que directement sur les restes de l'enceinte ont été déposés après sa démolition et après son démantèlement par les habitants de la ville, afin de réutiliser les matériaux de construction, vestiges de structures constructives datées de l'époque romaine. L'un des bâtiments qui chevauche l'ancienne enceinte hellénistique est construit avec les murs accolés à l'ancienne enceinte, ce qui prouve qu'il a été érigé peu après la désaffectation de l'enceinte. Le bâtiment a été daté sur la base des céramiques découvertes sur son sol aux I^{er}-II^{e} siècles av. J.C.[63].

De plus, au-dessus des vestiges datés de cette phase III, un mur de 1,95 m de large est apparu en 1953 qui se poursuit à l'ouest, mais n'a pas été recherché qu'après 1966. Le même édifice a également été partiellement investigué par H. Nubar, mais pas assez de recherches ont été faites pour pouvoir préciser la fonction et la datation plus précise de la construction. Les murs en terre des constructions de l'époque byzantine qui le chevauchent, cependant, constituent le *terminus ante quem*-II–IV siècles ap. J.-C. Les très importantes recherches en cours [64] ont établi que ce bâtiment (90 × 20 m) a été construit au début du III^{e} siècle ap. J.-C., probablement pendant le règne de Septime Sévère[65].

En conclusion, l'enceinte hellénistique de l'Acropole a cessé de fonctionner à partir de la fin du II^{e} siècle av. J.-C. puisqu'elle est recouverte par ce supposé *horreum*[66] bâti à l'époque de Septime Sévère.

Le front oriental

Ce front est dominé par le fonctionnement, dans cette aire, de la Zone sacrée histrienne[67]. Après les fouilles du secteur A qui ont mis en évidence la présence du rempart hellénistique à la limite septentrionale du sanctuaire histrien, l'extension de la surface fouillée dans le cadre du secteur Temple vers le sud fut l'occasion des nouvelles fouilles sur la limite de la zone sacrée, sur le bord du lac Sinoe. Ces fouilles ont permis de préciser davantage le tracé du front oriental de l'enceinte romaine du Bas-Empire. De plus, ces fouilles ont révélé le tracé rectiligne de ce rempart, invalidant la supposée « fracture de Pârvan » (**Fig. 2**, **3**) que certains chercheurs ont pu voir sur

[62] Voir dernièrement ȘTEFAN 2019, p. 67–69.

[63] PREDA, DOICESCU 1966, p. 322 le bâtiment a été encadrée dans la phase III (carreaux 102, 106 et 110).

[64] DABÎCA 2014, p. 137–139 et pl. 2.

[65] La largeur des murs (1,95 m), l'emprise au sol (1800 m^2) et l'existence de contreforts extérieurs (0,50 × 0,80 m et distancés à 5 m) semblent indiquer la fonction d'un horreum pour ce bâtiment.

[66] ANGELESCU 2019c, p. 42–44, pl. 11; DABÎCA 2014, p. 137–139.

[67] Pour les resultats des fouilles de la Zone sacree voir les syntheses de AVRAM *et alii* 2007, p. 241–249 et AVRAM *et alii* 2013, p. 39–101.

d'anciennes photographies aériennes et qui les a déterminées à supposer l'existence d'une tour à cet imaginaire tournant du tracé de l'enceinte romaine du Bas-Empire[68].

Du côté est, il faut supposer que la fortification hellénistique a également été construite sur une limite naturelle tenant compte de la conformation du terrain (probablement le bord de mer)[69]. Comme l'ont démontré des recherches récentes (2020) qui ont permis d'identifier les fondations du mur hellénistique de son côté depuis le lac Sinoe, à côté de la zone sacrée. Ainsi, de ce côté aussi, l'enceinte hellénistique est encastrée/superposée par l'enceinte romaine tardive érigée immédiatement après la destruction au milieu du III^e^ siècle ap. J.-C. puis les phases ultérieures de l'enceinte tardive[70]. Le lit d'attente de la fondation du mur est fait de blocs/dalles de calcaire-certains avec des traces de pointes métalliques de type « queue d'aronde ». Dans ce cas, aussi, nous constatons la réutilisation de certains blocs plus anciens pour les fondations. La présence de traces de pointes de fer et le fait qu'elles soient soigneusement conçues justifie, selon nous, l'hypothèse que le matériau utilisé pour construire le radier provient de la mise hors service de certains monuments plus anciens. La réalisation d'un lit de construction similaire a également été trouvée sur les côtés sud[71] et ouest[72], de nombreuses dalles utilisées ayant conservé des traces des crampons métalliques[73]. Surtout l'absence totale de mention de la présence du mortier indique clairement qu'il s'agit du lit de fondation de l'enceinte hellénistique de l'acropole-une situation similaire à celle documentée par nous dans la tranchée réalisée à l'extérieur du mur sud de la tour I[74].

Les recherches sur ce front viennent seulement de commencer. Une première fouille[75] est suivie des trois tranchées (coupes) orientées E-O, perpendiculairement sur le trajet du rempart, commencées seulement cette année[76] et confirmera ou infirmera notre hypothèse.

Le front méridional

Les fouilles entreprises entre 2000 et 2015 à Histria dans le secteur appelé Basilique Pârvan, topographiquement placée dans la partie méridionale du rocher constituant la basse Acropole de la cité Histria ont créé les conditions pour des nouvelles observations[77] et ont constitué l'occasion de l'enregistrement de nombreuses informations nouvelles concernant cette fortification de l'époque hellénistique.

Le fait que des vestiges faisant part du front occidental du rempart hellénistique ont été retrouvés jusqu'à un point placé en ligne avec le trajet de la même

[68] PÂRVAN 1916c, plan schematic, contre page, p. 704; LAMBRINO 1927–1932, p. 381, fig. 1.

[69] La différence de niveau du rocher sur le côté oriental est d'environ 2,20 m.

[70] BÎRZESCU, IANCU 2022, p. 224–225, fig. 5 et fig. 9.

[71] ANGELESCU 2019b, p. 93 et pl. II, VIII/c-e, IX/a-b, X.

[72] PREDA, DOICESCU 1966, p. 300.

[73] BÎRZESCU, IANCU 2022, p. 225.

[74] ANGELESCU 2019a, p. 93.

[75] Recherche menée par L. Iancu dans le cadre du secteur "Temple" pour établir le trajet du nouveau circuit de visitation dans le cadre d'une étude de faisabilité (2021) pour l'aménagement du site par le Conseil départemental de Constanța avec des fonds européens.

[76] Recherche dirigée par C. Pavel qui travaille avec des étudiants de l'Université «Ovidius» de Constanța.

[77] ANGELESCU, BOTTEZ, ACHIM 2018, p. 103–154.

fortification qui a été retrouvée à l'intérieur de la cité post-gothique nous a amené à supposer que le mur fait un coin vers l'est et a un trajet quasi rectiligne pour la prochaine quarantaine des mètres-c'est-à-dire jusqu'au front occidental de la fortification post gothique et la tour I. Plus loin vers le sud, le mur continue sous le mur d'enceinte romain tardif, érigé au IV^e^ siècle ap. J.-C., près de la *poterna* de la forteresse romano-byzantine. Plus à l'est, ce rempart continue sous les murs se trouvant dans la zone sud de l'édifice Thermes I[78] et puis il change à nouveau de direction en se dirigeant vers l'angle sud-est de la forteresse tardive.

Des sections ont été faites pour essayer de reconnaitre le trajet du rempart de la cité hellénistique dans cette zone ou nos antécesseurs ont renoncé à le retrouver-surtout à cause de la nappe phréatique et à l'état de conservation précaire[79]. Leurs résultats ont été décevants-la destruction du rempart dans cette zone et les processus naturels déterminés par l'évolution de l'environnement n'ont laissé aucune trace de cette structure.

Sur le côté méridional du site, la date à laquelle l'enceinte hellénistique de l'Acropole a cessé de fonctionner a généré un problème de chronologie qui n'a pas été résolu pendant longtemps. Gr. Florescu a eu l'intuition qu'au sud des Thermes I s'agissaient de l'existence d'une enceinte différente de celle du *vallum* III, et aussi que ceci ne fut pas la dernière enceinte de la cité[80]. En même temps la situation des enceintes qui se trouvaient au-dessous la tour I a posée des questions sur leurs trajets et sur leur chronologie, aussi. D'autre part, les éditeurs du rempart hellénistique du *vallum* III ont supposé vers le sud, un changement de trajet vers l'est et ont présumé un fonctionnement prolongé, même jusqu'au désastre gothique du milieu du III^e^ siècle ap. J.-C.[81]. La solution est venue avec les nouvelles fouilles faites aux Thermes I-il s'agissait des deux fortifications romaines du Bas Empire[82], une antérieure à l'autre, et en même temps elles étaient différentes de l'enceinte hellénistique[83]. En plus, cette enceinte (celle qu'on a appelé la phase A de l'enceinte du Bas Empire) était une autre fortification que le rempart du Haut Empire découvert sur le Plateau. Grâce aux fouilles faites pour déterminer la chronologie des Thermes on a remarqué que l'enceinte découverte au-dessous de la tour I était réalisée sans utiliser le mortier et était différente de l'enceinte découverte dans les pièces Q, J, T et R des Thermes I[84]. En conclusion, les murs de la première phase du fonctionnement des Thermes I se sont accolés aux tronçons encore solides de l'enceinte hellénistique de l'Acropole.

D'autre part, les autres fouilles ont démontré qu'après la construction de l'enceinte du Haut Empire au début du II^e^ siècle ap. J.-C. [85] il n'existe plus de raison pour soupçonner que l'enceinte hellénistique de l'Acropole a continué à fonctionner après le I^er^ siècle ap. J.-C.

---

[78] SION, SUCEVEANU 1974, p. 5–8; SUCEVEANU 1982, p. 77–78; SUCEVEANU 1990, p. 233–264; SUCEVEANU 1992, p. 206–288.

[79] PREDA, DOICESCU 1966, p. 322–323.

[80] FLORESCU 1954, p. 324.

[81] PREDA, DOICESCU 1966, p. 315–324.

[82] SUCEVEANU 1969, p. 342 et note 29; voir aussi SUCEVEANU 1982, p. 24, 85, 175.

[83] ȘTEFAN 1974, p. 48.

[84] SUCEVEANU 1982, p. 18.

[85] COJA 1970; voir aussi PREDA, NUBAR 1973, p. 61, n. 205.

Sachant cela, on a décidé d'entreprendre des fouilles aux endroits susceptibles de nous fournir des informations supplémentaires sur le trajet du rempart hellénistique et dans les trois points de changement de son trajet du front méridional pour éclaircir ses rapports avec les différentes phases de l'enceinte romaine du Bas Empire.

On va présenter les résultats les plus importants des fouilles, en commençant du point de flexion de l'extrémité sud de la cité et puis, dans l'ordre respectant le critère topographique (**Fig. 9**).

S. 26 (6 × 5 × 3,5 × 6,3 m)

La coupe S. 26 a été faite dans une surface délimitée par les murs romains du Bas Empire Z069, Z079 et Z078. Cette surface a été fouillée pour documenter la courbure du rempart hellénistique dans cette zone. À part les perturbations de la stratigraphie constatées dans les coins NE et E de cette coupe, la stratigraphie était à peu près intacte.

La phase A de l'enceinte du Bas-Empire (couche 26016) était déjà visible à la surface du terrain sur une longueur de 3 m, avec une orientation NO-SE. Comme on a pu constater dans les autres coupes du secteur, cette première phase de l'enceinte du Bas Empire chevauche l'enceinte hellénistique de l'Acropole.

En dessous de la phase A on a retrouvé l'enceinte hellénistique de l'Acropole et, en descendant, on a constaté qu'ont été préservées jusqu'à cinq assises et que le parement intérieur (nord-est) était en place.

L'ensemble de l'enceinte hellénistique, dans cette zone, est construit sur une pente, avec une déclinaison importante vers le sud (différence constatée de 0,44 m). Immédiatement sur la surface du rocher se trouvait une couche d'env. 0,20 m de lœss jaune qui ne contenait pas des fragments céramiques et qu'on la considérée comme la couche naturelle de lœss qui recouvre le rocher. Les couches de nivellement (couches 26007 et 26013–14) contenaient beaucoup de fragments de céramique archaïque et classique. Au-dessus, une couche en lœss jaune daté à l'époque classique par la céramique à vernis noir recouvré toute la surface de ce coin. Ces couches étaient recouvertes par trois couches hellénistiques impossibles à dater à cause des interventions ultérieures et à la céramique mélangée suivie par une intervention générale, un fort aplanissement du terrain, probablement au moment de construction de la phase A.

S. 28 (3 × 1,5 m)

Cette coupe a été placée à l'extrémité méridionale du coin de la rue qui monte vers le « quartier Cetate » pour vérifier la continuité du trajet de l'enceinte hellénistique de l'Acropole. On a identifié le trajet de l'enceinte hellénistique seulement dans la partie méridionale de la coupe (longueur env. 1 m), fragments des parements et de l'*emplekton*. Chaque parement avait un bloc avec traces des crampons. Dans le reste de la coupe est apparu seulement le rocher et des traces des aménagements faites pour recevoir les fondations.

S. 29 (12 × 2 m)

Coupe dans la zone ou les anciennes fouilles ont constaté le changement du

trajet, vers le sud, de l'enceinte hellénistique « du III^e vallum ». La coupe, orientée nord-sud, a été faite 2 m au nord de l'allée pour les visiteurs et à une distance de 27 m du coin sud-est du musée Lambrino et à une distance de 45 m du coin sud-ouest de la tour I. Dans cette zone on a supposé qu'on puisse surprendre le changement de direction du trajet de l'enceinte dans la direction de la tour I. Malheureusement, la fouille nous a démontré que cette zone était située en bordure, ou en dehors, de la cité hellénistique fait prouvée par une très épaisse (1 m) couche noire superposant une autre couche de sable à la limite de la nappe phréatique.

S. 31 (6,5 × 3 m)

Coupe dans la moitié nord de la pièce U des Thermes I. On a retrouvé l'enceinte hellénistique très bien conservée près de son point de flexion après lequel elle va se diriger vers le sud-est sur une distance d'env. 60 m. Le rempart est conservé ici sur une hauteur d'env. 1,5 m. On a enregistré, *in situ*, l'existence du parement intérieur-des blocs calcaires avec les dimensions 0,75 × 0,50 × 0,25 m, appareillée irrégulièrement, avec un aspect très soigné. Un bloc est disposé transversal et il conserve l'empreinte d'une poutre transversale. Les parements extérieurs des deux remparts superposés sont assez endommagés dans cette portion. L'espace très étroit entre les remparts et les murs de la pièce U ne nous a pas permis de descendre plus bas et de faire autres observations. Aussi, on a constaté que le point ou les enceintes tournent vers sud-est se trouve sous l'intersection des murs de coin nord-ouest de cette chambre appartenant au monument le superposant. On savait que dans le point de flexion au sud-est, dans la pièce T, seule la première assise du mur hellénistique est conservée. Cette observation est aussi valable pour l'intérieur du coin nord-ouest de la pièce U.

S. 32 (6 × 3 m)

Coupe dans la moitié sud de la pièce U des Thermes I. On a retrouvé l'enceinte hellénistique, chevauchée par la phase A, qui traverse cette pièce, en diagonale. L'alignement des parements extérieurs des deux murs a fait que la phase A semblé être déplacée vers le sud d'env. 0,50–60 m. En effet, on a constaté que c'est seulement une impression donnée par le fait qu'il existe une différence d'env. 0,60 entre les épaisseurs des deux murs. L'épaisseur de l'enceinte hellénistique est de 3,20 m et l'épaisseur du mur de la phase A qui la chevauche est de seulement env. 2,60 m. Cette différence nous a permis de faire l'observation que la même technique de renforcement de l'enceinte par la disposition transversale chaque env. 0,90 m des poutres en bois est utilisé-on a pu observer l'existence de quatre empreintes de ce genre. Ce mur est parfaitement superposé par le mur de la phase A, sur toute la distance de 33 m entre ce point de flexion au sud-est et la tour I (les pièces Q, R, S, T, U) où le rôle de parement intérieur est joué par un mur antérieur[86]. À l'extrémité sud-est on a retrouvé même un bloc calcaire (env. 1,20 × 0,50 × 0,40 m) disposé transversalement sur le mur et un autre bloc (env. 1 × 0,60 × 0,40 m) qui a fait partie de son parement intérieur. Les traces préservées dans le mortier nous ont montré que le parement avait la même épaisseur que celle constatée dans la coupe S. 26/2010 (0,40 m).

[86] Voir aussi SUCEVEANU 1982, p. 24.

S. 33 (2 × 2 m)

Entre la zone de la S. 34 (tour I) et S. 26 le trajet de l'enceinte hellénistique continue en ligne droite vers l'est, longeant et bordant le monument Thermes I vers le sud (les pièces Q et R, S, T[87]). À l'extrémité orientale de la pièce Q on a fait une coupe perpendiculaire (S.33/2011) sur l'enceinte hellénistique. Malgré ses dimensions réduites (2 × 2 m) on a surpris quatre assises hellénistiques, surmontées par autres trois de la phase A. On s'est arrêté à une profondeur de 1,25 m, en dessous le niveau du pavage qui se trouve en face de la *poterna* de la courtine k („La Petite Porte") à cause de l'apparition de la nappe phréatique.

S. 34 (14 × 4,75 m)

À ce qu'on a pu constater dans nos fouilles, les fondations de l'enceinte hellénistique ne sont pas réalisées d'une manière uniforme, ce qui est évident dans les coupes réalisées près de la tour I et dans les points des flexions de l'enceinte hellénistique de l'Acropole.

Les photographies aériennes prises en 1954[88] et 1959[89] nous montrent l'existence d'une tranchée d'environ 28 m de long, direction est-ouest, faite le long du mur sud de la tour I. Malheureusement, nous ne connaissons rien sur le résultat de ces investigations. Ces fouilles et les travaux faits pour la restauration massive dans les années 1970 ont pratiquement détruit toute la stratigraphie de ce coin de la cité.

Cependant, les fouilles précédentes ne sont pas descendues jusqu'à un niveau assez bas comme on a eu la chance d'atteindre, en 2011, quand la nappe phréatique a été très bas. Sur la paroi occidentale de la coupe, on a pu voir la couche de sable, chaux et de pierres utilisées pour la restauration[90]. En dessous, une couche uniforme de sable et de coquilles non perturbées indiquant qu'à l'extrémité ouest de la tranchée, au moins, les fouilles ne sont pas descendues jusqu'au niveau de notre découverte-les dalles en calcaire du socle de la fondation du rempart hellénistique.

En S. 34, le mur d'enceinte hellénistique a été surpris de la sortie du bas du mur de sud de la Tour I (parement extérieur) et en dessous du côté ouest de la tour I (parement intérieur) et jusqu'à une distance de 14 m, vers l'ouest. On a commencé la fouille de la coupe S. 34 par déblayant une tranchée est-ouest à l'extérieur de la tour I, à la base du côté méridional de la tour I. Après l'élargissement vers le nord de la fouille (à l'ouest de la tour I) avec une carrée de 54 m^2, la coupe a eu finalement la forme de la lettre L (14,30 m le côté long et 5,30 m le côté court), à l'extérieur de la tour I. On a déblayé une surface à l'intérieur de la tour I, aussi. Toutes ces fouilles nous ont permis de faire quelques importantes observations sur l'enceinte hellénistique (**Fig. 11**, **12**).

Le parement extérieur et sa fondation ont été mis en évidence sur une distance d'env. 19 m, en partant de la ligne de l'enceinte du Bas Empire vers l'ouest.

[87] SUCEVEANU 1982, p. 175–176, fig. 8–9.

[88] L'aérophotographie F018–54 après laquelle, probablement, ce relevé combiné aérophotogrammétrique a été effectué, à l'échelle 1: 2 000 et avec les courbes de niveau équidistantes à 1 m par l'unité d'aérophotogrammétrie (chef Boitan Nicolae) à l'aide des carreaux L–35–130 (105b) et (105c).

[89] Aerophotogramme F132–59.

[90] Dans cette couche a été trouvée une monnaie de 15 bani de 1972.

La phase A chevauche le rempart hellénistique sur une distance de 2,10 m, entre le parement extérieur de l'enceinte du Bas Empire vers l'ouest. Après ce tronçon, les deux enceintes ont des trajets différents de sorte que près du coin sud-ouest de la tour la distance entre eux est de 1,3 m (**Fig. 22**).

La fondation du parement extérieur a été réalisée sur un lit d'attente très solide constitué de dalles épaisses (20–25 cm) de calcaire de longueur inégale, disposé alternativement, sur deux rangées. La longueur de ces dalles est de 1,10–1,20 m et la largeur présente de légères variations entre 0,50-0,60 m. Ce lit d'attente est placé sur une couche de sable et de gravier au même niveau que la nappe phréatique, ce qui a rendu, à cause de l'eau, la recherche très difficile. Les dalles alternent-une dalle longue suivie d'une dalle courte et puis une autre dalle longue-de sorte qu'une plate-forme uniforme en résulte. Ce lit d'attente est, en effet, fait des matériaux réutilisés, issus de constructions désaffectées, comme en témoignent certaines pièces qui ont des traces de transformation: trous de serrure de porte (dalles 1A, 2A et 3A), traces des crampons du type double queue d'aronde concave (fragmentaires) ou crampons en double T[91] (dalle 5A). Les deux rangées de dalles sont maintenues, parfaitement alignées vers l'extérieur, sur une distance de 13,50 m, formant une plateforme pour la base de la fondation. Au-dessus de cette plateforme qui constitue le socle du rempart se trouve la première assise de la fondation pour laquelle ont été utilisés de gros blocs. Les blocs sont rangés en retraite de 0,2 m du bord extérieur des dalles, résultant ainsi une saillie de 0,2 m de large qui peut être reconnue sur toute la longueur de ce tronçon (**Fig. 10**, **15**).

Le socle composé des dalles mentionnées se poursuit sous la courtine k et la tour I exactement où, en regardant à l'intérieur de la cité, on peut observer la discontinuité constructive qui a permis de soutenir l'hypothèse concernant l'ajout ultérieur du quartier (« économique ») du sud-ouest de la cité.

Le parement extérieur est visible sous la phase A de l'enceinte et est composé d'une série de blocs calcaire et de blocs de grès de différentes longueurs: 0,59 m, 0,5 m, 0,62 m, 0,57 m (avec traces des crampons de son côté ouest), 0,8 m, 2,25 m (fragment d'une voûte en arc réutilisée) et 1,85 m. La hauteur de ces blocs est régulière, mesurant environ 0,30-0,35 m.

Ce parement est conservé sur la hauteur de quatre assises. De la première assise sont conservés quatre blocs érodés (arrondis) à cause d'un contact prolongé avec les vagues. Le cinquième bloc est un fragment architectonique avec deux cannelures parallèles. La deuxième assise est représentée par deux blocs calcaires et un entablement long (env. 2 m) et fortement roulé par le contact avec l'eau. La troisième assise comprend des blocs avec des dimensions plus réduites. L'extrémité occidentale du premier bloc entre 0,10 m sous la courtine *k*. Il est suivi par un bloc plus petit et une autre crevée an deux parties. Le quatrième bloc conserve des traces des éléments de crampon et d'un orifice carré. Enfin, la quatrième assise conservée commence aussi sous la courtine *k* et le premier bloc en calcaire sort 0,20 m en dehors de ce mur, le deuxième bloc est en calcaire exfolié et le troisième conserve deux orifices carrés des deux crampons.

Le parement intérieur de l'enceinte hellénistique de l'Acropole a été préservé sur

[91] GINOUVÈS, MARTIN 1985, pl. 28, c. et 3, pl. 28, g et 6.

une distance d'environ 2 m vers l'ouest de la tour I, mais seulement sur la hauteur des deux premières assises. L'*emplekton* est conservé ici dans un très mauvais état, seulement près du parement intérieur. Il était composé de petits blocs de calcaire reliés avec une argile très résistante. Cette structure commence sous la tour I, à une distance de 1,5 m du coin sud-ouest de la tour I de la phase A[92], sous un angle d'env. 120º. Les premiers blocs (0,85 × 0,50 × 0,25 m) et (0,80 × 0,52 × 0,20 m) avec une hauteur d'env. 0,5 m, en calcaire, entrent sur une distance d'env. 0,20 m sous la tour I (**Fig. 10**). Après la sortie de dessous la tour I, le trajet du parement intérieur continue vers l'ouest sur une distance d'env. 1,60 m avec seulement une assise des blocs en calcaire, avec une largeur d'env. 0,5 m (**Fig. 15**). Il faut remarquer la présence d'un orifice carrée fait pour monter à son intérieur une grosse poutre en bois (0,65 × 0,23 × 0,5 m), transversale. Après une portion d'env. 0,50 m où le parement a été complétement détruit, il continue vers l'ouest encore 2 m. Le parement intérieur se compose de quatre blocs (0,7 × 0,5 × 0,25 m) soigneusement aligné, l'un d'eux conservant l'orifice pour la poutre en bois. Ainsi, le parement intérieur a été construit en blocs de calcaire d'une hauteur (0,5 m) et d'une largeur uniforme (0,5 m). La continuation de cette enceinte, vers l'ouest, à l'extérieur de l'enceinte du Bas Empire, nous montre que pour la fondation du parement intérieur ont été utilisés des blocs en calcaire alignés soigneusement vers l'extérieur. Dans les portions préservées, la fondation du parement intérieur a une largeur de 1,3 m.

L'emplekton, mal conservé, se présente comme un conglomérat de blocs de taille moyenne de calcaire et de schiste vert reliés à une argile jaune très adhérente, ce qui en fait un très fort liant. Il a été préservé sur une longueur d'env. 4,5 m et a été découvert sur une petite surface (environ 11 m^2), à l'ouest de la tour I. Les pierres de l'*emplekton* sont placées directement sur la couche de sable et de gravier et ont des traces de scellement des poutres en bois transversales pour assurer la connexion avec l'*emplekton* afin d'assurer la plus grande résistance de l'ensemble défensif (**Fig. 11**, **12**).

S. 37 (7 × 2 m)

Cette coupe orientée est-ouest a été faite juste en bordure septentrionale de l'allée pour les visiteurs et à l'extrémité méridionale de la partie haute du vallum II. L'objectif principal était de retrouver le trajet méridional de l'enceinte hellénistique de l'Acropole. La fouille est descendue jusqu'à une profondeur de 3 m.

En dessous de la couche de l'aménagement de l'allée (0,30 m) est apparue une couche épaisse d'env. 1,20 m. Le contenu hétérogène de cette couche est reflété par la céramique datable au II–VII siècles ap. J.-C. Cette couche de débris doit être mise en liaison avec les travaux de l'aménagement du *vallum* II, comme d'ailleurs on a pu clairement voir sur la stratigraphie contenue par la paroi sud de la coupe. En dessous est apparue seulement une très épaisse (1 m) couche noire superposant une autre couche de 0,70 m de sable. Enfin, au-dessous c'était la nappe phréatique. Le résultat négatif de la fouille dans ce point démontre que cette coupe a été faite à l'extérieur de la cité, et que le rempart a dû changer de trajet dans la distance d'env. 15 m, entre S. 34 et S. 38.

[92] C'est la fondation de la phase A, en grands blocs en calcaire avec une hauteur de 1 m, et trois assises. La deuxième assise contient un bloc travaille-l'entablement d'un monument démoli.

S. 38 (10 × 1,5 + 2 × 5,5 m)

Coupe nord-sud, immédiatement au nord du panneau d'information, dans le *vallum* I. Initialement, la section mesurait 8 × 2 m, mais a été élargie à 4 m dans sa moitié sud. À 2,5 m de l'extrémité sud de la section, il est apparu une grande pièce en forme de la lettre L (1,90 × 0, 70 long côté et 1,37 × 0, 90 m court côté), en marbre, une pièce architecturale denticulé-un fragment d'un fronton avec un décor denticulé. Au-dessus, un autre bloc imposant et une dalle calcaire-tout recouverte par une couche épaisse (env. 0,20 m) grise de cendres (**Fig. 14**). Plus intéressant encore est que cette couche de sable, à l'extrémité sud du S. 38, recouvre la pièce architecturale massive (**Fig. 17**, **18**) en marbre dont nous présentons les dessins préliminaires (**Fig. 19**, **20**). Le dessin a été réalisé par l'architecte Mara Catargiu qui publiera une étude sur cette pièce architecturale, après avoir pris des nouvelles dimensions qui permettront de compléter et d'affiner le dessin afin de le finaliser[93].

À l'extrémité nord de la section, il est apparu à la profondeur de – 2,7 m une grande dalle de calcaire (1,60 × 0,50 × 0,10 m) placé longitudinalement en direction nord-sud et qui continue dans la paroi nord de la fouille. Sur le bord ouest de celle-ci est placé un autre bloc calcaire 1,60 × 0,50 × 0,50 m. Celles-ci représentent la paroi intérieure du canal de la rue.

Du point de vue stratigraphique, il est intéressant de noter que sur toute la surface de la section a été enregistré (à 2,5 m de profondeur de la surface du sol) l'existence d'une couche de gravier mélangée à des coquilles et du sable dont l'épaisseur varie entre 0,30 et 0, 40 m. Immédiatement en dessous se trouve une couche relativement uniforme de sable vert, propre et épais d'env. 0,20 m, sur toute la surface de la coupe.

*

Fondation du mur

Dans tous les secteurs étudiés jusqu'à présent, l'enceinte hellénistique de l'Acropole est érigée sur un radier (lit d'attente) en blocs de calcaire placés directement sur le sable, qui s'étend sur toute la largeur du mur. On parle généralement de dalles de calcaire réutilisées, comme en témoignent les traces de crampons en plomb que ces pièces ont conservées. Il s'agit clairement d'un système utilisé par les histriens, conçu pour augmenter la surface d'appui, en raison des conditions de la zone- un sol peu résistant, parfois probablement même marécageux (**Fig. 15**).

Le parement extérieur n'est pas construit d'une manière très unitaire à cause des imperfections du rocher. La fouille de la coupe S. 9 nous a donné l'occasion de constater qu'il existe des traces d'un aménagement préalable, mais probablement que c'est n'était pas possible ou nécessaire partout. Il y a de zones ou directement sur le rocher ont été posés des blocs rectangulaires (env. 1,20 × 0,50 × 0,40 m) au long du mur. Dans autres portions la première assise du parement extérieur est réalisée par de gros blocs calcaires placés alternativement, en longueur et à travers le mur (**Fig. 7**, **8**). La première assise du parement extérieur contenait des blocs d'une

[93] Cette pièce va faire l'objet d'une publication séparée.

hauteur d'env. 0,60 m dont l'épaisseur était d'env. 0,40 m. Le parement extérieur est appareillé irrégulièrement des blocs rectangulaires (1,20 × 0,60 × 0,40 m) et ne contient pas des *spolia*. La deuxième assise est l'assise qui met la fondation à l'horizontale pour les assises qui suivent. Les premières deux assises du parement ont une hauteur totale d'env. 1,20 m. Les assises suivantes étaient faites des blocs environ de la même taille, avec leurs faces alignées à l'extérieur. Ce parement a été superposé par le parement extérieur de la phase A-ses blocs ont été arrachés, comme le montre l'*emplekton* à mortier qui est resté sur place, et ont été réutilisés probablement à la construction de la phase B qui se trouve quelques mètres plus au sud.

Le parement intérieur est construit directement sur le rocher, aussi. Le socle et haut de 0,5 m et a une largeur d'env. 0,15 m. La première assise du parement intérieur comporte des blocs d'env. 0,60 m de haut et d'une épaisseur d'env. 0,20 m. La fouille de la coupe S. 26 est descendue jusqu'au rocher et on a constaté l'existence d'une différence importante entre les niveaux des fondations des deux parements-le rocher est plus haut avec env. 0,55 m à l'intérieur du rempart. Ici, se sont préservées cinq assises, en somme une hauteur de 1,60 m. Dans le rocher a été creusée une petite tranchée d'aménagement (26015) remplit des petites blocailles ici et là, où le rocher était dénivelé[94]. Au-dessus a été installé un socle construit des blocs arrangés sur la longueur du mur, avec une hauteur d'env. 0,30 m et long d'env. 1–1,20 m. Le soubassement du parement est composé des grands blocs calcaires hauts d'env. 0,60 m et avec une épaisseur d'env. 0,25 m. Les blocs qui faisaient partie du parement étaient alignés en retraite d'env. 0,10 m de la face de deux assises du socle (voir aussi S. 28). Un bloc du parement intérieur de grandes dimensions[95], conservé *in situ,* a plus de 2 m longueur est prévu chaque 0,60 m avec deux orifices rectangulaires (0,07 m) pour les poutres de bois transversales (**Fig. 24**). Malheureusement, le parement intérieur de l'enceinte hellénistique a été coupé au moment de la construction d'un mur d'époque romaine (Z 071 du bâtiment CR04).

L'*emplekton* de l'enceinte hellénistique de l'Acropole est composé des petits blocs de schiste, un remplissage de tailles et de résidus de pierre, avec parfois un coulis de lœss jaune, liaisonné. Ce mélange était probablement battu pour le compacter, à juger d'après sa solidité. La seule occasion de voir l'*emplekton* a été offerte par l'espace d'env. 0,25 m de la différence des largeurs du rempart hellénistique et la première enceinte du Bas-Empire qui le superpose.

Dans ce que concerne l'élévation il faut dire que le fait que l'élévation du mur n'est pas conservée explique l'absence des cavités destinées à recevoir des chaînages de bois-ce qui est une des caractéristiques soulignées par les éditeurs des fouilles du front occidental de cette enceinte. C'est seulement dans les portions conservées des premières assises de l'élévation (S. 26) ou l'on retrouve les traces des poutres en bois.

Nos fouilles démontrent que le front méridional de l'enceinte hellénistique de l'Acropole présente une largeur de 3,25–3,30 m et dans la zone plus haute de l'Acropole la roche est plus haute à l'intérieur-env. 0,5 m du niveau du rocher extérieur au rempart. En revanche, concernant la suprastructure on va mentionner que les chemins de ronde et les parapets ont totalement disparu.

[94] Le complexe 26015 (pierres et terre jaune) le démontre par sa position et par sa composition.
[95] La troisième assise de l'enceinte hellénistique en S. 26.

Donc, le trajet du front méridional de l'enceinte hellénistique se présente comme un front continu entre l'extrémité sud du front occidental du rempart et le rivage de la mer Noire (actuellement le lac Sinoe). Le constat le plus important est que la fortification n'est pas, du moins d'après ce que l'on sait jusqu'à présent, dotée de tours et présentes plusieurs points d'inflexion dont l'explication la plus logique nous semble être la topographie du terrain.

Conclusions-enceinte hellénistique de l'Acropole (Fig. 25)

L'enceinte hellénistique de l'Acropole arrive sur le front sud en provenance du bord de la mer se trouvant, à cette époque vers l'est de la cité. Depuis la ligne du littoral et jusqu'au point qui marque l'extrémité méridionale de la cité, on a une seule information, indirecte, sur l'existence de ce rempart. À l'occasion des recherches concernant les rues du secteur « Domus »[96], une fouille (la coupe S. IV) a démontré l'existence d'un dépôt rituel, à l'intérieur de la cité et juste près de la ligne de ce rempart. Il s'agit d'un cercle réalisé par la déposition des douze amphores de la première moitié du IV^e^ siècle av. J.-C. en cercle. Au milieu de ce cercle était déposé un vase autochtone des petites dimensions, à la main, avec des traces de brulure (**Fig. 23**). L'existence de ce dépôt intentionnel très près d'un endroit où on a trouvé des traces d'un aménagement du rocher pour la fondation d'une structure constructive nous fait penser à la possibilité d'avoir à faire avec un dépôt rituel réalisé avant la construction d'un mur d'enceinte. La datation des amphores à l'époque hellénistique suggère que, peut-être nous sommes dans la présence d'un dépôt rituel pour l'enceinte hellénistique de l'Acropole. Sur une distance d'env. 150 m vers sud-ouest il existe encore deux fouilles de V. Pârvan pour retrouver la limite de la cité, mais on n'a pas des informations sur leurs résultats.

L'extrémité méridionale de l'enceinte hellénistique de l'Acropole est le coin sud, le point ou toutes les enceintes connues de la cité d'Histria tournent vers l'est pour aller sur le même trajet vers la rencontre avec la ligne du littoral du Pont Euxine (les eaux du lac Sinoe d'aujourd'hui). De ce point, l'enceinte hellénistique, chevauchée par la phase A du rempart du Bas Empire, se dirige en ligne droite vers ouest-nord-ouest sur une distance d'env. 15 m. Dans le point du départ qu'on a mentionné, la distance entre son trajet et le trajet de la phase B de l'enceinte romaine du Bas Empire est de seulement 0,45 m. Jusqu'à son arrivée au point de la première flexion (vers nord-ouest) les lignes des deux trajets s'éloignent progressivement et au premier coin la distance entre les deux est de 0,80 m. Le changement de direction du parement extérieur est réalisé par l'appareillage des blocs qui sont arrangés pour décrire une courbure assez large sans utiliser des blocs courbes[97]. Arrivée ici, l'enceinte hellénistique fait un ongle obtus (env. 135º) et se dirige vers le nord-ouest sur une distance de 60 m. La distance entre les deux trajets est maintenant déjà d'env. 23 m. Sous l'intersection des murs des pièces U, V, T et J des Thermes l'enceinte hellénistique fait un nouveau coin vers l'ouest et se dirige en ligne droite vers le rempart du Bas Empire, sur une distance de 31 m. Après le passage « au-dessous » du

[96] BOUNEGRU 2000–2001, p. 397–413; voir aussi BOUNEGRU, LUNGU 2005, p. 167–178.

[97] Voir les considérations de FLORESCU 1954, p. 67 sur l'absence des tours arrondis des fortifications d'Histria.

mur de la cité romaine tardive, l'enceinte hellénistique continue vers l'ouest encore env. 15 m. Après un trajet long d'env. 120 m le rempart hellénistique disparaît pour apparaître dans le *vallum* III, une trentaine des mètres plus à l'ouest.

On considère que c'est évident que la construction de ce rempart est déterminée par la configuration du terrain et par les sinuosités de la ligne du littoral de cette époque qui a constitué une limite naturelle permanente vers le sud.

Du côté nord, on suppose donc, comme c'est le cas pour les fronts sud et est, l'existence d'une autre limite naturelle. Cette fois on soupçonne que le terrain a dû être assez marécageux pour qu'il ne soit inclus dans la forteresse que plus tard-celui de l'agrandissement de l'enceinte romaine tardive au début du IV^{e} siècle ap. J.-C.

Les progrès réalisés par la poliorcétique[98], spécialement par l'utilisation des machines de jet, sont reflétés par la technique de construction utilisée pour l'enceinte hellénistique de l'Acropole. C'est une structure épaisse de 3,20 m, à deux parements en appareil pseudo-isodome et à *emplekton.* Le rempart est pourvu des chaînages en bois disposés transversalement[99], fixées dans les parements à travers des trous rectangulaires[100] qui recevaient les poutres encastrées à une distance assez régulière, d'env. 0,90 m.

Sa construction a supposé des grands efforts d'aménagement et l'utilisation des blocs calcaires avec des dimensions rapprochées ont conféré une indéniable régularité à l'ensemble. D'ailleurs, cette enceinte de l'Acropole a des caractéristiques qui s'appliquent sur toute sa longueur.

En premier lieu, l'impression d'uniformité est donnée par ses dimensions constantes. La largeur totale du mur est d'env. 3,20 m sur toute la longueur préservée, mail ils n'existent pas des indices sur son suprastructure ou sa hauteur. Le parement extérieur est construit sur un socle formé par des dalles ou des grands blocs en calcaire; le parement intérieur est construit sur un soubassement en gros blocs calcaires; l'*emplekton* est un conglomérat lié avec du lœss très dur est posé sur une couche de sable et de gravier. L'épaisseur des parements est relativement constante, env. 0,60 m. Seulement dans la partie la plus haute de l'Acropole le rempart hellénistique a des parements plus étroits d'env. 0,40 m (voir la situation constatée dans la coupe S. 26).

La technique de construction du rempart hellénistique du front sud, telle qu'on a pu observer dans les coupes qui sont descendues jusqu'à sa profondeur, est une technique mixte. Les fondations étaient posées directement sur le rocher préparé en avance[101], sur le sable[102] ou directement sur le rocher naturel (**Fig. 8**)[103]. La principale difficulté des fouilles est que la fondation de l'enceinte hellénistique de l'Acropole

[98] L'utilisation des poutres transversales était recommandée comme méthode pour obtenir une résistance accrue des remparts aux impacts des machines de guerre; voir, Philon de Byzance, Syntaxe mécanique, V, 80, 13.

[99] Cette technique a été constatée pour le tronçon découvert dans le vallum III, voir PREDA, DOICESCU 1966, p. 308 et depuis longtemps comparée avec des constructions du milieu autochtone; voir ȘTEFAN 1995, p. 468.

[100] Voir les situations de nos coupes-S. 9, S. 26, S. 31, S. 32 et S.34.

[101] Voir la situation des tranchées peu profondes creusées sur les dimensions des blocs (S. 30).

[102] Voir la situation de S. 34.

[103] Voir la situation de S. 26 avec la mise au plat, minimal, du rocher.

est au niveau de la nappe phréatique-donc le niveau actuel de la Mer noire. Les parements sont réalisés en maçonnerie sèche, sans aucun liant-il s'agit de grands blocs façonnés, en calcaire, et des rares *spolia*[104]. L'espace entre les deux parements était rempli avec de l'*emplekton* avait une largeur d'env. 2 m et est réalisé dans sa plus grande partie en blocs de schiste de dimensions moyennes liées avec de la terre ou du lœss jaune[105]. Il y a seulement quelques endroits où on a pu voir la composition de l'*emplekton* à cause du fait que maçonnerie de la phase A est plus étroite de 0,40 m. Dans le reste de son trajet, soit les conditions des fouilles ne l'ont pas permis, soit l'état de conservation n'a pas permis la conservation de la structure.

Nos recherches n'ont pas pu, principalement en raison du chevauchement direct de la phase A du mur romain du Bas Empire, mettre en évidence d'autres voies d'accès dans la zone de l'Acropole à l'époque hellénistique, en dehors de la porte documentée par les anciennes fouilles du *vallum* III[106].

Peut-être que la rue pavée des dalles monolithique, large de 3 m avec canal central, découverte en S. 38–43 se dirigeait vers un point d'accès à l'intérieur de la cité et qui avait été détruit, mais, à part la logique, il n'existe pas des autres arguments. Cependant, s'il y avait une porte à ce point, ce que nous pouvons dire avec certitude, c'est qu'elle n'avait de toute façon pas le même système de fondation que celui utilisé par la porte du front occidental de ce rempart[107]. À en juger par le fait que le mur de défense a subi une destruction dans cette zone que même la fondation n'a pas survécu, on peut supposer que cette rue menait à une porte, située dans la zone S. 28, qui a été détruite lors du siège de la forteresse. L'épaisse couche de cendres (env. 0,20 m) présente sur l'ensemble de la zone permet de supposer l'existence d'une importante superstructure en bois à cet endroit, qui se trouvait également dans la proximité immédiate du port.

En tout cas, la structure de l'enceinte hellénistique de l'Acropole a été considérée assez solide[108] et s'est conservée sur de longues tronçons dans un état assez bon pour être utilisée en tant que fondation des fronts méridionaux et septentrionaux de la première phase (la phase A) de l'enceinte de la cité du Bas Empire.

Le mur d'enceinte de l'Acropole histrienne de l'époque hellénistique pose encore des nombreux problèmes topographiques, planimétriques et surtout urbanistiques. Son intégration fonctionnelle dans l'ensemble de la ville qu'elle a défendu pose de nombreux problèmes que nous ne pouvons tenter de résoudre en l'absence des fouilles archéologiques plus étendues-les seules qui pourront contribuer à décrypter l'organisation et le fonctionnement de la cité d'Istros/Histria pendant l'époque hellénistique.

---

[104] Les fragments architecturaux utilisées pour la première assise du parement extérieur de la fortification hellénistique au-dessous la tour I et seulement quelques autres petites pièces profilées qui ont été observés isolées dans les portions visibles de la structure des parements de ce mur.

[105] BÎRZESCU, IANCU 2022, fig. 7.

[106] PREDA, DOICESCU 1966, p. 306–308.

[107] APOSTOL 2011, p. 41–46.

[108] Le front occidental – 4,40 m; les fronts méridional et septentrional – 3,20 m. Nous ne voulons pas se hasarder sur des explications pour cette situation.

BIBLIOGRAPHIE

ADAMEȘTEANU 1955 – D. Adamești eanu, *Compte rendu de E. Condurachi dir., Histria. Monografie arheologica,* I, București, Archeologia Classica VII (1955), p. 218–224.

ALEXANDRESCU, SCHULLER 1990 – P. Alexandrescu, W. Schuller (éds.), *Histria. Eine Griechenstadt an der rumänischen Schwarzmeerküste*, Xenia. Konstanzer althistorische Vorträge und Forschungen, 25, Konstanz am Bodensee, 1990.

ANGELESCU 2003–2005 – M. V. Angelescu, *Histria. Sistemul de duble incinte în epocă greacă*, SCIVA 54–56 (2003–2005), p. 55–84.

ANGELESCU 2018a – M. V. Angelescu, *Incintele de la Histria în lumina fortificațiilor din lumea greacă*, București, 2018.

ANGELESCU 2018b – M. V. Angelescu, *Histria. Quelques notes sur le port antique*, Pontica 51 (2018), p. 343–384.

ANGELESCU 2019a – M. V. Angelescu, *Histria. Scanarea laser 3D a turnului I*, MCA S.N. 15 (2019), p. 89–104.

ANGELESCU 2019b – M. V. Angelescu, *Histria in 1917*, SCIVA 70/1–4 (2019), p. 181–198.

ANGELESCU 2019c – M. V. Angelescu, *Histria. Considérations sur la possibilité de l'existence des horrea*, Pontica 52 (2019), p. 39–81.

ANGELESCU, BOTTEZ, ACHIM 2018 – M. V. Angelescu, V. Bottez, I. Achim, *New research on the early christian basilicas in the southern part of the acropolis of Istros,* Dacia N.S. 61 (2018), p. 103–154.

APOSTOL 2011 – V. Apostol, *The Hellenistic gate of Histria. Remarks on its foundation system*, Caiete ARA 2 (2011), p. 39–46.

AVRAM *et alii* 2007 – A. Avram, K. Zimmermann, M. Mărgineanu-Cârstoiu, I. Bîrzescu, *Nouvelles données sur la zone sacrée d'Histria*, dans: A. Bresson, A. Ivantchik, L. Ferrary (éds.), *Une* koinè *pontique. Citees grecques, sociétés indigènes et empires mondiaux sur le littoral nord de la Mer Noire (VII*e *s.a. C.-III*e *s. p.C.),* Bordeaux, 2007, p. 241–249.

AVRAM *et alii* 2013 – A. Avram, I. Bîrzescu, M. Mărgineanu-Cârstoiu, K. Zimmermann, *Archäologi-sche Ausgrabungen in der Tempelzone von Histria, 1990–2009*, dans: *Mélanges d'archéologie et d'histoire ancienne à la mémoire de Petre Alexandrescu*, Mar Nero 8 (2010–2011) [2013], p. 39–101.

BÎRZESCU, IANCU 2022 – I. Bîrzescu, L. Iancu, *Raport sector Templu (2021)*, dans: *Cronica Cercetărilor Arheologice din România 2022, Campania 2021, A LVI-a sesiune Națională de Rapoarte Arheologice, 26–28 mai 2922, Oradea*, București, 2022, p. 223–226.

BOUNEGRU 2000–2001 – O. Bounegru, *Date stratigrafice recente privind rețeaua stradală din cartierul „Domus" de la Histria*, Pontica 33–34 (2000–2001), p. 397–413.

BOUNEGRU, LUNGU 2005 – O. Bounegru, V. Lungu, *Histria. Cercetări recente în cartierul Domus*, SCIVA 54–56 (2003–2005), p. 167–178.

CANARACHE 1954 – V. Canarache, *Incinta din valul III al cetății*, dans: *Histria. Monografie arheologică,* vol. I, București, 1954, p. 278–285.

CANARACHE 1956 – V. Canarache, *Observații noi cu privire la topografia Histriei*, SCIV 7/3–4 (1956), p. 289–318.

CANARACHE, DUMITRIU 1954 – V. Canarache, S. Dumitriu, *Secțiuni și sondaje*, dans: *Histria. Monografie arheologică,* vol. I, București, 1954, p. 163–205.

COJA 1959a – M. Coja, *Raport asupra activității șantierului Histria în campania 1956. Sectorul Z2*, MCA V (1959), p. 300–303.

COJA 1959b – M. Coja, *Șantierul Histria. Sectorul Z2*, MCA VI (1959), p. 283–289.

COJA 1959c – M. Coja, *Șantierul Histria. Sectorul Z2*, MCA VII (1959), p. 250–255.

COJA 1962 – M. Coja, *Șantierul Histria. Sectorul Z2*, MCA VIII (1962), p. 408–415.

COJA 1964 – M. Coja, *Zidul de apărare al cetății Histria și împrejurările istorice ale distrugerii lui în secolul al IV-lea î.e.n.*, SCIV 15/3 (1964), p. 383–400.

COJA 1970 – M. Coja, *Les phases d'habitat du Plateau ouest de la cité d'Histria à l'époque gréco-romaine*, Dacia N.S. 14 (1970), p. 99–117.

COJA 1986 – M. Coja, *Les fortifications grecques dans les colonies de la côte ouest du Pont-Euxin*, dans: *La fortification dans l'histoire du monde grec, Actes du colloque international 'La fortification et sa place dans l'histoire politique, culturelle et sociale du monde grec,* Valbonne, décembre 1982, Paris, 1986, p. 95–103, fig. 211–217.

COJA 1990 – M. Coja, *Greek colonists and native populations in Dobroudja (Moesia Inferior)*, dans: J.-P. Descoeudres (ed.), *Greek Colonists and Native Populations, Proceedings of the 1st Australian Congress of Classical Archaeology, held in honour of A.D. Trendall*, Sydney, 1985, Oxford, 1990, p. 157–168.

CONDURACHI 1957 – E. Condurachi, *Histria à l'époque du Bas-Empire d'après les dernières fouilles archéologiques*, Dacia N.S. 1 (1957), p. 365–388.

CONDURACHI *et alii* 1954 – E. Condurachi, G. Florescu, V. Canarache, S. Dimitriu, D. M. Pippidi, Gh. Cantacuzino, I. Stoian, V. Zirra, *Histria. Monografie arheologică, I*, București, 1954.

DABÎCA 2014 – M. Dabîca, *The Histria Sud sector. Recent archaeological research on an 'imposing' early roman public building*, MCA S.N. 10 (2014), p. 133–155.

DAUX 1957 – G. Daux, *Chronique des fouilles et découvertes archéologiques en Grèce en 1956*, Bulletin de Correspondance Hellénique 31/2 (1957), p. 598–599.

DELORME 1953 – J. Delorme, *La maison dite de l'Hermès, à Délos: étude architecturale*, Bulletin de Correspondance Hellénique 77 (1953), p. 444–496.

DESJARDINS 1868 – E. Desjardins, *Voyage archéologique et géographique dans la région du Bas-Danube*, Revue Archéologique 17 (avril) (1868), p. 254–278.

DIMITRIU 1954 – S. Dimitriu, *Sectorul locuințelor din Nord-Estul cetății (Sectorul X*), dans: *Histria. Monografie arheologică*, vol. I, București, 1954, p. 205–231.

DIMITRIU 1966a – S. Dimitriu, *Cartierul de locuințe din zona de vest a cetății, în epoca arhaică. Săpături 1955–1960*, dans: Em. Condurachi (ed.), *Histria II*, București, 1966, p. 19–132.

DIMITRIU 1966b – S. Dimitriu, *Despre temeliile olbiene de la Histria*, SCIV 17/3 (1966), p. 473–489.

DITTENBERGER 1915 – W. Dittenberger, *Sylloge Inscriptionum Graecarum*, 1915.

DOMANEANTU 1983 – C. Domăneanțu, *Rezultatele săpăturilor arheologice de la Histria-sector A*, MCA 15 (1981) [1983], p. 357–360.

DOMĂNEANȚU, SION 1982 – C. Domăneanțu, A. Sion, *Incinta romană târzie de la Histria. Incercare de cronologie*, SCIVA 33/4 (1982), p. 377–394.

DOMĂNEANȚU 1990 – C. Domăneanțu, *Die spätrömische Festungsmauer von Histria*, dans: P. Alexandrescu, W. Schuller (Hg.), *Histria. Eine Griechenstadt an der rumänischen Schwarzmeerküste*, Konstanzer althistorische Vorträge und Forschungen, 25, Konstanz, 1990, p. 265–283.

DUPONT 2002 – P. Dupont, *L'habitat Grec Du Pont-Euxin: Quelques Pierres d'achoppement*, Pallas 58 (2002), *Habitat et urbanisme: dans le monde grec de la fin des palais mycéniens à la prise de Milet (494 av. J.-C.)*, Table ronde Internationale organisée à Toulouse les 9–10 mars 2001 par le GRACO (Groupe de Recherche sur l'Antiquité Classique et Orientale), p. 285–299.

DUPONT *et alii* 1999 – P. Dupont, M. Angelescu, C. Dubosse, L. Noca, P. Séjalon, *Les enceintes grecques d'Histria: vers une nouvelle approche?*, dans: O. Lordkipanidze, P. Lévêque (éds.), *Religions du Pont-Euxin, Actes du VIIIe Symposium de Vani (Colchide)*, Besançon, 1999, p. 37–52.

FLORESCU 1954 – G. Florescu, *Incinta cea mare a cetății*, dans: *Histria. Monografie arheologică,* vol. I, București, 1954, p. 66–95.

FLORESCU, CANTACUZINO 1954 – G. Florescu, G. Cantacuzino, *Zidul de incintă de pe platoul din vestul cetății*, dans: *Histria. Monografie arheologică,* vol. I, București, 1954, p. 285–292.

GAIDUKEVICI 1958 – B. F. Gaidukevici, *Raskopi TiritaKi i Mirmekia 6 (1916–1952),* MIA 85 (1958), p. 149–196.

GARLAN 1974 – Y. Garlan, *Recherches De Poliorcétique Grecque*, Ecole française d'Athènes, Bibliothèques de l'Ecole française d'Athènes et de Rome-Série Athènes, 223/1, Paris, 1974.

GARLAN 1992 – Y. Garlan, *Les fortifications grecques de Mycènes à Alexandre,* Les Dossiers d'Archéologie 172 (1992), p. 52–57.

GINOUVÈS, MARTIN 1985 – R. Ginouvès, R. Martin, *Dictionnaire méthodique de l'architecture grecque et romaine. Tome I. Matériaux, techniques de construction, techniques et formes du décor*, École Française de Rome, 84, 1985.

GIOSAN *et alii* 2006 – L. Giosan, J. P. Donnelly, S. Constantinescu, F. Filip, I. Ovejanu, A. Vespremeanu-Stroe, E. Vespremeanu, G. A. T. Duller, *Young Danube delta documents stable Black Sea level since the middle Holocene: Morphodynamic, paleogeographic, and archaeological implications*, Geology 34/9 (2006), p. 757–760.

IONESCU, GEORGESCU 1998 – M. Ionescu, N. Cheluță-Georgescu, *Le système défensif callatien,* dans: M. Zahariade, I. Opriș (eds.), *The Roman Frontier at the Lower Danube 4th–6th c.*, The Second International Symposium, Murighiol/Halmyris, 18–24 august, 1996, 1998, p. 182–196.

LAMBRINO 1927–1932 – S. Lambrino, *Fouilles d'Histria (deuxieme article)*, Dacia III–IV (1927–1932), p. 378–410.

LAMBRINO 1931a – S. Lambrino, *Memoriu de titluri și lucrări*, Bucarest, 1931, p. 3–11.

LAMBRINO 1931b – S. Lambrino, *Histria romaine à la lumière des fouilles,* RÉL 9 (1931), p. 77–83.

LAMBRINO 1933 – S. Lambrino, *La destruction d'Histria et sa reconstruction au IIIe s. ap.* J.-C., RÉL 11/1 (1933), p. 457–463.

MERKLER 1973 – Gh. Merkler, *Aspects concernant les résultats des mesures géophysiques de détail exécute pour détecter des objets archéologiques dans les zones de Păcuiul lui Soare et de la cité d'Histria*, Revue Roumaine de Géologie, Géophysique et Géographie-série de Géophysique 171 (1973), p. 103–122.

MOISIL 1909 – C. Moisil, *Din tezaurul arheologic al Dobrogei. II. Antichități creștine din Istros*, Buletinul Comisiunii Monumentelor Istorice 2 (1909) (octomvrie-decemvrie), p. 165–170.

MÜTH *et alii* 2016 – S. Müth, P. I. Schneider, M. Schnelle, P. D. De Staebler (eds.), *Ancient fortifications: a compendium of theory and practice,* National Museum of Denmark, International Network "Fokus Fortifikation", Oxford, 2016.

NEUTCH 1956 – B. Neutch, *Archäologische Grabungen und Funde im Bereich der unteritalischen Soprintendenzen von Tarent, Reggio di Calabria und Salerno*, 1949–1955, p. 327–351.

NUBAR 1970 – H. Nubar, *Sectorul basilica extra muros (1961–1964),* MCA IX (1970), p. 193–201.

NUBAR 1971 – H. Nubar, *Contribuții la topografia cetății Histria în epoca romano-bizantină. Considerații generale asupra necropolei din sectorul bazilicii 'extra muros'*, SCIV 22/2 (1971), p. 199–215.

NUBAR, SION 1980 – H. Nubar, A. Sion, *Incinta romano-bizantină de la Histria în lumina ultimelor cercetări*, Revista Muzeelor și Monumentelor (Monumente Istorice și de Artă) 49/1 (1980), p. 19–31.

NUBAR, TEODORESCU 1970 – H. Nubar, D. Teodorescu, *Zidul mare de incintă (1960–1966),* MCA IX (1970), p. 190–193.

PÂRVAN 1914 – V. Pârvan, *Archäologische Anzeiger* 3 (1914), col. 430.

PÂRVAN 1915a – V. Pârvan, *Raport provizoriu asupra primei campanii de săpături la Histria,* ACMI 7/25–28 1914/1915, p. 117–121.

PÂRVAN 1915b – V. Pârvan, *Archäologische Funde im Jahre 1914: Rumänien*, JDAI 30/4 (1915), col. 253–270.

PÂRVAN 1915c – V. Pârvan, *Raport provizoriu asupra primei campanii de săpături la Histria,* Analele Academiei Române (Desbateri) 2/37 (1915), p. 291–296.

PÂRVAN 1916a – V. Pârvan, *Raport special nr. 4. Campania a II-a de săpături la Histria*, ACMI 8/29–32 (1915) [1916], p. 190–199.

PÂRVAN 1916b – V. Pârvan, *Raport asupra activității MNA în cursul anului 1915 înaintat domnului ministru al instrucțiunii și cultelor de directorul muzeului*, București, 1916, p. 18–29.

PÂRVAN 1916c – V. Pârvan, *Histria IV, Inscripții găsite în 1914 și 1915*, Analele Academiei Române. Memoriile Secției Istorie II/XXXVII (1916), p. 1–200.

PÂRVAN 1923 – V. Pârvan, *Începuturile vieții romane la Gurile Dunării*, București, 1923.

PÂRVAN 1926 – V. Pârvan, *Getica. O protoistorie a Daciei*, București, 1926.

PETRE 2003–2005 – Z. Petre, *Histria. Spațiul public și organizarea politică în sec. VII–V a. Chr.*, SCIVA 54–56 (2003–2005), p. 33–53.

PIPPIDI 1967 – D. M. Pippidi, *Contribuții la istoria veche a României*, București, 1967.

PIPPIDI 1983 – D. M. Pippidi, *Inscriptiones Scythiae Minoris. 1. Inscriptiones Histriae et viciniae*, Bucharest, 1983, p. 138–147.

POENARU BORDEA 1971 – Gh. Poenaru Bordea, *Numismatica și distrugerea Histriei la mijlocul secolului al III-lea e.n.*, Studii și Cercetări de Numismatică 5 (1971), p. 91–111.

PREDA 1980 – C. Preda, *Callatis, necropola romano-bizantină*, București, 1980.

PREDA, DOICESCU 1966 – C. Preda, A. Doicescu, *Zidul de apărare din epoca elenistică*, dans: Em. Condurachi (coord.), dans: *Histria II*, București 1966, p. 295–334.

PREDA, NUBAR 1973 – C. Preda, H. Nubar, *Histria III. Descoperirile monetare 1914–1970*, București, 1973.

PREOTEASA *et alii* 2012 – L. Preoteasa, I. Bîrzescu, D. Hanganu, A. Vespremeanu-Stroe, *Schimbări morfologice în regiunea Histria produse înainte, în timpul și după declinul cetății*, SCIVA 63/3–4 (2012), p. 201–223.

RUSU-BOLINDET *et alii* 2014 – V. Rusu-Bolindeț, A. Bădescu, V. A. Lazărescu, M. Dima, C. Radu, N. Szeredai, *Recent research at the Basilica extra muros, Histria at 100 years since the initiation of archaeological research on the site*, MCA S.N. 10 (2014), p. 199–219.

SION, SUCEVEANU 1974 – A. Sion, A. Suceveanu, *Contribuții stratigrafice la urbanistica Histriei romane (sec. II–VI e.n.)*, Revista Muzeelor și Monumentelor, seria Monumente istorice și de artă 43/1 (1974), p. 5–15.

SUCEVEANU 1969 – Al. Suceveanu, *Observations sur la stratigraphie des cites de la Dobrogea aux II-e-IV-e siècles a la lumière des fouilles d'Histria*, Dacia N.S. 13 (1969), p. 329–365.

SUCEVEANU 1982 – Al. Suceveanu (avec la collaboration de l'architecte A. Sion, Gh. Poenaru Bordea, Gh. Vecerdea), *Histria VI. Les thermes romains*, București-Paris, 1982.

SUCEVEANU 1990 – A. Suceveanu, *Das römische Histria*, dans: *Histria. Eine Griechenstadt an der rumänischen Schwarzmeerküste*, Konstanz, 1990, p. 233–264.

SUCEVEANU 1992 – A. Suceveanu, *Die römischen Verteidigungsanlagen an der Küste der Dobrudsha,* BonnJh 192 (1992), p. 206–288.

SUCEVEANU 2007 – A. Suceveanu, *Histria XIII. La basilique épiscopale*, București, 2007.

SUCEVEANU, SCORPAN 1971 – A. Suceveanu, C. Scorpan, *Stratigrafia Histriei romane târzii în lumina săpăturilor din 1969 și 1970 în sectorul central*, Pontica 4 (1971), p. 155–172.

ȘANTIERUL HISTRIA 1951 – *Șantierul Histria*, SCIV 2/1 (1951), p. 127–158.

ȘANTIERUL HISTRIA 1952 – *Șantierul Histria*, SCIV 3/1–2 (1952), p. 231–279.

ȘANTIERUL HISTRIA 1953 – *Șantierul Histria*, SCIV 4/1–2 (1953), p. 90–152.

ȘANTIERUL HISTRIA 1954 – *Șantierul arheologic Histria (r. Histria, reg. Constanța)*, SCIV 5/1–2 (1954), p. 69–122.

ȘANTIERUL HISTRIA 1955 – *Șantierul arheologic Histria (1954)*, SCIV 6/3–4 (1955), p. 515–557.

ȘTEFAN 1974 – A. S. Ștefan, *Cercetări aerofotografice privind topografia urbană a Histriei. I. Epoca romană (sec. I–III e.n.)*, Monumente Istorice și de Artă 53/2 (1974), p. 39–51, fig. 1–7.

ȘTEFAN 1975 – A. S. Ștefan, *Cercetări aerofotografice privind topografia urbană a Histriei. II. Epoca romană târzie (sec. III–IV e.n.)*, Revista Muzeelor și Monumentelor (seria Monumente Istorice și de Artă) 2 (1975), p. 51–62.

ȘTEFAN 1987 – A. S. Ștefan, *Evolution de la côte dans la zone des Bouches du Danube durant l'Antiquité*, dans: *Déplacements des lignes de rivage en Méditerranée d'après les données de l'archéologie*, Actes du Colloque international du C. N. R. S., Aix-en-Provence, 1985, Paris, 1987, p. 191–209.

ȘTEFAN 1995 – A. S. Ștefan, *Murus Dacicus*, dans: P. Arcelin, M. Bats (eds.), *Sur les pas des Grecs en Occident*, Études Massaliètes 4 (1995), p. 467–492.

TOMLINSON 1961 – R. A. Tomlinson, *Emplekton masonry and 'Greek structura'*, Journal of Hellenic Studies 81 (1961), p. 133–140.

TREZINY 1999 – H. Tréziny, *Les Fortifications Grecques En Occident à l'époque Classique (491–322 Av. J.-C.),* Pallas 51 (1999), p. 241–282.

VESPREMEANU-STROE *et alii* 2017 – A. Vespremeanu-Stroe, F. Zăinescu, L. Preoteasa, F. Tătuia, S. Rotaru, C. Morhange, M. Stoica, J. Hanganu, A. Timar-Gabor, I. Cârdan, N. Piotrowska, *Holocene evolution of the Danube delta: An integral reconstruction and a revised chronology,* Marine Geology 388 (2017), p. 38–61.

VULPE 1935 – R. Vulpe, *Noutăți arheologice dobrogene,* Analele Dobrogei 16 (1935), p. 185–192.

VULPE 1938 – R. Vulpe, *Histoire ancienne de la Dobrudja*, București, 1938, p. 98–100.

WASOWICZ 1970 – A. Wasowicz, *Les "fondation en terre" d'Olbia et d'Histria,* Archeologia 20 (1969) [1970], p. 39–61.

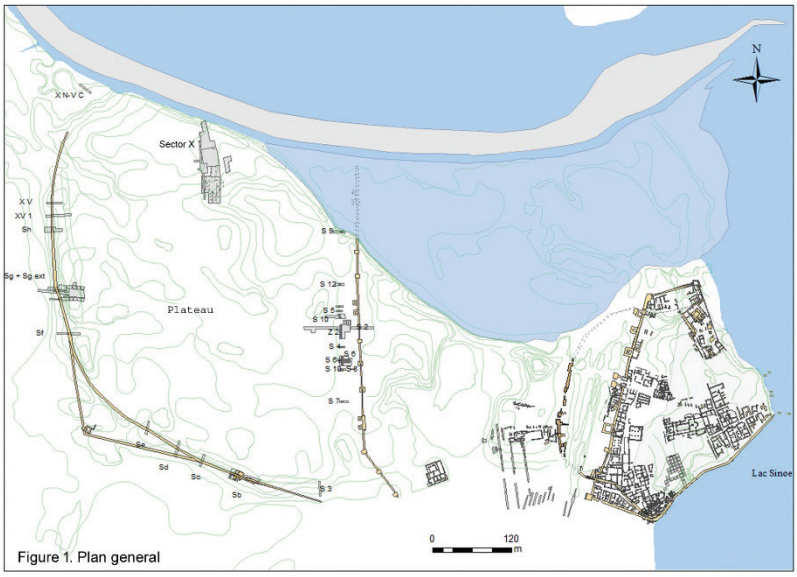


Fig. 1. Plan général du site Istros/Histria.

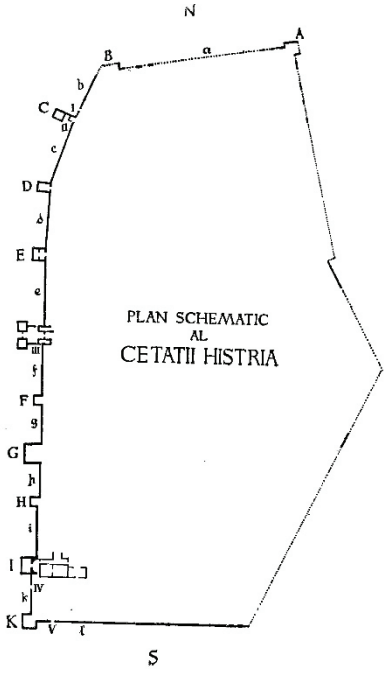


Fig. 2. Plan schématique de la cité Histria publie par V. Pârvan (contra page de la p. 104 de Histria IV, PÂRVAN 1916).

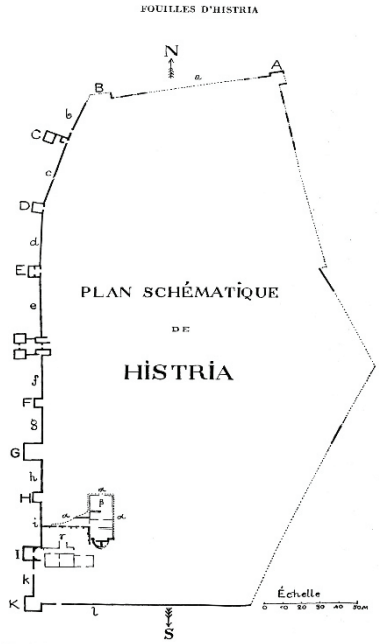


Fig. 1. Plan sommaire des fouilles: γ, les thermes; β, la basilique à abside; α, α, terrain non fouillé

Fig. 3. Plan schématique de la cité Histria publie par LAMBRINO 1927–1932, p. 381, fig. 1.

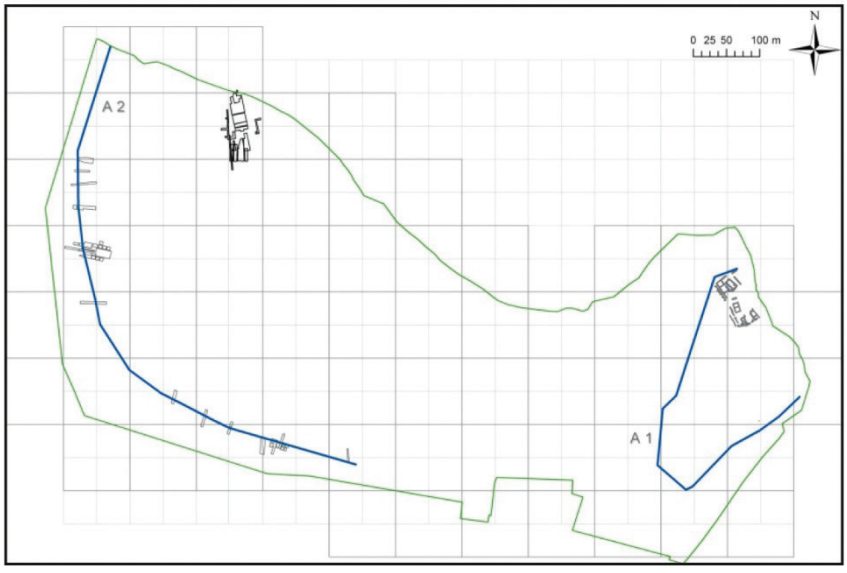


Fig. 4. Les enceintes archaïques (Acropole et Plateau).

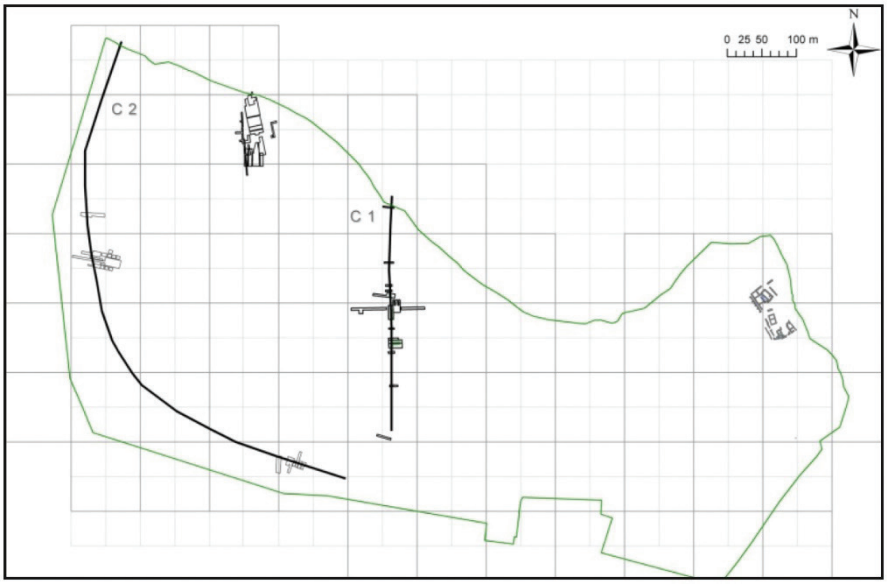


Fig. 5. Les enceintes classiques (Acropole et Plateau).

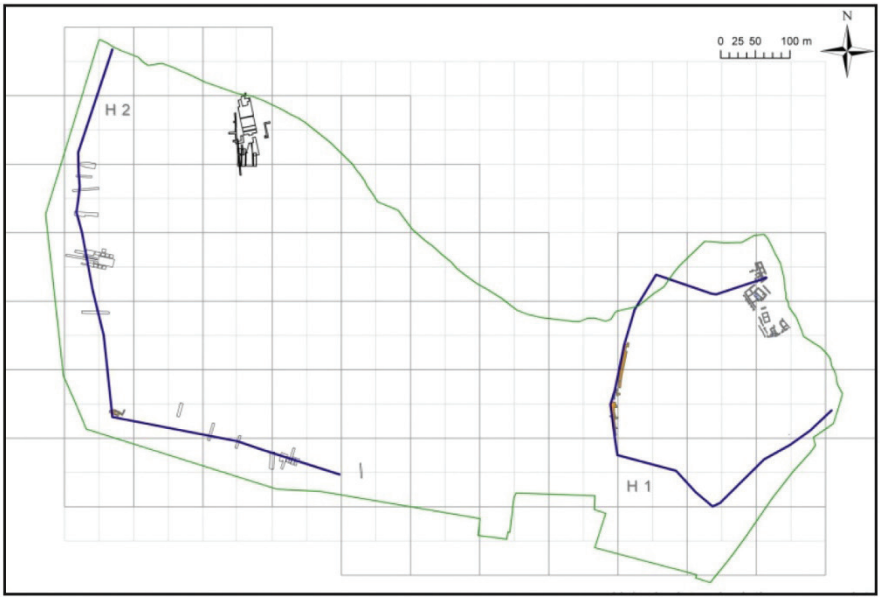


Fig. 6. Les enceintes hellénistiques (Acropole et Plateau).



Fig. 7. Fragment de maçonnerie de l'enceinte hellénistique découverte dans les fouilles faites par C. Domăneanțu dans le secteur A (photo 1983).



Fig. 8. Fondation du rempart hellénistique de l'Acropole-directement sur le rocher en schiste vert-coupe S. 26.



Fig. 9. Plan général des coupes archéologiques du secteur « Basilique Pârvan ».

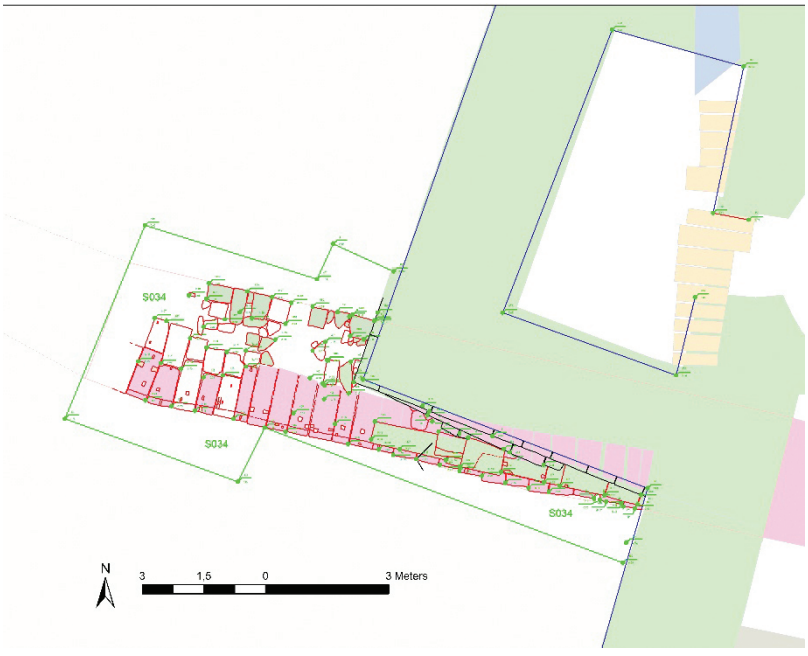


Fig. 10. Plan des vestiges de l'enceinte hellénistique de l'Acropole, découvertes dans la coupe S. 34.

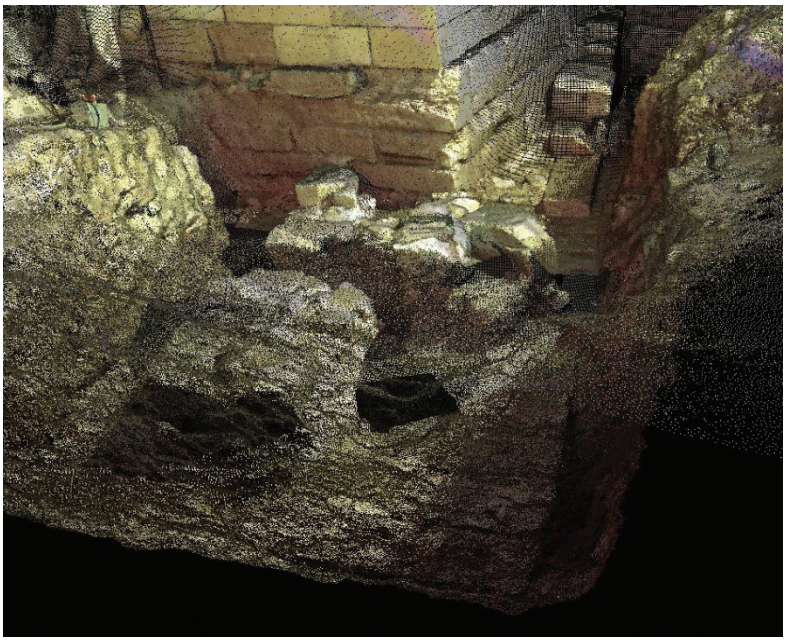


Fig. 11. Image scan 3D de la coupe S.34-vue de sud-ouest.



Fig. 12. Image scan 3D de la coupe S.34-vue de l'ouest.



Fig. 13. Le fragment architectonique découvert dans l'extrémité méridionale de S. 38.



Fig. 14. La rue hellénistique découverte dans la coupe S. 38.



Fig. 15. Image du radier de la fondation de l'enceinte hellénistique-coupe S. 34.



Fig. 16. Le radier de la fondation du rempart hellénistique de l'Acropole découvert en S. 34 au niveau de la nappe phréatique.

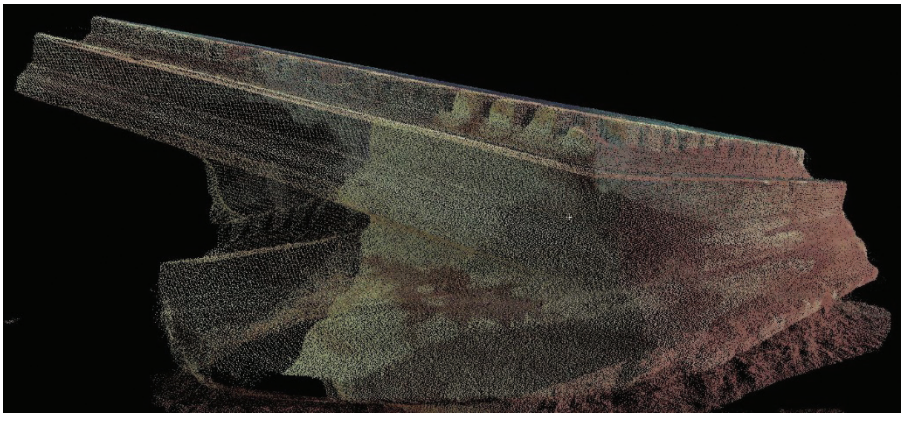


Fig. 17. Image scan 3D du fragment architectural découvert en S. 38-image frontale.

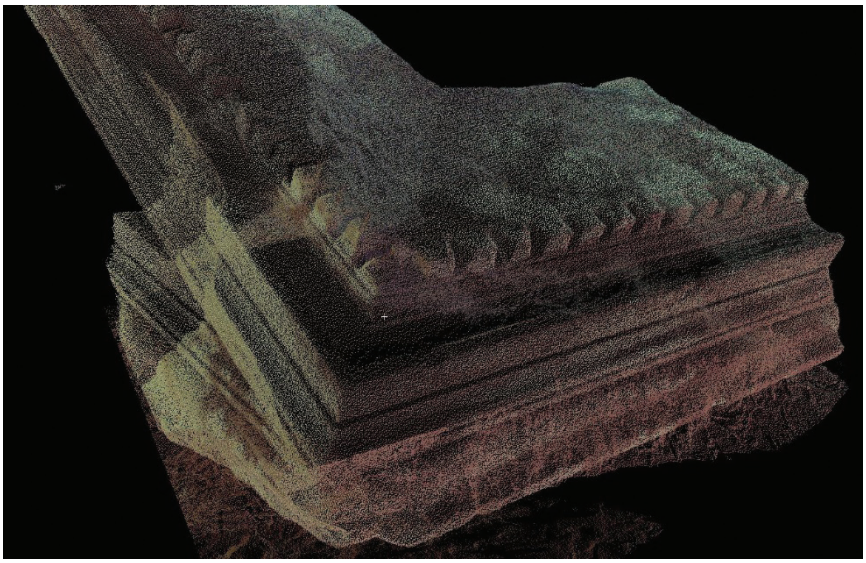


Fig. 18. Image scan 3D du fragment architectural découvert en S. 38-image latérale.

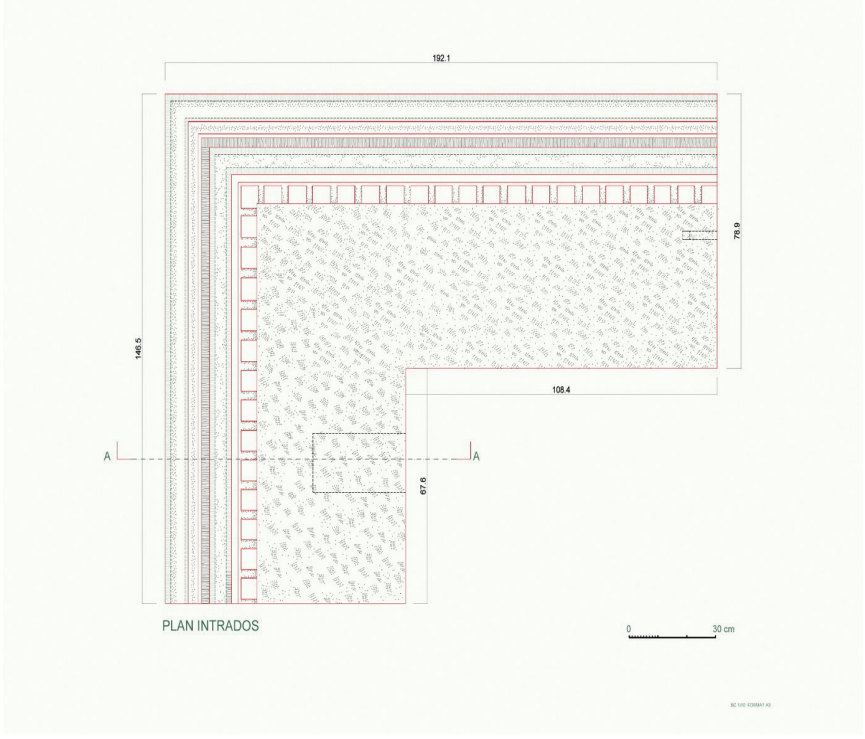


Fig. 19. Dessin de l'intra dos du fragment architectural découvert en S. 38.

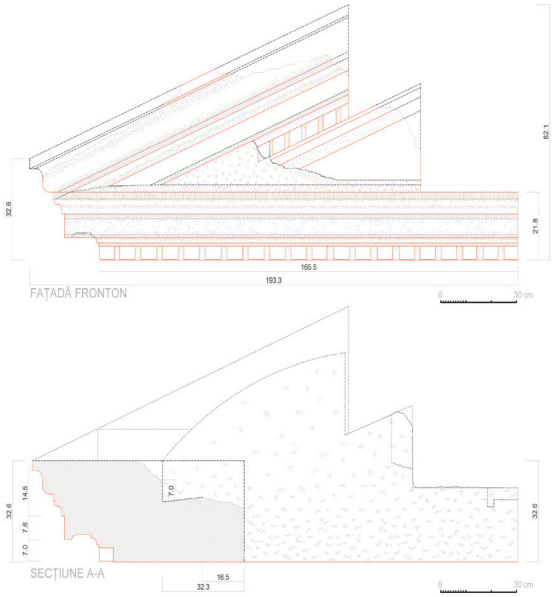


Fig. 20. Dessin de la vue frontale et une section A-A du fragment architectural découvert en S. 38.



Fig. 21. Détail du radier avec les traces des crampons en plomb-coupe S. 34.



Fig. 22. Trajet du rempart hellénistique au-dessous le mur sud de la Tour I-coupe S.34.

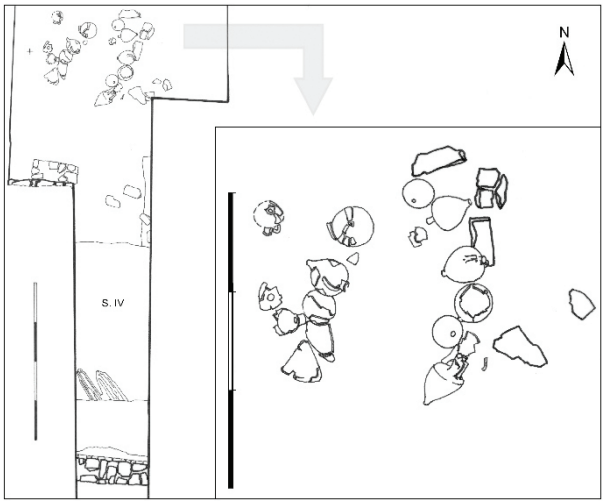


Fig. 23. Les amphores hellénistiques découvertes autour d'un vase autochtone-S. IV (secteur Domus).



Fig. 24. Le parement intérieur du rempart posé directement sur le rocher-coupe.

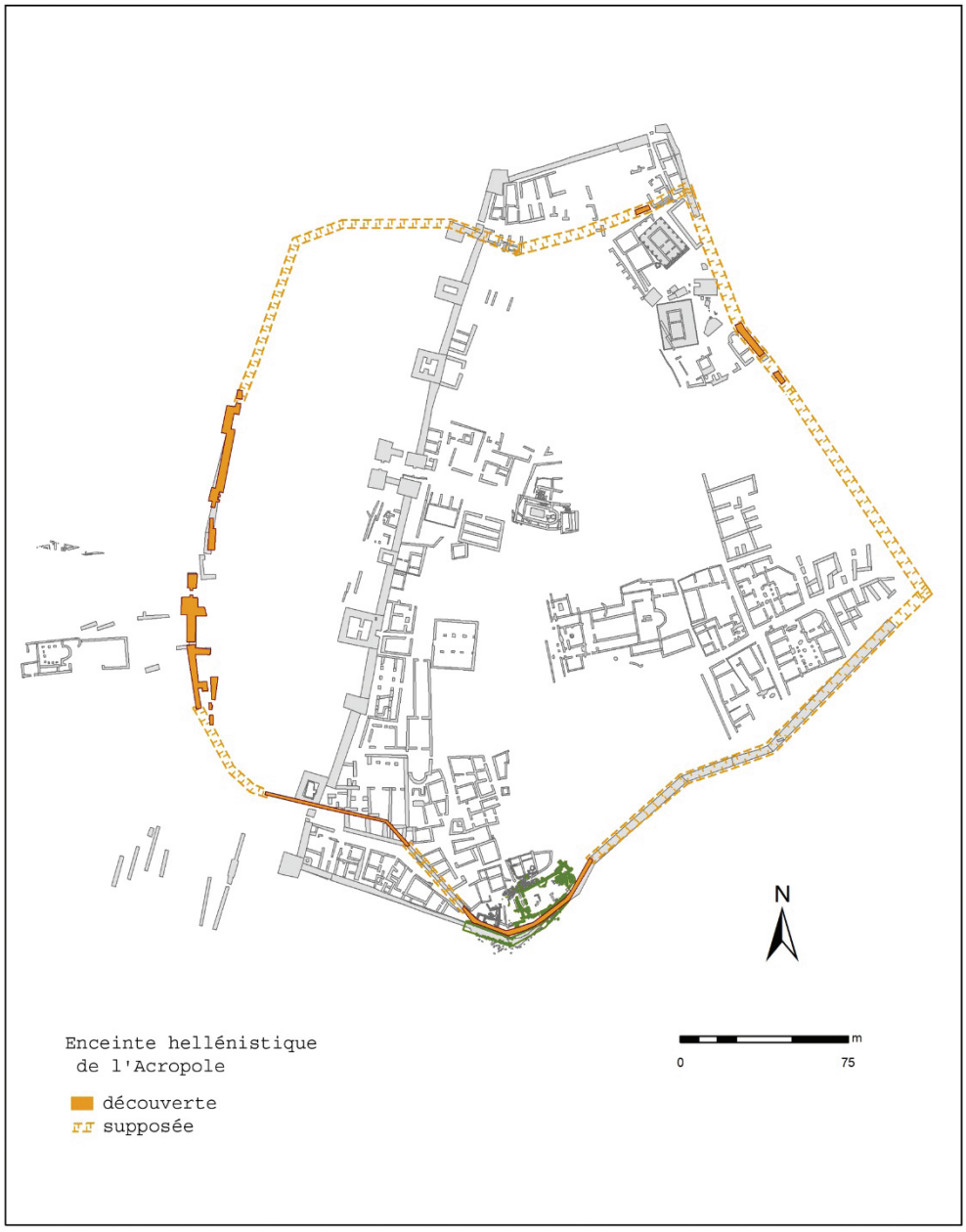


Fig. 25. Plan des vestiges découverts et le trajet supposé de l'enceinte hellénistique de l'Acropole.

NEW ARCHAEOLOGICAL INVESTIGATIONS ON THE UPPER MOESIAN LIMES. ĆETAĆE-RADUJEVAC SITE, LOCATED IN THE ROMAN *AQUAE* REGION, AT THE CONFLUENCE OF THE TIMOK AND DANUBE RIVERS[1]

Vladimir P. PETROVIĆ[*]
Gordan JANJIĆ[**]

Cuvinte-cheie: *limesul roman în Serbia, așezarea de la Ćetaće-Radujevac, fort roman, debutul cercetărilor arheologice.*

Keywords: *Roman limes in Serbia, site of Ćetaće-Radujevac, Roman fort, first archaeological investigations.*

Rezumat: *Având în vedere poziționarea sa remarcabilă în vecinătatea confluenței râului Timok cu Dunărea, pe limesul roman, precum și indiciile privind o fondare foarte timpurie, situl Ćetaće, situat în apropierea satului Radujevac, oferă date importante pentru cunoașterea statiei romane Aquae, a rolului acesteia din punct de vedere militar, economic, minier și vamal. Pe baza a două campanii arheologice, în 2021 și 2022, și a unor intensive periegheze efectuate pe o zonă mai extinsă, s-a stabilit că situl are mai multe niveluri datând din perioadele protoistorică, romană și bizantină timpurie și păstrează o inerentă importanță militară și strategică până în perioada contemporană. Din fericire, situl se află pe o porțiune a limesului Dunării din Serbia care nu a fost pusă în pericol de construcția hidrocentralelor de pe Dunăre. În ceea ce privește perioada romană, a fost atestată existența zidurilor de apărare și a unui turn de colț al unei fortificații, construit la sfârșitul secolului I, care a continuat să sufere modificări și completări până la începutul perioadei bizantine. Cronologia parțial stabilită a fost confirmată de descoperiri relevante.*

Abstract: *Given its remarkable location in the vicinity of the confluence of the Timok and Danube rivers, on the Roman limes, as well as indications of very early construction, the site of Ćetaće near the village of Radujevac offers vital evidence for a closer characterization of the whole area of Roman Aquae (Prahovo) in terms of its military, communication,*

[*] Vladimir P. PETROVIĆ: Institute for Balkan Studies Serbian Academy of Sciences and Arts, Belgrade; e-mail: vladimir.arheolog@gmail.com.

[**] Gordan JANJIĆ: Museum of Krajina Negotin; e-mail: gordanjanjic62@gmail.com.

[1] The article was written as a result of the work at the Institute for Balkan Studies of Serbian Academy of Sciences and Arts, which is financed by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia and on the basis of the Agreement on the implementation and financing of scientific research work in 2023, number: 451-03–47/2023-01 dated 17.01.2023.

economic, mining and customs operation role. Based on two archaeological campaigns, in 2021 and 2022, and extensive field surveys of the broader area, the site has been determined to have several levels dating from the proto-historical, Roman and early Byzantine periods and retains an inherent military and strategic importance until in the contemporary period. As luck would have it, the site is located on a section of the Danube limes in Serbia which was not endangered by the construction of the hydroelectric power plants on the Danube. As far as the Roman period is concerned, the existence has been attested of the masonry defences and a corner tower of a fort built in the late first century which kept undergoing alterations and additions until the early Byzantine period. The partially established chronology has been confirmed by interesting finds.

After the establishment of the Roman frontier in the area of the Danube limes, from the Tiberian age to Trajan intensive construction was taking place in the broader area of Djerdap (Iron Gates) from Golubac (*Cuppae*) to Prahovo (*Aquae*) of Roman border forts, overland and river communications, a port and a bridge across the Danube with a view to consolidating the border and in preparation for the Dacian War[2].

In Roman times, *Egeta* (Brza Palanka)[3] and *Aquae*[4], in eastern Serbia's region of Ključ, operated as two main nodes of overland routes as well as important river ports (**Map 1** and **Map 2**).

It seems highly likely that the port near present-day Prahovo (Kusjak), archaeologically investigated during the construction of the hydroelectric power plant Djerdap II[5], was one of the four major construction projects attested by epigraphic monuments-Trajan's *tabulae*[6] (**Fig. 1**).

Roman *Aquae*, at the confluence of the Timok river and Danube as a prominent and strategically important point in its broader area, was not only a military but also a trading hub, an important logistics centre and the administrative seat of a large mining district under imperial control[7]. The site of Ćetaće near the village of Radujevac,[8] given its proximity to the confluence of the Timok river and Danube, on the Roman limes, as well as indications of very early construction, offers vital evidence for a closer characterization of the whole area of Roman *Aquae* (Prahovo) in terms of its military, communication, economic, mining and customs operation role (*portorium*).[9]

[2] PETROVIĆ, VASIĆ 1996, p. 15–27; PETROVIĆ 2017, p. 387–396; PETROVIĆ 2019.

[3] *TIR*, L–34, 57; PETROVIĆ 1984, p. 153–166.

[4] *TIR*, L–34, 93; PETROVIĆ 2018, p. 386–393.

[5] PETROVIĆ 1989–1990, p. 207–216; PETROVIĆ 1991, p. 295–298.

[6] *CIL* III, 1699 = 8267 = *ILS* 5863 = *ILJug* I, 63 = *AE* 1978, 474; *CIL* III, 1642 = *ILJug*. 3, 1362; *ILJug*. II, 468 = *AE* 1973, 475; PETROVIĆ 1972, p. 31–40.

[7] DUŠANIĆ 2004, p. 247–270.

[8] The site of Ćetaće is situated near the village of Radujevac, Negotin Municipality. Its geographic coordinates are: N44° 13.730′ E22° 39.377′. The toponym Ćetaće comes from the Romanian word cetate (from Lat. civitas, -atis) and in Serbian denotes a "fort", a "fortification" (https://dexonline.ro/definitie/cetate). Its pronunciation in standard Romanian is "četate", but regionally, in the Romanian dialects (Banat and Transylvania) a sound change takes place (palatalization) and in those areas the word is pronounced ćetaće or šetaće. We are grateful to our colleague dr. Annemarie Sorescu-Marinković for the explanation of the exact meaning and Romanian origin of the toponym.

[9] A Roman customs station might have been located at the site of Ćetaće not far from the crossing over the Timok, analogously to what is recorded for the stations near the bridge across

The area of the confluence of the Timok and Danube rivers has not been much explored archaeologically. Field surveys carried out after the Second World War recorded the site of "Ćetaće" not far from the Timok river and Danube[10]. Given the history of inundation of the two rivers, the site was likely located on the terrain unexposed to periodic flooding. In its immediate vicinity is also the place where the Dupljanska river joins the Danube, which means that the site had access to abundant water resources. In a short article published in 1961 the first explorer of the site, N. Petrović, described a rectangular fortification with rounded corners and stated that trial trenching established the presence of a fort with its entrance on the north and an encircling ditch. The site was defended by rubble-and-earth ramparts. The excavator identified it as a "Byzantine" fort based on the plentiful fragments of Byzantine pottery found in the rubble. Situated in the military zone along the border with Bulgaria and Romania, the site of Ćetaće remained unexplored and practically forgotten until the 2010s.

In 2016 the Museum of Krajina in Negotin undertook an extensive field survey of the area under its responsibility in order to establish the actual state of preservation of the archaeological heritage eligible for the preliminary list of sites on the Danube limes in Serbia to be nominated for the UNESCO World Heritage List[11]. The site of Ćetaće was also surveyed. The state of its preservation was identified and its chronology established as undoubtedly beginning in the proto-historical period based on the presence of fragments of so-called La Tène pottery, with the other remains dated to the Roman and early Byzantine periods (remains of a smaller masonry structure-a tower (?), plentiful finds of fragmented pottery, brick, slag, building stones and, sporadically, bones).

The most interesting discovery made during the survey was a double rampart built of rubble and earth. This fact suggested a Roman military fortification, possibly of a very early date, built on a markedly important strategic location[12]. The archaeological record for this section of the Danube frontier produces a vague picture of the early Roman military and civilian presence. The polygonal plan of the fort with a double rampart and a ditch could have made one thought of parallels with Roman military camps such as occur in the neighbouring areas in the early phase of Roman domination (Mora Vagei/*Clevora*, Glamija in Rtkovo)[13]. The results of the first trial excavation known from N. Petrović's brief report from 1961 have never been fully published. We know nothing of the characteristics of the movable finds discovered at the time and not even the recent surveys could tell us much more about the site.

In 2021 the Institute for Balkan Studies, Serbian Academy of Sciences and Arts, in collaboration with the Negotin-based Museum of Krajina, started the first archaeological investigation of the site of Ćetaće near the village of Radujevac.[14] The inves-

---

the Sava at Sirmium (Sremska Mitrovica) and near the crossing over the Velika Morava at Margum (Orašje), see FRANCE, NELIS-CLÉMENT 2014, p. 171 and 239, n. 502.

[10] PETROVIĆ 1961, p. 142.

[11] https://whc.unesco.org/en/tentativelists/6475/; GOLUBOVIĆ, MRDIĆ 2013, p. 101–118.

[12] Under emperor Claudius many temporary earthen and wooden fortifications were built on the Upper Moesian limes, see KORAĆ *et alii* 2014, p. 39.

[13] On Mora Vagei (Clevora): TIR, L–34, 48; CERMANOVIĆ-KUZMANOVIĆ, STANKOVIĆ 1986, p. 453–466. On the site of Glamija in Rtkovo, see GABRIČEVIĆ 1986, p. 71–91.

[14] The project of archaeological excavation on the site of Ćetaće-Radujevac is directed by the

tigation, resumed in 2022, was carefully designed so as to ensure it brought fresh information and reliable scientific results (**Fig. 2**).

The 2021 archaeological campaign began by opening Trench 1 (6 m by 5 m) in the north-western sector of the site which was presumed, based on the configuration of the terrain, to be a part of the outer rampart of the fort. It revealed five stratigraphic units and a circular or semi-circular wall whose curve could be traced along the length of 3.1 m. The thickness of the wall from its exterior face to its interior semi-circular side is 1.9 m and the inner diameter is about 1.8 m. The wall is built of variously sized broken stones bound with white lime mortar, and its surviving upper side is coated with a layer of strong plaster. The western profile showed "negative" imprints of the walls of a structure. The trench was explored to a relative depth of 1.1 m.

Trench 1a (3.5 m long north to east by 1.5 m wide) was dug at a distance of 0.5 m east of Trench 1. The space between them was intended to be used as a control profile. Trench 1a showed seven stratigraphic units of a relative depth of 1.9 m. The wall of the structure found in Trench 1 did not extend into it, contrary to what could be expected. But the exposure of the control profile between the two trenches produced a completely unexpected discovery. Namely, the oval shape of the structure was fully confirmed. A fragment of stamped brick was found on the quite well-levelled layer of strong plaster, preserving only the letters: *coh(ors)* (**Fig. 3**, **4**, **4a**).

It became clear, therefore, that an auxiliary unit of the Roman army had taken part in the construction of the discovered structure. Its full name could not be established because of a thick layer of plaster covering the rest of the stamped inscription. The answer to this question will have to wait for some other discovery or chance find. Apart from exploring the oval structure in Trench 1, the situation in the area of the inner earthen rampart was also investigated. Trench 2 (5 m long west to east by 2.5 m wide) was excavated in the middle of the western inner rampart. It yielded seven stratigraphic units. An unexpected discovery in the layer of loose light brown soil was a necropolis, in fact Grave 1 oriented west to east and Grave 2, identically oriented but with the skeleton subsequently disturbed by wild animals. The same layer yielded a brick fragment incised with a cross (**Fig. 5, 5a**).

As a result of the discovery of the necropolis, the examination of Trench 2 was suspended and rescheduled for another campaign. The trench was explored to a relative depth of 1.8 m.

Trench 3 (7 m long north to south by 1.5 m wide) was opened on the inner northern "earthen rampart" of the fort. It showed ten stratigraphic units. Unexpectedly, its southern half also contained a part of the necropolis with Grave 1 oriented south to north discovered in a layer of loose yellow soil. Grave 2, holding a skeleton oriented west to east, was discovered at a lower level in a layer of loose light brown soil. It contained no grave goods. The same layer yielded a brick fragment incised with a cross. Grave 2 is contemporary with the burials found in Trench 2, whereas Grave 1 is of a later date. The trench was explored to a relative depth of 2.9 m (**Fig. 6**, **7**, **7a**).

The 2022 archaeological season focused on the remains of military architecture

Institute for Balkan Studies in collaboration with the Museum of Krajina in Negotin and co-funded by the Ministry of Culture and Information of the Republic of Serbia.

in order to establishing the chronology and function of the discovered part of the fort more clearly. A trial trench (2 m by 2.3 m) was dug south of the last-year's Trench 1a and southeast of Trench 1 in order to release Structure 1 from a massive tree stump with the root system and to cause the eastern and southern profiles of Trench 1 to meet at a right angle. The resulting dimensions of Trench 1 were 7 m by 6 m. In the trial trench, which thus became an integral part of Trench 1, six stratigraphic units documented during the previous season were observed. After the bottom of Trench 1 was levelled, imprints of walls were noted. The imprint of the southern wall runs SW-NE along the length of 4.5 m, its maximum width being 1.3m. Its actual dimensions were not established because it extends into the profile of the trench. Next to the western profile of the trench was a row of collapsed stones, presumably from the wall of the structure which continues in the shape of the Cyrillic letter "Г" in the direction of the inner circular (apsidal?) part of Structure 1. This wall connects to the imprint of the southern wall also at a right angle, which suggests yet another masonry structure, designated as Structure 2.

In order to establish the depth of the foundation belonging to the Structure 1 is, a trial trench (2.5 m by 1.1 m) was dug next to the exterior face of its wall. It was discovered that Structure 1 had in fact been added to an already existing structure, also oval in plan, as clearly visible on the face of the wall. This earlier circular shape structure, designated as Structure 3, may be presumed to be a semi-circular corner tower of the Roman fort from the period of the first – second century. The tower was repaired, reinforced and added to in the third – fourth century, when Structures 1 and 3 in fact formed a structural whole. The bottom of the foundation trench of Structure 3, which formed a whole with Structure 1 in the second construction phase, is at a relative depth of 2.4 m (**Fig. 8, 9**).

In the third building phase the interior semi-circular portion of Structure 1 was given the shape of an apse and connected to the part of the exterior face of the wall in the eastern part of the trench with a levelling layer of strong plaster. As in the first excavation season, in 2022 yet another fragment of fresco plaster was found in the apsidal part of Structure 1. Therefore, the presence of a religious, possibly Christian, building may be presumed in the third phase.

The early Byzantine, Christian period of the site (fifth – sixth century) is further indicated by the graves found in Trenches 2 and 3 with bricks incised with a cross.

The first two excavation campaigns discovered an abundance of movable archaeological material, mostly Roman pottery dating from the end of the first to the end of the fourth century[15]. To be singled out is the fragment of an amphora which may be dated to the end of the first and beginning of the second century based on analogies. It is potentially indicative of the heterogeneous character of the site, but it is too early to make any speculations. The date of the amphora allows us nonetheless to confirm the presumed early date of the fort at the confluence of the Timok and Danube rivers, the period of the consolidation of the Roman limes and preparations for the conquest of Dacia. On the other hand, it seems increasingly certain from these finds that the late – first – century Roman fort was closely connected with

[15] NIKOLIĆ-ĐORĐEVIĆ 2000, p. 11–244; JEREMIĆ 2009; BOJOVIĆ 1977, p. 5–23; BJELAJAC, SIMIĆ 1991, p. 17–21; BJELAJAC 1996; BIKIĆ, IVANIŠEVIĆ 1996, p. 253–271.

Roman *Aquae* and its port, the first major infrastructural project in the Iron Gates area completed under Trajan, as evidenced by the now sadly lost inscription of 99 AD[16] (**Tab. 1**).

A remarkable find of interest to the chronology of the site is an almost intact pear-shaped oil lamp with concave discus, reliably dateable to the fourth century based on the analogies from Singidunum[17]. The lamp, made of kaolin clay, is 10 cm in length and 6.9 cm in width. Its height at the handle is 4 cm, the diameter of the discus is 3.5 cm, and the diameter of the base, 3.8 cm (**Fig. 10**).

The nozzle is relatively short. The concave discus is separated from the shoulders by a low moulding which continues towards the nozzle and around its tip, flanking the nozzle channel. The discus is decorated with curved lines slanted anti-clockwise and arranged radially from the filling hole. The sloping shoulders are decorated with a row of short ribs along the either side of the moulding. At the point where the shoulders taper to form the nozzle, these ornamental rows terminate with a circular ornament with a dot in the middle. The wick hole at the tip of the nozzle is charred from use. The solid handle is set symmetrically to the nozzle. Its ends are shaped into two cylindrical enlargements, one of which is missing (chipped off). The inner side of the surviving enlargement is decorated with concentric circles. The lamp rests on a base ring[18].

Based on all the information presented here, some preliminary thoughts following from only two, partly limited, archaeological seasons seem worthy of being put forward. The site of Ćetaće near the village of Radujevac was spared from destruction during the construction of the hydroelectric power plant owing to its position at the confluence of the Timok and Danube rivers, certainly a section of the Roman Danube frontier in present-day Serbia worthy of researchers' particular attention. It is the strategic location of the site that decided its importance and purpose. It was the point that defended the entrance to the Timok valley on the section of the Roman road *Aquae-Dorticum*[19], at a crossing over the Timok. It quite certainly was built in the early period of the construction of the limes before the conquest of Dacia. It may have lost its primary military importance over time, especially after the creation of the Roman province of Dacia, when it may have become customs point and a major centre of the Roman mining district of *Aquae* (slag). It seems at the moment that the original Roman masonry fort built in the first century (Structure 3) received additions and was enlarged between the second and fourth century (Structures 1 and 2). Then, in the early Byzantine period, apart from the possible restoration of its military structure, it was given markedly Christian elements (apse with fresco plaster, early Christian burials). Taking into account the proto-historical Dacian context on the site, four chronological phases may be identified clearly. The importance of the proto-historical element, with Dacian pottery noted in a broader area of the site, should not be neglected. Based on the data about the proto-historical Dacian

[16] PETROVIĆ 1989–1990, p. 295–298.

[17] KRUNIĆ 2011, p. 317–318.

[18] The authors are grateful to their colleague dr. Milica TAPAVIČKI–ILIĆ for her generous help regarding the possible date of and analogies to this significant find.

[19] Roman Dorticum is situated on the bank of the Danube in the vicinity of the right bank of the Timok near the village of Vrav, Bulgaria. See TIR, L–34, 55; IVANOV, STOICHKOV 1992.

material recorded in the Morava River valley, in Paraćin, it is clear that the Timok river valley was an important, perhaps even primary communication route between the Danube valley and the interior of the Balkans as early as pre-Roman times and that it retained the importance in the Roman period.

The double earthen rampart visible in the field and confirmed by LiDAR images seems to negate all previous building phases on the site, perhaps indicating some later emergency phase of fortifying this location of an inherent military importance. The presence of a multi-period necropolis within an originally Roman fort seems to support the hypothesis. The archaeological excavations carried out so far as well as those that will hopefully follow strongly justify the inclusion of the site of Ćetaće-Radujevac in the tentative UNESCO list pertaining to the Roman Danube frontier-limes in Serbia both by the ascertained structural remains of a Roman fort and by the movable material which defines it in terms of chronology and character.

BIBLIOGRAPHY

BIKIĆ, IVANIŠEVIĆ 1996 – V. Bikić, V. Ivanišević, *South gate area in the Upper town of Belgrade fortress*, Starinar 47 (1996), p. 253–271.

BJELAJAC 1996 – Lj. Bjelajac, *Amfore gornjomezijskog Podunavlja,* Belgrade, 1996.

BJELAJAC, SIMIĆ 1991 – Lj. Bjelajac, Z. Simić, *Rezultati zaštitnih arheoloških iskopavanja na prostoru ulice Kneza Mihaila*, Godišnjak grada Beograda 37 (1991), p. 17–21.

BOJOVIĆ 1977 – D. Bojović, *Rimske terme u parku na Studentskom trgu u Beogradu*, Godišnjak grada Beograda 34 (1977), p. 5–23.

CERMANOVIC-KUZMANOVIC, STANKOVIC 1986 – A. Cermanović-Kuzmanović, S. Stanković, *La forteresse antique Mora Vagei près de Mihajlovac*, Djerdapske sveske/Cahiers des Portes de Fer 3 (1986), p. 453–466.

DUSANIC 2004 – S. Dusanic, *Roman mining in Illyricum: historical aspects*, in: G. Urso, (ed.): *Dall'Adriatico al Danubio. L'Illirico nell'età greca e romana,* Atti del Convegno internazionale, Cividale del Friuli, 25–27 settembre 2003 (I convegni della Fondazione Niccolo Canussio 3), Pisa, p. 247–270.

FRANCE, NELIS-CLEMENT 2014 – J. France, J. Nelis-Clément (eds.), *La statio. Archéologie d'un lieu de pouvoir dans l'empire romain*, Bordeaux, 2014.

GABRICEVIC 1986 – M. Gabričević, *Rtkovo–Glamija I – une forteresse de la basse époque, fouilles de 1980–1982*, Djerdapske sveske/Cahiers des Portes de Fer 3 (1986), p. 71–91.

GOLUBOVIĆ, MRĐIĆ 2013 – S. Golubović, N. Mrđić, *Danube Limes as a UNESCO World Heritage Site*, Archaeology and Science 9 (2013), p. 101–118.

IVANOV, STOICHKOV 1992 – R. Ivanov, V. Stoichkov, *Dolnodunavskia limes ot Dortikum do Bononia*, Voennoistoričeski sbornik 1 (1992), p. 76–93.

JEREMIĆ 2009 – G. Jeremić, *Saldum: Roman and Early Byzantine Fortification*, Belgrade, 2009.

KORAĆ *et alii* 2014 – M. Korać, S. Golubović, N. Mrđić, G. Jeremić, S. Pop-Lazić, *Roman Limes in Serbia*, Belgrade, 2014.

KRUNIĆ 2011 – S. Krunić, *Antičke svetiljke iz Muzeja grada Beograda*, Belgrade, 2011.

NIKOLIĆ-ĐORĐEVIĆ 2000 – S. Nikolić-Đorđević, *Antička keramika Singidunuma-oblici posuda*, Singidunum 2 (2000), p. 11–244.

PETROVIĆ 1961 – N. Petrović, *Utvrđenja na limesu kod Negotina,* in: M. Grbić (ed.), *Limes u Jugoslaviji I*, Belgrade,1961, p. 141–144.

PETROVIĆ 1972 – P. Petrović, *Nova Trajanova tabla u Djerdapu*, Starinar 21 (1972), p. 31–39.

PETROVIĆ 1984 – P. Petrović, *Brza Palanka-Egeta*, Djerdapske sveske/Cahiers des Portes de Fer *2* (1984), p. 153–166.

PETROVIĆ 1989 – 1990 – P. Petrović, *Classis Flavia Moesica na Dunavu i Gornjoj Meziji (Classis Flavia Moesica on the Danube in Upper Moesia)*, Starinar 40–41 (1989–1990), p. 207–216.

PETROVIĆ 1991 – P. Petrović, *Ein Donauhafen von Trajan bei dem Kastell Aque (Moesia Superior)*, in: V. A. Maxfield, M. J. Dobson (eds.), *Roman Frontier Studies 1989: Proceedings of the XV*th *International Congress of Roman Frontiers Studies*, Canterbury, 2–10 September 1989, Exeter, p. 295–298.

PETROVIĆ 1996 – P. Petrović (ed.), *Roman Limes on the Middle and Lower Danube*, Belgrade, 1996.

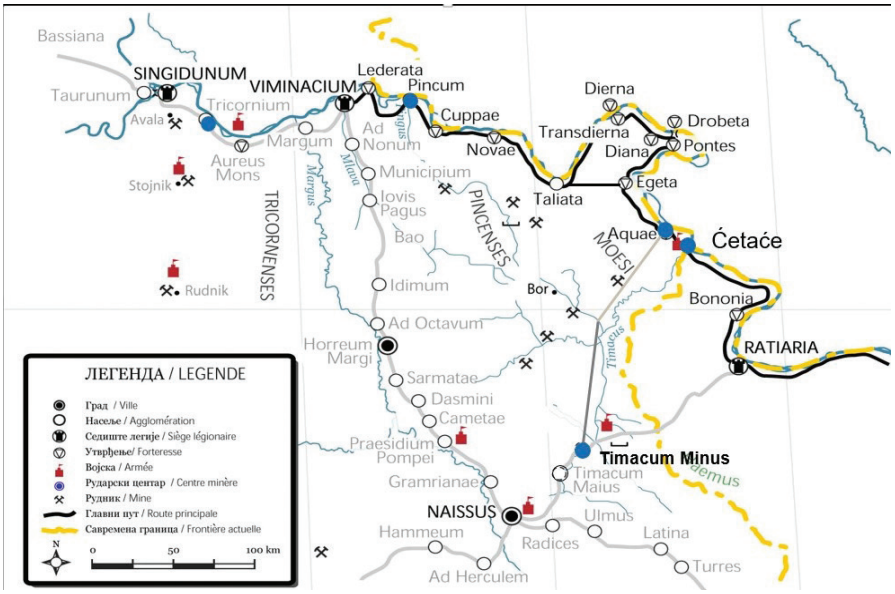
PETROVIĆ, VASIĆ 1996 – P. Petrović, M. Vasić, *The Roman Frontier in Upper Moesia: Archeological Investigations in the Iron Gate Area-Main Results*, in: P. Petrović (ed.), *Roman Limes on the Middle and Lower Danube*, Belgrad, p. 15–27.

PETROVIĆ 2017 – V. P. Petrović, *Les travaux des Romains aux Portes de Fer*, in: A. Bouet, C. Petit-Aupert (eds.), *Bibere, ridere, gaudere, studere, hoc est vivere: hommages à Francis Tassaux,* Bordeaux, 2017, p. 387–396.

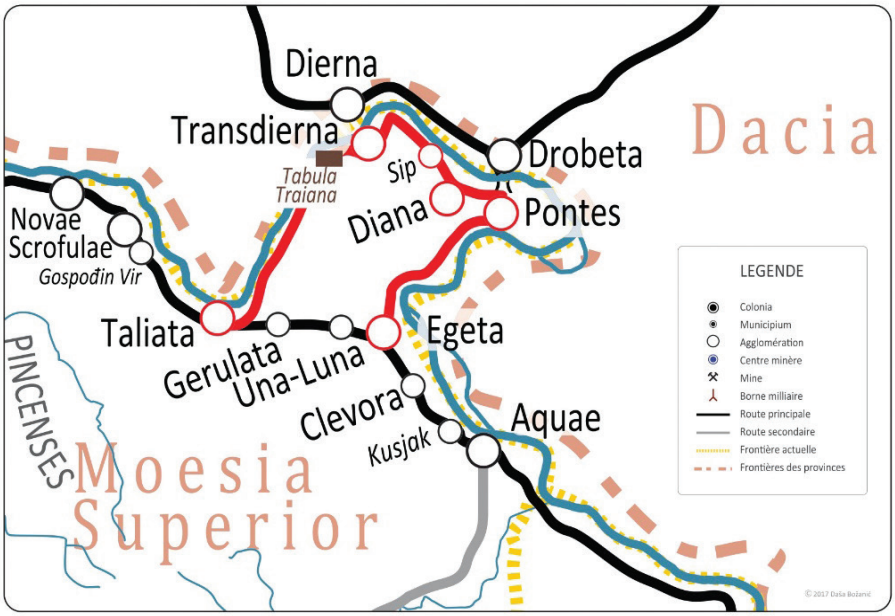
PETROVIĆ 2018 – V. P. Petrović, *The Aquae Station on the Roman Danube Limes Road in Upper Moesia*". *Danubian Provinces of the Roman Empire,* Open Archaeology 4 (2018), p. 386–393.

PETROVIĆ 2019 – V. P. Petrović, *Les voies et les agglomérations romaines au cœur des Balkans: Le cas de la Serbie*, Bordeaux, 2019.

URSO 2004 – G. Urso (ed.), *Dall'Adriatico al Danubio. L'Illirico nell'età greca e romana,* Atti del Convegno internazionale, Cividale del Friuli, 25–27 settembre 2003, I convegni della Fondazione Niccolo Canussio 3, Pisa, 2004.



Map 1. Uppermoesian Danube limes.



Map 2. Danube limes in the Iron Gates-Djerdap area.



Fig. 1. Roman port at Kusjak near Prahovo.

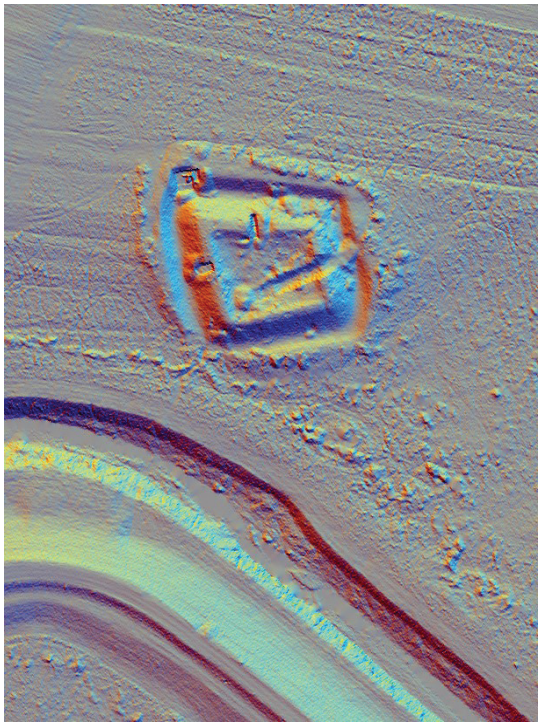


Fig. 2. LiDAR image of the fort.



Fig. 3. Trench 1. Corner tower of the Roman fort in 2021.



Fig. 4. Trench 1. Stamped brick.

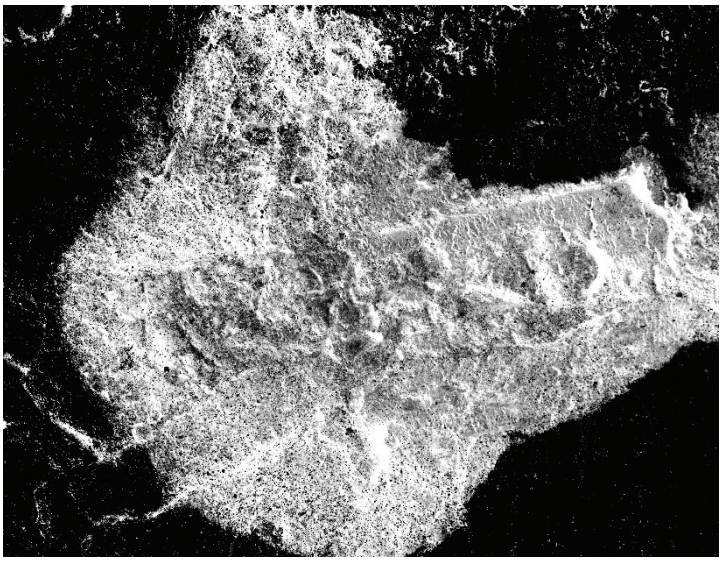


Fig. 4a. Trench 1. Stamped brick.



Fig. 5. Trench 2.



Fig. 5a. Trench 2. Brick with the cross.



Fig. 6. Trench 1. Corner tower of the Roman fort in 2022.



Fig. 7. Trench 3.



Fig. 7a. Trench 3. Brick with the cross.



Fig. 8. Trench 1. Corner tower of the Roman fort.



Fig. 9. Trench 1. Trial trench: apsidal part of Structure 1.



Fig. 10. Trench 1: the lamp.



Tab. 1. Typology of the pottery finds from Trench 1.

1. Pot, mid-4th century; analogy: Type II/10 (NIKOLIĆ-ĐORĐEVIĆ 2000).
2. Pot, mid-2nd-end of 4th century; analogy: Type II/8 (JEREMIĆ 2009).
3. Pot, second half of 3rd–4th century; analogy: Type II/5 (NIKOLIĆ-ĐORĐEVIĆ 2000).
4. Pot, second half of 3rd-beginning of 5th century; analogy: Type II/2 (NIKOLIĆ-ĐORĐEVIĆ 2000).
5. Amphora, end of 1st-first half of 2nd century; analogy: Type V/3 (NIKOLIĆ-ĐORĐEVIĆ 2000; BOJOVIĆ 1977: T. LXIV/557, 558; BJELAJAC, SIMIĆ 1991, T. II/4; BJELAJAC 1996, photo I/1–4, 7, 8, 18–21; BIKIĆ, IVANIŠEVIĆ 1996, photo 5/5).
6. Pot, 4th century; analogy: Type II/12 (NIKOLIĆ-ĐORĐEVIĆ 2000).

L'EXCEPTION SCYTHE D'APRÈS SOZOMÈNE ET LES EXCEPTIONS SCYTHES D'APRÈS L'HISTOIRE ET L'ARCHÉOLOGIE PALÉOCHRÉTIENNES[1]

Georgi ATANASOV[*]

Cuvinte-cheie: *Sozomenos, martiri, criptă, synthronon, Tomis, Zaldapa, Scythia.*
Keywords: *Sozomène, martyrs, crypte, martyrium, synthronon, Tomis, Zaldapa, Scythie.*

Rezumat: *Excepția scitică potrivit lui Sozomenos VI.21. În Cartea a VI-a a Historia Ecclesiastica, Sozomenos scrie: Mitropolia (Scythiei) se numește Tomis... După un obicei străvechi, care încă se practică, toate bisericile din țară (Scythia) se află sub autoritatea unui episcop. Într-adevăr, conform primelor două liste episcopale care s-au păstrat, în provincia Scythia există un singur episcop – episcopul capitalei Tomis. Aceasta dovedește că Sozomenos și istoricii Bisericii care au urmat au scris pe bună dreptate despre așa-numita „excepție scitică".*

Având în vedere rezultatele istoriografiei și arheologiei creștine din ultimele decenii, am înregistrat alte șapte excepții scitice.

1. Într-o listă episcopală publicată de C. de Boor (sau nr. 3 după J. Darouzes) de la sfârșitul secolului al VIII-lea – mijlocul secolului al IX-lea, cu un prototip pentru Scythia din a doua jumătate a secolului al VI-lea, apare episcopul / arhiepiscopul Tomisului ca mitropolit cu 14 episcopi sufraganți. În opinia noastră, acest lucru s-a întâmplat după mijlocul secolului al VI-lea și nu are nici o analogie în organizarea episcopală din imperiu.

2. Așa-zisa excepție a lui Sozomenos este posibil să se datoreze importanței capitalei Tomis. Acesta este orașul în care, potrivit diverselor surse, au fost uciși zeci de martiri creștini – caz fără analogii în provinciile balcanice ale Imperiului Roman în secolele II–IV. În sursele hagiografice avem informații despre mai mult de 30 de martiri sciți – în total peste 100! Aceasta este, de asemenea, un fel de excepție scitică.

3. Este strâns legată de așa-numita noastră a doua excepție scitică. Doar în această provincie a fost studiat un grup semnificativ de cripte mari pentru sfintele moaște construite sub mesele altarului. Din cele 58 de biserici descoperite până acum în Scythia, datând de la mijlocul (?) secolului al IV-lea până la începutul secolului al VII-lea, în 15 bazilici au fost documentate cripte mari, cu o suprafață de aproximativ 2 m² și chiar mai mult. Aceste

[*] Georgi ATANASOV: Regional Historical Museum, Silistra; courriel: geotal@abv.bg.

[1] Ce texte est le résultat des recherches menées dans le cadre du projet intitulé *Frontières et modèles culturels: paganisme vs christianisme dans la zone de contact du limes danubien (Scythie Mineure et Mésie Seconde aux IV^e^-VII^e^ siècles)*, financé par le Fond national de la recherche scientifique du Ministère de l'Éducation et des Sciences sous le contrat n° KH-06-H60/10 du 17.11.2021.

dimensiuni permit amplasarea acolo nu doar a raclelor mici, ci și a sicrielor cu trupurile dezmembrate ale martirilor sau racle mai mari.

4. Pe lângă faptul că Scythia este provincia cu cele mai mari cripte aflate sub mesele de altar ale bazilicilor, este și singura din Balcani cu un grup de cripte hipogee amplasate în întregime în spațiul absidei.

5. Acum o jumătate de secol J.-P. Sodini a evidențiat așa-numitul grup IV, în care a numărat criptele cu scară dinspre sud în bazilicile creștine timpurii din Balcani. Aici include criptele din bazilicile C și D de la Tropaeum Traiani, bazilica cu cripta de la Histria, cripta din bazilica Insulei Thassos și cripta de sub altarul Bazilicii Sfântul Dimitrie, din Salonic. Contestăm ideea conform căreia cripta din Bazilica Sfântul Dimitrie este un prototip al acestui grup, deoarece conform ultimelor cercetări a fost construită în biserică nu mai devreme de secolul al VIII-lea. În această etapă a cercetării, cea mai veche este cripta Bazilicii nr. 4 din Zaldapa datată în penultimul sfert al secolului al IV-lea. Este de remarcat faptul că în timpul erei creștine timpurii, secolele IV–VI, aproape toate criptele cu o intrare dinspre sud se află în Scythia.

6. O asociem cu absența sintronurilor în aproape toate cele 58 de bazilici creștine timpurii din Scythia, inclusiv în catedralele din Tomis, Histria, Callatis, Zaldapa și Tropaeum Traiani. Singura excepție de necontestat este sintronul cu deambulatoriu al Bazilicii nr. 2 din Zaldapa, care este în prezent cercetat de o echipă arheologică bulgaro-franco-canadiană. Și această excepție este în contradicție cu realitatea din eparhiile vecine din Moesia Secunda și Chersones, unde sintronuri sunt înregistrate nu numai în catedrale, ci și în alte zeci de biserici.

7. A șaptea excepție scitică constă în faptul că în nici o bazilică din provincia Scythia nu a fost găsit un mormânt privilegiat sau mormânt al unui episcop, preot, patron etc., „oameni speciali" în biserici.

Abstract: *The Scythian exception according to Sozomenos VI.21. In Book VI of the Historia Ecclesiastica Sozomenos writes: The metropolis (of Scythia) is called Tomis... According to an ancient custom, which is still current, all the churches in the country (Scythia) are under the authority of a bishop. Indeed, according to the first two episcopal lists which have been preserved, there is only one bishop in the province of Scythia alone-the bishop of the capital Tomis. This proves that Sozomenos and subsequent historians of the Church rightly wrote about the so-called "Scythian exception".*

Based on the results of Christian historiography and archeology in recent decades, we have registered seven other Scythian exceptions.

1. In a bishop list published by C. de Boor (or also No. 3 according to J. Darouzes) from the end of the 8th-middle of the 9th century with a prototype for Scythia from the second half of the 6th century, appear the bishop/archbishop of Tommy as metropolitan with 14 suffragan bishops. In our opinion this happened after the middle of the sixth century, and has no analogue in episcopal organization in the empire.

2. The so-called exception of Sozomen it may be due to the importance of the Tomis capital. This is the city where, according to various sources, dozens of Christian martyrs were killed-a case without parallel in the Balkan provinces of the Roman Empire in the 2nd–4th centuries. In hagiographic sources we have information about more than 30 more Scythian martyrs-a total of more than 100! This is also a kind of Scythian exception.

3. It is closely connected with our so-called second Scythian exception. In this province alone, a large group of large crypts for holy relics built under the altar tables has been studied. In the 58 churches discovered so far in Scythia, dating from the middle (?) of the 4th to the

beginning of the 7th century, large crypts with an area of about 2 m² and even more have been documented in 15 basilicas. They are of such dimensions that not only small reliquaries can be placed there, but also coffins with the dismembered bodies of martyrs or larger reliquaries

4. Apart from the fact that Scythia is the province with the largest crypts under the altar tables of the basilicas, it is also the only one in the Balkans with a group of hypogea crypts entirely located in the space of the apse.

5. Half a century ago J.-P. Sodini singled out the so-called group IV, in which he counted crypts with a staircase from the south in the early Christian basilicas of the Balkans. Here it includes the crypts in basilicas C and D of the Tropaeum Traiani, the basilica with the crypt in Histria, the crypt in the basilica of Island Thassos and the crypt under the altar of the Basilica of Saint Demetrius, in Thessaloniki. We dispute the idea that the crypt in St. Demetrius is a prototype of this group, since according to the latest research it was built in the church no earlier than the 8th century. At this stage of research, the earliest is the crypt of Basilica No. 4 in Zaldapa from the third quarter of the 4th century. It is noteworthy that during the early Christian era 4th–6th centuries, almost all crypts with an approach from the south are in Scythia.

6. We associate it with the absence of synthrons in almost all 58 early Christian basilicas in Scythia, including the cathedrals of Tomis, Histria, Callatis, Zaldapa and Tropaeum Traiani. The only undisputed exception is the sintron with deambulatories of Basilica No. 2 in Zaldapa, which is currently under investigation by the Bulgarian-French-Canadian archaeological team. And this exception is in contradiction with the reality in the neighboring dioceses of Second Mysia and Chersones, where syntrons are registered not only in cathedrals, but also in dozens of other churches.

7. The seventh Scythian exception consists in the fact that in no basilica in the province of Scythia has been found a privileged tomb or tomb of a bishop, priest, patron, etc., "special people" in churches.

L'exception scythe d'après Sozomène VI.21

Vers 440, le fameux historien de l'Eglise Sozomène écrit dans le livre VI de son Histoire ecclésiastique (*Historia Ecclesiastica*), consacrée à l'empereur Théodose II (408–450): la métropole */de Scythie/ s'appelle Tomis; c'est une grande ville bondée qui s' étend sur la côte…Selon une coutume ancienne qui prévaut toujours, toutes les églises à travers le pays entier /Scythie/ sont sous l'autorité d'un seul évêque*[2]. Cette exception est confirmée par la loi de Zénon de 480 et l'Encyclique de 457/8, signée par l'évêque de Tomis Theotim II – *Theotimo reuerentissimo episcopo Tomitano*[3]. En effet, dans les deux plus anciennes notices épiscopales conservées – Not. I d'après J. Darrouzès, la ci-dite Pseudo-Épiphane de la fin du VIIe siècle[4], ayant un prototype de la première moitié du VIe s.[5], et Not. II d'après J. Darrouzès datant du IXe s.[6] ayant un prototype du VIe s.(?), seule la province de Scythie est dotée d'un seul évêque-celui de sa capitale Tomis. Ceci autorise Sozomène et les historiens ecclésiastiques qui le suivent jusqu'à nos jours à parler d'*exception scythe*. Effectivement, d'après ces premières notices

[2] SOZOMÈNE, *Historia Ecclesiastica*, VI. 21, 1343–1346.
[3] GELZER 1886, p. 341–342.
[4] DARROUZÈS 1981,p. 5–9, 213–215.
[5] ATANASOV 2008, p. 305–309; ATANASOV 2012, p. 359–364.
[6] DARROUZÈS 1981, p. 18–19, 217.

épiscopales, le métropolite de Marcianopolis dans la province voisine de Mésie seconde a un archevêque et cinq évêques suffragants. Dans la province d'Héminont, le métropolite d'Héraclée a également un archevêque et cinq évêques suffragants. Le métropolite de Philippoupolis dans la province de Thrace a un archevêque et trois évêques suffragants, etc[7]. La géographie et le territoire relativement restreint de la province de Scythie constituent-ils la seule raison de la dite *exception scythe* de Sozomènne? Or si les autres provinces le long du *limes* romain, telles la Mésie seconde, la Dacie Ripensis, la Mésie supérieure, la Pannonie, et celles situées au sud de l'Hæmus comme l'Hémimont, la Thrace, la Dacie méditerranéenne, la Macédoine première, ont un territoire presque deux fois plus étendu, la Macédoine seconde, le Rhodope, la Gothie (le Bosporus) et le Chersonèse ont quant à eux un territoire comparable à celui de la Scythie. La situation géographique, à savoir que la Scythie constitue la province frontalière la plus éloignée faisant face au monde barbare, est un facteur qui ne doit pas être négligé sans toutefois être surestimé.

La première exception scythe

Dans la notice épiscopale publiée par K. de Boor connue sous le nom de « Notice parisienne 1555a »[8] qui correspond à la Notice III du VIII[e]-IX[e] s. d'après J. Darrouzès[9], l'évêque/archevêque de Tomis apparaît soudainement comme métropolite avec quatorze évêques suffragants: 1. ὁ Ἀναξιουπόλεως-Axiopolis, 2. ὁ Καπηδάου-Capidava, 3. ὁ Βιπαίνου-Beroe?, Libida?, Troesmis? 4. ὁ Κούπρου-Carsium, 5. ὁ Νικομηδέου-Noviodunum), 6. ὁ Δέσου-Aegyssus), 7. ὁ Σαλσοβίας-Salsovia), 8.ὁ Ἁλμυρίου-Halmyris), 9. ὁ Τροπαίου-Tropaeum Traiani 10. ὁ Ζελδίπας-Zaldapa, 11. ὁ Διονυσουπόλεως-Dionysopolis, 12. ὁ Καλάτου-Callatis, 13. ὁ Ἰστρίου-Histria, 14 ὁ Κωνσταντιάνων-Constantiana?[10]. Il est remarquable que dans la Notice III la Mésie seconde soit à nouveau avec 5 évêques suffragants[11], mais il est probable que le centre métropolitain a été déplacé de Marcianopol à Odessos[12]. Dans le même

[7] DARROUZÈS 1981, p. 5–9, 205–215; *Fontes Graeci Historiae Bulgaricae II*, p. 186–189.

[8] BOOR 1891, p. 303–322, 519–534.

[9] DARROUZÈS 1981, p. 31–32, 242–243; *Fontes Graeci Historiae Bulgaricae III*, p. 191–196. Pendant un siècle et demi, le débat s'est poursuivi pour savoir si la Notis III reflète une organisation épiscopale réelle ou est une copmilation (surtout pour la Scythie) avec la liste des Hiérocles des villes de Scythie (une revue des différentes opinions en: HOLUBEANU 2019, p. 75–104; MOGARICHOV 2021, p. 369–371).

[10] HOLUBEANU 2019, p. 77–78.

[11] Παλαιστήνης est le seul nouveau centre épiscopal qui apparaisse à la dernière place. J. Darrouzès suppose qu'il s'agit d'une erreur: ce centre soit n'avait pas existé, soit son nom était mal rendu (DARROUZÈS 1981, p. 31, 241). La seconde possibilité est plus vraisemblable: petite erreur du compilateur de cette liste qui, à l'IXe s., aurait faussé l'orthographe de la forteresse nommée Πάλματις par Procope de Césarée dans De aedificiis vers le milieu du VIe s. (PROCOPIUS, *De aedificiis*, IV, 7, 12; *Fontes Graeci Historiae Bulgaricae II*, p. 169–172). Pour l'identification de l'évêché ὁ Παλαιστήνης avec la forteresse de Πάλματις, voir (HOLUBEANU 2018a, p. 178–181). Πάλματις est identifiée avec certitude à la grande forteresse près du village actuel d'Onogur, région de Dobric dans la province de la Mésie seconde à la frontière avec la province de Scythie (TORBATOV 2000, p. 59–63, fig. 1). Un indice indirect à l'appui de l'hypothèse de l'existence d'un siège épiscopal à cet endroit est la découverte d'une importante basilique avec un synthron aux 9 assises qui était rajouté dans un second temps (POPKONSTANTINOV, TOTEV, DOBREV 2019, p. 349–351, обр. 1).

[12] HOLUBEANU 2018a, p. 172–178, 205–234; MOREAU, PETCU, GERGANO 2021, p. 72.

temps, dans l'Hémimont leur nombre passe de deux à sept, en Thrace de quatre au sept, etc. Les causes de ces changements ne sont pas établies définitivement et les discussions à ce sujet continuent. Toutefois, l'apparition de 14 évêques suffragants dans une province d'une taille relativement réduite comme la Scythie peut être qualifiée d'exceptionnelle et constitue même un précédent pour l'organisation ecclésiastique des V^e^-VII^e^ s. (**Fig. 1**). Les discussions sur la date de cette notice épiscopale se poursuivent sur plus d'un siècle et les hypothèses varient entre le début de VI^e^ et le XI^e^ s[13]. Étant donné les circonstances historiques en Scythie (vers 680 elle est définitivement conquise par les Bulgares du khan Asparuch et reste en leur possession pour les trois siècles à venir), j'adhère à la datation proposée par le premier éditeur du document, K. de Boor, à savoir la fin du VIII^e^ s[14]. Certains auteurs l'attribuent même à la seconde moitié du IX^e^ s[15]. D'autres encore soutiennent la thèse d'une compilation très tardive[16] qui n'est pas à négliger non plus. Il s'agit plutôt d'une copulation du IX^e^ siècle qui comprend diverses sources. Je crois qu'en ce qui concerne la Scythie, Notice III est rédigée sur la base d'informations antérieur dont la date peut être précisée vers la seconde moitié du VI^e^ s.[17] Il est peu probable que cela se soit produit immédiatement après 536, lorsque a été créé le district administratif interprovincial de *Quaestura exercitus*[18]. Plusieurs sources postérieures à 536 mentionnent le prélat de Tomi comme évêque ou archevêque et non pas comme métropolite[19]. Dans ce contexte, mérite attention l'idée de D. Moreau, selon laquelle la liste de De Boor est une compilation tardive[20] et sans rapport avec la réalité-c'est-à-dire l'évêque de Tomis n'a jamais été métropolitain et n'a jamais eu 14 évêques suffragants aux Ve-VIIe siècles[21]. A Mangalia (Calatis), cependant, une inscription /épitaphe!/ avec le nom de l'évêque Étienne sur une croix de pierre a certainement été découvert[22]. Si Étienne était évêque de Calatis (?), cela suggère que l'archevêché de Tomis avait des évêques suffragants au VIe siècle.

La deuxième exception scythe

La ci-dite exception scythe d'après Sozomène peut être mise en rapport avec le rayonnement charismatique de la capitale provinciale de Tomis. C'est la ville qui brille de l'éclat d'une centaine de martyrs paléo-chrétiens, ce qui est un cas

[13] DARROUZÈS 1981, p. 31–33, 45; NAUMENKO 2003, p. 131–138; LAMBERZ 2004, p. 24–35; ZUCKERMAN 2006, p. 214–218; ATANASOV 2012, p. 357–364; MOGARICHOV *et alii* 2017, p. 236–238; HOLUBEANU 2019, p. 75–104; MOGARICHOV 2021, p. 369–371; MOREAU 2022, p. 98–121.

[14] BOOR 1891, p. 303–322, 519–534; KULAKOVSKII 1898, p. 173–202.

[15] ZUKERMAN 2006, p. 214–218; MOGARICHOV *et alii* 2017, p. 236–238; MOGARICHOV 2021, p. 369–371.

[16] LAMBERZ 2004, p. 24–35.

[17] ATANASOV 2012, p. 359–364.

[18] HOLUBEANU 2018a, p. 232–233; HOLUBEANU 2018b, p. 85–88.

[19] ATANASOV 2008, p. 305–309.

[20] Il est à noter que selon le Synecdemus de Hiéroclès, daté d'environ 535, il y a 15 villes en Scythie (*Fontes Graeci Historiae Bulgaricae II*, p. 90) qui, à 2 exceptions près (Acre-Caliacra et Constantiana?), sont répétées dans la notice épiscopale publiée de C. De Boor. Cela peut laisser penser que l'auteur de la notice épiscopale compilée à partir de Hiéroclès.

[21] MOREAU, PETCU, GERGANO 2021, p. 70–73; MOREAU 2022, p. 98–121.

[22] POPESCU 2018a, p. 26; POPESCU 2018b, p. 504, pl. VIII, fig. e1, 2.

unique dans les provinces balkaniques de l'Empire romain aux II^e^-IV^e^ s. Des textes hagiographiques nous renseignent sur l'identité de 30 autres martyrs scythes – 14 de Noviodunum, 9 de Dinogetia, 7 d'Axiopolis et 2 de Halmyris, soit un total de plus de 100 saints qui ont souffert le martyre en Scythie (?)[23] (**Fig. 2**). C'est ainsi que nous pouvons définir *une seconde exception scythe*. Cette province, et particulièrement sa capitale Tomis, sont couronnées du plus grand nombre de saints dans les Balkans et le long du *Limes*. En guise de comparaison, rappelons que dans la province voisine de Mésie seconde on dénombre quatorze martyrs pour le IV^e^ s., dont douze provenant de Durostorum, ville limitrophe avec la Scythie, en Dacie Ripensis ils sont quatre, en Mésie supérieure seulement deux, en Pannonie quarante-cinq (tous de la capitale Sirmium), en Dacie méditerranéenne seulement un ou deux (?), dans la vaste province de Thrace ils sont au nombre de 43 et tous sont de la capitale Philippoupolis, etc. Il existe également des provinces comme le Rhodope, la Dardanie et autres pour lesquelles nous ne disposons d'aucune donnée certaine de martyr (**Fig. 2**).

La troisième exception scythe

Le fait que dans cette province seulement on a enregistré toute une série de grandes cryptes pour des saintes reliques construites sous les tables d'autel est étroitement lié à la deuxième exception scythe formulée ci-dessus (**Fig. 3, 4**). Quinze cryptes spacieuses d'environ ou plus de 2 m^2 ont été découvertes dans les 58 basiliques des IV^e^-VII^e^ s. étudiées à ce jour[24]. Leurs dimensions suggèrent qu'elles étaient conçues pour accueillir non pas de petits reliquaires, mais des sarcophages/cercueils avec les saints corps entiers des martyrs ou bien de grands reliquaires pour la consécration des temples. La plus vaste de la série est la crypte-hypogée à cinq chambres (50 m^2) sous l'abside de la basilique cathédrale de Tomis (**Fig. 3a**)[25]. En second lieu vient la crypte-hypogée avec ses 2 chambres sous l'abside de la basilique № 4 de Zaldapa qui s'étend sur 34 m^2 (**Fig. 3b**)[26], suivie par la crypte-hypogée à 3 chambres sous le lycée Eminescu de Tomis ayant une superficie d'environ 23 m^2 (**Fig. 3c**)[27], la crypte-martyrium de 12,95 m^2 sous l'abside de la basilique de Niculițel[28] (**Fig. 3d**), la crypte-hypogée de la basilique A de Tropaeum Traiani d'environ 6,2

[23] DELEHAYE 1912, p. 265–268; POPESCU 1989, p. 46–53; ATANASOV 2011, p. 32–45. D'ailleurs, ces grands nombres sont contestés par certains chercheurs (voir ZUGRAVU, SETNIC 1995, p. 239–247; ZUGRAVU 1997, p. 214–224.

[24] BARNEA 1981, p. 489–505; ACHIM 2004, p. 577–591; IAȚCU 2012; ACHIM 2015, p. 324–325; ATANASOV, VALERIEV, YOTOV 2017, p. 123–132; ATANASOV 2020b, p. 11–16; ATANASOV, VALERIEV 2021, p. 45–80.

[25] BARNEA 1977, p. 123–126, fig. 37, 38; BARNEA 1979, p. 128–129; ACHIM 2004, p. 278–280, fig. 6; ACHIM 2015, p. 324–325, fig. 10–16.

[26] ATANASOV 2020b, p. 11–16, fig. 2; ATANASOV, MILANOVA 2024, fig. 14 (sous presse)

[27] BARNEA 1979, p. 133; BARBET, MONIER 2001, p. 221, fig. 1; ACHIM 2004, p. 278, fig. 3, 12; ACHIM 2015, p. 324–325, fig. 10–17.

[28] Y ont été découverts quatre cercueils en bois contenant les squelettes de martyrs locaux: saint Zoticos, saint Attalos, saint Kamasius, et saint Philippos dont les noms sont inscrits sur la paroi orientale; BAUMANN 1972, p. 189–202; BAUMANN 2006, p. 827–831, Taf.. 32; ACHIM 2004, p. 278, fig. 2; BAUMANN 2005, p. 83–132; ACHIM 2015, p. 326, fig. 10–19.

m² (**Fig. 4c**)[29]. La crypte sous l'abside de la basilique de Beroe dépasse également les 6 m² /?/ (**Fig. 4i**)[30]. La superficie de la crypte sous le béma de la basilique № 3 de Zaldapa est de 5 m² (**Fig. 4a**)[31], celle de la crypte de la ci-dite Petite basilique de Tomis est de 5,1 m² (**Fig. 4f**)[32], celle de la crypte-martyrium de la basilique de Halmyris d'environ 3,8 m² (**Fig. 4l**)[33], celle de la crypte sous le béma de la basilique № 1 de Zaldapa d'environ 3,3 m² (**Fig. 4b**)[34], celle de la crypte de la basilique rue „Karl Marx" de Tomis d'environ 2 m² (**Fig. 4h**)[35], de même que celles des deux basiliques d'Histria (**Fig. 4j, 5a**)[36], de la basilique C[37] et D de Tropæum Traiani[38] (**Fig. 4d, e**). On peut ajouter encore les quatre cryptes de Capidava (**Fig. 5**c)[39], celle du village de Saint-Cyril/Golesh (**Fig. 5b**)[40], de la basilique № 2 de Zaldapa (?)[41] et de la basilique extra-muros de Tropæum Traiani[42], ayant une superficie autour de 1 m². Par conséquent, les grandes cryptes se retrouvent dans 21% des basiliques. Si ou prend en considération les quatre cryptes à superficie d'environ 1 m² ce rapport atteint les 31%-situation sans équivalent non seulement dans les Balkans, mais dans le monde chrétien durant les IVe-VIIe s. En particulier, à Zaldapa ce rapport atteint les 100% car les quatre basiliques (№ 1–4) qui y sont entièrement fouillées possèdent de grande cryptes sous leurs autels.[43] Il faut souligner que dans les provinces voisines de la Scythie-en Mésie seconde et en Chersonèse, on n'a découvert aucune grande crypte malgré l'important nombre d'églises des IVe-VIIe s. Fouillées-respectivement 75 et 25. Il y a deux seules exceptions incertaines-les cathédrales d'Abritus[44] et de Chersonèse[45], mais elles ne sont bien documentées[46]. La situation

[29] BARNEA 1977, p. 163, fig. 55; BARNEA 1979, p. 163–167, fig. 55, 56; BARNEA 1981, p. 496, fig. 7; LUNGU 2000, p. 72–73, fig. 15; ACHIM 2004, p. 278, fig. 7.

[30] BAUMANN 2003, p. 101–102; BAUMANN 2005, p. 53–55; ACHIM 2015, p. 321, fig. 10–15.

[31] ATANASOV, VALERIEV, YOTOV 2017, p. 123–132; ATANASOV 2020b, p. 11–16.

[32] ACHIM 2004, p. 278, fig. 14.

[33] Dans celle-ci il y a deux lits funéraires sur lesquels sont déposées les reliques entières des saints Epictetus et Astion, dont les noms sont écrits sur la lunette orientale. ZAHARIADE 2002, p. 231–245; BOUNEGRU 2003, p. 117–126; ACHIM 2015, p. 325–326, fig. 10–18.

[34] ATANASOV 2020b, 11–16; ATANASOV, VALERIEV 2021, p. 45–80.

[35] ACHIM 2004, p. 278–280, fig. 4.

[36] ACHIM 2004, p. 278–280, fig. 1, 8; ACHIM 2005, p. 85–90; SUCEVEANU 2007, p. 51, pl. VIII, XIV; ACHIM 2014, p. 265–287.

[37] BARNEA 1977, p. 163, fig. 55; BARNEA 1979, p. 167; LUNGU 2000, p. 73, fig. 17; ACHIM 2004, p. 278, fig. 9; MĂRGINEANU-CÂRSTOIU 1977, p. 235–250.

[38] BARNEA 1977, p. 163, fig. 55; BARNEA 1979, p. 163–167, fig. 56; BARNEA 1981, p. 496, fig. 7; LUNGU 2000, p. 72–73, fig. 17; ACHIM 2004, p. 278, fig. 10.

[39] ACHIM, OPRIȘ 2010, p. 521–534.

[40] ATANASOV 2006, p. 199–306.

[41] ATANASOV 2020b, p. 11–16; ATANASOV *et alii* 2020, p. 732–737; MOREAU, ATANASOV, BEAUDRY 2020, p. 35–55.

[42] ACHIM 2004, p. 278.

[43] ATANASOV, VALERIEV, YOTOV 2017, p. 123–132; ATANASOV 2020b, p. 11–16; ATANASOV, VALERIEV 2021, p. 45–80; ATANASOV *et alii* 2020, p. 732–737; MOREAU, ATANASOV, BEAUDRY 2020, p. 35–55.

[44] DZANEV 2005, p. 100.

[45] KHROUSHKOVA 2016, p. 362.

[46] La crypte d'Abritus dont la chronologie est très discutable-VIe ou Xe s., est située au centre du béma de la cathédrale et elle représente une chambre aux murs enduits de mortier et aux

dans le reste des provinces balkaniques est similaire. Dans l'Hémimont, situé au sud de la Mésie seconde, on trouve de grandes cryptes uniquement sous les autels des églises de Karnobat[47] et de Voden[48], mais elles attestent de plans et d'accès tout à fait différents de ceux connus en Scythie. Même les églises cathédrales de la capitale byzantine, Sainte-Sophie et Sainte-Irène, ainsi que les Saints-Serges-et-Bacchus, sont privées de cryptes. L'on ne connaît de grandes cryptes dans la mégalopolis de Constantinople que dans trois églises (parmi un total de plus de 30 églises au VI^{e} s.) – Saint-Jean-Baptiste de Stoudios et la basilique Chalkoprateia, toutes les deux datant du milieu du V^{e} s. et l'église Saint-Polyeucte remontant vers 520[49]. Or, les trois cryptes de la capitale impériale connues ont une forme en croix et des escaliers du côté est pour les basiliques du Saint-Jean-Baptiste de Stoudios et la Chalkoprateia, et du côté ouest pour Saint-Polyeucte, mais leur forme et dimensions (en moyenne environ 2,80 × 2,80 m et environ 0,90 × 0,90 m au croisement des bras de la croix) rendent problématique la pose d'un squelette entier dans un cercueil ou un sarcophage. Le même raisonnement est valable pour les cryptes cruciformes et aux dimensions modestes de Thessalonique. Parmi la dizaine d'églises datant des IV^{e}-VII^{e} s., la seule crypte importante par sa superficie est celle de la basilique de Saint-Démétrios. Or, elle ne contenait pas de saintes dépouilles de martyrs, mais uniquement une urne placée en son centre. De vastes cryptes ont été découvertes également à Thassos[50], à Philippes (basiliques „A" et „B"), à Stobi (la basilique épiscopale et la basilique A) et à Caričin Grad (la basilique à crypte?)[51]. La situation en Dalmatie est très instructive à cet égard. Parmi les quelques 250 églises étudiées, seule une quinzaine de cryptes sont enregistrées[52] et elles se présentent comme de petites cavités sous l'autel, rappelant les cryptes de Capidava[53] et de Saint-Cyril près du village actuel de Golesh[54]. En Dalmatie, trois cryptes uniquement se distinguent par une superficie plus importante de 2,5 m^{2} en moyenne et des escaliers à deux-trois marches, et sont situés toujours à l'est[55]. En Asie Mineure également le nombre des cryptes est restreint et se trouvent dans Saint-Jean d'Ephèse, Saint-Jean de Çavus, en Cappadoce, et plus particulièrement à Ancyre-Ankara[56], en Palestine (Jérusalem, Bethléem, Khirbet Bureikut,

dimensions 1,50 × 1,20 × 0,30 /?/ m. Mon collègue G. Dzanev m'a informé de cette crypte. La seconde crypte, celle de la cathédrale de Chersonèse, est très mal documentée, mais était située sous l'autel et avait les dimensions suivantes: 1,52 × 0,94 × 1,4 m.

[47] ALADJOV, DRAZHEVA, MOMCHILOV 2006, p. 273–280, fig. 2, 4.

[48] TANCHEVA-VASILEVA 1973, p. 73–88.

[49] MATHEWS 1971, p. 25–27, 32–33, 52–55, fig. 10, 12, 15, 25.

[50] HODDINOTT 1963, p. 181, fig. 89; SODINI 1981, p. 438–455.

[51] LEMERLE 1945, p. 368–372; HODDINOTT 1963, p. 163, 171, 181, 190, 209–210, fig. 74, 80, 81, 89, 98, 137, 138; SODINI 1981, p. 438–455; SNIVELY 1995, p. 1179–1184; SNIVELY 2006, p. 161–169.

[52] CHEVALIER 1995, p. 139–144.

[53] ACHIM, OPRIȘ 2010, p. 527, pl. II/4, pl. IV/7, 8, pl. V/10–13; ACHIM 2017, p. 83, pl. III-g.

[54] ATANASOV 2006, p. 199–236; ATANASOV 2007, p. 55–68.

[55] CHEVALIER 1995, p. 143, fig. 1–3, pl. XLII–1.

[56] Son plan est similaire à celui de la crypte de la basilique № 3 de Zaldapa, mais ses dimensions sont supérieures: 4,50 × 5,55 × 2,20 m (RESTLE 1991, p. 482–483), ce qui permet d'envisager la pose de plus d'un squelette. A la différence de Zaldapa son orientation est ouest-est et le couloir et l'entrée sont placés à l'ouest.

Khirbet Ruheibeh), en Afrique du Nord (Nubie, Abou Mena, Carthage) et autres[57]. De plus, ces exemples sont très éloignés par leur situation géographique du Bas-Danube et ont des formes, des plans et des accès différents. Sur cette toile du fond, les 15 grandes cryptes des 58 basiliques de Scythie sont effectivement une exception sans équivalent. Dans le même temps, il n'y en a pas deux qui soient totalement identiques quant à leur plan, leurs dimensions, les constructions et l'accès, ce qui invite à rejeter l'existence d'une certaine réglementation canonique. Les presbytes de chaque église, en accord avec l'évêque /archevêque de Tomis, décident de leur aspect précis et cette décision est prise en fonction des ressources disponibles.

La raison de cette nouvelle exception scythe concernant l'existence de grandes cryptes au-dessous des autels des 15/19 basiliques n'est pas évidente. Elle est peut-être à mettre en rapport avec le fait que c'est la seule province qui brille de la gloire d'autant de saints martyrs.

La quatrième exception scythe

En dehors du fait que la Scythie est la province qui regroupe la plus grande concentration de grandes cryptes disposées au-dessous des tables d'autel des basiliques, elle est également le seul territoire des Balkans où ont été découvertes des cryptes-hypogées situées entièrement ou en grande partie dans l'espace absidial. En effet, les cryptes des églises les plus anciennes comme celles de Niculițel, de Halmyris, de Beroe, de Tomis (la cathédrale, la basilique « Eminescu » et la ci-dite Petite basilique[58] et la basilique № 4 de Zaldapa, sont placées entièrement ou en grande partie dans les limites de leurs absides. Ceci suggère qu'au moins certaines des tables d'autels qui les surmontaient se trouvaient également dans l'abside. Il convient de noter que tous ces exemples datent entre la seconde moitié du IV^e^ et le milieu du V^e^ s. Des cas isolés similaires proviennent de Rome[59], de la Terre Sainte[60] et dans une certaine mesure de Macédoine. Il s'agit des « cryptes absidiales » bâties sous les absides de l'église Sainte-Sophie et celle de la rue Trois septembre de Thessalonique, ainsi que de la basilique épiscopale de Stobi. Ces cryptes se présentent comme une sorte de souterrains absidiaux prenant la forme de l'abside elle-même, limitées à l'est par les fondations de l'abside et accessibles par des escaliers placés aussi bien au nord qu'au sud[61]. Voilà pourquoi leur ressemblance avec les cryptes absidiales de Scythie est uniquement formelle et ne traduit ni influences ni emprunts directs.

La cinquième exception scythe

Il y a longtemps que J.-P. Sodini a discerné un groupe particulier (quatrième) parmi les cryptes des basiliques paléochrétiennes des Balkans qui étaient accessibles par un escalier méridional. On y compte les cryptes des basiliques C et D de

[57] SODINI 1981, p. 443, 446–447, notes 30–34; SALVATORE 1983, p. 825–842; RESTLE 1991, p. 482–483; PATRICH 2006, p. 379–392; COMTE 2012, p. 69–72, note 12.

[58] ACHIM 2004, p. 278.

[59] SPELA 2006, p. 18, fig. 20.

[60] TSAFRIR, HIRSCHFELD 1979, p. 291–323; ACHIM 2004, p. 280, note 15; TSAFRIR 2006, p. 35–36, fig. 21–23.

[61] SNIVELY 1995, p. 1179–1184; SNIVELY 2006, p. 161–169.

Tropæum Traiani (**Fig. 4d, e**), la basilique d'Histria (**Fig. 4j**), la crypte de la basilique de l'île de Thassos et celle sous l'autel de Saint-Démétrios de Thessalonique (**Fig. 7**) dans la province de Macédoine première[62]. C'est notamment ce dernier exemple qui est considéré comme étant le prototype, pour ce petit groupe, de l'aménagement d'un accès méridional aux cryptes qui ne se rencontre nulle part ailleurs dans les Balkans et dans le monde chrétien contemporain (Sodini 1981, p. 457). On doit y ajouter les grandes cryptes des basiliques № 1 et 3 du début du VI^e^ s. et № 4 de la fin du IV^e^ s. qui ont été fouillées durant la dernière décennie à Zaldapa[63] car elles sont également pourvues d'un escalier au sud (**Fig. 3b, Fig. 4a, b**). Le fait que la basilique № 4 de Zaldapa est construite au dernier quart du IV^e^ s. remet en question la proposition de J.-P. Sodini de considérer la crypte de l'église de Saint-Démétrios de Thessalonique comme le prototype de ce groupe car la basilique de Thessalonique est postérieure de quelques décennies puisqu'elle est attribuée au premier quart du V^e^ s[64]. L'on peut accepter l'idée de J.-P. Sodini qu'il s'agit d'une pratique régionale et rajouter aux cinq cryptes à escalier au sud qu'il cite trois autres récemment mises au jour à Zaldapa, mais il est peu probable que l'aménagement des cryptes à escalier méridional de Scythie, y compris à Zaldapa, suive le modèle diffusé par Saint-Démétrios de Thessalonique. Par ailleurs, I. Achim fait également allusion à l'impact de Thessalonique sur le dispositif des cryptes en Scythie, et en particulier à Tropaeum Traiani[65]. Pourtant, il existe des arguments solides permettant de mettre en rapport l'aménagement de la crypte de Saint-Démétrios avec l'importante campagne de reconstruction de la basilique au VII^e^, ou même au X^e^ s.[66], ce qui annulerait toute possibilité d'y voir un prototype du groupe. Enfin, par leur plan cruciforme, les cryptes de Saint-Démétrios, de Thassos, du catholicon du monastère du Stoudios et de Dioclétianopolis (Hissar) sont très différentes des cryptes de Zaldapa et de Scythie en général. Par conséquent, nous pouvons admettre que les six grandes cryptes munies d'escaliers au sud en Scythie sont une autre *exception scythe*, une pratique locale qui ne peut pas être mise en rapport avec la crypte de Saint-Démétrios de Thessalonique.

[62] SODINI 1981, p. 453–457, fig. 10, 12.

[63] ATANASOV 2020, p. 11–16.

[64] SOTERIOU 1953, p. 60 ff et 107 f.; WOODS 2000, p. 222. Il n'est pas impossible que les deux églises (Zaldapa no. 4 et Saint-Démétrios) soient contemporaines car les monnaies, le sceau et la céramique provenant de la basilique № 4 de Zaldapa ne donnent que le terminus post quem de sa fondation au cours du dernier quart du IV^e^ s., très probablement après l'invasion wisigothe de 377. Nous ne disposons toutefois pas de repères chronologiques certaines permettant de fixer à quel moment exact après 377 avait commencé sa construction.

[65] ACHIM 2004, p. 284.

[66] MENTZOS 2006, p. 257–270.

La sixième exception scythe

Nous associons cette *exception* à l'absence de synthronon dans pratiquement toutes les 58 basiliques paléochrétiennes étudiées en Scythie, y compris les deux cathédrales de Tomis[67], celles d'Histria[68], de Tropaeum Traiani[69], de Troesmis[70], d'Ibida[71], d'Argamum[72], de Zaldapa[73], ainsi que les autres églises d'Axiopolis, Capidava, Noviodunum, Ibida, Bizoné, Tomis, Histria, Tropaeum Traiani, etc[74]. La basilique № 2 de Zaldapa qui est en cours d'étude par une équipe bulgaro-canado-française serait probablement l'exception qui confirme la règle[75]. On suppose la présence d'un synthronon dans certaines églises à Argamum, Histria et Tropaeum Traiani, mais elle n'est pas établie incontestablement[76]. Cette quasi-absence de synthronon en Scythie est d'autant plus frappante comparée aux éparchies voisines de la Mésie seconde et du Chersonèse, où cette installation est enregistrée non seulement dans les cathédrales mais dans des dizaines d'autres églises (probablement en rapport avec la présence de chorévèques), y compris dans de petites forteresses et habitats.

La septième exception scythe

Consiste dans l'absence de *tombes privilégiées* d'évêques, de prêtres, de ktitors, et d'autres « personnes spéciales » à l'intérieur des basiliques de Scythie en dehors de l'autel et de l'abside, ces derniers espaces étant réservés aux saintes reliques

[67] IAȚCU 2012, p. 82–83, 86–87, fig. 42, 48.

[68] IAȚCU 2012, p. 67–69, fig. 25, 27. Des murs antérieurs et postérieurs et des réfections donnent une fausse impression de l'existence d'un synthronon dans la basilique extra muros et la basilique « V. Parvan » à Histria. Des syntronos à une seule assise sont représentés sur les plans plus anciens qui ne sont pas confirmés par les plans dressés lors des fouilles plus récentes (IAȚCU 2012, p. 60–61, fig. 20a-c, p. 64–65, fig. 22a, b). La superposition des réfections postérieures peuvent entraver la lecture des structures et donner l'illusion d'existence de synthronon. D'autant plus, qu'il est certain que les principales basiliques de Histria-la cathédrale et la basilique à crypte sont dépourvues de synthronos.

[69] IAȚCU 2012, p. 90–96, fig. 57, 58, 62, 65. La présence d'un synthronon dans la basilique D à Tropaeum Traiani est douteuse. Un synthronon avec un déambulatoire sont indiqués sur les anciens plans du monument, mais sur les dessins illustrant les fouilles récentes de telles structures sont absentes (IAȚCU 2012, p. 92–93, fig. 60, 62). Si toutefois on admet l'existence d'un synthronon avec déambulatoire, et prenant en compte la présence d'un transept, d'une grande crypte au-dessous de l'autel et le décor de mosaïques dans l'abside, l'identification de cette église avec la cathédrale de Tropaeum Traiani semble bien réelle (ATANASOV 2012, p. 365–366, not. 18, fig. 20).

[70] IAȚCU 2012, p. 88–89, fig. 54.

[71] IAȚCU 2012, p. 72, fig. 33.

[72] L'hypothèse de synthronon à Argamum doit être rejetée car il s'est avéré qu'il s'agissait de l'abside d'un édifice antérieur. (IAȚCU 2012, p. 45–47, fig. 4).

[73] Il est certain que la cathédrale de Zaldapa (basilique № 3) est privée de synthronon (ATANASOV 2020a, p. 33–58). Mais un synthronon et un déambulatoire sont enregistrés sans aucun doute dans la basilique voisine № 2 située près de la porte septentrionale. C'est l'unique exemple indubitable de ce genre dans toute la province de Scythie (ATANASOV *et alii* 2020, p. 732–737; MOREAU, ATANASOV, BEAUDRY 2020, p. 35–55).

[74] IAȚCU 2012, p. 44–102, fig. 2, 3, 7, 8, 10–18, 20–25, 33, 37, 40–43, 46, 48, 49, 54–60, 63, 65–68.

[75] ATANASOV *et alii* 2020, p. 732–737; MOREAU, ATANASOV, BEAUDRY 2020, p. 35–55.

[76] IAȚCU 2012, p. 111–114, fig. 2–4, 20a-c, 22a, b, 60, 62 et notes 6–8.

uniquement[77]. Il faut souligner que des tombes privilégiées sont connues dans toutes les provinces voisines durant le VI^e^ s. Ainsi, en Mésie seconde, des tombes privilégiées, situées d'habitude dans le narthex et les nefs latérales, sont enregistrés dans au moins huit basiliques, alors qu'à Chersonèse et la région de Crémée dans neuf cas. En Scythie, des chambres funéraires ont été découvertes seulement dans la basilique d'Histria[78], mais la majorité d'entre elles appartiennent à la vaste nécropole urbaine et sont antérieures à l'édification de l'église. Que la seule tombe de personnage haut placé dans la hiérarchie ecclésiastique du V^e^ s. ait été trouvée devant l'abside de cette même église est intéressant. La situation est similaire dans la basilique extra muros de Tropaeum Traiani. Malgré le caractère funéraire de cette dernière, aucune tombe n'est située dans son enceinte et dans son atrium qui est élevé plus tard et de ce fait détruit des tombes plus anciennes.[79] Il est instructif que malgré l'impressionnant martyrium sous l'abside de la basilique de Niculiţel, construite dans la nécropole de Noviodunum, aucune tombe privilégiée n'est aménagée à l'intérieur ou dans l'atrium, y compris des inhumations *ad sanctus* habituelles dans ces cas. Dans la province voisine de Mésie seconde, à Odessos et ses environs, on a trouvé des tombes privilégiées à l'intérieur de la cathédrale située rue Khan Krum et des basiliques rue Tsar Siméon, Djanavara, Pirinč tépé, Ossenovo i Chkorpilovtzi, dans les deux basiliques extra muros de Novae (**Fig. 6**); celles de Tzarevetz/Zikideva et du siège du chôévêque près du village de Khan Krum dans la région de Chumen, de la localité Gradishte près de la ville actuelle de Gabrovo[80]. On a également détecté des tombes privilégiées au sud du Balkan: à Serdica, Augusta Traiana, Pautalia, Sozopolis etc[81]. On observe une situation similaire à Chersonèse en Crimée comme en témoignent les tombes privilégiées découvertes dans les narthex et les naos de la majorité des églises du Ve-VIIe s., certaines contenant jusqqu'à 12–15 tombes comme la basilique Kruze, la basilique de la Colline, la basilique 1935, la basilique 1932, la basilique occidentale et l'église cruciforme de Blachernissa[82]. Des tombes privilégiées analogues sont également étudiées à Eski Kermen voisin, alors que dans le centre épiscopal voisin de Mangup elles atteignent le nombre de 30 (!), celles datant des VI^e^-VIII^e^ s. étant une dizaine[83].

Il est difficile d'expliquer les raisons de cette série d'exceptions scythes dans la pratique paléochrétienne de l'Empire romain mais elles sont sans doute complexes. La Scythie est une province frontalière, éloignée, directement confrontée à l'ataxie (désordre) barbare, donc le monde païen. Elle subit ainsi pratiquement en permanence des invasions des Barbares païens et est la plus menacée de toutes les provinces romaines entre l'IV^e^ et le VII^e^ s. Ceci impose une forte centralisation et la

[77] SODINI, KOLOKOTSAS 1984, p. 219–238; SODINI 1986, p. 233–243; ACHIM 2015, p. 312–330; KHROUSCHKOVA 2016, p. 362.

[78] ACHIM 2014, p. 265–287; ACHIM 2015, p. 294–296, fig. 10. 2.

[79] ACHIM 2015, p. 291–294.

[80] ACHIM 2015, p. 312–330 avec la bibliographie complète et un aperçu détaillé de la question en Scythie et en Mésie seconde.

[81] DOSEVA 2015, p. 35–37

[82] SOROTCHAN 2005, p. 720–903, fig. 197, 199, 201, 205, 236, 247, 255, 260, 265, 266, 280, 290, 306.

[83] LOSITSKII, PARSCHINA 2002, p. 99–113; SOROTCHAN 2005, p. 688–689, fig. 183; KHROUSHKOVA 2016, p. 362, fig. 37, 41; KHROUSHKOVA 2017, p. 107–138, fig. 15, 16.

concentration du pouvoir civil et spirituel entre les mains d'une personne. Le territoire restreint de la Scythie joue un rôle supplémentaire dans ce sens, étant la plus petite des provinces dans les Balkans et sur le Limes danubien. Il faut y rajouter le charisme de la capitale Tomis qui est la ville au nombre le plus élevé de saints martyrs dans les terres balkaniques de l'Empire. Quant aux particularités et innovations de l'architecture ecclésiastique de Scythie, et plus particulièrement les cryptes, il faut de nouveau rappeler le nombre particulièrement élevé de martyrs provenant de cette région. Les cryptes de Niculiţel et de Halmyris témoignent de la plus ancienne pratique (première moitié du IVe s.?) de construction de vastes hypogées au-dessous des absides des basiliques, une pratique reprise peu de temps après (vers le dernier quart du IVe s.) dans la cathédrale de la capitale Tomis et la basilique № 4 à Zaldapa. Les escaliers méridionaux dans un groupe de cryptes peut-être le fruit du hasard ou la réponse aux exigences liturgiques: les longs escaliers du côté ouest gênent l'accès à l'ambon. Introduits dans l'une des églises (basilique № 4 de Zaldapa à la fin du IVe s.), ils ont été repris ensuite dans d'autres basiliques de la province. Il est également difficile d'expliquer l'absence de tombes privilégiées dans les églises de Scythie. Est-ce à mettre en rapport avec certaines idées des évêques et des archevêques de la capitale Tomis qui auraient imposé cette pratique? C'est une question qui reste pour le moment sans réponse argumentée. Il est encore plus difficile de comprendre pourquoi vers la seconde moitié du VIe s. l'évêque de Tomis reçoit soudain le titre de métropolite et la province est dotée de quatorze nouvelles chaires. Entre le milieu du Ve et le milieu du VIe s. le réseau de sites en Scythie est totalement bouleversé et la vie se concentre uniquement dans les villes fortifiées et les grandes forteresses[84]. On sait que les Slaves ne réussissent à prendre de manière durable aucune grande ville pendant les règnes de Justinien Ier et Justin II,[85] mais ils entravent les communications entre elles suite au ravage des villages satellites périurbains et la destruction des petites fortifications. Les Barbares sont particulièrement actifs en Scythie vers 550 lorsqu'ils attaquent périodiquement les grandes forteresses. Procope de Césarée cite Ulmetum, Palmatis (près du village actuel d'Onogur dans la région de Tervel non loin de Zaldapa), Adina (près du village Balik toujours dans la région de Tervel)[86], mais aucun centre important n'est pris. Les changements commencent après la création en 536 du district administratif interprovincial de *Quaestura exercitus* ayant comme capitale Odessos et réunissant les ressources des riches provinces de Chypre, de Caria et les îles des Cyclades et les provinces frontalières financièrement et économiquement affaiblies de Scythie et de Mésie seconde. Le résultat ne tarde pas: après 551 la Scythie est stabilisée et son potentiel s'accroît. Après la défaite des Goths en Italie vers 552, des forces militaires sont désengagées et disponibles pour être mobilisées dans le nord des Balkans[87]. En effet, c'est notamment après les raids slavo-avares de l'année 550 que Justinien le Grand entreprend son offensive en 551 au cours de laquelle nombre des forteresses détruites sont refaites[88]. Je suppose qu'à ce moment-là ou un peu plus tard, les quatorze plus grandes villes et forteresses de

[84] TORBATOV 2011, p. 333–342.
[85] VRYONIS 1995, p. 23–24, 27.
[86] PROCOPIUS, *De aedificiis*, IV, 7, 13–17; *Fontes Graeci Historiae Bulgaricae II*, p. 169–172.
[87] TORBATOV 1997, p. 84–87.
[88] TORBATOV 1997, p. 84–87; TORBATOV 2002, p. 37.

Scythie reçoivent des sièges épiscopaux subordonnés à l'archevêque de Tomis, déjà élevé au statut de métropolite. Ces transformations de l'organisation ecclésiastiques sont le résultat des changements évoqués ci-dessus et concernant le réseau d'habitats, l'administration et les ressources disponibles. Il n'est pas exclu que certaines des villes ayant reçu des chaires épiscopales avaient auparavant des *χωρεπίσκοποι*. Ces changements traduisent le processus de décentralisation indispensable et toute ville existante devient un siège épiscopal quelque part entre 551 et 570[89].

L'accroissement des ressources disponibles accélèrent la construction d'édifices religieux dans les centres épiscopaux. Vers le milieu du VI^e^ s. sont élevées les basiliques épiscopales d'Histria, d'Argamum, l'église tétraconcale à mosaïques de Zaldapa[90], la grande basilique de Bizone, les basiliques № 2 et 3 de Tromesis. D'autres sont refaites à fond, telles la basilique centrale (?) de marbre de Tropaeum Traiani, celles de Kalatis, de Halmyris, la basilique avec crypte de Histria, la basiliques I et II d'Argamum etc.[91].

Cette nouvelle organisation épiscopale de Scythie comprenant quatorze évêchés suffragants du métropolite de Tomis se désintègre à la fin du VI^e^ et aux premières décennies du VII^e^ s. Plus précisément, ce processus se déroule dans la période 588–614, lorsqu'en quelques 25 ans sont détruites et successivement abandonnées les villes épiscopales de Troemsis, Capidava, Tropaeum Traiani, Zaldapa, Argamum, Noviodunum, Axiopolis, Ibida, Egissos, Halmyris, Kalatis et Dioclétianoupolis[92]. Les informations offertes par l'étude de la circulation monétaire entre 614 et 680 atteste qu'un mince fil de vie continu à Tomis, Histria, Durostorum et Dioclétianoupolis (?) uniquement, et que les Bulgares de khan Asparuh les conquièrent en 678–680[93]. C'est ainsi que prend fin l'organisation ecclésiastique en Scythie et que sont démolies et délaissées les églises. Les reliques contenues dans les cryptes ont un sort différent. Elles sont le plus souvent profanées et éparpillées par les Barbares. Ailleurs, elles sont emportées par les populations romaines migrant vers le sud. C'est le cas des reliques des saints de Durostorum-Dasius, Dada, Maxim et Quintilian[94]. Parfois, comme dans les cryptes de Niculiţel, Halmyris, Saint-Cyril, Tropaeum Traiani[95] et Beroe[96] elles restent cachées dans les « coffres-forts » souterrains jusqu'à l'époque moderne.

[89] ATANASOV 2012, p. 359–364.

[90] L'excavation de cette remarquable tétraconque qui est sans analogie au nord de Stara planina, a commencé en 2019 par l'équipe de G. Atanassov et Y. Valériev (ATANASOV, VALERIEV 2020, p. 730–731, fig. 3, 4) à laquelle en 2021 se sont joints A. Milanova et E. Hobdari. Les panneaux de mosaïques de sol et sa riche décoration de marbre orientent la datation de la construction après le début de VI^e^ s.

[91] IAŢCU 2012, p. 44–47, 51, 52, 58, 63, 70, 89, 95.

[92] TORBATOV 2002, p. 101, 110, 115, 126, 139, 152, 155, 162, 173, 197, 285, 297, 307, 337; ATANASOV 2008, p. 308–310.

[93] TORBATOV 2002, p. 182, 193, 268–270, note 401; ATANASOV 2008, p. 309–310; ATANASOV 2015, p. 184–186.

[94] ATANASOV 2007, p. 68–72.

[95] BARNEA 1978, p. 181–187.

[96] BAUMANN 2015, p. 83–84

BIBLIOGRAPHIE

ACHIM 2004 – I. Achim, *Les fosses d'autel en Scythie Mineure. Esse d'analise*, Ephemeris Dacoromania 12 (2004), p. 577–591.

ACHIM 2014 – I. Achim, *La basilique à crypte d'Istros: dix campagnes de fouilles (2002–2013)*, MCA 10 (2014), p. 265–287.

ACHIM 2015 – I. Achim, *Churches and Graves of the Early Byzantine Period in Scythia Minor and Moesia Second: The Development of a Christian Topography at the Periphery of the Roman Empire*, Studies in Funerary Archaeology 73 (2015), p. 287–342.

ACHIM, OPRIȘ 2010 – I. Achim, C. Opriș, *Loca sancta Scythiae: l'église paléochrétienne de Capidava, un monument délaissé*, dans: M. V. Angelescu, I. Achim, A. Bâltâc, V. Rusu-Bolindeț, V. Bottey (éds.), *Antiquitas istro-pontica, Mélanges d'archéologie et d'histoire ancienne offerts à Alexandru Suceveanu*, Cluj-Napoca, 2010, p. 521–534.

ALADJOV, DRAZHEVA, MOMCHILOV 2006 – Z. Aladjov, Ts. Drazheva, D. Momchilov, *The Martyrium of „Markeli" Fortress by Karnobat*, Acta Musei Varnaensis 4 (2006), p. 273–280.

ATANASOV 1997 – G. Atanasov. *Martyrium et ΑΓΙΑΣΜΟΝ dans le castel bas-byzantin près du village de Golech, région de Silistra (communication préliminaire)*, Miscellanea Bulgarica 11 (1997), p. 127–135.

ATANASOV 2006 – Г. Атанасов, *Martyrium et confesio contenant des reliques dans le castel basbyzantin près du village de Golech, région de Silistra*, Acta Musei Varnaensis 4 (2006), p. 199–236.

ATANASOV 2007 – Г. Атанасов, *Християнският Дуросторум – Дръстър, Доростолската епархия през късната античност и средновековието (IV-XIV в.), История, археология, култура, изкуство*, Варна-Велико Търново, 2007.

ATANASOV 2008 – Г. Атанасов, *Бележки и допълнения към църковната организация в Мизия и Скития през IV–VII в, Сборник в чест на Ал. Минчев*, Acta Musei Varnaensis 8/1 (2008), p. 299–320.

ATANASOV 2011 – G. Atanasov, *345 раннохристиянски светци-мъченици от българските земи (I-IV в.)*, София, 2011.

ATANASOV 2012 – G. Atanasov, *Christianity along the Lower Danube Limes in the Roman Provinces of Dacia Ripensis*, *Moesia Secunda* and *Scytia Minor* (4th–6th C. AD), dans: L. Vagalinski, N. Sharankov, S. Torbatov (eds.), *The Lower Danube Roman Limes*, Sofia, 2012, p. 327–380.

ATANASOV 2015 – Г. Атанасов, *Първостроителите на българската държавност, Органа, Кубрат, Аспарух, Тервел*, София, 2015.

ATANASOV 2020a – Г. Атанасов, *La résidence épiscopale à proximité de la cathédrale de la ville romano-byzantine de Zaldapa dans la province de Scythie*, Archaeologia Bulgarica 1 (2020), p. 33–58.

ATANASOV 2020b – Г. Атанасов, *Крипты для святых мощей в базиликах раннехристианского города Залдапа и практики в Черноморских епархиях Скифия, Вторая Мезия и Херсонес IV–VII вв*, dans: *Зучение и сохранение древных сакральных пространств в современном мире (к 1365-летию ссылки папы Мартина в Херсонес)*, Симферополь, 2020, p. 11–16.

ATANASOV, MILANOVA 2024 – G. Atanasov, Al. Milanova, *Les cryptes des basiliques de Zaldapa au regards des autres exemples en Scythie, Mésie Seconde et Chersonèse (IVe-VIIe siècles)*, dans: *Actes du colloque international du projet DANUBIUS – The Christianisation of North-Western Black Sea during Late Antiquity. Proceedings of the International Symposium of the DANUBIUS Project (Villeneuve d'Ascq, Lille and Bavay, 24–27.11.2021)*, Turnhout: Brepols (coll. Rome and After in Central and Eastern Europe), sous presse (2024).

ATANASOV, VALERIEV, YOTOV 2017 – G. Atanasov, I. Valeriev, V. Yotov, *The Crypt in the Sanctuary of the Basilica No. 3 at the Ancient City of Zaldapa (Province of Scythia)*, Ниш, 2017, p. 123–132.

ATANASOV *et alii* 2020 – Г. Атанасов, Н. Бодри, Ал. Миланова, Д. Моро, Й. Валериев, *Антична крепост Залдапа-сектор северозапад и Базилика № 2*, dans: *Археологически открития и разкопки през 2019 г, Книга 2*, София, 2020, p. 732–737.

ATANASOV, VALERIEV 2020 – Г. Атанасов, Й. Валериев, *Антична крепост Залдапа-квартали северно и южно от базилика № 3*, dans: *Археологически открития и разкопки през 2019 г, Книга 2*, София, 2020, p. 729–731.

ATANASOV, VALERIEV 2021 – G. Atanasov, Y. Valeriev, *Basilica # 1 with a Newly Discovered Crypt from the Roman. Early Byzantine City of Zaldapa. Addenda et corrigenda,* Archaeologia Bulgarica 25/2 (2020), p. 45–80.

BARBET, MONIER 2001 – A. Barbet, Pl. Monier, *La crypte funéraire de la basilique sous le lysée M. Eminescu à Constantza (Roumanie)*, dans: *La penture funéraire antique IVe siècle av. J.C.-IV siècle ap. J.C., Colloque de l'Association Internationale pour la peinture murale antique (AIPMA), 6–10 octobre 1998*, Saint-Romain-en-Gal-Vienne, Paris, 2001, p. 221–228.

BARNEA 1977 – I. Barnea, *Monuments paléochrétiens de la Roumanie*, Città del Vaticano, 1977.

BARNEA 1978 – I. Barnea, *„Bazilica „simplă" (A) de la Tropaeum Traiani"*, Pontica 11 (1978), p. 181–187.

BARNEA 1979 – I. Barnea, *Christian Art in Romania*, vol. I, Bucarest, 1979.

BARNEA 1981 – I. Barnea, *Le cripte delle basiliche paleocristiane della Scizia Minore*, Revue des Études Sud-Est Européennes 19/3 (1981), p. 489–505.

BAUMANN 1972 – V. H. Baumann, *Nouveaux témoignages chrétiens sur la limes nord-schytique: la basilique à martyrium de basse époque romaine découvertes à Niculițel (jud. Tulcca)*, Dacia N.S. 16/1–2 (1972), p. 189–202.

BAUMANN 2005 – V. H. Baumann, *Sângele martirilor*, București, 2005.

BAUMANN 2006 – V. H. Baumann, *A propos des premières basiliques paléochrétiennes découvertes à l'embouchure du Danube*, dans: *Acta Congressus Internationalis XIV Archaeologiae Christianae*, Roma, 2006, p. 827–831.

BOOR 1891 – C. de Boor, *Nachträge zu den Notitiae episcopatum*, Zeitschrift f⊙r Kirchengeschichte XII (1891), p. 519–534.

CHANEVA-DECHEVSKA 1999 – Н. Чанева-Дечевска, *Раннохристиянската архитектура в България, IV–VI в*, София, 1999.

CHEVALIER *et alii* 1995 – P. Chevalier, Br. Pender, M. Pašali-Vješnica, D. Vukši, *Salona II. Recherches archéologiques franco-croates à Salone. Ecclesiae Dalmatiae. L'architecture paléochrétienne de la province romaine de Dalmatie (IVe-VIIe s.)*, [En dehors de la capitale, Salona], Tome 2 (Publications de l'École française de Rome 194), Rome, 1995**.**

CHICHIKOVA 1997 – M. Čičikova, *La basilique et la nécropole paléochrétiennes extra muros de Novae (Moesia Inferior)*, dans: A. B. Biernacki, P. Pawlak (eds.), *Late Roman and Early Byzanine Cities on the Lower Danube (IV–VI AD)*, Poznań, 1997, p. 57–69.

DARROUZÈS 1981 – J. Darrouzès, *Notitiae episscopatuum Ecclesiae Constantinopolitanae*, Paris, 1981.

DELEHAYE 1912 – H. Delehaye, *Saints de Thrace et de Mésie*, Bruxelles, 1912.

DOSEVA 2015 – Ив. Досева, *Паметта за мъртвите: структуриране на сакралните пространства в ранновизантийските некрополи и градове (според паметниците от територията на съвременна България), Герои Култове Светци*, София, 2015, p. 27–44.

DZANEV 2005 – Г. Дзанев, *Епископията от края на X в. в Абритус*, dans: *Българските земи през средновековието (VII–XVIII в.), Международна конференция в чест на 70-годишнината на проф. Александър Кузев, Варна 12–14 септември 2002*, Acta Musei Varnaensis 3/2 (2005), p. 95–105.

Fontes Graeci Historiae Bulgaricae II – *Гръцки извори за българската история*, Т. II, София, 1958.

Fontes Graeci Historiae Bulgaricae III – *Гръцки извори за българската история*, Т. III, София, 1960.

GELZER 1892 – H. Gelzer, *Die kirchliche Geographie Grie-chenlands vor dem Slaveneinbruche*, Zeitschrift für wissen-schaftliche Theologie 35/4 1892, p. 419–436.

IAȚCU 2012 – I. Iațcu, *Construcții religioase creștine în provincia Scythia (secolele IV–VI p.Chr.)*, Brăila, 2012.

HODDINOTT 1963 – R. Hoddinott, *Early Byzantine Churches in Macedonia and Southern Serbia. A Study of the Origins and the Initial Development of East Christian Art*, New York, 1963.

HOLUBEANU 2018a – I. Holubeanu, *Organizarea bisericească în Scythia și Moesia Secunda în secolele IV–VII*, București, 2018.

HOLUBEANU 2018b – I. Holubeanu, *Numele provinciei mitropoliei de Marcianopolis în Notitiae episcopatuum*, Pontica 51 (2018), p. 81–90.

HOLUBEANU 2019 – I. Holubeanu, *Provincia Scythia in Notitia Lui Carl de Boor. Vechile interpretari ale cercetatorilor*, Classica et Christiana 14 (2019), p. 75–104.

KHROUSHKOVA 2016 – *Л.* Г. Хрушкова, *Епископская базилика Херсонеса Таврического: Методы изучения, результаты, современный взгляд*, Владимирский сборник, Севастополь, 2016, p. 327–435.

KHROUSHKOVA 2017 – *Л.* Г. Хрушкова, *К дискуссии о времени строительства Мангупской базилики Материалы по археологии, истории и этнографии Таврии*, Вып XXII (2017), p. 107–138.

KULAKOVSKII, 1898 – Ю.Кулаковский, *К истории Готской епархии в Крыму в VIII веке*, Журнал министерства народного просвещения II (1898), p. 173–202.

LAMBERZ 2004 – E. Lamberz, *Die Bischofslisten dez VII Ökumenischen Konzils (Nicaenum II)*, München, 2004.

LEMERLE 1945 – P. Lemerle, *Philippes et la Macédoine Orientale aux époques chrétienne et byzantine*, Paris, 1945.

LOSITSKII, PARSCHINA 2002 – Ю. Г. *Лосицкий*, Е. А. Паршина, *Эски- Керменская базилика*, dans: *Православные древности Таврики*, Киев, 2002, p. 99–113.

LUNGU 2000 – V. Lungu, *Creștinismul în Scythia Minor în contextul vest-pontic*, Sibiu-Constanța, 2000.

MATHEWS 1971 – Th. Mathews, *The Early Churches in Constantinople: Architecture and Liturgy*, London, 1971.

MĂRGINEANU-CÂRSTOIU 1977 – M. Mărgineanu-Cârstoiu, *Problèmes d'architecture concernant la citerne romaine et labasilique chrétienne de Tropaeum Traiani*, Dacia N.S. 21 (1977), p. 235–250.

MENTZOS 2006 – A. Mentzos, *The Bema and Altar Crypt of the Church of St. Demetrius*, Acta Musei Varnaensis 4 (2006), p. 257–270.

MOGARICHOV 2021 – Ю.М. Могаричев, *К вопросу о времени и обстоятельствах появление проекта „Готская митрополия" (Not. III)*, dans: Б. Е. Рашковский, Е.А. Мельникова, Е. В. *Литовских* (ред), *„Древнейшие государства Восточной Европы. 2021 год: Восточная Европа и мир ислама. К юбилею Татьяны Михайловны Калининой*, Москва, 2021**,** **p.** 368–383.

MOGARICHOV *et alii* 2012 – Ю. М. Могаричев, А. В. Сазанов, Т. Э.Саргсян, С. Б. Сорочан, А. К. Шапошников, *Жития епископов Херсонеских, В контексте истории Херсонеса Таврического*, Харьков, 2012.

MOREAU 2022 – D. Moreau, *To Baptise in Late Antiquity-An Unfounded Episcopal Prerogative. Some Remarks Inspired by the "Scythian" Case."*, Rivista di Archeologia Cristiana 98/1 (2022), p. 98–121.

MOREAU, ATANASOV, BEAUDRY 2020 – D. Moreau, G. Atanasov, N. Beaudry, *The Archaeology of the Late Roman City of Zaldapa: The Status Quaestionisin 2016 (with an Appendix on Seasons 2017–2019)*, dans: D. Moreau, C. Snively, A. Guiglia, I. Baldini, L. Milanović,

I. Popović, N. Beaudry, O. Heinrich-Tamáska (eds.), *Archaeology of a World of Changes*, Selected Papers from the 23rd International Congress of Byzantine Studies (Belgrade, 22–27 August 2016), in memoriam Claudiae Barsanti, Oxford, BAR International Series 2973, p. 35–55.

MOREAU, PETCU, GERGANO 2021 – D. Moreau, R. Petcu, Iv. Gargano, *Christianisme et organisation ecclésiastique dans le Bas Danube*, Dossier d'archéologie 40 (2021), p. 70–73.

NAUMENKO 2003 – В. Е. Науменко, *К вопросу о церковно-административном устройстве Таврики в VIII–IX вв. (по данным Notittiae episcopatuum)*, Античная древность и средние века 34 (2003), p. 123–145.

PATRICH 2006 – J. Patrich, *Early Christian Churches in The Holy Land*, dans: G. G. Stroumsa, O. Limos (eds.), *Christians and Christianity in the Holy Land: From the Origins to the Latin Kingdoms*, Cultural Encounters in Lane Antiquity and the Middle Ages, 5, Turnhoout, 2006, p. 351–395.

PILLINGER 1988 – R. Pillinger, *Das Martyrium des Heiligen Dasius*, Wien, 1988.

POPESCU 1989 – E. Popescu, *Martirii și sfinții în Dobrogea*, Studii teologice 41 (1989), p. 55–65.

POPESCU 2018a – E. Popescu, *Organizarea eclesiastică a provinciei Scythia minor în secolele IV–VI*, Studii de Istorie și de spiritualitate creștină 2 (2018), București, p. 11–33.

POPESCU 2018b – E. Popescu, *Imaginea vieții de dincolo într-o provincie de margine a imperiului bizantin timpuriu (sec. IV–VI): Scythia Minor (Dobrogea)*, Studii de Istorie și de spiritualitate creștină 2 (2018), București,p. 485–504.

POPKONSTANTINOV, TOTEV, DOBREV 2019 – К. Попконстантинов, Б. Тотев, *Д.* Добрев, *Късноантична крепост Palmatae в м. Калето, с. Оногур, община Тервел*, dans: *Археологически открития и разкопки през 2018 г*, София, 2019, p. 349–351.

PROCOPIUS 1954 – Procopius, *De aedificiis*, dans: H. B. Dewing (ed.), *Procopius with an English Translation*, VII, Harvard, 1954 (ГИБИ, II, София, 1958).

SALVATORE 1983 – M. Salvatore, *La Ss. Trinita di Venosa e la Cattedrale paleocristiana: Recenti scoperte*, dans: *Atti del VI Congresso Nationale di Archeologia Cristiana*, 2, Pessaro-Ancona, 19–23 settembre, 1983, p. 825–842.

SNIVELY 1991 – C. Snively, *Apsidal Crypts in Macedonia: Possible Places of Pilgrimage*, dans: *Akten des XII Internationalen Kongresses für christliche Archäologie*, Bonn, 1991, Jahrbuch für Antike und Christentum. Ergänzungsband 20/2 (1995), p. 1179–1184.

SNIVELY 2006 – C. Snively, *A Type of Underground Cult Place from Late Aantiquity: How Did it Function?* Acta Musei Varnaensis 4 (2006), p. 161–169.

SODINI 1981 – J.-P. Sodini, *Les cryptes d'autel paléochrétiennes: essai de classification*, dans: *Travaux et mémoires du centre de recherches et civilisation de Byzance*, 8, Mélanges P. Lemerle, Paris, 1981, p. 437–458.

SODINI 1981 – J.-P. Sodini, *Les tombes privilégiées dans l'Orient chrétien (à l'exception du diocèse d'Egypte)*, dans: Y. Duval, J.-C. Picard (eds.), *L'inhumation privilégiée du IVe au VIIIe siècle en Occident*, Actes du colloque tenu à Créteil les 16–18 mars 1984, Paris, p. 233–243.

SODINI, KOLOKOTSAS 1984 – J.-P. Sodini, K. Kolokotsas, *Aliki II: la basilique double*, École française d'Athènes, Études thasiennes 10, Paris, 1984, p. 219–238.

SOROTCHAN 2005 – С. Б. Сорочан, *Византийский Херсонес, Очерки истории и культуры*, Харков, 2005.

SOZOMÈNE 1864 – *Historia Ecclesiastica,* dans: *Patrologiae ccursus completes*, series Graeca (PGr), LXVII, Paris, 1864.

SPELA 2006 – L. Spela, *Distribution and Monumental Typologies of the Sanctuaries in the Suburbs of Rome in Late Antiquity and in the Early Mediaeval Period*, Acta Musei Varnaensis 4 (2006), p. 5–22.

SUCEVEANU 2007 – Al. Suceveanu, *Histria XIII. La basilique épiscopale*, Bucarest, 2007.

TORBATOV 1997 – S. Torbatov, *Quaestra exercitus*: *Moesia Secunda and Scytia under Justinian*, Archaeologia Bulgarica 3 (1997), p. 78–87.

TORBATOV 2000 – S. Torbatov, *Procop. De aedif. IV, 7, 12–14 and he Historical Geogrophy of Moesia Secunda*, Archaeologia Bulgarica 25/3 (2000), p. 45–80.

TSAFRIR 2006 – Y. Tsafrir, *On the Location of Relics in the Churches of Palestine and Arabia in the Early Byzantine Period*, Acta Musei Varnaensis 4 (2006), p. 23–39.

TSAFRIR, HIRSCHFELD 1979 – Y. Tsafrir, Y. Hirschfeld, *The church and mosaics at Horvat Berachot, Israel*, Dumbarton Oaks Papers 33 (1979), p. 291–323.

TORBATOV 2002 – С. Торбатов, *Укрепителната система на провинция Скития (края на III-VII в.)*, Велико Търново, 2002.

TORBATOV 2011 – С. Торбатов, *Развитие на селищната структура в Добруджа през Късната Античност*, dans: История на Добруджа, Т. 2., В. Търново, 2011, p. 333–342.

RESTLE 1991 – M. Restle, *Krypta*, Reallexikon zur byzantinischen Kunst 35 (1991), p. 482–483.

VRYONIS 1995 – S. Vryonis, *Ἡ καθ' ἡμᾶς Ἀνατολή. Ἡ πνευματική παράδοση τοῦ Μεσαιωνικοῦ Ἑλληνισμοῦ στον Σλαβικό καὶ τόν Ἰσλαμικό κόσμο. Βιβλιοθήκη Σλαβικῶν Μελετῶν*, 6. Βανιας, 1995.

ZAHARIADE 2002 – M. Zahariade, *The Halmyris episcopal basilica and the martyrs`crypt* (M. Zahariade, M. K. Phelps, *Halmyris, a settlement and fort near the mouth of the Danube: interim report*), Journal of Roman Archaeology 15 (2002), p. 231–245.

ZAHARIADE, BOUNEGRU 2003 - M. Zahariade, O. Bounegru, *Despre începuturile creştinismului la Dunărea de Jos: Martyriumul de la Halmyris*, dans: *Izvoarele creştinismului românesc*, Constanța, 2003, p. 115-126.

ZUGRAVU, SETNIC 1995 – N. Zugravu, E. Setnic, *Câteva consideraţii privind martirii din Scythia Minor*, Memoria Antiqvitatis 20 (1995), p. 239–247.

ZUGRAVU 1997 – N. Zugravu, *Geneza creştinismului popular al românilor*, Bibliotheca Thracologica 18 (1997), Bucureşti, p. 214–224.

ZUCKERMAN 2006 – C. Zuckerman, *Byzantium's Pontic Policy in the Notitiae episcopatuum*, *La Crimee entre Byzance et le Khaganat Khazar*, Monographies du Centre de Recherche D'Histoire et Civilisati, Paris, 2006.

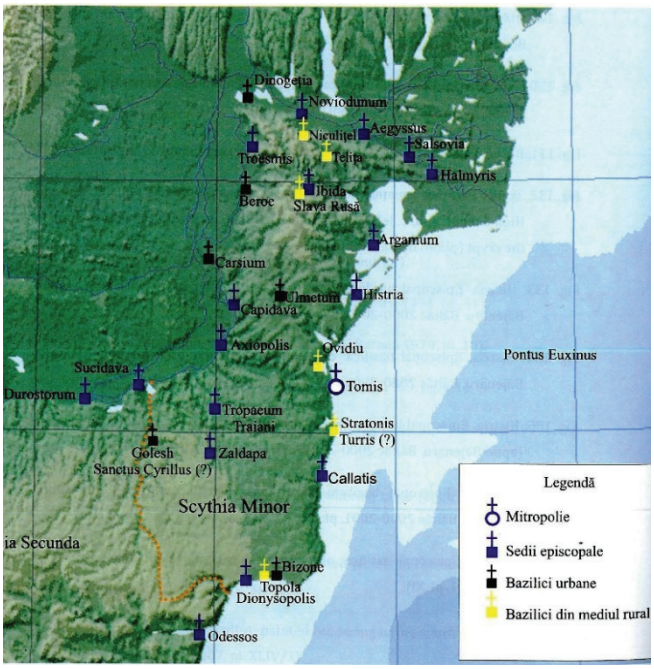


Fig. 1. Les centres épiscopaux de la province de Scythie au VIe siècle d'après IAȚCU 2012.



Fig. 2. Nombre de martyrs dans les différentes villes et provinces de la Péninsule Balkanique au IVe siècle (d'après ATANASOV 2011).

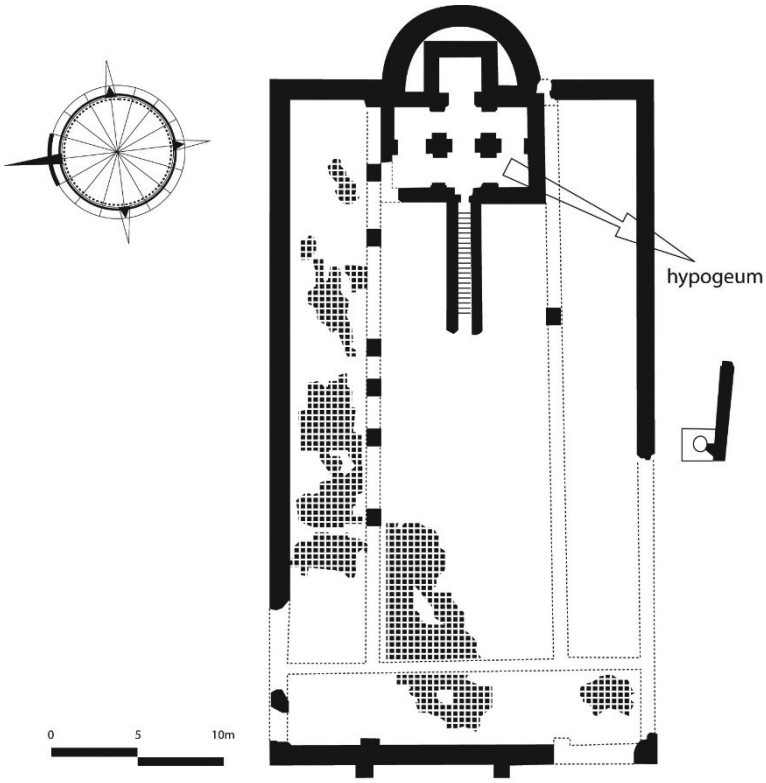




Fig. 3. Grandes cryptes – hypogées sous l'autel des églises: **3a**. Dans la basilique cathédrale à Tomis d'après BARNEA 1981 et ACHIM 2015.

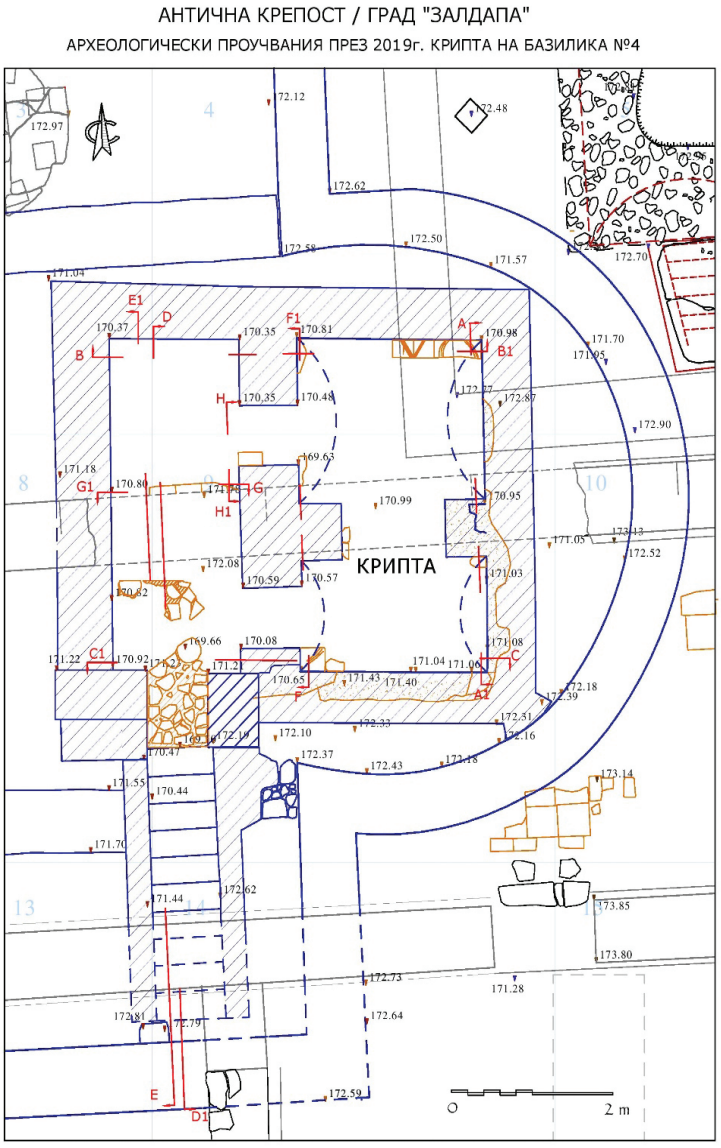


Fig. 3b. Dans la basilique № 4 à Zaldapa d'après ATANASOV, MILANOVA 2024.

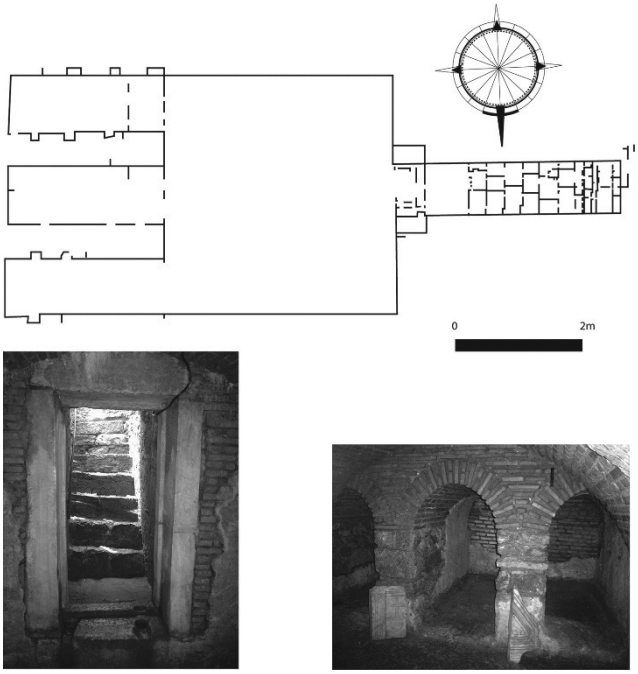


Fig. 3c. Dans la basilique sous le lycée "Eminescu"de Tomis d'après ACHIM 2015.

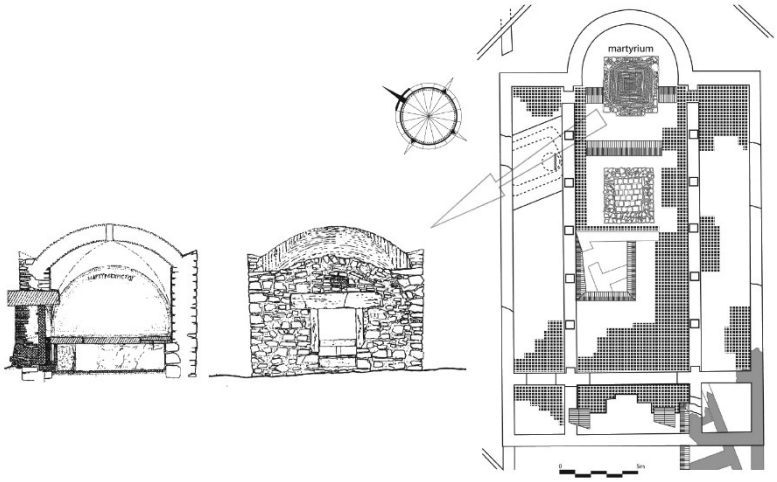


Fig. 3d. Dans la basilique de Niculițel d'après BAUMMANN 2005 et ACHIM 2015.

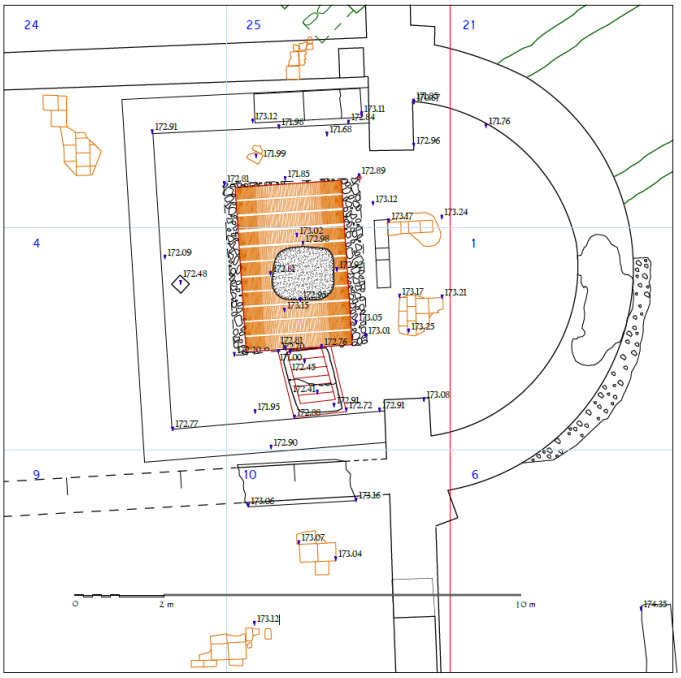


Fig. 4. Cryptes moyennes sous l'autel des églises; **4a**. Dans la basilique № 3 à Zaldapa d'après ATANASOV, VALERIEV, YOTOV 2017.

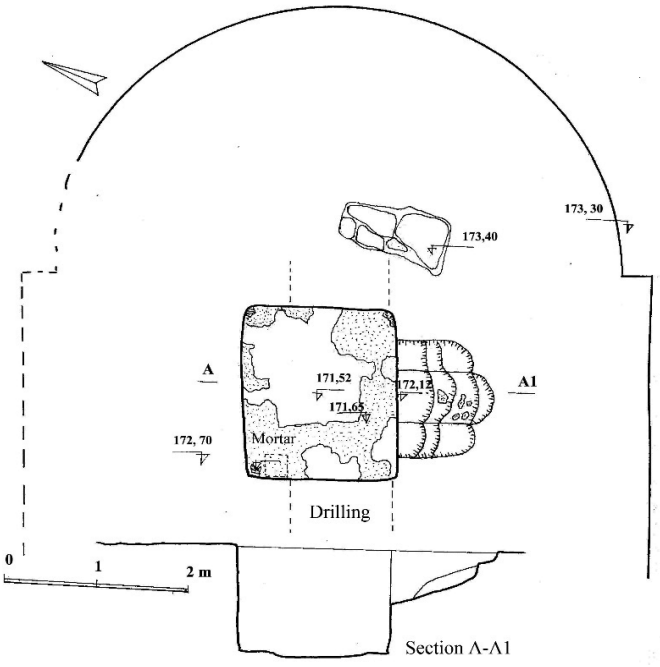


Fig. 4b. Dans la basilique № 1 à Zaldapa d'après ATANASOV, VALERIEV 2021.

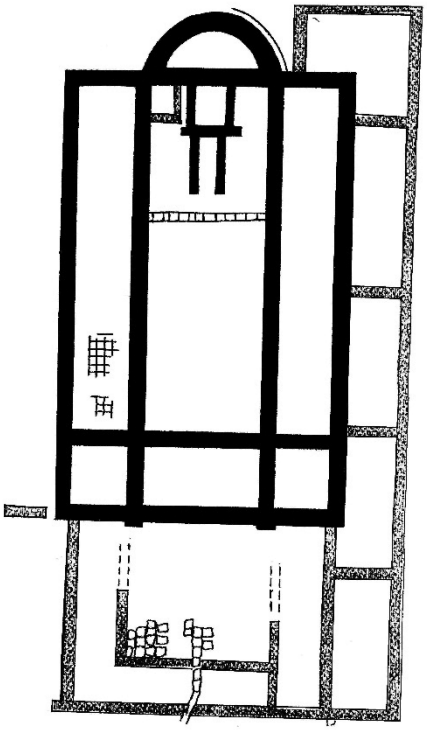


Fig. 4c. Dans la basilique "A" à Tropaeum Traiani d'après BARNEA 1977.

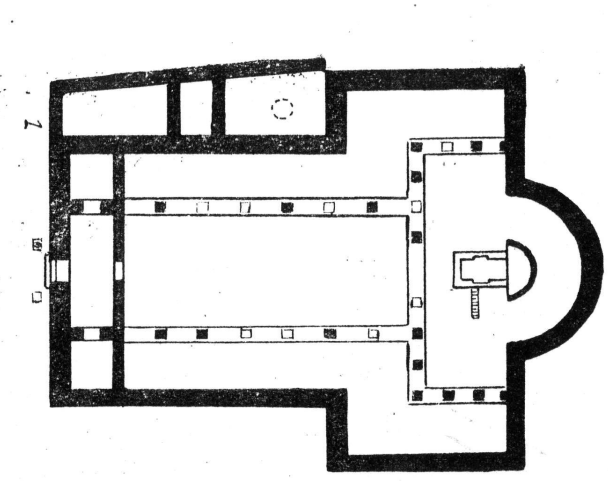


Fig. 4d. Dans la basilique "D" à Tropaeum Traiani d'après BARNEA 1977.

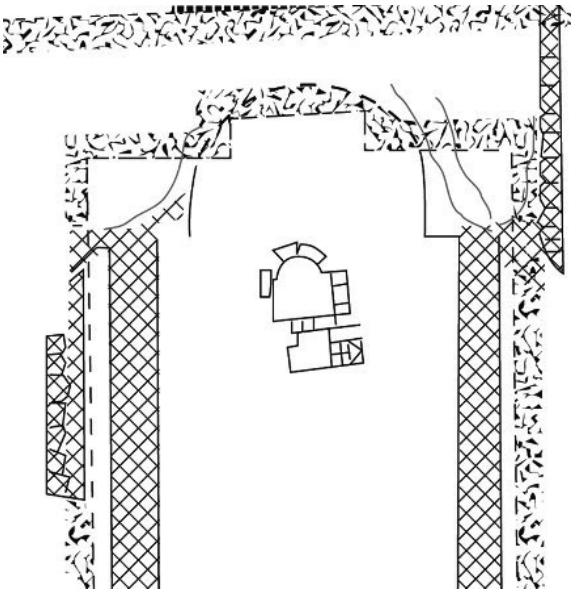


Fig. 4e. Dans la basilique "C" à Tropaeum Traiani d'après MĂRGINEANU-CÂRSTOIU 1977 et ACHIM 2015.

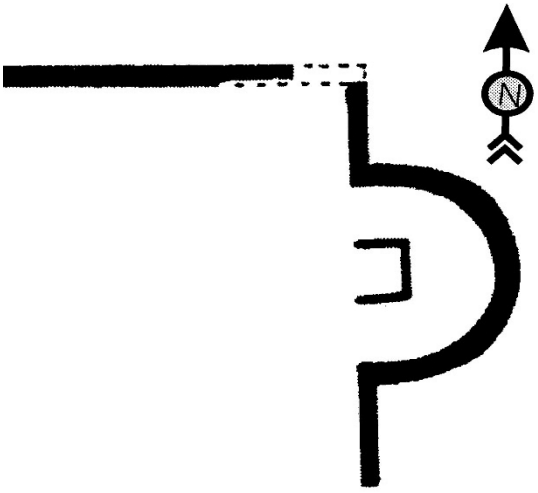


Fig. 4f. Dans la "Petite Basilique" à Tomis (Constanta) d'après LUNGU 2000.

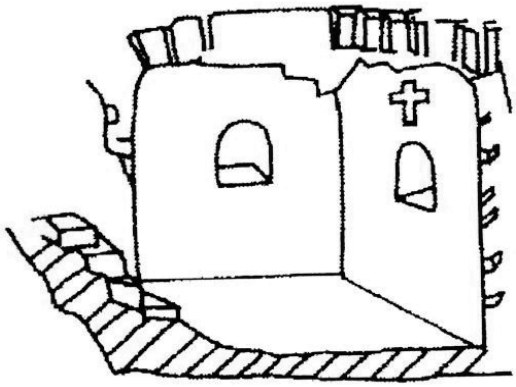


Fig. 4g. Dans la basilique de la rue „K. Marx" à Tomis (Constanta) d'après LUNGU 2000.

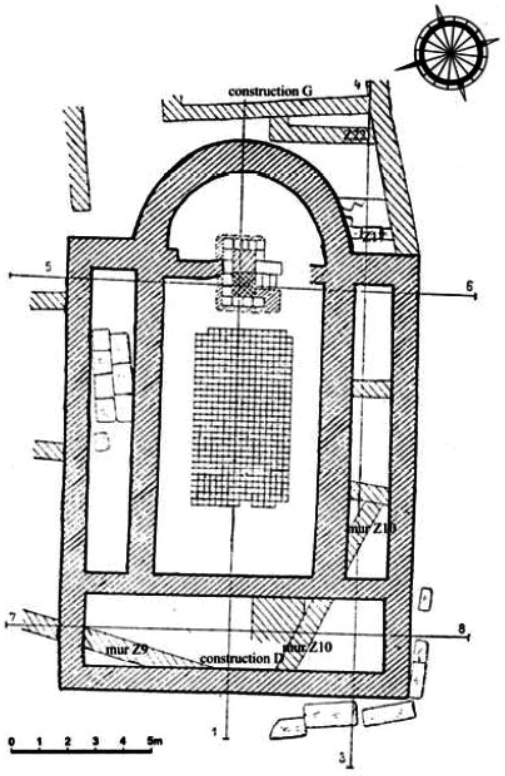


Fig. 4h. "Basilique avec crypte" en Histria d'après ACHIM 2014.

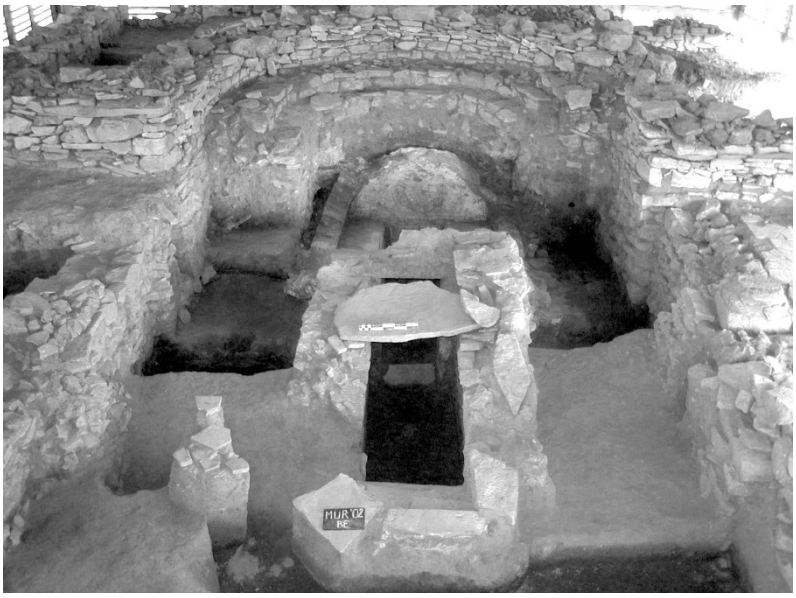


Fig. 4i. Dans la basilique cathédrale d'Halmyris d'après ZAHARIADE 2002.

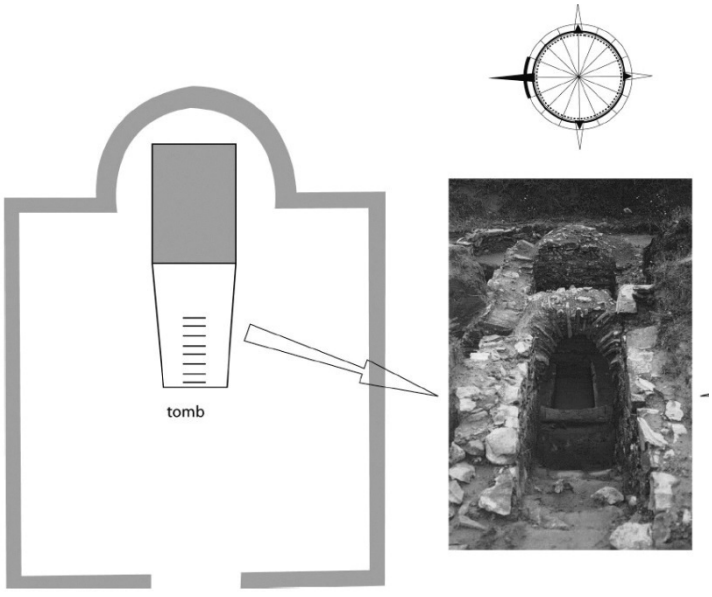


Fig. 4j. Dans la basilique de Beroe d'après BAUMANN 2005.

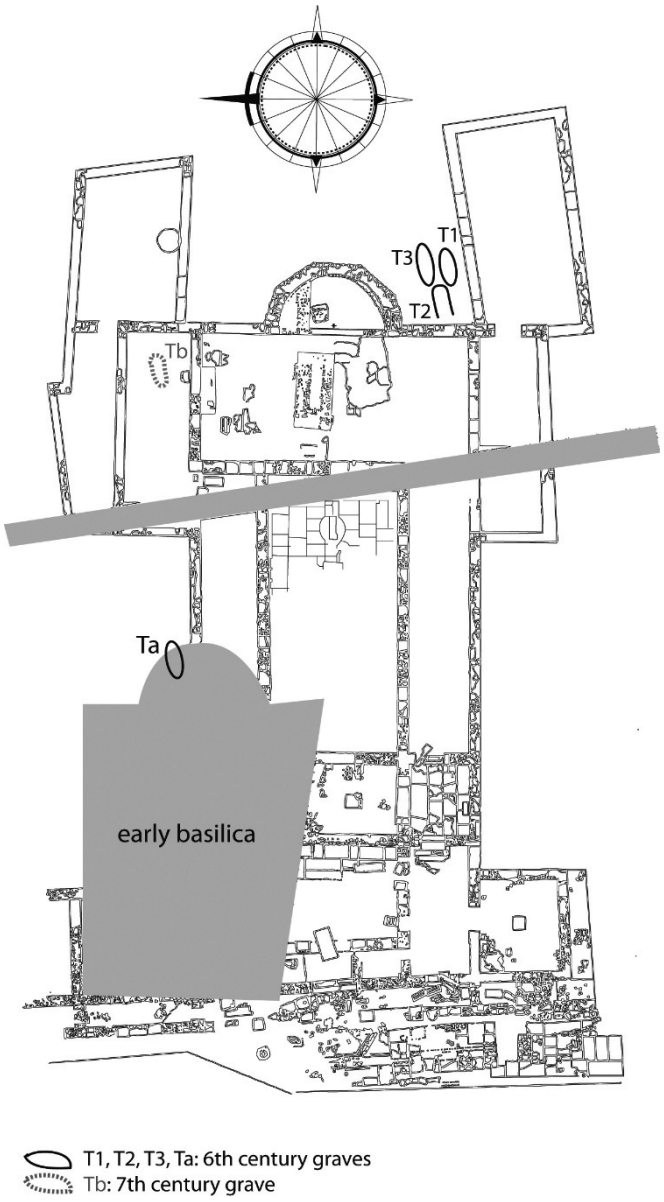


Fig. 5. Petites cryptes sous les autels des églises: **5a**. Dans la base de la cathédrale d'Histria d'après SUCEVEANU 2007 et ACHIM 2015.

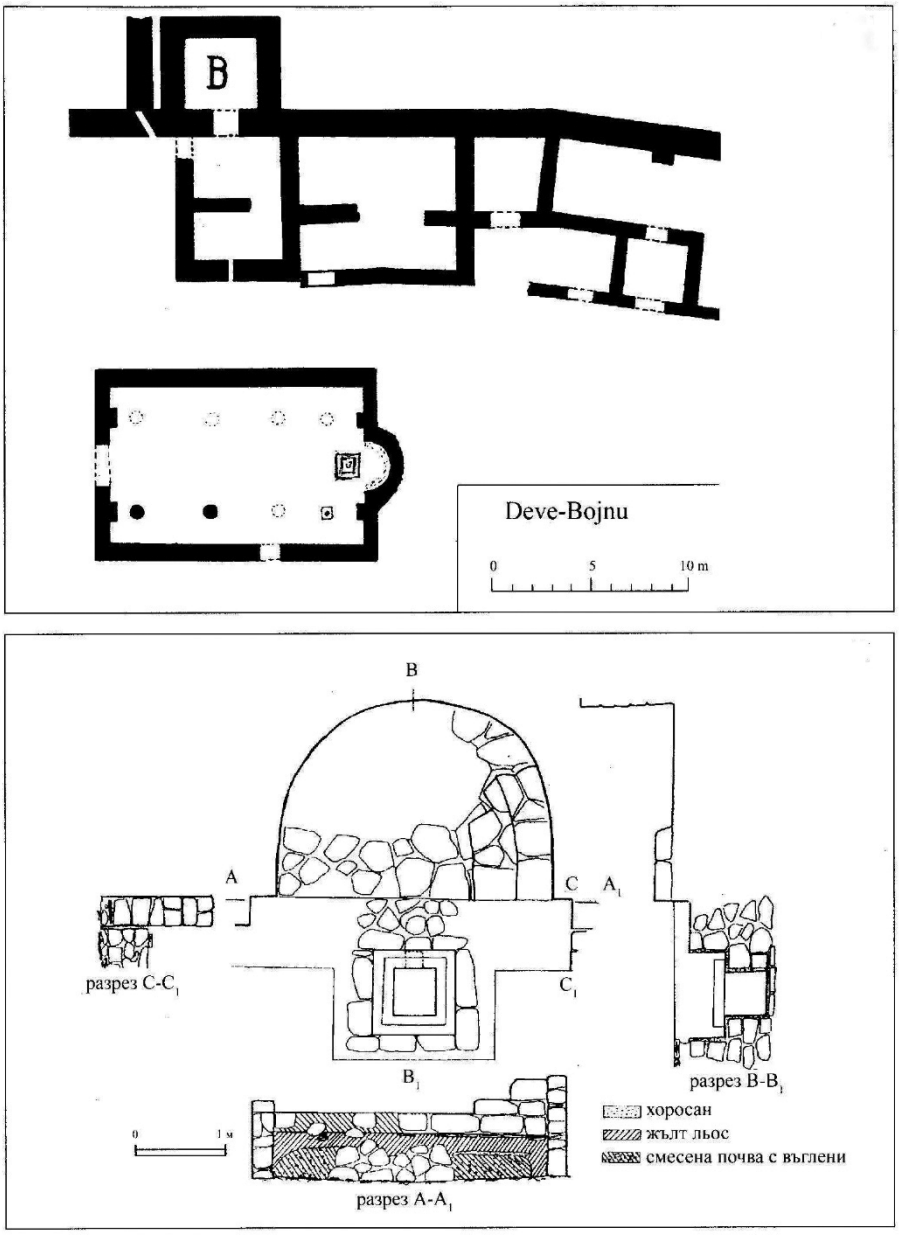


Fig. 5b. Dans la basilique de la forteresse de St. Cyril (Golesh) selon ATANASOV 1997.

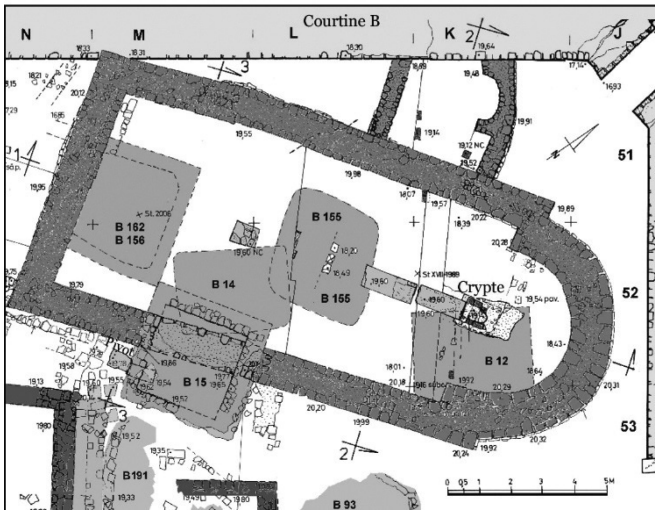


Fig. 5c. Dans la basilique de Capidava d'après ACHIM, OPRIȘ 2010.

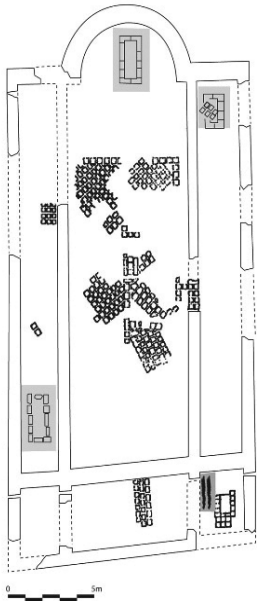


Fig. 6. Tombes de personnes privilégiées dans la basilique extra muros à Novae selon CHICHIKOVA 1997.

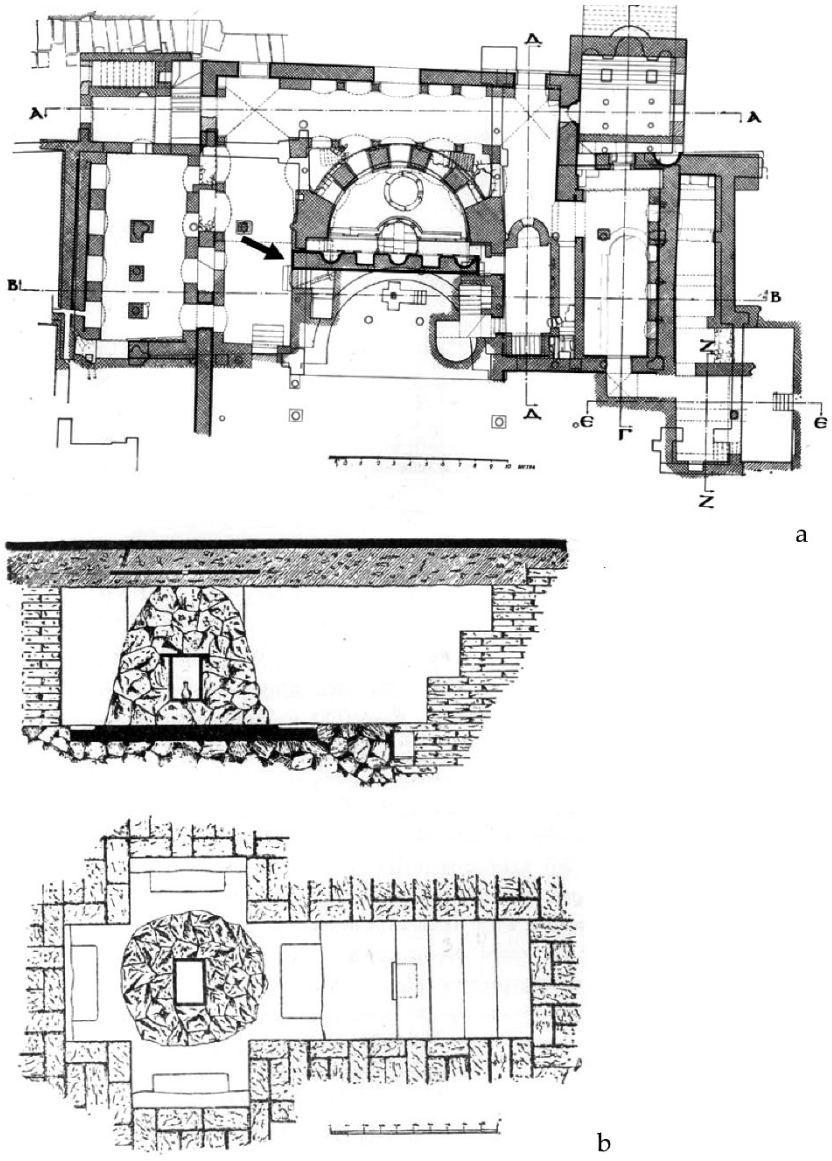


Fig. 7a. St Demetrius: Plan du Bema et de la crypte souterraine à Thessalonique selon MENTZOS 2006**; 7b.** St Demetrius: Plan et coupe de la crypte cruciforme à Thessalonique selon MENTZOS 2006.

A UNIQUE FUNERARY ASSEMBLAGE FROM THE LATE AVAR PERIOD. A RARE IRON TOOL AND THE ISSUE OF SALT EXTRACTION IN TRANSYLVANIAN IN THE EARLY MIDDLE AGES

Gergely SZENTHE[*]

Cuvinte-cheie: *arheologie avară, perioadă avară târzie, unelte din fier ca inventar funerar, distribuția sării, extragerea sării, organizarea producției.*

Keywords: *Avar archaeology, Late Avar period, iron tools as grave good, distribution of salt, salt mining, organisation of production.*

Rezumat: *Autorul încearcă să identifice funcția unui instrument rar, din fier, care apare într-un context al unui mormânt din perioada avară târzie din bazinul Carpaților și în mai multe depozite de unelte din fier din bazinul Donețk. Contextele arheologice și locațiile geografice ale acestor unelte, împreună cu funcția lor reconstituită, oferă o oportunitate tentantă de a construi un model istoric. Concluzionează că mormântul „Mártély" ar fi putut aparține unui individ care s-a ocupat cu exploatarea și distribuirea unor resurse minerale din Transilvania, probabil sarea. Autorul folosește o metodă deductivă pentru investigarea modalităților de exploatare și distribuire a resurselor minerale, în perioadă medievală timpurie.*

Abstract: *The author attempts to identify the function of a rare iron implement type, which occurs in a Late Avar period grave assemblage in the Carpathian Basin and several iron tool depots in the Donetsk Basin. The archaeological contexts and the geographical locations of these tools, together with their reconstructed function offer a tempting opportunity to build a historical model. I conclude that the "Mártély" grave may have contained the remains of an individual who played a role in the exploitation and distribution of mineral resources, probably salt from Transylvania. The study uses a deductive method to investigate the social modalities of extraction and distribution during the early medieval period.*

This study[1] presents a grave assemblage and one of its artefacts in particular, and the economic and social structures it implicates about the Carpathian Basin in the Late Avar period (ca. 8th century AD.).

In the first publication, József Hampel identified the iron artefact as a spearhead (**Fig. 1**, Hungarian National Museum, Inv. no. 61.182)[2]. The total length of the

[*] Gergely SZENTHE: Hungarian National Museum, Budapest; e-mail: szenthe.gergely@hnm.hu.

[1] The study has been implemented with the support provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development and Innovation Fund, financed under the TKP2021-NKTA–24 funding scheme.

[2] HAMPEL 1905, vol. II, p. 106–107, vol. III, taf. 85.

object is 27.4 cm. Its socket (length: 8.5 cm, diameter: 3.3 cm) was created from the two wings of the triangular, flat-hammered lower part of the body, folded over each other to form a tube that is open at both ends. There is no trace of fastening or a nail hole on the socket. Over the socket, the body of the artefact is rectangular in cross-section in its whole length, narrowing to the tip, ending in a short edge perpendicular to the flat face of the blade (length of the blade: 19.5 cm; largest body width over the socket: 2.76 cm; width of the edge: 1.7 cm).

Comparative study of the artefact

There is another specimen of this artefact type, today of unknown provenance, kept in the Hungarian National Museum (**Fig. 2**). Besides minor differences in the proportions of the blade and the socket, it resembles the Mártély artefact in every detail (total length: 23.1 cm; diameter of the socket: 3.75 cm; width of the blade at the socket: 2.84 cm; width of the edge: 11.4 cm; Inv. no. 62.120). Originally, this specimen may have belonged to a large group of objects, which were re-inventoried during the 1950s and '60s, owing to the ill-planned museological activity during the period of cultural plan management in the Communist era. The Mártély specimen and other, currently finds of unknown provenance, were taken out of their context (if there was any) most probably in the first part of the 20th century and remained so in the Collection during the forced revision after WWII. The Mártély specimen was re-inventoried as of unknown provenance in 1961. Based on early documentation, inventory books and publications, the original context of several objects – among them of the Mártély artefact-has been identified in the past decade. In the case of the other iron object, repeated attempts to the identification were unsuccessful, at least until recently. Considering the composition of the collection, it was probably cut off from an Avar grave assemblage (95 per cent of the 20th century material of the "Migration Period Collection" in the HNM comprises Avar period grave assemblages).

The other known parallels are recorded in early medieval hoards of iron implements[3]. All hoards comprise different agricultural and woodworking tools as well as horse gear and weaponry. The few cases focus on the eastern periphery of the East and Central European depot horizon at the Donetsk River, in the Donbas region (Ukraine). Following a downpour, several iron tools were collected from the Sidorove hillfort as surface finds, probably originating from a hoard. Among them, an analogue of the Mártély artefact can be recorded (**Fig. 3**)[4]. From the Mokhnach *gorodishche*, V. V. Koloda published several hoards of iron implements, with one specimen of the object type (**Fig. 4**)[5]. Here, Koloda discussed the artefact as a chisel, among other special woodworking tools. Another hoard came to light from the Majaki hillfort at the Severniy Donetsk in 1981, which comprised two specimens of the object type (**Fig. 5**)[6]. The last case is known from the Gosudarev Yar–1 assemblage

[3] I would like to express my gratitude to Bence Gulyás, who called my attention to the analogues in the Donetsk Basin.

[4] MIKHEEV 1985, fig. 17; KRAVCHENKO 2020, p. 114–115, Ris. 203/12; 297/12–13, 14, 16.

[5] KOLODA 2006, p. 213–216; for the depot with the iron tool, see KOLODA 2015, p. 114, 127, Ris. 7/1.

[6] KRAVCHENKO 2020, p. 64, Ris. 163.

from the vicinity of the village Bohorodichne (**Fig. 6**)[7]. As a specific trait of the latter, a tubular bone piece was inserted into its socket.

The object type has more distant typological parallels from a wider chronological and geographical range. A socketed iron artefact with a similar rectangular blade cross-section but with a rounded, blunt edge and a nail hole in its socket was found in the Sklabiňa (Slovakia, okr. Martin) depot (**Fig. 7**)[8]. The publisher, I. Hrubec identified the long, narrow object as the head of a pole used for moving heavy objects, e. g. trunks. F. Curta listed it as a socketed ploughshare[9]. While the typical object categories of the East-Central European depot horizon (ploughshare, coulter, hollow axe, and spearhead) are present in the Sklabiňa depot, its two iron implements resembling axes with long bodies are extraordinary types. Both tools differ markedly in their massive body from the axe-shaped ingots of the period. According to I. Hrubec's opinion, both were used for breaking/cutting relatively hard materials (in fact, the shape of the two tools corresponds with that of high medieval mining tools[10]).

Four distant parallels to the Mártély iron implement from the Sebenje depot assemblage (**Fig. 8**) (Slovenia) bear some importance for our argument. The socketed artefacts have short, thin, pointed, slightly curved bodies, two of them terminate in spoon-like tips. The sockets are closed and perforated in all four cases. T. Knific identified them among other agricultural tools as socketed ploughshares[11].

Questions about the function

There are some uncertainties in the literature concerning the functions of the listed artefacts. As mentioned before, T. Knific discussed the four analogous objects among agricultural tools. Slightly less robust, socketed implements with elongated, asymmetrical bodies terminating in a short edge occur also in Roman contexts, where the type is defined as a mortise chisel[12]. Socketed mortises were used in early medieval times as well, however, differing in shape from the Mártély-type artefacts. One specimen may be identified in the find material of the Velem-Szent Vid prehistoric hilltop settlement. Among the predominantly prehistoric artefacts which entered the museum collection without known finding circumstances in the early 20th century, published by necessity as an unstructured mass of objects by baron Kálmán Miske, there is a group of iron tools morphologically identical to those found in early medieval depot assemblages[13]. These and some other objects in the assemblage, like a Carolingian stirrup and a strap end with bimetallic inlays[14] suggest that the prehistoric fortifications were reoccupied during the 9th century AD. The

[7] KOLODA 2013, fig. 3, fig. 5/4.

[8] HRUBEC 1965, p. 415–417, Obr. 4/4; BARTOŠKOVÁ 1986, Obr. 16.

[9] CURTA 2011, p. 331, Cat. no. 69.

[10] Georgius Agricola: De re metallurgica libri XII, Lib. 6.

[11] PLETERSKI 1987; KNIFIC 2010, p. 85, fig. 1.

[12] RUPNIK 2015, p. 196–199, and fig. 3, 9–13; Similar tools were left unnoticed in the thorough study of HENNING 1987, see the typological table abb. 13.

[13] Among other objects of unidentified function, see MISKE 1907, XLVII/2, 12, 14–17, 19; XLVIII/1–2, 17; LI/14.

[14] MISKE 1907, XLVIII/16: a strap end with metal inlay; XLIX/14: stirrup.

reconstructed depot assemblage comprised a long, thin mortise chisel (**Fig. 9**)[15], that differed in shape from the Mártély type significantly. At the same time, solid iron chisels of different sizes are relatively well-known in early medieval iron tool depot assemblages. This makes the identification of the rare Mártély type as a simple chisel quite improbable[16].

The composition of early medieval depots[17], again, does not contribute much to the identification of the object function. The type occurs in the Ukrainian depots listed above among woodworking and agricultural implements (sickles, ploughshare, coulter, axe, and adze), riding gear (stirrup, horse-bit), and weaponry (spearheads), as well as with multifunctional tools, like long knives. Early medieval depots comprise such a wide variety of tools for everyday life that their functional heterogeneity seems to be of utmost importance in their compilation. This subjectivity assumes a ritual character of their burial and is probably due to the actual requirements or purpose of the deposition. Thus, the functional variability of the items in these assemblages hinders the identification of this tool type's function.

V. Koloda considered the Mokhnach artefact a woodworking tool[18]. In another study, however, he interpreted the Bohorodichne specimen otherwise, as in his opinion, the tubular bone piece inside the socket was unsuitable for hammering, and contradicted the chisel function. He argued that the bone piece could have been used to fix the tool on a shaft, and he determined the object's function in cutting soft stone material or even ice[19]. If we consider the rare and geographically restricted occurrence of the type as an argument against its identification with a simple mortise chisel, Koloda's interpretation may bring us closer to a solution.

The morphology of the Mártély artefact type is almost identical to the Bronze Age and the Early Iron Age mining picks from the Alpine copper and salt mines in Hallstatt and Mitterberg, today Austria (**Fig. 10**)[20]. The shape itself, with its elongated body and the short edge at its tip, corresponds with the high medieval pickaxes as well, which were used by miners to cut around larger blocks. The Roman pick[21] that came to light from an iron depot in a Roman salt mine complex in Hispania was a shafted, symmetrical specimen, with a straight blade on both sides ending in a short edge. Although the Roman type was the typological predecessor of recent picks, the shape of its tips is identical to that of the prehistoric socketed tools-and our early medieval artefacts as well.

The strong, relatively long and thick body of the discussed artefact type is fitting for a percussive hand tool, as in the case of prehistoric mining tools. For this purpose, the straight shaft of a chisel-like tool would not have been convenient or practical. Similar to prehistoric mining tools, and, more importantly, early medieval

[15] MISKE 1907, XLVII/T. 30.

[16] In several assemblages: BARTOSKOVÁ 1986, Obr. 10, 36–38; Obr. 15A/15; Obr. 16C/3; Obr. 18B/11.

[17] To the problem of the composition of the depot assemblages, see ATANASOV 2000; CURTA 2011, tab. 7; MÜLLEROVÁ 2014.

[18] KOLODA 2006, p. 213–216.

[19] KOLODA 2013, p. 75.

[20] THOMAS 2018, p. 164 (shafted picks), p. 228–232 (typological table).

[21] MONTERO 2022, p. 35.

socketed adzes[22] from Eastern Europe and the Carpathian Basin, the shaft was most probably carved from a branch junction that allowed a (nearly) right-angled position of the shaft and the head, in this case, the pick. This hafting technique seems to have disappeared in Europe and the Mediterranean for a long time, until the Late Iron Age. However, according to the occurrence of socketed axes in "wealth deposits", the hafting method was widely used in the Baltic region and Eastern Europe also during the Great Migration Period and the Early Middle Ages[23]. Based on the analysis of László Kovács, socketed adzes were used continuously in Siberia and the Eurasian steppe from prehistoric times until the Middle Ages[24]. This could result in the early medieval emergence of this hafting method in Eastern Europe and the Carpathian Basin and allow us to reconstruct a new artefact category, namely, a socketed pick, following Eastern European, Siberian and steppic technical traditions.

The spatial distribution of the discussed artefact type offers another key aspect of our study. As a marginal component of East-Central European deposits, the type occurs only in the Donetsk Basin (**Fig. 11**). While the composition of the four assemblages from this region corresponds in every other detail with the East-Central and Southern European deposits of the 8th–10th centuries AD., the presence of the discussed artefact type creates a regional group at the eastern periphery of the early medieval iron tool depot horizon.

We formulate the working hypothesis that Mártély-type tools occur in or near important regions of mining and their distribution network. The enormous Soledar salt mine complex is situated in the same region of the Donetsk Basin as the mentioned assemblages. The Sklabiňa depot assemblage, with one of the closest analogies of the tool type, is situated near the Carpathian copper and silver ore deposits in the vicinity of Banská Bystrica (Slovakia), and the Blatnica elite burial (9th century AD.)[25].

Taking all of the aforementioned aspects into consideration, we conclude that the analysed tool type probably served as a mining pick instead of a woodworking chisel. If this assumption is correct, the socketed mounting of the pick to the shaft resembles that of the socketed adzes of the period. This solution was alien to the post-Roman contexts surrounding the Carpathian Basin and can be traced back to Eastern European and steppe cultural environments.

The cultural and social context of the Mártély tool as a grave find

Following a probable functional identification of the Mártély artefact, a series of deductive arguments helps us to interpret its find context and its regional significance. The uniqueness of the assemblage suggests that the iron artefact-the assumed pick-reflected equally high prestige as the other artefacts in the set, derived from their function as grave goods. Questions arise concerning the placement of the artefact in one of the best-equipped graves of the Late Avar period comprising several rare (gold earrings, gold braid ornaments) or even unique

[22] KOVÁCS 1981.

[23] ORAS 2015, in several depots (see the catalogue).

[24] KOVÁCS 1981, p. 91–94; BALOGH 2016, p. 269, the latter quotes Kovács's conclusions.

[25] HAMPEL 1905, taf. 321–322.

(gold coin imitation with punched ornament, belt set) find types, presented by József Hampel on his plate "B"[26] (**Fig. 12**).

The burial ground

Among the numerous Avar-period sites surrounding the present-day settlements of Csongrád and Mártély (**Fig. 13**)[27], the "Csanyi part" burial ground on the left bank of the Tisza River stands out with its rich find material. The first two supposed grave assemblages (Graves "A" and "B") have been found and destroyed in 1887 during dam construction works. The planned excavations were carried out in three campaigns during the following years (1891[28], 1894[29], 1897–1898[30]). The finds of the first seasons were brought to the Hungarian National Museum, and the finds from the graves excavated in 1897–1898, most of them poorly furnished, to the local museum in Hódmezővásárhely. Although some of the graves may have been destroyed by the Tisza as the cemetery was located along its outer bank, the burial ground is considered fully excavated. With a total number of no more than one hundred graves, it is one of the smaller cemeteries of the period. Based on available data, it was established around 650 (dated by a rare gilt bronze buckle with an Animal Style II carved ornament[31]). Compared to its size, the relatively high number of gold ornaments in the cemetery is extraordinary for the Late Avar period (thick gold obolus, gold foil braid ornaments, and four pairs of gold earrings with bead pendants[32]).

Grave "B" of Mártély

Among the finds of the first, destroyed burials the publisher distinguished two assemblages, which were treated separately already at the time when the finds were handed over to the National Museum in Budapest. Contrary to the explicit statement of the finders recorded by Hampel, the finds presented on Plate "A" (taf. 84), however, can be attributed to two or even three graves. At least a female and a male set of costume accessories can be distinguished among them that, if the finders were right, may represent a double grave. At the same time, the finds on Plate "B" (taf. 85; **Fig. 12**) may belong to one remarkable grave assemblage, except one cast bronze strap end (bottom right), which is, most probably, a component of the assemblage presented on the previous plate. Apart from that, every object is extraordinary to some extent: most of them are unique (obolus and braid ornament with punched decoration, gilt bronze belt set), and/or made of gold (obolus, braid ornament, earrings). To get an impression of the true significance of this assemblage – a reconstructed Grave "B"-it is worth examining its components briefly.

The round earrings made of two wires twisted together, with their bead

[26] HAMPEL 1892, p. 413–416; HAMPEL 1905, II/106–107, III/taf. 85.

[27] According to the data published in ADAM.

[28] FARKAS 1892, p. 417–426.

[29] SZEREMLEI 1900, p. 461–463.

[30] PÁRDUCZ 1937.

[31] GARAM 2005, p. 420–422.

[32] „A" (HAMPEL 1905, taf. 85/9–10); „B" (HAMPEL 1905, taf. 86/11); Grave 8 (HAMPEL 1905, taf. 90/15–16); Grave 11 (HAMPEL 1905, p. 112, taf. 91/4–5).

pendants missing, are dated to the initial phase of the Late Avar period at the latest[33]. Golden earrings are rare finds in the Late Avar period[34]. The obolus has irregular contours. It was cut from a thick gold plate. The thin gold foil braid ornaments are embellished with the same C-shaped punch marks. This indicates that both were made on the same occasion, in concert with the low quality of the goldsmith's work for the funeral. Analogues of both objects occur only sporadically in the Carpathian Basin, in the so-called "Middle Avar period" (second half of the 7th century)[35]. Compared to these objects, the cast bronze and gilt belt set (**Fig. 14**) represents the next typo-chronological phase, the first phase of the Late Avar period. The morphological characteristics of the belt set have been presented in detail elsewhere[36]: here, it is enough to emphasize that both the scroll ornament and the figural scene of the large strap end lead to the Mediterranean elite culture of the 7th century, dominated by Byzantine style[37]. The complex scene on the large strap end refers to the iconography of late antique carved ivory panels, depicting Heracles and the Ceryneian hind in a corrupted scheme, blended with other iconographic elements-animal bodies, a gryphon, peacocks with palm tree etc.-of antique origin[38]. This mixture of iconographic elements was created in an identical form already in the Byzantine culture, which had a direct impact on the Mártély belt set as well. The belt set has an Avar character regarding its technology and shape, and it is of relatively low worth compared to goldsmith's artefacts circulating in elite networks. Thus, its manufacturer was probably active in the Carpathian Basin. The unique decoration of the belt set can stem from the creative copying of various artefacts-in this case, probably furniture embellished with carved ivory panels (?) – held in the treasuries of the elite[39]. Yet the belt set differs markedly from all identified elements of the elite culture by its material and casting technique. To our knowledge, the Late Avar elite culture mostly used complex goldsmith's products made of precious metals[40]. The "row grave cemetery" in which the burial was found, the lack of weaponry and horse or horse harness (both playing an important role in Avar-type funerary representation), and the modest belt set the owner of assemblage "B" apart from high society.

Taken together, we identify the owner of assemblage "B" as a prominent person in his community or an important member of a prominent family. However, the richness of the assemblage and the connection network it represents do not allow him to be simply placed among the leaders of contemporary local communities, who were buried mostly without precious metal ornaments, with simple belt sets, rather

[33] GARAM 1993, p. 27. The round earrings are dated by CILINSKÁ 1975, p. 77–78.

[34] SZENTHE 2021, p. 420.

[35] To the oboli: BALOGH 2016, p. 323–326; to the braid ornaments: ANDRÁSI 1997. A good analogue of the Mártély braid ornaments came to light from Kisköre-Halastó, Grave 41 with a scroll ornament: GARAM 1979, taf. 35/9–10. The specimens are dated to the first decades of the Late Avar period.

[36] On the hinged strap ends: SZENTHE 2013a; to various other issues concerning the set, see the following notes.

[37] SZENTHE 2020, p. 363–368.

[38] SZENTHE 2013b, p. 151–154.

[39] To the problem of uniqueness in the context of the Avar material culture: SZENTHE 2020, p. 86–103.

[40] On Late Avar period precious metal artefacts: SZENTHE 2021.

few weapons and, occasionally, a horse[41]. The character[42] of Grave "B" is extraordinary compared to the assemblages dating from the first half of the Late Avar period in other cemeteries. This indicates a strong subjective factor behind the burial, such as personal significance, influence, and, based on the golden objects, probably wealth. Among the object categories of the grave, we do not find any real Avar-type status symbols such as weapons, drinking vessels, horses, or horse harnesses. Instead, the belt set can be considered a visual indication of sociocultural relations with probably exclusive access to elite cultural goods. If this differentiation is even conceivable in the period when kinship seem to play a decisive role in the social structure[43], burial complex "B" reflects rather a person whose status was achieved through social connections and wealth than one with inherited rank/family prestige. This assumption is corroborated by other graves in the cemetery. Except for one burial with a horse, no other male grave possesses even comparable representative value to Grave "B". The representative female burials with golden earrings are dated to a much later phase, to the end of the Late Avar period, and as such, their problem deserves a separate discussion about the changes in funerary representation at the end of the Avar age[44]. These female burials and Grave "B" certainly share traits which belong to the same topic of high social investment in funerary representation in one single cemetery, but due to their late dating, they should not be discussed here further.

The presence of tools in grave assemblages

Iron tools seldom occur in Avar-period graves. Besides multifunctional ones like axes and large knives/daggers, special craft tools that were placed more often in graves are usually sickles and socketed adzes. "Hammers" are present in a few cases[45], which could have been percussive weapons as well[46]. Sickles, being pointy or sharp tools, are regularly interpreted as apotropaic objects[47], laying mostly crosswise on the body, in two third of the cases in male graves[48]. Socketed adzes are present in the 7th–8th centuries Avar material without regional focus[49]. According to the analysis of László Kovács, adzes equally occur in burials with weapons, horses, and ornate belts, as well as in poorly furnished graves. In one case (Grave 63, Prša)[50], a socketed adze came to light in an iron depot together with a spearhead, near a female grave. In the case of sickles and axes, we cannot be confident whether their deposition was related to the practical functions of the tools, or whether they had a symbolic meaning in a hitherto unknown rite. Both reasons are conceivable. Besides

[41] SZENTHE, GÁLL 2022b identifies local leaders in these deceased.

[42] By the first half of the Late Avar period, the placing of precious metals and costume elements in graves largely disappears from the cemeteries of the Carpathian Basin. See SZENTHE 2021, p. 418–419.

[43] For the lineage organization of the Avar-period elite, see CSÁKY *et alii* 2020.

[44] SZENTHE 2021, p. 426; SZENTHE, GÁLL 2022a, p. 258–263.

[45] BENDE 2017, p. 295; TOBIAS 2020, p. 37–39.

[46] E.g., Szentes-Kaján, Grave 159 (MADARAS 1991, pl. 17).

[47] SOMOGYI 1982, p. 194; BENDE 2017, p. 296.

[48] BENDE 2017, p. 296.

[49] KOVÁCS 1981, abb. 7.

[50] TOČIK 1963, p. 136.

the aforementioned two categories, the assemblages of goldsmith's and blacksmith's implements must be discussed in the present context[51]. Exceptional assemblages of everyday items and weaponry are known from "goldsmith" and "blacksmith" burials. These are armor lamellae, harpoons, weapons, and a belt set with the blacksmith's tools in Kölked-Feketekapu cemetery "B", Grave 80[52]. Even more spectacular finds are the "goldsmith's grave" at Kunszentmárton[53], and the Band / Mezőbánd (Romania) grave with the goldsmith's tools and a *bandhelm* (spherical helmet)[54].

Based on the sex of the deceased and other finds in the graves, the motivation for the burial of these tools was probably their practical function in the majority of the cases. The physical strength required for their use probably correlates with their placement in male graves in the Avar culture. Blacksmith's tools were buried exclusively, adzes mostly, and sickles in many cases with males. On the other hand, blacksmiths and goldsmith's tools are predominantly found in above-average equipped graves. There is a significant chronological and spatial variability in the contexts of grave assemblages and there is no general answer to the question whether the tools were placed into the grave as craft symbols, or they served different magical, or even social purposes, e.g., they were elite status markers[55].

In many graves of the Early Avar period, different combinations of three groups of finds-weapons, ornate belts and horses (horse harness sets)[56]-appear. Among these graves, elite burials are distinguished by the accumulation of precious metal and luxury artefacts that demonstrate extensive communication networks (e.g., complex goldwork, glass vessels, amphorae, etc.). Thus, the control of strategic resources or craftsmen did not have a direct role in the display of elite status. Rather, the goldsmith's or blacksmith's tools in graves indicated the owner's craftmanship during their lives. Consequently, valuables like jewellery and otherwise rare weapon categories such as armor elements displayed the high status of the person connected to their special skills.

The exceptional/unique finds in the Mártély "B" assemblage certainly resemble the burials with blacksmiths or goldsmith's tools. In the context of the unique grave goods, the iron tool in assemblage "B" may signify a special activity that brought prestige, and probably, wealth, to its practitioner. However, one must keep in mind the lack of elite status markers of the deceased or his community.

This prestigious activity was probably not woodworking or-as V. Koloda puts it-cutting holes in the ice for fishing, nor can the tool type be associated with metalworking. The high prestige probably derives from the strategic importance of the craft the tool represents. This draws attention to mining, more specifically, to salt mining, as we presume the discussed artefact type as a pickaxe. Objects of symbolic value in metalworking were tools for processing metals rather than ones for extracting ores. If identified as a salt mining pick indeed, the presence of this tool in the

[51] RÁCZ 2014.

[52] KISS 2001, taf. 24–27.

[53] CSALLÁNY 1933.

[54] KOVÁCS 1913, p. 280–290.

[55] HENNING 2007, p. 51–59 (on ploughshares); in general, and about blacksmith's tools in the burials of women and children. See also RÁCZ 2014, p. 18–19.

[56] An analysis of the problem by statistic means, see SZENTHE, GÁLL 2022b, p. 324–327.

Mártély grave and the Donetsk Basin depots makes sense as there is no other object which could better symbolise the possession, extraction, and redistribution of this important natural resource. This idea is corroborated by the prominence of the grave assemblage, which could have been interdependent with the symbolic value of the tool. Salt is vital for human life, food conservation as well as animal breeding. The control of salt deposits and trade routes was a source of wealth and social power in all historical periods[57].

In summary:

a) based on its occurrences, the artefact was a rare but well-discernible tool type, most probably used for a special purpose;

b) according to the other elements of the grave assemblage, the tool symbolized an activity that was important for the well-being or success of the deceased or their community;

c) the socketed mounting on a shaft branching at right angles, which is required for its use as a pick, was widespread in early medieval times in the Eurasian steppe and Eastern Europe;

d) by its morphology and analogues, the tool was suitable for cutting blocks from rock salt;

e) due to the fundamental importance of salt, the tool for its extraction probably became an important symbol in the socio-cultural system of relations;

f) the functional reconstruction is further supported by the clustering of this tool in the vicinity of the salt deposits at today's Soledar.

Based on these arguments, it is possible to construct a hypothetical model of artefact function, which, however, arises several questions. If we hypothesize a link between the tool type and salt extraction, we have to answer two further questions, namely, how the tool has got into a grave far from any salt occurrences by the Tisza, and, secondly, whether we do find evidence of the distribution of halite blocks-cubes-in the given territories. I address these issues in the two final chapters of my paper.

Salt deposits and salt extraction in the vicinity of the Mártély site in the early medieval Carpathian Basin

The most probable depositional context of the tool type in the Mártély grave was the extraction of halite deposits in central and southern Transylvania. In early medieval Europe, evaporation techniques were dominantly used to get pure salt from brine. By contrast, concerning the distribution of Transylvanian salt, early written sources (11th–13th centuries) refer only salt blocks transported on water or wheel. It seems that Transylvanian rock salt was much appreciated for its high purity, and it was extracted in blocks[58]. These data correspond with the analyzed tool type.

[57] See e.g., HARDING 2021, p. 66–72. Exploitation and trade of salt is discussed by most of the works dealing with early medieval economy and trade. See the studies in HENNING 2007a (GELICHI 2007, p. 84–90; HAMEROW 2007, p. 225; BUKO 2007, p. 434–435; also, about the issue of Transylvanian salt in POLÁČEK 2007, p. 499–500, 518).

[58] ROMHÁNYI 2017, p. 2.

The Mártély site lies on the important and well-documented medieval salt route[59], through which central- and southern-Transylvanian salt was redistributed towards the west[60]. According to the distribution of Avar-period archaeological sites, this route has already been important in the late 7th and 8th centuries, which resulted in the emergence of a centre of settlement along the lower course of the river Tisza, the river Körös/Criş, and the river Maros/Mureş[61]. Early medieval Carpathian salt extraction sites are, however, still "by-products" of projects aimed at the research of prehistoric salt mining[62]. There is one 8th–9th centuries date available from the "Királyvölgy" (Solone) salt deposit (Ukraine), among a series of samples from the Bronze Age[63]. Another, 5th–6th centuries date is known from the Someş Valley salt mine at Băile Figa[64]. For the present study, the Királyvölgy/Solone site is of special importance as it may explain the distribution and character of Avar sites between the upper and middle course of the river Tisza/Tisa. The occupation along the east-west land route leading from Satu Mare and Mátészalka through Debrecen towards the river crossing at Tiszafüred was characterised by a seemingly strong elite presence (Hortobágy-Árkus, Mátészalka), a series of smaller burial sites with equestrian and weapon graves, and the Tiszafüred-Majoroshalom cemetery (1200 graves) showing a strong impact of east-west communication with Transdanubia[65]. By contrast, there is no clear indication of Transylvanian salt extraction in the Avar period. After the 6th century date from Băile Figa, the exploitation of the Someş valley deposits is documented only in the written records from the early Árpád era[66], although 10th century Hungarian occupation of the microregion is generally explained by the control of salt mining[67]. Unfortunately, we have even less information about possible early medieval salt exploitation in central and southern Transylvania (Turda, Ocna Mureş, and Ocnişoara), the first-written-records date back to the 11th–12th centuries[68]. Based on the archaeological sources, Avar-type cemeteries in Transylvania, mainly small and sporadic burial places, are restricted to the zone around the salt deposits on the Lopad plateau between Turda and Ocnişoara. However, the research on Avar settlement activity in the area is still in its initial phase. Thus, scholarship bounds the considerable settlement density at the lower course of the river Maros / Mureş only hypothetically to the communication with Transylvania, and, especially, among other goods, with the possible distribution of Transylvanian salt[69].

[59] The issue of medieval salt routes in the Carpathian Basin is discussed, with further literature, in ROMHÁNYI 2017, p. 13–22.

[60] Concerning the salt deposits of the northern Mureş valley, see LAZAROVICI, LAZAROVICI 2015, p. 144–147.

[61] SZENTHE, GÁLL 2021, p. 357–360.

[62] Summarized in CAVRUC, HARDING 2012.

[63] HARDING 2011, p. 41–44.

[64] HARDING, KAVRUK 2010, p. 150–153.

[65] To the east-west route accross the plains south of the Tisza (today's Hortobágy), see SZENTHE, GÁLL 2022a, p. 298–303.

[66] ROMHÁNYI 2017.

[67] GÁLL 2013, p. 822.

[68] DRASKÓCZY 2014, p. 827; ROMHÁNYI 2016, p. 284–289.

[69] HOREDT 1986, p. 71–72, abb. 33; FIEDLER 2008, p. 162 (mentioning Ocnișoara); SZENTHE 2019, p. 240.

A tentative socio-economic model explaining early medieval salt redistribution in the Carpathian Basin

While subjective motives possibly led to the placement of the iron artefact in the Mártély grave, contextual patterns contradict this assumption. The pattern explained in points a-f above, presents a strong argument for identifying the Mártély "B" assemblage as a rare, but not extraordinary phenomenon, defined and understood on a comprehensive level in Late Avar society. The other analogous object in the collection of the Hungarian National Museum also fits this narrative. According to the relatively high representative value of the grave assemblage, the deposition of the iron artefact was motivated rather by its symbolic value than its function.

Building upon these arguments, we continue our deduction and draw a preliminary hypothetical historical model[70] concerning sociocultural structures working behind the creation of such a grave assemblage.

The Transylvanian salt deposits are located in a relatively inaccessible, closed geological setting, without major settlement centres, factors that are important to consider when researching the extraction and distribution of salt. There are hardly any signs of urbanisation[71] even in the relatively densely populated, central regions of the Carpathian Basin until the 9th century. The main factors in the emergence of a complex centre, such as a focal position in the east-west and north-south route systems, significant craft and agricultural production potential, and the presence of elites, are documented in the settlement centre along the southern course of the Tisza and the Maros-Tisza-Körös interfluve. However, the settlements there were dispersed over a too large area and lacked the criteria of a real "central place", including a fortified settlement focus with dense habitation. In Transylvania, at the eastern periphery of the Avar socio-economic system, in a rather sparsely inhabited area, the requirements for the emergence of a local centre were even less prevalent. In this regard, the structures built around salt exploitation had to be the result of "exogenous growth"[72] out of the Avar socio-economical system, where resource access and transport safety could have been the main bottlenecks of the redistribution[73]. We know practically next to nothing about early medieval salt extraction in the Carpathian Arch and Transylvania. Permanent extraction infrastructure sustained by local specialists must have existed, but their role in the redistribution system and their control over it are unknown. The sporadic but regularly dispersed cemeteries of militant communities are certainly the residues of a system controlling the area for Avar elites. Without information about the political system, we do not know whether transportation was guarded by military force and if so, how strong their presence was.

In our hypothetical model, we assume expeditionary salt redistribution, delivering the quantity needed to the home area, and the inner regions of the Carpathian

[70] Distinguished from general models. See PARKINSON 2010.

[71] To the problem of urbanisation in the period see the studies. For a complex analysis of Moravian fortified settlements see MACHÁČEK 2010.

[72] RENFREW 1975, p. 32–33.

[73] For this approach, see EARLE 2011.

Basin (or: to the redistribution area) by caravans. In the medieval system of salt transportation, the main route leading from southern Transylvania to the west crossed the river Tisza near Mártély, south of the estuary of the Körös/Criş[74]. Interestingly enough, people taking part in salt distribution (*mansiones*, servants in dependent status) are mentioned in 11th–13th centuries written sources. They inhabited various settlements along the salt transportation routes, from which they departed and to which they returned carrying out expeditions for salt. As specialised servants, they collected salt according to the privileges and/or needs of their masters from Transylvania, then they redistributed it locally in their area. Even if the charters themselves are often later transcripts or fakes since their purpose is to secure the right of various ecclesiastical institutions, the practical details they describe have to be truthful, otherwise, the right claimed by the holder of the charter would have been discredited[75]. It seems, therefore, that salt distribution was carried out in the early period of the Hungarian kingdom by certain groups of servants, living along the salt road system enmeshing the Carpathian Basin. Due to the similarities between the 8th century and 10th–11th centuries locations of settlement hubs and road networks[76], the early Árpád-period and Late-Avar-period systems are well comparable. The settlement cluster along the lower course of the Tisza/Tisa and the Maros/Mureş rivers emerged in the late 7th century and reached its full development by the end of the Late Avar period. This massive settlement hub must have been continuously inhabited during the 9th century. Otherwise, the 10th century settlement pattern would have emerged there without any antecedents[77]. This does not mean that social structures and redistribution systems would have remained unchanged since Avar's social and power structures disintegrated after the fall of the Avar Khaganate. The need for salt as a vital resource persisted, and, as local populations adapted to the changing conditions, rock salt extraction and distribution must have been maintained.

Early medieval economies are expected to be poorly organised systems. Thus, a relatively simple supply system is presumed even for salt, a strategic resource, which played an important role in generating social complexity in every historical era[78]. The early Árpád-age system fits this condition in general, although the system of royal storage houses shows an emergent complexity. We learn from Árpád-age written sources that the basic structures were modified and restructured by the elite, by royal and ecclesiastical power, as servants in dependent status provided salt for their lords who distributed parts of that further.

In the lack of written records, the Avar period structures are obscure. Similar to Árpád-era elites, Avar's central power and elites probably controlled the circulation of certain resources as well as communication. The aforementioned salt route

[74] ROMHÁNYI 2016, p. 270.

[75] ROMHÁNYI 2016, p. 271–274.

[76] See ROMHÁNYI 2017.

[77] Suggested already in BÁLINT 1991, p. 98–100. Recent studies provide new and decisive arguments for this continuity. Based on cerealia pollen distribution in the Carpathian Basin, see TÖRŐCSIK, SÜMEGI 2019, interpreted by SZENTHE, GÁLL 2021, p. 356–357.

[78] Salt occurrences are concentrated and relatively rare, which, together with the importance of the raw material, facilitate hierarchisation, concentration of power and specialisation. See HARDING 2021, p. 66–72.

may be an example of that, which led from Királyvölgy/Solone across the northern Transtisza region towards the west, on which the Hortobágy-Árkus cemetery occupied a strategic position[79]. This route indicates the existence of a redistribution system, with hubs held by specialised, militant communities probably under elite control[80]. Late Avar social structures are barely known, but there is strong evidence for the existence of specialist groups[81]. We presume that certain persons or communities in the Carpathian Basin population were more or less specialised in salt extraction and supply, as the Mártély Grave "B" may show. Even if these specialists enjoyed a particular position in Avar society, as Grave "B" again suggests, this had, however, nothing to do with elite status. In our opinion, the grave assemblage reflects an identity that was based on merely a close connection with the elite, not membership. The presence of gold reflects unusually high funerary representation. Access to the visual world of the elite is also shown by the iconography and shape of the belt ornaments, which, however, are made of cheap material with simple technology. Different from the elite, it was rather tied to the copper alloy ornaments widely used in the period.

In our model, all the special traits of the assemblage suggest special identity and social status, the direct symbol of which was the supposed mining pick. The three main attributes of this identity are: a) an activity expressed by a special tool; b) wealth; and c) communication with powerholders, indicating a person engaged in redistribution (trade?) as an entrepreneur, gaining profit from his activity. It is not clear, however, to what extent this activity was subjected to the control of the elite. Compared to the merchants in written Carolingian sources engaged in long-distance trade (*mercatores* or *negotiatores*, merchants operating partly independently, partly with the direct mandate of their lord)[82], they could act either independently or under the control of a lord, or the khagan himself.

If the person in the Mártély Grave "B" was engaged in salt distribution (trade) he could have travelled with his caravans on the routes leading across the Tisza at Csongrád, in a northwesterly direction to the Danube bend or westward, through the Danube-Tisza Interfluve and the Roman river crossing on the Danube, to Transdanubia. These land routes were indicated by the distribution of Avar sites already from the late 7th century[83], anticipating the medieval salt roads of the same area, because the main population hubs and redistribution centres retained their place and probably their importance in this region from the 8th century until the late 11th century.

The character of this reconstructed supply system depends on the situation of the salt sources in Transylvania. To draw a relevant model, information would be necessary on the settlement and power structures surrounding salt deposits, and the ways the local population used this resource. There are no traces of settlement in the vicinity of the "Királyvölgy"/Solone salt mine (Ukraine). Considering elevation and relief energy, the presence of a significant self-sustaining population in the 8th–9th

[79] See above.

[80] SZENTHE 2019, p. 238–240.

[81] A statistical analysis on the changes of Avar society see SZENTHE, GÁLL 2022b.

[82] MCCORMICK 2001, p. 11.

[83] For the details of the reconstruction, see SZENTHE, GÁLL 2021.

centuries there is highly improbable. In central and southern Transylvania, the terrain is much more favorable for human settlement, and there is abundant evidence of the Avar-period population[84]. However, the settlement patterns near the Turda, Ocna Mureş and Ocnişoara salt deposits still need further investigation.

BIBLIOGRAPHY

ADAM – *Archäologische Denkmäler der Awarenzeit in Mitteleuropa*, Varia Archaeologica Hungarica 13, Budapest, 2002.

ANDRÁSI 1997 – J. Andrási, *Avar kori varkocsszorítók-Awarenzeitliche Zopfspangen*, Archaeologiai Értesítő 123–124 (1996–1997), p. 85–123.

ATANASOV 2000 – G. Atanasov, *Treasures of Agricultural Tools from Early Medieval Fortresses of Southern Dobrudja (X–early XI cc.)*, Stratum Plus 5 (2000), p. 183–208.

BALOGH 2016 – Cs. Balogh, *Régészeti adatok a Duna-Tisza-közi avarok történetéhez*, Studia ad Archaeologiam Pasmanensia 6, Budapest, 2016.

BARTOŠKOVÁ 1986 – A. Bartošková, *Slovanské depoty železných předmětů v Československu*, Praha, 1986.

BÁLINT 1991 – Cs. Bálint, *Südungarn im 10. Jahrhundert*, Studia Archaeologica XI, Budapest, 1991.

BENDE 2017 – L. Bende, *Temetkezési szokások a Körös-Tisza-Maros közén az avar kor második felében-Bestattungsbräuche in der zweiten Hälfte der Awarenzeit im Gebiet zwischen Körös, Theiss und Maros*, Studia ad Archaeologiam Pasmaniensia 8, Budapest, 2017.

BUKO 2007 – A. Buko, *"Tribal" societies and the rise of early medieval trade: archaeological evidence from Polish territories (eighth-tenth centuries)*, in: J. Henning (ed.), *Post-Roman Towns, Trade and Settlement in Europe and Byzantium*, Vol. 2, *Byzantium, Pliska, and the Balkans*, Millennium Studies in the culture and history of the first millennium C. E., Berlin-New York, 2007, p. 431–450.

CAVRUC, HARDING 2012 – V. Cavruc, A. Harding, *Prehistoric production and exchange of salt in the Carpathian-Danube Region*, in: V. Nikolov, K. Bacvarov (eds.), *Salz und Gold: die Rolle des Salzes im prähistorischen Europa*. Akten internationaler Fachtagung (Humboldt-Kolleg) Provadia, 2010, Veliko Tarnovo, 2012, p. 173–200.

COSMA 2017 – C. Cosma, *Războinici avari în Transilvania. Avar warriors in Transylvania*, Cluj-Napoca, 2017.

CSALLÁNY 1933 – D. Csallány, *A kunszentmártoni avar kori ötvössír-Das Goldschiedegrab aus der Avarenzeit von Kunszentmárton*, Szentes, 1933.

CSÁKY *et alii* 2020 – V. Csáky, D. Gerber, I. Koncz, G. Csiky, B. G. Mende, B. Szeifert, B. Egyed, H. Pamjav, A. Marcsik, E. Molnár, Gy. Pál, A. Gulyás, B. Kovacsóczy, G. M. Lezsák, G. Lőrinczy, A. Szécsényi-Nagy, T. Vida (eds.), *Genetic insights into the social organisation of the Avar period elite in the 7th century AD. in the Carpathian Basin*, Scientific Reports 2020, p. 10: 948, https://doi.org/10.1038/s41598-019–57378–8.

CURTA 2011 – F. Curta, *New Remarks on Early Medieval Hoards of Iron Implements and Weapons*, in: J. Macháček, Š. Ungerman (eds.), *Frühgeschichtliche Zentralorte in Mitteleuropa*, Bonn, 2011, p. 309–332.

ČILINSKÁ 1975 – Z. Čilinská, *Frauenschmuck aus dem 7.–8. Jahrhundert im Karpatenbecken*, Slovenská Archeologia XXIII/1 (1975), p. 63–96.

DOBOS 2023 – A. Dobos, *Shifting identities on the periphery of the Avar khaganate-Settlement pattern and social transformations in the Transylvanian Basin during the Avar period*, in: A. Rapan Papeša, A. Dugonjić (eds.), *Avari i Slaveni Dvije strane pojasnog jezičca-Avari na sjeveru i jugu*

[84] Most recently COSMA 2017; DOBOS 2023.

kaganata. Avars and Slavs. Two Sides of a Belt Strap End-Avars on the North and South of the Khaganate, Zbornik radova s međunarodnog znanstvenog skupa održanog u Vinkovcima 2020 godine, Proceedings of the international scientific conference held in Vinkovci 2020, Vinkovci, 2023, p. 150–179.

DRASKÓCZY 2014 – I. Draskóczy, *A kősó bányászat átalakulása Erdélyben az Árpád-korban*, in: A. Bárány, G. Dreska, K. Szovák (eds.), *Arcana tabularii. Tanulmányok Solymosi László tiszteletére*, Budapest-Debrecen, 2014, p. 825–836.

EARLE 2011 – T. Earle, *Redistribution in Aegean Palatial Societies. Redistribution and the Political Economy: The Evolution of an Idea*, American Journal of Archaeology 115/2 (April 2011), p. 237–244.

FARKAS 1892 – S. Farkas, *Népvándorlás kori temető Mártélyon H. M. Vásárhely határában*, Archaeologiai Értesítő 12 (1892), p. 417–436.

Fiedler 2008 – U. Fiedler, *Bulgars in the lower Danube region. A survey of the archaeological evidence and of the state of current research*, in: F. Curta (ed.), *The Other Europe in the Middle Ages. Avars, Bulgars, Khazars and Cumans*, *East Central and Eastern Europe in the Middle Ages, 450–1450*, Vol. 2, Leiden-Boston, 2008, p. 151–236.

GARAM 1979 – É. Garam, *Das awarenzeitliche Gräberfeld von Kisköre*, Fontes Archaeologici Hungariae, Budapest, 1979.

GARAM 1993 – É. Garam, *Katalog der awarenzeitlichen Goldgegenstände und der Fundstücke aus den Fürstengräbern im Ungarischen Nationalmuseum*, Catalogici Musei Nationalis Hungarici Seria Archaeologica I, Budapest, 1993.

GARAM 2005 – É. Garam, *Avar kori nemzetségfő sírja Maglódon. Das awarenzeitliche Sippenhäuptlingsgrab von Maglód*, Communicationes Archaeologicae Hungariae (2005), p. 406–436.

GÁLL 2013 – E. Gáll, *Az Erdélyi-medence, a Partium és a Bánság 10–11. századi temetői*, Magyarország honfoglaláskori és kora Árpád-kori sírleletei 6, Szeged, 2013.

GELICHI 2007 – S. Gelichi, *Flourishing places in North-Eastern Italy: towns and emporia between late antiquity and the Carolingian age*, in: J. Henning (ed.), *Post-Roman Towns, Trade and Settlement in Europe and Byzantium*, Vol. 1, *The Heirs of the Roman West*, Millennium Studies in the culture and history of the first millennium C. E, Berlin, New York, 2007, p. 77–104.

HAMEROW 2007 – H. Hamerow, *Agrarian production and the emporia of mid Saxon England, ca. AD 650–850*, in: J. Henning (ed.), *Post-Roman Towns, Trade and Settlement in Europe and Byzantium*, Vol. 1, *The Heirs of the Roman West*, Millennium Studies in the culture and history of the first millennium C. E. Berlin, New York, 2007, p. 219–232.

HAMPEL 1892 – J. Hampel, *Népvándorlás kori temető Mártélyon H. M. Vásárhely határában*, Archaeologiai Értesítő 12 (1892), p. 413–416.

HAMPEL 1905 – J. Hampel, *Alterthümer des frühen Mittelalters in Ungarn*, Brauschweig, 1905.

Harding 2011 – A. Harding, *Evidence for prehistoric salt extraction rediscovered in the Hungarian central mining museum*, The Antiquaries Journal 91 (2011), p. 27–49.

Harding 2021 – A. Harding, *Salt. White Gold in Early Europe*, Cambridge Elements: Elements in the Archaeology of Europe, Cambridge, 2021.

Harding, Kavruk 2010 – A. Harding, V. Kavruk, *A prehistoric salt production site at Baile Figa, Romania*, Eurasia Antiqua 16 (2010), p. 131–167.

HENNING 1987 – J. Henning, *Südosteuropa zwischen Antike und Mittelalter. Archäologische Beiträge zur Landwirtschaft des 1. Jahrtausends u. Z.*, Schriften zur Ur- und Frühgeschichte 42, Berlin, 1987.

HENNING 2007a – J. Henning, *Early European towns: The way of the economy in the Frankish area between dynamism and deceleration 500–1000 AD.*, in: J. Henning (ed.), *Post-Roman Towns, Trade and Settlement in Europe and Byzantium*, Vol. 1, *The Heirs of the Roman West*, Millennium Studies in the culture and history of the first millennium C. E, Berlin-New York, 2007.

HENNING 2007b – J. Henning, *„Heisse Eisen" der frühen Rectsgeschichte. Pflugschare als*

Grabbeigaben der Merowinger-und Karolingerzeit, in: H. Brink-Kloke, H. Deutmann (Hrsg.), *Die Herrschaften von Asseln: Ein frühmittelalterliches Gräberfeld am Dortmunder Hllweg*, München, 2007, p. 109–114.

HOREDT 1986 – K. Horedt, *Siebenbürgen im Frühmittelalter*, Antiquitas Reihe 3, Bd. 28, Bonn, 1986.

HRUBEC 1965 – I. Hrubec, *Depot železných nastrojov zo Sklabine*, Slovenská Archeológia 13/2 (1965), p. 415–422.

KISS 2001 – A. Kiss, *Das awarenzeitliche Gräberfeld in Kölked-Feketekapu B. I–II.*, Monumenta Avarorum Archaeologica 2, Budapest, 2001.

Knific 2010 – T. Knific, *Early mediaeval hoards of iron items in Slovenia*, Archaeologia Adriatica IV (2010), p. 85–99.

KOLODA 2006 – V. V. Koloda, *Arheologicheskie issledovanija Har'kovskogo peduniversiteta v 2005. g.*, Arheologichni doslidzhennaja v Ukraini 2004–2005 rr, p. 213–216.

KOLODA 2013 – V. V. Koloda, *Dva saltovskih kompleksa iz Gosudareva Jara*, Saltovo-Majac'ka arheologichna kul'tura: problemi ta doslidzhennja, Vipusk 3, Harkiv, 2013, p. 73–81, 161–168.

KOLODA 2015 – V. V. Koloda, *Unikal'nyj zhilishno-hozjajstvennyj kompleks saltovskoj kul'tury na selishe Mohnach-p*, in: *Saltovo-Majac'ka arheologichna kul'tura: problemi ta doslidzhennja*, Vipusk 5, Harkiv, 2015.

KOVÁCS 1913 – I. Kovács, *Mezőbándi ásatások-Les fouillages de Mezőbánd*, Dolgozatok Erdélyi Nemzeti Múzeum 4 (1913), p. 265–429.

KOVÁCS 1981 – L. Kovács, *Der landnahmezeitliche ungarische Grabfund von Hajdüböszörmény-Erdős tanya. Angaben zur Verbreitung der Hohlbeile in der Awaren- und der Landnahmezeit*, Acta Archaeologica Academiae Scientiarum Hungaricae 33 (1981), p. 81–103.

KRAVCHENKO 2020 – E. E. Kravchenko, *Сидоровский археологический комплекс на р. Северский Донец*, Археология Евразийских Степей № 4 (2020).

LAZAROVICI, LAZAROVICI 2015 – Gh. Lazarovici, C. M. Lazarovici, *New data and observations related with exploitation and transport of salt in Transylvanian prehistory (Romania)*, in: R. Brigand, O. Weller (eds.), *Archaeology of Salt. Approaching an Invisible Past*, Leiden, 2015, p. 139–156.

MADARAS 1991 – L. Madaras, *A szentes-kajáni temető és néprajzi vonatkozásai*, Debrecen, 1991.

MACHÁČEK 2010 – J. Macháček, *The Rise of Medieval Towns and States in East Central Europe. Early Medieval Centres as Social and Economic Systems*, East Central and Eastern Europe in the Middle Ages, 450–1450, Vol. 10, Leiden-Boston, 2010.

MCCORMICK 2001 – M. McCormick, *The origins of the European economy. Communications and commerce, A. D. 300–900*, Cambridge, 2001.

MIKHEEV 1985 – V. K. Miheev, *Podon'e v sostave Hazarskogo kaganata*, Harkov, 1985.

MISKE 1907 – K. Miske, *A Velem Szt. Vidi őstelep. I. kötet: A harácsolt leletek leírása*, Wien, 1907.

MONTERO 2022 – A. P. Montero, *Salt Valley of Añana. The 7,000 years of history of the oldest active saltwork in the world (Salinas de Añana. Basque Country. Spain)*, in: A. P. Montero, O. Weller, F. J. A. Moras, G. Delibes, D. Castro, E. G. Doce, M. T. Alexianu, I. Amorin, C. G. Alexianu, Ș. Caliniuc *et alii* (eds.), *Seven Millennia of Saltmaking*, 3rd *Internacional Congress on the Anthropology of Salt*, 2022, p. 18–87.

MÜLLEROVÁ 2014 – M. Müllerová, *Depoty južných Slovanov a ich klasiikácia pomocou metódy hlavných komponent*, Zborník Slovenského Národného Múzea CVIII, Archeológia 24 (2014), p. 197–212.

ORAS 2015 – E. Oras, *Practices of wealth depositing in the 1st–9th century AD. Eastern Baltic*, Leiden, 2015.

PARKINSON 2010 – W. A. Parkinson, *Beyond the Peer: Social Interaction and Political*

Evolution in the Bronze Age Aegean, in: D. J. Pullen (ed.), *Political Economies of the Aegean Bronze Age.* Papers from the Langford Conference, Florida State University, Tallahassee, 22–24 February 2007, Oxford, 2010, p. 11–34.

PÁRDUCZ 1934 – M. Párducz, *A hódmezővásárhelyi református gimnázium régiséggyűjteménye II–V*, Dolgozatok 13 (1937), p. 105–194.

PÁSZTOR 1986 – A. Pásztor, *Adatok a közép-avarkori ékszerek kérdéséhez. Beiträge zur Frage der mittelawarenzeitlichen Schmucke*, Archaeologiai Értesítő 113 (1986), p. 113–134.

PLETERSKI 1987 – A. Pleterski, *Sebenjski zaklad*, Arheološki vestnik 38 (1987), p. 237–330.

POLÁČEK 2007 – L. Poláček, *Ninth-century Mikulčice: the "market of the Moravians"? The archaeological evidence of trade in Great Moravia*, in: J. Henning (ed.), *Post-Roman Towns, Trade and Settlement in Europe and Byzantium,* Vol. 1, *The Heirs of the Roman West*, Millennium Studies in the culture and history of the first millennium C.E, Berlin-New York, 2007, p. 499–523.

RÁCZ 2014 – Zs. Rácz, *Die Goldschmiedegräber der Awarenzeit*, Monographien des Römisch-Germanischen Zentralmuseums, Bd. 116, Mainz, 2014.

RENFREW 1975 – C. Renfrew, *Trade as action as a distance: questions of integration and communication*, in: J. A. Sabloff, C. C. Lamberg-Karlovsky (eds.), *Ancient civilization and trade*, New Mexico, 1975, p. 3–59.

ROMHÁNYI 2016 – B. Romhányi, *A beregi egyezmény és a magyarországi sókereskedelem az Árpád-korban,* in: Gy. Kövér (ed.), *Magyar Gazdaságtörténeti Évkönyv 2016: Válság-Kereskedelem*, Budapest, 2016, p. 265–302.

ROMHÁNYI 2017 – B. Romhányi, *Changes of the Spatial Organisation of the Carpathian Basin (5th–14th Century)*, Zeitschrift für Archäologie des Mittelalters 45 (2017), p. 1–31.

RUPNIK 2015 – L. Rupnik, *New aspects of an old find – the hoard of woodworking tools from Aquincum (Budapest)*, in: L. Borhy, K. Dévai, K. Tankó (eds.), *Studia Archaeologica Nicolae Szabó LXXV annos nato dedicata*, Budapest, 2015, p. 191–210.

SOMOGYI 1982 – P. Somogyi, *A Kárpát-medencei sarlós temetkezési szokás eredete-Ursprung des Bestattungsbrauches mit Sichel im Karpatenbecken*, Archaeologiai Értesítő 109 (1982), p. 191–200.

SZENTHE 2013a – G. Szenthe, *Connections between the Mediterranean and the Carpathian Basin in the 8th century AD. On the hinged strap-ends of the Late Avar Period*, Acta Archaeologica Carpathica 48 (2013), p. 195–225.

SZENTHE 2013b – G. Szenthe, *Antique Meaning-Avar Significance. Complex Iconographic Schemes on Early Medieval Small Objects,* Acta Archaeologica Academiae Scientiarum Hungaricae 64 (2013), p. 139–172.

SZENTHE 2020 – G. Szenthe, *Növényi ornamentika a késő avar kori díszítőművészetben (Kr. u. 8. század–9. század eleje. Kultúrtörténeti tanulmányok-The plant ornament in the decorative arts of the Late Avar period. Cultural historical studies*, Budapest, 2020.

SZENTHE 2021 – G. Szenthe, *Edelmetallgegenstände als Quellen zu sozialen Prozessen der Spätawarenzeit (8.–9. Jahrhundert n.Chr.)*, Acta Archaeologica Academia Scientiarum Hungaricae 72/2 (2021), p. 417–452. DOI: 10.1556/072.2021.00019

SZENTHE, GÁLL 2021 – G. Szenthe, E. Gáll, *A (Needle) Case in Point. The Transformation of the Distribution and Population Centres in the Carpathian Basin during the Late Avar Period*, European Journal of Archaeology 24/3 (2021), p. 345–366.

SZENTHE, GÁLL 2022a – G. SZENTHE, E. GÁLL, *Hortobágy-Árkus kora középkori temetője. Egy elit csoport hagyatéka a 8–10. századi Észak-Tiszántúlról. The early medieval cemetery at Hortobágy-Árkus. The heritage of an elite group from the 8th–10th century northern Transtisza region*, Archaeologia Hungarica 52, Budapest, 2022.

SZENTHE, GÁLL 2022b – G. Szenthe, E. Gáll, *Steppe nomadic cultural phenomena in the context of a settled society-equestrian and weapon graves in the Late Avar-period Carpathian Basin (late 7th to early 9th century)*, in: H. Meller, F. Daim (eds.), *Grenzüberschreitungen-Reiternomaden in Mitteleuropa, ihre östlichen Wurzeln und Verbindungen. Crossing boundaries – Mounted nomads*

in Central Europe, their eastern roots and connections, Tagungen des Landesmuseums für Vorgeschichte Halle, Bd. 25, Halle, 2022, p. 315–335.

SZEREMLEI 1900 – S. Szeremlei, *Hód-Mező-Vásárhely története. I. kötet. A barbárság kora. Kezdettől-I. István királyig*, Hódmezővásárhely, 1900.

THOMAS 2018 – P. Thomas, *Studien zu den bronzezeitlichen Bergbauhölzern im Mitterberger Gebiet*, Studien zur Montanlandshaft Mitterberg 1, Bochum, 2018.

TOBIAS 2020 – B. Tobias, *Frühmittelalterliche Gräber mit Beigabe von Werkzeugen zur Metallbearbeitung*, Monographien des Römisch-Germanischen Zentralmuseums, Bd. 153, Mainz, 2020.

TOČIK 1963 – A. Točik, *Pohrebisko a sídlisko z doby avarskej riše v Prši.-Gräberfeld und Siedlung des Awarischen Reiches*, Slovenská Archeológia 11 (1963), p. 121–198.

TÖRŐCSIK, SÜMEGI 2019 – T. Törőcsik, P. Sümegi, *Pollen-based reconstruction of the plant cultivation in the Carpathian Basin from the Migration Age to the end of the Medieval Age*, Archeometriai Műhely 16/3 (2019), p. 245–270.



Fig. 1. The iron artefact from Mártély Grave „B" (Hungarian National Museum, photos by the author).



Fig. 2. The iron artefact of unknown provenance from the Carpathian Basin (Hungarian National Museum, photos by the author).

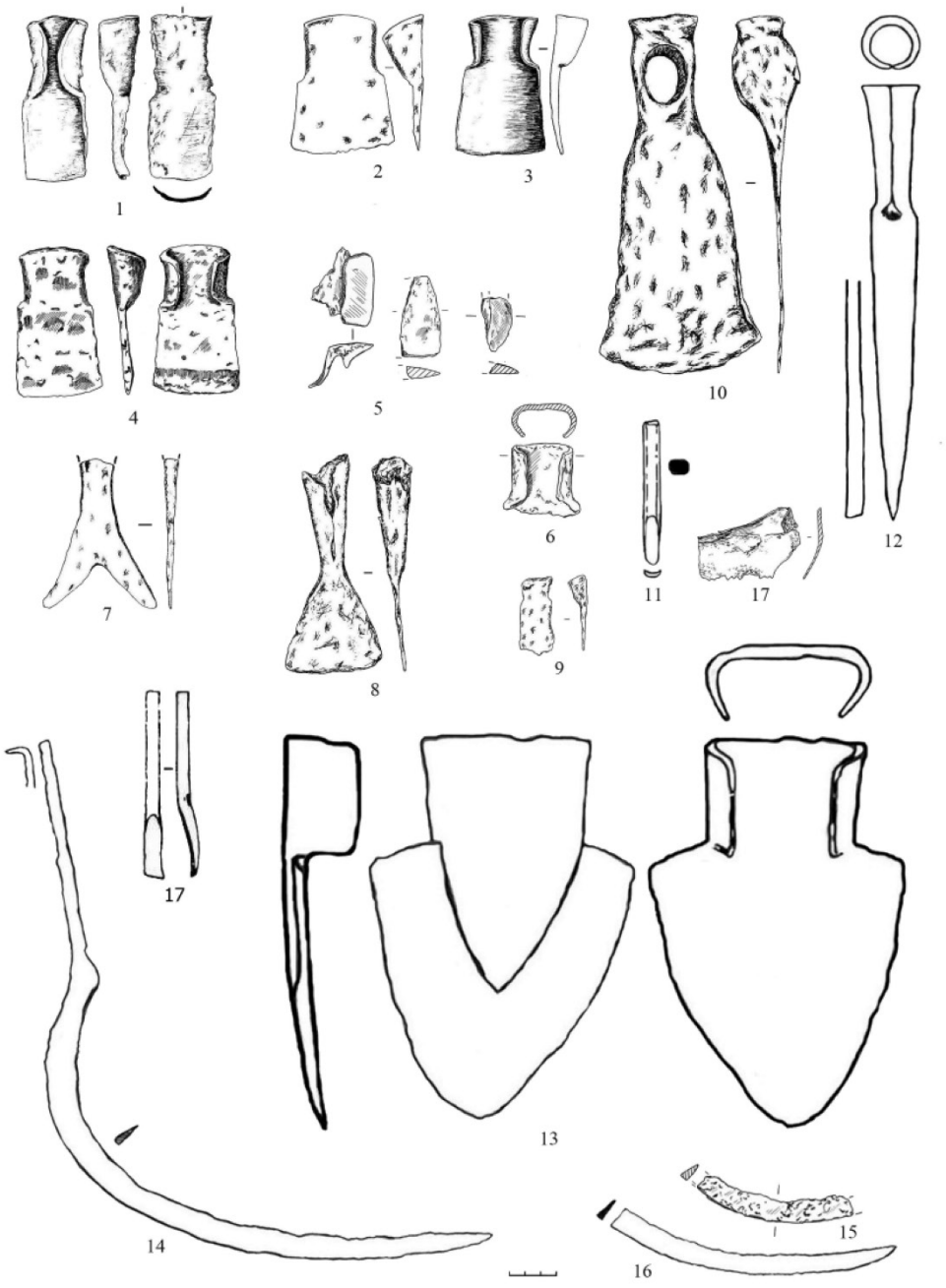


Fig. 3. The Sidorove depot assemblage (after KRAVCHENKO 2020, p. 114–115, Ris. 203).

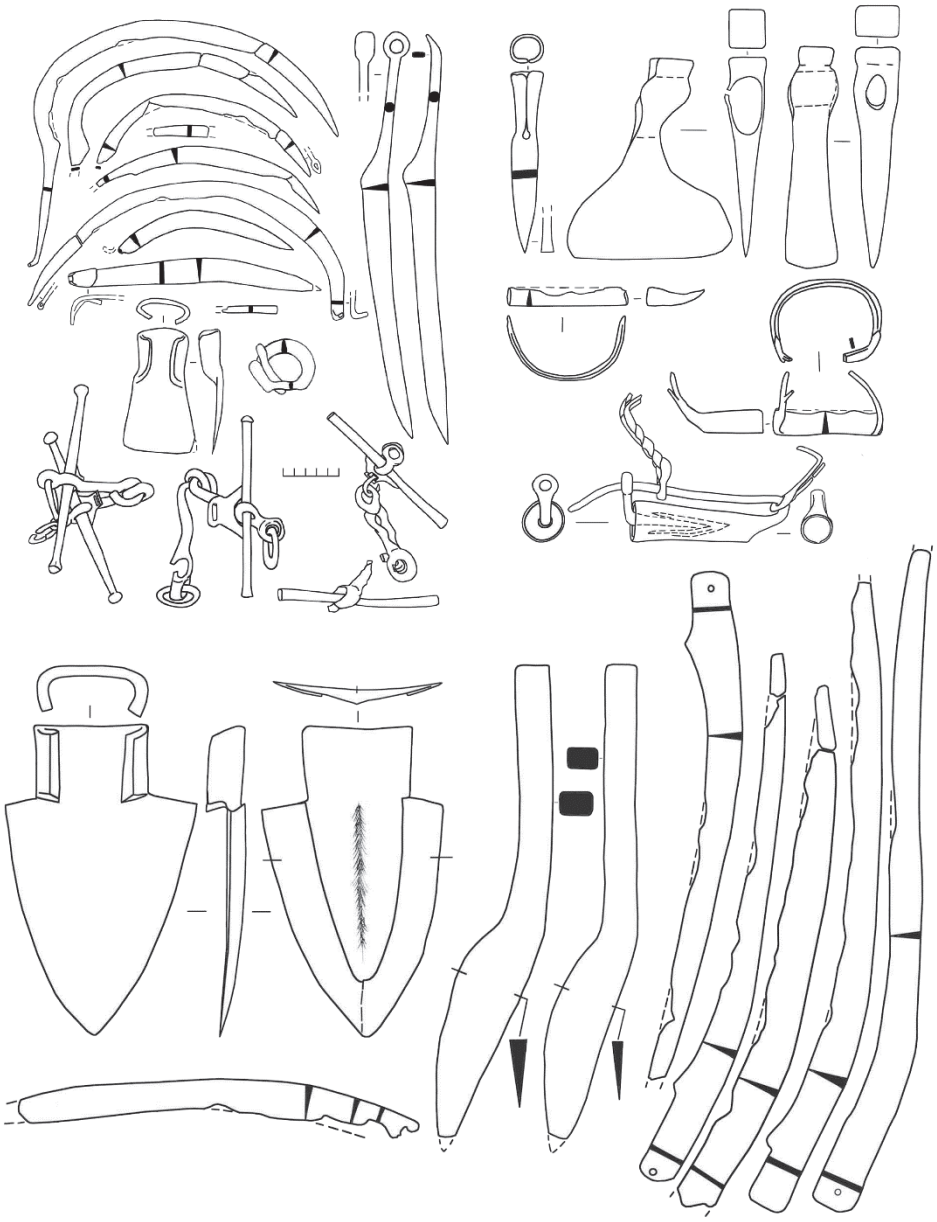


Fig. 4. The Mokhnach depot assemblage (after KOLODA 2015, Ris. 7).



Fig. 5. The Majaki depot assemblage (after KRAVCHENKO 2020, Ris. 163).

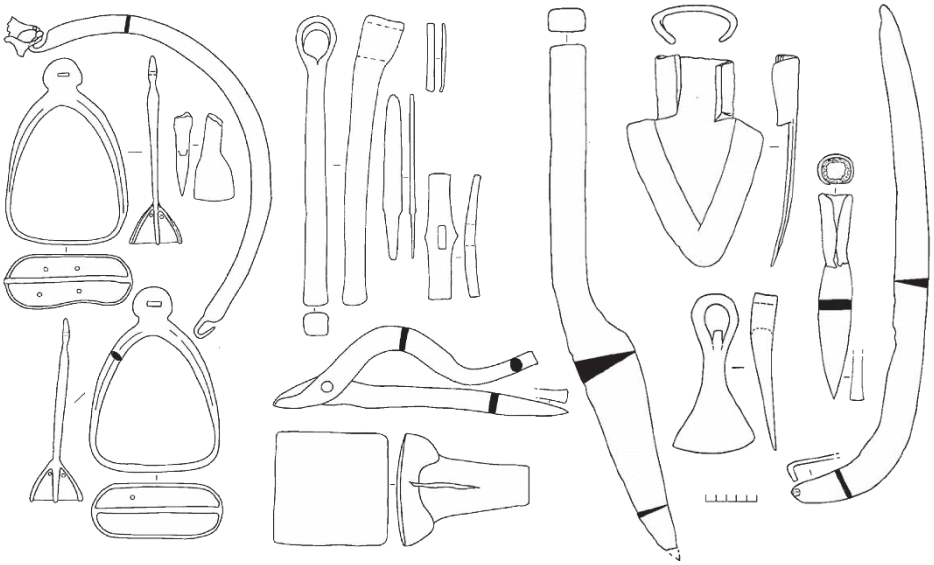


Fig. 6. The Bohorodichne depot assemblage (after KOLODA 2013, fig. 3, fig. 5).

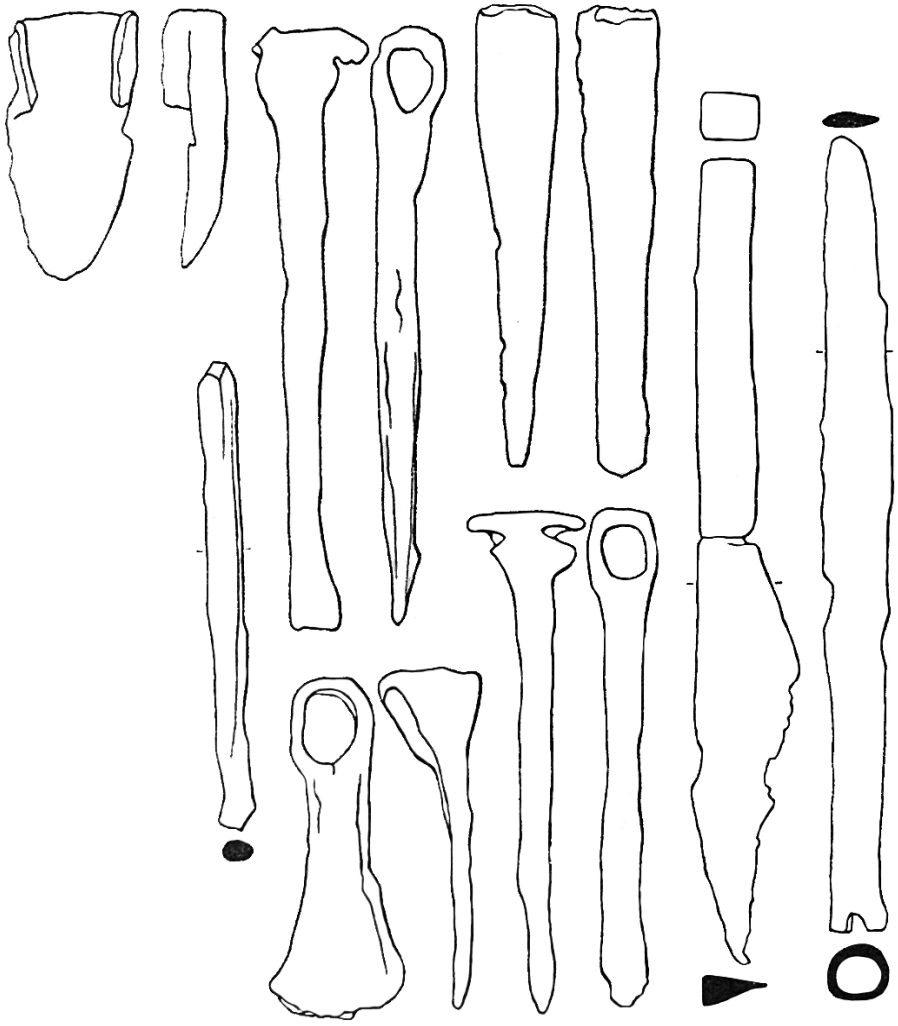


Fig. 7. The Sklabiňa depot assemblage (after BARTOŠKOVÁ 1986, Obr. 16, no scale in original publication).

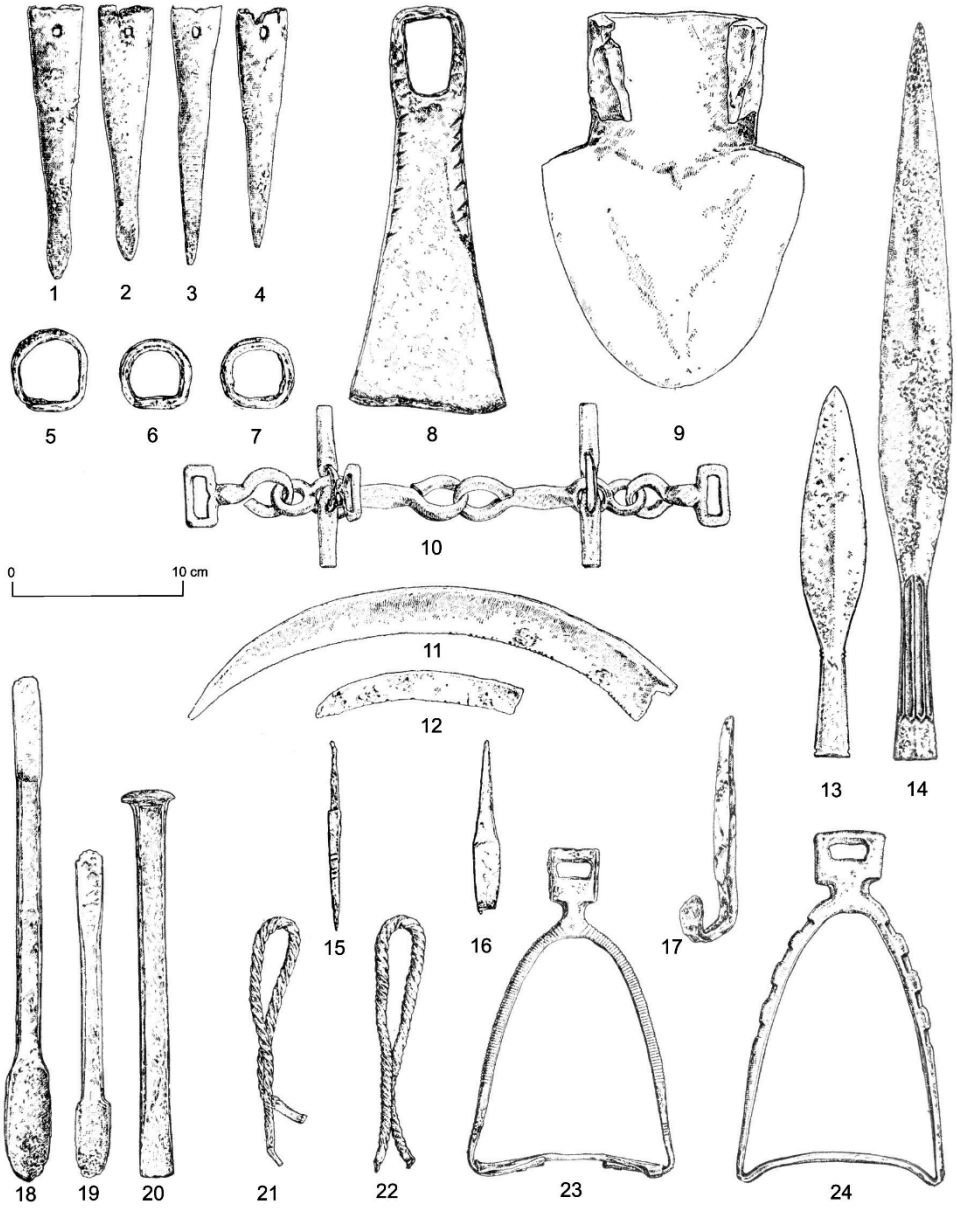


Fig. 8. The Sebenje depot assemblage (after KNIFIC 2010, p. 85, fig. 1).



Fig. 9. The supposed depot assemblage from Velem-Szent Vid (after MISKE 1907, XLVII/2, 12, 14–17, 19; XLVIII/1–2, 17; LI/14, no scale in original publication).

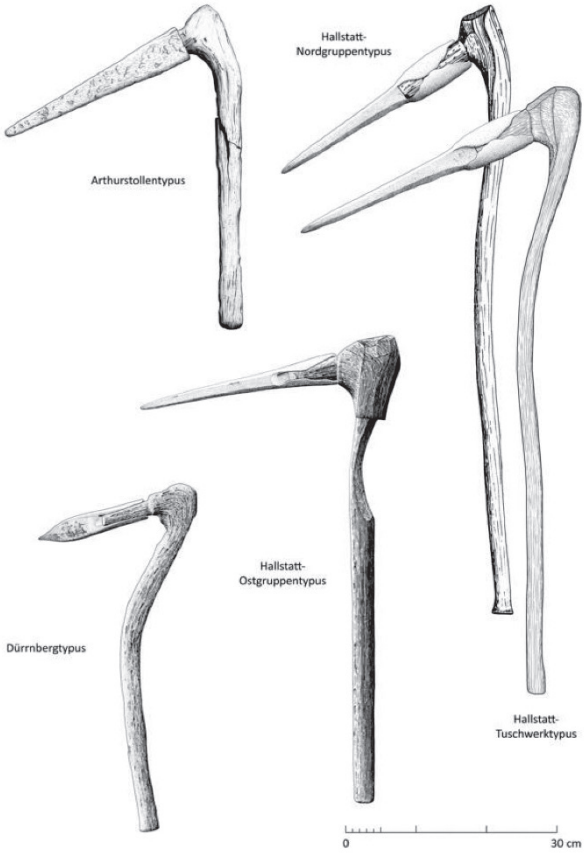


Fig. 10. Bronze Age analogues of the reconstructed pickaxe (after THOMAS 2018, p. 164).

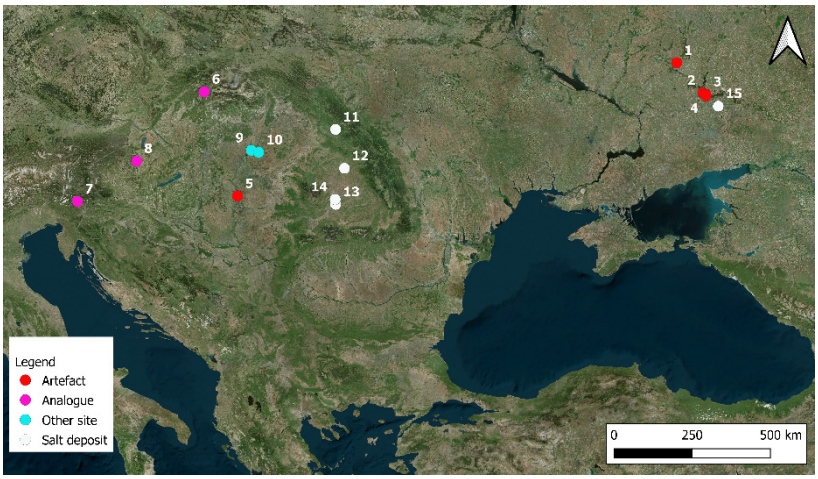


Fig. 11. Regional distribution of the artefact and sites mentioned in the text: 1. Mokhnach; 2. Bohorodychne; 3. Sidorove; 4. Majaki; 5. Mártély; 6. Sklabiňa; 7. Sebenje; 8. Velem-Szent Vid; 9. Tiszafüred-Majoros; 10. Hortobágy-Árkus; 11. Solone; 12. Băile Figa; 13. Ocnișoara; 14. Ocna Mureș; 15. Soledar (source: Bing satellite map).

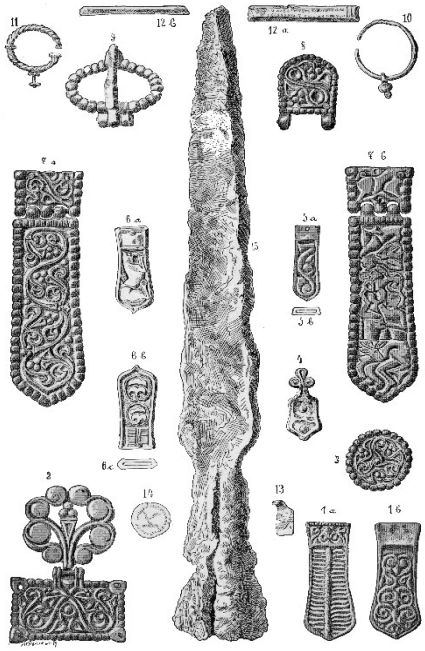


Fig. 12. Assemblage „B" in the volume of József Hampel (after HAMPEL 1905, III/taf. 85, no scale in original publication).

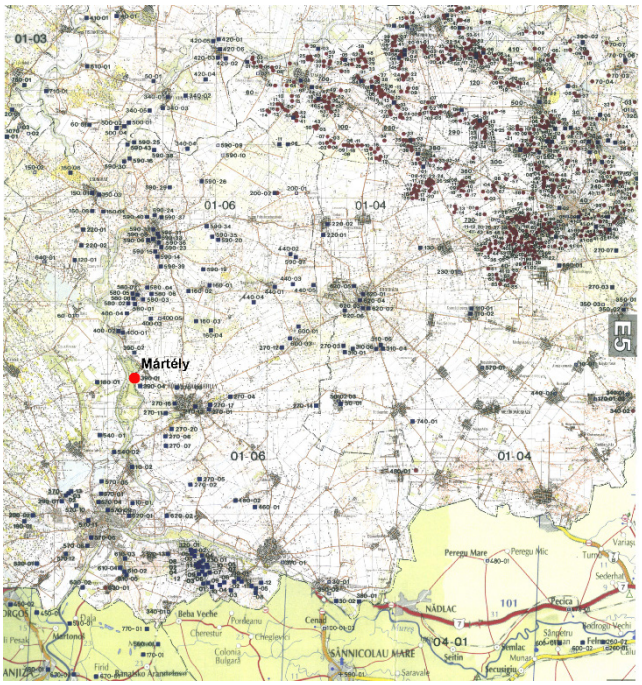


Fig. 13. Avar-period sites surrounding the present-day settlements of Csongrád and Mártély (after ADAM, map no. E5 and F5, the blue squares mark Late Avar period funeral sites).



Fig. 14. The belt set from Mártély Grave „B" (Hungarian National Museum, photos of the author).

CHURCH № 4 FROM THE MURFATLAR ROCK COMPLEX – SOME NEWLY DOCUMENTED GRAFFITI ALONG THE EAST-WEST AXIS AND THEIR ANALOGIES

Evgenia KOMATAROVA-BALINOVA*
Yavor MILTENOV**
Antoaneta GRANBERG***

In memory of:
Ion Barnea (1913–2004) and
Petre Diaconu (1924–2007)

Cuvinte-cheie: *Pliska, Murfatlar, desene-graffiti, inscripții-graffiti.*
Keywords: *Pliska, Murfatlar, graffiti-drawings, graffiti-inscriptions.*

Rezumat: *Prilejul pentru o nouă documentare arheologică în istoria cercetării bisericii rupestre de la Murfatlar a fost determinat de cercetarea unei structuri descoperite în săpăturile recente (2005–2010) de la Pliska – așa-numita platformă de piatră rotundă. Redescoperirea sa a avut loc cu un deceniu în urmă în legătură cu un studiu special axat pe graffiti-urile incizate pe 2% din materialul de construcție, dintre care majoritatea sunt invizibile cu ochiul liber și transmit simboluri creștine, personaje și scene cu caracter biblic. Aceste împrejurări au adus echipa de cercetare la cea mai sigură (și mai bine păstrată) analogie posibilă-complexul rupestru de la Murfatlar, din județul Constanța, România.*

Subiectul acestei lucrări îl reprezintă graffiti-urile aflate de-a lungul axei est-vest din Biserica nr. 4. Documentarea fotografică din aprilie 2022 a încercat să acopere cu maximă precizie toate inciziile, în special pe cele mai puțin adânci și pe cele care sunt practic invizibile cu ochiul liber. Atâta timp cât un desen al acestui graffiti nu a fost publicat până acum, se poate spune că detaliile necunoscute, până acum, din el, reprezintă: completări și/sau corectări detaliate ale celor două inscripții chirilice, precum și două inscripții asemănătoare runelor. Am completat vizualizarea fotografică și grafică a imaginilor, cu detalii ale celor două figuri umane și ale păsării.

* Evgenia KOMATAROVA-BALINOVA: National Institute of Archaeology with Museum – Bulgarian Academy of Sciences, Sofia; e-mail: e_komatarova@abv.bg.

** Yavor MILTENOV: Institute for Bulgarian Language – Bulgarian Academy of Sciences, Sofia.

*** Antoaneta GRANBERG: University of Gothenburg, Gothenburg; e-mail: antoaneta.granberg@sprak.gu.se.

Abstract: *The occasion for yet another archaeological documentation in the research history of the Murfatlar rock monastery was provided by the continuous excavations (2005–2010) of one particular site in Pliska – the so called Round stone platform. Its rediscovery occurred a decade later in relation to a special study focused on the graffiti incised on 2% of the building material, most of which are invisible to the naked eye and convey Christian symbols, personages and scenes of Biblical character. These circumstances brought the research team to the most certain (and best preserved) possible analogy-the rock monastic complex of Murfatlar, in Constanța County, Romania.*

The subject of this paper are the graffiti along the east-west axes in Church № 4. The photographic documentation of April 2022 attempted to cover with maximum precision all carvings, especially the shallowest ones and those that are practically invisible to the naked eye. As long as a drawing of this graffito has not been published so far, it can be said now that the so far unknown details in it are: additions and/or thorough corrections of the two Cyrillic inscriptions, as well as two rune-like inscriptions. We have completed full photographic and graphic visualization of the images, with details of the two human figures and that of the bird.

Introduction

The occasion for yet another archaeological documentation in the research history of the Murfatlar rock monastery was provided by the continuous excavations of one particular site in Pliska and the results it has yielded. At first glance, the two sites do not seem to share anything in common: either in their structure, or in their function, and least of all in the historical events that more or less led to their existence. The connection between them reminds to a certain extent the Butterfly effect in the Theory of chaos. As far as their archaeological aspect is concerned, there are only two invariables: part of the team that carried out the investigations, and the working methodology with its results. The defining element about both sites is their irregularity, due to which they have not found – for decades now – logical interpretation in the "Theory of archaeological chaos".

In the period 2005–2010, an archaeological site that later became known to academia as the Round Stone Platform was studied in Pliska. This is a vast open-air space of elliptic shape, situated to the north of Pliska's Citadel over an area of 1 dca **(Fig. 1/1)**. Its pavement consists of several thousand stones: various limestones, marls and marbles, worked to a different extent and aligned in 8 imperfect rows running NE-SW **(Fig. 2/1)**. In the course of investigations it became clear that all of the material is, in effect, reused *spolia* from collapsed earlier building(s), which marks a stage of considerable destruction and/or reconstruction, unknown so far for Pliska, that had affected its central part especially. The stratigraphic position of the platform dates it to the last quarter of the 9th – the beginning of the 10th century[1], thus making it the latest monumental structure of Pliska's capital period, or among the earliest ones from the city's post-capital history. Its function remains unknown. The leading hypothesis is that of an athletic facility, similar to the hippodrome in Constantinople.

The rediscovery of the site occurred a decade later in relation to a deliberate study focused on the graffiti incised on 2% of the building material (92 in total), most

[1] STANILOV *et alii* 2007, p. 583; STANILOV, ALADZHOV 2011, p. 388–389.

of which are invisible to the naked eye and, contrary to expectations (as well as logic, and the stratigraphic context), convey Christian symbols, personages and scenes of Biblical character. The scenes find no analogies in Pliska, mainly due to the scarcity of visual materials there, but find similarities only among the graffiti material from the monasteries in Ravna (Provadia region), Veliki Preslav (the second capital of the First Bulgarian Kingdom), and the rock churches in Dobruja-all of which, however, are of later date in comparison to the graffiti in Pliska.

Our starting points in the solving of this complex puzzle are two inscriptions. The first one is of pilgrimage content in Greek (to be published separately), and the second one, designated as № 2 according to the graffiti nomenclature, is written in rune-like characters and is in combination with a drawing that represents an Old Testament scene **(Fig. 2/2**, **3)**[2]. Essentially, this is the second known rune-like inscription from Pliska, but the first one to originate from a certain context, with a clear stratigraphic position, and as a result of archaeological excavations[3]. One of the "corners" of the general picture of this puzzle is the depiction of a saint dressed in a bishop's attire, with the name Michael repeating several times around the figure (a publication is currently under preparation). Collected together, and moreover, found close to each other, these graffiti left no room for doubt that in the construction of Pliska's Round Stone Platform were embedded pieces from the debris of a church which had been destroyed or refurbished only about 2 decades after the Christianization of the First Bulgarian Kingdom in 864, and perhaps even in a shorter time interval that began at the onset of church construction in the First Bulgarian Capital and the erection of the Great Basilica, probably around 870.

The circumstances mentioned above in short brought the research team to the most certain (and best preserved) possible analogy-the rock monastic complex of Murfatlar, in Constanţa County, Romania.

The following contribution is a token of our deepest gratitude to the colleagues in the Museum of National History and Archaeology in Constanţa, who allowed us to work with this exceptional monument. We are also obliged to acknowledge its discoverers who worked under the direction of Prof. Ion Barnea and we dedicate this paper to their memory.

The work of the team from the National Archaeological Institute with Museum (NAIM-Sofia) was carried out in April 2022 and was focused on churches № 3 and № 4 in Sector B, where the graffiti-drawings and inscriptions are most numerous[4].

[2] KOMATAROVA-BALINOVA 2023, in press.

[3] The first certain rune-like inscription was discovered during a field survey in 2010 within a settlement (Site 109) in the southeast periphery of Pliska's Inner City, generally dated to the first half of the 9th century **(Fig. 1/2)** (Regional Museum of History-Shumen, inv. № 4628) (ALADZHOV *et alii* 2014, p. 90, 130, табл. XIX, обр. 12; ALADZHOV 2022, p. 282). The photograph presented here was personally suggested and provided by Andrey Aladzhov, head of the field survey, to whom I am genuinely grateful (note E. Komatarova-Balinova).

[4] The research project is financed by the National Archaeological Institute with Museum at the Bulgarian Academy of Sciences (NAIM-BAS) in relation to the project "The Round Stone Platform of Pliska: building materials, graffiti, marks and inscriptions" under the supervision of Evgenia Komatarova-Balinova. The project began in 2021 with a resolution of the Scientific Council of NAIM (Scientific Council Protocol № 24/25.03.2021). As a result, in November 2022 (with the support of MINAC), the work of the team under the same director covered the entire B

The graffiti in both churches were documented with the help of several contemporary techniques that have already been laid out in detail in a publication related to the working methodology and documentation of the graffiti from Pliska[5].

Graffiti along the west-east axes in Church 4

Church № 4 was discovered in the course of the second archaeological campaign of Murfatlar in 1960[6]. According to its floor plan, it is a single-apse church that measures 7 × 3.50 m[7]. Its interior space is partitioned by 9 asymmetrical pillars, the first four of which separate the narthex from the naos **(Fig. 3)**. As far as their architectonic properties are concerned, only the monolithic pillars № 2, № 3 and № 6 have a supporting function. The first two, which are also centrally situated, are located frontally and opposite the entrance of the church. On three of their faces, the west, north and south – which also happen to be the ones most illuminated by natural light-can be observed a high concentration of incised images and inscriptions. As for iconography, they contain almost the full repertoire of graffiti-drawings in the rock monastic complex. The south face of pillar № 2 and the north face of pillar № 3 flank the east-west axis and only the narrow space between them allows direct visibility from the entrance towards the church altar (together with the south altar table). On the walls of these two pillars are scratched multiple drawings and inscriptions of various content and genre. Regardless, an overlapping of graffiti in church № 4 – and specifically of drawings over inscriptions – has been registered only on the south face of pillar № 2, as well as on the west faces of pillars № 2 and № 3. It is namely these rare occurrences and specifically the first of these three instances that provoked our special research interest, because the sequence of graffiti engraving gives grounds to contemplate on their relative chronology. The same situation – of overlapping (here only partially) images on inscriptions – repeats only in one more place of the entire rock-cut complex: to the left of the entrance to the apse in Church № 3.

The south face of pillar № 2 is aligned exactly along the east-west axis **(Fig. 4)**[8]. A total of 4 inscriptions are carved on it: two rune-like, two Cyrillic; as well as 28 drawings: four anthropomorphic figures, five zoomorphic figures, 19 crosses and many other incisions that have now faded due to the atmospheric conditions **(Fig. 5–6)**. Independently incised are 23 other rune-like characters, 11 of which occupy the lowermost part of the ornamented field, while the other 12 have been fitted within the

sector, or the so-called Peninsula Massif, where a 3D laser scanning was performed on all structures, together with a topographic mapping of the graffiti according to their repertoire and graphic system. This second stage was financed by the Ministry of Education and Science of the Republic of Bulgaria within the framework of the National Scientific Program "Development and Promotion of Bulgarian Studies Abroad".

[5] KOMATAROVA-BALINOVA, CHARALAMPAKIS, RAYKOVSKA 2022, p. 26–31.

[6] BARNEA 1962, p. 293.

[7] BARNEA, ȘTEFĂNESCU 1971, p. 202; AGRIGOROAEI 2007, p. 93; DAMIAN 2015, p. 111.

[8] Here we refer to the dogmatic east-west axis, whereas the long axis of the church is in fact oriented with an azimuth of 325, which proved a significant challenge for the identification of the already published inscriptions, the same graffiti zones being recorded in literature as west, southwest or south.

outlines of the human figure on the right. Despite the visible traces of past restoration activities, it is beyond doubt that the separate parts of the ornamented field, especially at the upper part of the pillar, have not changed their authentic location.

These authentically preserved part's dimensions are: 0.89 m height, and 0.73 m width at the top and 0.64 m at the bottom.

Although this is one of the most recognizable graffiti from Murfatlar, it has been published only fragmentarily so far. Moreover, all publications use only photographs to illustrate it, which however does not reflect all actually existing details. In a reverse chronological order, the graffiti have been included in the rich catalogue of the Constanţa Museum, "Mixobarbaroi from Dobruja in the context of the Byzantine world" (2020)[9], which features a bibliographic reference to its first publication in "The culture in the territory of Dobruja in the second half of the 10th–12th century" in volume 3 of the fundamental work "History of Dobruja" (1971)[10]. In the first publication of church № 4 (1962), there is no detailed description[11]. A few decades later (in 1994), to the only Cyrillic inscription published by Ion Barnea, Kazimir Popkonstantinov added one more, which he documented graphically in person, without however providing a photograph in support of this information[12]. The photographic documentation carried out by our team did not confirm the existence of such an inscription, but of another one in the same location, of different content (see below)[13]. Later, the discussions in academic literature – Romanian, Bulgarian, Russian – focus exclusively on the reading of the so-called donor inscription (see below), and in particular, on the titles and personal names mentioned in it.

The common flaw of all authors mentioned so far – whether Romanian, Bulgarian, Polish or Russian – remains the absence of objective and thorough documentation to illustrate the inscriptions and drawings, with the help of photographs and graphic drawings simultaneously. After all, vision is one of the most subjective human senses. This fault of the past publications is also particularly true about the topographic location of the drawings and the inscriptions, mainly due to the lack of direct observations by the authors.

Results of the photographic documentation

The photographic documentation of April 2022 attempted to cover with maximum precision all carvings, especially the shallowest ones and those that are practically invisible to the naked eye. As long as a drawing of this graffito has not been published so far, it can be said now that the so far unknown details in it are: additions and/or thorough corrections of the two Cyrillic inscriptions, as well as two rune-like inscriptions. We have completed full photographic and graphic visualization of the images, with details of the two human figures and that of the bird **(Fig. 6)**.

[9] PARASCHIV-TALMAȚCHI *et alii* 2020, p. 133.

[10] BARNEA, ȘTEFĂNESCU 1971, p. 212, fig. 63.

[11] See BARNEA 1962, p. 293–316.

[12] See POPKONSTANTINOV, KRONSTEINER 1994, p. 95.

[13] Part of the Cyrillic graffiti is visible only in laboratory conditions with artificially simulated light sources. Its publication will be possible after it has been processed with a digital program which is being developed presently.

Graffito-drawings

It is clear from the first glance that all images and inscriptions differ in terms of style and are carved by different hands and by people of a different level of skill, knowledge and esthetic taste. The fact that some of the images and inscriptions overlap suggests that they were also not synchronous. This suggestion is supported by the variety of artistic techniques used – of the carvings and of the shallow relief. Taken into consideration together, these circumstances mean that the presented figures hardly belong to the same composition, or a scene taken from any narrative, clarified and further elaborated by the inscriptions that surround the drawings. Moreover, the central drawing disturbs the longest of these inscriptions. In terms of width, the graffiti are incised in such a way that they occupy thoroughly the ornamented field from the very left to the right edge of the pillar's south face.

Anthropomorphic depictions

The first of them is located at the very west end of the ornamented field and is a human figure in the *orans* position **(Fig. 7)**. Its dimensions are 0.15 × 0.12 m. The torso and the lower limbs are outlined with a double contour, the legs are bent sideways at the knees and the heels face each other, adding a certain "dancing" motion to the overall depiction. The head is round, slightly elongated at the chin. The facial details are minimalistic and unrealistic-with an exaggerated nose and a barely marked mouth through a shallow horizontal line. The ears are unnaturally enlarged, with pointy tips. The general impression is of a fantastic image that combines anthropomorphic and zoomorphic features – the former in the body, the latter in the head.

The second figure is also in the *orans* position and is to be found at the east end of the ornamented field, but is of considerably larger dimensions (0.39 × 0.22 m) and far more realistic rendering, even though the body proportions demonstrate an emphasized irregularity **(Fig. 9)**. Apparently, the represented individual is a religious figure, considering the long mantle decorated with horizontal bands, barely visible in the original photographic documentation, that covers fully his body from the shoulders down. The fact that one more piece of vestment is present under the mantle is seen in the shallow incisions that run diagonally and merge in the rectangular cleavage around the neck. In the left 'division' is visible a cross with an elongated vertical and a short horizontal arm. With great caution, it could be suggested that the undergarment in question is a *sakkos*, from which is discernible also the wide horizontal band at the bottom end of the piece and the diagonal stripes – the two bands of the *omophorion*. That the image represents the figure of an archpriest (who was perhaps really present at Church № 4), is implied by the mantle whose decoration of horizontal bands, visible mostly in the area of the right shoulder, is rather reminiscent of bishop mantles. The lack of some details from the parts of episcopal garments enlisted above, as well as the absence of other characteristic attributes related to this rank, e.g. the scepter and the tiara, should be explained with the artistic skills of the author of the drawing who was unable render them within the constricted space. For this reason, in fact, the left part of the drawing remains unfinished as it reaches as far as the right edge of the pillar's face. Could be possible,

again with a great caution, that the preserved cross near the left hand is an ending of a scepter and the lines over the human head are part of tiara.

At the lower part of the human figure outlined with the contour of the mantle, to the right can be seen a cross with triangular endings, and under the right horizontal arm is a rune-like character similar to Cyrillic front nasal. Another 12 characters of significantly smaller size have been fitted inside the right lower half of the figure, between the details of the garment, which means that they take the existing lines into consideration and are thus of a later date **(Fig. 6)**.

To the group of anthropomorphic images could be added also the drawings of boots. This suggestion was first put forward by Petre Diaconu who connected them to the shortened version of the Biblical narrative and the scene of Jesus Christ washing apostle Peter's feet[14]. The boot drawings have been incised very shallowly here. The first boot is placed within the body of the bird, and the second one – in the lowest part of the ornamented field **(Fig. 11/1, 2)**. Both are in motion to the right, towards the altar of the church. At their lower side they are shaped through an emphasized curve at the heel and the sole, the tips are sharp, and the upper part of the boots consist of cylindrical legs up to knee height.

The four anthropomorphic depictions are visibly heterogeneous, carved with lines of different thickness. Topographically, their analogies can be traced first in the rock monastery itself – in church № 4, as well as in church № 3 and chapel E5 in gallery E.

The artistic approach which is characterized by the outlining of the torso and the limbs with a double line, as in the graffito of pillar № 2, was used also in the depiction of the human body on the south face of pillar № 5, where at approximately the same depth of carving has been added an ornamental motif – interlaced pattern **(Fig. 8)**. Outside Murfatlar, the most precise iconographic parallel is the figure in graffito № 2 from the Round Stone Platform in Pliska, which was in fact the very reason that prompted the search of analogies in the rock monastery. In the Pliska graffito, apart from the fact that the torso and the limbs are traced with a double line, we can see the same "dancing" motion of the figure **(Fig. 2/2)**. The scene from graffito № 2 in Pliska is interpreted as shortened visual version of the Old Testament tale from the Torah – Moses and the Burning Bush[15]. Our initial expectation that the anthropomorphic figure from church № 4 might also be part of a narrative composition was not confirmed in the course of our work.

Certain details of the second figure – that of the so-called monk – are repeating also in the figures from pillar № 3 in church № 4 and the south wall in church № 3 **(Fig. 10/1)**, as well as in the saints' depictions in church № 4[16] and chapel E5 **(Fig. 10/2)**. In the first case, they are the details of the upper garment and the marked cleavage around the neck, and in the second – the rune-like characters carved in the lower right half of the skirts of the upper garment. As far as the stylistic specifics of the drawing are concerned, and in particular the disproportion in the rendering of the human figures with the unnatural augmentation of the upper torso and the

[14] DIACONU 1975, p. 267–268.
[15] KOMATAROVA-BALINOVA 2023, in press.
[16] BARNEA, ȘTEFĂNESCU 1971, p. 209, fig. 58.

shaping of the armpits of the arms raised in orans position, it can be pointed out that the most precise analogy is the human image incised at the lowermost part of the west face of pillar № 3[17].

As far as the above-mentioned type of vestment indicates – to a certain extent – the rank of the depicted individual, it can be said that the most suitable analogy from Bulgaria comes from the building material of the Round Stone Platform. But there, in graffito № 3 the figure of the saint is presented with an epitrachili, and with an omophorion. Therefore – with relative caution about Murfatlar and more confidence about Pliska – we can say that both figures represent church *archiereis*, most probably bishops. The visible details of the garment in Murfatlar and especially the omophorion without the additional marking of the epitrachelion, match the images in the Paris Psalter (BnF Grec 510), dated to the last quarter of the 9th century[18]. In the graffiti material of Ravna, which is also among the best preserved and richest in visual aspect, there are no drawings that represent religious figures in such vestment. Only the headdress, whose lower end is marked by horizontal lines across the forehead, implies that there might have been similar images, as long as such headdresses appear also in the graffiti repertoire from Pliska and Ravna.

The parallels of the two small boots and their topography inside Murfatlar also demonstrate certain interesting correlations. In church № 4 they are situated in all functional parts of the temple – at the south wall of the narthex, in the naos – on the surface of pillars № 2, № 6, and № 8, as well as in one of the central arches of the altar – by pillar № 10 **(Fig. 3)**.

Almost all of them, except those in the narthex of B4 (2 in total, single, not pair), are walking right, or towards the altar. In church № 3 they are on the north wall, as well as in the room attached to it (the so-called chapel 2), also from the north. In both cases they are also single, first three – walking right towards the altar, the second three – too **(Fig. 11/4)**. Such images are also clearly visible in the Crypt № 1 from the primary publication of Murfatlar[19], and from our documentation. In the latter case, the drawing is situated to the left of the entrance of Crypt № 2 and is presented in motion towards it **(Fig. 11/3)**. An attempt at the logical assessment and interpretation of these images would be related to their topographic position.

Approximately the same topographic situations, as in Murfatlar, are seen in the boot drawings from the "Theotokos" monastery at Ravna **(Fig. 12/1, 2)**, with a total of 75 depictions, the largest number in Bulgaria. The topographic, typological and statistical analysis of the boot drawings there indicate that they are distributed mainly in two zones – in the inn and in the church. The smallest number is in the scriptorium – only 3. This leads to the conclusion that they were left by outsiders to the brotherhood of monks – most likely pilgrims[20]. Judging by the example from Church № 4 in Murfatlar, especially based on the drawing incised at the central entrance to the altar **(Fig. 3)**, to the possible circle of these pilgrims should be added also members of the clergy because it was mostly them that had access to this most sacred part of the temple.

[17] BARNEA, ȘTEFĂNESCU 1971, p. 205, fig. 54/1.
[18] THIERRY 1966, p. 309, fig. 1.
[19] BARNEA, BILCIURESCU 1959, fig. 11.
[20] KOSTOVA 1994–1995, p. 147; KOSTOVA 1996a, p. 226–227; KOSTOVA 1996b, tabl. 5.

The discovery of such drawings in Pliska, on the spolia of the Round Stone Platform **(Fig. 2/2, 3)**, is astonishing, because, if we follow the example of Ravna and Murfatlar, they must also originate from a monastery, and the only one known so far is the monastery at the Large Basilica. Difficult for interpretation remain the boot drawings from Crypt № 1, unless we accept that the object of pilgrimage in this case were – collectively – the three persons buried in the two crypts[21] and especially the individual (possibly re-buried) in the small niche, carved into the floor of the room designated as Crypt № 2.

Zoomorphic depictions

1. Ornithomorphic depictions

The central position in the ornamented field belongs to the figure of a bird walking left **(Fig. 6, 13/1, 2)**. Its body is comparatively realistic and is rendered through the help of two different techniques. The first one is shallow relief – the body, head and legs of the bird are formed through the scraping of the surface of the soft rock. Apparently, the wide and not too distinct grooves in the upper part of pillar № 2 took into consideration the existence of this image because they start at the curve of the upper wing. There is no doubt that the deep tracing of the bird's back interrupted the right part of a two-line rune-like inscription, as well as part of the anthropomorphic image in the east half of the pillar **(Fig. 13/1)**.

The second technique – engraving – was used for the depiction of the wings. What is peculiar here is that they are three in number. One is folded close to the body and its position is realistic, matching the peaceful walk of the bird. The other two wings – above and below – appear to have been added after the deep tracing. They are presented in the flight motion characteristic of the so-called heraldic imagery of birds of prey – falcons and eagles – known from the elite specimens of stone sculpture, toreutics, decorated ceramics, and textile.

In the center of the body, with approximately the same depth of the outline, is engraved a Maltese cross with triangular arms of approximately the same size, which do not join in the middle. The upper vertical arm also disturbs (and partly destroys) the earlier two-line rune-like inscription **(Fig. 13/1)**. As for style and decoration, the combination of the technique of shallow relief, together with the Maltese crosses, is repeated on the west faces of pillars № 2 and № 3, situated frontally opposite the entrance of the church, where they disrupt older rune-like inscriptions. It seems that they, together with the groove decoration of the pillars, represent a later stage of the general decoration program of the temple, which appears to have been suddenly interrupted since it was applied only in certain parts of it, and in relation to the supporting structure of the church – only on some of the pillars and some of the vaults.

The same situation is repeated in church № 3 at the altar, where the cross depiction, together with that of a water bird, disrupt (and partly destroy) older rune-like inscriptions **(Fig. 14)**.

We can say with confidence that the images that mark the second (later) ornamental stage were carved by people who had been acquainted with finer art

[21] DAMIAN, SAMSON, VASILE 2009, p. 129, fig. 24/a.

specimens which so far have not been found in Bulgaria dating before the first half of 10th century, especially with regard to zoomorphic decoration. It seems most probable that they follow Byzantine prototypes that became popular in the First Bulgarian Kingdom with the Christianization.

What is particularly impressive is that the same ornamental motif that was used in the rendition of the folded wing was applied also in a little known scene from pillar № 3, also situated along the east-west axis. It can be therefore assumed that the above mentioned ornithomorphic images have the same author.

2. Teratomorphic depictions

This group comprises the depictions of four snakes or so-called dragons. In the ornamented field of the south face of pillar № 2 they occupy the left half, and in all instances only the bodies are drawn **(Fig. 7)**. The first two are overlapped by the anthropomorphic figure and the third one – by a Maltese cross. "The complete catalogue" of the teratomorphic depictions in Murfatlar is presented in Crypt № 1, as noted already by Ion Barnea[22]. The obvious similarities in the shaping of the bodies as double serpentines ending in sharp tails, and of the heads (where present), rendered expressively in profile with tongues sticking out and triangular horns, are presented only on pillars № 2 and № 3 in Church № 4, and gallery E which suggests that the individuals who left these depictions had access both to the church and the crypts, and to the gallery. The question about the origin and semantic essence of these depictions is rather complex due to their ambivalent symbolic meaning. Their connection to a particular ethnos or "people of Nordic origin"[23] remains problematic for now. Regardless of the fact that it is challenging to say which part of their rich semantics has been employed here, such depictions among the monuments synchronous to Murfatlar are encountered among the graffito material from the Ravna monastery[24], and their concentration in the unit interpreted as a scriptorium[25] suggests that they were left by people involved in the production of manuscripts and/or their illumination. In various variants, such images are encountered as decorative elements in other textual monuments, among which stand out the Boyana Palimpsest and Roe's Manuscript, in its marginalia (MS-Roe 27), the latter document being dated within the 10th century[26]. A later but still indicative example comes from St. Sophia in Kyiv, where such drawings that undoubtedly originated from manuscripts, are encountered in the north inner gallery, known as St. Vladimir, with its lower chronological border in the 11th century[27].

[22] BARNEA, BILCIURESCU 1959, fig. 11; BARNEA 1962, p. 311.
[23] BARNEA 1962, p. 311.
[24] KOSTOVA 1996a, tab. A/II.
[25] KOSTOVA 1996a, tab. 1.
[26] MOUSSACOVA 2016, fig. 7; GRANBERG 2005, fig. 1, fig. 4.
[27] KORNIENKO 2019, p. 103, tab. XVII, tab. LXXXIX.

The graffiti-inscriptions[28]

On the south face of pillar № 2 there are a total of 4 visible inscriptions: two rune-like, two Cyrillic and nine separate characters situated at the lower end of the ornamented field.

1. Rune-like inscriptions

The first one of them has 19 preserved characters of which 11 are located on the first and 8 on the second line **(Fig. 13/1, 2)**. The length of the first row is 0.15 m, with character size of 0.09-0.12 m. Considering the spacing between the characters, the later depictions – those of the bird and the Maltese cross – must have destroyed three characters from the first and two characters from the second line. Despite this partial overlapping and disruption, it can be pointed out that the inscription is aligned to the left, because the length of the second line starts from under the first character of the first line **(Fig. 15/1)**. The first and the second four and five characters from the second line have been set apart with an interval. The sequence of five of the characters (№ 7, № 8, № 9, № 10, № 11) – the last five on the first line – coincides precisely with the sequence characters in the rune-like inscription engraved under the saint's figure on the south wall, to the right of the altar of B4 (compare **Fig. 13/2** and **Fig. 17/1**). The repetition of 3 of the characters from the first line is especially distinct on the north wall of B4, next to the anthropomorphic image **(Fig. 16)**. Taken in to account together, these similarities present a good starting point for our future work with the rune-like inscriptions, especially after their last documentation which unveiled new (previously unpublished and undocumented) characters.

The topographic distribution of the rune-like inscriptions in B4 demonstrates some curious details: in the east half of the church they are situated in zones of relatively low concentration of graffiti and Cyrillic inscriptions **(Fig. 3)**. Some of them can be interpreted as "clarifications" as they surround two anthropomorphic images, one of which represents a saint, and the other one is located close to the grave niche. The fact that some of those on pillars № 2 and № 3 are interrupted by later carvings suggests that they were inscribed in a period when the church did not have many visitors yet. What is very striking is the absence of rune-like inscriptions on them as on pillars, especially the side ones of the naos, № 1 and № 4. So far, we can offer, as a working hypothesis, that they predate the second (main) stage of decoration of the church, when the shallow relief images appeared, as well as the masonry pillars plastered in red (still visible here and there) **(Fig. 18)**, which made the interior of the temple more "lively".

The second rune-like inscription is of particular interest. It has been carved by a different hand. It contains 10 characters-respectively 4 and 6 on the first and second line, with a total length of the inscription of 0.06 m and a height of 0.025 m **(Fig. 13, 15/2)**. The first three characters on the first line have been separated from the fourth one with an interval.

Undoubtedly, this inscription is later than the previous one, because it takes into consideration the already existing bird figure and that of the human in church attire. There is an obvious intent for left alignment, not only due to the situation

[28] The Romanian-Bulgarian scientific discussion that actually never happened.

of the lines, but also based on the interval that separates the first three characters from the fourth one on the first line. The characters are carved with precision and imply a very good level of graphic competence, close to that of cursive writing. The only circumstance to prevent us from suggesting that the author of this inscription had calligraphic experience is the lack of a textual document of rune-like script to confirm that. Nevertheless, the existence of such a monument can be speculated about. In terms of paleography, this inscription is closest to the rune-like inscription on the west face of pillar № 6 **(fig. 17/2)**, in which one can observe similarity in the writing with four out of the eight non repeating characters from the second rune-like inscription from the south face of pillar № 2. Outside Murfatlar, the most intriguing analogy originates from Pliska where, within a settlement from the southeast periphery of the Inner City was found a ceramic sherd with a "Murfatlar-style" rune-like inscription in three lines **(Fig. 1/2**, **3)**[29]. It was incised on the back side of the fragment and its lines are situated perpendicularly to the pottery wheel's horizontal traces. The fact that this fragment was part of the shoulders of a jug and that the inscription can hardly be incised from the inside, especially at this part of the vessel, means that the inscribing happened after the jug had been broken. On the other hand, the vertical breakage of the sherd does not interrupt any of the characters on the right; therefore, this is a full inscription, which is again aligned to the left. To the fact that it has to be read from left to right attest also the two single characters at the beginning of the third line. Compared to the rune-like inscriptions of Murfatlar, most of which are in one line, the analogy from Pliska indicates with a fair degree of certainty, at the very least, the reading direction. To a full extent this is valid also about the second rune-like inscription from the west face of pillar № 2.

2. Cyrillic inscriptions

The first and most debated one among them is located at the very left edge of the south face of the pillar **(Fig. 7/1, 2)**. The lines go slightly diagonally, from left to right, apparently because they take into account images that predate them: the anthropo-zoomorphic one in orans position, and the Maltese cross whose outlines are not disrupted by the last two lines of the inscription, which are smaller in size for that reason. Over the left half of the inscription is incised a pentagram, so that it affects eight of nine inscription's lines.

The inscription has undergone significant damage in modern times. Humidity has made some of the letters impossible to decipher. Nevertheless, thanks to some older photographs and to modern technologies, at least some of them can be reliably reconstructed.

The inscription has been published several times.

The brief overview of the different interpretations should begin with that of Ion Barnea, who found the inscription and published a photograph and reading of the text for the first time[30]:

[29] ALADZHOV 2022, p. 282.

[30] BARNEA, ȘTEFĂNESCU 1971, p. 212, fig. 63.

✝[Ж]оуπан
и имаетъ Геор-
гѣ.жц тебѣ там
мъ ѥст ѣкъ кръннъ и ръжѣ
тъ. .
а тжганъ нз полоу
тъка обасѧ
.ѥс . ап . ж

According to Barnea's interpretation, this graffito informs us about a certain Georgi, who held the title *zhoupan*, i.e. governor of district. His name here and the context leads to the suggestion, that zhoupan Georgi was allegedly the donator and initiator of the construction and foundation of the church.

Barnea's reading leaves much unexplained, for only three or four words have any meaning, and it is difficult to speak of any text that makes sense at all. However, the inscription was referred to as *the inscription of zhoupan Georgi* for many years. As an example, we can point to a study by V. Beshevliev (1976), in which otherwise important clarifications are made regarding the proto-Bulgarian word *tǫganъ*[31].

A significant step towards revealing the message of the graffito was made by Kazimir Popkonstantinov. After visual examination and making new photographs, he suggests that it reads as following[32]:

[т]оуπан
дѣлаетъ георь
геѣж цр҃кьвѥ кам[ ]
нън сѣкъѣн кръннъ и ръжѣ
нън

а тжганъ нз полоу
тъка [ ] оба сѧ
ѥс[ ]ап[ ]жч

The authors, Popkonstantinov and Kronsteiner, have translated the first part only: „Tupai macht eine Kirche für den heiligen Georgi, aus Stein gehauen (…)". The detailed analysis is postponed for another study[33]. In it K. Popkonstantinov assumes, that there are two proper names of Turkic origin featured in the inscription. The first one is Tupai, the donator of St. George's church, and the second one is Tongan, one of its builders, therefore zhoupan Georgi does not feature in the text at all. As concerns полоутъка, Popkonstantinov thinks it is a toponym, closer in form to a well-known village named Poloutesk.

A. A. Zaliznyak has contributed to the reading and interpretation of the inscription in an article, intended as *corrigenda* to various inscriptions, published by other

[31] BESHEVLIEV 1976, p. 12–22.
[32] POPKONSTANTINOV, KRONSTEINER 1994, p. 79.
[33] POPKONSTANTINOV 1996.

scholars[34]. Even though he worked with the photograph from the above mentioned catalogue, his intuition and considerable experience in epigraphy enabled him to observe some unnoticed features:

--[т]оуπан
дѣлаетъ гєоρьѯ
гєвж цр҃кьвє кам[є]ѯ
нъє сѣкъы н крънньн ръжѣѯ
нън
а тжган҃ъ нз҃ полоуѯ
тъка оба сѧ
єс[т]а п[ор]жч(нл)[а]

After a brief analysis, Zaliznyak suggests the following translation: „--тупай делает Георгиеву церковь, обсекая камень, и сосуды для ржи. А Туган [с ним] исполу. Оба поручились“ (--tupai makes St. George's church, by cutting stone, and vessels for rye. And Tugan [with him] a half. Both were charged with that duty). According to the author, the seemingly strange message that the stonemason was simultaneously carving out a temple and making stone (!) vessels for rye becomes understandable if we take into account how often churches were used as granaries. The Krepcha inscription, which prohibits the use of monastery premises for granaries, is cited to illustrate this.

A similar interpretation is proposed by A.-M. Totomanova[35]. Without being acquainted with Zaliznyak's notes, she considers ръжѣнън acts as modifier of крънньн, thus the whole phrase refers to vessels with a grain of rye, which were probably received as a reward for the stonemason's work. This rendition was adopted by V. Ilieva in her dictionary of Old Bulgarian inscriptions[36].

Meanwhile, A. A. Medyntseva has continued forward in the same line of thought, while developing her own, quite different conception of the meaning of the text. According to her analysis, the inscription tells us about the work for the monastery (the Church of St. George) of two peasants, Tupai and Tugan. The former cultivates a piece of land, крънньн, sowing it with rye, while the latter is working for half, нз҃ полоу, of the product received[37].

As compared to photographs from 40 years ago, the condition of the inscription is now worse than it was when it was discovered. Some letters that were clearly visible then are illegible today. On the other hand, modern technologies help to identify signs or traces of signs that previous researchers could only guess about. Here we will offer the three readings presented above with brief line-by-line commentary that takes into account the old images and the new digital photographs. Based on this analysis, at the end we will suggest a possible reconstruction of the text of the inscription and an interpretation.

[34] ZALIZNYAK 2004, p. 280–281.
[35] TOTOMANOVA 2014, p. 160.
[36] ILIEVA 2021.
[37] MEDYNTSEVA 2019, p. 299.

line	I. Barnea and St. Ştefănescu	K. Popkonstantinov and O. Kronsteiner	A. A. Zaliznyak	new reading
1	✝[Ж]оупан	[т]оупан	--[т]оупан	[сдѣ] тоупан
2	н нмаетъ Геор-	дѣлаетъ георь	дѣлаетъ георьѥ	дѣлаетъ георь
3	гѣ.жц тебе там	гѣѣж цр҃кьвѣ кам[ ]	гевж цр҃кьвѣ кам[ѣ]ѥ	гѣѣж цр҃кьвѣ · ка[м]ѣ
4	мъ ѥст ѣкъ кръннъ н ръжѣ	нън сѣкън кръннъ н ръжѣ	нъѣ сѣкъы н кръннѣн ръжѣѥ	нъ н[сѣкаѫ]н : кранн н ръжѣ
5	тъ. .	нън	нън	нън
6	а тжганъ нз полоу	а тжганъ нз полоу	а тжганъ нз полоуѥ	а тжганъ нз полоу
7	тъка ова сѧ	тъка [ ] ова сѧ	тъка ова сѧ	тъка ова сѧ
8	.ес . ап . ж	ес[ ]ап[ ]жч	ес[т]а п[ор]жч(нл)[а]	[нѣ]ста п[ор]жч
9				н[ма]

1. On the first line, we read a proper name, тоупан (Toupai) and without any doubt the first letter is т. I. Barnea thought that there is a cross before these six letters and A.A. Zaliznyak has assumed that it is not a cross, but rather two more letters. In fact, the first line aligns with the following ones and the word тоупан is not indented, there are other letters before it. Traces of such are visible on both the old and new images, however the problem is they are more shallowly and tentatively carved into the stone than all the others. We argue that there are probably three signs. In our opinion, they are not part of the name of the builder, as Zaliznyak has suggested, but form another word, which could be сдѣ 'here'. Of these three letters, only the middle one (д) can be identified with greater certainty, while as regards the others very faint portions of letter outlines are visible. Judging from the fact that Barnea took the ѥ for a cross, it seems this part was better preserved in 1960s.

2. Second line reads дѣлаетъ георь. The first six letters are much harder to read today than they were some decades ago.

3. On the third line we read: гѣѣж цр҃кьвѣ · ка[м]ѣ. The reading гѣѣж seems much more plausible after examining the digital images of the inscription. Therefore, we prefer the anomalous form георьгѣѣж instead of conjecture георьгевж, proposed by A. A. Zaliznyak. The word цр҃кьвѣ is easy to read. However, this is not the case regarding the letters following afterwards, as the inscription is not preserved well. What is more, the author had to take into account the remaining space for writing next to the partially drawn cross on the right, thus he had to reduce the size of the letters, warp the text and write below the drawing. Previous researchers did not notice that at the end there seems to be letter ѣ. Thus this part reads ка[м]ѣ.

4. Fourth line is the longest one: нъ н[сѣкаѫ]н : кранн н ръжѣ. First three letters are нън, and they form the rest of the word ка[м]енън (not ка[м]енъѣ as Zaliznyak read it). Many of the letters that follow are unclear. The text so far speaks of certain Toupai, who is building St. George's church. It is made of stone, thus the word next to ка[м]енън should mean the action which the stonemason performs upon the stone. Only traces of the letters survived and they remind с, ѣ and к, then there should follow two letters, now illegible, and н. Therefore, all readings are tentative: сѣкън fails to record one symbol, сѣкъын does not coincide with the way *jery* is rendered in

the inscription and сѣкъı н is impossible, because there are two dots after н that mark end of the clause. One possible solution is to reconstruct form исѣкаѫн and a phrase ка[м]енъ исѣкаѫн 'carving out the stone'. After the two dots we read кранньı ръжѣ. We interpret кранньı as an adjective, which agrees with ка[м]енъ and means 'situated away from the center, side, on/from the side'.

5. On the fifth line there are three letters only, нън (нѣн is also possible). It is the ending of the word that begins on the previous line – ръжѣнън. It is obviously an adjective and scholars translate it as 'rye'. The phrase кръннıн ръжѣнън is the most obscure passage in the inscription. We do not think that the text speaks of stone vessels for rye made while carving out the church, nor it refers to sowing a field with rye. Such vessels were being normally made from wood, they would be unusable if made of stone because of their weight. Second, if the author wanted to write *vessel for rye*, he would normally use a noun, not an adjective (i.e. крина ръжи), and if it was the pay he worked for he would normally use preposition ѕа with accusative (ѕа кринъ ръжи). The idea that this humid space was originally used as a granary is untenable, moreover the author himself a) claims that he is building a church and b) complies with previously carved crosses around the inscription. As we mentioned above, the reading кръннıн is dubious, and кранньı н is more probable. Toupai worked upon the "side stones", and ръжѣнън is second adjective referring to certain quality of the stone. It could be its color, if the author of the inscription has connected by analogy ръжь, ръжѣнъ 'rye' (deriving from Proto-Slavic root *rъg-) with ръıжь 'rufous', ръжда 'rust', ръдръ 'reddish' (deriving from *rъd-). In this case, the inscription so far would read "Here Toupai builds the church of St. George by carving out the reddish stones from the side". Such a translation fits the actual interior of the church, which features two monolithic central pillars between the narthex and the naos, and the side ones (to the left and to the right of them, but along the same line – are built of blocks by a stonemason and plastered in red. **(Fig. 18/1, 2)**.

6. On the sixth line begins a second part of the text, which can also be taken as a second inscription, continuing the previous one. The author definitely decided not to continue on the fifth line, but to start a new paragraph: а тѫганъ нѫ полоѵ. The text is warped in order to avoid a cross drawn on the right: it is written at a different angle, and goes straight to the other part of the inscription.

7. There are four letters on the seventh line: тъка. Then some space is left blank and the third part of the inscription begins: ова сѫ. First four letters are in fact part of the word that begins on the previous line: а тѫганъ нѫ полоѵтъка. We think that Tongan is definitely proper name and нѫ полоѵтъка is not a reference to certain village, but means 'from the half, from the point at an equal distance from the sides, from the middle'. Conjunction а is very important, since it introduces dependent comparative clause to indicate dissimilarity: Toupai works on the side, and Tongan [works] in the middle.

8. The text of the inscription on line eight is almost illegible and may be reconstructed as follows: [нѣ]ста п[оѫ]жч. First letter is unclear, it is not a в (i.e. вѣста 'were') and looks more like н (i.e. нѣста 'weren't'). The second letter resembles ѥ, however the lower part of the symbol is missing thus it could be ѣ.

9. The fact that the inscription continues has remained unnoticed by scholars.

The text is warped, the letters are arranged in a step-down manner and are almost unrecognizable. We read it as н[ла]. If this reconstruction is correct, then the text states that Tupai and Tongan did not engage in this work by virtue of an agreement, which could mean that they had provided their services voluntarily and without payment.

In the light of the above, we suggest the following reading of the inscription:

[сдѣ] тоупан
дѣлаетъ георьѣ
гѣкж цр҃кьвѣ · ка[м]ѣ
нъ н[сѣкаѧ]н : краннь н ръжѣ
нън
а тжганъ нз полоу
тъка оба сѧ
[нѣ]ста п[ор]жч
н[ла]

This is an inscription of the stonemasons who worked on the premises: "*Here Toupai builds the church of St. George by carving out the reddish stones from the side, and Tongan [works] from the middle. Both hadn't been bound by agreement*".

The second Cyrillic inscription is placed above the head of the male figure (a bishop?), on the upper right part of the south face of pillar № 2 **(Fig. 6, Fig. 9/1)**. The inscription has been published once, by Popkonstantinov and Kronsteiner, who identified a three-line long Cyrillic inscription[38]:

[ ] имѧ хоѡти
[ ] ѣнъ въ
[к]алоугеръ

The authors suggest that the proper name ѣнъ(Ěn) on the second line of the inscription presumably refers to a son of Tsar Simeon, who became a monk, and that the inscription therefore is a clarification of the male figure below[39]. This is probably the reason the inscription has been dated to the 10th century in this publication. The new photographic documentation resulted in a revision of what can be seen on this part of the pillar. It reveals only two lines containing Cyrillic letters, and below them, a ligature and a single rune-like letter. The ligature and the single rune-like letter differ from the Cyrillic letters in terms of the depth and width of the lines, as well as in the height of the letters. They were not made by the same hand that left the Cyrillic inscription. In this article we include the analysis of the first line of the Cyrillic inscription. The rest will be part of a future publication.

1. A line with four clearly distinguishable Cyrillic letters, here reproduced with normalized letterforms: [ ]**НѦѪХ**[ ].

[38] POPKONSTANTINOV, KRONSTEINER 1994, 95.
[39] POPKONSTANTINOV, KRONSTEINER 1994, 95.

The surface to the left of the first visible letter, **Н**, has been damaged. Short indistinct traces of one or two letters are visible to the left of **Н**, but it is very difficult to identify anything with certainty. The same applies to the space after the fourth letter – **Х**. There are indistinct traces of the upper part of one letter to the right of **Х**, but it is difficult to determine which letter it is. It might be the upper part of the letter **Ꙁ**, **О**, **Р** or **Ꙅ**. The letters **ОѠТИ** suggested in the publication by Popkonstantinov & Kronsteiner (1994: 95) could not be verified in the recent photographic documentation. The space on the stone surface after the letter **Х** is not large enough for more than one or two letters. No *titlo* is visible above the letters, and today it is impossible to determine whether there has been any, as the stone in the space above the letters is badly damaged and has been repaired with cement.

This inscription was made by a well-trained hand. Some of the letters have a very special shape that provides a solid basis in dating the inscription to the 10th century.

The form of the letter **Ⰿ** is quite wide. The middle part of the letter, the "belly", is pointed and it reaches the same level as the lower part of the side lines of the letter. All lines are the same length. This form of the letter **Ⰿ** has been attested in inscriptions from the 9th and the 10th century:

a) Bulgarian military inventory inscriptions with Greek letters from the first quarter of the 9th century[40], and an inscription with Greek letters from Preslav, from the first quarter of the 10th century[41].

b) Bulgarian Cyrillic inscriptions from the 10th century: a dated inscription from 943[42], the inscription by monk Ananij against the *Bogomils*[43] and the bilingual Cyrillic-Greek funeral inscription of Ana, from Preslav[44] .

Among the Cyrillic inscriptions from the monastery complex in Murfatlar, the letter M with identical shape has been attested in an inscription, by another hand, on the vault of the south entrance to the altar (close to the altar in B4, dated to the 10th century)[45].

The form of the third letter, for the front nasal vowel, has two intersecting lines in the middle. They are longer than the side lines. So far, this form of the letter –  – is known from two other Bulgarian Cyrillic inscriptions, dated from the 10th century:

a) The inscription by monk Ananij against the *Bogomils*[46].

b) A funeral inscription of Antunij from the cave monastery in Krepča[47].

The fourth letter: in this form of **Х**, the upper part of the lines is angled downwards at a sharp angle. The same form of the letter has been attested in Bulgarian inscriptions in Greek from the 9th century: a) Inscription № 14[48], and b) Inscription №

[40] BESHEVLIEV 1979, №№ 49 and 50.

[41] BESHEVLIEV 1979, №№ 90.

[42] GOSHEV 1961, p. 117, Obr. 95ª/3, 153, Tables XVa,b, DOBREV 1985, p. 601–602, SMYADOVSKI 1993, p. 192–193.

[43] GOSHEV 1961, p. 79–83, 154, Table XVI, SMYADOVSKI 1993, p. 201.

[44] MALINGUDIS 1979, p. 25–26, SMYADOVSKI 1993, p. 199, SLAVOVA 1985, p. 664, 665.

[45] BARNEA 1962, p. 312, Fig. 19, DOBREV 1985, p. 602–603, SMYADOVSKI 1993, p. 189.

[46] GOSHEV 1961, P. 79–83, 154, Table XVI, SMYADOVSKI 1993, p. 201.

[47] POPKONSTANTINOV 1977, p. 19–22, Obr. 5a, 5б, POPKONSTANTINOV 2019, p. 377–379, SMYADOVSKI 1993, p. 195.

[48] BESHEVLIEV 1979, p. 132–138.

15[49]. This shape of **Х** appears in a Greek/Cyrillic/rune-like inscription on the shoulder of a fragmentary amphora from Dinogetia, attributed, in accordance with its shape, to the 9th–10th century[50]. Among the Cyrillic inscriptions in B4, this form of **Х** has been attested in an inscription carved by another hand, **ѩс ѯ҃ъ ѡдѣлѣ**, in the right part of the altar[51].

Summarizing the paleographical analysis, we can conclude that the shape of three of these four letters is related to the use of Greek and Cyrillic script in Bulgarian epigraphic tradition from the 10th century.

The clearly visible letters on this line are [ ]**НМѦХ**[ ]. The letter **Н** is most probably the verb ending for the imperative mode, the 2d person sg. **МѦ** is the personal pronoun for the 1st person, Ack. sg., and **Х** is the beginning of a word, probably **Х**[**ѣ**], in Voc. sg., or **Х**[**ρ**], **Х**[**с**] 'Christ', The trace of the letter before **Н** corresponds best to the shape of the letter **С**–[**спьпас**]**Н МѦ Х**[**ѣ**] 'Save me, Christ'. No *titlo* is visible above **Х**, but the surface of the stone has been damaged and it is impossible to say if there originally was a *titlo*.

This inscription does not have any immediate connection to the other inscriptions on the pillar, or the anthropomorphic and zoomorphic depictions. It was not carved over any previous existing letters or figures.

A single letter, ᚾ, not documented earlier, or mentioned in previous publications, is clearly visible on the surface below the Cyrillic inscription. This single letter has, in comparison with the Cyrillic letters above it, without doubt been made with a different tool, a tool which leaves narrower, deeper, and much clearer lines. The upper horizontal line coincides with the horizontal line of the Cyrillic letter **Н** in the inscription above.

The letter ᚾ appears to be a single letter here; there are no traces of letters to the right or the left of this letter. The same letter has been used in inscriptions in B1, the east side of the pro-narthex[52], and in B4, on the west face of pillar № 6[53]; it has also been used as a single letter in several places in B4, in the left upper part of one of the crosses to the left of the figure of a bishop (south face, pillar № 2), as well as on several places on the west-side of pillar № 2, on the west face of pillars № 3 and № 6, and on the wall of the narthex, to the left of the entrance.

Summarizing the results: Above the head of the male figure, we only identified the Cyrillic letters, [**спьпас**]**Н МѦ Х**[**ѣ**] 'Save me, Christ', and we dated them to the 10th century, based on the paleographical analysis. No other Cyrillic letters could be verified. In addition, we identified one previously undocumented and unpublished single rune-like letter under the Cyrillic inscription.

Relative chronology of the graffiti on the south face of pillar № 2

With its surface area of merely 1.14 sq.m., the south face of pillar № 2 in Church № 4 amounts to one ten-thousandth part of the total area of the Murfatlar rock

[49] BESHEVLIEV 1979, p. 139–140.
[50] BARNEA, ŞTEFĂNESCU 1971, p. 63–69.
[51] BARNEA, ŞTEFĂNESCU 1971, p. 220, Fig. 69.1.
[52] BARNEA 1962, p. 309, fig. 16/1.
[53] BARNEA 1962, p. 309, fig. 16/3.

monastery. Regardless, this insignificant (but only in terms of size) segment "narrates" almost the entire history of what is known today about the complex (we would like to remind that the original documentation from the excavations is off limits), due to the exceptionally high concentration of graffiti. The review above leads to the conclusion that no less than 17 different hands have left drawings and inscriptions on the soft chalk surface. In a relative sequence, they appear as follows: *Hand № 1* **(Fig. 19/1)** incised the earliest two-line rune-like inscription, which is aligned to the left and situated centrally, at eye level. Synchronous to it are the single- and two-line inscriptions from the east part of Church № 4, from a time when it was not much visited. In terms of paleography, most similar to this inscription are those on the north and south wall of the church, as well as on the west face of pillar № 6 **(Fig. 16**, **17/1, 2)**. All of those have been carved on their own, at eye level, and in the case of pillar № 6 – also in center of its west face. *Hand № 2* **(Fig. 19/2)** left the anthropomorphic image dressed in an archpriest's attire to the right, as the right arm of this figure disrupts the first line of the rune-like inscription of Hand № 1. Separate details of this image and especially the cleavage of the garment at the neck area point to the fact that it is synchronous with the figure of the saint from the south wall of Church № 4, to the right of the altar. *Hand № 3* **(Fig. 19/3)** engraved the figure of the bird in profile walking left. The outline of its back affects partly the last characters from the inscription by Hand № 1 and the right arm of the figure made by Hand № 2. *Hand № 4* **(Fig. 19/4)** added to the bird the unnaturally spread wings of an eagle, hawk or other bird of prey, facing. The author of these additions was perhaps present at the monastery, together with the one who drew the bird that overlaps the rune-like inscription to the left of the altar of Church № 3 **(Fig. 14)**. *Hand № 5* **(Fig. 19/5)** incised the second rune-like inscription, also aligned to the left, that took into consideration the existing outlines of the figures left by Hands 2 and 3. *Hand № 6* **(Fig. 19/6)** drew the images of snakes whose bodies resemble double serpentines. The reason for this assumption is the images from Crypt № 1, where the teratomorphic images are also in combination with closely situated rune-like inscriptions. This would also mean that at that time human remains were (re)buried only in Crypt № 2, because Crypt № 1 measures just 3 × 1.5 m[54] and in order to engrave the graffiti there, the visitors had to step over the deceased that were laid across at the entrance, which is naturally impossible. *Hand № 7* **(Fig. 19/7)** scratched the anthropo-zoomorphic figure in orans position on the left part of the pillar's face. This figure is definitely later because it interrupts the bodies of two of the snakes. *Hand № 8* **(Fig. 19/8)** (and probably one more hand after it) left the drawings of boots walking right, towards the altar. The following, *Hand № 9* **(Fig. 19/9)**, engraved the Maltese cross that damaged the inscription by Hand № 1, the bird's wing drawn by Hand № 3 and the little boot left by Hand № 8. *Hand № 10* **(Fig. 19/10)** wrote the so-called donor's inscription. It is later than the anthropo-zoomorphic figure left by Hand № 7, because its last three lines go diagonally, taking into account the narrow space above the figure's head. *Hand № 11* **(Fig. 19/11)** (without any definite proof) left the «Save me, Christ» inscription. The paleographic similarity of some of the letters to those written by Hand № 10 suggests that they were left within a short period of time.

[54] BARNEA, BILCIURESCU 1959, p. 546, fig. 8.

Much more complicated is the issue about the single rune-like characters inscribed at the bottom of the ornamented field of the south face of the pillar, and also the ones fitted between the folds of the garments of the human figure on the right. Provisionally, they can be labeled as *Hands № 12, № 13, № 14, № 15, № 16*, because they are of different sizes, depths and paleographic properties, but it is difficult to arrange them in a relative sequence, because there is no overlapping. The last *Hand № 17* **(Fig. 19/17)** left the drawing of the pentagram that affects eight out of nine lines from the so-called donor's inscription. A similar drawing is encountered once again-on the south wall of the B4, under the Gospel text: "For it is written, I will beat the shepherd, and the sheep shall be scattered" (Mark XIV, 27 = Mathew XXVI, 31)[55].

In the totally chaotic (but only at first glance) manner all these graffiti are scattered, one can still discern at least two layers that can be related to the other graffiti in Church № 4. In the interpretation of their horizontal stratigraphy, we can outline the following connections: the rune-like inscriptions and the single characters occupy the center and the right half of the ornamented field, while the "donor" inscription in nine lines is in the left one. The rune-like inscriptions were engraved within a close interval of time with the large anthropomorphic figure and with a certain degree of caution, it can be suggested that they are captions to the images. This hypothesis is consistent with the remaining anthropomorphic depictions, especially those of saints, around which can be seen rune-like inscriptions only.

Notes on the absolute chronology

The questions on the dating of the Murfatlar rock monastic complex, naturally, were first raised among the Romanian colleagues[56]. The epigraphic material and especially the so-called dated inscriptions have been the subject of multiple publications, but the Romanian-Bulgarian discussion on them never really happened, because the position of each side is, in fact, hardly conductive to debate.

The possibilities for the dating of the graffiti on the south face of pillar № 2 are also based predominantly on the inscriptions. Crucial for the understanding of the chronology are the "Murfatlar-style" rune-like inscriptions in Pliska which can be related to two clearly distinct chronological periods – pre-Christian and Christian. The first one is associated with the settlement in the south-east periphery of the Inner City, dated in the first half of the 9th century[57]. The rune-like inscription found there indicates that, at the period in question, this graphic system was already in use. The material on which the inscription was incised suggests that this script was not limited only to Pliska's elites, but was also available to the broader social circles of the population. The second period has been detected among the spolia from the Round Stone Platform to the north of the Citadel, due to the fact that there the rune-like inscription of graffito № 2 is found in a combination with a scene-drawing of Christian symbolism **(Fig. 2.1, 2)**[58]. The stratigraphic observations demonstrate that

[55] BARNEA, ȘTEFĂNESCU 1971, p. 211, 219, fig. 67; PARASCHIV-TALMAȚCHI 2020, p. 134, № 86.

[56] See BOGDAN 1960, p. 31–49; COMȘA 1964, p. 363–370.

[57] ALADZHOV *et alii* 2014, p. 90, 130, таб. XIX, обр. 12.

[58] KOMATAROVA-BALINOVA 2023, in press.

the Round Stone Platform dates to the last quarter of the 9th-the very beginning of the 10th century, and thus the material reused for its construction, some of which clearly originating from a church (along with its inscriptions and graffiti), predates it. A certain indication for the lower chronological limit of this reused building material in this case would be the earliest ecclesiastic structure-that of the Great Basilica, which, according to the accepted chronology, dates to ca. 870. The left alignment of the rune-like inscriptions and the pottery sherd from Pliska, as well as the graphic resemblances in the lettering of the inscription from the Round Stone Platform currently serve as the only chronological indicator for the dating of the rune-like texts, at least as far as pillar № 2 in Church № 4 in Murfatlar is concerned. In this sense, *terminus ante quem* for them would be the last quarter of the 9th century.

Based on the above mentioned analogies of a broader date – within the 10th century – are the two Cyrillic inscriptions, one of which has been defined as a donor inscription in literature so far. According to the interpretation suggested by our team, it should be instead considered a building inscription. It is not synchronous to the beginning of the construction of Church № 4, but to its second construction period which was defined by the addition of the masonry pillars that separated the narthex from the naos, № 1 and № 4. In favour of our statement that the rune – like and the Cyrillic inscriptions belong to two different chronological periods – respectively to the 9th and the 10th century – is the fact that there are no rune-like inscriptions or single rune-like characters on pillars № 1 and № 4 from the second construction period.

Perhaps some of the hypotheses laid out here would be confirmed one day, or, quite the opposite, revised. This publication marks the beginning of the announcement of the results from the new thorough documentation of the Murfatlar rock monastic complex, product of the joint effort and goodwill of the National Archaeological Institute with Museum at the Bulgarian Academy of Sciences and the Museum of National History and Archaeology in Constanţa. Regardless of what part of our observations and conclusions would be confirmed or revised in future publications, what remains certain is the identification of chronological reference points to which the relative chronology of the rock complex can be linked and thus new observations on the absolute dates can be put forward.

The authors of this study express their hope that the joint effort will continue in the future as well.

Acknowledgements

The Head of the project is greatly indebted to the Department of Scientific Computations with Laboratory on 3D Digitization and Microstructure Analysis within the project BG05M2OP001.001-0003 "Center for Excellence in Informatics and Information and Communication Technologies", Bulgarian Academy of Sciences, and personally to the Head of the department-Associate Prof. Ivan Georgiev for the constructive discussions and provided help (E. K.)!

BIBLIOGRAPHY

AGRIGOROAEI 2007–2008 – V. Agrigoroaei, *Biserica B4 de la Murfatlar: descriere*, NEMUS 2–3/3–4 (2007–2008), p. 92–120.

ALADZHOV 2022 – A. Aladzhov. *Krugfragment mit Symbolen*, Reiter Nomaden in Europa, Shallaburg, 2022.

ALADZHOV *et alii* 2014. – А. Аладжов, Я. Димитров, Ст. Иванов, Хр. Стоянова, Ст. Стойчев, Ст. Стаменов, *Археологическа карта на Плиска*, София, 2014.

BARNEA 1962 – И. Барня, *Предварительные сведения о каменных памятниках в Бассараби (обл. Добруджа),* Dacia N.S. 6 (1962), p. 293–313.

BARNEA, BILCIURESCU 1959 – I. Barnea, V. Bilciurescu, *Șantierul arheologic Basarabi (reg. Constanța),* MCA 6 (1959), p. 541–566.

BARNEA, ȘTEFĂNESCU 1971 – I. Barnea, Șt. Ștefănescu, *Bizantini, români și bulgari la Dunarea de Jos. Din Istoria Dobrogei,* Vol. 3, București, 1971.

BESHEVLIEV 1976 – В. Бешевлиев, *Етническата принадлежност на рунните надписи при Мурфатлар*, Векове 4 (1976), p. 12–22.

BESHEVLIEV 1979 – В. Бешевлиев, *Първобългарски надписи*, София, 1979.

BOGDAN 1960 – D. P. Bogdan, *Grafitele de la Basarabi*, Analele Universității C. I. Parhon, Seria Științe Sociale-Istorie 16/9 (1960), p. 31–49.

COMȘA 1964 – M. Комша. *К вопросу истолкования некоторых граффито из Басараби*, Dacia N.S. 8 (1964), p. 363–374.

DAMIAN 2015 – O. Damian, *Bizanțul la Dunărea de Jos (secolele VII–X),* Brăila, 2015.

DAMIAN, SAMSON, VASILE 2009 – O. Damian, A. Samson, M. Vasile, *Complexul rupestru de la Murfatlar-Basarabi la jumătate de secol de la descoperire*, MCA S.N. 5 (2009), p. 117–158.

DIACONU 1975 – P. Diaconu, *Représentations de la jambe humaine sur certains monuments archéologiques des X^e–XI^e siècles*, Dacia N.S. 19 (1975), p. 267–268.

DOBREV 1985 – I. Добрев, *Добруджански надписи. Кирило-Методиевска енциклопедия*, Том 1, София, 1985.

GOSHEV 1961 – И. Гошев, *Старобългарски глаголически и кирилски надписи*, София, 1961.

GRANBERG 2005 – A. Granberg, *Pictures and Bulgarian Cyrillic inscriptions in a Greek 11th century manuscript*, in: A. M. Тотоманова, Т. Славова, *Сборник в чест на проф. д.ф.н. Иван Добрев-член-кореспондент на БАН и учител*, София, 2005, p. 385–399.

ILIEVA 2021 – В. Илиева, *Епиграфски паметници на Първото българско царство (IX–XI в.). Речник-индекс и езиков коментар*, Годишник на Софийския университет „Св. Климент Охридски" 106 (2021), p. 124–245.

KOMATAROVA-BALINOVA 2023 – E. Komatarova-Balinova, *The road of a pilgrim (Graffiti drawing with an Epiphany scene on the Round Stone Platform in Pliska),* Рани средњ век на Централном и источном Балкану/ ранното средновековие на Централните и Източните Балкани/The early Middle ages in the Central and Eastern Balkans, Belgrade-Sofia, 2023, in press.

KOMATAROVA-BALINOVA, CHARALAMPAKIS, RAYKOVSKA 2022 – E. Komatarova-Balinova, P. Charalampakis, M. Raykovska, *The "Khan" and His "Kumihrs" (New Details from the Documentation of a Graffito from Stancho Vaklinov's Excavations North of Pliska's Citadel),* Приноси към българската археология 12 (2022), p. 21–47.

KORNIENKO 2019 – В. В. Корніенко, *Корпус графіті Софії Київської*, Частина IX, *Північні Внутрішня та зовнішня галереї*, Київ, 2019.

KOSTOVA 1994–1995 – Р. Костова, *За библейския смисъл на един ранносредновековен символ*, in: *Българите в Северното причерноморие*, Том III, ВеликоТърново, 1994, p. 81–101.

KOSTOVA 1996a – Р. Костова, *Център и периферия в Равненския манастир (По археологически данни),* in: Светогорска обител Зограф II, София, 1996, p. 221–243.

KOSTOVA 1996b – Р. Костова, *Една хипотеза за поклонничеството в България*, Българите в Северното Причерноморие 5 (1996), p. 149–175.

MALINGUDIS 1979 – Ph. Malingudis, *Die mittelalterlichen kyrillischen Inschriften der Hämus-Halbinsel*, 1, *Die bulgarischen Inschriften*, Thessaloniki, 1979.

MEDYNTSEVA 2019 – А. А. Медынцева, *Надпись № 3 X в. из Мурфатлара (с. Басараби, Румыния)*, Краткие сообщения Института археологии 257 (2019), p. 291–303.

MOUSSAKOVA 2016 – E. Moussakova, *The Dragon/Snake motif in the Illuminated Old Glagolic manuscripts*, Slovo 66 (2016), p. 139–163.

PARASCHIV-TALMAȚCHI *et alii* 2020 – C. Paraschiv-Talmaţchi, A. Stănică, C. Șova, G. Custurea, *Mixobarbarii din Dobrogea în contextul lumii byzantine (secolele VI–XIII)/Mixobarbaroi from Dobruja in the context of the Byzantine world (6th–13th century)*, Cluj-Napoca, 2020.

POPKONSTANTINOV 1977 – К. Попконстантинов, *Два старобългарски надписа от скалния манастир при с. Крепча, Търговищки окръг*, Археология 19/3 (1977), p. 17–24.

POPKONSTANTINOV 1996 – К. Попконстантинов, *Прабългарските имена от манастирите при Мурфатлар и Равна*, Българите в Северното Причерноморие. Изследвания и материали 5 (1996), p. 101–109.

POPKONSTANTINOV 2019 – К. Попконстантинов, *Отпечатъци в българската писмена традиция (по епиграфски данни)*, in: *И. Ю. Стрикалов* (ed.), *Звучат лишь Письмена. К юбилею Альбины Александровны Медынцевой*, Москва, 2019, p. 367–397.

POPKONSTANTINOV, KRONSTEINER 1994 – K. Popkonstantinov, O. Kronsteiner, *Altbulgarischen Inschriften*, Bd. 1, [*Die Slawischen Sprachen, 36*], Salzburg-Wien, 1994.

SLAVOVA 1985 – Т. Славова, *Таблица на буквите от първобългарски, византийски и старобългарски кирилски надписи (IX–XI в.)*, *Кирило-Методиевска енциклопедия*, 1, София, 1985.

SMYADOVSKI 1993 – Ст. Смядовски, *Българска кирилска епиграфика IX–XV век.*, Studia Classica 1, София, 1993.

STANILOV *et alii* 2007 – Ст. Станилов, В. Григоров, М. Инкова, А. Аладжов, С. Иванов, И. Кънев, Д. Рябовянов, *Тайни ходници северно от Цитаделата в Плиска, Археологически открития и разкопки за 2006 г.*, София, 2007.

STANILOV, ALADZHOV 2011 – Ст. Станилов, А. Аладжов, *Археологически разкопки на обект Кръгла каменна площадка*, in: *Археологически открития и разкопки за 2010 г.*, София, 2011.

THIERRY 1966 – N. Thierry. *Le costume épiscopal byzantin au IXe du XIIIe siècle d'après les peintures dates (miniatures, fresques)*, Revue des études byzantines 24 (1966), p. 308–315.

TOTOMANOVA 2014 – А. -М. Тотоманова, *Единството на българския книжовен и некнижовен език през X–XI в.*, in: К. Попконстантинов, А. М. Тотоманова (eds.), *Епохата на българския цар Самуил. Език и писменост*, София, 2014, p. 79–173.

ZALIZNYAK 2004 – А. А. Зализняк, *К изучению древнерусских надписей*, in: *Новгородские грамоты на бересте (из раскопок 1997–2000 г.)*, XI (2004), Moskva, p. 280–281.



1



2

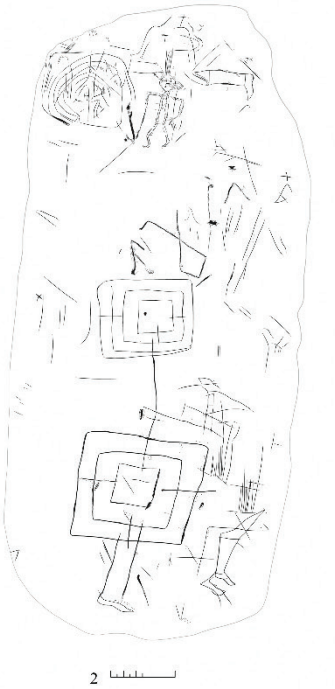


3

Fig. 1. 1 Aerial photo of the Inner city of Pliska (photo Stanimir Stoychev); 2–3 Ceramic fragment with rune-like inscription from the SE part of the Inner city of Pliska (photo Andrey Aladzhov).



1



2



3

Fig. 2. 1 A part from the Round Stone Platform in Pliska with location of graffito № 2 (photo Andrey Aladzhov, 2010); 2–3 Graffito № 2 from the Round Stone Platform (photo Miglena Raykovska; drawings Miglena Raykovska and Evgenia Komatarova-Balinova).

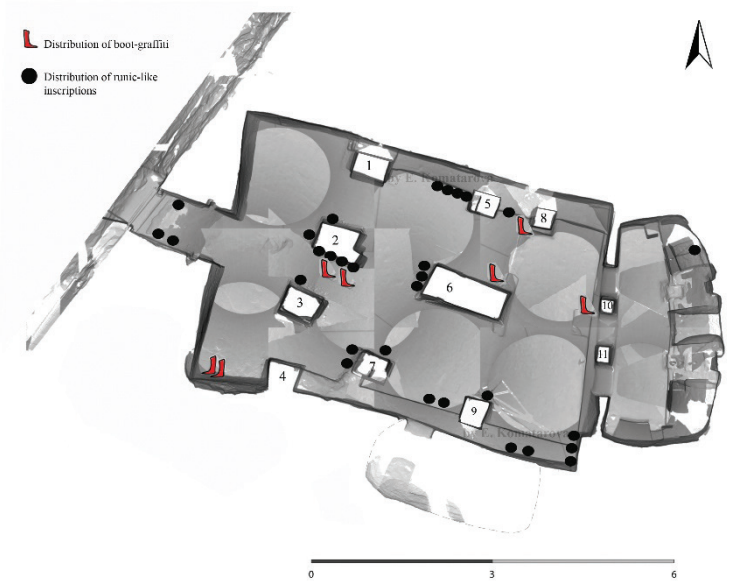


Fig. 3. Floor plan of Church № 4 in the Rock complex Murfatlar (authors Georgi Evtimov, Miglena Raykovska, Laboratory on 3D Digitization and Microstructure Analysis, IICT-BAS); additions: distribution of the boot-graffiti and rune like inscriptions (by Evgenia Komatarova-Balinova).



Fig. 4. East-west axes of Church № 4 and the rooms of Church № 3 (authors Georgi Evtimov, Miglena Raykovska, Laboratory on 3D Digitization and Microstructure Analysis, IICT-BAS, additions: Evgenia Komatarova-Balinova).



Fig. 5. Graffiti at the south face of pillar № 2 (photo Miglena Raykovska).

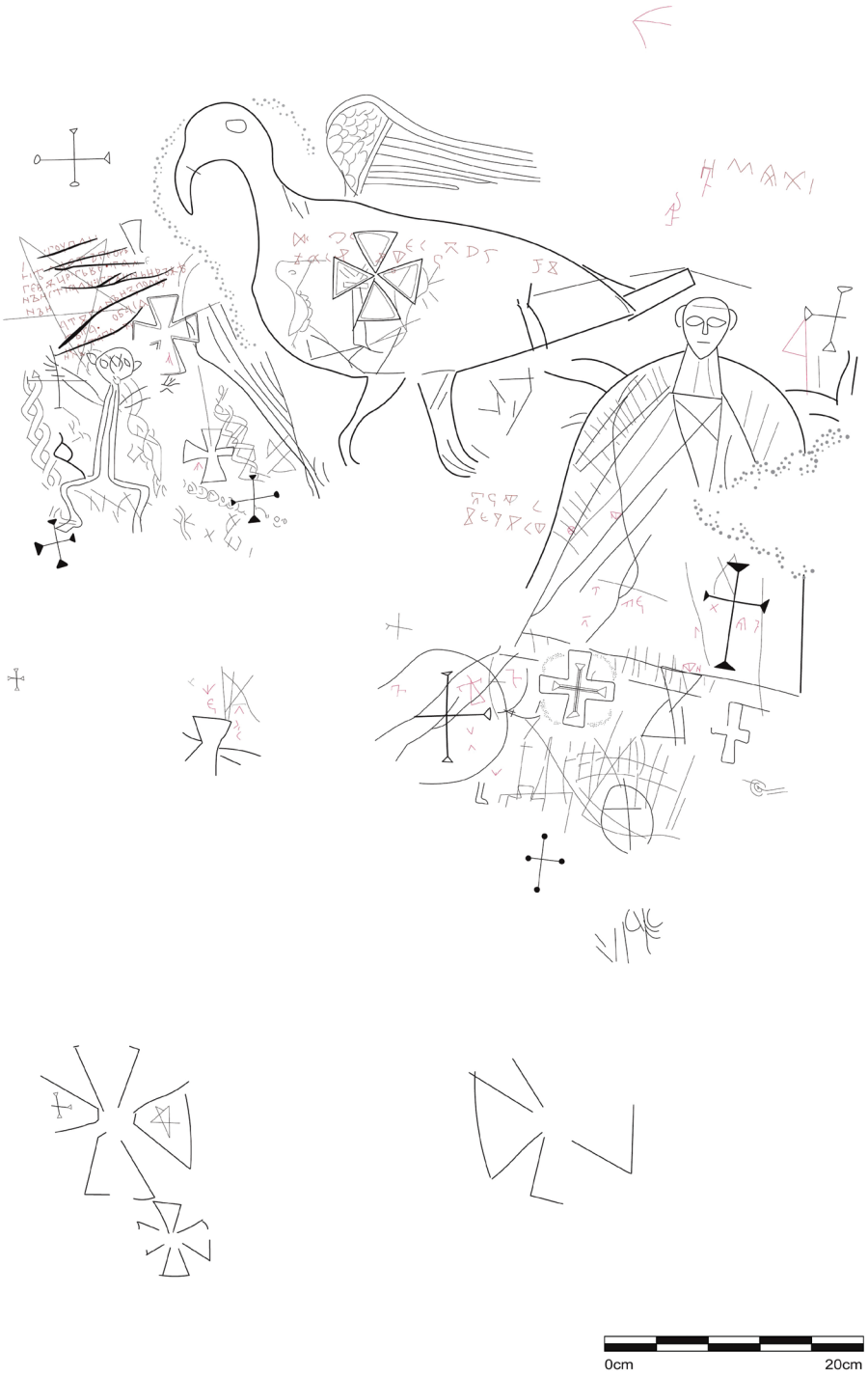


Fig. 6. Drawing of the graffiti at the south face of pillar № 2 (drawing Miglena Raykovska, Nina Stoilova, Evgenia Komatarova-Balinova, Antoaneta Granberg).



Fig. 7. The first anthropomorphic figure and the so-called donor inscription at the left side of the south face of pillar № 2 (drawing Miglena Raykovska, Nina Stoilova, Evgenia Komatarova-Balinova, Antoaneta Granberg). [Note: The drawing of the inscription presented in Fig. 6 and Fig. 7 is a result of analysis of archaeological documentation, made after professor Yavor Miltenov passed away. There are, as a result of this, slight differences between the drawing and professor Miltenov's interpretation].



Fig. 8. Graffiti at the south face of pillar № 5 (photo Miglena Raykovska; drawing Miglena Raykovska, Evgenia Komatarova-Balinova).



1 2

Fig. 9. 1- 2 The second anthropomorphic figure at the right side of the south face of pillar № 2 and the Cyrillic inscription above it (photo Miglena Raykovska; drawing Miglena Raykovska, Nina Stoilova, Evgenia Komatarova-Balinova, Antoaneta Granberg).

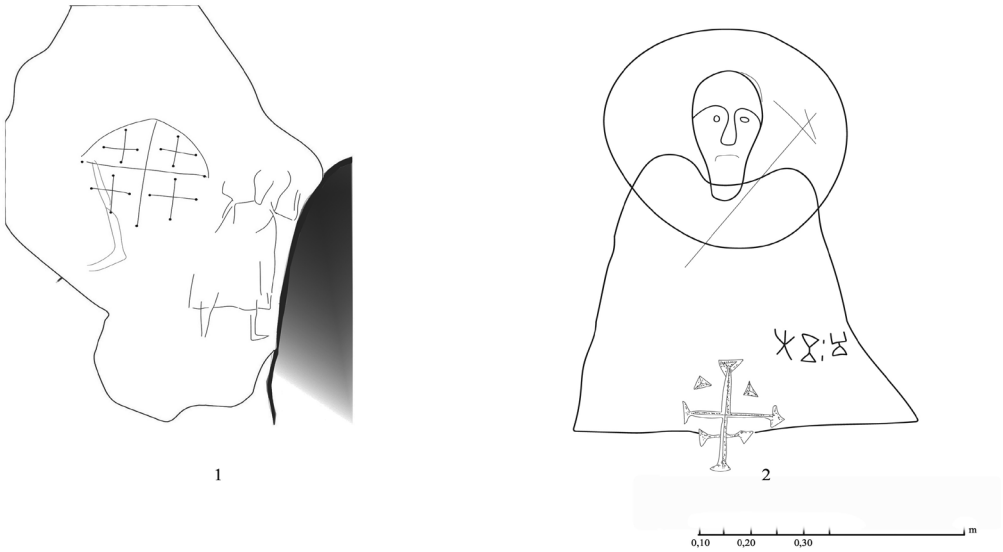


Fig. 10. 1 An image of a saint from the south wall of Church № 3, 2. An image of a saint from chapel E5 (drawings Miglena Raykovska, Evgenia Komatarova-Balinova)



Fig.11. Boot-graffiti from: 1–2 the south face of pillar № 2 in Church № 4, 3. Crypt № 1, to the left of the entrance of Crypt № 2, 4. The north wall of chapel 2 in Church № 3 (photo Miglena Raykovska).

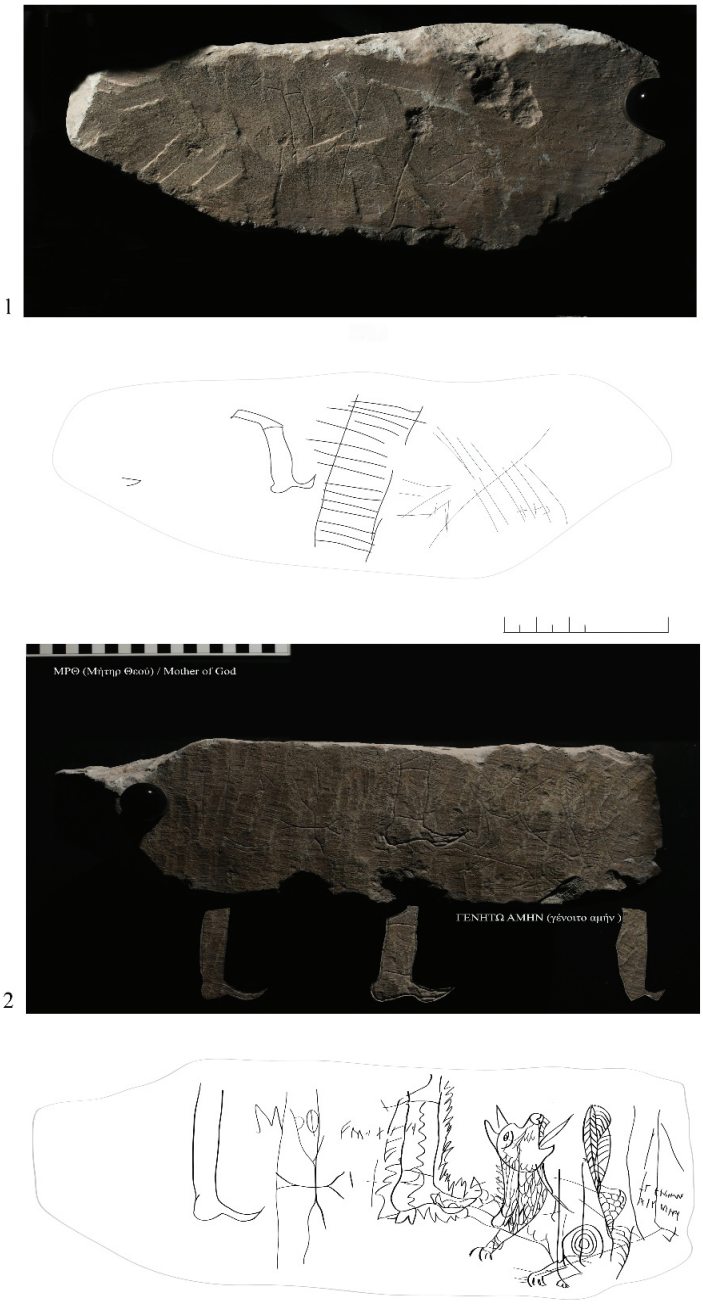


Fig. 12. 1–2 Graffiti from the "Theotokos" monastery at Ravna, Provadia district, Bulgaria (photos Miglena Raykovska; drawings Miglena Raykovska, Evgenia Komatarova-Balinova).

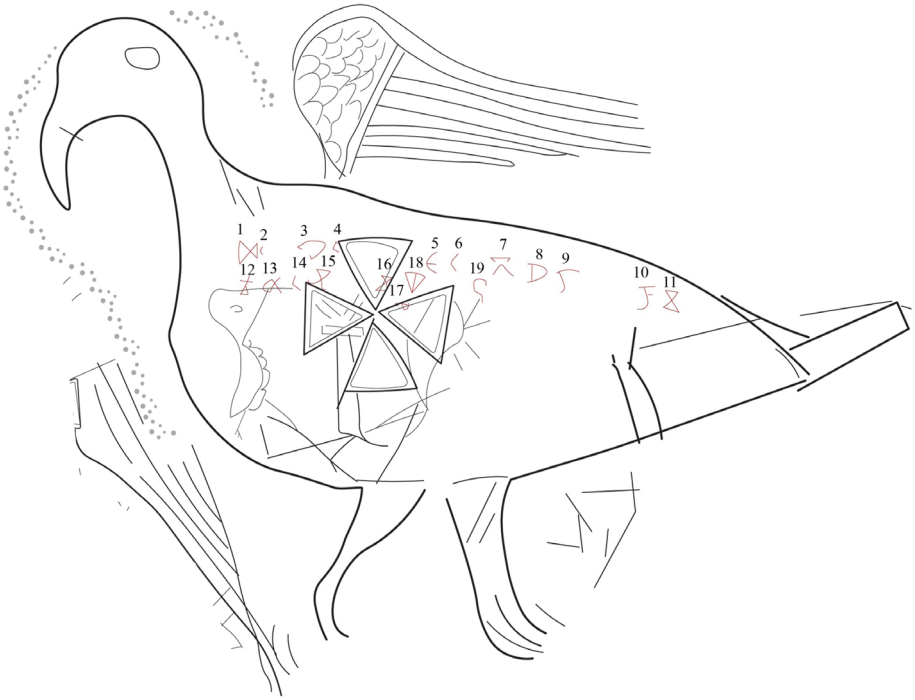


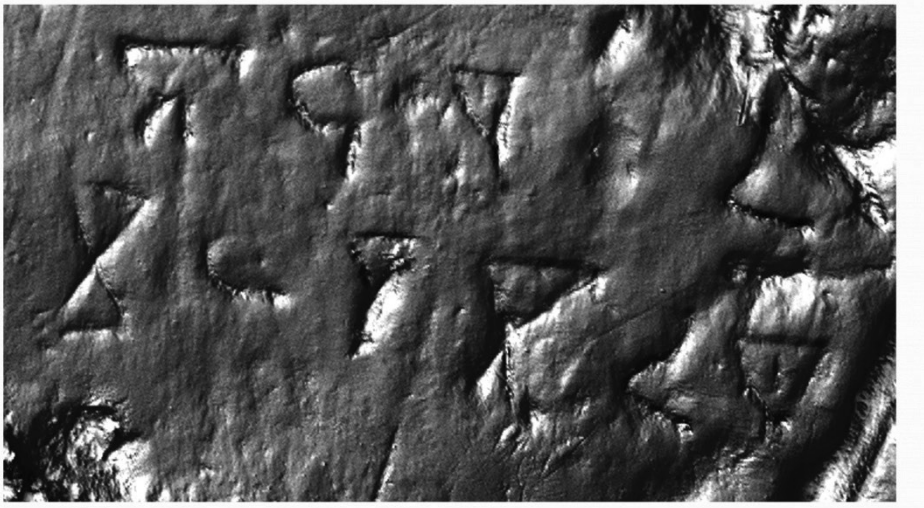
Fig. 13. The image of the bird at the central part of the south side of pillar № 2 and the first (with numbering of the signs) and the second rune-like inscriptions (photo Miglena Raykovska; drawing Miglena Raykovska, Evgenia Komatarova-Balinova).



Fig. 14. Graffiti at the left side of the altar at Church № 3 (photo Miglena Raykovska).



1



2

Fig. 15. 1 Detailed photo of the first rune-like inscription at the south side of pillar № 2; 2 Detailed photo of the second rune-like inscription at the south side of pillar № 2 (photo Miglena Raykovska).



Fig. 16. Detailed photo of the rune-like inscription from the north wall of Church № 4 with the repeating signs from those of the first rune-like inscription at the south side of pillar № 2 (photo Miglena Raykovska; additions Evgenia Komatarova-Balinova).

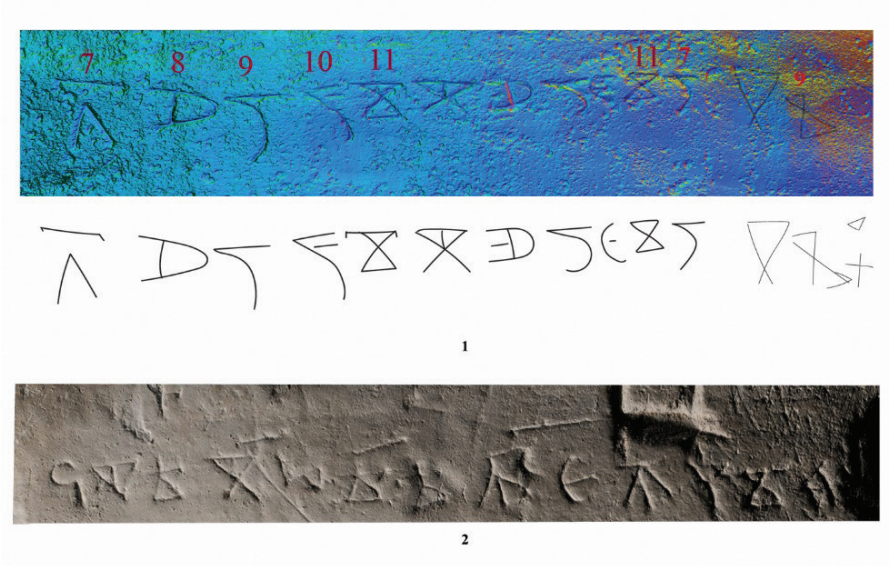


Fig. 17. 1 Detailed photo of the rune-like inscription from the south wall of Church № 4 with the repeating signs from those of the first rune-like inscription at the south side of pillar № 2; 2 Detailed photo of the rune-like inscription from the west side of pillar № 6 with the repeating signs from those of the second rune-like inscription at the south side of pillar № 2 (photo Miglena Raykovska; additions and drawings Evgenia Komatarova-Balinova).



1



2

Fig. 18. 1 South side of pillar № 1; 2 West side of pillar № 4 in Church № 4 (photos Evgenia Komatarova-Balinova).

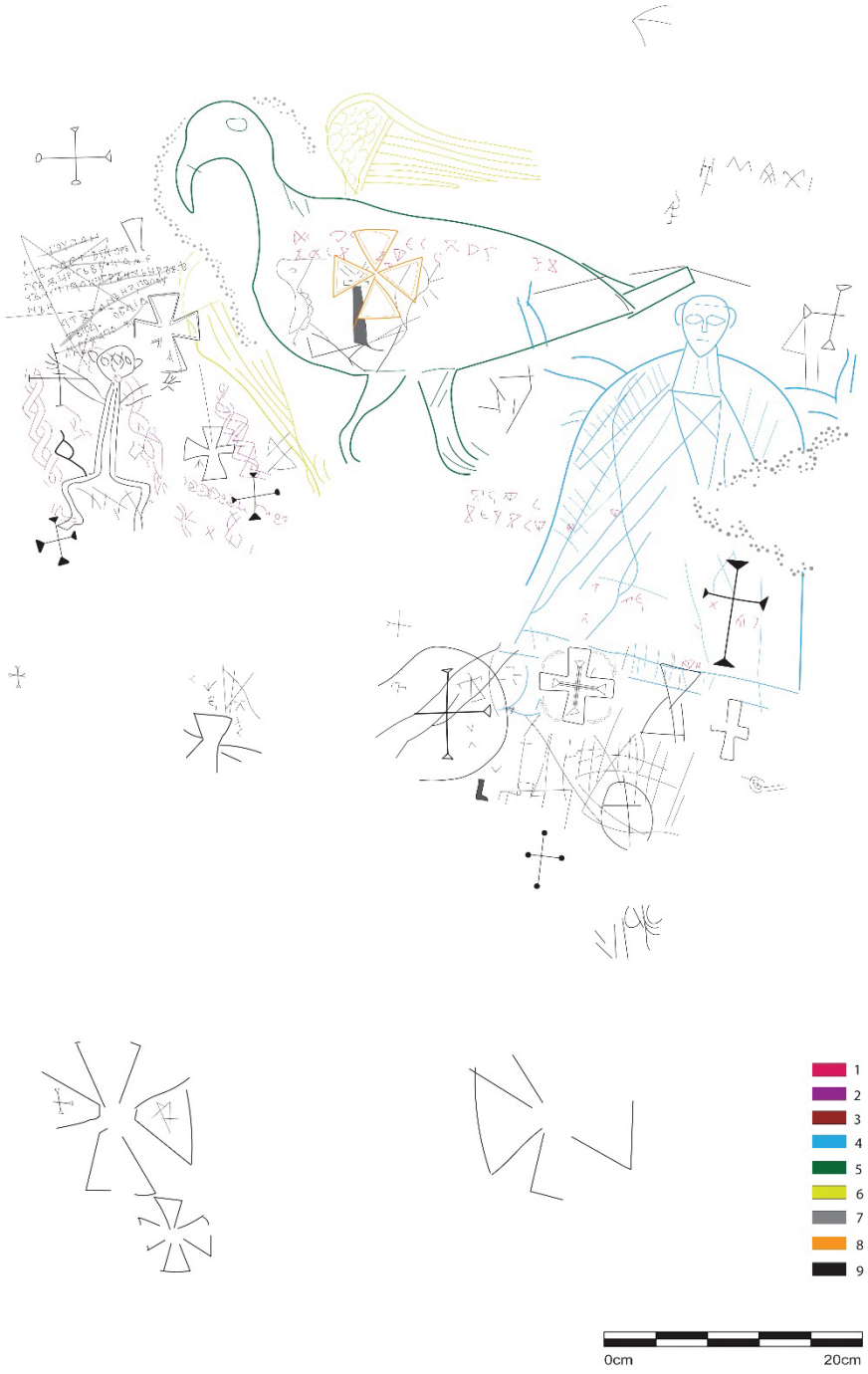


Fig. 19. Relative chronology of the graffiti at the south side of pillar № 2 in Church № 4 (authors Evgenia Komatarova-Balinova, Nina Stoilova).

A SETTLEMENT FROM THE LATE MIDDLE AGES NEAR VRASHKA CHUKA, VIDIN REGION, NORTHWEST BULGARIA

Elena VASILEVA[*]

Cuvinte-cheie: *perioada romană, Evul Mediu târziu, așezare, obiecte de podoabă, monede.*

Keywords: *Roman period, Late Middle Ages, settlement, adornments, coins.*

Rezumat: *Situl 1/1000 a fost cercetat în contextul construirii gazoductului Balkan Stream, în 2019. Situl acoperă mai multe perioade: epoca bronzului și începutul epocii fierului, perioada romană, Evul Mediu și Evul Mediu târziu. Materialele arheologice și structurile care pot fi datate în perioada otomană (secolele XV–XVII), pe baza materialului ceramic și a multor alte descoperiri, au apărut în principal în partea de vest a sitului și sunt probabil locuințe temporare. Au fost cercetate două locuințe, două cuptoare metalurgice și numeroase gropi. S-au descoperit numeroase obiecte de metal, datate în această perioadă. Printre acestea, podoabele sunt deosebit de variate și impresionante: inele, cercei și pandantive pentru urechi, pandantive de diferite forme, monede perforate, piese de centură etc. Acestea sunt realizate în tehnici complexe, cum ar fi filigranul, granulația etc.*

Abstract: *Site 1/1000 was explored in connection with the construction of the Balkan Stream gas pipeline in 2019. The site spans several periods: the Bronze Age and the early Iron Age, the Roman period, the Middle Ages and the Late Middle Ages. Archaeological materials and structures that can be dated to the Ottoman period (15th–17th centuries), based on the ceramic material and many other finds, were found mainly in the western part of the site and are probably temporary dwellings. Two dwellings, two metallurgical furnaces and numerous pits were investigated. Numerous metal objects were discovered for this period. Among them, the variety of adornments is particularly impressive-rings, earrings and ear pendants, pendants of various shapes, pierced coins, belt pieces, etc. They are made in complex techniques such as filigree, granulation, etc.*

The object 1/1000 is located at the foot of the isolated height of Vrashka chuka, locality Baba Velika, land of Izvor village, Kula municipality (**Fig. 1**). During the archaeological rescue investigations in 2019, archaeological structures from the Middle Bronze Age, the Early Iron Age, the Roman period and the Late Middle Ages were investigated.

[*] Elena VASILEVA: National Archaeological Institute with Museum, Bulgarian Academy of Sciences, Sofia; e-mail: helengnom@gmail.com.

The Middle Bronze Age and Early Iron Age settlement traces identified during the archaeological investigations were from short-lived residential and economic establishments. A number of natural stone accumulations were noted, beneath which compact accumulations of archaeological material were examined. The diverse ceramic material sheds new light on the development of local cultures and their relations with neighbouring areas. Of particular interest for the early Iron Age is an excavated burial pit hewn into the natural rock. Pieces of burnt destruction, fragments of various pottery vessels and small pieces of charcoal were discovered in the pit, lying close together. At the western end of the pit, a fragmented funerary urn was discovered with the remains of a human person, burnt debris, charcoal, pottery, bones and stone balls. The materials from the early Iron Age find their parallels and match the characteristics of the early iron cultures in eastern Serbia. The results of the archaeological research have made a great contribution to the study of the development dynamics of the Bronze and early Iron cultures in this part of Europe.

Archaeological materials[1] and structures that can be dated to the Ottoman periods (15th–17th) centuries, based on the ceramic material and many other finds, were found mainly in the western part of the site and are probably temporary dwellings. Two dwellings, two metallurgical furnaces and numerous pits were investigated. Numerous metal objects were discovered for this period. Among them, the variety of adornments is particularly impressive-rings, earrings and ear pendants, pendants of various shapes, pierced coins, belt pieces, etc. They are made in complex techniques such as filigree, granulation, etc.

The information obtained from the studies relates the Bulgarian lands to the context of the early iron culture from the region NE Serbia, proves the well-developed culture of the Middle Bronze Age and antiquity, and also complements the available data on the developed mining in the region of NW Bulgaria, as well as the production of jewellery and other jewels, the circulation of coins, etc. during the Ottoman period.

This article also looks at the structures from the Late Middle Ages-kilns, dwellings, finds and ceramic material. The Iron Age structures were published by Zheni Vasileva[2]. Bronze Age structures are under print.

At this point it should be noted that all the structures recorded and investigated at this site are temporary settlements. This applies to all epochs. For this very reason they are not well preserved and, on this basis, full reconstruction is very difficult. Therefore, any over-interpretation is avoided. Therefore, more attention is paid here to the materials found during the survey.

Roman period

The Roman period of the site is represented by two structures-a dwelling and a pit. They are numbered 29 and 31. Structure No. 29 has a quadrangular shape, is aligned N-NW and S-SE and has the following dimensions: length 3.50 m and width 2.50 m. It is a dug out, the southern part of which is bordered by a natural stone

[1] The coins were determined by Rosen Peevski (National museum of history Sofia) and Prof. Konstantin Dochev (NAIM-BAS).

[2] VASILEVA 2022.

row and the north by a stone border and a grey-black layer interspersed with small stones. In its northwestern part, it is bordered by a natural mainland. A circular shape and a diameter of about 0.50 m were recorded on the discovery level. Two levels were noted in the structure, with pottery fragments from the Late Roman period, animal bones, charcoal, etc. (**Fig. 2**). A bone needle and a silver coin come from structure No. 29. Needle worked rib bone, ancient object, 1st–3rd century. Bevelled at one end, half of the circumference cut into triangles. Two graffiti, one is a straight human figure, schematic body with X in front of torso, arms raised. The second figure is that of a horseman galloping to the left with sword raised. The figures are rotated along the vertical of the bone, height 7.5 cm; width 1.9 cm; fat 0.27 cm; height in the figures–3.4/1.5 cm. This type of finds is discussed in detail in a publication by K. Koycheva. She defines these finds as flat needles and dates them within broad chronological limits-from the 4th to the 7th century. Observations on their distribution show a connection with domestic production, but the possibility that they were also used apotropaically is not excluded[3]. The coin is silver. It`s a Roman denarius of Emperor Lucius Verus (161–169 AD.). A small part of the coin is broken off. The reverse shows Concordia seated left (Ø 1.70/1.80 cm; W–2.41 g.). From this structure is also a ceramic vertebra for the spindle, secondary made from the base of a vessel; Ø 3.5 cm; thick 1.5 cm, and an iron knife, sharpened on one side, length length 6.5 cm; width 1.6 cm (**Fig. 2a**).

Immediately east of structure No. 29, structure no. 31 was discovered-a circular pit dug into the natural subsoil and dating from the Roman period (**Fig. 3**). No finds were found in this buried structure, but its proximity to structure No. 29 allows us to assign it to this chronological period.

The finds that refer to the Roman era are several coins. No other structures from the Roman period were discovered. Isolated coin finds provide evidence of settlement, albeit temporary on the site during this period (**Pl. 1**). The only very well-preserved coin is:

1. Roman Republican denarius of the magistrate L. Titurius, Lf. Sabinus from 89 BC. Averse: SABIN A T V., head of King Tatius to the right. Reverse: L. TITURI. Two Roman soldiers each carrying a woman to Sabinus; Ø 1.68/1.88 cm; W–3.62 g.

Unstruck provincial, copper coins, from the first half of the 3rd century are:

2. Coin, copper alloy, fragments broken off at the periphery, folded; Ø 2.06/2.28 cm, W–1.57 g.

3. Coin, copper alloy, Ø 1.5/1.7 cm; W–1.50 g.

4. Coin, copper alloy, Ø 1.35/1.45 cm; W–1.10 g.

From the end of the 3rd century come depersonalised antonyms:

5. Coin, copper alloy, Ø 1.8/1.9 cm; W–1.85 g.

6. Coin, copper alloy with a hole in the rim, Ø 1.8/1.94 cm; W–2.28 g.

7. Coin, copper alloy, with a hole to the side of the centre; Ø 2.00/2.10 cm; W–1.86 g.

From the first half of the 4th century:

8. Numus of Constantius II (347–355 AD.). Type: Soldiers with standard; Ø 1.34/1.55 cm; W-0.94 g.

[3] KOYCHEVA 1994.

Other finds from the 4th century include several impersonal coins:

9. Coin, copper alloy AE–4, Ø 1.40/1.60 cm; W–1.40 g.

10. Coin, copper alloy AE–4, Ø 1.28/1.38 cm; W-0.64 g.

11. Coin, copper alloy. Slide. Cut from centre to reverse; Ø 2.0 cm; W–2.83 g.

12. Coin, copper alloy, Ø 1.40/1.50 cm; W–1.51 g.

This temporary settlement is situated on the road between Bononia and Singidunum, namely at Vrshka Chuka, the most north–western pass of the Balkan Mountains (Haemus, Stara planina). It is possible that there is another larger and permanently inhabited settlement nearby.

Medieval period

No structures are known from the Middle Ages, but the few materials found indicate a settlement from the 13th to 14th centuries. It is indicated by the two Latin imitations-Coin, copper, Constantinople, series D-W, (1215–1250 AD.), type O; attachment hole; Ø 1.9/2.2 cm; W–1,08 g. (**Fig. 4.1**); Coin, copper, Constantinople, series D-W, (1215–1250 AD.), type O; attachment hole, Ø 2.12/2.60 cm; W–1.73 g. (**Fig. 4.2**) from the 13th century as well as the very well preserved coin of Andronicus II Paleologus, which were widely used in the kingdom of Vidin-Coin, copper alloy, Stamina of Andronicus II Paleologus (1282–1294 AD.). Struck in Thessaloniki in 1282–1305 AD.; Ø 2.33/2.50 cm; W–1.83 g. (**Fig. 4.3**).

Late Medieval Period

The survey in the eastern sector recorded some natural stone accumulations (limestone or sandstone) with faint traces of temporary occupation and a low concentration of archaeological material-pottery fragments, charcoal and shapeless pieces of plaster. The ceramic material consists mainly of vessels made of relatively purified clay with impurities of fine sand, with incised decoration characteristic of the period and sgraffito pottery characteristic of the 15th to 17th centuries.

Archaeological materials and structures that can be dated to the late medieval and Ottoman periods (15th–17th centuries) based on the ceramic material were found mainly in the western part of the site and have the character of temporary dwellings. This statement applies to structures from all recorded eras. A number of facts can be cited as evidence, such as: the thin cultural layer, the flat recorded rock masses, the environment unfavourable to life, namely numerous bogs and the absence of a spring or river nearby.

An example of this is Structure No. 17/Dwelling No. 2 (**Fig. 5**). Large limestones with an average size of 0.25 – 0.30 m were found delimiting a rectangular space and resting in a natural cairn to the southeast. The dimensions of the house are 7.30 × 3.80 m and are oriented from south to north. Inside the dwelling, an inhomogeneous layer with a high concentration of 15th–17th century ceramic material (**Pl. 2**), charcoal, animal bones, and single household objects can be observed: iron knives, blades, a drill and other metal objects as well as a bone handle with incised decoration, buttons, etc. (**Pl. 2a**).

Structure No. 30 is also a late medieval dwelling (**Fig. 6**). The interior consists of a fill of fine limestones, fragments of late medieval pottery, including floors and

walls in situ, animal bones and plaster fragments. In the NW corner, the outline rests on the rock (green sandstone). The natural formations-sandstone and horizontal stone lines crossing the site in SW-NW direction-were probably used in construction. In the corner SW there are lined nests of approximately oval shape (Ø 0.10-0.15 m, depth 0.10 m) and plaster around them. It is probably a wooden structure/shed hewn into the rock for better stability and lined with medium sized limestones. Of Structure No. 30/Dwelling No. 1, only two walls of limestone of different sizes have survived. The dwelling is built on the continental rock and it is probably only temporary.

In the same sector, two metallurgical furnaces-structures nos. 6 (**Fig. 7**) and 7 (**Fig. 7a**)-were recorded and investigated on the site. They are large, round patches of rotten earth. They are only preserved in the negative, which was clearly visible when the sections of the installations were made. Pieces of iron slag were found in both, and the ceramic material points them to the late Middle Ages.

Structure No. 18 is a fireplace. A patch of small stones, charcoal and a one-handled pot were found in the field (**Fig. 8**). The vessel is made of clay mixed with fine and coarse sand. The colour is smoky brown to grey-black. The bottom shows traces of cutting with a thread. The decoration consists of single straight incised lines on the neck, a belt of straight incised lines on the shoulders and a white engobe design on the neck, shoulders and handle. It dates from the beginning of the 15th century.

Pits and structures with the character of shallow excavations have been recorded on the site, the functions of which are not clear (**Fig. 9**). Their fills consist of charcoal, bones, ceramic fragments, iron slag, metal objects, knives, etc.

Numerous finds have been discovered from the time of the late Middle Ages, which we will discuss later in the text. The fact that such a large number of artefacts were found during the survey, most of which have exhibition value, indicates to us the importance of this settlement, which was obviously inhabited either seasonally or in connection with the nearby fair, which is mentioned in ethnographic sources. At the beginning of the twentieth century, the fair moved to the town of Kula (Adlje), 13 km from Vrashka Chuka[4].

The finds from the 15th and 17th centuries are, as mentioned above, large in quantity. They are over 60 coins, as follows:

Mehmed II (1451–1481 AD.) (Pl. 3)
1. Akçe, silver; Ø 1.0/1.1 cm; W-0.72 g.
2. Akçe, silver. Molten from burning; Ø 1.05/1.20 cm.
3. Mangir, copper alloy; Ø 1.40/1.65 cm; W–3.14 g.
4. Mangir, copper alloy; Ø 1.30/1.50 cm; W–2.55 g.
5. Mangir, copper alloy; Ø 1.1/1.2 cm; W-0.75 g.
6. Mangir, copper alloy; Ø 1.10/1.20 cm; W-0.75 g.

Bayazid II (1481–1512 AD.) (Pl. 3)
7. Akçe, silver; Ø 1.10/1.20 cm; W-0.73 g.
8. Akçe, silver; Ø 1.04/ 1.20 cm; W-0.70 g.

[4] KANITZ 1879.

9. Akçe, silver; Ø 1.00/1.04 cm; W-0.64 g.
10. Akçe, silver; Ø 1.00/1.06 cm; W-0.75 g.
11. Mangir, copper alloy; Ø 1.30/1.55 cm; W–1.58 g.
12. Mangir, copper alloy; Ø 1.05/1.15 cm; W–1.18 g.

Selim I (1512–1520 AD.) (Pl. 3)
13. Akçe, silver; Ø 1.10/1.18 cm; W-0.69 g.
14. Acçe-fourré, copper alloy, imitation of Selim I's; Ø 1.06/1.37 cm; W-0.44 g.
15. Akçe, silver; Ø 1.03/1.1 cm; W-0.56 g.
16. Akçe, silver; Ø 1.04/1.14 cm; W-0.55 g.

Süleyman I (1520–1566 AD.) (Pl. 4)
1. Akçe, silver; Ø 1.14/1.22 cm; W-0.68 g.
2. Akçe, silver; Ø 1.00/1.16 cm; W-0.68 g.
3. Akçe, silver; Ø 1.00/1.10 cm; W-0.71 g.
4. Manger, copper alloy; Ø 1.0/1.1 cm; W-0.63 g.
5. Akçe, silver; Ø 1.10/1.20 cm; W-0.68 g.
6. Akçe, silver; Ø 1.02/1.21 cm; W-0.64 g.
7. Akçe, silver. Hole to rim; Ø 1.12/1.30 cm; W-0.63 g.
8. Akçe, silver; Ø 1.19/1.21 cm; W-0.43 g.
9. Akçe, silver; Ø 1.04/1.14 cm; W-0.66 g.
10. Akçe, silver; Ø 1.00/1.15 cm; W-0.68 g.
11. Akçe, silver; Ø 1.00 cm; W-0.41 g.
12. Akçe, silver; Ø 0.9/1.08 cm; W-0.70 g.
13. Akçe, silver; Ø 1.10/1.15 cm; W-0.39 g.
14. Akçe, silver; Ø 1.10/1.05 cm; W-0.54 g.
15. Akçe, silver; Ø 1.00/1.05 cm; W-0.73 g.
16. Akçe, silver; Ø 1.15/1.22 cm; W-0.67 g.
17. Mangir, copper alloy; Ø 1.27/1.57 cm; W–2.55 g.
18. Mangir, copper alloy; Ø 1.58/1.62 cm; W–2.76 g.

Murad III (1574–1595 AD.) (Pl. 4)
19. Akçe, silver; Ø 0.95/1.10 cm; W-0.38 g.

Silver unknown akçes (16th c.) (Pl. 4)
20. Akçe, silver, with hole in the rim; Ø. 1.30/1.42 cm; W-0.43 g.
21. Coin, imitation of an Ottoman akçe-fourré. With hole in the rim; Ø 1.22/1.27 cm; W-0.64 g.

Copper alloy unknown mangirs from the late 15th and early 16th centuries (Pl. 4)
22. Mangir, copper alloy; Ø 1.10/1.15 cm; W-0.21 g.
23. Mangir, copper alloy; Ø 1.3/1.6 cm; W–2.61 g.
24. Mangir, copper alloy; Ø 1,04/1,30 cm; T–1,18 g.
25. Mangir, copper alloy; Ø 1.2/1.33 cm; W-0.40 g.
26. Mangir, copper alloy; Ø 1.32/1.65 cm; W–1.90 g.
27. Mangir, copper alloy; Ø 1.3/1.1 cm; W–1.18 g.

28. Mangir, copper alloy; Ø 0.92/1.15 cm; W–1.11 g.
29. Mangir, copper alloy; Ø 0.95/1.0 cm; W-0.26 g.
30. Mangir, copper alloy; Ø 1.00/1.10 cm; W-0.50 g.

Several later coins of Ahmed III (1703–1730 AD.), Mahmud I (1730–1754 AD.), Mahmud II (1808–1839 AD.) as well as Western European coins-early 18th century Austrian silversmiths and brass trade tokens of early 19th century German and Austrian companies were also found at the site.

The chronological overview of the coins generally shows that the pipeline route passes through a settlement of the late 15th century, which was intensively populated in the 16th century and was abandoned towards the end of the 18th century. There is probably a connection to a medieval settlement of the 14th century, which is indicated by the two Latin imitations from the 12th century as well as the very well-preserved coin of Andronicus II Paleologus, which were widely used in the kingdom of Vidin.

Without digressing unnecessarily, given the small area under investigation, I would suggest with greater certainty that the 16th–17th century settlement was depopulated by the departure of its inhabitants or was destroyed by the Kardschalis and the rebellion of Osman Pazvantoğlu in the late 17th century. This can be clarified on the basis of the other movable finds discovered during the investigation. I am inclined to suggest this dating because of the absence of the typical and numerous silver coins of Sultan Mahmud II (1808–1839 AD.), which are too numerous in Bulgarian lands.

As already mentioned, most of the finds date from the late Middle Ages. They are a large number of adornments typical of this period. Adornments are a constant and topical subject of archaeological research. They are important in solving a range of social and cultural problems. Not only are they a marker of society's taste, the level of aesthetic criteria, but in the context of scientific research they are one of the most important chronological reference points and researchers of different periods prefer them as objects of study. For a comparison of the finds found during the 1/1000 site survey, the late medieval adornments used in the dissertation[5], which were found in archaeological contexts on the territory of Bulgaria, are used as examples, as is the typology developed in the thesis.

The rings found at site 1/1000 represent a significant part of the finds. They are representative specimens typical of the period from the 15th to the 17th century and, more importantly, of the area in north-western Bulgaria where one of the largest jewellery-making workshops was located in that period. The school in Chiprovtsi[6] was known throughout the Empire and its production spread throughout the Balkan Peninsula.

The rings will be presented typologically as follows:

Type I-simple rings

The rings of this type are simply cast rings, usually made of copper, bronze or silver. Specimens made of bone or glass. Without or with decoration. They are open and closed. Some publications dealing with jewellery claim that these rings were

[5] VASILEVA 2019.
[6] SOTIROV 1984.

among the most common types of rings in both the Early and Late Middle Ages[7]. However, analysis of the available material in the necropolises studied shows that this was not the case at all in the period from the late 14th to the late 17th century. This type is hardly to be found among the grave finds. However, these rings are also found, albeit in small numbers, in necropolises dating to the 17th century. Specimens were found in "St. Archangels Michael and Gabriel" (Arbanassi), "Sv. Nicholas" (Poroishte village, Razgrad region), Cape Chirakman (Kavarna).

There is a ring of this type here (**Pl. 5.1**)-Ring, copper alloy. Open ring with thin ends and thickened central part. Unadorned; Ø 1.40/1.65 cm; width 0.8 cm.

Analogies: type "rings of group I", according to the classification of B. Pisarova[8]; E. Zechevich[9]; E. Maneva[10]; type I according to the classification of V. Grigorov[11]; type "banded rings" according to L. Dumitriu's classification[12]; Miloševiћ[13]; Bikić[14].

Type II-rings with profiled rings and tiles with/without decoration

These are solid specimens made of bronze or silver. Cast. The rings are profiled on the upper side, directly under the plate. Specimens are found with decoration on the ring and the plate. This type of rings is widely researched from Serbia and Macedonia. They date from the 13th to the 15th century, and in later variants up to the 17th century. Here this type is represented by four specimens: Ring, copper alloy. Deformed. Consists of a ring with a flat cross-section, the plate is raised on a low clear pillar of conical form. The plate is almost circular, flat with decoration of radial incisions towards the rim. 17th century; Ø 1.20/1.35 cm-tile; 0.6 cm-ring (**Pl. 5.2**); Ring, copper alloy. Closed ring. Narrower at the bottom, widening towards the plate. Visible decoration of wavy incisions. The plate is oval. Raised on a narrower rim than the ring. Decoration of incised ornament, similar to f, with elongated bands; Ø 2.3 cm; height 2.7 cm; width 0,72 cm (**Pl. 5.3**); Ring plate, bronze, with a small part of the ring preserved. Oval flat, small neck. Decoration of wavy horizontal lines; Ø 1.3/1.5 cm; width 1.3 cm (**Pl. 5.4**).

Analogies: Stancheva, Pisarova[15]; Maneva[16]; Dumitriu[17]; Ivaniћ[18]; Georgieva, Buchinski[19]; Nikolova, Robov[20]; Margos[21]; Maneva[22]-type: 'massive walls with

[7] MANEVA 1992, p. 83.
[8] PISAROVA 1988, p. 156, tab. I 1,2.
[9] ZEĆEVIĆ 2006, cat. No 40–42.
[10] MANEVA 1992, T. 75, 86/19, 93/14, 93/15.
[11] GRIGOROV 2007, fig. 57, 1–3.
[12] DUMITRIU 2001, III.1.1.1. tab. 5/1–4.
[13] MILOŠEVIĆ 1990, cat. no. 81.
[14] BIKIĆ 2010, 91, p. 1–3.
[15] STANCHEVA, PISAROVA 1989, p. 106, fig. 8B.
[16] MANEVA 1992, cat. no. 58/31.
[17] DUMITRIU 2001, tabs 16/8, 82/13.
[18] IVANIĆ 1995, p. 37, cat. no. 91, p. 39, cat. no. 100.
[19] GEORGIEVA, BUCHINSKI 1959, tab. XVIII, fig. 10.
[20] NIKOLOVA, ROBOV 2005, tab. XXX–9, 10,11, tab. XXX–1, 2, 4.
[21] MARGOS 1983, tab. XV, vol. 1, tab. XVl–4.
[22] MANEVA 1992, type: massive walls with adjusted decoration and profiling of the head and T. 96, P/6, P/10.

adjusted decoration and profiling of the head; Zečeviћ[23]; Miloševiћ[24]; Bajaloviћ-Hatsi-Peshiћ [25]; Radojkoviћ[26].

Type III-rings with profiled rings and profiled plate

These rings are composed of a thick, profiled ring, profiled plate, and a bud located opposite the plate. There are also found specimens with a profiled ring decorated with cassettes which are formed by removal of material and decorated with stylized branches. The tile is elliptical, decorated with floral motifs obtained by withdrawal and filled with green enamel. A form without decoration is mentioned by M. Stancheva and V. Pisarova, as it was placed in the 14th–15th centuries[27]. More rings without decoration are known from Serbia. The same form is found in two specimens from Macedonia. The dating of one specimen, found in the necropolis of Kratovo, is from the 14th–15th centuries, and of the other from the necropolis of the Church of St. Nikola" in Prilep, is 12th–14th century[28]. E. Maneva places the form generally in the 13th–15th c.[29]. Rings of this type have been found in the study of the one of the necropolises in the municipality of Bratya Daskalovi, Chirpan region[30]. The necropolis is dated to the 16th–19th centuries. Rings were included in the study, "St. Peter and Paul", "Sv. Ivan Rilski (Veliko Tarnovo), Archangels Michael and Gabriel (Arbanassi), Nedelkovo (Trun municipality). This ring type is represented here by four specimens: ring, bronze, cast, with triangular section of the ring. Smoothly thickening towards the plate, decoration of incised lines on the left and right of the ring. By slight beveling follows a high plate 0,4 cm. With elliptical shape tapering at the ends. Decoration of two Xs in the periphery and two I I I vertical lines in the centre or (X II X). Thickened bud at base of ring; Ø 2.2/2.5 cm; thick 1.1 cm (**Pl. 6.1**); Ring, copper alloy, part of the ring missing, small ladies or children. The ring consists of a flat plate merging into a plate tapering towards the tip. Decoration of incised spiral lines. Decoration of the plate-a vertical line and several incisions at acute angles to the main line. Geometric motif; ap. Ø 1.65/1.70 cm; thick 0.9 cm (**Pl. 6.2**); Ring, copper alloy, closed ring of equal width. Pyramid-shaped plate protruding from the ring. Shaped like a small circle. Decoration on the underside of the ring-large embossed bud. Shoulders with five horizontal incisions, a fifth incision crosses the base of the plate. Small vertical lines underneath. The decoration of the tile consists of two opposite spirals and an incised line along the entire circumference; Ø 2.2/2.6 cm; 1.0 cm; thick 0.2 cm; Ø of tile 1.0 cm (**Pl. 6.3**); Ring, bronze, thick ring, flat, semicircular section, passing into thickened shoulders and low cast plate. Bud at the bottom. Overall incised decoration. The tile has two zigzag horizontal lines, the shoulders with five transverse lines. Below with two opposite S-shaped motifs. The bud with radial incisions; Ø 2.3/2.42 cm; width1.0 cm; Ø tile 1.0/1.5 cm.

[23] ZEĆEVIĆ 2006, p. 110–111, cat. nos. 62, 138, 139, 141, 142, p. 107, cat. no. 82.
[24] MILOŠEVIĆ 1990, types 2, 3, 7, 53.
[25] BAJALOVIĆ-HADŽI-PEŠIĆ 1984, T.VIII–6.
[26] RADOJKOVIĆ 1969, cat. nos. 112, 113, 114, 117.
[27] STANCHEVA, PISAROVA 1989, p. 107.
[28] MANEVA 1992, tab. 96, 26/5 and tab. 93, 65/18.
[29] MANEVA 1992, p. 102.
[30] TONKOVA, IVANOV 2011.

Analogies: Stancheva, Pisarova[31]; Maneva[32]; Zečeviћ[33]; Miloševiћ[34]; Tonkova, Ivanov[35].

Type IV-rings with round, elliptical or square plate with/without decoration

These rings are solid specimens made of bronze or silver. The technique of manufacture is casting. The rings usually have a semicircular cross-section and are expanded into plates of various shapes (square, round, etc.) with or without decoration. As a type it has evolved from the earlier periods and in the Second Empire it is probably also the most common type of ring, which is mainly due to its easy and quick production. It is widespread in Serbia, Macedonia and Romania. L. Dumitriu defines this type as "rings with a flat shield", with a great variety of decorations consisting of simple incised lines, geometric and floral motifs, etc[36]. In all studies, this type of ring is dated in the wide range from the 12th to the 17th century, depending on the chronological framework of the site. Rings of this type were found during the excavation of the late necropolis (16th–19th century) in the municipality of Bratya Daskalovi, Chirpan region[37]. In the investigated necropolises are found in: Archangel Michael and Gabriel", "Nativity of Christ" (Arbanasi), "St. Dimitar", "St. Nicholas" (village of Poroishte, Razgrad region), "St. Nicholas" (village of Poroishte, Razgrad region). Ivan Rilski", "St. Peter and Paul" (Veliko Tarnovo), "St. Ilia" (Iliyantsi district, Sofia), Priboy (Pernik municipality), Vaksevo (Kyustendil municipality), Nedelkovo (Tran municipality), Nisovo (Ruse region), Chirakman (Kavarna municipality). Here this type is represented by five specimens: Ring, copper alloy, closed ring, thickened to the plate. Direct transition into an elliptical tile arranged along the length of the ring, without underlay. Vertical and horizontal incisions. Tile decoration of two spirals running in opposite directions with several vertical slashes. Deformed ring; Ø 2.1/2.53 cm; Ø tile 1.3/1.85 cm (**Pl. 7.1**); ring, bronze, cast together with the plate. Periphery of the plate in symmetrical floral grooves. Without decoration. Decoration below the shoulders, with bundles of incised lines; Ø 2.2/2.8 cm; width 1.4 cm (**Pl. 7.2**); Fragment of a bronze ring. The plate is cast with the ring. Oval without decoration; Ø 1.25/1.60 cm (**Pl. 7.3**); Ring, copper alloy, thin, closed ring, semicircular in cross-section. Leading into a round, flat plate. Decoration of incised lines angled to a central vertical line; Ø 1.9/2.1 cm; width 0.95 cm (**Pl. 7.4**); Ring, copper alloy, with elliptical cross-section. At the shoulders it widens and becomes an elliptical plate. Flat on top, traces of silver solder. Probably had an additional soldered decoration, now missing; Ø 2.1/2.2 cm; Ø of the plate 1.15/1.5 cm (**Pl. 7.5**).

[31] STANCHEVA, PISAROVA 1989, p. 107, v. 10/c, d.
[32] MANEVA 1992, tab. 96, 26/5 and tab. 93, 65/18.
[33] ZEĆEVIĆ 2006, type 7, cat. nos. 68, 69, 70, 71, 72, 73, 74.
[34] MILOŠEVIĆ 1990, p. 113, 115, 116, 118–163, 165, 166, 167, 168, 170, 171, 172.
[35] TONKOVA, IVANOV 2011, PIN 246, 71.
[36] DUMITRIU 2001, p. 36–39.
[37] TONKOVA, IVANOV 2011, p. 72.

Analogies: Zečeviħ[38]; Stancheva, Pisarova[39]; Maneva[40]; Dumitriu[41]; Ivaniħ[42]; Georgieva, Buchinski[43]; Nikolova, Robov[44]; Margos[45]; Tonkova, Ivanov[46].

Type IVA-rings with core/sheet metal plate

The rings of this type consist of a solid flat ring with a plate in heart or leaf shape. The pointed part is usually festooned. The plates usually have stylized decorations, including a human face on a specimen from Serbia[47]. This type is attested by a few finds in Serbia. The type appears in the late 14th-early 15th century. In the examined necropolises it is found in: Archangel Michael and Gabriel", "Birth of Christ" (Arbanassi), Nedelkovo (Tran municipality), cape Chirakman (Kavarna municipality), as it probably appeared later as a type on the Bulgarian territory. Here this type is represented by one specimen: Ring, bronze. Closed ring of uniform width. Decoration of three symmetrically arranged relief borders below and on the shoulders of the ring, two and one incised. The tile stands on a pyramidal, bevelled base. The flat rim is divided into eight petals. Imitation flower. On top a decoration of spirals, 4 arranged crosswise. Radial slashes. Incised band around the entire circumference, 17th–18th century; Ø of the ring: 2.4 cm; Ø of the plate 1.63/1.85 cm (**Pl. 8.1**).

Analogies: Zečeviħ[48]; Milošević[49]; Radojkoviħ[50]; Georgieva, Buchinski[51]; Sotirov[52].

In the present text we could not present all the finds, so we limited ourselves to individual specimens to illustrate the diversity of the adornments. And since we are on the subject of rings, will introduce three blanks for this kind of jewellery. The blanks are cast, but not finished. These finds indicate that there was production in this settlement, even if it was only temporary-casting for the making of a ring. Horseshoe-shaped. The flat transverse part has a hole. There is excess material on the periphery; height 3.45 cm; width 2.8 cm; thick 1.1 cm (**Pl. 8.2**); Ring blank, lead. Open ring with flat cross-section. The plate is solidly elliptical with incisions on the periphery. Deformed; Ø 1.4/1.9 cm; height 1.8 cm (**Pl. 8.3**); Ring blank, bronze. Cast in a mould and undecorated; height 2.1 cm; width 1.4 cm (**Pl. 8.4**).

The adornments on the site are also represented by neck ornaments, as well as components of various pieces of adornments (earrings, bracelets, strings), which are known as 'trepki' (shakes). These will be briefly introduced as follows: Medallion,

[38] ZEĆEVIĆ 2006, cat. no. 58.
[39] STANCHEVA, PISAROVA 1989, p. 106, 8B.
[40] MANEVA 1992, cat. no. 58/31.
[41] DUMITRIU 2001, tabs 16/8, 82/13.
[42] IVANIĆ 1995, p. 37, cat. no. 91, p. 39, cat. no. 100.
[43] GEORGIEVA, BUCHINSKI 1959, tab. XVIII, fig. 10.
[44] NIKOLOVA, ROBOV 2005, tab. XXX–9, 10,11, tab. XXX–1, 2, 4.
[45] MARGOS 1983, tab. XV, vol. 1, tab. XVl–4.
[46] TONKOVA, IVANOV 2011, PIN 108–2, 183, 205.
[47] MILOŠEVIĆ 1990, cat. no. 190.
[48] ZEĆEVIĆ 2006, type 6, cat. no. 65, 66.
[49] MILOŠEVIĆ 1990, cat. nos. 188, 189, 190, 191, 192.
[50] RADOJKOVIĆ 1969, no. 152.
[51] GEORGIEVA, BUCHINSKI 1959, p. 111, tab. XVIII, model 7.
[52] SOTIROV 1984, fig. 105.

bronze. Shape of an openwork cross. Flat with four symmetrical holes in the corners. Four buds at the periphery. In the upper part a loop through which a wire ring is pierced. The cross is incised in the centre. Unicoloured; height 2.2 cm; width 1.5 cm; thick 0.2 cm (**Pl. 8.5**); Cross, lead. Flat square. Maltese type. With sharp busts extending from the centre to the rim. One of the busts had a suspension loop, but it is broken off. Flat, small, roughly cast; length 1.8/2.0 cm; thick 0.35 cm (**Pl. 8.6**). The shakes (trepki) are small plates cut into various shapes-triangular, diamond-shaped, round, etc. They are made of thin copper alloy sheet into which, after cutting, the desired number of holes are drilled for sewing or hanging (**Pl. 8.7**).

The information available and presented leads to the following conclusions: The gas pipeline passes through a settlement with the highest settlement intensity in the period from the early 15th to the 17th century. In the chronological periods recorded earlier (Bronze Age, Early Iron Age, Roman period and Middle Ages) the settlement of the site was apparently insignificant, and one should look for larger and more populated settlements nearby. This intensity in the Ottoman period can of course be seen as temporary or seasonal, as mentioned above. The presence of non-permanent residential buildings, the remains of hut furnaces and storage pits for various materials indicate that the settlement most probably either served the aforementioned fair or existed in connection with the road to the border zone that passed in the immediate vicinity. It is also likely that it was a small production centre, as evidenced by the various tools found-awls, axes, knives, wedges, whetstones, etc. At this stage of archaeological research in Bulgaria, a settlement of a similar character and from this period has not yet been investigated, so it is difficult to make a proper comparison.

BIBLIOGRAPHY

BAJALOVIĆ-HADŽI-PEŠIĆ 1984–1985 – M. Bajalović-Hadži-Peshić, *O lunulastim naushnitsama iz ostave XVII veka u Muzeju grada Beograda*, Zbornik Muzej primenje umetnosti 28–29 (1984/1985), p. 93–100.

BIKIĆ 2010 – V. Bikić, *Vizantijski nakit u Srbiji: Modeli i naslede*, Beograd, 2010.

GEORGIEVA, BUCHINSKI 1959 – S. Georgieva, D. Buchinski, *Staroto zlatarstvo vav Vratsa*, Sofia, 1959.

GRIGOROV 2007 – V. Grigorov, *Metalni nakiti ot srednovekovna Balgariya (VII–XI v.)*, Sofia, 2007.

DUMITRIU 2001 – L. Dumitriu, *Der mittelalterliche schmuck des unteren Donaugebietes im 11.–15. Jahrhundert*, Bucuresti, 2001.

IVANIĆ 1995 – B. Ivanić, *Nakit iz zbirke Narodnog muzeja od 15. do poćetka 19. veka. Katalog zbirke Umetnost pod turskom vlašću*, Beograd, 1995.

KANITZ 1879 – F. Kanitz, *Donau-Bulgarien und der Balkan. Historisch-geographisch-etnographische Reisestudien aus den Jahren 1860–1879: Bd. 1–3*, Leipzig, 1879.

KOYCHEVA 1994 – K. Koycheva, *Kostni izdeliya ot rannovizantiyskata epoha*, Godishnik na muzeite v severna Balgariya 9 (1994), p. 237–261.

MANEVA 1992 – E. Maneva, *Srednovekoven nakit od Makedonija*, Skopje, 1992.

MARGOS 1983 – A. Margos. *Kasnosrednovekovna tsarkva v s. Harsovo, Razgradski okrag*, Izvestiya na Narodniya muzey Varna 19/34 (1983), p. 133–141.

MILOŠEVIC 1990 – D. Milošević, *Nakit od XII do XV veka iz zbirke Narodnog Muzeja*, Beograd, 1990.

NIKOLOVA, ROBOV 2005 – Y. Nikolova, M. Robov, *Hramat na parvite Asenevtsi. Tsarkvata „Sv. Dimitar" vav Veliko Tarnovo*, Veliko Târnovo, 2005.

PISAROVA 1988 – V. Pisarova, *Srednovekovni prasteni ot fonda na Okrazhniya istoricheski muzey v Kyustendil*, Izvestiya na natsionalniya istoricheski muzey 7 (1988), p. 156–168.

SOTIROV 1984 – I. Sotirov, *Chiprovskata zlatarska shkola*, Sofia, 1984.

RADOJKOVIĆ 1966 – B. Radojković, *Srpsko zlatarstvo XVI i XVII veka,* Beograd, 1966.

STANCHEVA, PISAROVA 1989 – M. Stancheva. V. Pisarova, *Kolektsiya ot prasteni v muzeya za istoriya na Sofiya*, Serdika 2 (1989), p. 98–132.

TONKOVA, IVANOV 2011 – M. Tonkova, Y. Ivanov, *Trako-rimski dinastichen tsentar v rayona na Chirpanskite vazvisheniya, obshtina Bratya Daskalovi*, Sofia, 2011.

VASILEVA 2019 – E. Vasileva, *Nakitat prez XV-XVII v. ot balgarskite zemi*, Disertatsiya, 2019, *in print*.

VASILEVA 2022 – Zh. Vasileva, *The Early Iron Age pottery assemblage from site 1/1000 at the foot of Vrashka Chuka, northwest Bulgaria*, Bulgarian e-Journal of Archaeology 12/2 (2022), p. 183–215, doi:10.57573/be-ja.12.183–215.

ZEĆEVIĆ 2006 – E. Zećević, *Nakit Novog Brda. Iz Arheološke zbirke poznog srednjeg veka*, Beograd, 2006.



Fig. 1. Aerial photos of the gas pipe route and site 1/1000.

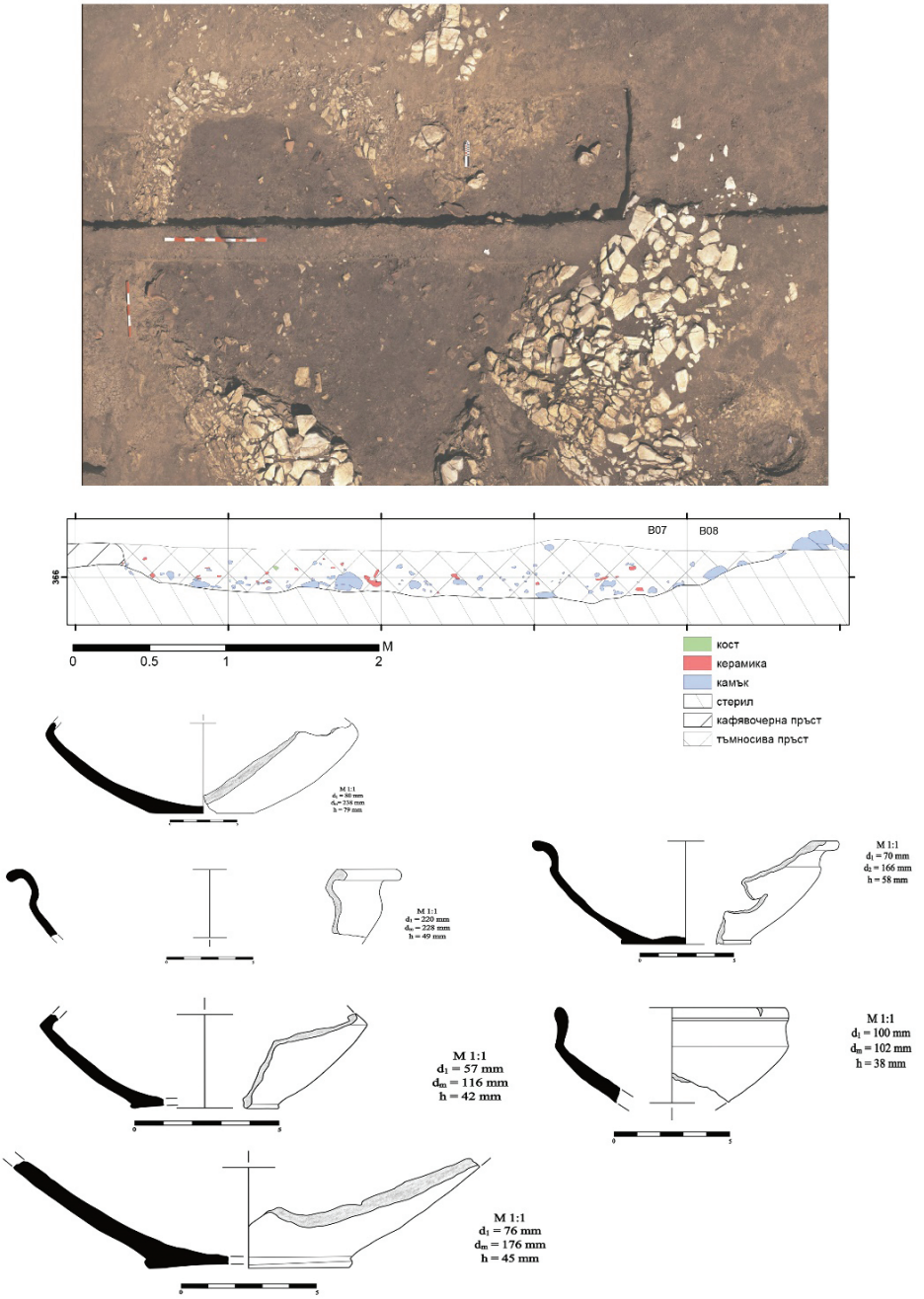


Fig. 2. Structure no. 29 of the Roman period, profile and pottery found.

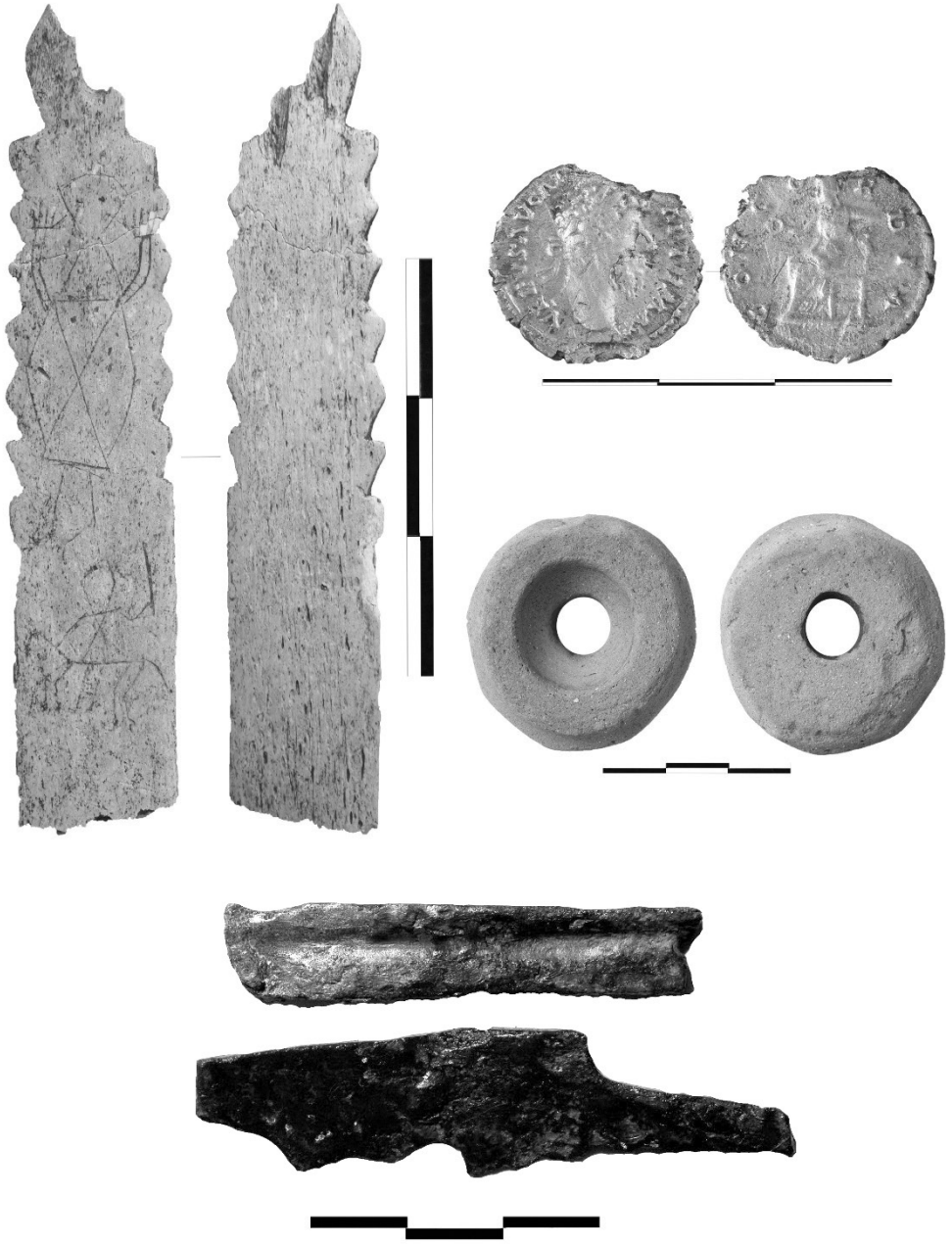


Fig. 2a. Finds from Structure no. 29-bone needle, ceramic spindle vertebra, silver coin and iron knife.



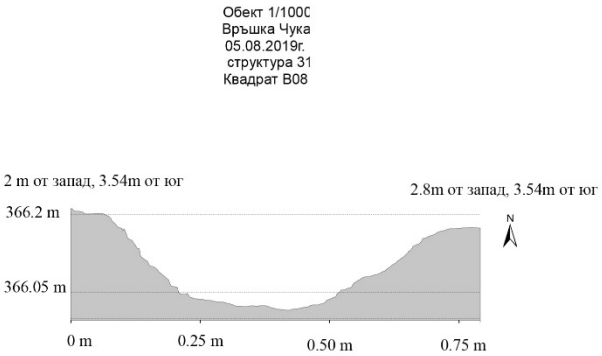


Fig. 3. Structure no. 31- pit from the Roman period.

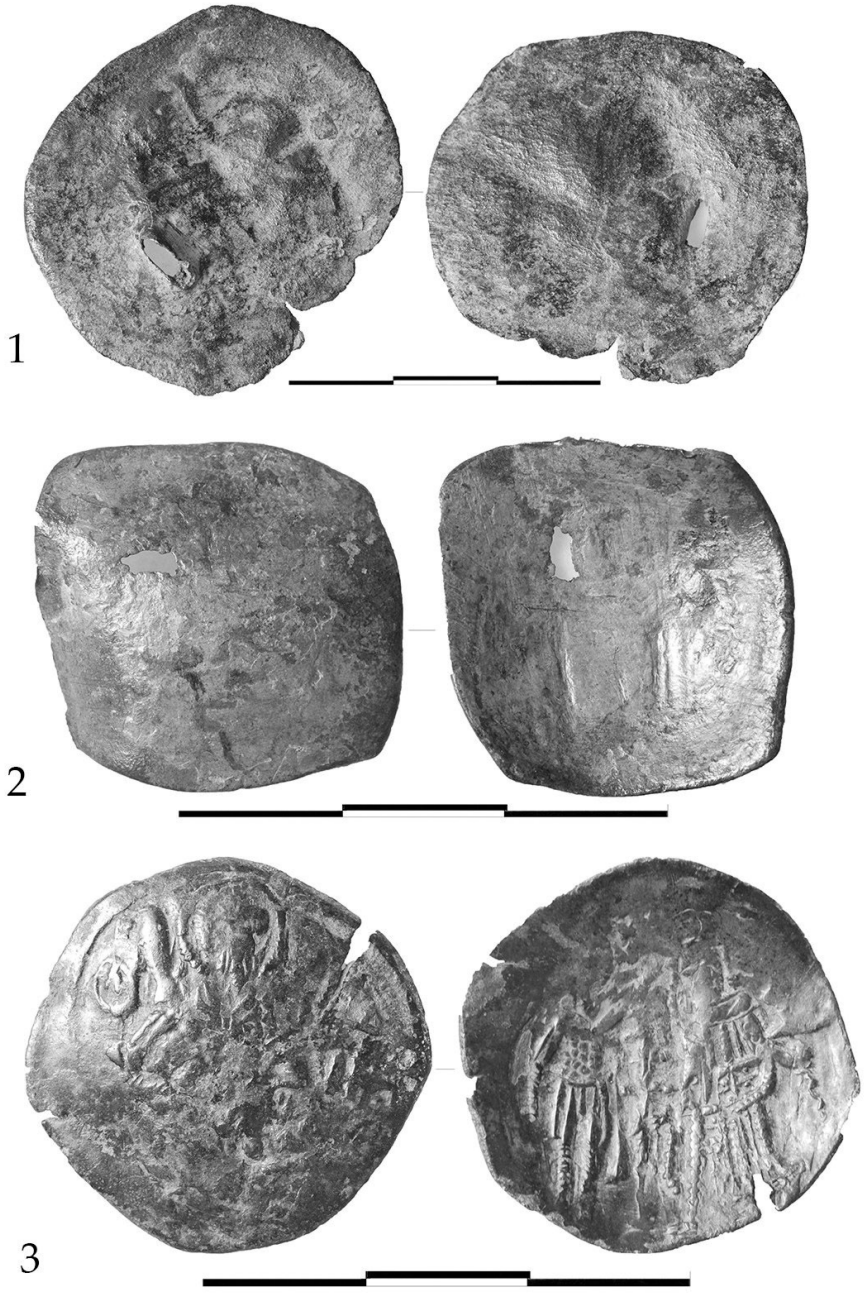


Fig. 4. Coins from 13 th–14 th centuries.

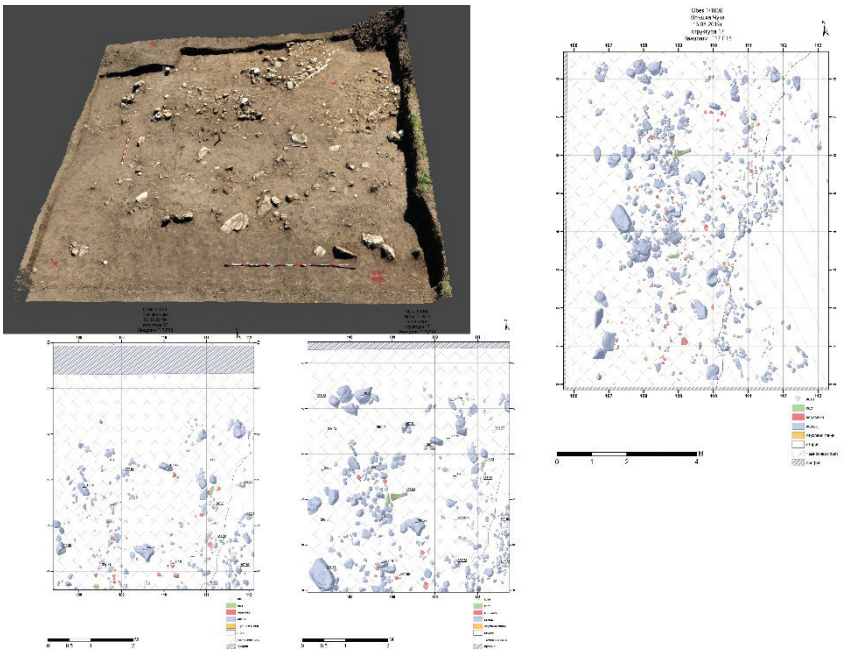


Fig. 5. Structure no. 17/Dwelling no. 2–15th–17th century.

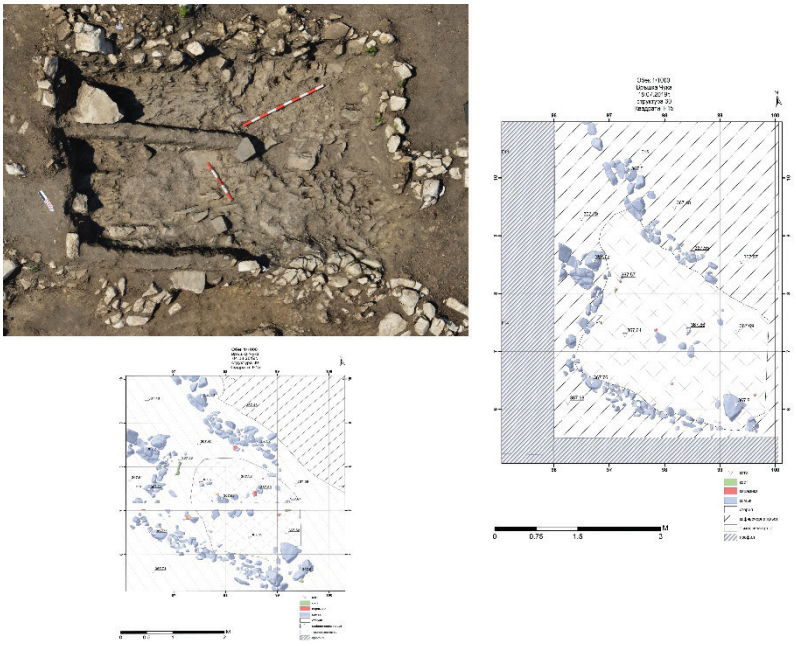


Fig. 6. Structure no. 30/Dwelling no. 1–15th–17th centuries.

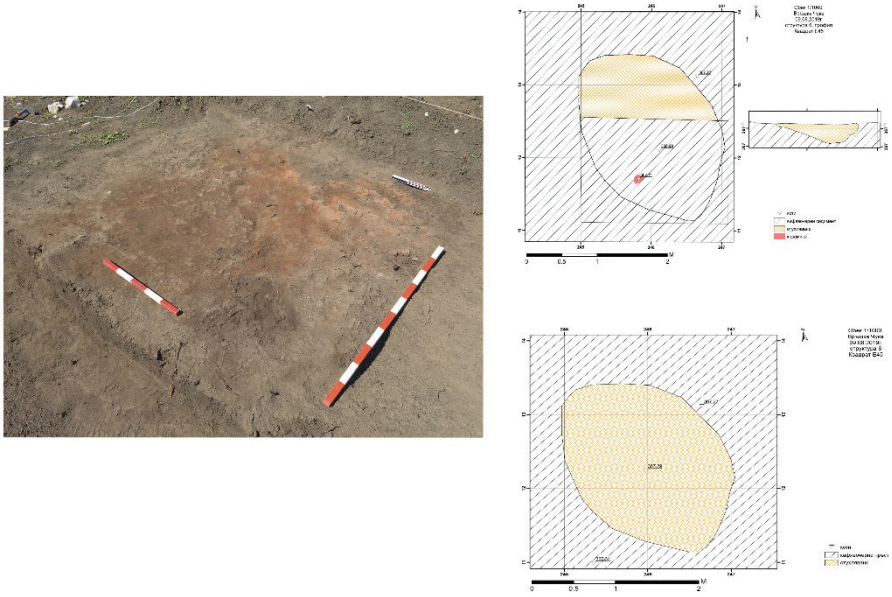


Fig. 7. Structure no. 6 metallurgical furnace.

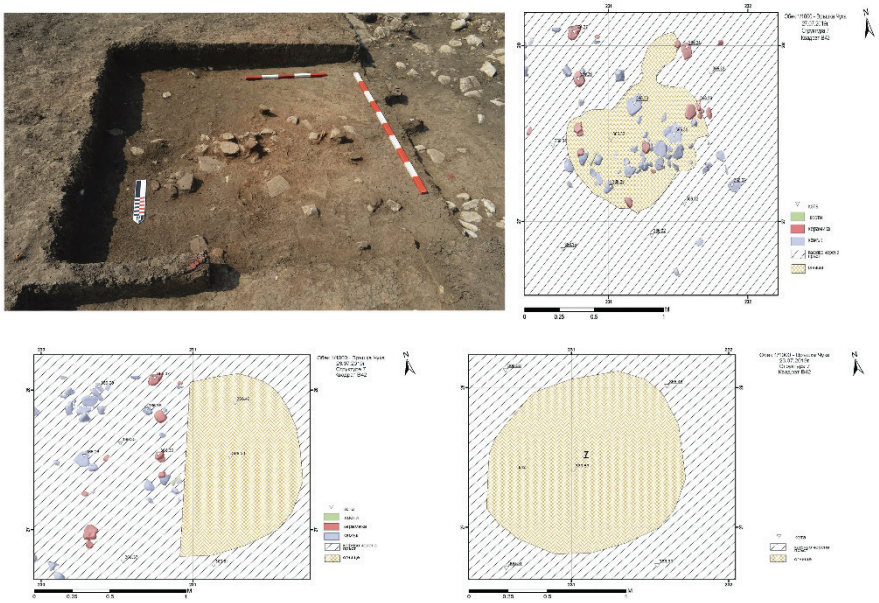


Fig. 7a. Structure no. 7 metallurgical furnace.



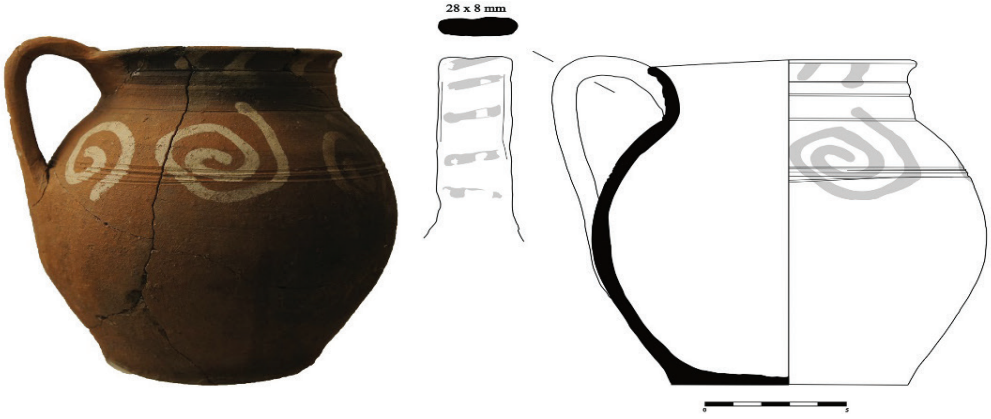


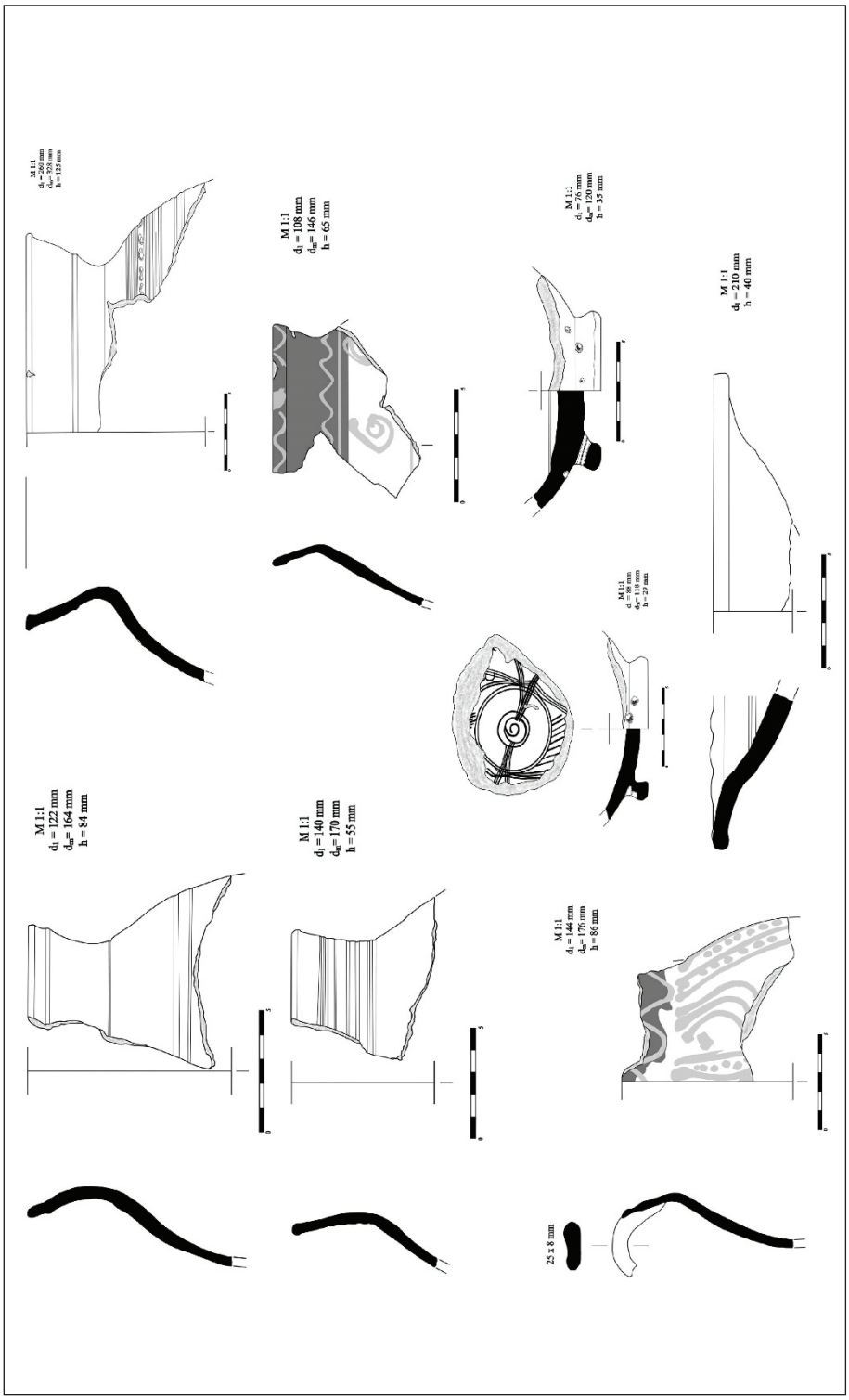
Fig. 8. Structure no. 18 A fireplace–15 th century.



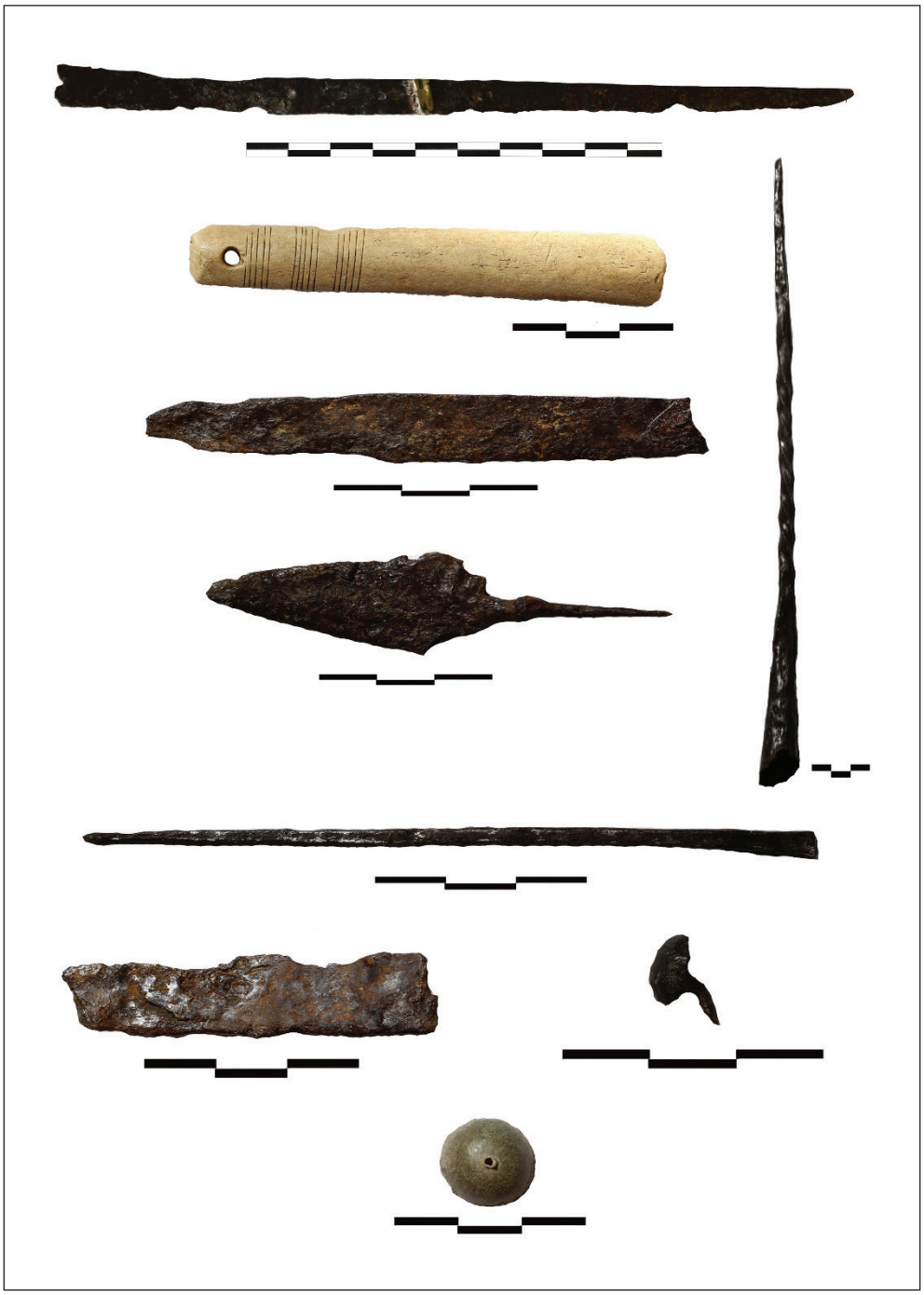
Fig. 9. A pit with materials from the 15th–17th centuries.



Pl. 1.


M 1:1
d1 = 269 mm
dm = 358 mm
h = 125 mm
M 1:1
d1 = 108 mm
dm = 146 mm
h = 65 mm
M 1:1
d1 = 270 mm
dm = 120 mm
h = 35 mm
M 1:1
d1 = 210 mm
h = 46 mm
M 1:1
d1 = 122 mm
dm = 164 mm
h = 84 mm
M 1:1
d1 = 140 mm
dm = 170 mm
h = 55 mm
M 1:1
d1 = 144 mm
dm = 176 mm
h = 86 mm
M 1:1
d1 = 260 mm
dm = 118 mm
h = 29 mm
25 x 8 mm

Pl. 2.



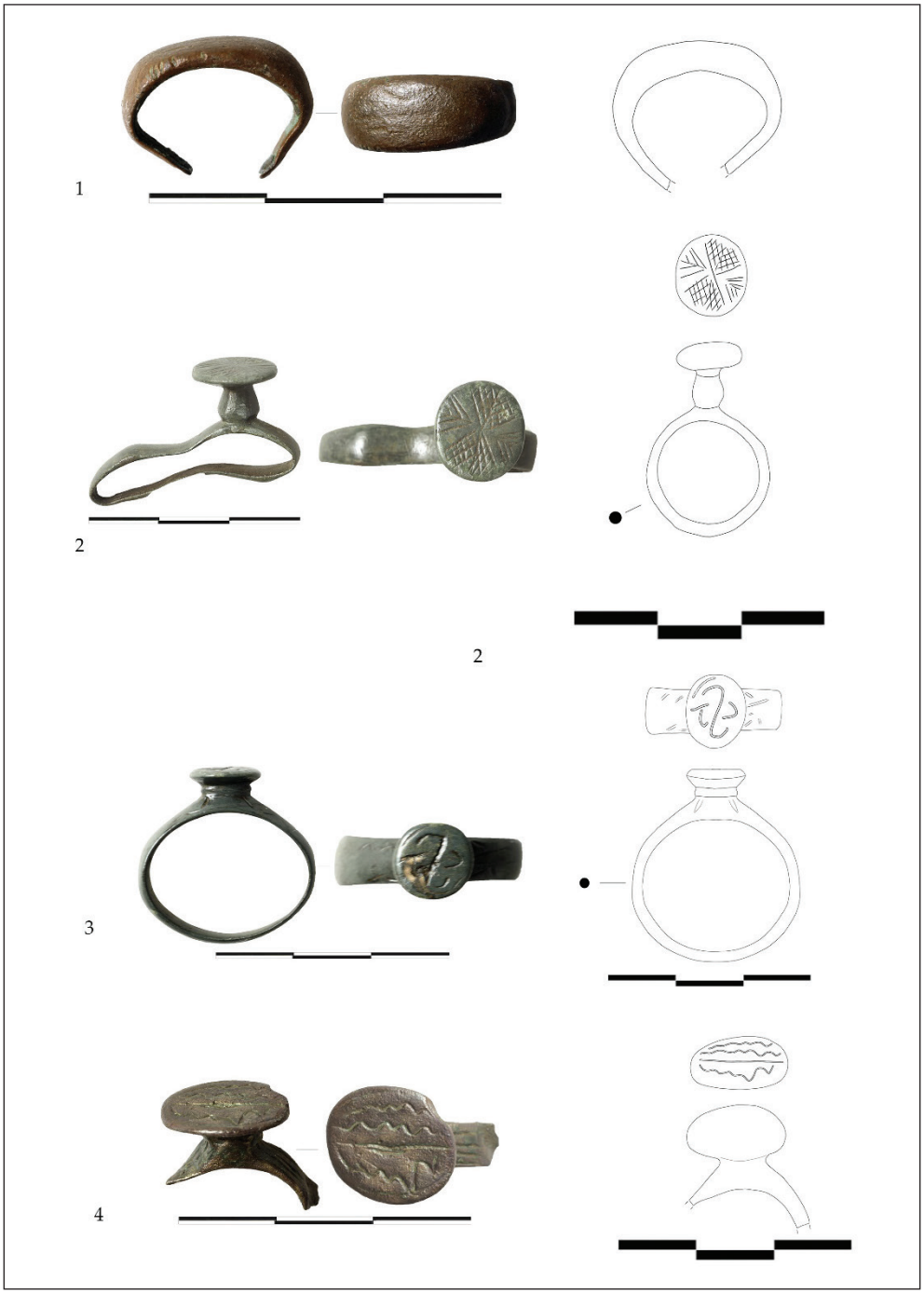
Pl. 2a.



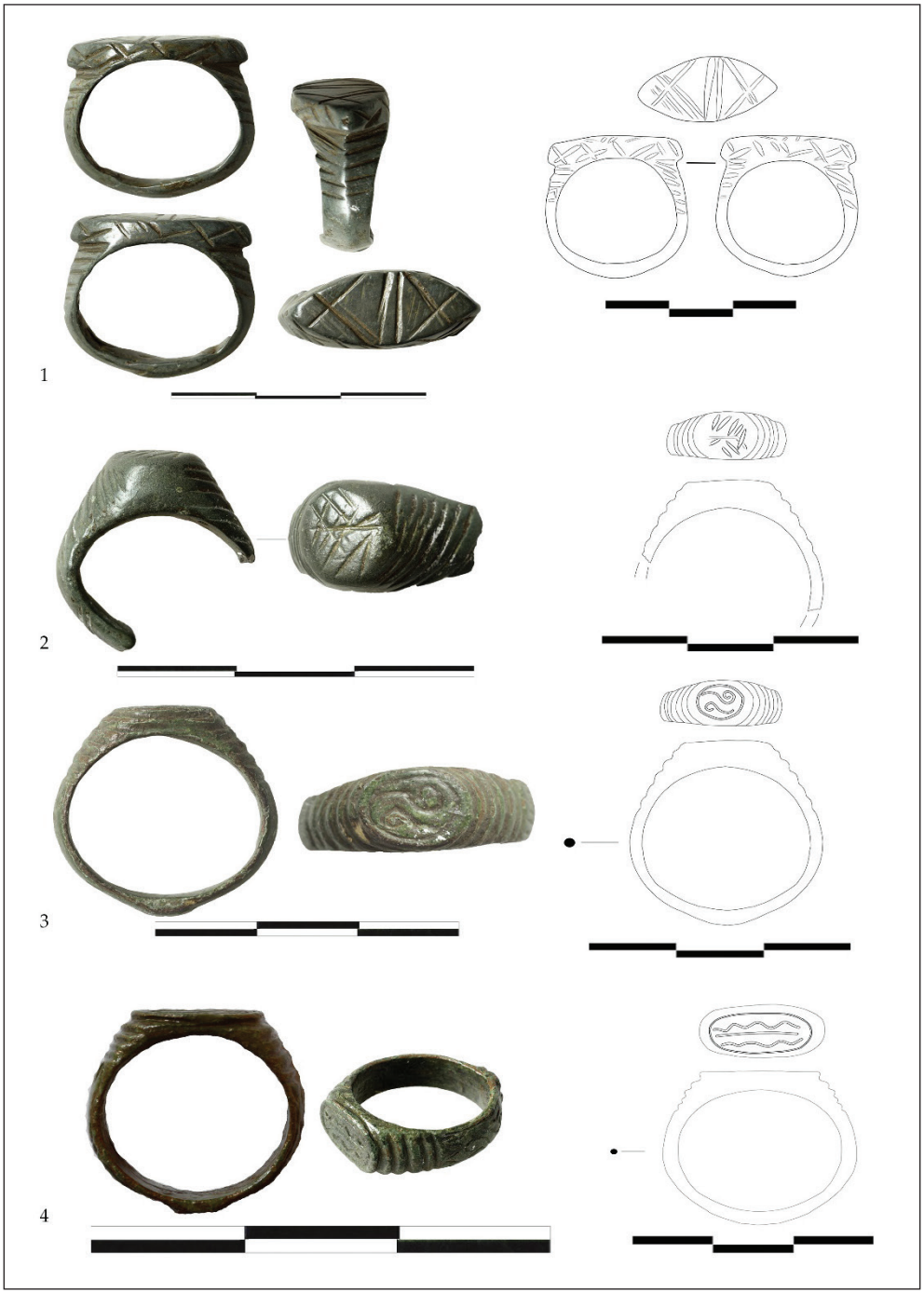
Pl. 3.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

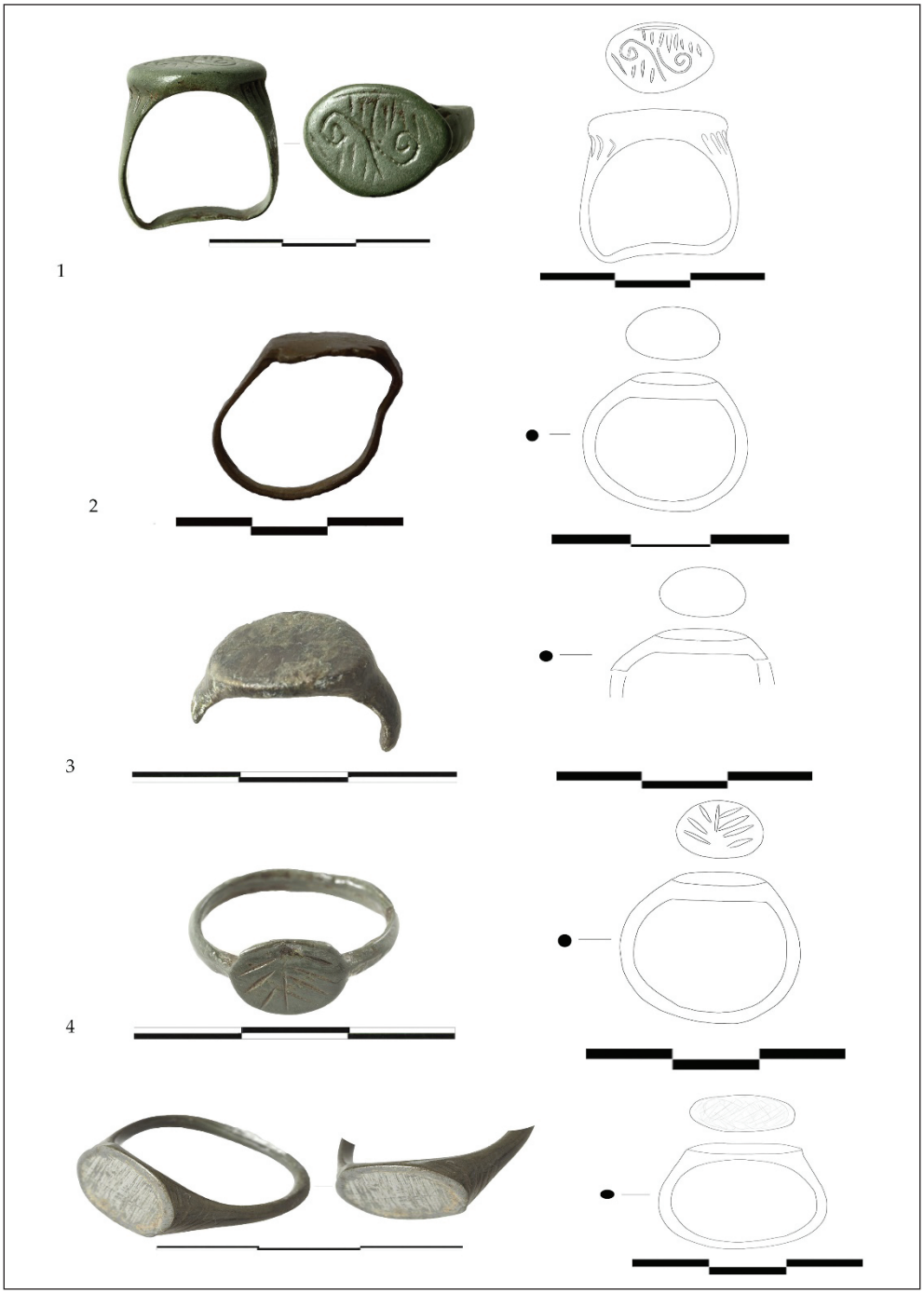
Pl. 4.



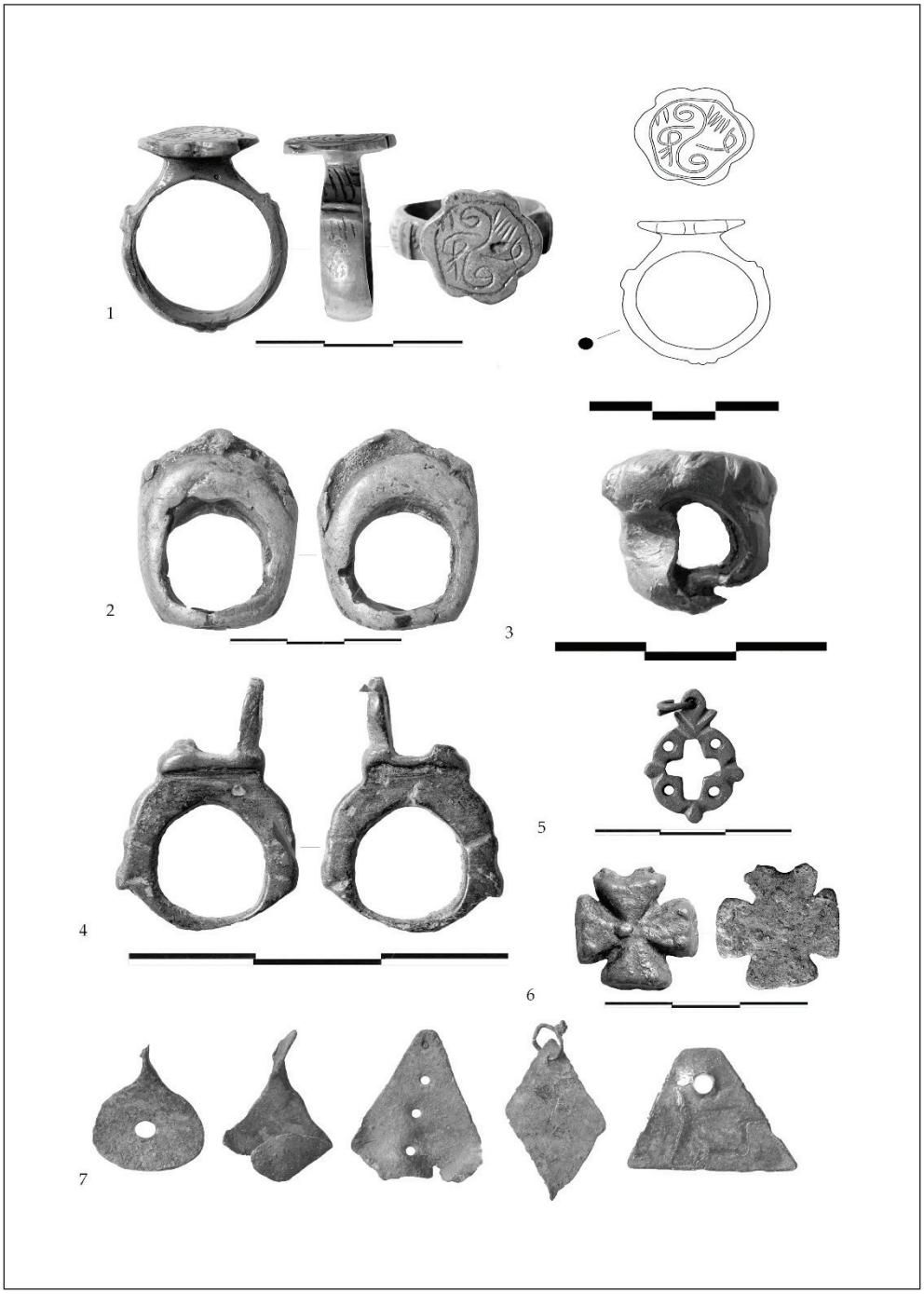
Pl. 5.



Pl. 6.



Pl. 7.



Pl. 8.

THE ANTHROPOMORPHIC PENDANTS. MARKER OF SOCIO-ECONOMIC CHANGES AND DISTURBANCES ON THE LATE ENEOLITHIC PERIOD

Vanya STAVREVA[*]

Cuvinte-cheie: *pandantive antropomorfe, schimbări socio-economice, eneoliticul târziu, Kodjadermen-Gumelnița-Karanovo VI, Varna, Krivodol-Sălcuța-Bubani.*

Keywords: *anthropomorphic pendants, Socio-Economic Changes, Late Eneolithic, Kodjadermen-Gumelnița-Karanovo VI, Varna, Krivodol-Sălcuța-Bubani.*

Rezumat: *Producția de figurine antropomorfe în estul Peninsulei Balcanice, în a doua jumătate a mileniului al V-lea a.Chr., este asociată cu o tendință de masificare, standardizare, utilizare de noi materii prime, diversificarea tipurilor iconografice și creșterea dimensiunii acestora. În articol, autorul analizează una dintre schimbările care au avut loc – apariția unui grup mare de figurine din os și aur, care au fost purtate ca pandantive sau ca aplicații pe îmbrăcăminte. S-a propus o ipoteză cu privire la motivele interesului crescut pentru utilizarea lor în culturile Kodjadermen-Gumelnița-Karanovo VI, Varna și Krivodol-Sălcuța-Bubani. Potrivit autorului, producția de pandantive antropomorfe apotropaice din aur și os a fost cauzată de incertitudinea crescută ca urmare a schimbărilor socio-economice, a prăbușirii societății egalitare, a competiției în interiorul grupului pentru dobândirea prestigiului și a conflictelor dintre comunități pentru accesul la materie primă și resurse. Ipoteza se bazează pe dovezile arheologice ale conflictelor armate: cantitate crescută de arme, date care sugerează un număr mare de oameni uciși, gropi comune, straturi arse în movile de așezări cu persoane care au murit pe loc și fortificații ale așezărilor. Alte argumente provin din analiza pandantivelor și aplicelor antropomorfe.*

Abstract: *The production of anthropomorphic figurines in the Eastern Balkans in the second half of the fifth millennium BC. is associated with a tendency towards massification, standardization, use of new raw materials, diversification of iconographic types, and increase in their sizes. The article examines one of the changes that occurred – the emergence of a large group of bone and gold figurines that were worn as pendants or as appliqués to clothing. A hypothesis has been proposed regarding the reasons for the increased interest in their use in the Kodjadermen-Gumelnița-Karanovo VI, Varna and Krivodol-Sălcuța-Bubani cultures. According to the author, the production of bone and gold anthropomorphic amulets was caused by increased uncertainty as a result of socio-economic changes, the breakdown of egalitarian society, intra-group competition for the acquisition of prestige and conflicts between communities for access to raw materials and resources. The hypothesis is based on*

[*] Vanya STAVREVA: Regional History Museum Vidin; e-mail: vmstavreva@uni-sofia.bg.

the archaeological evidence of armed conflicts: increased amount of weapons, data suggesting large numbers of people killed, mass graves, burned layers in settlement mounds with individuals who died on the spot, and fortifications of settlements. Other arguments come from the analysis of anthropomorphic pendants and appliqués.

Data

Anthropomorphic bone figurines are a cultural and chronological indicator of cultures from the Eastern Balkans in the second half of the fifth millennium BC. However, the use of bone to make figurines was not a Late Eneolithic innovation. They were made during the Late Paleolithic and were found in various places around Europe and Asia, including in the Kozarnika cave in Bulgaria[1]. In the Neolithic cultures of the Balkans, they are almost absent, although bone was an available raw material and the bone industry was well developed. The only known exception from the territory of present-day Bulgaria is an anthropomorphic bone figurine from the Early Neolithic settlement of Slatina[2].

The production of bone figurines began in the Middle Eneolithic. During the Late Eneolithic, their quantity rapidly increased and in its second and third phases there was significant growth[3]. Different numbers of flat (**Fig. I, 1–4, 7)** and prismatic (**Fig. I, 10–11**) bone figurines have been found in over 80 sites in the area of the Varna, Kodjadermen-Gumelniţa-Karanovo VI, Krivodol-Sălcuţa-Bubani cultures[4]. Their quantity in some settlements is significant: in the Smyadovo settlement moundover 130[5], Ruse-over 60[6], Căscioarele–35[7], Hotnitsa-over 30[8], Golyamo Delchevo–30[9], etc. Their production is specialized, an indication of which is the high quality of most samples and the presence of workshops in the Hotnitsa settlement mound[10] and Yunatsite[11].

The flat and prismatic bone figurines were used as pendants or appliqués, as evidenced by signs of wear and polishing. Trasological examination of broken specimens show that some figurines were reused with additional perforations for hanging or sewing (**Fig. I, 5**), on which traces of wear were found[12]. Evidence of their use is provided by some grave finds. Five flat figurines of the Mediterranean shell Spondylus were found in Hamangia culture graves in the Durankulak necropolis, which were part of strings[13]. A string of clay beads with an anthropomorphic shell figurine has also been found in the Ruse settlement mound[14].

[1] SIRAKOV *et alii* 2015, p. 27.
[2] NIKOLOV, TAKOROVA 2021, p. 125.
[3] BOYADZHIEV 2007, p. 88.
[4] AVERBOUH, ZIDAROV 2014, p. 184–185. Kodjadermen-Gumelniţa-Karanovo VI, hereafter referred to as KGK VI and Krivodol-Sălcuţa-Bubani, hereafter referred to as KSB.
[5] POPOV 1993, p. 151–154.
[6] GEORGIEV, ANGELOV 1952; GEORGIEV, ANGELOV 1957.
[7] ANDREESCU 1995; ANDREESCU 1997.
[8] ELENSKI 1997, p. 81–89.
[9] TODOROVA *et alii* 1975.
[10] ANGELOV 1961, p. 34–38.
[11] BOYADZHIEV, BOYADZHIEV 2022, p. 37.
[12] AVERBOUH, ZIDAROV 2014, p. 187.
[13] VAJSOV 2002, p. 261–262.
[14] GEORGIEV, ANGELOV 1957, p. 96.

In the last phases of the Late Eneolithic, the production of a new type of bone figurines, called in the literature vaulted, convex, *en violon*, began (**Fig. I, 12**). Just over 100 specimens were found in about thirty settlements and two necropolises. After finding them in the rich graves in the Varna I necropolis, the opinion that they are anthropomorphic images related to the religious-mythological sphere and to the burial practices prevailed[15]. They were most likely worn as appliqués[16]. They were made from long bones or shoulder blades of large animals, most often cattle. Some figurines of considerable size are believed to have been made from *Bos primigenius* bones[17]. It was the largest wild animal species in Southeast Europe in the second half of the fifth millennium BC., which differed significantly in size from domesticated cattle[18]. The sex of the animals whose bones were used is impossible to determine, but the raw material had a symbolic meaning and is probably related in some way to the widespread image of the bull and cow since the Neolithic.

Two types of figurines were produced from gold: flat ones, whose iconography is close to the flat bone figurines, and schematic disc-shaped figurines with standardized dimensions of 2 to 3.5 cm, also called Ringidole or Trojan-type flat idols[19]. There are only two flat gold figurines-from Ruse and Košaritsa (**Fig. I, 6**). Disc-shaped figurines are the most widespread anthropomorphic images in a grave context – they were found in the Durankulak, Varna I, Varna III, Provadia-Solnitsata, Sava necropolises from the Varna culture and Smyadovo and Vărăşti necropolises from the KGK VI culture (**Fig. I, 8–9)**. They are known from the settlement mounds of Gumelniţa, Vităneşti, Vidra, Sultana, Pietrele, Yunatsite, Hotnitsa, and in three cases they were deposited as treasures (Sultana, Pietrele, Hotnitsa). Their distribution in the area of the KSB culture is limited to one accidental find from the settlement of Sofronievo, Vrachansko and one with an unclear context from the Sofia area. They are known not only in the three studied cultures, but also from other cultural contexts from the territory of the Balkans, Hungary, Anatolia, and apparently, they represented a supra-regional symbol[20].

Social context

The accumulation of empirical material from intensive excavations in recent decades provides archaeological evidence to support the hypothesis of a transition from an egalitarian society to a society with a complex social structure in the second half of the fifth millennium BC[21].

Technological innovations, the change in the nature of production – from self-satisfaction of needs to specialization, accumulation, distribution and exchange

[15] GIMBUTAS 1977, p. 47; IVANOV 1982; IVANOV, AVRAMOVA 2000; ANDREESCU 2002, p. 67; VOINEA 2008, p. 80.

[16] TODOTOVA *et alii* 1975, p. 35; BIEHL, MARCINIAK 2000, p. 197; TODOROVA, VAJSOV 2001, p. 94.

[17] AVERBOUH, ZIDAROV 2014, p. 189; MANOLAKAKIS, AVERBOUH 2004, p. 162.

[18] BEM, BĂLĂŞESCU 2005.

[19] BELDIMAN, SZTANCS, BUZEA 2010, p. 233.

[20] HANSEN 2009; HANSEN 2011; HANSEN 2015.

[21] CHERNIH 1978, p. 263; MASSON 1995, p. 16–17; NIKOLOV 2011, p. 261, 281–282; GEORGIEVA 2018, p. 101, 130.

trade, cause changes in intra-group and inter-group social organization. The process of consolidation of large communities, the coordination of the efforts of various unrelated groups to ensure food, access to raw materials and resources and guarantee their security, requires strong leadership, unlike life in small groups. The attainment of social status and power is based on acquired prestige or on coercion based on dominance. In dominance, social power is achieved through the use of threat or force, as opposed to prestige, which is acquired due to the qualities of an individual[22]. Although both dominance and prestige can coexist within the same society, competition for prestige is the more common route to power in non-state societies[23]. In the Late Eneolithic cultures of the Eastern Balkans, the change in the individual status of certain members of the community and social stratification was based on the system of prestige, which in this period was acquired, but not inherited[24]. On the other hand, socio-economic changes lead to a significant concentration of wealth in some centers and weaker development of others.

The impressive wealth of the Varna I and Varna II necropolises is solid evidence of the existence of cross-cultural socio-economic inequality, in which the area around the Varna Lakes stands out. It is believed that the accumulation of wealth is due to the geographical position, which makes it a center from which the exchange trade with metal products by sea takes place[25], as well as the production of salt in the prehistoric complex of Provadia-Solnitsata[26].

During the development of the settlement system, a hierarchization of settlements was observed[27]. Around many settlement mounds, "satellite" flat settlements or smaller mounds have been found-Pietrele, Vităneşti, Radovanu, Sultana, Vătaşi, Tangâru, Kozareva mogila, Bereketska, Dyadovo, Chatalka, etc.[28] It has been hypothesized that the settlement mounds played the role of centers for the population from the unfortified settlements or smaller mounds. In this division, the habitation of the settlement mounds was the privilege of dominant families and clans. The Pietrele settlement mound is supposed to have been the core of the settlement, which spread over a vast area at its foot. The mound represented the social and political leadership, where the houses of ruling families or public buildings were located[29]. In the middle of the Early Eneolithic, the settlement near the Yunatsite settlement mound acquired an organization similar to that of later cities: a settlement with an area of more than 10 ha, in the highest and naturally protected part of which a "citadel" was erected and designed to protect the population and to ensure the performance of basic craft activities[30]. The population of the satellite settlements

[22] SMITH *et alii* 2015, p. 56.

[23] MATTISON *et alii* 2016, p. 196–197.

[24] NIKOLOV 2011, p. 261.

[25] TODOROVA 1985, p. 42–47; SLAVCHEV 2010, p. 26.

[26] NIKOLOV 2011, p. 258, 281.

[27] GEORGIEV 1982, p. 7; TODOROVA 1986, p. 180; ANDREESCU, MIREA 2008, p. 32; NIKOLOV 2011, p. 261; GEORGIEVA 2018, p. 130.

[28] COMŞA 1990, p. 70; RADUNCHEVA 2003, p. 8; HANSEN *et alii* 2005, p. 342–346; BEM *et alii* 2012; BEM *et alii* 2013; GEORGIEVA 2018, p. 105; LAZĂR, ANDREESCU 2018, p. 130; ANDREESCU, MOLDOVEANU 2019.

[29] HANSEN 2015; TODERAŞ *et alii* 2009, p. 42.

[30] BOYADZHIEV, BOYADZHIEV 2022, p. 46.

had a subordinate position and gathered in the central settlement mounds on various occasions or in case of danger[31].

Social hierarchization finds expression within settlements, in residential architecture and the appearance of large buildings. There is a significant increase in two-story buildings compared to earlier periods, which is an expression of a higher social status of the families who live in them[32]. They were defined as residences of elders or chiefs and even as palace buildings[33].

Discussion

The economic differentiation that has occurred and the accumulation of wealth are a possible reason for the emergence of military clashes to seize the accumulated and to impose power and control over raw materials, roads and production centers[34]. This required them to be protected, and the realization of an exchange required rules, organization, a structure to support them and sanction violators[35]. At the same time, the sense of insecurity was probably reinforced by the process of social stratification, the breakdown of egalitarian society, and the competition to accumulate personal prestige. The difference between the high consumption of prestige items by only a small part of the population may have led to conflicts. Reduced growth and limited access to resources associated with growing inequality are reflected in the graves in the Durankulak necropolis[36].

The alternation of periods of war and peace, and intra-tribal conflicts were part of social life during the Eneolithic, as archaeological data testify[37]. The evidence of military conflicts is visible, and can be traced in the burned building horizons in the settlement mounds layers from the second and third phases of the Late Eneolithic.

Information about individuals killed in armed clashes comes from the Yunatsite, Hotnitsa, Ruse, Provadia-Solnitsata, Omurtag, Liljak, Petko Karavelovo, and Pietrele settlement mounds. In the last burned Late Eneolithic levels in the Yunatsite, Ruse and Hotnitsa settlement mounds there is unequivocal evidence that the burning took place during a conflict. It was sudden and some of the inhabitants found their deaths in the ruins of the houses. Human skeletal remains were found in the completely burned last settlement from the Late Eneolithic in Yunatsite. Relatively well-preserved skeletons or single human bones of about 70 individuals of various ages were found inside and outside the burned dwellings. There is reason to assume that a partial burial ritual was performed in 11 graves between the dwellings[38]. Anthropological examination of 13 skulls has found evidence of trauma that caused death[39]. Bone remains of about 100 individuals originate from the Ruse

[31] MORINTZ 1962, p. 282; COMȘA 1990, p. 113; RADUNCHEVA 2003, p. 8.

[32] NIKOLOV 2019, p. 8; NIKOLOV, PETROVA 2021, p. 172.

[33] TODOROVA 1986, p. 177; LICHTER 2014, p. 126.

[34] TODOROVA 1986, p. 84–85; RADUNCHEVA 2003, p. 159; BOYADZHIEV 2014, p. 143, 215; GEORGIEVA 2018, p. 122.

[35] GEORGIEVA 2018, p. 122, 130.

[36] WINDLER, THIELE, MÜLLER 2013, p. 209.

[37] TODOROVA *et alii* 1983, p. 96; IVANOVA 2007, p. 45–46.

[38] MATSANOVA 2000, p. 121; BALABINA, MISHINA 2011.

[39] ZAÜNER 2011, p. 52–54.

settlement mound[40]. It is assumed that they died in one or several enemy attacks[41]. Skeletons of five individuals were found under the ruins of a burned-out house in the Hotnitsa settlement mound[42].

A flint arrow was embedded in the spine of a man in grave No. 27 in the Provadia – Solnitsata necropolis[43], and skull injuries were reported for those buried in graves No. 5 and No. 6[44]. Six individuals were buried in collective grave No. 26, one of whom was killed with a stone adze in the abdomen, four with skull injuries[45]. Two men in the Omurtag necropolis were found to have skull injuries[46], as well as the man in grave No. 2 in Liljak[47]. Five men from a collective grave in the Petko Karavelovo settlement mound have multiple injuries, the result of particularly brutal violence. The researchers' working hypothesis is that captured raiders may have been executed and buried within the settlement as a "trophy" in the collective memory of the mound's inhabitants[48].

The peculiarities of settlement architecture during the Eneolithic with the presence of settlement fortifications is another argument in support of the hypothesis of the conflicts that accompanied social transformations in this period.

A diversification of weapons during the Early Eneolithic can be traced, an increase in their number during the Middle Eneolithic and during the Late Eneolithic they are practically found in almost all settlements. A significant concentration of weapons has been archaeologically documented in Ruse, Smyadovo, Durankulak, Căscioarele, Gumelniţa, Sultana, Pietrele settlement mounds[49]. At this time the creation of a military stratum began. The concentration of weapons in the graves of the Varna I necropolis testifies to the increased role of warriors, whereby the weapons themselves (battle axes) become symbols of social status and "testify to the direct connection between power and military command"[50]. The ensemble of anthropomorphic figurines from the settlement near Stubline, dated to 4600 BC., appears as indirect evidence. It is supposed to present a model of a community with a leader. The tool models with which the figurines are equipped reflect the roles that people played in a community with vertical social stratigraphy[51].

It is logical to assume that insecurity and violence are one of the reasons for seeking supernatural protection, such as wearing bone anthropomorphic figurines. The assumption that their bearers perceived them as apotropaic and not simply as ornaments finds confirmation in the burial rite. In many cases, the dead are buried with their personal ornaments – bracelets, earrings, strings of beads and pendants,

[40] GEORGIEV, ANGELOV 1952, p. 182–186; GEORGIEV, ANGELOV 1957, p. 112–121.
[41] TODOROVA 1986, p. 74–75; MATSANOVA 2000, p. 124; BOYADZHIEV 2001, p. 21.
[42] ANGELOV 1958, p. 389–402.
[43] NIKOLOV *et alii* 2014, p. 91.
[44] NIKOLOV 2012, p. 55.
[45] NIKOLOV *et alii* 2014, p. 91; MCSWEENEY 2016, p. 495.
[46] YORDANOV *et alii* 2006, p. 143–201.
[47] OVCHAROV 1963, p. 53–56.
[48] CHOHADZIEV, ATANASOVA 2019, p. 24–25.
[49] BOYADZHIEV 2014, p. 134.
[50] SLAVCHEV 2010, p. 31.
[51] CRNOBRNJA, SIMIĆ, JANKOVIĆ 2009, p. 91; CRNOBRNJA 2011, p. 39–41; BORIĆ 2013; PALAGUTA 2016, p. 334; BAILEY 2017, p. 826.

appliqués, etc., but anthropomorphic figurines are absent from this usual set[52]. This is an indication that they were perceived as objects with symbolic meaning and apotropaic function. It is obvious that they were important for the living, because they are found in settlements throughout the territory of the Kodjadermen – Gumelniţa – Karanovo VI, Varna and Krivodol – Sălcuţa – Bubani cultures, but at the same time, their appearance in graves is documented in only a few cases. In the Smyadovo settlement mound, for example, 119 flat and prismatic bone figurines were found, but none in the necropolis[53].

The same trend can be observed in the other sites where settlements and the necropolises belonging to them have been studied. Bone figurines appear as an exception in the funeral rite in a few graves. Flat and prismatic bone figurines were found in children's graves: No. 55 in Provadia-Solnitsata, in a children's grave in Yunatsite, graves No. 61, 108 and 110 in Varna I, grave No. 1 in Telish Lîga, No. 5 in Smyadovo, No. 13 in Gumelniţa. It is noteworthy that the graves in Smyadovo, Telish Lîga and Gumelniţa are among the richest, and the three graves in the Varna I necropolis contain grave goods made of gold. The fact that apotropaic figurines accompanied primarily children and adolescents provides some direction in finding an answer why they were placed in graves, even though they were attributes for the protection of the living. It is possible that these exceptions to the funeral rite were prompted by the desire to provide protection to prematurely deceased individuals who were perceived as important members of the community. The two figurines from graves in Provadia-Solnitsata and Ruse are of the rare type with copper ornaments on them.

The traseological analysis of the specimens from the Varna I necropolis establishes that, unlike those found in the settlements, there are no traces of use on them[54]. It is possible that they were made specifically for the funeral or that they were a household rather than a personal amulet. This would explain the lack of signs of use, especially since the specimens found are relatively large (about 10 cm preserved height) to have been worn as pendants by the buried child. The researchers of the Pietrele settlement mound allow in one particular case that two flat bone figurines were placed on the wall or the entrance of a building[55].

The iconography of bone and gold anthropomorphic figurines in the three Late Eneolithic cultures is identical. This suggests that the characters were recognizable to communities in the region and they shared similar ideological understandings. However, the clarification of their semantics is difficult due to the absence of written sources to verify the hypotheses. Apparently, the figurines embodied characters that were believed to provide magical protection. The opinion that the flat bone figurines represent a female image with hands placed on the stomach is substantiated by A. Chilingirov[56]. It was adopted in the literature, and later received direct evidence in the found marble figurines, which repeat the iconography of the bone's ones, but in their case the gesture of the hands is clearly represented. Based on the

[52] STAVREVA 2021, p. 15–17.
[53] POPOV 1992; CHOHADZHIEV, MIHAYLOVA 2014.
[54] AVERBOUH, ZIDAROV 2014, p. 191.
[55] TODERAŞ *et alii* 2009, p. 55.
[56] CHILOINGIROV 1909, p. 8–10.

analysis of the different way of depicting the crossed hands in the marble statuettes, Ya. Boyadzhiev deciphered their schematic presentation in the flat bone figurines. Figurines with lateral perforations in the chest area are assumed to represent arms crossed over the abdomen and separated from the body, figurines without holes are represented with arms folded and attached to the body. There is also an opinion that the holes in the chest had a functional meaning, but this does not explain the presence only of depressions in some figurines[57]. The character's special status is emphasized by the copper, serpentinite and Dentalium ornaments with which some of figurines are equipped. Chronologically, they belong to the second half of the KGK VI culture. One is from KSB culture, from Lepitsa.

The steady spread of the female image with hands on the abdomen, its production from a variety of raw materials – clay, bone, gold, shell and marble, the different functional purpose-to be worn as a pendant or appliqué to clothes, to be displayed in houses or used in domestic or public ceremonies, there are reasons to believe that these figurines are associated with the worship of a female character, possibly a mythologized ancestress. The use of sustainable raw materials emphasizes the desire for the crafted artefacts to be stored and used for a long time. In this way, the ideological information encoded in the hand-on-belly images is preserved and transmitted not only within the community that produced them, but remains for future generations.

The prismatic bone figurines must also be interpreted in this paradigm, but they must have had a different semantics than the flat ones. In the current state of research, the interpretation proposed by H. Todorova, based on a specimen from Ovcharovo with a tooth mounted at its base, seems convincing, that "they represent images of the spirit of some notable deceased member of the tribe or of an animal whose positive qualities (courage, flexibility, etc.) the bearer of the idol wished to inherit"[58].

Various hypotheses have been put forward for the vaulted bone figurines. In earlier publications, they were considered as objects with a utilitarian function[59]. H. Todorova assumes they are pectorals that were symbols of power[60]. After finding them in the rich graves in the Varna I necropolis, the opinion that they are anthropomorphic images related to the religious-mythological sphere and to burial practices prevailed[61]. Finding them alongside artefacts of gold, copper, Spondylus, their particular shape and large sizes are grounds for considering them as supra-regionally recognizable symbols of power[62]. The finding of vaulted figurines in the Pietrele settlement mound and their absence in the village at its foot is evidence that its inhabitants were of a higher social status than the inhabitants of the satellite settlement[63].

[57] BOYADZHIEV 1981, p. 87; BOYADZHIEV 2007, p. 86–87.

[58] TODOROVA *et alii* 1983, p. 95; TODOROVA 1986, p. 201.

[59] GEORGIEV, ANGELOV 1952, p. 174; COMȘA 1977, p. 51; SMOLENOV, KOSTOV 2009, p. 227; ROSSETI 1934, p. 28.

[60] TODOROVA *et alii* 1975, p. 35.

[61] ANDREESCU 2002, p. 67; IVANOV, AVRAMOVA 2000; GIMBUTAS 1977, p. 47; IVANOV 1982; TODOROVA, VAJSOV 2001; VOINEA 2008, p. 80.

[62] ANDREESCU 2002; HANSEN 2011, p. 4; HANSEN 2013, p. 553; KOTSOV 2017.

[63] HANSEN 2015, p. 279.

The figurines from the Varna I necropolis lack traces of use, as is the case with the flint extra-long blades and the flat bone figurines[64]. This suggests that they were made specifically for the burial ritual. In contrast, those from the settlements show traces of use[65]. It is possible that they had a cultic and a practical function, without the two functions being mutually exclusive[66], which seems logical for a society with syncretic thinking. It is possible that they were used in community rituals, had a protective function for the entire settlement, or were worn only by a certain category of individuals who had a high social rank or belonged to a special class.

The semantics of disc-shaped anthropomorphic pendants is more obscure due to their large schematicity and the ambiguity of whether they depict a human face or a full figure. It could only be said with some confidence that they are a female character. Some researchers interpret them as schematic female images representing a female body during childbirth[67], "amulets associated with the magic surrounding pregnancy and childbirth" that depict whole figurines[68], "a stylized female image associated with the cult of the mother goddess"[69]. An opinion has also been expressed that they represent anthropomorphic heads[70]. Their wearing as pendants is confirmed by the traces of use on some of the specimens from the Varna I necropolis[71].

It is noteworthy that during the considered period, pendants and appliqués with a zoomorphic shape were not used. The only exceptions are from the Varna I necropolis, where two gold zoomorphic figurines and 30 gold appliqués in the form of stylized zoomorphic heads with horns were found in symbolic grave No. 36 and one gold zoomorphic figurine in symbolic grave No. 26. They date to the end of the third phase of the Late Eneolithic, after which the life of the Late Eneolithic cultures ends. Perhaps because of this, there was not enough time for the use of such pendants and applications to spread.

Conclusions

It is important that the vaulted bone figurines, the gold disc-shaped, and the flat and prismatic figurines were used as pendants and appliqués throughout the Late Eneolithic period. Their use could be the result of the wearer's desire to demonstrate his respect for the depicted character. However, it is more likely that wearing them is also related to the belief that they can provide protection. The production of bone and gold anthropomorphic amulets was caused by increased uncertainty as a result of socio-economic changes, the breakdown of egalitarian society, intra-group competition for the acquisition of prestige and conflicts between communities for access to raw materials and resources. The hypothesis is based on the archaeological evidence of armed conflicts-increased amount of weapons, data suggesting large

[64] MANOLAKAKIS, AVERBOUH 2004.
[65] AVERBOUH, ZIDAROV 2014, p. 191.
[66] TODOROVA, VAJSOV 2001, p. 92; GEORGIEVA 2014, p. 231.
[67] IVANOV 1982, p. 22.
[68] TODOROVA 1992, p. 71; TODOROVA, VAJSOV 2001, p. 66.
[69] NIKOLOV 2000, p. 453.
[70] RADUNCHEVA 1971, p. 53.
[71] LEISCH *et alii* 2015, p. 364–365.

numbers of people killed, mass graves, burned layers in settlement mounds with individuals who died on the spot, and fortifications of settlements. Other arguments come from the analysis of anthropomorphic pendants and appliqués themselves.

BIBLIOGRAPHY

ANDREESCU 1995 – R. R. Andreescu, *Căscioarele-Ostrovel. Plastica de os din nivelul Gumelnița B1*, Cultură și Civilizație la Dunărea de Jos 23–24 (1995), p. 41–48.

ANDREESCU 1997 – R. R. Andreescu, *Plastica gumelnițeană din colecțiile Muzeului Național de Istorie a României*, Cercetări Arheologice 10 (1997), p. 309–322.

ANDREESCU 2002 – R. R. Andreescu, *Plastica Antropomorfă Gumelnițean. Analiză Primară* (Monografii III), București, 2002.

ANDREESCU, MIREA 2008 – R. R. Andreescu, P. Mirea, *Tell settlements: a pattern of landscape occupation in the Lower Danube*, in: D. Bailey, A. Whittle, D. Hofmann (eds.), *Living Well Together? Settlement and Materiality in the Neolithic of South-East and Central Europe*, Oxford, 2008, p. 28–34.

ANDREESCU, MOLDOVEANU 2019 – R. R. Andreescu, K. Moldoveanu, *Looking around the tell-settlements. A view from Southern Romania*, Studii de Preistorie 16 (2019), p. 97–112.

ANGELOV 1958 – N. Angelov, *Selishtna mogila pri s. Hotnitsa*, Izvestiya v chest na akad. Dimităr Dechev, Sofia, 1958, p. 389–402.

ANGELOV 1961 – N. Angelov, *Rabotilnitsa za ploski kosteni idoli v selishtnata mogila pri s. Hotnitsa, Tŭrnovsko*, Arheologija 2 (1961), p. 34–38.

AVERBOUH, ZIDAROV 2014 – A. Averbouh, P. Zidarov, *The production of bone figurines in the Balkan Chalcolithic and the use of debitage by extraction*, in: M. Mărgărit, G. Le Dosseur, A. Averbouh (eds.), *An overview of the exploitation of hard animal materials during the Neolithic and Chalcolithic*, Proceedings of the GDRE PREHISTOS Work-Session in Târgoviște, Romania (November 2013), Târgoviște, p. 83–200.

BAILEY 2017 – D. Bailey, *Southeast European Neolithic figurines: beyond context, interpretation, and meaning*, in: T. Insoll (ed.), *The Oxford Handbook of Prehistoric Figurines*, Oxford, 2017, p. 823–851.

BALABINA, MISHINA 2011 – V. Balabina, T. Mishina. *Considering the Destruction of the Latest Eneolithic Village at Tell Yunatsite*, in: Ya. Boyadzhiev, St. Terziyska-Ignatova (red.), *Zlatnoto peto hilyadoletie. Trakiya i sŭsednite rayoni prez kamenno-mednata epoha*, Sofia, София, 2011, p. 39–48.

BELDIMAN, SZTANCS, BUZEA 2010 – C. Beldiman, D. Sztancs. D. Buzea, *Date recente privind plastica antropomorfă eneolitică din materii dure animale aparținând culturii Cucuteni-Ariușd*, Bibliotheca Archaeologica Iassiensis XXIII, *L'art anthropomorphe feminin dans la prehistoire de l'espace Carpato-Dniestreen*, Iași, 2010, p. 221–237.

BEM, BĂLĂȘESCU 2005 – C. Bem, A. Bălășescu, *A few Considerations Regarding an Exceptional Archaeological Situation. Foundation Pit of the Settlement or Occasional Offering?* Cultură și Civilizație la Dunărea de Jos 22 (2005), p. 317–335.

BEM *et alii* 2012 – C. Bem, A. Asăndulesei, C. Haită, C. Bem, F.-A. Tencariu, V. Cotiugă, Ș. Caliniuc, *Identity in diversity: photogrammetry, 3d laser scanning and magnetometric analysis of Gumelnița tells from Muntenia (Romania)*, in: V. Cotiugă, Ș. Caliniuc (eds.), *Interdisciplinarity Research in Archaeology. Proceedings of the First Arheoinvest Congress*, 10–11 June 2011, Iași, Romania, Oxford, 2012, p. 19–36.

BEM *et alii* 2013 – C. Bem, A. Asăndulesei, C. Haită, C. Bem, M. Ș. Florea, *Interdisciplinary investigations. The tell settlement from Vătași Măgura (Teleorman County, Romania)*, Studii de Preistorie 10 (2013), p. 89–117.

BIEHL, MARCINIAK 2000 – P. Biehl, A. Marciniak, *The Construction of Hierarchy*

Rethinking the Cooper Age in Southeastern Europe, in: M. Diehl (ed.), *Hierarchies in Action: Cui Bono?*, Occasional Paper 27, 2000, p. 181–209.

BORIĆ 2015 – D. Borić, *Mortuary Practices, Bodies and Persons in the Neolithic and Early-Middle Copper Age of Southeast Europe*, in: C. Fowler, J. Harding, D. Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*, Oxford, 2015, p. 927–958.

BOYADZHIEV 2014 – K. Boyadzhiev, *Vŭorŭzhenie prez halkolita v bŭlgarskite zemi*, Sofia, 2014.

BOYADZHIEV 1981 – Y. A. Boyadzhiev, *Mramorni i kostni idoli ot epohata na kŭsniya eneolit v Bŭlgariya*, Izkustvo 9–10 (1981), p. 85–88.

BOYADZHIEV 2001 – Y. A. Boyadzhiev, *Pogrebalnata praktika intra muros prez neolita i halkolita v bŭlgarskite zemi: obichaii ili izklyuchenie*, Arheologija 3–4 (2001), p. 16–24.

BOYADZHIEV 2007 – Y. A. Boyadzhiev, *Ploski kosteni figurki ot eneolitnata epoha*, in: M. Stefanovich, Ch. Angelova (eds.), *PRAE in Honorem Henrieta Todorova*, Sofia, 2007, p. 79–94.

BOYADZHIEV, BOYADZHIEV 2022 – Y. Boyadzhiev, K. Boyadzhiev, *Tell Yunatsite-archaeological studies and perspectives*, Sofia, 2022.

CHERNIH 1978 – Y. Chernyh, *Gornoye delo i metallurgiya v drevneyshey Bolgarii*, Sofia, 1978.

CHILINGIROV 1909 – A. Chilingirov, *Kostni idoli ot praistorichnoto selishte v s. Sultan*, SbNUNK 25/7 (1909), p. 3–54.

CHOHADZIEV, ATANASOVA 2019 – A. Chohadzhiev, N. Atanasova, *Neobichaen grupov grob ot halkolitnata selishtna mogila pri s. Petko Karavelovo. Predvaritelni rezultati*, Izvestiya na Regionalen istoricheski muzey, Veliko Târnovo 24 (2019), p. 9–57.

CHOHADZHIEV, MIHAYLOVA 2014 – S. Chohadzhiev, N. Mihaylova, *Smyadovo-Prehistoric cemetery (2005–2008)*, Sofia, 2014.

COMȘA 1977 – E. Comșa, *Despre „figurinele en violon" din aria culturii Gumelnița*, Pontica 10 (1977), p. 45–51.

COMȘA 1990 – E. Comșa, *Complexul neolitic de la Radovanu*, Cultură și Civilizație la Dunărea de Jos 8 (1990), p. 5–126.

CRNOBRNJA 2011 – A. Crnobrnja, *Arrangement of Vinča culture figurines: a study of social structure and organization*, Documenta Praehistorica 38 (2011), p. 131–144.

CRNOBRNJA, SIMIĆ, JANKOVIĆ 2009 – A. Crnobrnja, Z. Simić, M. Janković, *Late Vinča culture settlement at Crkvine in Stubline: household organization and urbanization in the Late Vinča culture period*, Starinar 59 (2009), p. 9–25.

ELENSKI 1997 – N. Elenski, *Kosteni idoli ot selishtnata mogila do s. Khotnitsa, Velikotŭrnovsko*, Izvestiya na Istoricheski muzey, Veliko Târnovo 12 (1997), p. 81–90.

GEORGIEV 1982 – G. Georgiev, *Studying Neolithic and Chalcolithic culture in the present-day Bulgarian lands*, in: N. Egami, T. Hayashi, A. Hori (eds.), *The First Civilization in Europe and the Oldest Gold in the World-Varna, Bulgaria*, Tokio, 1982, p. 4–7.

GEORGIEV, ANGELOV 1952 – G. Georgiev, N. Angelov, *Razkopki na selishtnata mogila do Ruse prez 1948–1949 g.*, Izvestiya na Arheologicheskiya Institut 18 (1952), p. 119–194.

GEORGIEV, ANGELOV 1957 – G. Georgiev, N. Angelov, *Razkopki na selishtnata mogila do Ruse prez 1950–1953 г.*, Izvestiya na Arheologicheskiya Institut 21 (1957), p. 41–128.

GEORGIEVA 2014 – P. Georgieva, *Kosteni antropomorfni figurki ot Kozareva mogila*, in: V. Petrova, S. Taneva, K. Boyadzhiev (eds.), *In memoriam Lilyana Pernicheva-Perets* (GNAM, 12), Sofia, 2014, p. 225–232.

GEORGIEVA 2018 – P. Georgieva, *Sotsialno-ikonomicheski promeni prez kŭsniya eneolit v raiona na kulturite Varna, Kodzhadermen-Gumelnitsa-Karanovo VI i Krivodol-Sŭlkutsa*, Studia Archaeologica Universitatis Serdicensis 6 (2016), p. 101–151.

GIMBUTAS 1977 – M. Gimbutas, *Varna: A sensationally rich cemetery of the Karanovo civilization, about 4500 BC.*, Expedition 19/4 (1977), p. 39–47.

HANSEN 2009 – S. Hansen, *Kupfer, Gold und Silber im Schwarzmeerraum währenddes 5.*

und 4. Jahrtausends v. Chr., in: J. Apakidze, B. Govedarica, B. Hänsel (eds.), *Der Schwarzmeerraum vom Äneolithikum bis in die Früheisenzeit (5000–500 v.Chr.). Kommunikationsebenen zwischenKaukasus und Karpaten*, Rahden, 2009, p. 11–50.

HANSEN 2011 – S. Hansen, *Figurines in Pietrele: Copper Age ideology*, Documenta Praehistorica 38 (2011), p. 1–13.

HANSEN 2013 – S. Hansen, *Figuren aus Stein und Bein in der südosteuropäischen Kupferzeit*, in: A. Anders, G. Kulcsár (Hrsg.), *Moments in Time. Papers Presented to Pál Raczky on His 60th Birthday*, Budapest, 2013, p. 539–556.

HANSEN 2015 – S. Hansen, *Neolithische Figuralplastik zwischen Tigris und Donau. Die Kunde: Zeitschrift für niedersächsische Archäologie*, Neue Folge 66 (2015), p. 97–127.

HANSEN *et alii* 2005 – S. Hansen, A. Dragoman, A. Reingruber, I. Gatsov, J. Görsdorf, P. Nedelcheva, S. Oanță-Marghitu, B. Song, *Der kupferzeitliche Siedlungshügel Pietrele an der Unteren Donau. Bericht über die Ausgrabungen im Sommer 2004*, Eurasia Antiqua 11 (2005), p. 341–393.

IVANOV 1982 – I. Ivanov, *The Varna Chalcolithic necropolis*, in: N. Egami, T. Hayashi, A. Hori (eds.), *The First Civilization in Europe and the Oldest Gold in the World-Varna, Bulgaria*, Tokio, 1982, p. 21–28.

IVANOV, AVRAMOVA 2000 – I. Ivanov, M. Avramova, *Varna Necropolis. The Dawn of European Civilization*, Sofia, 2000.

IVANOVA 2007 – M. Ivanova, *Tells, Invasion Theories and Warfare in Fifth Millennium B.C. North-Eastern Bulgaria*, in: T. Pollard, I. Banks (eds.), *War and Sacrifice. Studies in the Archaeology of Conflict*, Leiden-Boston, 2007, p. 33–48.

KOTSOV 2017 – I. Kotsov, *Sotsialen kontekst na kŭsnohalkolitnite korubesti idoli*, in: *Martenski studentski cheteniya*, Sbornik s materiali ot Shesta studentska nauchna konferentsiya vŭv VTU „Sv. Sv. Kiril i Metodii" 3 (2017), p. 15–29.

LAZĂR, ANDREESCU 2018 – C. Lazăr, R. R. Andreescu, *Sultana, com. Mânăstirea, jud. Călărași, punct: Malu-Roșu*, in: F. Matei-Popescu, I. C. Opriș, O. Țentea (eds.), *Cronica Cercetărilor Arheologice din România 2018. Campania 2017*, București, p. 129–131.

LEUSCH *et alii* 2015 – V. Leusch, B. Armbruster, E. Pernicka, Vl. Slavchev, *On the Invention of Gold Metallurgy: The Gold Objects from the Varna I Cemetery (Bulgaria). Technological Consequence and Inventive Creativity*, Cambridge Archaeological Journal 25.1 (2015), p. 353–376.

LICHTER 2014 – C. Lichter, *"Temples" in the Neolithic and Copper Age in Southeast Europe?* Documenta Praehistorica 41 (2014), p. 119–136.

MANOLAKAKIS, AVERBOUH 2004 – L. Manolakakis, A. Averbouh, *Grandes lames et grandes statuettes, marqueurs de l'activité funéraire dans le Chalcolithique de Bulgarie*, in: *XXVe Congrès Préhistorique de France, Nanterre 24–26 novembre 2000-Approches fonctionnelles en Préhistoire*, Nanterre, 2004, p. 155–165.

MASSON 1995 – V. M. Masson, *Ranniye kompleksnyye obshchestva v drevney istorii Vostochnoy Yevropy*, Arkheologija 4 (1995), p. 16–24.

MATSANOVA 2000 – V. Matsanova, *Intramuralni "pogrebeniya" ot kŭsniya halkolit v selishtnata mogila pri Yunatsite, Pazardzhishko*, in: V. Nikolov (ed.), *Karanovski konferentsii za praistoriyata na Balkanite 1. Trakiya i sŭsednite raioni prez neolita i halkolita*, Sofia, 2000, p. 121–131.

MATTISON *et alii* 2016 – S. M. Mattison, E. A. Smith, M. K. Shenk, E. E. Cochrane, *The Evolution of Inequality*, Evolutionary Anthropology 25/4 (2016), p. 184–199.

MATSANOVA 2000 – V. Matsanova, *Intramuralni "pogrebeniya" ot kŭsniya halkolit v selishtnata mogila pri Yunatsite, Pazardzhishko*, in: V. Nikolov (ed.), *Karanovski konferentsii za praistoriyata na Balkanite 1. Trakiya i sŭsednite raioni prez neolita i halkolita*, Sofia, 2000, p. 121–131.

MCSWEENEY 2016 – K. McSweeney, *Human skeletal analysis: the osteoarcheological approach*, in: K. Bacvarov, R. Gleser (eds.), *Southeast Europe and Anatolia in prehistory. Essays in honor of Vassil Nikolov on his 65th anniversary*, Bonn, 2016, p. 493–500.

MORINTZ 1962 – S. Morintz, *Tipuri de așezări și sisteme de fortificație și de împrejmuire în cultura Gumelnița*, SCIV 13 (1962), p. 273–284.

NIKOLOV 2000 – V. Nikolov, *„Maskite" ot Varnenskiya nekropol*, in: *Paleobalkanistika i starobŭlgaristika. Vtori esenni mezhdunarodni cheteniya Profesor „Ivan Gŭlŭbov"*, Veliko Târnovo, 14–17 noemvri 1996 g., Veliko Târnovo, 2000, p. 453–455.

NIKOLOV 2011 – V. Nikolov, *Praistoriya na bŭlgarskite zemi*, in: *Bŭlgarska natsionalna istoriya, t. I. Bŭlgarskite zemi prez drevnostta*, Veliko Târnovo, 2011.

NIKOLOV 2012 – V. Nikolov, *Salt, early complex society, urbanization: Provadia-Solnitsata (5500–4200 BC)*, in: V. Nikolov, K. Bacvarov (eds.), *Salt and gold: the role of salt in Prehistoric Europe*, Provadia, Veliko Târnovo, 2012, p. 11–65.

NIKOLOV 2019 – V. Nikolov, *Methodological issues in the exploration of prehistoric settlement sites and houses*, Papers of BAS Humanities and Social Sciences 6/1 (2019), p. 3–12.

NIKOLOV, PETROVA 2021 – V. Nikolov, V. Petrova, *Antropomorfni keramichni sŭdove ot kŭsnoneolitniya obreden kompleks Kapitan Andreevo*, Sofia, 2021.

NIKOLOV, TAKOROVA 2021 – V. Nikolov, D. Takorova, *Slatina: rannoneolitno selo v Sofiiskoto pole (krayat na VII-pŭrvata polovina na VI hil. pr. Hr.)*, Sofia, 2021.

NIKOLOV *et alii* 2014 – V. Nikolov, K. Bŭchvarov, P. Leshtakov, G. Samichkova, N. Hristov, K. McSweeney, S. Trifonov, E. Purnarova, V. Stoitsova, M. Slavkova, I. Ilieva, S. Zhecheva, R. Spasov, S. H. Martino, *Arheologicheski prouchvaniya na praistoricheskiya solodobiven i gradski tsentŭr Provadiya-Solnitsata*, AOR prez 2013 g, Sofia, 2014, p. 89–91.

OVCHAROV 1963 – D. Ovcharov, *Eneoliten nekropol do s. Lilyak, Tŭrgovishtko*, Arheologija 1 (1963), p. 53–56.

PALAGUTA 2016 – I. Palaguta, *An Assemblage of Anthropomorphic Figurines of the Neolithic and Copper Age Balkan-Carpathians Cultures: some Observations on the Structure of Images and its Development*, in: C. Preoteasa, C.-D. Nicola (eds.), *Cucuteni Culture within the European Neo-Eneolithic context*, Piatra-Neamț, 2016, p. 327–348.

POPOV 1992 – N. Popov, *Antropomorfni kosteni figurki ot selishtnata mogila kraĭ grad Smyadovo*, Godishnik na muzeite v Severna Balgariya 18 (1992), p. 17–40.

POPOV 1993 – N. Popov, *Antropomorfna mramorna figurka ot selishtnata mogila krai grad Smyadovo*, in: V. Nikolov (ed.), *Praistoricheski nakhodki i izsledvaniya. Sbornik v pamet na prof. Georgi I. Georgiev*, Sofia, 1993, p. 151–154.

RADUNCHEVA 1971 – A. Raduncheva, *Za nyakoi vidove amuleti ot eneolita*, Arheologija 3 (1971), p. 52–58

RADUNCHEVA 2003 – A. Raduncheva, *Kŭsnoeneolitnoto obshtestvo v bŭlgarskite zemi* (Razkopki i prouchvaniya XXXII), Sofia, 2003.

ROSETTI 1934 – D. V. Rosetti, *Săpăturile de la Vidra – raport preliminar*, Publicațiile Muzeului Municipiului București 1 (1934), p. 6–60.

SMITH *et alii* 2015 – J. E. Smith, S. Gavrilets, M. B. Mulder, P. L. Hooper, C. E. Mouden, D. Nettle, E. A. Smith, *Leadership in Mammalian Societies: Emergence, Distribution, Power, and Payoff*, Trends in Ecology & Evolution 31/1 (2015), p. 54–66.

SIRAKOV *et alii* 2015 – N. Sirakov, Z.-L. Guadeli, S. Sirakova, A.-M. Tilie, S. Taneva, V. Miteva, A. Guadeli, I. Krumov, I. Dimitrova, P. Nikolov, R. Spasov, P. Pusheva, N. Zahariev, *Terenni prouchvaniya na paleolita v peshtera Kozarnika, obshtina Dimovo*, AOR prez 2014 g., Sofia, 2015, p. 27–29.

SLAVCHEV 2010 – V. Slavchev. *Varnenskiyat halkoliten nekropol – arheologicheski danni i sotsialno-ikonomicheski kontekst*, in: R. Rusev (ed.), *Varna – praistoricheski tsentŭr na metaloobrabotkata*, Varna, 2010, p. 9–32.

SMOLENOV, KOSTOV 2012 – H. Smolenov, R. Kostov, *On the interpretation of some prehistoric "anthropomorphic" bone and marble (Varna Chalcolithic necropolis-Bulgaria), as well Jade (Hongshan-China) amulets*, in: *Proceeding of the First International Symposium Ancient cultures*

in South-East Europe and the Eastern Mediterranean "Megalithic monuments and cult practices", Blagoevgrad, 2012, p. 226–231.

STAVREVA 2020 – V. Stavreva, *Anthropomorphic figurines from burial contexts in Varna, Kodjadermen-Gumelnița–Karanovo VI and Krivodol–Sălcuța–Bubani cultures*, Bulgarian e-Journal of Archaeology 10/1 (2020), p. 1–32. Available at: https://be-ja.org/index.php/journal/article/view/be-ja–10–1–2020–1–32.

STAVREVA 2021 – V. Stavreva, *Unusual Burial Practices in the Late Eneolithic*, in: P. Georgieva (ed.), Studia Archaeologica Universitatis Serdicensis 7 (2017), Sofia, 2021, p. 5–74.

TODERAȘ *et alii* 2009 – M. Toderaș, S. Hansen, A. Reingruber, J. Wunderlich, *Pietrele-Măgura Gorgana: o așezare eneolitică la Dunărea de Jos între 4500 și 4250 î.e.*, MCA S.N. 5 (2009), p. 39–90.

TODOROVA *et alii* 1983 – H. Todorova, V. Vasilev, M. Kovacheva, P. Vŭlev, *Ovcharovo* (Razkopki i prouchvaniya, IX), Sofia, 1983.

TODOROVA 1985 – H. Todorova, *Kulturata Varna v Dobrudzha. Etnokulturno sŭdŭrzhanie, genezis i istorichesko myasto*, Dobrudzha 2 (1985), p. 42–47.

TODOROVA 1986 – H. Todorova, *Kamenno-mednata epoha v Bŭlgariya (peto hilyadoletie predi novata era)*, Sofia, 1986.

TODOROVA 1992 – H. Todorova, *Kŭm problema za t. nar. „simvolichni pogrebeniya" ot eneolitniya nekropol Varna I*, Dobrudzha 9 (1992), p. 71–83.

TODOROVA, VAJSOV 2001 – H. Todorova, I. Vajsov, *Der kupferzeitliche Schmuck Bulgariens*, Prähistorische Bronzefunde 20/6, Stuttgart, 2001.

TODOROVA *et alii* 1975 – H. Todorova, S. Ivanov, V. Vasilev, M. Hopf, H. Kvita, G. Kol, *Selishtnata mogila pri Golyamo Delchevo* (Razkopki i prouchvaniya V), Sofia, 1975.

VAJSOV 2002 – I. Vajsov, *Die Idole aus den Gräberfelder von Durankulak*, in: H. Todorova (ed.), *Durankulak, II. Die Prähistorischen Gräberfelder von Durankulak*, Teil 1, Sofia, 2002, p. 257–266.

VOINEA 2008 – V. Voinea, *About figurines en violon within the civilization Gumelnița-Karanovo VI*, Sprawozdania Archeologiczne 60 (2008), p. 73–101.

WINDLER, THIELE, MÜLLER – A. Windler, R. Thiele, J. Müller, *Increasing inequality in Chalcolithic Southeast Europe: the case of Durankulak*, Journal of Archaeological Science 40 (2013), p. 204–210.

YORDANOV *et alii* 2006 – I. Iordanov, B. Dimitrova, Sl. Cholakov, *Rezultati ot antropologichnoto izsledvane na kostnite ostanki ot halkolitniya nekropol „Pchelina" v grad Omurtag*, Grad Omurtag i Omurtagskiyat krai: Istoriya i kultura 4 (2006), p. 143–201.

ZAÜNER 2011 – S. Zaüner, *The Dark Side of the Chalcolithic. Evidance for Warfare at Tell Yunatsite? An anthropological approach*, in: Ya. Boyadzhiev, St. Terziyska-Ignatova (red.), *Zlatnoto peto hilyadoletie. Trakiya i sŭsednite rayoni prez kamenno-mednata epoha*, Sofia, 2011, p. 49–56.



Fig. I: Anthropomorphic bone figurines: 1. Hotnitsa. 2. Krivodol. 3. Krapchene. 4. Hotnitsa. 5. Smyadovo. 7. Razgrad. 10. Hotnitsa. 11. Golyamo Delchevo. 12. Varna I necropolis. Anthropomorphic stone figurine: 8. Golyamo Delchevo. Anthropomorphic gold figurines: 6. Košaritsa (photos: Vanya Stavreva). 9. Vărăști (photo: NHI, http://clasate.cimec.ro/Detaliu.asp?tit=pandant iv&k=eb0296b905a8421a9c2cf270ece37788).

THE JOURNEY OF THE SPIRAL HAIR ORNAMENTS DURING THE THIRD MILLENNIUM BC. HOW DID IT BECOME SO POPULAR?

Zheni VASILEVA[*]

Cuvinte-cheie: *Balcani, sud-estul Europei, Epoca Bronzului timpuriu, mileniul al III-lea a.Chr. inele de păr.*

Keywords: *the Balkans, Southeastern Europe, Early Bronze Age, 3rd millennium BC; hair-rings.*

Rezumat: *În timpul mileniului al III-lea a.Chr., arta confecționării bijuteriilor a înflorit în Balcani, Marea Egee, Anatolia și în lumea apropiată. Societățile antice creau și foloseau diverse obiecte ca bijuterii. Scopul prezentului studiu este de a extinde istoria inelelor de păr de metal din mileniul al III-lea a.Chr. dincolo de studiile tipologice tradiționale și de a examina răspândirea lor prin societăți, prin prezentarea unora dintre cele mai reprezentative piese. Evidența arheologică specifică unui anumit număr de situri arheologice demonstrează evoluția remarcabilă a inelelor metalice de păr.*

Abstract: *During the 3rd millennium BC., the art of jewelry making flourished in the Balkans, the Aegean, Anatolia, and in the world beyond. Ancient societies made and use various pieces of jewelry. The aim of the present study is to extend the history of metal hair rings of the 3rd millennium BC. beyond traditional typological studies and to examine their journey through societies by presenting some of the most representative pieces. The archaeological evidence from a number of archaeological sites demonstrates the remarkable evolution of metal hair rings.*

Whether cultural, religious, ethnic, worn to underscore a person's status or simply for adornment, jewelry has a long tradition in all cultures around the world. Each piece of jewelry tells a long story that begins with the selection and value of raw materials, the technology of manufacture, the skills of the artisan, the propensity for form, the ethnic, cultural and social affiliation of the wearer, and so on. During the 3rd millennium BC., the art of jewelry making flourished in the Balkans, Aegean, Anatolia and the world beyond. The ancient societies made and wore various pieces of jewelry. In a study dealing with the European hair rings of the Late Bronze Age, G. Eogan emphasizes that the hair rings, despite their modest appearance, were significant objects indicating social status and probably trade activities[1]. This idea

[*] Zheni VASILEVA: National Archaeological Institute with Museum, Bulgarian Academy of Sciences, Sofia; e-mail: vassileva.jeni@gmail.com.

[1] EOGAN 1997.

is also of great importance for the 3rd millennium BC., when the increasing trade and cultural contacts strongly influenced the style preferences of jewelry fashion. Archaeological evidence from a number of excavation sites shows the remarkable development of metal hair rings. It is no coincidence that the fashion of metal hair rings spread over a wide geographical area. Hair rings were probably the most characteristic and distinctive type of jewelry.

This study aims to extend the history of metal hair rings of the 3rd millennium BC. beyond traditional typological studies and to examine their journey through societies by presenting some of the most representative pieces. Various types of hair rings were produced in the 3rd millennium BC., but the most popular type is rings made of spirally twisted wire.

The earliest spiral-shaped ornaments date from the 5th millennium BC. from two graves in Krivoj Rog (present-day central Ukraine). Based on their position in the grave-to the right and left of the skull-it is believed that the rings were used as hair ornaments-attached to braids in the hair[2]. In last third of 4th millennium BC., silver hair spirals emerged in the West Pontic area (**Tab. 1a-c**). Among the earliest examples are rings (**Tab. 1a**) from the Usatovo necropolis found together with flat axes, chisels, *etc*.[3].

The find sites of hair ornaments from the late 4th millennium BC. to the 3rd millennium BC. range from the southern Caucasus to the western Carpathian Basin, but their main distribution area is in the northern Pontic steppe region. Sv. Hansen emphasizes the social significance of the small hair rings. One such evidence is the material value of silver used for crafting spiral rings. The distinctive placement of metal in the head area is additionally an important indicator for the significance of the ornaments[4].

Recently V. Dergachev summarized the information from the Carpathian-Dniester region and Wallachia where 135 burials with temple rings were found (based on research published in 2023). Each of the burials contain one, more often two, and sometimes three or five rings, respectively their number is more than 200, of which 197 are spiral shaped. The rings were usually found near the temple bone, most often in children's graves, but also known from male and female burials[5]. Considering the development of the hair-rings in the Northwest Pontic region, S. Ivanova described the 3rd millennium BC. as "*silver age*"[6].

The spiral hair ring can be found throughout the Yamnaya area, including in the space attributed to the Afanasievo culture[7]. It is also present in the Kura Araxes cultural environment, made of gold, silver and copper. Very similar in shape, metal spirals of Kura-Araxes culture had two to four coils with rounded cross-section. According to E. Carminati the function of these objects is still unclear: they could have been used as ear- or finger-rings. The author also accept the interpretation of L. Woolley, who suggested that the ornaments from Ur were

[2] HANSEN 2018, p. 285.
[3] DERGACEV 1991, p. 64–70.
[4] HANSEN 2018, p. 285
[5] DERGACHEV 2023, p. 59.
[6] IVANOVA 2007.
[7] POLIAKOV 2022, fig. 21.

used as hair ornaments[8]. An interesting example from the later Kura-Araxes period (middle 3rd millennium BC.) are two gold spiral rings from Hasansu[9]. Hair ornaments emerged also in the area of the Novotitorovskaja culture, made of silver or bronze. The rings were found in burial context *in situ* near the temple or the occipital bone, probably decorating the headdress. The number of the rings found in one grave varies from 1 to 6–10, but most often the rings were 2. According to A. N. Gej the hair rings from the area of the Novotitorovskaja culture can be divided into six types and subtypes based on the shape and the diameter of the rings. The author considered the spiral hair rings as the most characteristic ornament[10].

Of a special interest is the appearance of precious metal hair ornaments in the area of the Lower Danube (**Fig. 1d-l**). The last third of the 4th millennium BC. and the first half of the next millennium mark the appearance of earth mound burials in the area. Hair-rings emerged in the area of interest here during the last third of the 4th millennium and became representative objects in the first half of the following millennium. The rings are principal grave good for Yamnaya graves[11], which probably was an element expressing Yamnaya identity[12].

The development hair ornaments in the territory of present-day Romania was discussed by various authors such as E. Zaharia[13], H. Ciugudean[14], A. Popescu[15], A. Frînculeasa[16], B. Preda[17] etc. On the territory of present-day Romania hair ornaments made of silver, gold or copper were found both in pre-Yamnaya and Yamnaya burials. Most of the rings were made of a wire twisted spirally in 1.5 coils, but there are also rings in 2.5 turns (e.g Soimesti)[18]. From the territory of present-day Romania are known also crescent-shaped rings of type Zimnicea (e.g the flat cemetery Zimnicea)[19], as well as drop-shaped rings known as type Leukas (e.g Ampoiţa-Peret, Jurilovka etc.)[20].

Referring to the number of tumulus graves researched in Romania (until 2020)- more than 177 tumuli/over 714 graves we see that hair rings are rather isolated discoveries, namely 55 rings in 36 graves, researched in 28 tumuli. This means that they appear in about 5% of the graves (**Fig. 2a-d**). The number of the rings in the tumuli is not proportional to that of the graves. In most of the cases a pair of rings can be found in one grave. But there are also graves with several rings. On one of interesting examples is M.4A from T.IV from Aricestii Rahtivani[21] where five rings

[8] CARMINATI 2014, p. 168.
[9] STÖLLNER 2016, p. 225.
[10] KOHL 2007, p. 266; GEJ 2000, p. 159–161.
[11] HEYD 2011.
[12] FRÎNCULEASA *et alii* 2015, p. 71.
[13] ZAHARIA 1959.
[14] CIUGUDEAN 1996.
[15] POPESCU 2010.
[16] FRÎNCULEASA *et alii* 2020; FRÎNCULEASA, FRÎNCULEASA 2022.
[17] PREDA 2015.
[18] FRÎNCULEASA, FRÎNCULEASA 2022, p. 7.
[19] ALEXANDRESCU 1974.
[20] VASILEVA 2017.
[21] FRÎNCULEASA *et alii* 2014, p. 192, pl. 6/4.

were found. Another example is M.1/T.IV from Blejoi where four rings were discovered[22]. Despite the fact that there are few anthropological studies, the available information on the sex and age suggests that metal rings from the period preceding Yamnaya appeared in graves of adults both male and female, while in the case of Yamnaya complexes of male adults and sub-adults[23].

Spiral hair ornaments were also discovered in flat graves dating from the first half of the 3rd millennium. Fifteen hair ornaments were found in the necropolis Zimnicea (**Fig. 1h-i**)-spiral hair rings and rings of type Zimnicea[24]. Hair ring if found also in a flat tomb dug in stone-Năieni.[25] Another interesting example from Romania is Văleni-Dămboviţa, related to the post-Yamnaya chronological horizont[26]. Hair ornament was found also on the territory of the Livezile group at M.1/T. III Ampoiţa[27]. It seems that hair rings occurred overwhelmingly in burial context in present-day Romania but there are also rings found in settlements-e.g Celei, where in layer 2c were found two silver spiral rings and gold pendant[28] or gold ring found from the Schneckenberg settlement in Braşhov[29].

B. Preda emphasizes that hair rings are relatively well preserved in tumuli, but given the general lack of inventories, the rings can be considered as prestige objects intended only for a limited number of people[30].

Spiral ornaments made of spirally twisted wire appeared in today's Bulgaria already at the beginning of the EBA. The large-scale archaeological excavations of the last decades provided completely new insights into the development of the local societies during the EBA[31].

The earliest certainly dated silver spiral ornaments in Bulgaria come from flat grave no. 20 of the cemetery Smyadovo (14C dates between 3328–3015/3338–3025 cal BC. and 3336–3028 cal BC., respectively)[32]. Another flat grave in which silver hair ornaments was found is Dzhulyunitsa, dated in the 3336–3027 cal BC.[33] According to some formal criteria, the grave construction, position of the body, *etc*., S. Alexandrov relates the silver ornaments from cemeteries Tarnak (**Fig. 1n**), Belitsa and Kalugeritsa situated in North Bulgaria to the same period[34].

Spiral hair-rings were produced from metal wire with oval cross-section; the wire was twisted in 1.5, 2.5 or 3 coils. In research on the metal spiral hair-rings from North Bulgaria St. Alexandrov distinguished two groups of spiral hair-rings in 1.5 coils-group A1 (diameter more than 1.5 cm, and wire width more than

[22] FRÎNCULEASA *et alii* 2019.
[23] FRÎNCULEASA, FRÎNCULEASA 2022.
[24] ALEXANDRESCU 1974, pl. 8.
[25] VULPE, DRĂMBOCIANU 1981, p. 177, fig. 8/4.
[26] MOTZOI-CHICIDEANU, OLTEANU 2000, p. 54.
[27] CIUGUDEAN 1996, p. 33, fig. 31/8–9; SCHUSTER *et alii* 2019, p. 277.
[28] NICA 1982, p. 24.
[29] MOTZOI-CHICIDEANU, OLTEANU 2000, p. 58, no. 38.
[30] PREDA 2015, p. 22.
[31] ALEXANDROV 2009; VASILEVA 2021.
[32] CHOHADZHIEV, MIHAYLOVA 2014, p. 21–22, 39–40, fig. 28/a-b; MATHIESON *et alii* 2018; ALEXANDROV 2020, p. 252.
[33] MATHIESON *et alii* 2018, table 6.
[34] ALEXANDROV 2020, p. 252.

0.4 cm) and group A2 (diameter less than 1.3 cm and wire less than 0.3 cm) based on their form and dimensions[35].

In present-day North-East Bulgaria spiral hair ornaments made of silver are found in barrow graves-at Madara[36], Zeglartsi-Orlyak[37], Plachidol[38]. During rescue archaeological excavations near Vetrino in 2020 in a burial of a male 20–25 years old was found a pair of two rings, on each side of the skull. The rings were made of silver wire twisted spirally in 2.5 coils. The C14 date is 2884–2623 BC[39]. Here should be mentioned also the results from the rescue archaeological excavations in 2020 near Chudomir where 1 gold ring twisted spirally in 1.5 coils was found in grave of an adult. The grave is dated in 3000 BC. At the same barrow was found also 1 gold ring twisted in 1.5 turns. The ornament belongs to an adult individual. The grave is dated in the period 2500–1500 BC (**Fig. 2f**)[40]. In burial context spiral hair ornaments appeared also at North-West Bulgaria, stray find from Mihailovo (**Fig. 3a**)[41], Tarnava (**Fig. 3b**)[42] and Goran-Slatina barrow necropolis (**Fig. 3c-d**)[43].

Spiral hair ornaments made of wire twisted in 1.5 turns appear in Upper Thrace as early as the beginning of the EBA. Ornaments of this type were made of both silver and gold. Their distribution in Thrace is attested east of the rivers Blatnitza and Sazliyka. St. Alexandrov suggests that the appearance of barrows in Thrace can be dated around 3100 BC. and could be connected with the phenomenon Cernavoda III-Usatovo, but the problem is not solved yet. He dates the appearance of tumuli around 3100 BC. in the area of Karnobat in the east and on the Blatnitza River and Sazliyka River in the west[44].

From EBA context in Thrace so far, the date we have come from burial context: Straldza (**Fig. 1m**)[45], Zimnitsa[46], Mogila[47], Kamen, "*Gabrova barrow*" (**Tab. 3i**)[48]; Kamen, "*Shekerdza*"[49], Boyanovo „*Lozyanska*" Barrow (**Fig. 1s**)[50]; Boyanovo, „*Golyam kairyak*"[51], Popovo[52], Troyanovo "*Cherniova*" barrow (**Fig. 1t**)[53]; Troyanovo "*Kamennata mogila*" (**Fig. 1r; Fig. 3e-h**)[54], Mednikarovo[55].

---

35 ALEXANDROV 2009.
36 PANAYOTOV 1989, p. 69.
37 PANAYOTOV 1989, p. 122.
38 PANAYOTOV 1989, p. 112.
39 ALEXANDROV *et alii* 2021, p. 6, pl. IX/2.
40 ALEXANDROV, SLAVCHEV 2020, p. 468–469.
41 ALEXANDROV 2020, p. 252.
42 NIKOLOV 1976, p. 45–46.
43 KITOV *et alii* 1991.
44 ALEXANDROV 2015.
45 ALEXANDROV, ILIEV 2016, p. 154–155.
46 ALEXANDROV, ILIEV 2010, p. 113; VALCHEV, BLAZHESKA 2019, fig. 2.12.
47 ILIEV, BAKARDZHIEV 2006, p. 104, fig. 12.
48 DIMITROVA 2014, p. 71.
49 DIMITROVA 2014, p. 79.
50 AGRE 2015, p. 22, fig. 32, 35, 39.
51 BAKARDZHIEV *et alii* 2011, p. 117.
52 ALEXANDROV 2020, p. 253.
53 ALEXANDROV 2009, p. 11.
54 BUYUKLIEV 1964, p. 63–65.
55 PANAYOTOV, ALEXANDROV 1995, p. 94, fig. 10.

Spiral hair-ring made of wire twisted in 2.5 coils are found at Kangalova barrow[56] and Pet mogili (**Fig. 1q**)[57]. A stray find from the region of Malomirovo are 2 gold rings twisted into 3 turns[58].

During the EBA spiral hair-rings appeared in association with other types of hair ornaments-type Zimnicea and type Leukas. Of special interest is the case of Toncheva barrow near Venets where gold spiral hair-rings in 1.5 coils and 2.5 coils were found together with a gold ring of type Leukas (**Fig. 3j-k**)[59]. Here should also be mentioned one of the most recent finds coming from barrow 4 in Silihlyar locality near Primorsko where silver spiral hair-rings were found attached to gold rings of type Leukas (**Fig. 2g**). The burial belongs to a young woman. The ornaments were found close to the skull[60] and were probably embedded in the hair style of the young woman.

The popularity of metal hair-rings in EBA Thrace naturally resulted in the appearance of a new local type-rings type Dubene (**Fig. 3m-o**). The rings comprise one full loop followed by backward folds–1, 2, 3, 6 or 9 folds. Of special importance is also the appearance of gold rings of 1.5 coils[61] which were also fashioned at Dubene, indicating that the local masters produced the already popular type in EBA Thrace and created a new type. Nowhere at the Balkans such a large number of exquisite gold pieces of jewelry come to light. The sensational discovery at Dubene revealed all features of local development of the EBA Thracian jewelry production, which could be observed in the technique of serial production, variety, and occurrence of new types. The appearance of a new local type should not come as a surprise. The gold hair ornaments from Dubene should be considered as a status symbol of outstanding individuals, placing Thrace among the 3rd millennium BC. jewelry centres.

Hair ornaments are widespread throughout the Black Sea basin and probably reflect a fashion that has persisted for a long time. In the steppe, they appear in the second half of the 4th millennium in a small number of tombs attributed to the Yamnaya communities. According to A. Frînculeasa and M. Frînculeasa the discovery of this type of ornament in wide areas and in different cultural contexts makes it possible to study chronological relationships, contacts and interactions between the peoples of the northern Pontic steppe and those of the Lower Danube and the Balkans, and beyond with those of Central Europe and Anatolia. This dynamic can also be traced through the presence of other categories/types of pieces such as daggers, axes, flat axes, ornaments, but also raw materials, technologies and knowledge, etc. The history of silver metallurgy can serve as a model for the evolutionary interpretation of human societies, as the interaction with this unique material spurred people to explore and acquire new skills[62].

Hair ornaments are found west of the Black Sea to the Hungarian Plain. Between 2.900 and 2.007 BC., burials furnished with precious metal jewellery (most

[56] ALEXANDROV, KIROV 2017, p. 127.
[57] KANCHEVA-RUSEVA 1994, p. 92, обр.5.
[58] AGRE 2018, p. 475, nos. 144–145.
[59] GEORGIEVA *et alii* 2008, p. 232.
[60] BALABANOV, PANTOV 2019, p. 108, fig. 3.
[61] HRISTOV 2005, p. 129.
[62] FRÎNCULEASA, FRÎNCULEASA 2022, p. 255–256.

of all hair rings) and copper and precious metal weapons (daggers and shaft-hole axes) emerged in Eastern Hungary. An example is grave 7–7a from Sárrétudvari-Őrhalom kurgan where an amphora-shaped vessel and a pair of hair rings made of silver and electrum were found in a grave of a mature man (**Tab. 1o**). The presence of tumulus burial, containing high value prestige objects and unique foreign weapons was interpreted as "*signal of the arrival of a new ruling elite of Southeast and Central Europe in the first quarter of the 3rd millennium BC*".[63]

Hair ornaments appeared further in the middle Danube and the Adriatic area[64], mentioning here the six silver loop rings discovered in M.3/T.10 from Shtoj (Albania).[65] Made of gold, slightly different typologically, we recall the discoveries from the Adriatic area, such as those from Velika Gruda, Mala Gruda, Gruda Boljevića (Montenegro)[66]. Further south, we mention those from the Ionian Sea through the Leukas discoveries and even the Aegean Sea, through the Manika type[67].

Loop rings are widespread throughout the Black Sea basin and probably reflect a fashion that has persisted for a long time. In the steppe, they appear in the second half of the 4th millennium in a small number of tombs attributed to the Yamnaya communities. The discovery of this type of ornament in wide areas and in different cultural contexts makes it possible to study chronological relationships, contacts and interactions between the peoples of the northern Pontic steppe and those of the Lower Danube and the Balkans, and beyond with those of Central Europe and Anatolia. This dynamic can also be traced through the presence of other categories/types of pieces such as daggers, axes, flat axes, ornaments, but also raw materials, technologies and knowledge, etc. The history of silver metallurgy can serve as a model for the evolutionary interpretation of human societies, as the interaction with this unique material spurred people to explore and acquire new skills.

The distribution of metal hair-rings in 1.5 coils during 3rd millennium BC. reached also Northeast Aegean. At EBA I context gold spiral hair-ring was found at Besik Tepe[68]. Spiral hair-rings made of gold wire are known from Treasure F, Troy-two pairs[69]. One silver hair-ring is found within a wall from Troy III during the excavations of M. Korfmann[70]. One hair-ring in 1.5 coils made of bronze also comes from Troy, found during the excavations of H. Schliemann, but there is no information about the context (**Fig. 3q**)[71].

The fashion of metal hair-rings is well illustrated in the EBA cemeteries in Anatolia. Gold, silver, lead or bronze hair-rings worn on a lock of hair were found at the EBA II cemeteries of Demirchihöyük-Seriket (**Fig. 1v**)[72] and Küçükhöyük[73]. The local population in West Inland Anatolia often combined the hair-rings with

[63] DANI, NEPPER 2006, fig. 4–5; DANI, KULSCÁR 2021, p. 336–337.
[64] RUTTKAY 2002.
[65] GOVEDARICA 2016, p. 22.
[66] PRIMAS 1995; BAKOVIĆ 2011.
[67] VASILEVA 2017; VASILEVA 2021.
[68] SAZCI, KORFMANN 2000, abb. 3.
[69] SCHLIEMANN 1880, p. 555; SAZCI 2007, F-S11, F-S13.
[70] KORFMANN 1998, p. 25, fig. 20.
[71] SCHMIDT 1902, no. 6431; ANTONOVA *et alii* 1996, no. 252.
[72] SEEHER 1991, p. 63–64.
[73] GÜRKAN, SEEHER 1991, p. 90.

metal diadems. M. Mellink has noted that the practice of using metal rings as hair ornaments can be seen also at the cemetery Karataş-Semayük, where similar bronze rings were found in situ on skulls[74]. This practice also documents at the EBA cemetery Resuloğlu where pairs of silver hair-rings were found around skull[75]. Of particular interest is the occurrence of hair ornaments in the rich burial complexes such as Alaca Höyük, Arslantepe and Ur.

At Alaca Höyük hair-rings were found near the heads of the skeletons and it has been assumed that strands of hairs were threaded through the ornaments. Especially interesting is a pair of gold hair-rings made of solid wire with deeply incised decoration on the surface (**Fig. 3s**)[76].

Spiral hair-rings are known from the royal cist tomb of Arslantepe in Eastern Anatolia, dated at the beginning of 3rd millennium BC. The hair-rings were found together with other jewelry in a hoard situated close to the body, probably originally worn on the body. Evidence that spiral ornaments adorned the hairstyle come from two adolescents discovered above the cist slabs. Each of them wore a pair of copper-silver spiral hair-ring and diadem[77].

Gold spiral hair-rings were found around the head of the famous queen Puabi from the royal tombs at Ur.[78] The head was the prime locus of displaying jewelry in Ur. Puabi wore a golden headdress. Her head was wrapped with a long gold diadem, adorned with gold leaves, flowers, rings and plates. At the top of the decoration was a high crest of gold with three rosettes. On the ears, Puabi wore gold crescent-shaped earrings. Above the earrings, the queen wore gold spiral hair-rings that had been twisted around a lock of hair. Similar spiral hair-rings were found on the shoulders as if they had held a lock of hair that hung down the breast (**Fig. 3u, t**). Hair-rings were found also at the other burials from the cemetery of Ur[79]. A. R. Gansell has recognized four types of jewelry sets, worn by the local society. Silver hair-rings were among the fourth jewelry set together with pins and string of beads. The main accent in the hairstyle were the hair-rings. A. R. Gansell has noted that this jewelry set was worn by both sexes. Gold hair-rings were found at other jewelry sets, but the main accent was a wreath- or choker-based ornament[80].

The right to own and wear precious metal ornaments

The spiral hair was made of deliberately chosen materials-silver and gold-which are attractive and visible. This raises the question of what exactly hair rings "said" about their wearers, their function and symbolism. A possible determination of whether the rings were functional or social ornaments is a tricky question indeed, since we have only the archaeological context of the finds to gain insight into the use of the ornaments. During the EBA, in most cases, spiral metal hair rings were found around the skull. Very often, excavators noted that rings were found around

[74] MELLINK, ANGEL 1970, p. 245.
[75] YILDIRIM 2006, p. 11.
[76] MAXWELL-HYSLOP 1971, p. 45, fig. 31 b.
[77] FRANGIPANE *et alii* 2001, p. 108–109.
[78] PITTMAN 1998.
[79] PITTMAN 1998, p. 108.
[80] GANSELL 2006, p. 10.

the temple/skull, suggesting that the ornaments were most likely used as hair ornaments. In my opinion, the way the rings were worn was important for interpreting their social and cultural significance. It is likely that body parts were adorned with jewelry intended to convey messages about social, ethnic, or religious identity. The head is the most visible part of the human body. The peculiar spiral ornaments and prominent placement on the head were probably indicative of prominent personalities.

The function of the small rings as hair ornaments is often confirmed by their archaeological context-most pieces were found on both sides of the skull, probably in connection with a particular hairstyle (**Fig. 3p**). There are many hypothetical reconstructions of hairstyles decorated with spiral hair rings: 1) strands of hair were threaded through the spiral hair rings; 2) spiral hair rings were twisted around a lock of hair; 3) the ornaments were used to decorate various braided hairstyles; 4) the ornaments were sewn onto headbands or head scarves, etc.

The appearance of new jewelry could be the result of various factors – population movements, traders, principles, craftsmen, recipients manifested in the course of acquisition, possession, exhibition and so on. There is no doubt that foreign goods possessed the highest possible degree of visibility at the time of their appearance in a new place. Most likely, things that were useful or attractive were repurposed and integrated according to local preferences. There is no doubt that spiral hair rings were very popular in the 3rd millennium BC. Their prevalence in EBA societies in the Balkans, the Aegean, Anatolia and around the world allows us to consider them as a widespread type of ornament that has its own journey and development history.

BIBLIOGRAPHY

AGRE 2015 – D. Agre, *Archaeological Investigation of the "Lozianska Mogila" Barrow Located near the Village of Boyanovo, Municipality of Elkhovo, in South-Eastern Bulgaria*, Praehistorische Zeitschrift 90/1–2 (2015), p. 141–171.

AGRE 2018 – D. Agre, *Catalogue. Cat. № 144 Hair-ring, Cat. № 145 Hair-ring, MEA Elhovo*, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*, Sofia, 2018, p. 475.

ALEXANDRESCU 1974 – A. D. Alexandrescu, *La nécropole du Bronze ancien de Zimnicea (dép. de Teleorman)*, Dacia N.S. 18 (1974), p. 79–94.

ALEXANDROV 2009 – St. Alexsandrov, *Ukrashenia za kosa ot zlato i srebro prez bronzovata epoha v Severna Bulgaria*, Arheologia 1–2 (2009), p. 7–18.

ALEXANDROV 2015 – St. Alexsandrov, *Mogilni grobove ot rannata bronzova epoha v Trakija (55 godini po-kasno)*, Arheologia 1–2 (2015), p. 33–48.

ALEXANDROV 2017 – St. Alexsandrov, *Ukrashenia ot blagoroden metal ot rannata bronzova epoha vav fonda na Natsionalniya archeologicheski institute s muzei-Sofia*, in: H. Popov, J. Tzvetkova (eds.), *ΚΡΑΤΙΣΤΟΣ. Volume in Honour of Professor Peter Delev (ΚΡΑΤΙΣΤΟΣ. Сборник в чест на професор Петър Делев*, Sofia, 2017, *p.* 215–227.

ALEXANDROV 2018a – St. Alexandrov, *Catalogue. Cat. № 146. Stray find from Mihailovo*, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*, Sofia, 2018, p. 475.

ALEXANDROV 2018b – St. Alexandrov, *Catalogue. Cat. № 41–42. Tumular grave near*

village of Turnava, Vratsa region, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*, Sofia, 2018, p. 461.

ALEXANDROV 2018c – St. Alexandrov, *Catalogue. Cat. № 34–37. Tumular Graves in "Kamenna tumulus" bear village of Troyanovo, Radnevo region. Grave № 1 and 2*, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*, Sofia, 2018, p. 460.

ALEXANDROV 2018d – St. Alexandrov, *Catalogue. Cat. № 38–39. Tumular Grave in "Toncheva tumulus" near village of Venets, Karnobat region*, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*, Sofia, 2018, p. 475.

ALEXANDROV 2019 – St. Alexandrov, *Early Bronze Age Barrow Graves in North-West Bulgaria*, in: V. Flipović, V., A. Bulatović, A., Kapuran (eds.), *Papers in Honour of Rastko Vasić 80th Birthday,* Praga, 2019, p. 75–94.

ALEXANDROV 2020 – St. Alexandrov, *Gold and Silver Ornaments in Early and Middle Bronze Age Bulgaria*, in: J. Maran, R. Băjenaru, S-C. Ailincăi, A-D. Popescu, S. Hansen (eds.), *Objects, Ideas and travelers. Contacts between the Balkans, the Aegean and Western Anatolia during the Bronze and Early Iron Age. Volume to the memory of Alexandru Vulpe: Proceedings of the Conference in Tulcea, 10–13 November 2017*, Universitätsforschungen zur prähistorischen Archäologie, Band 350, Bonn, 2020, p. 251–263.

ALEXANDROV 2021 – St. Alexandrov, *Forth / third millennium BC barrow graves in North-East Bulgaria (120 years of investigations)*, in: V. Heyd, G. Kulcsar, B. Preda – Balanica (eds.), *YAMNAYA INTERACTIONS. Proceedings of the International Workshop held in Helsinki, 25–26 April 2019*, Budapest, 2021, p. 271–314.

ALEXANDROV 2021 – St. Alexandrov, *New Data about the Bronze Age Plachidol Barrow Necropolises (Northeast Bulgaria)*, in: L. Dergacheva (ed.), *AERE PERENNIUS MORE LASTING THAN BRONZE, Essays in honour of Valentin Dergachev on the occasion of his 80th birthday*, Chișinău, 2021, p. 453–468.

ALEXANDROV, ILIEV 2010 – St. Alexandrov, I. Iliev, *Spasitelni arheologicheski prouchvanija na obekt 14-A po AM „Trakija", LOT 4, s. Zimnica, obshtina Straldzha*, in: *Arheologicheski prouchvania i razkopki prez 2009 g.*, 2010, p. 113–114.

ALEXANDROV, ILIEV 2016 – St. Alexandrov, I. Iliev, *Spasitelni arheologicheski prouchvania na nadgrobna mogila (obekt no.6 po traseto na tranziten gazoprovod za Turtsia), zemlishte na gr. Straldzha, obshtina Straldzha*, in: *Arheologicheski otkritia i razkopki prez 2015 g.*, 2016, p. 154–156.

ALEXANDROV, KIROV 2017 – St. Alexandrov, I. Kirov, *Spasitelni arheologicheski prouchvania na nadgrobna „Kangalova"mogila ot Rannata Bronzova Epoha, zemlishte na s. Troyanovo, obshtina Radnevo*, in: *Arheologicheski otkritia i razkopki prez 2016 g.*, 2017, p. 126–128.

ALEXANDROV, SLAVCHEV 2020 – St. Alexandrov, S. Slavchev, Site A1/3 near Vetrino, Varna Region. Section A1, in: H. Popov, K. Chukalev, Y. Dimitrova, N. Kecheva, M. Damyanov, N. Ivanova, G. Grozdanova (eds.), *Stream through time. Rescue archaeological investigations along the expansion of the gas transmission infrastructure of Bulgartransgaz EAD*, National Archaeological Museum Catalogues, Supplementum 1, Sofia, 2020, p. 439–443.

ALEXANDROV, SLAVCHEV, TONKOVA 2021 – St. Alexandrov, S. Slavchev, E. Tonkova, *Rescue excavations of bronze age barrows in Vetrino region, Northeast Bulgaria*, MCA S.N. 17 (2021), p. 5–48.

ANTONOVA, TOLSTIKOV, TREISTER 1996 – I. Antonova, V. Tolstikov, M. Treister, *The Gold of Troy: searching for Homer's fabled city,* London, 1996.

BAKOVIĆ 2011 – M. Baković, *The Princely Tumulus Gruda Boljevića Podgorica, Montenegro*, in: E. Borgna, S. M. Celka (eds.), *Ancestral Landscapes. Burial Mounds in the Copper and Bronze the Early Bronze Age Central and Eastern Europe-Balkans-Adriatic-Aegean, 4th–2nd millennium B.C.*, Travaux de la Maison de l'Orient et de la Mediterranée 58 (2011), Lyon, p. 275–381.

BALABANOV, PANTEV 2019 – P. Balabanov, D. Pantev, *Nadgrobna mogila Silihlyar 4*, in: *Arheologicheski otkritia i razkopki prez 2018 g.*, 2019, p. 106–109.

BAKARDZHIEV, ILIEV, RUSEV 2011 – St. Bakardzhiev, I. Iliev, Y. Rusev, *Spasitelni arheologicheski prouchvania na mogilen nekropol v m. „Baylar Kayryak", s. Boyanovo, oblast Yambolsko*, in: Arheologicheski otkritia i razkopki prez 2010 g.,2011, p. 117.

BUYUKLIEV 1964 – H. Buyukliev, *Dve rannotrakiyski mogilni pogrebenia ot Starozagorsko*, Arheologija 4 (1964), p. 61–65.

CARMINATI 2014 – E. Carminati, *Jewellery manufacture in the Kura-Araxes and Bedeni cultures of the southern Caucasus: analogies and distinctions for the reconstruction of a cultural changeover*, in: A. Golani, Z. Wygnańska (eds.), *Polish Archaeology in the Mediterranean 23/2, Special Studies: Beyond ornamentation. Jewelry as an Aspect of Material Culture in the Ancient Near East*, Warsaw, 2014, p. 161–181.

CHOHADZIEV, MIHAILOVA 2014 – St. Chohadziev, N. Mihailova, *Smyadovo. Prehistoric Cemetery 2005–2008*, Sofia, 2014.

CIUGUDEAN 1996 – H. Ciugudean, *Epoca timpurie a bronzului în centrul și sud-vestul Transilvaniei*, Bibliotheca Thracologica XIII, București, 1996.

DANI, NEPPER 2006 – J. Dani, I. M. Nepper, *Sárrétudvari-Őrhalom Tumulus grave from the Beginning of the Early Bronze Age in Eastern Hungary*, Communicationes Archaeologicae Hungariae (2006), p. 29–48.

DANI, KULSCÁR 2021 – J. Dani, G. Kulcsár, *Yamnaya interactions in the Carpathian Basin*, în: V. Heyd, G. Kulcsár, B. Preda-Bălănică (eds.), *Yamnaya Interactions. Proceedings of the International Workshop held in Helsinki*, 25–26th April 2019, Budapest, 2021, p. 329–359.

DERGACEV 1991 – V. Dergacev, *Bestattungskomplexe der späten Tripolje-Kultur*, Mainz, 1991.

DERGACHEV 2023 – V. Dergachev, *Budzhak "Culture" through the prism of the cartographic method*, in: B. Preda-Bălănică, M. Ahola (eds.), *Steppe transmissions. The Yamnaya Impact on Prehistoric Europe, no. 4, Archaeolingua,* Budapest, 2023, p. 45–95.

DIMITROVA 2014 – D. Dimitrova, *Grobove ot bronzovata epoha pri Kamen, Slivensko*, Arheologija 1–2 (2014), p. 69–82.

DIMITROVA 2018 – D. Dimitrova, *Catalogue № 11. Tumular Grave in "Gabrova tumulus" near village of Kamen, Sliven region*, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*, Sofia, 2018, p. 475.

EOGAN 1997 – G. Eogan, *'Hair-rings' and European Late Bronze Age Society*, Antiquity 71/272 (1997), p. 308–320.

FRANGIPANE *et alii* 2001 – M. Frangipane, G. M. Nocera, A. Hauptmann, P. Morbidelli, A. Palmieri, l. Sadori, M. Schultz, T. Schmidt-Schultz, *New Symbols a New Power in a "Royal" Tomb from 3 000 BC Arslantepe, Malatya (Turkey*), Paléorient 27/2 (2001), p. 105–139.

FRÎNCULEASA *et alii* 2013 – A. Frînculeasa, B. Preda, O. Negrea, A. Soficaru, *Bronze Age tumulary graves recently investigated in Northern Wallachia*, Dacia N.S. 58 (2013), p. 23–64.

FRÎNCULEASA *et alii* 2014 – A. Frînculeasa, B. Preda, T. Nica, A. Soficaru, *Un nou tumul preistoric cercetat la Ariceștii Rahtivani (jud. Prahova)*, Studii de Preistorie 11 (2014), p. 189–227.

FRÎNCULEASA, PREDA, HEYD 2015 – A. Frînculeasa, B. Preda, V. Heyd, *Pit-Graves, Yamnaya and Kurgans at the Lower Danube: Disentangling 4th and 3rd Millennium BC Burial Customs, Equipment and Chronology*, Präehistorische Zeitschrift 90 (2015), p. 45–113.

FRÎNCULEASA *et alii* 2019 – A. Frînculeasa, B. Preda-Bălănică, A. Simalcsik, O. Negrea, B. Constantinescu, D. Cristea-Stan, *Morminte Iamnaia într-unt tumul redescoperit și salvat în localitatea Blejoi (Jud. Prahova),* Buletinul Muzeului Județean Teleorman 11 (2019), p. 35–78.

FRÎNCULEASA *et alii* 2019 – A. Frînculeasa, D. Garvăn, M. Mărgărit, A. Bălăsescu, I. Lazăr, M. N. Frînculeasa, A. D. Soficaru, M. Molnar, M. Georgescu, *Between worlds and elites at the beginning of the Early Bronze age in the Lower Danube Basin: a pluridisciplinary approach to*

personal ornaments, Archaeological and Anthropological Sciences 12/9 213 (2019), http://doi.org/10.1007/s12520-020-01177-0.

FRÎNCULEASA 2021 – A. Frînculeasa, *Burial mounds in the Lower Danube region-From the international to the local and the other way round*, in: V. Heyd, G. Kulcsar, B. Preda-Bălănică (eds.), *Yamna Interactions. Proceedings of the International Workshop*, held in Helsinki, 25–26 April 2019, volume 2 (2021), p. 173–205.

FRÎNCULEASA, FRÎNCULEASA 2022 – A. Frînculeasa, M. Frînculeasa, *Podoabe în contexte funerare – despre inele de buclă din argint descoperite în morminte tumulare preistorice cercetate in nordul Munteniei*, in: O. Cîrstina, E. C. Nițu (eds.), *O viață dedicată Paleoliticului. Studii in honorem Marin Cârciumaru*. Târgoviște, 2022, p. 247–272.

GANSELL 2006 – A. R. Gansell, *Identity and Adornment in the Third Millennium BC Mesopotamian "royal cemetery" at Ur*, Cambridge Archaeological Journal 17/1 (2006), p. 1–19.

GEORGIEVA, NIKOV, MOMCHILOV 2008 – R. Georgieva, K. Nikov, M. Momchilov, *Tonchova mogila kray s. Venets, Karnobatsko*, in: *Arheologicheski otkritia i razkopki prez 2007 g.*, 2008, p. 231.

GOVEDARICA 2016 – B. Govedarica, *The stratigraphy of Tumulus 6 in Shtoj and the appearance of the violin idols in burial complexes of the south Adriatic region*, Godišnjak/Jahrbuch 45/5–34 (2016) DOI: 10.5644/Godisnjak. CBI.ANUBiH–45.70.

GÜRKAN, SEEHER 1991 – G. Gürkan, J. Seeher, *Die Frühbronzezeitliche Nekropole von Küçükhüyük bei Bozüyük*, İstanbuler Mitteilungen 41 (1991), p. 39–96.

HANSEN 2018 – S. Hansen, *Elements for an Iconography of Bronze Age in Europe*, Anatolian Metals 8 (2018), p. 281–293.

HEYD 2011 – V. Heyd, *Yamnaya groups and tumuli west of the Black Sea*, in: E. Borgna, S. Müller Celka (Hrsg.), *Ancestral Landscapes. Burial Mounds in the Copper and Bronze. The Early Bronze Age Central and Eastern Europe-Balkans-Adriatic-Aegean, 4th–2nd Millennium B.C.*, Travaux de la Maison de l'Orient et de la Mediterranée 58 (2011), Lyon, p. 536–555.

HRISTOV 2005 – M. Hristov, *Mogilen nekropol ot rannata bronzova epoha kray Dabene (predvaritelno saobshtenie)*, Arheologija 1–4 (2005), p. 127–136.

HRISTOV 2017 – M. Hristov, *Sakrovishtata ot Dabene. Sofiya: Natsionalen Istoricheski Muzey*, Sofia, 2017.

ILIEV, BAKARDZHIEV 2006 – I. Iliev, S. Bakardzhiev, *Arheologicheski prouchvania na mogilen nekropol ot rannata bronzova epoha kray s. Mogila, oblast Yambol*, Izvestia na muzeite ot Yugoiztochna Bulgaria 22 (2006), p. 89–107.

IVANOVA 2007 – S. V. Ivanova, *„Serebrjanyj vek" Severo-Zapadnogo Prichernomor'ja*, Матеріали та дослідження з археології України 7 (2007), p. 85–91.

IVANOVA 2013 – S. V. Ivanova, *Yamnaya (Budzhakskaya) kul'tura Severo-Zapadnogo Prichernomor'ya. Drevniye kul'tury Severo-Zapadnogo Prichernomor'ya. Odessa: SMIL* (*Ямная (Буджакская) культура Северо-Западного Причерноморья. Древние культуры Северо-Западного Причерноморья. Одесса*), 2013, p. 211–254.

KANCHEVA-RUSEVA 1994 – T. Kancheva-Ruseva, *Yamni pogrebenia v mogila № 2 ot mogilen nekropol v zemlishteto na s. Pet mogili, Novozagorsko, Maritsa-Iztok*, Arheologicheski prouchvania 2 (1994), p. 91–94.

KITOV, PANAYOTOV, PAVLOV 1991 – G. Kitov, I. Panayotov, P. Pavlov, *Mogilni nekropoli v Loveshkia kray. Ranna bronzova epoha. (Nekropolat Goran-Slatina)*, Razkopki i prouchvania 23, Sofia, 1991.

KOHL 2007 – P. H. Kohl, *The Making of Bronze Age Eurasia*, Cambridge, 2007.

KORFMANN 1988 – M. Korfmann, Beşik-Tepe. *Vorbericht über die Ergebnisse der Granungen von 1985 und 1986*, Archäologische Anzeiger (1988), p. 391–398.

MATHIESON, ALPASLAN-ROODENBERG, REICH 2018 – I. Mathieson, S. Alpaslan-Roodenberg, D. Reich, *The genomic history of Southeastern Europe*, Nature 555/8 (2018), p. 197–210.

MAXWELL-HYSLOP 1971 – K. R. Maxwell-Hyslop, *Western Asiatic Jewellery*, London, 1971.

MELLINK, ANGEL 1970 – M. J. Mellink, L. Angel, *Excavations at Karataș-Semayük and Elmali, Lycia*, 1969, American Journal of Archaeology 74/3 (1970), p. 245–259.

MICU *et alii* 2014 – C. Micu, S. Ailincăi, F. Mihail, M. Constantinescu, *Rahman, com. Casimcea, jud. Tulcea*, în: *Cronica Cercetărilor Arheologice, Campania 2013, A XLVIII-a Sesiune Națională de Rapoarte Arheologice, Oradea*, București, 2014, p. 187–188.

MOTZOI-CHICIDEANU, OLTEANU 2000 – I. Motzoi-Chicideanu, G. Olteanu, A *Slab-Cist Grave discovered at Văleni-Dâmbovița*, SCIVA 51/1–2 (2000), p. 3–70.

NICA 1982 – M. Nica, *Locuirea preistorică de la Sucidava-Celei din perioada de trecere de la neolitic la epoca bronzului, Oltenia.* Studii și Comunicări 4 (1982) p. 5–37.

NIKOLOV 1976 – B. Nikolov, *Mogilni pogrebenia ot rannabronzova epoha kray Tarnava i Knezha*, Arheologija 3 (1976), p. 38–51.

ÖZGÜÇ, TEMIZER 1993 – T. Özgüç, R. Temizer, *The Eskiyapar treasure*, in*: Aspects of Art and Iconography: Anatolia and Its Neighbours. Studies in Honor of N.* Özgüç, Ankara, 1993, p. 613–628.

PANAYOTOV 1989 – I. Panayotov, *Yamnata kultura v balgarskite zemi, Razkopki i prouchvania 21*, Sofia, 1989.

PANAYOTOV, ALEXANDROV 1995 – I. Panayotov, S. Alexandrov, *Rannobronzoviyat nekropol pri Mednikarevo i Iskritsa*, Maritsa-Iztok. Arheologicheski prouchvania 3 (1995), p. 87–113.

PATOKOVA 1979 – F. Patokova, *Usatovskoe poselenie I mogilniki, Kiev: Naukova duma (Усатовское поселение и могильники),* 1979.

PITTMAN 1998 – H. Pittman, *Jewelry*, in: R. Zettler, L. Horne (eds.), *Treasures from the royal tombs of Ur*, Philadelphia, 1988, p. 87–122.

POLIAKOV 2022 – A. Poliakov, *Chronology and Cultural Genesis of the Paleometal epoch sites in Minusinsk basin*, Sankt Petersburg, 2022.

POPESCU 2010 – A. D. Popescu, *Silver artefacts of the third and second millennia BC at the Lower and Middle Danube*, in: R. Băjenaru, G. Bodi, C. Opreanu, V. V. Zirra (eds.), *Recent Studies on Past and Present I. Human Heritage and Community: Archaeology in the Carpathians and Lower Danube Area from Prehistory to the Early Medieval Age*, Transylvanian Review 19, Supplement 5/1 (2010), p. 163–182.

PREDA 2015 – B. Preda, *Considerations regarding barrow burials and metal depositions during the Early Bronze Age in the Carpathian-Danube area*, Hiperboreea Journal II/2 (2015), p. 5–51.

PREDA-BĂLĂNICĂ, FRÎNCULEASA, HEYD 2020 – B. Preda-Bălănică, A. Frînculeasa, V. Heyd, *The Yamnaya Impact North of the Lower Danube. A Tale of Newcomers and Locals*, Bulletin de la Société préhistorique française 117/1 (2020), p. 85–101.

PRIMAS 1995 – M. Primas, *Gold and silver during 3rd Millenium Cal. B.C.*, in: R. Morteani, J. P. Northover (eds.), *Prehistoric Gold in Europe. Mines, Metallurgy and Manufacture*, Dordrecht: NATO Advanced Science Institute Series 280 (1995), p. 77–93.

RUTTKAY 2002 – E. Ruttkay, *Das Endneolitihische Hügelgrab von Neusiedl Am See, Burgenland*, Régiségei 36 (2002), Budapest, p. 145–172.

SAZCI, KORFMANN 2000 – G. Sazci, M. Korfmann, *Metallfunde des 3. Jahrtausends v. u. aus Troia-Eine Studie in Vernindung mit den Ergebnissen der neuen Ausgrabungen*, Der Anschnitt, Beiheft 13 (2000), p. 93–99.

SAZCI 2007 – G. Sazci, *The Treasures of Troia*, Istanbul, 2007.

SCHLIEMANN 1880 – H. Schliemann, *Ilios. The City and the Country of the Trojans,* London, 1880.

SCHMIDT 1902 – H. Schmidt, *Schliemann's Sammlung: Trajanischen Altertumen*, Berlin, 1902.

SCHUSTER *et alii* 2019 – C. Schuster, N. C. Rișcuța, A. T. Marc, R. Pavel, M. Bleoancă,

F. Ciuvalu, A. Comșa, *Dealul Mare, comuna Vălișoara, județul Hunedoara*, în: *Cronica Cercetărilor Arheologice din România, Campania 2018*, A LIII-a Sesiune Națională de Rapoarte Arheologice, București, 2019, p. 276–278.

SCHUSTER, TUTULESCU 2014 – C. Schuster, I. Tutulescu, *Few Remarks about the Funerary customs of the Early Bronze Age in Southern Roumania*, Drobeta 24 (2014), p. 43–56.

SEEHER 1991 – J. Seeher, *Die Nekropole von Demirchihüyük-Sariket, Grabungs Kampagne 1990*, Istanbuler Mitteilungen 41 (1991), p. 97–124.

STÖLLNER 2016 – T. Stöllner, *The Beginnings of Social Inequality: Consumer and Producer Perspectives from Transcaucasia in the 4th and the 3rd Millennia BC*, in: M. Bartelheim, B. Horejs, R. Krauß (Hrsg.), *Von Baden bis Troia. Ressourcennutzung, Metallurgie und Wissenstransfer. Eine Jubiläumsschrift für Ernst Pernicka*, Rahden: Oriental and European Archaeology Volume 3, VML Verlag Marie Leidorf GmbH, 2016, p. 209–234.

YILDIRIM 2006 – T. Yildirim, *An Early Bronze Age Cemetery at Resuloğlu, near Uğurludağ, Çorum. A preliminary report of the archeological work carried out between years 2003–2005*, Anatolia Antiqua 14 (2006), p. 1–14.

VALCHEV, BLAZHESKA 2019 – T. Valchev, Z. Blazheska, *Silver and gold pendants from Early Bronze Age from Lower and Middle course of Tundzha river, Bulgaria,* Anodos. Studies of the Ancient World 14/2014 (2019), p. 235–243.

VALENTINOVA 2018 – M. Valentinova, *Catalogue. Cat. № 43–45. Finds from the Goran-Slatina tumular necropolis. Hair-rings*, in: S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Gold and Bronze. Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*: 461., Sofia, 2018.

VASILEVA 2017 – Z. Vasileva, *The Early Bronze Age rings of type Leukas-new considerations regarding their origin, distribution and function*, Archaeologia Bulgarica 20/1 (2017), p. 1–13.

VASILEVA 2021 – Z. Vasileva, *Worn to Impress. Development and Significance of the Metal Spiral Hair Ornaments in Early Bronze Age-Upper Thrace*, in: K. Leshtakov, M. Andonova (eds.), *Galabovo in Southeast Europe and Beyond. Cultural Interactions during the 3rd–2nd Millennium BC. Proceedings of the International Conference 24–27 October 2018 in the Town of Galabovo*, Sofia, 2021, p. 218–237.

VULPE, DRĂMBOCIANU 1981 – Al. Vulpe, V. Drâmbocianu, *Cercetări arheologice în raza comunei Năeni (Buzău)*, SCIVA 32/2 (1981), p. 171–193.

ZAHARIA 1959 – E. Zaharia, *Die Lockenringe von Sărata-Monteoru und ihre typologischen und chronologischen Beziehungen*, Dacia N.S. 3 (1959), p. 103–134.

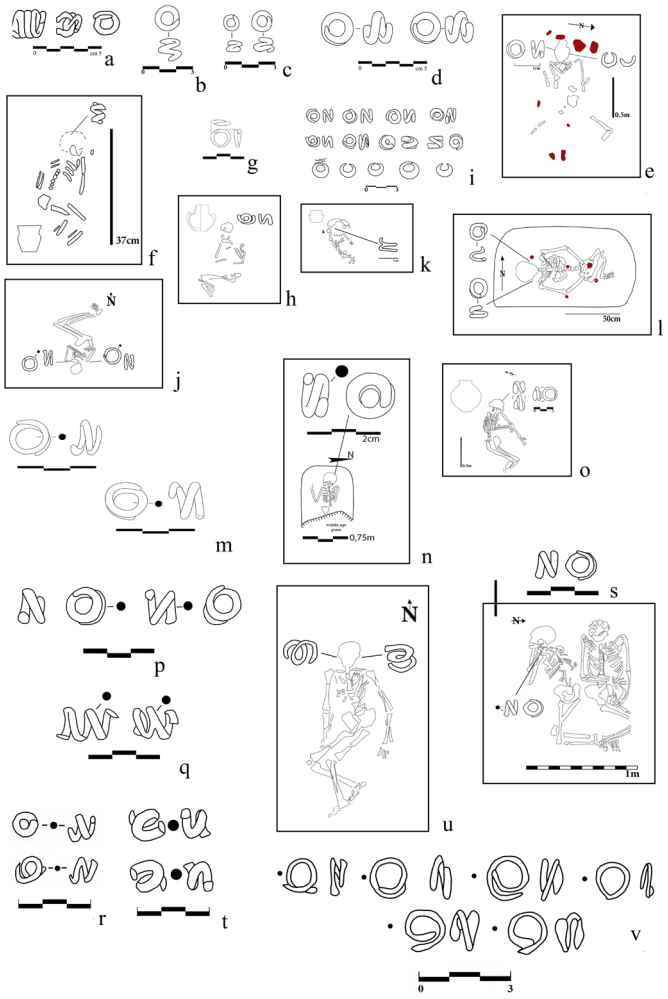


Fig. 1. Spiral hair ornaments from the West Pontic region, Romania, North Bulgaria and Hungary: a. Usatovo I–13, grave No. 4 (after PATOKOVA 1979, p. 109); b. Katarzhino (after IVANOVA 2013, fig. 4/3); c. Baranovo (after IVANOVA 2013, fig. 5/2); d. Celei (after NICA 1982); e. Aricești I, grave No. 1 (after FRÎNCULEASA *et alii* 2015, pl. 2/1); f. Ploiești-Triaj II, grave No. 20 (after FRÎNCULEASA *et alii* 2013, pl. 16/6); g. Văleni-Dâmbovița slab-cist grave (after MOTZOI-CHICIDEANU, OLTEANU 2000, fig. 6/2); h. Zimnicea, grave No. 4 (after ALEXANDRESCU 1974, pl. 2/T4, pl. 6/5, pl. 8/6); i. The rings from Zimnicea (ALEXANDRESCU 1974, pl. 8); j. Turnava, barrow No. 3, grave No. 1 (after PANAYOTOV 1989, fig. 52); k. Ploiești-Triaj II, grave No. 15 (after FRÎNCULEASA *et alii* 2013, pl. 16/2); l. Plenița, barrow No. 2, grave No. 1 (after SCHUSTER, TUȚULESCU 2014, pl. II, 5); m. Straldzha, barrow No. 1, grave No. 1 (after ALEXANDROV 2017, fig. IV/1–2); n. Turnak, Ninovska barrow (after ALEXANDROV 2019, pl. V/2, 3); o. Sárrétudvari-Őrhalom, grave No. 4 (after DANI, NEPPER 2006, fig. 4) (redrawn by the author); p. Mogila (by the author); q. Pet mogili (after KANCHEVA-RUSEVA 1994, p. 92, fig. 5); r. Troyanovo, Kamenna barrow (by the author) (redrawn by the author); s. Lozianskata barrow grave No. 14 (after AGRE 2015, fig. 31–32); t. Troyanovo, Chernoyova barrow (by the author); u. Troyanovo, Kamenna barrow, grave 1 (after PANAYOTOV 1989, fig. 30, 31); v. Demirchihöyük-Seriket graves Nos. 196, 125, 84 (after SEEHER 1991).



Fig. 2. Spiral hair ornaments from Romania and Bulgaria: a. Spiral rings from Blejoi TIV/M1 (after FRÎNCULEASA *et alii* 2019, pl. VII); b. Spiral rings from Blejoi TIV/M1 (after FRÎNCULEASA *et alii* 2019, pl. VII); c. Spiral rings from Blejoi TIII/M1 (after FRÎNCULEASA *et alii* 2019, pl. X); d. Yamnaya graves in the Prahova area (after FRÎNCULEASA 2021, fig. 11); e. Vetrino, barrow No. 34 (after ALEXANDROV 2021, fig. 17/1–3); f. Chudomir, feature No. 17 (after ALEXANDROV 2021, fig. 12/2–4); g. Silihlyar, barrow No. 4, gold and silver hair ornaments (after BALABANOV, PANTOV 2019, fig. 3).

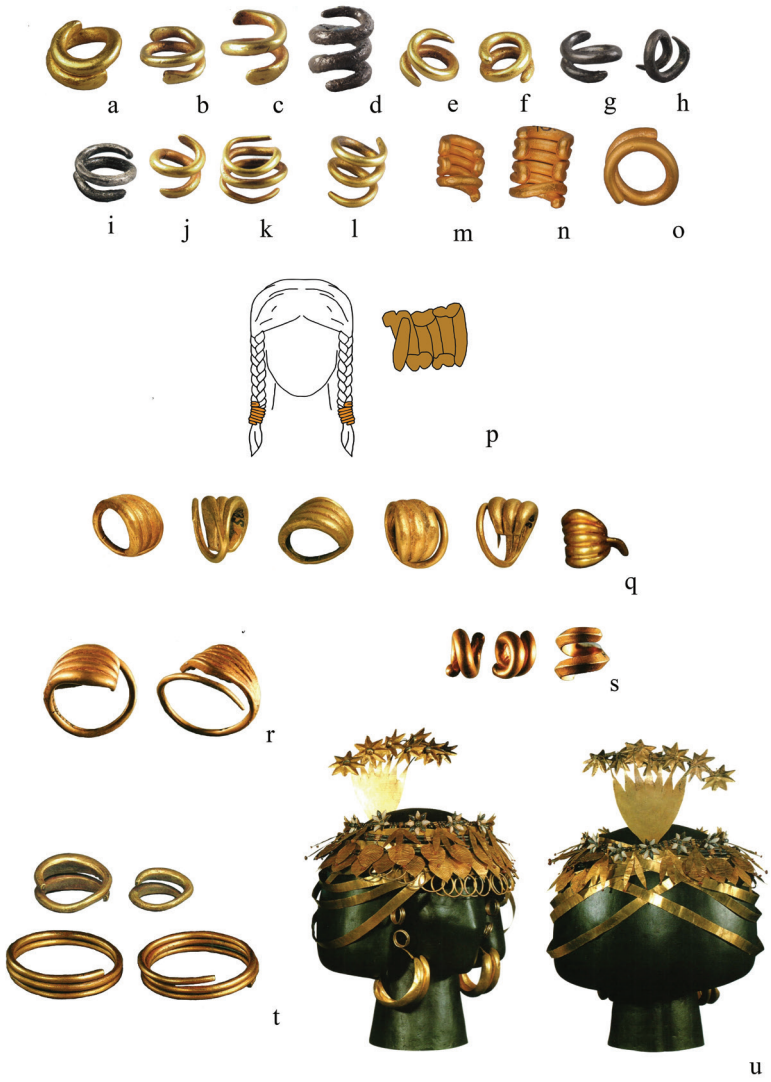


Fig. 3. Metal spiral hair ornaments from present day Bulgaria, Aegean, Anatolia and the world beyond: a. Mihailovo, stray find (after ALEXANDROV 2018a, Cat. No. 146); b. Tarnava tumulus 3, grave No. 1 (after ALEXANDROV 2018b, Cat. № 42); c-d. Goran-Slatina barrow No. 2, grave No. 4 and barrow No. 3, grave No. 8 (after VALENTINOVA 2018, Cat. Nos 44–45); e-h. Troyanovo, Kamenna barrow, gold hair-rings from grave 1 and silver hair-rings from grave 2 (after ALEXANDROV 2018c, Cat. Nos. 34–37); i. Gabrova barrow (after DIMITROVA 2018, Cat. No. 11); j-k. Toncheva barrow (after ALEXANDROVA 2018d, Cat. No. 38–39); l. Malomirovo, stray find (after AGRE 2018, Cat. No. 145); m-o. Dubene (after HRISTOV 2017, Cat. Nos. 16, 18); p. possible reconstructions of hairstyles decorated with spiral hair ornaments (drawings by the author); q. gold hair ornaments from the Treasure a Troy (after ANTONOVA *et alii* 1996, p. 17–21); r. gold hair ornaments from Eskiyapar treasure (after ÖZGÜÇ, TEMIZER 1993, pl. 107, 1–2); s. gold hair ornaments from Alaca Hoyük (after Anadolu Medeniyetleri Müzesi 1988); t. gold hair ornaments of Queen Puabi, Ur (after PITTMAN 1998, p. 108); u. reconstruction of the jewellery set of Queen Puabi (after PITTMAN 1998).

UN INEL CU GEMĂ DESCOPERIT RECENT ÎN DACIA SUPERIOR[1]

Radu OTA[*]
Anca MATIȘ[**]
Ovidiu-Maxim OARGĂ[***]

Cuvinte-cheie: *Ceres, inel cu gemă, sardonyx.*
Keywords: *Ceres, finger ring with gem, sardonyx.*

Rezumat: *Subiectul acestui articol privește un inel de fier care are montată o bijuterie de sardonix cu reprezentarea zeiței Ceres, descoperit întâmplător în primăvara anului 2019, pe teritoriul satului Tibru, comuna Cricău, județul Alba. Orașul este situat în zona de vest a Depresiunii Transilvaniei, la poalele Munților Trascău, o subdiviziune a Carpaților Occidentali. Piesa fusese donată de un localnic care a descoperit-o întâmplător, lângă izvorul pârâului Tibru, care izvorăște din Munții Trascău și se varsă în valea Galda, care la rândul său se varsă în râul Mureș (Maris). Aceasta se constituie într-o importantă arteră hidrografică a Daciei romane. De-a lungul timpului, în satul Tibru, au fost descoperite urme de locuire romană dintr-o vilă rustică, un relief votiv și un altar închinat Dianei, un altar votiv închinat lui Jupiter Optimus Maximus și alte artefacte. În bibliografie inelul prezintă o datare largă, specifică secolelor I–III p.Chr., dar, în opinia noastră, bijuteria poate fi datată în secolul al II-lea p.Chr. datorită execuției fine a imaginii gravate a zeiței și a numeroaselor detalii legate de veșminte.*

Abstract: *The subject of this article is the analysis of an iron ring that has a sardonyx gem mounted with the representation of the goddess Ceres, discovered by chance in the spring of 2019, in the territory of Tibru village, Cricău commune, Alba County. The town is located in the western area of the Transylvanian Depression, at the foot of the Trascău Mountains, a subdivision of the Western Carpathians. The piece had been donated by a local resident who discovered it by chance near the source of the Tiber stream, which springs from the Trascău Mountains and flows into the Galda valley, which in turn flows into the Mureş (Maris) river. This constitutes an important hydrographic artery of Roman Dacia. Traces of Roman habitation from a villa rustica, a votive relief and altar dedicated to Diana, a votive altar*

[*] Radu OTA: Muzeul National al Unirii Alba Iulia; e-mail: eractum@yahoo.com.
[**] Anca MATIȘ: Muzeul National al Unirii Alba Iulia; e-mail: hermyona_1983@yahoo.com.
[***] Ovidiu OARGĂ: Muzeul National al Unirii Alba Iulia; e-mail: ovidiu_maxim_oarga@yahoo.com.

[1] Aducem calde mulțumiri colegei dr. Ana-Cristina Hamat-Georgescu pentru sfaturi și punerea la dispoziție a tezei sale de doctorat, care ne-au fost de un real folos în editarea acestui modest material.

*dedicated to Jupiter Optimus Maximus and other artefacts have been discovered over time in the village of Tibru. The ring has in bibliography a broad dating, from the century I–III AD., but, in our opinion, the gem can be dated at the II*nd *century AD, due to the fine execution of the engraved image of the goddess and with numerous details related to the garments.*

Introducere

Subiectul acestui articol privește analiza unui inel din fier care a fost donat Muzeului din Alba Iulia de către un localnic[2] din satul Tibru, com. Cricău, jud. Alba, în luna martie a anului 2019. Este vorba despre o descoperire întâmplătoare realizată de acesta în punctul "Fântâna Fiașului", la aproximativ 70 m de izvorul pârâului Tibru. Localitatea se află la 22 km nord-vest de Alba Iulia, în partea vestică a Depresiunii Transilvaniei, la poalele Munților Trascău, pe culoarul Turda-Alba Iulia[3].

Din punctul de vedere al documentării arheologice se cunoaște faptul că pe teritoriul satului Tibru au fost identificate prin periegheze mai multe vestigii aparținând epocii romane: un drum și o *villa rustica*, unde au fost găsite fragmente de conducte ceramice, cărămizi cu ștampila legiunii a XIII-a Gemina[4], un relief și un altar votiv dedicate Dianei, primul de către Ulpius Vindex[5], și nu în ultimul rând, un altar votiv închinat lui IOM de către un anume Claudius Valentinus[6].

Descriere și analogii

Zeița este redată în picioare, cu capul spre dreapta, învеșmântată într-un *chiton* lung, care îi acoperă membrele inferioare. Se pot observa cutele marcate vertical, cu eleganță, ale veșmântului, creându-se astfel un efect de „umbră", la fel ca la statuile de înaltă calitate artistică. Peste *chiton* apare un *himation*, care învăluie torsul zeiței, două falduri atârnând în diagonală în zona abdomenului, iar un capăt al acestuia fiind adus la spate. Pe cap poartă o scufie (sau poate este vorba despre coafură), peste care este așezată o cunună vegetală; în mâna dreaptă ține un sceptru sau o suliță, iar în cea stângă, care este deteriorată, ținea probabil un mănunchi de spice sau o *patera*. Analogii apropiate găsim la gemele din jaspis roșu cu reprezentarea lui Ceres descoperite în necropola romană de la Isaccea[7] și la Novae în Moesia Inferior[8]. Un exemplar asemănător, dar nu identic, provenit de la Micia, din Dacia Superior, se găsește în colecțiile Muzeului Național de Istorie a Transilvaniei din Cluj-Napoca, pe care zeița este redată purtând *chiton* și *himation*, ținând în mâna dreaptă spice de grâu, iar în cea stângă un sceptru[9]. O analogie destul de apropiată provine de la Porolissum, unde zeița este redată cu sceptru în mâna dreaptă ridicată, și cu două

[2] Mulțumim încă o dată domnului F. L. I. pentru spiritul civic arătat, prin donarea acestui inel Muzeului Național al Unirii Alba Iulia.

[3] SAVU 1987, p. 623–624, fig. 214.

[4] REP ALBA 1995, p. 191, nr. 2–3.

[5] IDR III/4, 55–56.

[6] DAICOVICIU 1941, p. 317, nr. 1; IDR III/4, 57.

[7] SIMION 2005–2006, p. 176, n. 3, fig. 1/3.

[8] DIMITROVA-MILČEVA 1980, p. 49, nr. 76.

[9] ȚEPOSU-DAVID 1960, p. 528, nr. 9, fig. 1/16.

spice de grâu în cea stângă[10]. O altă gemă care se aseamănă cu a noastră se află în colecția Cabinetului Numismatic al Bibliotecii Academiei Române[11].

Ceres este o divinitate agrestă, similară cu Demeter a grecilor, care era protectoarea roadelor pământului și a agricultorilor în general. Era redată cu câteva atribute specifice precum spicele de grâu, coșul și ghirlanda cu spice de grâu purtată pe cap[12].

Inelul este din fier, având montată o piatră semiprețioasă de formă ovală (sardonyx de culoare albă cu nuanțe maro). Este prelucrat prin turnare, veriga făcând corp comun cu caseta ovală în care este prinsă gema (dimensiuni: 2,6 × 2,3 cm; dimensiuni gemă: 1,3 × 1 cm).

Din punct de vedere tipologic se încadrează în tipul 2.13.2 Riha[13] pentru descoperirile de la Augusta Raurica, din Germania Superior, tipul I, varianta 1 Ruseva-Slokoska 1991[14], tipul 2a Guiraud[15] pentru descoperirile din Gallia, tipul I/C Facsády pentru descoperirile de la Aquincum, din Pannonia Inferior[16], și tipul II. 2. 4a Hamat pentru descoperirile din Dacia Superior, cu cele mai bune analogii la Micia[17], toate acestea încadrându-se cronologic între sec. I și mijlocul sec. al III-lea p.Chr. Nu în ultimul rând dorim să amintim de o imagine a lui Ceres de pe un tipar pentru medalioane ceramice de la Apulum, în care zeița este redată îmbrăcată într-un *chiton* lung până la glezne, peste care are un *himation* marcat foarte elegant. In mâna dreaptă ține un sceptru regal, iar în cea stângă spice de grâu. Este o schemă iconografică foarte asemănătoare cu cea gravată pe piatra noastră de inel[18].

Concluzii

Inelul de fier cu gema din sardonyx pe care este redată zeița Ceres face parte din descoperirile mediului rural al Daciei romane. Nu este întâmplător că avem de-a face cu divinitatea protectoare a agriculturii și a roadelor pământului. Purtătorul căuta ca zeița să-i asigure recoltele împotriva calamităților naturale, fiind probabil unul din fermierii din zonă. Modul de redare a detaliilor veșmintelor (*chiton* și *himation*) și ilustrarea efectului de „umbră" similar statuilor din piatră de calitate superioară, ne fac să credem că avem de-a face cu o gemă din sec. II p.Chr., poate chiar mai timpurie, ajunsă în Dacia odată cu purtătorul său. Având în vedere că inelul este din fier, nu poate fi vorba despre o persoană avută, cu un rang social înalt. Dar era suficient de înstărită (probabil un veteran proprietar de fermă) pentru a-și permite achiziționarea unei asemenea piese gliptice.

[10] ȚEPOSU-MARINESCU, LAKÓ 1973, p. 7, nr. 21, pl. II, fig. 21.
[11] GRAMATOPOL 2011, p. 124, nr. 204, pl. X/204.
[12] FERRARI 2003, p. 276–277.
[13] RIHA 1990, p. 37.
[14] RUSEVA-SLOKOSKA 1991, p. 200, nr. 269.
[15] GUIRAUD 1988, p. 79.
[16] FACSÁDY 2009, p. 42, Table 2, p. 92.
[17] HAMAT 2011, p. 99–100, nr. cat. 147, 149, 150, 152, 153.
[18] ANGHEL *et alii* 2011, p. 93, nr. 136.

BIBLIOGRAFIE

REP ALBA – V. Moga, H. Ciugudean (ed.), *Repertoriul arheologic al județului Alba*, Alba Iulia, 1995.

ANGHEL *et alii* 2011 – D. Anghel, R. Ota, G. Bounegru, I. Lascu, *Coroplastica, medalioane și tipare ceramice din colecțiile Muzeului Național al Unirii Alba Iulia*, Alba Iulia, 2011.

DAICOVICIU 1941 – C. Daicoviciu, *Neue Mitteilungen aus Dazien*, Dacia VII–VIII (1937–1940) [1941], p. 299–336.

DIMITROVA-MILČEVA 1980 – A. Dimitrova-Milčeva, *Antike Gemmen und Kameen. Aus dem Archäologischen National Museum in Sofia*, Sofia, 1980.

FACSÁDY 2009 – R. A. Facsády, *Aquincumi ékszerek. Jewellery in Aquincum*, Budapest, 2009.

FERRARI 2003 – A. Ferrari, *Dicționar de mitologie greacă și romană*, București-Iași, 2003.

GRAMATOPOL 2011 – M. Gramatopol, *Geme și camee din colecția Cabinetului Numismatic al Bibliotecii Academiei Române*, teză de doctorat, Brașov, 2011.

GUIRAUD 1988 – H. Guiraud, *Intailles et camées de l'époque romaine en Gaule (Territoire français)*, Paris, 1988.

HAMAT 2011 – A.-C. Hamat, *Podoabe și accesorii vestimentare feminine din Dacia Romană. Cu privire specială la Dacia Superior*, teză de doctorat, Universitatea de Vest Timișoara, 2011.

RIHA 1990 – E. Riha, *Der römische Schmuck aus Augst und Kaiseraugst*, Forschungen in Augst 10, Augst, 1990.

RUSEVA-SLOKOSKA 1991 – L. Ruseva-Slokoska, *Roman Jewellery. A collection of the National Archaeological Museum-Sofia*, London, 1991.

SAVU 1987 – A. Savu, *Culoarul Turda-Alba Iulia*, în: D. Oancea, V. Velcea (coord.), *Geografia României III. Carpații românești și Depresiunea Transilvaniei*, București, 1987, p. 623–630.

SIMION 2005–2006 – G. Simion, *Gemele din colecția I. C. E. M. Tulcea*, Peuce S.N. 3–4 (2005–2006), p. 173–182.

ȚEPOSU-DAVID 1960 – L. Țeposu-David, *Gemele și cameele din Muzeul Arheologic din Cluj*, în: *Omagiu lui Constantin Daicoviciu: cu prilejul împlinirii a 60 de ani*, București, 1960, p. 525–535.

ȚEPOSU-MARINESCU, LAKÓ 1973 – L. Țeposu-Marinescu, E. Lakó, *Catalogul colecției de geme romane*, Zalău, 1973.

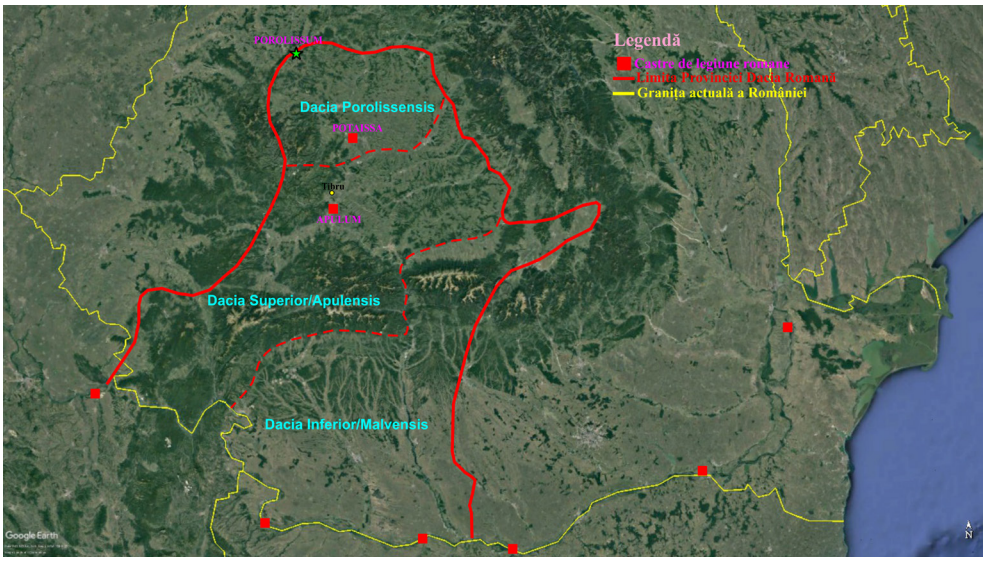


Fig. 1. The map of Roman Dacia with de place of discovery.



Fig. 2a. Image of the iron gem ring that has the representation of Ceres.



Fig. 2b. Images of the iron gem ring that has the representation of Ceres.

ROMAN GEMSTONES FROM NORTH-EASTERN TURKEY

Ergün LAFLI[*]
Martin HENIG[**]

Cuvinte-cheie: *geme, Amasya, Pontus, Asia Mică, nord-estul Turciei, secolele II–III p.Chr, perioadă romană.*

Keywords: *gems, Amasya, Pontus, Asia Minor, north-eastern Turkey, second – third century AD., Roman period.*

Rezumat: *În acest studiu este prezentat un lot de geme romane, majoritatea datate în secolele II–III p.Chr., piese aflate în colecția Muzeului Amasya, din nord-estul Turciei.*

Abstract: *In this short paper a group of gemstones curated in the Museum of Amasya in north-eastern Turkey will be presented most of which belong to second-third century AD.*

Introduction

In this paper 16 Roman gemstones are presented, all in gold settings and currently curated in the Museum of Amasya in north-eastern Turkey. During the Hellenistic and Roman periods Amasya, ancient Amaseia, was the centre of the interstate road system and roads from south-western Pontus to Galatia as well as Cappadocia ended at this city (**Map 1**). From 300 BC. until 183 BC., it was the capital of Hellenistic Kingdom of Pontus. In 65 BC. Amaseia became the administrative centre of the new province of *Bithynia et Pontus*. As is very well-known, the city was the birthplace of Strabo, who was born in 65 BC. in Amaseia and died in AD. 23, likewise in Amaseia; he provides a full description of the city as it was between 60 BC. and AD. 19. Around 3 or 2 BC., Amaseia was incorporated into the Roman province of Galatia, in the district of Pontus Galaticus. Most likely, the ancient site of Amaseia is located just below the present city of Amasya; but archaeologically not much is known about this city, except that it was a significant military base for the Romans during the first and second centuries AD.

During the rescue excavations carried out by the Museum of Amasya in and around the city centre of Amasya, numerous burials and necropolis sites dated between the first and fourth centuries AD. were discovered. The most common types

[*] Ergün LAFLI: Dokuz Eylül Üniversitesi, Edebiyat Fakültesi, Arkeoloji Bölümü, Izmir; e-mail: elafli@yahoo.ca

[**] Martin HENIG: Faculty of Classics, University of Oxford; e-mail: martin.henig@arch.ox.ac.uk

of burials are those in vaulted chamber tombs and cist graves. Three necropolis sites around Amaseia are known in archaeological literature, i.e., Uygur[1], Eski Şamlar and Kurşunlu (**Map 1**). These burial sites are of particular importance, as they provide further gem finds, some of them of high quality. However, there is no previous comprehensive study of the glyptic specimens curated at the Museum of Amasya.

Inaugurated in 1929, the Museum of Amasya was opened to visitors in 1980. In the museum Roman epigraphic materials from the ancient city of Amaseia and its extensive *chora* are especially numerous.

Material

There is a remarkable collection of gold, gem-set jewellery in the Museum of Amasya, fairly consistent in date, all being ascribable to the second or third centuries AD. There are four cameos in the assemblage, but of the remaining 12 no less than nine are garnets, rather than the carnelians and jaspers normally the most common materials for ring settings in this period. This large percentage is suggestive of a local source and a regional glyptic workshop in Pontus. Although some stones, the male portrait for example, are of good quality, the female figure, no. 7, is highly schematic and not of the quality one might expect from this normally prestigious stone. Three garnets are not engraved and this is reflective of a tendency from the third century to care more for the qualities of the stone itself and the decorative appearance of the metalwork than for the gems being engraved.

In this small collection none of the stones portray unusual, regional deities, and Herakles amongst the cameos, and Hermes and Artemis portrayed on gems were powerful protective deities, while Medusa depicted on another cameo deflected the Evil Eye.

Catalogue. Figured Gems

A. Cameos

No. 1 (Fig. 1). Cameo; onyx; bust of the youthful Herakles in profile to right.

Oval shape. Dimensions of ring: 23 mm in Diam.; dimensions of cameo: 13 mm H × 8 mm W; metal quality: 98% gold; weight: 1.7 grams.

His close-cropped hair is covered in tight curls. His lion skin drapes the base of his neck.

Herakles was a popular subject for cameos, but this type strongly resembles the young Caracalla who liked to identify himself as the Greek hero, as has been suggested in the case of examples excavated in an early third-century context at the fort of South Shields, County Durham in North-East Britain[2], and from a third-century treasure from La Haye-Malherbe, Eure in North-West Gaul[3]. Four examples from the Content Collection, now in the Rijksmuseum van Oudheden, Leiden[4], are described

[1] Two gemstones are presented from this cemetery site; the first is no. 8 below and the second is a ring with an engraved garnet figuring the head of a Satyr, cf. LAFLI, BUORA 2023.

[2] HENIG 1986, pl. lxiva.

[3] GUIRAUD 1988, p. 201, no. 993.

[4] HENIG, MOLESWORTH 2018, p. 76–77, nos. 76–79.

as possibly representing the youthful emperor Caracalla in the guise of Herakles as is an example from Umm Qeis (Gadara)[5].
Early third century AD.
The cameo is set in a contemporary oval frame with beaded surround, secured in place by claw-like projections.

No. 2 (Fig. 2). Two-layered cameo; onyx; mourning Eros Thanatos. Set in a gold ring.
Oval shape. Dimensions of ring: 21 mm in Diam.; dimensions of cameo: 11 mm H × 7 mm W; metal quality: 98% gold; weight: 1.3 grams.
Eros is depicted with a full, round face surrounded by curly hair. There are hints of the feathering of his wings from a number of incised grooves. The upper layer, into which the image of Eros is engraved, is of a striking blue color which contrasts with the dark brown background color of the lower layer. The brown layer is the side of the cameo which would have been inserted into the round metal setting of a piece of jewelry, apparently here a finger-ring. The cupid's left hand grasps an inverted torch which symbolizes the cessation of life. This is a typical Eros-Thanatos cameo, serving as a "memento mori"-a continuing reminder to the wearer of the brevity of life. This is a very common type employed in rings, ear-rings, pendants and other types of jewellery[6].
The ring approximates to the form Henig, type II, second century AD[7].
Second century AD.

No. 3 (Fig. 3). Two-layered cameo; onyx; mourning Eros Thanatos. Set in a gold bracelet.
Oval shape. Dimensions of bracelet: 112 mm in Diam.; dimensions of cameo: 13 mm H × 8 mm W; metal quality: 98% gold; weight: 29.2 grams.
The cameo is of the same type as the preceding, and was set in an oval surround with beaded border on a bracelet of thin sheet, laterally rilled but bearing comparison with bracelets which are ornamented with bands of ridging across the metal from an early third century hoard of jewellery found at Lyon in Gaul in 1841[8].
Third century AD.

No. 4 (Fig. 4). Two-layered cameo; onyx; Medusa. Set in a gold ring.
Oval shape. Dimensions of ring: 20 mm in Diam.; dimensions of cameo: 12 mm H × 8 mm W; metal quality: 98% gold; weight: 1.3 grams.
The mask of Medusa is, perhaps, the most common and most widespread subject for cameos and was believed to deflect the Evil Eye[9].

[5] HENIG, WHITING 1987, p. 38, no. 411.
[6] Compare HENIG, MOLESWORTH 2018, p. 171–117, nos. 160–182; SPIER 1992, p. 162, no. 449 (from Asia Minor).
[7] See HENIG 2007, p. 177, pl. L, no. 711; DEPPERT-LIPPITZ 1985, p. 31–32, pl. 50, no. 140; CHADOUR 1994, p. 89, nos. 301.
[8] COMARMOND 1844, pls. 2–4.
[9] Compare MIDDLETON 1998, p. 64–65, no. 52 (from Nazareth, Galilee); MIDDLETON 2001, p. 55, no. 31 [from Giresun (ancient Cerasus)]; HENIG, MOLESWORTH 2018, p. 183–192, nos.

Third century AD[10].

B. Intaglios

No. 5 (Fig. 5). Intaglio; garnet; Hermes standing frontally and facing right. Set in a gold pendant, with loop.

Oval shape. Dimensions of pendant: 22 mm in Diam.; dimensions of intaglio: 20 mm H × 11 mm W; metal quality: 98% gold; weight: 1.8 grams.

Hermes stands to the front; he is nude, although his chlamys is draped over his right forearm. He holds his kerykeion in his right hand and his money bag in his left hand. This is a common type throughout the Empire[11].

Second century AD.

No. 6 (Fig. 6). Intaglio; sardonyx; Artemis standing to the right. Set in a gold ring.

Oval shape. Dimensions of ring: 21 mm in Diam.; dimensions of intaglio: 18 mm H × 7 mm W; metal quality: 98% gold; weight: 1.3 grams.

Artemis, fully draped, stands to the front and is facing right. She holds her bow in front of her. There is a ground line[12]. Artemis is more often depicted running about to shoot an arrow with her bow, rather than standing as she is portrayed here[13].

Second century AD.

The ring is of a simple form (a slim version of Henig type II)[14].

The first century AD., but the type has a long life.

No. 7 (Fig. 7). Intaglio; garnet; standing female figure. Set in a gold ring.

Oval shape. Dimensions of ring: 18 mm in Diam.; dimensions of intaglio: 14 mm H × 6 mm W; metal quality: 98% gold; weight: 1.0 grams.

A female figure wearing a long chiton stands to the front. Left arm raised. There is a short ground line. The execution is highly schematised[15].

Second half of the second century AD.

No. 8 (Fig. 8). Intaglio; garnet; male portrait to left. Set in a gold ring.

Acc. no. A–98.1.2.

During the salvage excavations carried out by the Museum of Amasya in and around the modern city centre of Amasya, numerous burials dated between the first and fourth centuries AD. were discovered. As said above, three necropolis sites

192–204; SPIER 1992, p. 161–162, nos. 446–448 (nos. 447–448 from Asia Minor); HENIG, WHITING 1987, p. 38 nos. 407–409 (from Umm Qeis, Gadara); HENIG 2007, p. 179–180, nos. 725–731 (from various sites in Britain).

[10] For contemporary rings set with Medusa cameos see CHADOUR 1994, p. 91, no. 307; HENIG, MOLESWORTH 2018, p. 187–188, no. 195.

[11] See KONUK, ARSLAN 2000, p. 88–92, nos. 64–68.

[12] Compare MIDDLETON 2001, p. 25, no. 9, a garnet from Giresun (ancient Cerasus); HENIG, WHITING 1987, p. 13, no. 76; ZWIERLEIN-DIEHL 1979, p. 197, no. 1454.

[13] See KONUK, ARSLAN 2000, p. 38, no. 14; HENIG, WHITING 1987, p. 12, nos. 70–75 (from Umm Qeis, Gadara).

[14] As DEPPERT-LIPPITZ 1985, p. 28, no. 108 which is ascribed to the first century AD., but the type has a long life.

[15] The ring form CHADOUR 1994, p. 89, no. 301.

around Amaseia are known in archaeological literature: Uygur, a small rural necropolis located in the *chora* of Amasya, at a distance of some 32 km to the south-east where the present ringstone with the male portrait and a garnet intaglio figuring the head of a satyr were excavated (cf. note 1 above), Eski Şamlar, and Kurşunlu. This ring was found in a limestone sarcophagus excavated in 1998 at Uygur, encompassing only three burials which probably belong to one family. It was excavated near the left-hand fingers of the single skeleton inside the sarcophagus. Beside this ring, a very rich group of burial finds was unearthed in the same sarcophagus: a necklace of 20 brown stone beads strung on a gold wire on the skeleton, a silver denarius of Hadrian (AD. 119) was placed near the mouth, a bone hair pin lay under the skull, a bone splinter on the right shoulder edge, a glass unguentarium under the right hand, and there were also fragments of a glass bottle and a bone miniature cosmetic container. No anthropological analysis has been undertaken on the skeletal remains from this sarcophagus; but it most probably belonged to a female individual, in which case the portrait may have been that of her husband.
Oval shape. Dimensions of ring: 22 mm in Diam.; dimensions of intaglio: 13–15 × 3–5 mm; metal quality: 98% gold; weight: 14.31 grams.
The head is bearded and occupies the centre of the cabochon. Note a bearded head, left on a flat garnet from Umm Qeis, Gadara[16].
Second century AD.
References. DOĞANBAŞ 2015, p. 196; YÜCE, ÖZDEMİR 2000, p. 51, 52 no. 3; LAFLI, BUORA 2023, pl. 5.

No. 9 (Fig. 9). Intaglio; garnet; female portrait to left.
Oval shape. Dimensions of ring: 22 mm in Diam.; dimensions of intaglio: 11 mm H × 5 mm W; metal quality: 98% gold; weight: 1.4 grams.
A female bust is depicted in profile to the left. Her hair is tightly bound. A calathus protrudes from her forehead suggesting identification with Tyche-Isis. The head is somewhat reminiscent of the head depicted on a carnelian intaglio from Maiden Castle, Dorset, England[17].
The ring approximates to the form Henig, type II[18].
Second century AD.

No. 10 (Fig. 10). Intaglio; garnet; female portrait to left.
Oval shape. Dimensions of ring: 21 mm in Diam.; dimensions of intaglio: 10 mm H × 5 mm W; metal quality: 98% gold; weight: 1.3 grams.
This is a similar bust in near identical style, although without a calathus on its head. It is presumably the product of the same studio[19].
Second-third century AD.

[16] HENIG, WHITING 1987, p. 29, no. 278; The ring approximates to CHADOUR 1994, p. 88, no. 298.
[17] HENIG 2007, p. 154, no. 487 which we would now date to the second century AD.
[18] See HENIG 2007, p. 177, pl. L, no. 711; DEPPERT-LIPPITZ 1985, p. 31–32, pl. 50, no. 140; CHADOUR 1994, p. 89, no. 301.
[19] The ring approximates to DEPPERT-LIPPITZ 1985, p. 28, pl. 43, nos. 106 and 107; CHADOUR 1994, p. 94, no. 320.

No. 11 (Fig. 11). Intaglio; garnet; lion to left.
Oval shape. Dimensions of ring: 23 mm in Diam.; dimensions of intaglio o: 16 mm H × 8 mm W; metal quality: 98% gold; weight: 1.5 grams.
The lion prowls to the left. There is a ground line. Comparison may be made with the lions on sard and jasper intaglios[20].
The gold ring with its pronounced kink at the shoulders is a late second-early third century AD type[21].

No. 12 (Fig. 12). Intaglio; glass?
Oval shape. Dimensions of ring: 21 mm in Diam.; dimensions of intaglio: 15 mm H × 7 mm W; metal quality: 98% gold; weight: 1.3 grams.
The gem is too damaged for identification.
For the ring see no. 9 above[22].
Second half of second century AD.

C. Non-engraved gemstones set in gold rings
No. 13 (Fig. 13). Ring set with a garnet.
Oval shape. Dimensions of ring: 21 mm in Diam.; dimensions of garnet: 11 mm H × 4 mm W; metal quality: 98% gold; weight: 1.3 grams.
The ring, with its pronounced kink at the shoulders is a late second-early third century AD type[23].

No. 14 (Fig. 14). Ring set with a garnet.
Oval shape. Dimensions of ring: 20 mm in Diam.; dimensions of garnet: 9 mm H × 3 mm W; metal quality: 98% gold; weight: 0.9 grams.
The ring is flattened at its shoulders, approximating to a late second-early third century AD. Type[24].

No. 15 (Fig. 15). Ring set with a garnet.
Oval shape. Dimensions of ring: 22 mm in Diam.; dimensions of rectangular garnet: 13 mm H × 6 mm W; metal quality: 98% gold; weight: 1.4 grams.
The triangle on the shoulder, looks towards keeled rings[25].

No. 16 (Fig. 16). Ring set with a sardonyx.
Oval shape. Dimensions of ring: 21 mm in Diam.; dimensions of sardonyx: 5 mm H × 3 mm W; metal quality: 98% gold; weight: 1.4 grams.
Compare the ring, likewise with a sardonyx setting[26].
Second century AD.

[20] KONUK, ARSLAN 2000, p. 132, no. 108, p. 136, no. 112.
[21] As CHADOUR 1994, p. 105–106, nos. 362 and 363.
[22] DEPPERT-LIPPITZ 1985, p. 31–32, pl. 50, no. 140; CHADOUR 1994, p. 89, nos. 301.
[23] As CHADOUR 1994, p. 105–106, nos. 362 and 363.
[24] As CHADOUR 1994, p. 105–106, nos. 362 and 363.
[25] As DEPPERT-LIPPITZ 1985, p. 32, no. 145.
[26] DEPPERT-LIPPITZ 1985, p. 32, no. 141.

Acknowledgements

Authorization to publish these 16 gems in the Museum of Amasya was granted by the Directorate of the Museum of Amasya on February 20, 2018 and enumerated as 5619136–302.08.01–15463. The necessary documentation was assembled in October 2018.

Map 1 is included by arrangement with Dr. Sami Patacı (University of Ardahan) in 2023 to whom we would like to express our sincere gratitude and appreciation.

Acknowledgments are due also to (in alphabetical order) Professor Erwin Pochmarski (Graz) and Professor Hugo Thoen (Deinze/Ghent), who kindly read a draft of the paper and shared their comments.

BIBLIOGRAPHY

CHADOUR 1994 – A. B. Chadour, *Die Alice und Louis Koch Sammlung: Vierzig Jahrhunderte durch vier Generationien gesehen / The Alice and Louis Koch Collection: forty centuries seen by four generations,* vol. 1: *Ringe / Rings,* Leeds, 1994.

COMARMOND 1844 – A. Comarmond, *Description de l'écrin d'une dame romaine trouvé à Lyon en 1841 chez les Frères de la doctrine chrétienne, et donné par eux au musée de cette ville Paris: Drach*, Lyon, 1894.

DEPPERT-LIPPITZ 1985 – B. Deppert-Lippitz, *Goldschmuck der Römerzeit im Römisch-Germanischen Zentralmuseum,* Kataloge vor- und frühgeschichtlicher Altertümer 23, Mainz, 1985.

DOĞANBAŞ 2015 – M. Doğanbaş, *Preliminary results of rescue excavations in the Roman and Byzantine necropoleis of Amasya (1977–2014)*, in: K. Winther-Jacobsen, L. Summerer (eds.), *Landscape dynamics in northern Anatolia during the Roman and Byzantine period,* Geographica Historica 32, Stuttgart, 2015, p. 193–203.

GUIRAUD 1988 – H. Guiraud, *Intailles et camées de l'époque romaine en Gaule (Territoire français),* Supplément à Gallia 48/vol. 1, Paris, 1988.

HENIG 1986 – M. Henig, *Caracalla as Hercules? A new cameo from South Shields*, Antiquaries Journal 66 (1986), p. 378–380.

HENIG 2007 – M. Henig, *A Corpus of Roman Engraved Gemstones from British Sites*, BAR, British Series 8, Oxford, 2007.

HENIG, MOLESWORTH 2018 – M. Henig, H. Molesworth, *The Complete Content Cameos*, Turnhout, 2018.

HENIG, WHITING 1987 – M. Henig, M. Whiting, *Engraved Gems from Gadara in Jordan. The Sa'd Collection of Intaglios and Cameos,* Oxford University Committee for Archaeology, Monograph No. 6, Oxford, 1987.

KONUK, ARSLAN 2000 – K. Konuk, M. Arslan, *Anadolu Antik Yüzük Taşları ve Yüzükleri. Yüksel Erimtan Koleksiyonu / Ancient gems and finger rings from Asia Minor. The Yüksel Erimtan Collection,* Ankara, 2000.

LAFLI, BUORA 2023 – E. Laflı, M. Buora, *A garnet ringstone from Amasya depicting the head of a satyr*, Mediterranean Archaeology 36 (2023), p. 23–37.

MIDDLETON 1998 – S. H. Middleton, *Seals, finger rings, engraved gems and amulets in the Royal Albert Memorial Museum, Exeter: From the collections of Lt. Colonel L. A. D. Montague and Dr. N. L. Corkill,* Exeter, 1998.

MIDDLETON 2001 – S. H. Middleton, *Classical Engraved Gems from Turkey and Elsewhere. The Wright Collection,* BAR, International Series 957, Oxford, 2001.

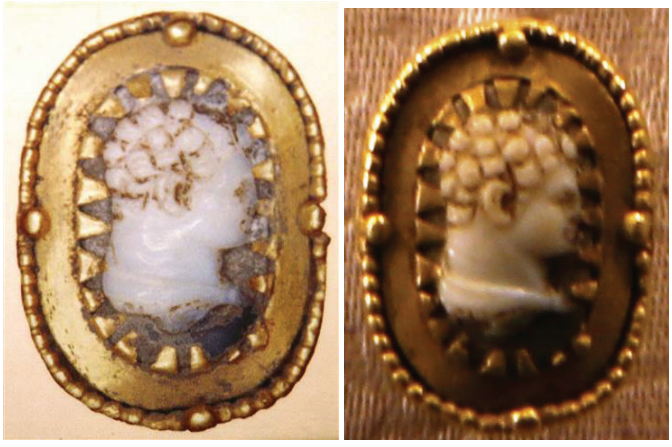
SPIER 1998 – J. Spier, *Ancient Gems and Finger Rings. Catalogue of the Collections. The J. Paul Getty Museum*, Malibu, 1998.

YÜCE, ÖZDEMİR 2000 – A. Yüce, C. Özdemir, *Rescue excavations in Uygur in the central district of Amasya*, in: K. Olşen, F. Bayram, A. Özme, K. Ataş, Y. Kepenek, H. Dönmez, C. Süvari (eds.), *10. Müze Kurtarma Kazıları Semineri, 26–28 Nisan 1999, Kuşadası, T.C. Kültür Bakanlığı, Anıtlar ve Müzeler Genel Müdürlüğü* [Tenth Turkish annual seminar for the results of rescue excavations undertaken by the local museums, 26–28 April 1999, Kuşadası, Republic of Turkey, Ministery of Culture, General Directorate of Ancient Monuments and Museums], T. C. Kültür Bakanlığı Yayınları Yayın No. 2347; Anıtlar ve Müzeler Genel Müdürlüğü Yayınları Yayın No. 70, Ankara, Kültür Bakanlığı, Milli Kütüphane Basımevi), 2000, p. 49–58 http://www.kulturvarliklari.gov.tr/sempozyum_pdf/muze_kurtarma/10.muze.kurtarma.pdf> (accessed on 1 January 2023).

ZWIERLEIN-DIEHL 1979 – E. Zwierlein-Diehl, *Antike Gemmen des Kunsthistorischen Museums in Wien*, vol. 2: *Die Glasgemmen, die Glaskameen,* supplement to vol. 1: *Die Gemmen der späteren römischen Kaiserzeit,* part I: *Götter,* Munich, 1979.



Map 1. Sites in Anatolia to which reference is made in the text (by S. Patacı, 2023).



1a 1b

Fig. 1. An onyx cameo with the bust of the youthful Herakles (photo by E. Laflı, 2018).



2a 2b

Fig. 2. A two-layered onyx cameo set in a gold ring with mourning Eros Thanatos (photo by E. Laflı, 2018).



3a



3b

Fig. 3. A two-layered onyx cameo set in a gold bracelet with mourning Eros Thanatos (photo by E. Laflı, 2018).



Fig. 4. A two-layered onyx cameo set in a gold ring with Medusa (photo by E. Laflı, 2018).



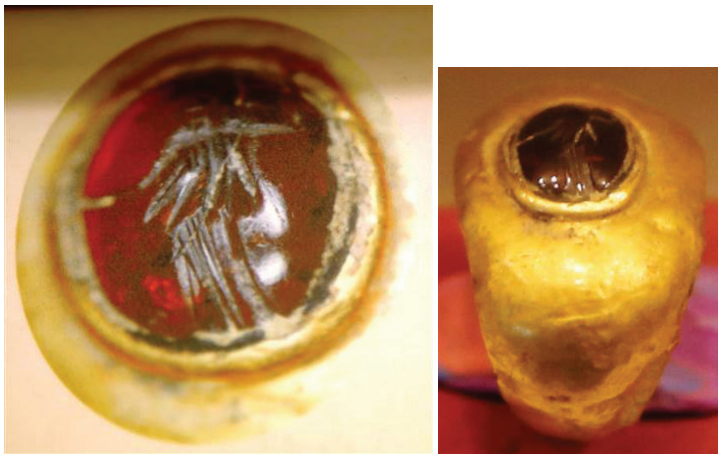
5a 5b

Fig. 5. A garnet intaglio set in a gold pendant with Hermes (photo by E. Laflı, 2018).



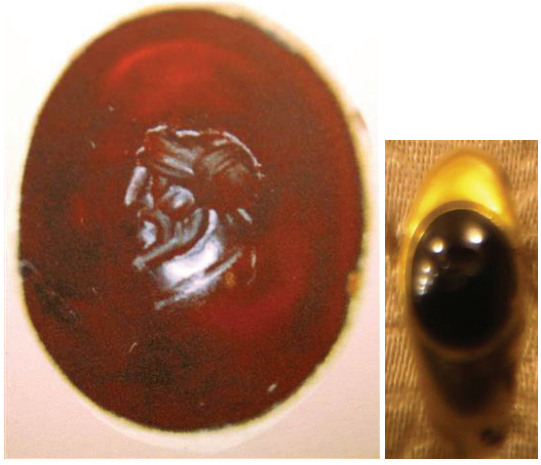
6a 6b

Fig. 6. A sardonyx intaglio set in a gold ring with Artemis (photo by E. Laflı, 2018).



7a 7b

Fig. 7. A garnet intaglio set in a gold ring with a standing female figure (photo by E. Laflı, 2018).



8a 8b

Fig. 8. A garnet intaglio set in a gold ring with a male portrait (photo by E. Laflı, 2018).



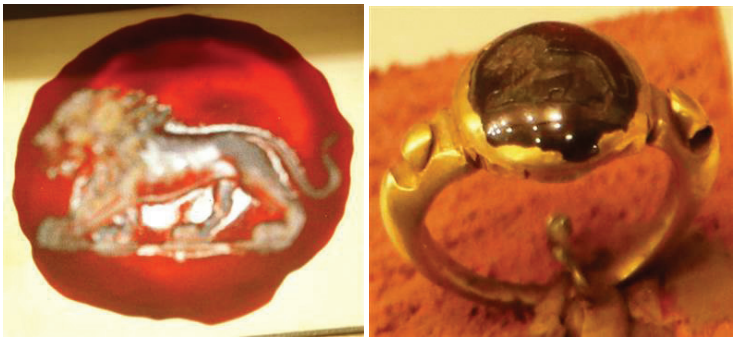
9a 9b

Fig. 9. Two garnet intaglios with a female portrait (photo by E. Laflı, 2018).



10a 10b

Fig. 10. Two garnet intaglios with a female portrait (photo by E. Laflı, 2018).



11a 11b

Fig. 11. A garnet intaglio with a lion (photo by E. Laflı, 2018).



Fig. 12. A glass intaglio (?) (photo by E. Laflı, 2018).



Fig. 13. Three ring sets with a garnet (photo by E. Laflı, 2018).



Fig. 14. Three ring sets with a garnet (photo by E. Laflı, 2018).

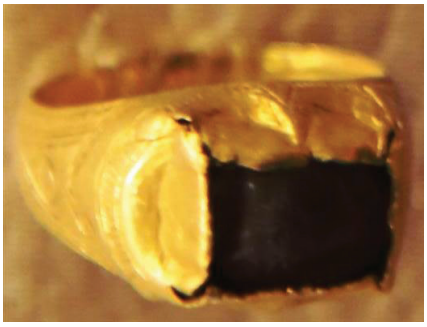


Fig. 15. Three ring sets with a garnet (photo by E. Laflı, 2018).

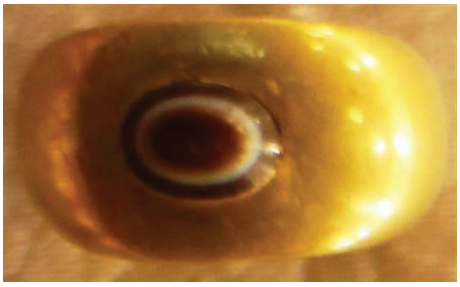


Fig. 16. A ring set with a sardonyx (photo by E. Laflı, 2018).

AN EARLY BYZANTINE CERAMIC WORKSHOP ON THE SITE OF *SCAMNUM TRIBUNORUM* IN *NOVAE (MOESIA SECUNDA)*

Alexander HARIZANOV[*]

Cuvinte-cheie: *Moesia Secunda, Novae, perioada bizantină timpurie, ateliere ceramice, producție ceramică*

Keywords: *Moesia Secunda, Novae, Early Byzantine period, ceramic workshop, pottery production.*

Rezumat: *Castrul legionar și orașul antic târziu Novae au fost locuite între mijlocul secolului I și începutul secolului al VII-lea p.Chr. La sfârșitul secolului al III-lea și în prima jumătate a secolului al IV-lea p.Chr. așezarea a fost transformată treptat dintr-un sit strict militar, cu o așezare civilă adiacentă, într-un oraș cu garnizoană militară. În același timp, zona fortificată a fost extinsă spre est, întinzându-se pe zone ale canabaelor anterioare, în timp ce structura sa internă a fost supusă unor modificări extinse. Situl* scamnum tribunorum *din Novae este unul dintre sectoarele cele mai bine studiate ale sitului arheologic. Cercetările intense din ultimele decenii au scos la iveală dovezi privind dezvoltarea sa, de la cea mai veche perioadă de construcție din pământ și lemn până la sfârșitul Antichității Târzii. Prezenta contribuție analizează un grup de cuptoare bizantine timpurii, inedite până în acest moment, descoperit în partea de nord-vest a acestui sector, în timpul campaniilor arheologice din sezoanele 2006 și 2007.*

Abstract: *The Roman legionary fortress and Late Antique town of Novae was inhabited between the mid–1*st *c. and the early 7*th *c. AD. During the late 3*rd *c. and the first half of the 4*th *c. AD. the settlement was gradually transformed from a strictly military site with an adjacent civilian settlement to a town with military garrison. At the same time its fortified area was enlarged to the east, spreading over parts of the earlier* canabae, *while its internal structure was subjected to extensive alterations. The area of the* scamnum tribunorum *in Novae is one of the most thoroughly studied sectors of the archaeological site. The intensive research over recent decades has produced evidence for its development from the earliest earth and timber construction period to the end of Late Antiquity. The present contribution explores an Early Byzantine kiln site, unpublished until now in detail, discovered in the north-western part of this sector during the 2006 and 2007 archaeological seasons.*

[*] Alexander HARIZANOV: Department of Classical Archaeology, National Archaeological Institute with Museum, Bulgarian Academy of Sciences, Sofia; e-mail: a_harizanov@abv.bg.

Introduction

The legionary camp at *Novae* was established a few years before the middle of the 1st c. AD. by *Legio VIII Augusta*. After the civil war of AD. 69 there was a change in the military units stationed along the Danubian limes. *Legio I Italica* was transferred to *Novae* and remained there until the end of Antiquity[1]. In the course of the Late Roman and the Early Byzantine periods the settlement was part of the province of *Moesia Secunda*, within the Diocese of *Thracia*[2] (**Fig. 1**).

During the late 3rd c. and the first half of the 4th c. AD. *Novae* was gradually transformed from a strictly military site with an adjacent civilian settlement to a Late Antique town with a military garrison[3]. At the same time its fortified area was enlarged to the east, spreading over parts of the earlier *canabae*, while its internal structure was also subjected to extensive alterations[4] (**Fig. 2**). During the course of the 5th c. AD., the bishop became the most prominent figure in the town[5]. The shift in power towards the post of the highest-ranked Christian priest in the area is best illustrated by the development of the large episcopal complex in *Novae*, situated over the late period baths and immediately to the west of the old *principia*[6]. According to the most recent findings, the old legion headquarters were still in use during the second half of the 4th c. AD. and until the 430s, when their space was shared with a presumed town's square (*forum civile*). In the late 5th and the 6th c. AD. the area was repurposed and afterwards accommodated smaller civic buildings and a market square[7].

The site of the *scamnum tribunorum* in *Novae* is one of its most thoroughly studied sectors. The intensive research conducted there in recent decades has produced evidence for its development from the earliest earth and timber construction period to the end of Late Antiquity. The first changes of both the purpose and structure of the area happened after a devastation in the second half of the 3rd c. AD. Following a thorough levelling of the terrain of the earlier *scamnum*, two public buildings were erected, most likely in the course of the late 3rd and/or the early 4th c. AD. The southern building existed until the late 4th c. AD. when several artisanal establishments were set within its ruins. These workshops were abandoned around the middle of the 5th c. AD. The northern premises were succeeded by another large building in the second half of the 4th c. AD., which stretched partially over the remains of the old military hospital in sector IV as well. This construction existed until the end of the 4th or the first half of the 5th c. AD. During the second half of the 5th and the 6th c. AD. two Christian basilicas were built consecutively there, one on top of another[8] (**Fig. 3**, **4**).

[1] GENČEVA 2002, p. 6–12, 59–69.

[2] VELKOV 1977, p. 99–106.

[3] The presumed *municipium* at *Novae* is still debatable (see for instance DINTCHEV 2015, p. 581–591), while the current archaeological data does not signify to town-related changes in the intramural architecture of the military camp during the late 2nd and the first half of the 3rd c. AD. (see for instance GENCHEVA *et alii* 2011, p. 276–278; LEMKE 2015, p. 90–97; DINTCHEV 2015, p. 581–583).

[4] See for instance LEMKE 2015, p. 90–97.

[5] For the increasing role and status of the bishops during the 5th and the 6th c. AD., including references to *Novae* see for instance DINTCHEV 2018, p. 362–365.

[6] BIERNACKI 2013, p. 31–54.

[7] LEMKE 2015, p. 91–92.

[8] GENČEVA 2003, p. 21–37; GENČEVA 2006, p. 45–51; GENCHEVA *et alii* 2011, p. 276–278.

The first remains of artisanal activities on the site of the *scamnum* date to the late 4th c.-early 5th c. AD., when a ceramic atelier, and also glass, metal and bone working ateliers were in operation there. The four ceramic kilns discovered had been dug within the remains of the southern early 4th c. AD. public building, and were used for the production of domestic pottery[9]. As mentioned above, the described installations were abandoned around the middle of the 5th c. AD[10] (**Fig. 4.W1**).

The present contribution explores a previously unpublished in detail kiln site, discovered to the north-west of the abovementioned structures, in the same sector (X, sq. 108), during the 2006 and 2007 archaeological campaigns in *Novae*[11] (**Fig. 4.W2**).

The second "*scamnum*" kiln site

The kiln site in question was discovered within the remains of a latrine from the period of the Roman *scamnum*, located in the north-western section of the Bulgarian part[12] of Sector X[13]. Two kilns of similar planning were excavated there, with the first one's firing chamber being reused as a stoke pit for the second installation (**Fig. 5**).

Kiln no. 1 was the first one built on that spot. Preserved *in situ* were the combustion and firing chambers, the support for the perforated floor and the stoking channel (**Fig. 6–10; table 1**). The entire structure had been dug into a layer of yellowish earth, used during a previous period for the levelling of the surrounding terrain, which was until then naturally sloping to the north[14].

The combustion (lower) chamber had an almost circular plan. The eastern wall was erected using fragments of bricks and small stones (reuse of an older structure?), while the western wall was built partially of larger stones. The other parts of the chamber walls were formed with a plaster made of clay.

A tongue-wall, built of clay and fragmented bricks was placed opposite the stoking channel and used as support for the perforated floor (**Fig. 8–10**). Only small

[9] GENČEVA 1999, p. 95–99; HARIZANOV 2019a, p. 177, 637–641.

[10] GENČEVA 2006, p. 45–51.

[11] The kiln site has been briefly described only in the annual reports for the archaeological discoveries in Bulgaria (GENCHEVA *et alii* 2007, p. 265–266; GENCHEVA *et alii* 2008, p. 340–341; SARNOWSKI *et alii* 2009, p. 420–421; GENCHEVA 2010, p. 312–313) and later included in a dissertation, dedicated to the Roman and Late Antique ceramic kilns in the territory of modern Bulgaria, published as a book in 2019 (HARIZANOV 2019a, p. 645–649). I would like to express my gratitude to the kilns' researcher and leader of the Bulgarian archaeological team in *Novae*, dr. Evgenia Gencheva (Assoc. Prof., NAIM-BAS), who presented me with the documentation from the excavations along with the opportunity to publish my interpretation of the excavated structures.

[12] Sector X was divided to "Bulgarian" and "Polish" sections, in accordance with the area of research of the Bulgarian and the Polish archaeological teams. For detailed description of the studied sectors in *Novae* and their nomenclature, see for instance DYCZEK 2008, p. 31–70.

[13] GENHEVA *et alii* 2007, p. 265–266; GENCHEVA *et alii* 2008, p. 340–341; SARNOWSKI *et alii* 2009, p. 420, fig. 2.

[14] GENCHEVA *et alii* 2007, p. 265. The topography and stratigraphy of the sector throughout the periods of human occupation will be described in detail in a forthcoming publication by Dr. E. Gencheva (Assoc. Prof., NAIM-BAS). I would like to thank her for providing me with this additional, still unpublished data.

parts of the latter, situated on top of the walls of the lower chamber, were found *in situ*. The uncovered ventilation openings had a diameter of c. 0.08-0.085 m.

The lower part of the firing chamber (which was found *in situ*) had larger internal diameter than the lower chamber. Its walls were arranged vertically and had also been sunk into the surrounding terrain (**Fig. 6.3**). A single post (?) hole was found on the southern side.

The stoking channel was placed on the northern side of the kiln, a little to the west of its central axis (**Fig. 6.1**, **9**). Its walls were connected with the walls of the lower and the upper chambers. It had a wider lower part made of fired clay plaster (up to 0.30 m above its floor). The narrower upper section was situated mostly above the original level of the perforated floor, and was built of horizontal layers of ceramic building materials and flat stones which were bonded and plastered with clay.

The combustion and the firing chambers were found filled with debris, consisting of ash, charcoal, fragments of ceramic building materials and broken pottery vessels (**Fig. 6**). The floor of the lower chamber was also covered with ash and charcoal. The upper chamber was filled with three layers of debris (ash, charcoal, broken pottery and fragments of ceramic building materials), each uncovered above a level of slightly fired yellowish clay. The bottom level of the latter three was situated almost immediately above the support for the perforated floor. The layer between this level and the original floor of kiln no. 1 consisted again of ash and charcoal. The upper part of the fill, situated above the top layer of debris, comprised dark brown, clayish earth mixed with a smaller amount of debris (**Fig. 6.2**).

Kiln no. 2 was discovered immediately to the south of kiln no. 1. The combustion chamber, the support for the perforated floor, the stoking channel and the stoke pit were found *in situ*. The firing chamber was also partially preserved (**Fig. 6**, **11–13**; **table 2**).

The combustion chamber had an almost circular plan and was dug into the same yellowish layer, used for the levelling of the surrounding terrain. Its walls were formed by a 10 cm thick plaster of clay (**Fig. 6.2**).

A cone-shaped tongue-wall, formed out of the natural soil, was found in the centre of the kiln pit opposite the stoking channel (**Fig. 12–13**). Together with the upper part of the walls of the combustion chamber, it was used as support for the perforated floor (**Fig. 6.4**). The latter was not preserved. Only the lower part of the firing chamber, which had been situated below the ground level, was found *in situ*. It had vertically arranged walls, covered with clay plaster (**Fig. 12–13**). Most of the plaster had fallen off probably due to erosion and the effects of the elements. The stoking channel was situated on the north side of the kiln pit and was dug out between the combustion chamber and the stoke pit. Its walls were plastered with clay. Identical to that of the combustion chamber, its floor was also inclined towards the stoke pit and was covered with a thin layer of ash and charcoal (**Fig. 6.2**). The stoke pit was placed inside the former firing chamber of kiln no. 1 (**Fig. 14**). The upper part of the bottom level of the pit was formed by a thick layer of slightly fired clayish soil lying above a layer of debris consisting of ash, charcoal, broken pottery and fragments of ceramic building materials (**Fig. 6.2)**.

Table 1. Internal dimensions of the structural components of kiln no. 1 ("*" size preserved *in situ*, "?" presumed size).

Internal dimensions Kiln no. 1 (in meters)	**Combustion chamber**	**Support**	**Perforated floor**	**Firing chamber**	**Stoking channel**	**Stoke pit**
Diameter	1.50–1.60	-	2.00–2.10?	2.00–2.10	-	?
Width	-	0.20-0.40	-	-	0.46	-
Length	-	1.24	-	-	0.58	-
Height	0.53	0.35*	-	0.90-0.95*	0.30-0.53?	?
Thickness	0.10	-	?	?	?	-

Table 2. Internal dimensions of the structural components of kiln no. 2 ("*" size preserved *in situ*, "?" presumed size).

Internal dimensions Kiln no. 2 (in meters)	**Combustion chamber**	**Support**	**Perforated floor**	**Firing chamber**	**Stoking channel**	**Stoke pit**
Diameter	1.30–1.40	-	1.50?	1.50	-	2.00–2.10
Width	-	0.26-0.60	-	-	0.50-0.62	-
Length	-	1.06	-	-	0.50	-
Height	0.30-0.40	0.40	-	0.50*	0.40-0.50	1.10
Thickness	0.10	-	0.10?	0.04	?	-

***

The presented stratigraphic situation allows the reconstruction of the design and relative chronology of the use of the two kilns.

Kiln no. 1 was the first one built on the spot. Taking into account the plan of the combustion chamber and the type of support for the perforated floor, it could be classified as type I/b/1 of the typology for the antique kilns in the territory of modern Bulgaria[15]. It had a sunken or semi-sunken firing chamber, which allowed for the underground part of the latter to be preserved.

After kiln no. 1 was abandoned, the preserved part of its firing chamber was reused as a stoke pit for the later built kiln no. 2 (**Fig. 14**). The three described layers of yellowish clay should be identified as three consecutively formed floors of the latter stoke pit, while the layers of debris above each of them ought to correspond to the periods of their use (**Fig. 6.2**). The position of the lowest one, beneath the discovered floor level of the stoking channel of kiln no. 2, was most likely owed to its gradual sinking over a long period of time, caused by the lack of firm ground below it, combined with the effect of the hot ash and charcoals taken out of the stoking channel during the kiln firing, and also due the burdening of this small area with heavy materials (for example the wood used as fuel).

During the repurposing of the firing chamber of kiln no. 1, the upper part of its

[15] See HARIZANOV 2019a, p. 81–122.

stoking channel was most likely reused as an entrance for the new stoke pit (**Fig. 8–9**) and was probably renovated (or even built up).

Apart from the stoke pit, kiln no. 2 had similar planning to that of kiln no. 1 and could also be classified as type I/b/1. However, in contrast to the first one, it was built using the technique of shaping most of the kiln's structural components out of the virgin soil and plastering them with clay on the inside. It also had a semi-sunken firing chamber, while the upper part of this component was probably rebuilt after each firing (the same could be supposed for the superstructure of the firing chamber of kiln no. 1). The considerable sloping of its floor, from the back of the combustion chamber towards the opposite end of the stoking channel, combined with the lack of ash and charcoal in the higher parts of the floor of the former, is a strong indication that the fire was lit and maintained at the junction point between the latter and the stoke pit.

As for the perforated floor of kiln no. 2, there are at least two possibilities for its design. The first one is the conventional type of permanent perforated floors, which were formed either entirely out of clay or in combination of other building materials (bricks, tiles, mud bricks, etc.) and clay. The second possibility is the so-called "movable" type of perforated floors, which were made of pre-fabricated ceramic bars or full sized and fragmented *imbrices* or *tubuli*, resting in horizontal position upon the walls of the lower chamber and the internal support[16].

The noted differences in the applied construction techniques in the erection of the two kilns, together with the described stratigraphic situation, provide no less than two alternatives for the time of their use. According to the first option, the two installations were used by the same potters, with the second construction being built shortly after the abandonment of the first one. However, it seems more plausible that kiln no. 2 wasn't built immediately after the disuse of kiln no. 1, but nonetheless at a time that the latter was still visible on the surrounding terrain and suitable for a partial reuse. Furthermore, it is possible that the potters that built the second structure weren't the ones who constructed the first kiln and had different training and technological background.

The ceramic assemblage[17]

The largest amount of pottery, discovered in the course of the excavations of the two kilns (over 340 rim fragments in total), was found inside the chambers of kiln no. 1, mainly in the layers of debris above the three clayish layers identified as consecutively formed floor levels of the stoke pit of kiln no. 2. The assemblage comprised hard fired coarse wares, mostly cooking pots, jugs with round and trefoil rims, table amphorae and pitchers, cups (mugs) and goblets (or deep bowls), and limited number of bowls and lids. Most of the vessels had similar coarse fabric, with sand, gravel, mica and sometimes shells or chamotte being used as tempers.

[16] For the construction and internal structure of the antique kilns in the modern territory of Bulgaria, see HARIZANOV 2019a, p. 38–66; HARIZANOV 2019b, p. 15–39.

[17] The drawings and initial description of the discovered pottery items were made by Dr. Anastasia Cholakova (Asst. Prof., NAIM-BAS), in the course of the excavation of the two kilns. The digitalisation and graphic design of the drawings, along with the presented here identification of the forms, was done by the author of this contribution.

The cooking pots were of two main varieties. The first one had mostly biconical (less frequent globular) partly ribbed bodies, plain almost cylindrical short necks and everted (out-turned) rims, with or without lid seats (**Fig. 16.1–7**). The second major type comprised vessels with globular or biconical partly ribbed bodies and everted rims, with or without lid seats (**Fig. 16.8–13**). The major divergence between this second type of pots and the first one is the lack of neck, with the rim of the second being placed directly above the body (making sharp corner in the section). The preserved examples had one, two or no handles. The fabric was coarse, with sand, gravel, mica and shells being used as tempers. The colour of the external surfaces of the pots varied from light to dark grey or grey-brown. The inner surfaces ranged from brown to brown-orange or orange-brown.

Part of the jugs had larger rim diameter, compared to the height of the vessels. They had globular bodies, everted rims, single or two handles, similar to those of the cooking pots (**Fig. 16.14–15**). Their fabric was coarse, with sand, gravel and mica being used as tempers, sometimes supplemented with chamotte (grog) and shells. Some of the jugs with trefoil rim had smoother surfaces, probably due to additional treatment after their forming. All jugs had identical colours of both surfaces, which ranged from light to dark grey or grey-black, also grey-brown, brown, beige-brown. Some of the vessels were brown or beige-brown inside the cross-section.

The rather small number of lids (**Fig. 17.1–5**) found at the site had coarse fabric, with sand being the main temper, supplemented by gravel, mica and, in few occasions, chamotte or shells. The lids had matching colours of both surfaces, namely beige-brown, brown or grey.

Bowls represented the smallest number of finds from the assemblage. They had thinner bodies, with cylindrical upper part and rounded rims (**Fig. 17.9**) or larger everted rims with lid seats, with a sharp-angled transition towards the body (**Fig. 17.6–8**). Sand was the main temper, supplemented by gravel and chamotte. The colour of both surfaces was brown or grey.

Another small group of tall vessels could be described as deep, almost cylindrical bowls or beakers (goblets) with slightly everted rims and no handles (**Fig. 17.11–13**). A find of similar shape, but partially covered in dots of dark green glaze, was also discovered among the discarded pottery (**Fig. 17.10**).

Vessels with globular bodies, short cylindrical necks, almost vertical, ribbed rims and a single handle were also attested in overall large numbers within the assemblage. They were most likely used as drinking cups (mugs) although some of the sherds of larger specimens could have actually been parts of jugs with similar profile (**Fig. 18.1–9**). Other finds could be more securely attributed to two types of jugs with one or two handles, with a horizontal or slightly out-turned rim with a lid seat (**Fig. 18.10, 15**).

A significant number of the preserved rim fragments belong to table *amphorae* and pitchers with similar rim diameter (**Fig. 18.12–14, 16–18**). They were ribbed on the outside and had identical coarse fabric, where sand, gravel, mica and in several occasions, shells were used as tempers. Some vessels were additionally smoothed on the outside after their forming. The entire group had identical colours on both surfaces, ranging from light grey to dark grey or grey-black, and pale brown or beige-brown to brown or brown-grey.

***

As it was already mentioned, most of vessels from the assemblage were discovered above the clayish layers inside the firing chamber of kiln no. 1, which should correspond to renewed floor levels (at least three) of the stoke pit of kiln no. 2, related to the exploitation periods of the latter (one to several seasons for each floor?). This hypothesis places the discarding of the ceramic items in the time of use of kiln no. 2 and supposedly within the repertoire of the same workshop, which leaves the purpose of kiln no. 1 uncertain.

The majority of the described vessels show homogenous technological and morphological characteristics, common for products of a single workshop. Their hard and coarse fabric is related both to the technique of their manufacture and their functional purpose. The use of large range of tempers was done to ensure lack of breakage during the initial firing of the items, in the course of which they were subjected to temperature fluctuations and close (although not immediate) contact with the flames. The latter could be proven by the variation of colours of the vessels from the assemblage, showing signs of alternating cycles of oxidised and reduced firings inside the kiln, at least some of which weren't planned by the potters, but happened due to the lack of good insulation, sudden temperature fluctuations and/or unwanted cold airflows.

The variety of colours of the vessels from the assemblage was owed also to their function in the household. The divergence between the colours of the external and internal surfaces of the pots could be explained either by secondary firing during cooking (which should mean that they were discarded after being used) or by intentional "smoking" of the vessels. The latter was done in the last stages of the initial firing, when fresh wood and leaves were put as a fuel, resulting in the release of greater amount of carbon and the absorption of latter in the walls[18] of the vessels[19].

According to some researchers, smoking was also done to coarse wares, which were intended for holding liquids, with the carbonised surfaces being less porous than the oxidised ones[20]. This is one possible explanation for the colours of most of the jugs, table *amphorae* and pitchers of the assemblage, which were grey or grey-black both on the outside and the inside.

Ceramic production in *Novae* during Late Antiquity

The kiln site in question was not an isolated case in *Novae*. A number of similar installations, unearthed within the Late Antique stratigraphic layers of the town, were supposedly also used as ceramic kilns[21]. However, only a part of the latter had produced secure evidence for such identification[22].

[18] The reason why only the exterior of some vessels was smoked could be owed the way they were stacked for firing. The pots in particular could have been placed upside down with each pot covering the opening of another one, thus protecting the inner surface from the fumes.

[19] See SULTOV 1985, p. 83.

[20] See SULTOV 1985, p. 83.

[21] See KLENINA 2006, p. 25–28; BIERNACKI, KLENINA 2015, p. 373–377; TOMAS 2015, p. 63–73, HARIZANOV 2019a, p. 177–179.

[22] Out of the fifteen installations described by E. Klenina and A. Biernacki as ceramic kilns

One large kiln of rectangular floor plan was found in the extramural Sector VIIIA (**Fig. 3.2**). It was used either for the production of ceramic building materials or that of pottery vessels, during the second half of the 4th c. or the first half of the 5th c. AD[23].

The largest cluster of kilns, found at *Novae*, was discovered outside the opposite, eastern side of the fortress, near the mouth of Dermen dere[24] (**Fig. 2**). Due to the lack of diagnostic finds, some of the kilns were dated only on the basis of their construction, while others weren't dated at all. For example, the two two-chambered installations of rectangular floor plan, found on the eastern bank of the Dermen dere, were dated to the 4th–5th c. AD[25]. Conversely, it has also been suggested that they were used during the second half of the 3rd c. and/or the first three quarters of the 4th c. AD[26].

Moving inside the fortified area of *Novae* from the Late Antique period (covering the so-called "*Novae I*" and "*Novae II*"), there are several more installations, most likely used as ceramic kilns.

As it was already mentioned, four two-chambered ceramic kilns with circular plan of the combustion chamber were used during the late 4th c. and the first half of the 5th c. AD. in the south-eastern section of the former *scamnum*, as part of a workshop (**Fig. 3.3**), set in the artisanal area of the town at the time[27].

Another two-chambered kiln with circular plan of the combustion chamber, this one without support for the perforated floor, was found in 1960 within the limits of the so-called "Building of the Inscription", situated in Sector IV, sq. II 338[28] (**Fig. 3.4**). The installation was part of a workshop, which was in operation either during the late 4th-first half of the 5th c. AD.[29] or between the 520s and the reign of Justin II[30]. Judging by the coins discovered[31] and the stratigraphic position of the kiln, the latter dating seems more plausible[32].

One more kiln with circular plan of the combustion chamber was discovered in the Polish section of Sector X (sq. XVI 59), to the north-west of the Episcopal complex, near *Via Principalis* (**Fig. 3.5**). It was found filled with brownish earth and a batch of almost entirely preserved ceramic vessels, left there during the abandonment of the structure. The latter action was initially dated to the late 6th c.-beginning

and dated to the 4th–6th c. AD (KLENINA 2006, p. 25–28; BIERNACKI, KLENINA 2015, p. 375, tab. 1) no more than eleven could be more securely identified as such, however two of the latter (BIERNACKI, KLENINA 2015, p. 375, tab. 1.6–7) should be dated to the 3rd c. AD. The rest of the installations (see KLENINA 2006, p. 25–28, Nos. 1–2, 13–15; BIERNACKI, KLENINA 2015, tab. 1.1–2, 1–13–15) were most likely used as lime kilns, bread or domestic ovens, etc. (HARIZANOV 2019a, p. 165–166, 178, note 232).

[23] CHICHIKOVA *et alii* 1980, p. 80–83; SULTOV 1985, p. 14; HARIZANOV 2019a, p. 635–636.

[24] MITOVA-DZHONOVA 1966, p. 38–45; VALOV 1966, p. 46–51; DYCZEK 2005, p. 301–306, HARIZANOV 2019a, p. 166–167.

[25] MITOVA-DZHONOVA 1966, p. 40; VALOV 1966, p. 48–49.

[26] HARIZANOV 2019a, p. 166–167.

[27] GENČEVA 1999, p. 95–99; HARIZANOV 2019a, p. 177, 637–641.

[28] MAJEVSKI 1962, p. 117–118.

[29] BIERNACKI, KLENINA 2015, p. 375.

[30] CIOŁEK 2011, p. 277–278.

[31] See CIOŁEK 2011, p. 277–278, tab. 21.

[32] HARIZANOV 2019a, p. 178.

of the 7th c. AD.[33], while most recent studies date the assemblage within the limits of the 6th c. AD[34].

The last securely identified ceramic kiln from the Late Antique period in *Novae* was unearthed in a section of the northern *intervallum* of the fortress, in sq. II 151 (**Fig. 3.6**). The kiln had circular combustion chamber, a tongue-shaped support for the perforated floor and a semi-sunken firing chamber. It was dated to the mid- 6th c. AD on the basis of the pottery discovered inside of it, as well as on a coin of Justinian I, originating from the related stratigraphic layer[35].

Parallels and dating of the second "*scamnum*" kiln site

The levelling of the terrain of the former *scamnum* with a layer of yellowish earth has been dated to the 4th c. AD[36], which provides a secure *terminus post quem* for the erection of the two kilns, described in this contribution. Even more, the stratigraphic situation in the sector points that the latter were probably built after the devastation of the town by the Huns in AD 423[37].

The two abovementioned installations (kiln no. 2 in particular) find close parallels in other pyrotechnical structures discovered at *Novae*, namely the ones found near *Via Principalis* and in the northern *intervallum*. All four kilns had circular plan of the combustion chamber, a tongue-shaped support for the perforated floor and sunken (or semi-sunken) firing chamber. Furthermore, kiln no. 2 as well as the ones found near the *Via Principalis* (which was also sunken in a yellowish layer of earth) and in the northern *intervallum* were built using the same technique of shaping most of the kiln components out of the virgin soil and clay. According to a recent study, this technique became widespread in the modern territory of Bulgaria during the Roman period and was used by potters, originating from northern located territories[38].

The used construction technique and type of support for the perforated floor are both to be found in the structure of the so-called "Celtic type" kilns, which were widespread in Western and Central Europe during the La Tene and the Roman periods[39], while in the East they had been found in settlements of Dacian and Geto-Dacian origin[40] as well as in areas inhabited by peoples of the Chernyakhov culture[41].

Within the territory of modern Bulgaria installations with circular combustion chamber and a tongue-shaped support for the perforated floor are among the most popular types of installation used during the Hellenistic and the Roman periods[42].

---

[33] KOTECKI 1978, p. 193–205.

[34] BIERNACKI, KLENINA 2014, p. 151; BIERNACKI, KLENINA 2015, p. 377.

[35] TOMAS 2015, p. 63–73.

[36] GENČEVA 2002, p. 18, fig. 12, with additional still unpublished information provided by Dr. Evgenia Gencheva (Assoc. Prof., NAIM-BAS).

[37] Additional, still unpublished information by Dr. Evgenia Gencheva (Assoc. Prof., NAIM-BAS).

[38] HARIZANOV 2019a, p. 205–206; HARIZANOV 2019b, p. 29.

[39] See DUHAMEL 1979, p. 59–62; PEACOCK 1982, p. 67–72; ANDREAS RISY 1994, p. 22–38; COLL CONESA 2008, p. 114–125.

[40] MATEI 2007, p. 279–296; RAȚIU 2009, p. 173–177.

[41] BOBRINSKY 1991, p. 197–199.

[42] HARIZANOV 2019a, p. 89–92.

While the kilns with such support and above the ground firing chamber date back to the Classical and the Early Hellenistic period[43], the ones with sunken or semi-sunken upper chamber appear from the last centuries of the Late Iron Age onwards and have been excavated predominantly in the northern part of the country: for instance, at a 2nd–1st c. BC. site underneath modern Rousse[44], the Chichov elak pre-Roman and Roman site near Krivina (1st c. BC.–1st c. AD.)[45], the recently studied archaeological sites near Kosta Perchevo (late 1st c. BC.–1st c. AD.)[46], Gorni Dabnik (2nd c.-first half of the 1st c. BC.)[47], and the 1st c. BC.–1st c. AD. production centre near Sinagovtsi[48]. Such installations are likewise attested at the Roman production centres near Hotnitsa[49] and Pet mogili (2nd–3rd c. AD.)[50], where however, similarly to the *scamnum* kilns design, the support for the perforated floor does not reach the opening of the stoking channel. Another kiln, also shaped out of the virgin soil and clay, but with a nearly rectangular combustion chamber and again a tongue-wall that divided both the lower chamber and the stoking channel in two, was excavated in the vicinities of *Zikideva*[51], in modern Veliko Tarnovo. It was dated to the 4th–5th c. AD.[52] and could mark a re-appearance of the specific construction type to the south of Danube during the Late Roman period.

The described conventionality of the kiln construction used by the potters at *Novae* makes uncertain any chronological considerations, based on the morphology of the installations. A more precise dating of the exploitation period of the kiln site at the former *scamnum* could be obtained through analysis of the discovered ceramic assemblage.

It is probably not a coincidence that the vessels from the assemblage in question find their closest parallels in the repertoire of the workshops, which utilised the kiln near *Via Principalis* (**Fig. 19**) and the one in the northern *intervallum* (**Fig. 20**), as well as in other studied groups of coarse wares from *Novae*, dated to the late 5th and the 6th c. AD (**Fig. 21**)[53].

The cooking pots (**Fig. 16.1–13**) find direct parallels in the described types of pots of the late 5th and the 6th c. AD., manufactured in *Novae*[54] (**Fig. 19–21**), as well as in the assemblages from period C (first half of the 5th c. AD) and especially period D (6th c. AD.) at *Iatrus*[55], and in types I and V of the cooking pots, used in the settlement

[43] HARIZANOV 2019a, p. 43–44, 91.

[44] VARBANOV *et alii* 2016, p. 101–117.

[45] VAGALINSKI 2011, p. 219–226; HARIZANOV 2019a, p. 481–482.

[46] GEORGIEV *et alii* 2020, p. 504–509.

[47] TONKOVA, MADZHAROV 2020, p. 514–520.

[48] Personal information from the site's researcher Dr. Zdravko Dimitrov (Assoc. Prof., NAIM-BAS), to whom I express my gratitude.

[49] SULTOV 1969, p. 12–24; HARIZANOV 2019a, p. 148, 680–696.

[50] ANTONOVA, ATANASOV 1979, p. 28–36; HARIZANOV 2019a, p. 157–158, 588–595.

[51] For the Early Byzantine town on the Tsarevets hill in Veliko Tarnovo, identified as the *Zikideva* known from the sources, see for instance DINTCHEV 2018, p. 368–369, and the literature cited.

[52] See ROBOV 1997, p. 136–142; HARIZANOV 2019a, p. 185–186, 403–404.

[53] See KOTECKI 1978, p. 193–199; BIERNACKI, KLENINA 2014, p. 151–157; TOMAS 2015, p. 65–69.

[54] BIERNACKI, KLENINA 2014, p. 152–153, 156, fig. 3.1–2.

[55] BŐTTGER 1978, p. 28–30; BŐTTGER 1991, p. 157–166, taf. 53.

at Gradishteto near Dichin, dated respectively to c. AD. 410–490 and c. AD. 540–580[56]. The latest parallels, dated to the late 6th c.-the beginning of the 7th c. AD., come from a closed complex, discovered in the Late Antique settlement on cape Kaliakra[57]. According to the classification of G. Kuzmanov the pots from the assemblage are close to types I, VI and VII, dated to the 5th c.-the early 7th c. AD[58]. Parallels are also to be found in *Scythia Minor*, namely in types II, IV, V, IX and X of the typology of A. Opaiţ, dated to the 5th c.-the early 7th c. AD., with the majority being common for the 6th c. AD[59]. The wide distribution of this variety of cooking vessels during the Early Byzantine period is further confirmed by the presence of similar items during the 5th and the 6th c. AD. in north-western Asia Minor[60].

Identical forms to the jugs with biconical or globular bodies and everted trefoil rims from the *scamnum* assemblage (**Fig. 16.14–15**) are to be found in the repertoire of both the *Via Principalis*[61] and the *intervallum* workshops[62], as well as in the other sets of vessels (described as "jugs-*oinochoai*" and "pots-*oinochoai*") from the late 5th c. and the 6th c. AD[63] (**Fig. 19–21**).

The small number of bowls, located within the *scamnum* assemblage (**Fig. 17.6–9**), show resemblance with bowl types II and III of the vessels from the site at Gradishteto near Dichin, used there during both habitation periods (c. AD. 410–490 and c. AD. 540–580), predominantly in the course of the first one[64]. In the typology of G. Kuzmanov they find similarities with type I, dated to the 4th c.-early 6th c. AD., and type III, discoverable in both Roman and Late Antique contexts[65].

The tall handless goblets/beakers or deep bowls (**Fig. 17.11–13**) could also be seen in the former publication[66] (**Fig. 21**) as well as in assemblages from period D in *Iatrus*[67].

The drinking cups (mugs) with single handle, globular body, cylindrical neck and almost vertical rims (**Fig. 18.1–9**) are also to be found in the published assemblages of the late 5th and 6th c. AD from *Novae*[68] (**Fig. 21**). Furthermore, they find parallels in the vessels of cups type IV from the classification of G. Kuzmanov, dated to the 5th–6th c. AD[69], while two handled varieties of the form occur in *Scythia Minor* during the 4th–6th c. AD[70].

The group of vessels, comprising table *amphorae*, pitchers and jugs with similar rim diameter (**Fig. 18.11–14**; **16–18**), find parallels in the said assemblages of

[56] KUZMANOV 2009, p. 153–154, 162–164, 169–170, 189–190, 196–197.
[57] See KUZMANOV 1978, p. 20–25.
[58] KUZMANOV 1985, p. 47–54, 90, T. 29, p. 92, T. 31, p. 93, T. 32.
[59] OPAIŢ 2004, p. 47–52.
[60] See KAN ŞAHIN, LAFLI 2015, p. 358–374.
[61] KOTECKI 1978, p. 196, tab. III.4–7.
[62] TOMAS 2015, p. 67, tab. 2.
[63] BIERNACKI, KLENINA 2014, p. 155, fig. 2.5, 8–9, p. 156, fig. 3.3–4.
[64] KUZMANOV 2009, p. 157–158, 185.
[65] KUZMANOV 1985, p. 39–40, p. 84, T. 23.
[66] BIERNACKI, KLENINA 2014, p. 152, 155, fig. 2.3–4.
[67] CONRAD 2007, p. 51–52; taf. 10.
[68] BIERNACKI, KLENINA 2014, p. 152, 155, fig. 2.1–2.
[69] KUZMANOV 1985, p. 45–46, 87, T. 26.
[70] OPAIŢ 2004, p. 67–68.

the late 5th c. and 6th c. AD. in *Novae*[71] (**Fig. 19**, **21**) and also in types III and IV of the jug forms from Gradishteto near Dichin, dated mostly in the 6th c. AD[72]. Two of the pitchers from the assemblage (**Fig. 18.11, 13**) are close to the jugs of Kuzmanov types II and III, mostly dated to the 4th–6th c. AD. and the end of the 4th c.-first half of the 5th c. AD., while at least one (**Fig. 18.12**) is close to the jugs of Kuzmanov type X, dated to the Late Antique period, with more securely dated examples from the 6th c. AD[73]. Another of the illustrated finds (**Fig. 18.16**) is very similar to the *amphorae* of Kuzmanov type XIX and Opaiţ type IIb, both dated mainly to the 6th c. AD[74]. The other two shapes, similar to types of locally produced *amphorae* (**Fig. 18.17–18**) find common features with Kuzmanov types XV and XVII[75].

***

The parallels described of the *scamnum* assemblage come mostly from contexts, dated from the second half of the 5th c. to the beginning of the 7th c. AD., but predominantly to the 6th c. AD. Therefore, it could be suggested that the later-built kiln no. 2 was used and abandoned at some point during the 6th c. AD. (the second / third quarter of the century?).

As for the vessels of earlier date (for instance **Fig. 17.9**, **10**, **18.11**), discovered among the debris in the kiln pit of kiln no. 1, there is another possibility for their origin. The overall large quantity of pottery, found inside the usually kept clean stoke pit, together with the traces of secondary smoking on the external surface of some vessels (for example some of the cooking pots with parallels in mentioned 5th c. AD. contexts), could be regarded as an indication that the latter were thrown there after their discard along with other waste material, during the levelling and raising of the bottom of the stoke pit of kiln no. 2. Furthermore, it could also be suggested that they were made prior the start of the use of the later kiln and, given their earlier date, that they could have been part of the repertoire of the potters, who used kiln no. 1.

Conclusions

According to A. Biernacki and E. Klenina, the ceramic workshops of the late 5th and the 6th c. AD. in *Novae* were controlled by the bishop and probably owned by the eparchy[76]. A. Tomas, on the other hand, sees a domestication of the craft during the same period due to the simplifications of the vessel forms. This is pointed as evidence for the lack of a direct control over the pottery production by the bishopric in favour of a less strict demand for a regular supply[77].

[71] KOTECKI 1978, p. 194, tab. I.4–5, p. 196, tab. III.1, 3; BIERNACKI, KLENINA 2014, p. 152, 155, fig. 2.6–7.

[72] See KUZMANOV 2009, p. 159–161, 187.

[73] KUZMANOV 1985, p. 31–34, 79, T. 18, p. 80, T. 19.

[74] KUZMANOV 1985, p. 25; OPAIŢ 2004, p. 5. I was additionally consulted on the supposed *amphorae* shapes by dr. Nikolay Rusev (National Institute of Immovable Cultural Heritage, Bulgarian Ministry of Culture) to whom I express my gratitude.

[75] KUZMANOV 1985, p. 20–22, 25, 70–71, T. 10–11, p. 74, T. 13.

[76] BIERNACKI, KLENINA 2015, p. 377, 380.

[77] TOMAS 2015, p. 70–71.

The here presented ceramic assemblage fits well in the production repertoire of the *Novae* workshops of the late 5th and 6th c. AD. However, the overall small number of produced forms is not a secure indication for a domestication of the craft. On the contrary, the strong correspondence among the vessel forms from the repertoire of the several identified potteries in the north-western part of the Late Antique town points toward some sort of centralised control over this activity. The latter is in agreement with the proposition of A. Biernacki and E. Klenina. Nevertheless, the available published information in is not sufficient for the secure acceptance of their hypothesis. Furthermore, the data presented for the technology of kiln building and vessel production during the same period in *Novae* provides grounds for the distinct possibility still worth noting that this last phase of development of the potter's craft within the settlement was at least partly owed to newly arrived peoples of different ethnic or cultural background.

BIBLIOGRAPHY

ANDREAS RISY 1994 – R. Andreas Risy, *Römerzeitliche Brennöfen in Noricum*, Wien, 1994.

ANTONOVA, ATANASOV 1979 – V. Antonova, G. Atanasov, *Peshti za bitova keramika v zemlishteto na s. Pet mogili, Shumensko*, Jahrbuch der Museen in Nordbulgarien 5 (1979), p. 28–36.

BIERNACKI 2013 – A. B. Biernacki, *The Episcopal Complex in Novae (5th and 6th Cent. AD)*, in: A. B. Biernacki, R. Czerner (eds.), *The Bishopric of Novae (Moesia Secunda) 4th–6th Cent. History, Architecture, Daily Life, Vol. I, History, Architecture*, Poznań, 2013, p. 31–54.

BIERNACKI, KLENINA 2014 – A. B. Biernacki, E. Klenina, *Early Byzantine Coarse Ware from Novae: Production and Chronology*, in: N. Poulou-Papadimitriou, E. Nodarou, V. Kilikoglou (eds.), *LRCW 4, Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean*, BAR International Series 2616 (I), 2014, Oxford, p. 151–157.

BIERNACKI, KLENINA 2015 – A. B. Biernacki, E. Klenina, *Early-Byzantine Pottery Workshops in Novae (Moesia II, Bulgaria): Technological, Economic and Historical Aspects*, in: F. Thuillier, E. Louis (eds.), *Tourner autour du pot… Les ateliers de potiers médiévaux du Ve au XIIe siècle dans l'espace européen*, Publications du Centre de Recherches Archéologiques et Historiques Médiévales (CRAHM), Brepols, 2015, p. 373–381.

BOBRINSKY 1991 – A. Bobrinsky, *Goncharnye masterskie i gorny Vostochnoi Evropy (po materialam II–V vv. n. e.)*, Moskva, 1991.

BŐTTGER 1978 – B. Bőttger, *Céramique ménagère des Ive-Ie s. de Jatrus Mesie inferieure*, Arheologija 20/2 (1978), p. 26–32 [in Bulgarian].

BŐTTGER 1991 – B. Bőttger, *Die gefäßkeramischen Funde (1975–1981)*, in: *Iatrus-Krivina, Band IV: Ergebnisse der Ausgrabungen 1975–1981*, Berlin, 1991, p. 157–166, taf. 46–54.

CHICHIKOVA *et alii* 1980 – M. Chichikova, B. Sultov, V. Naydenova, A. Dimitrova-Milcheva, *Razkopki v Nove (bylgarski sector)*, Arheologicheski otkritiya i razkopki prez 1979 g., 1980, p. 80–82.

CIOŁEK 2011 – R. Ciołek, *Conclusions from the inventory*, in: P. Dyczek (ed.), *Novae, Legionary fortress and Late Antique town, Volume II, Coins from Sector IV*, Warszawa, 2011, p. 235–278.

COLL CONESA 2008 – J. Coll Conesa, *Hornos romanos en España. Aspectos de morfología y tecnología*, in: *Ceramicas Hispanorromanas. Un estado de la cuestion*, Cadiz, 2008, p. 113–125.

CONRAD 2007 – S. Conrad, *Kommentierter Katalog der gefäßkeramischen Funde*, in: *Iatrus Krivina, Band VI: Dokumentation der Ausgrabungen 1992–2000*, Mainz am Rhein, 2007, p. 1–80, taf. 1–22.

DINTCHEV 2015 – V. Dintchev, *The Municipia of the province of Moesia Inferior*, in:

L. Vagalinski, N. Sharankov (eds.), *Proceedings of the 22nd International Congress of Roman Frontier Studies, Ruse, Bulgaria, September 2012* (*Bulletin of the National Institute of Archaeology* XLII), 2015, p. 581–591.

DINTCHEV 2018 – V. Dintchev, *Town and Church in Late Antiquity*, in: L. Vagalinski, M. Raycheva, D. Boteva, N. Sharankov (eds.), *Proceedings of the 1st International Roman and Late Antique Thrace Conference "Cities, Territories and Identities" (Plovdiv, 3rd–7th of October 2016)* (*Bulletin of the National Archaeological Institute* XLIV), 2018, p. 357–370.

DUHAMEL 1979 – P. Duhamel, *Morphologie et évolution des fours céramiques en Europe occidentale. Protohistoire, Monde Celtique et Gaule Romaine*, Acta Praehistorica et Archaeologica 9/10 (1978) [1979], p. 49–76.

DYCZEK 2005 – P. Dyczek, *A New Pottery Manufacturing Center at Novae*, RCRF Acta 39 (2005), p. 301–306.

DYCZEK 2008 – P. Dyczek, *Archaeological Excavations at Novae. A History of Research with Special Considerations of Sector IV (Legionary Baths, valetudinarium, Late Architecture)*, in: T. Derda, P. Dyczek, J. Kolendo (eds.), *Novae. Legionary Fortress and Late Antique Town, Volume 1, A Companion to the Study of Novae: History of Research, Novae in Ancient Sources, Historical Studies, Geography, Topography, and Cartography, Bibliography 1726–2008*, Warsaw, 2008, p. 31–70.

GENČEVA 1999 – E. Genčeva, *La production dans le camp militaire romain Novae pendant la Basse Antiquité (à l'instar du scamnum tribunorum)*, in: *Der Limes an der Unteren Donau von Diocletian bis Heraklios*, Vorträge der Internationalen Konferenz (Svištov, 1–5 September 1998), Sofia, 1999, p. 95–98.

GENČEVA 2002 – E. Genčeva, *Parviat voenen lager v Novae, provincia Miziya (Severna Bulgaria)*, Sofia-Warszawa, 2002.

GENČEVA 2003 – E. Genčeva, *Le premier camp militaire à Novae*, Novaensia 14 (2003), p. 21–38.

GENČEVA 2006 – E. Genčeva, *Bazyliki odsłonięte na odcinku X w Novae, koło współczesnego Svisztov, północna Bułgaria*, Novaensia 17 (2006), p. 45–52.

GENCHEVA 2010 – E. Gencheva, *Nove. Razkopki na sector X–scamnum tribunorum*, Arheologicheski otkritiya i razkopki prez 2009 g., 2010, p. 312–313.

GENCHEVA *et alii* 2007 – E. Gencheva, T. Sarnowski, P. Dyczek, A. Biernacki, *Bylgaropolski razkopki v rimskiya voenen lager i rannovizantiyski grad Novae*, Arheologicheski otkritiya i razkopki prez 2006 g., 2007, p. 263–266.

GENCHEVA *et alii* 2008 – E. Gencheva, T. Sarnowski, P. Dyczek, A. Biernacki, *Bylgaropolski razkopki v rimskiya voenen lager i rannovizantiyski grad Novae*, Arheologicheski otkritiya i razkopki prez 2007 g., 2008, p. 340–343.

GENCHEVA *et alii* 2011 – E. Gencheva, T. Sarnowski, P. Dyczek, A. Biernacki, *Rimski voenen lager i rannovizantiyski grad Nove*, Arheologicheski otkritiya i razkopki prez 2010 g., 2011, p. 276–280.

GEORGIEV *et alii* 2020 – P. Georgiev, R. Alexandrov, O. Milanova, H. Hristova, Y. Nikolova, Y. Baev, M. Baeva, S. Staykov, *Rescue Archaeological Excavations of Early Neolithic and Late Iron Age Site in the Land of Kosta Perchevo Village, Municipality of Kula, Vidin District, Archaeological Discoveries and Excavations in 2019*, 2020, p. 504–509 [in Bulgarian].

HARIZANOV 2019a – A. Harizanov, *Peshti za keramika v dneshnite bylgarski zemi prez I–VI vek* [*Ceramic kilns in the territory of modern Bulgaria from the 1st to the 6th century AD.*], Dissertations 15, National Archaeological Institute and Museum-BAS, Sofia, 2019.

HARIZANOV 2019b – A. Harizanov, *Bridging the gap: continuity and innovation in ceramic kiln technology from the 6th c. BC to the beginning of the 7th c. AD in the modern territory of Bulgaria*, Archaeologia Bulgarica 23/3 (2019), p. 15–39.

HARIZANOV 2022 – A. Harizanov, *Ceramic workshops in Dacia Mediterranea (late third-early seventh century AD)*, Journal of Ancient History and Archaeology 9.2 (2022), p. 156–188.

KAN ȘAHIN, LAFLI 2015 – G. Kan Șahin, E. Lafli, *Roman and Late Roman-Early Byzantine*

Coarse Ware from Southwestern Paphlagonia, in: E. Lafli, S. Pataci (eds.), *Recent Studies on the Archaeology of Anatolia*, BAR International Series 2750, Oxford, 2015, p. 327–437.

KLENINA 2006 – E. Y. Klenina, *Ceramic Tableware and Kitchenware of the 3rd–6th Century from Novae (Northern Bulgaria)*, in: A. B. Biernacki (ed.), *Novae. Studies and Materials II*, Poznan-Sevastopol, 2006.

KOTECKI 1978 – J. Kotecki, *Piec Garncarski w "Sondażu Wodociągowym"*, Archeologija 28 (1977), p. 193–205.

KUZMANOV 1978 – G. Kuzmanov, *Céramique de la Haute époque byzantine du castel du cap Kaliakra*, Arheologija 20/2 (1978), p. 20–25 [in Bulgarian].

KUZMANOV 1985 – G. Kuzmanov, *Rannovizantiyska keramika ot Trakia i Dakia (IV-nachaloto na VII v.)* (Razkopki i prouchvaniya 13), Sofia, 1985.

KUZMANOV 2009 – G. Kuzmanov, *Early Byzantine Pottery from Gradishteto (North-West Area)*, in: V. Dintchev (ed.), *Bylgaro-britanski razkopki na Gradishteto pri s. Dichin, Velikotyrnovska oblast, 1996–2003*, Razkopki i prouchvaniya 39 (2009), p. 153–206.

LEMKE 2015 – M. Lemke, *The Dwindling Legion: Architectural and Administrative Changes in Novae (Moesia Inferior) on the Threshold of Late Antiquity*, in: R. Collins, M. Symonds, M. Weber (eds.), *Roman Military Architecture on the Frontiers: Armies and Their Architecture in Late Antiquity*, Oxford, 2015, p. 90–97.

MAJEVSKI 1962 – K. Majevski, *Sprawozdanie tymczasowe z wykopalisk w Novae w 1960 roku*, Archeologija 12 (1962), p. 75–170.

MATEI 2007 – S. Matei, *The morphology and typology of kilns for firing ceramic in the Geto-Dacian Classical period (2nd century BC–1st century AD.)*, Istros 14 (2007), p. 279–296.

MITOVA-DZHONOVA 1966 – D. Mitova-Dzhonova, *Peshti za keramika i keremidi ot Nove*, Arheologija 8/1 (1966), p. 38–45.

OPAIȚ 2004 – A. Opaiț, *Local and Imported Ceramics in the Roman Province of Scythia (4th–6th centuries AD.). Aspects of economic life in the Province of Scythia*, BAR International series 1274, Oxford, 2004.

PEACOCK 1982 – D. P. S. Peacock, *Pottery in the Roman World: an ethnoarchaeological approach*, London, 1982.

RAȚIU 2009 – A. M. Rațiu, *Pottery kilns from North-Western Transylvania from the 2nd–4th centuries AD*, in: O. Țentea, I. C. Opriș (eds.), *Near and Beyond the Roman Frontiers, Proceedings of a Colloquium held in Târgoviște, 16–17 October 2008*, Bucharest, 2009, p. 165–186.

ROBOV 1997 – M. Robov, *Pottery furnace at the west foot of the hill "Momina krepost" in Veliko Turnovo*, Bulletin of the Muzeum of History-Veliko Tânovo 12 (1997), p. 136–142 [in Bulgarian].

SARNOWSKI *et alii* 2009 – T. Sarnowski, E. Gencheva, P. Dyczek, A. Biernacki, *Novae. Rimski voenen lager i rannovizantiyski grad*, *Arheologicheski otkritiya prez 2008* g., 2009, p. 419–422.

SARNOWSKI *et alii* 2014 – T. Sarnowski, A. Biernacki, P. Vladkova, E. Yordanov, M. Lemke, A. Tomas, *Nove (Novae). Arheologicheski pytevoditel po rimskiya legionen lager i rannovizantiyski grad na Dolniya Dunav (Bulgaria*), Warsaw, 2014.

SULTOV 1969 – B. Sultov, *Novootkrit keramichen centar pri s. Hotnitsa ot rimskata i starobalgarskata epoha*, Arheologija 11/4 (1969), p. 12–24.

SULTOV 1985 – B. Sultov, *Ceramic production on the territory of Nicopolis ad Istrum*, Anuaire de L'Université de Sofia "Kliment Ohridski"/Faculté d'Histoire 76/2 (1983), 1985.

TOMAS 2015 – A. Tomas, *Sixth-century Pottery Kiln from Novae (Moesia Secunda), A Contribution to the Studies of Local Pottery Manufacturing*, Archaeologia Bulgarica 19/3 (2015), p. 63–73.

TONKOVA, MADZHAROV 2020 – M. Tonkova, K. Madzharov, *Site of the Late Hellenistic Period and the Bulgarian Revival Period near Gorni Dabnik Village, Dolni Dabnik Municipality. Complete Archaeological Investigations, Archaeological Discoveries and Excavations in 2019*, 2020, p. 514–520 [in Bulgarian].

VAGALINSKI 2011 – L. Vagalinski, *A new Late La Tène pottery kiln with a bread oven on the lower Danube (northern Bulgaria)*, in: M. Guštin, M. Jevtić (eds.), *The Eastern Celts. The Communities between the Alps and the Black Sea*, Beograd, 2011, p. 219–226.

VALOV 1966 – V. Valov, *Pesht za stroitelna keramika ot Nove*, Arheologija 8/1 (1966), p. 46–51.

VARBANOV *et alii* 2016 – V. Varbanov, N. Rusev, S. Todorova, R. Yordanova, *Late Hellenistic kilns found on the territory of Rousse, Bulgaria*, Banatica 26/1 (2016), p. 101–117.

VELKOV 1977 – V. Velkov, *Cities in Thrace and Dacia in Late Antiquity (Studies and Materials)*, Amsterdam, 1977.



Fig. 1. Map of the Central and North-eastern Balkans with provincial and diocese borders of the 4th c. – 6th c. AD. (after HARIZANOV 2022, p. 158, fig. 1, with additions and corrections).

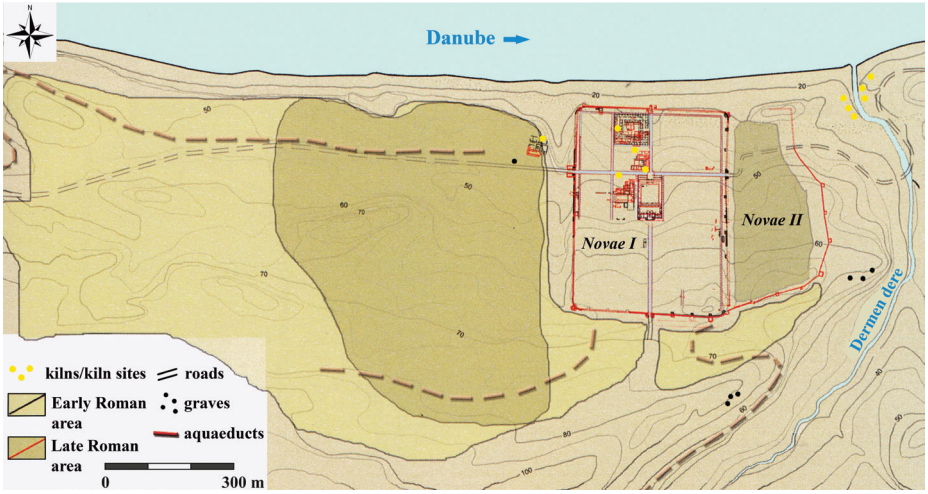


Fig. 2. General plan of the area of *Novae* with marked locations of excavated ceramic kilns (after SARNOWSKI *et alii* 2014, p. 79, fig. 1, with additions and corrections by A. Harizanov).

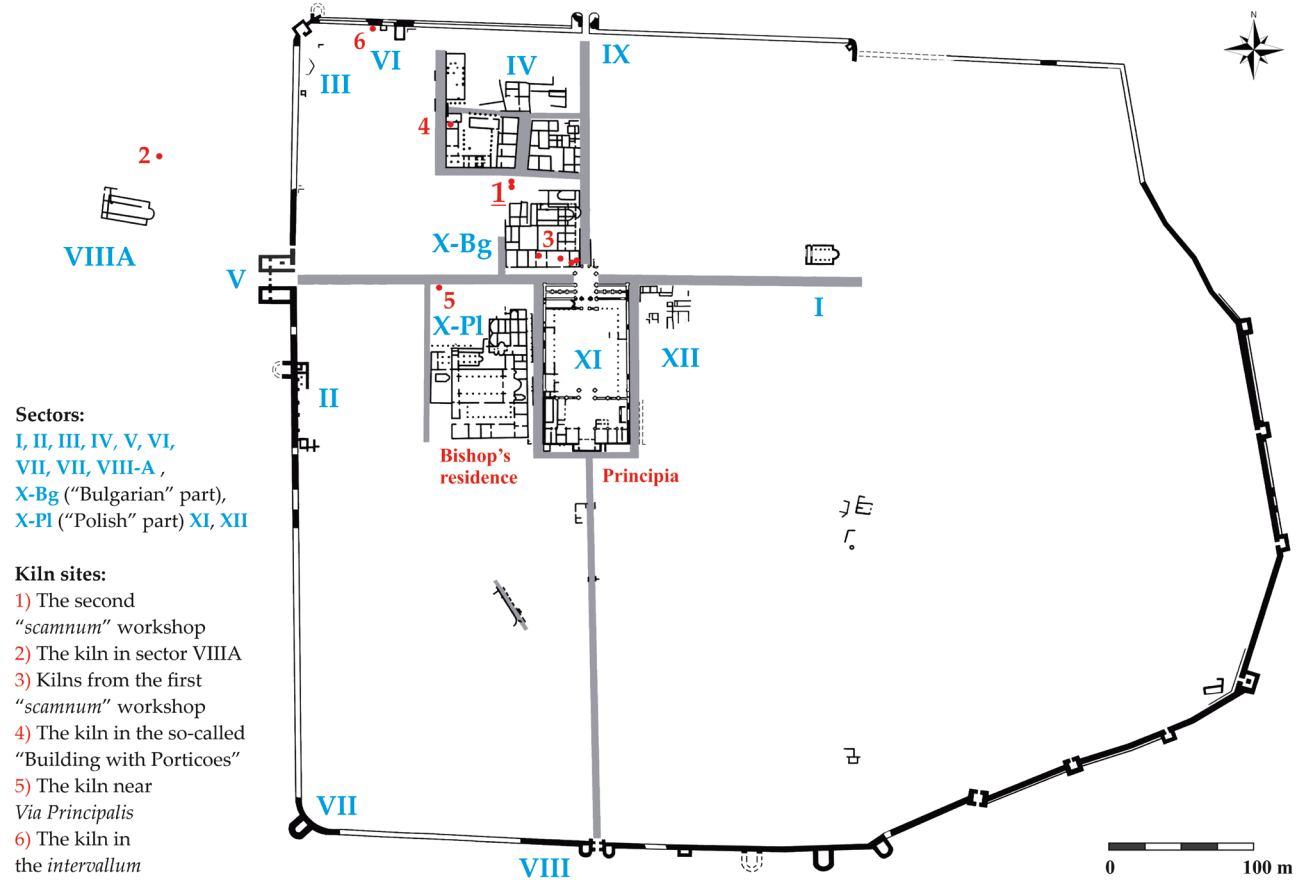


Fig. 3. Plan of the fortified area of *Novae* during Late Antiquity with locations of the kiln sites mentioned in the text and part of the studied sectors (after LEMKE 2015, p. 91, fig. 8.1; DYCZEK 2008, p. 56, fig. 19; with additions and correction by A. Harizanov).

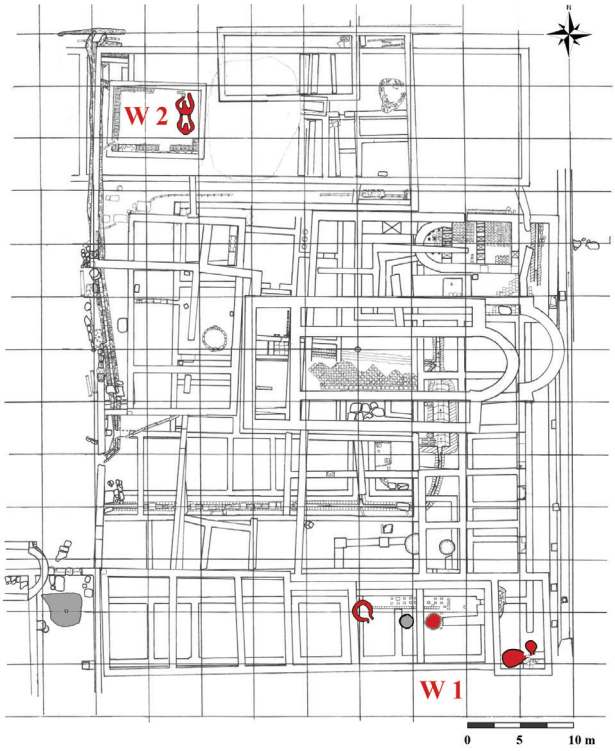


Fig. 4. General plan of the site of *scamnum tribunorum* with locations of the two kilns sites described in the text (W1-the earlier workshop; W2-the second *scamnum* kiln site) (plan courtesy of Assoc. Prof. Dr. E. Gencheva, with additions by A. Harizanov).

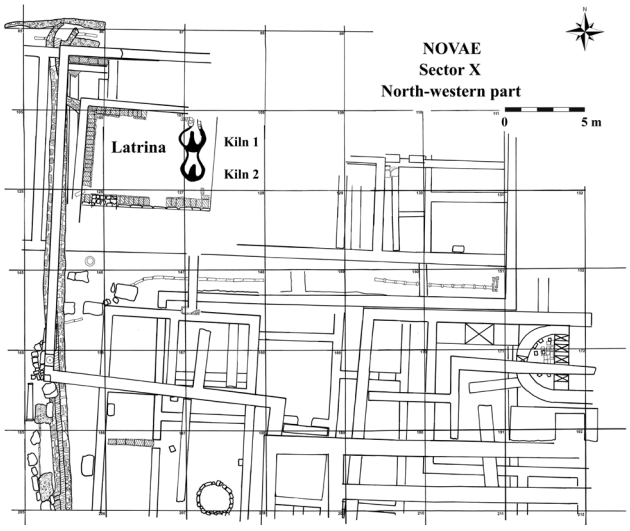


Fig. 5. Plan of the north-western section of sector X with location of the second *scamnum* kiln site (after SARNOWSKI *et alii* 2009, p. 420, fig. 2, with additions by A. Harizanov).

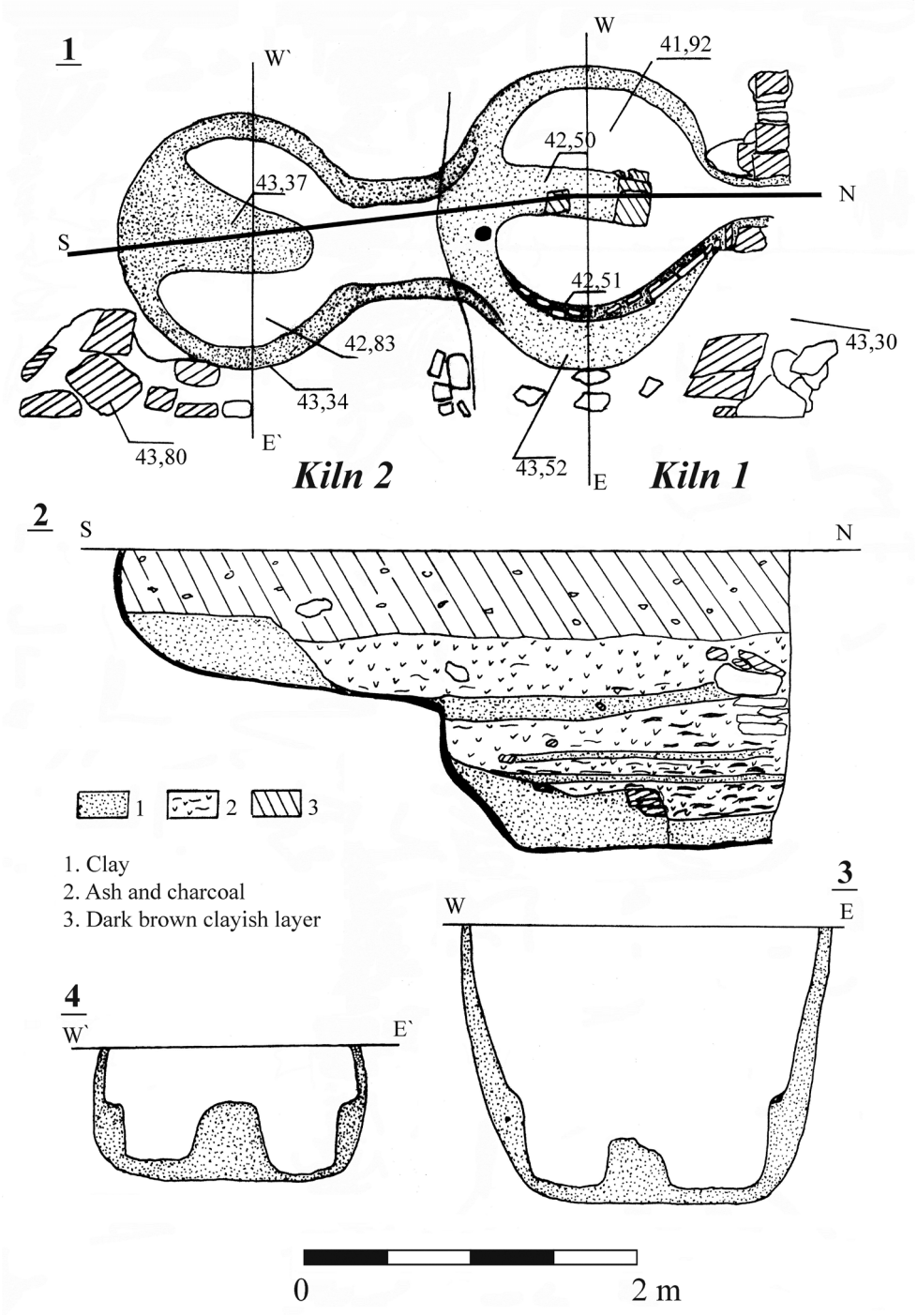


Fig. 6. Plan and cross-sections of the two kilns from the second *scamnum* kiln site (after GENCHEVA *et alii* 2008, p. 341, fig. 1, with additions and corrections by A. Harizanov).



Fig. 7. Photo of kiln no. 1 with the layers of debris inside the firing chamber, view from the west (author E. Gencheva).



Fig. 8. Photo of kiln no. 1 after the completion of its research (author E. Gencheva).



Fig. 9. Photo of the tongue wall and the stoking channel of kiln no. 1 (author E. Gencheva).



Fig. 10. Photo of the tongue wall and the eastern wall of the combustion chamber of kiln no. 1 (author E. Gencheva).



Fig. 11. Photo of kilns no. 1 and no. 2 after the completion of their research, view from the north (author E. Gencheva).



Fig. 12. Photo of kiln no. 2 after the completion of its research (author E. Gencheva).



Fig. 13. Photo of kiln no. 2 after the completion of its research, view from the south (author E. Gencheva).

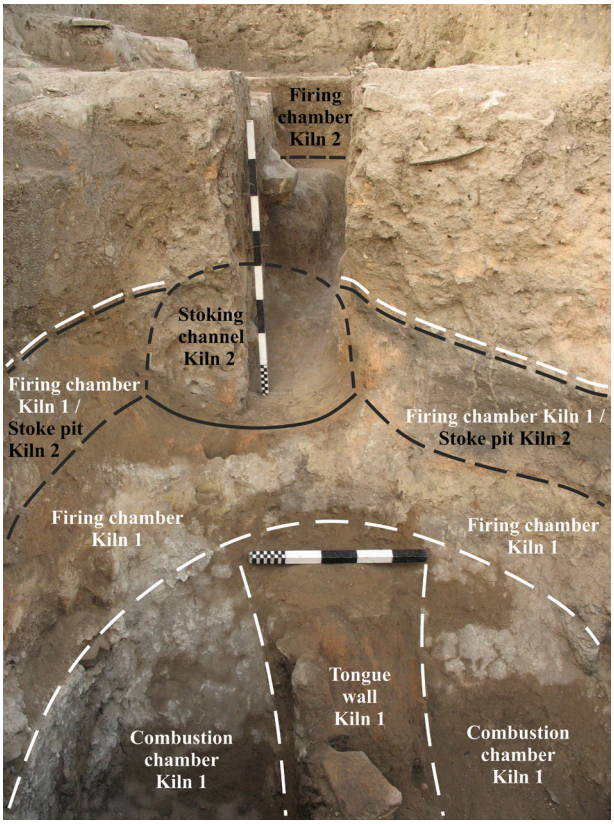


Fig. 14. Photo of kilns nos. 1 and 2 with drawings marking the visible preserved parts of the two installations (photo by E. Gencheva, additions by A. Harizanov).



Fig. 15. Photo of cooking pots from the *scamnum* assemblage (author A. Harizanov) a new illustration is sent

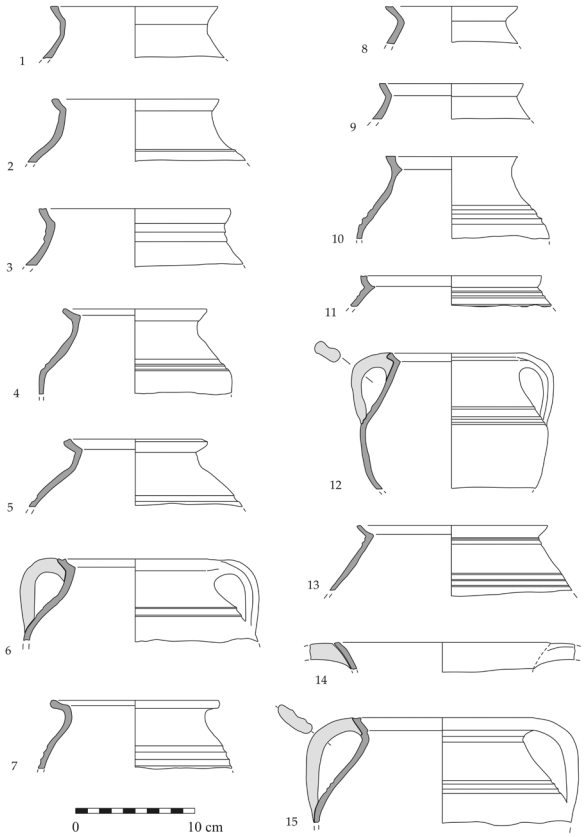


Fig. 16. Cooking pots and pots-*oinochoai* from the *scamnum* assemblage (drawings by A. Cholakova, graphic design and identification A. Harizanov).

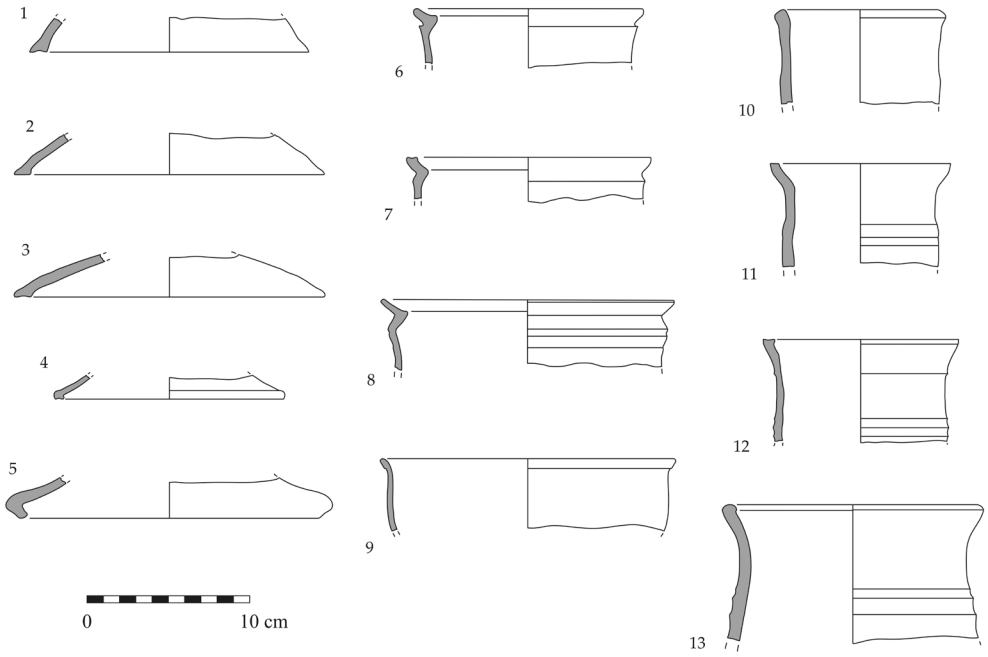


Fig. 17. Lids, bowls and beakers from the *scamnum* assemblage (drawings by A. Cholakova, graphic design and identification A. Harizanov).

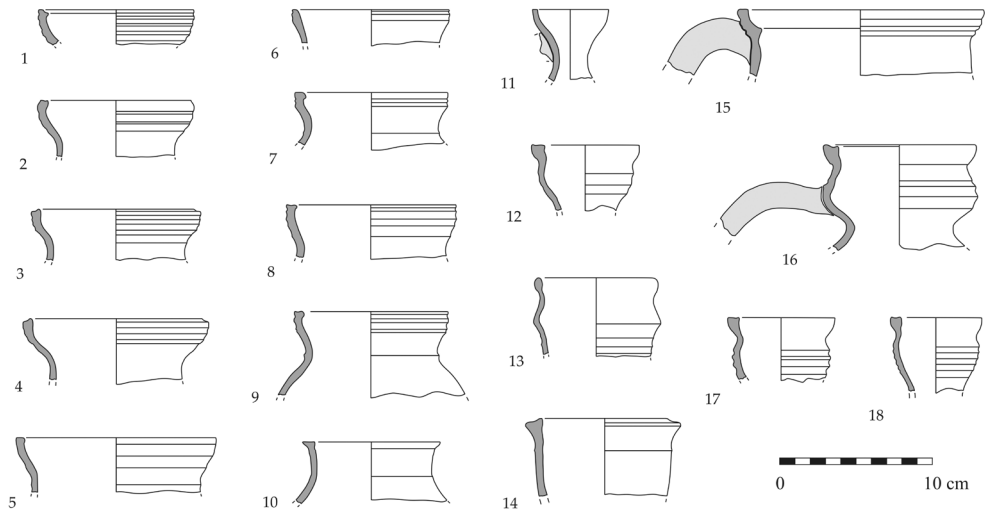


Fig. 18. Mugs, jugs, pitchers and table *amphorae* from the *scamnum* assemblage (drawings by A. Cholakova, graphic design and identification A. Harizanov).

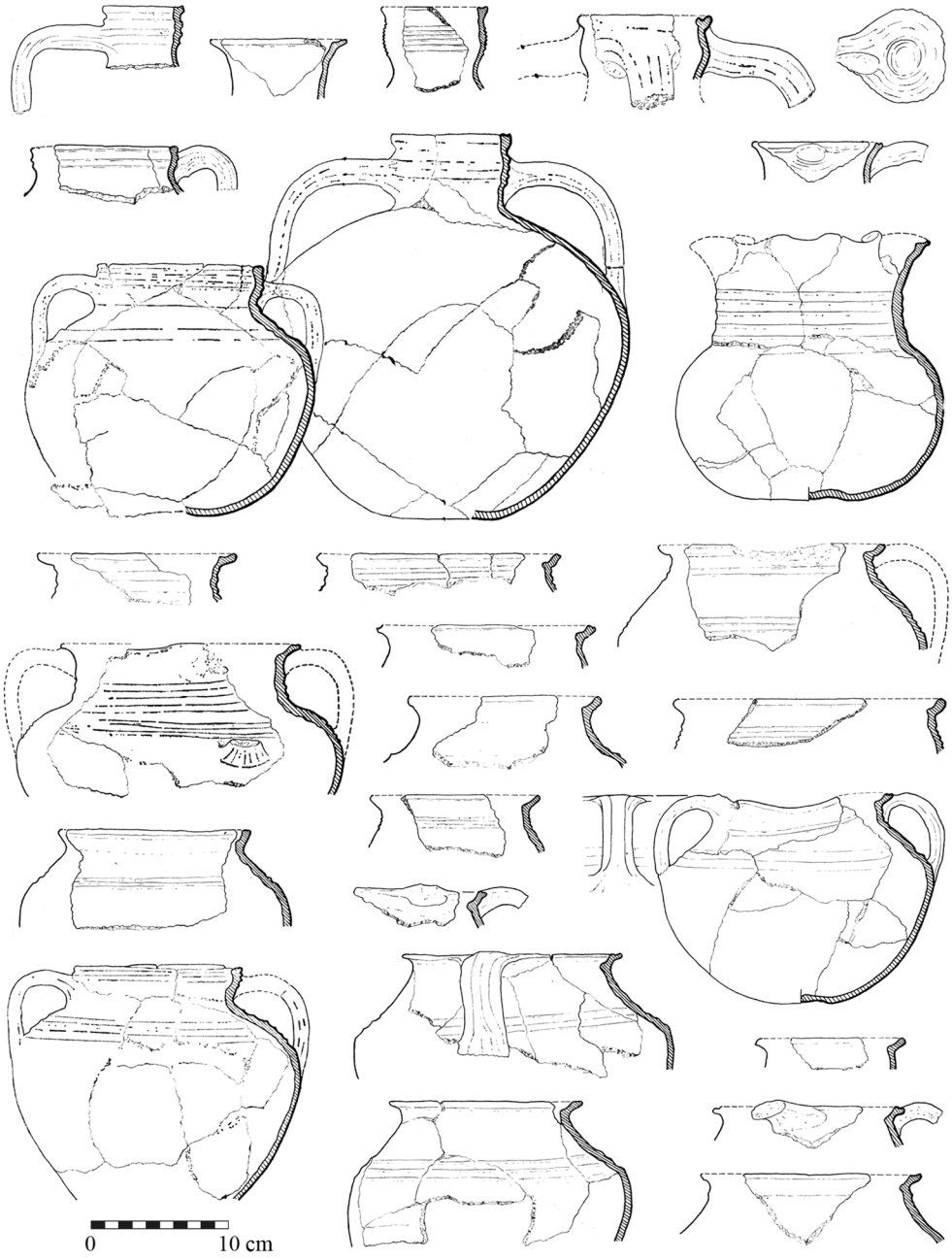


Fig. 19. The ceramic assemblage from the *via principalis* kiln site (after KOTECKI 1978, p. 194–196, tabl. I–III; compilation and additions by A. Harizanov).

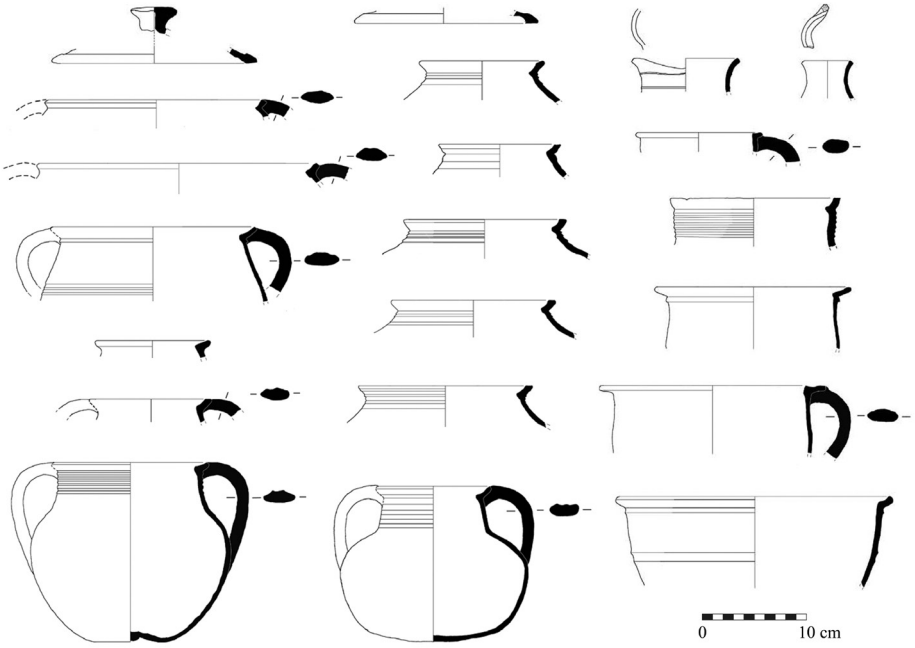


Fig. 20. The ceramic assemblage from the *intervallum* kiln site (after TOMAS 2015, p. 66–67, Tables I–II; compilation and additions by A. Harizanov).

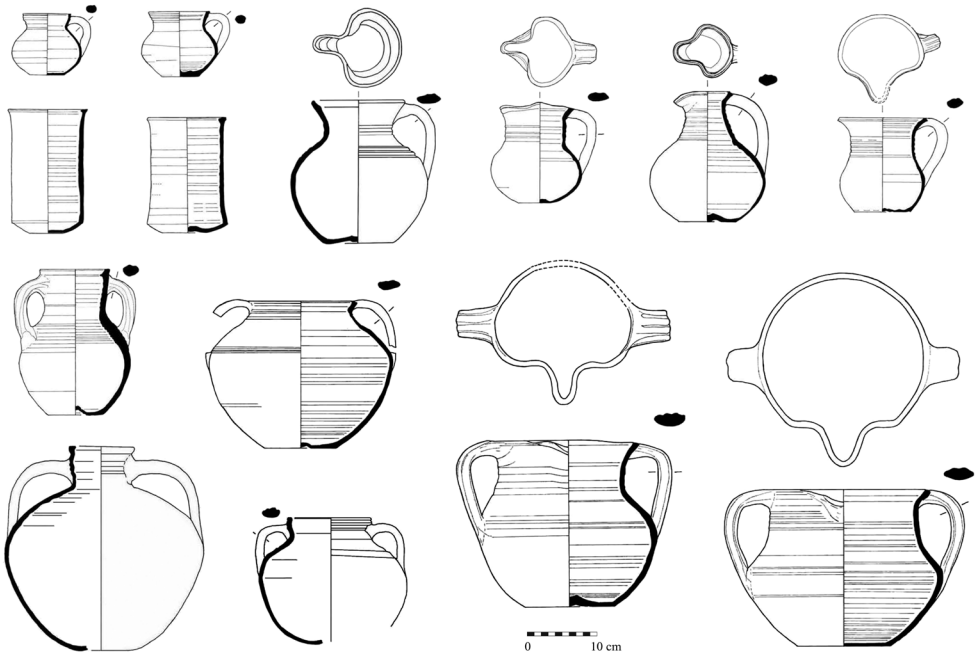


Fig. 21. Ceramic vessels of the late 5th c. and the 6th c. AD. found in *Novae* (after BIERNACKI, KLENINA 2014, p. 155–156, figs. 2–3; compilation and additions by A. Harizanov).

DOUĂ INSCRIPȚII GRECEȘTI INEDITE DE LA HISTRIA

Adela BÂLTÂC[*]
Dragoş HĂLMAGI[**]

Cuvinte-cheie: *Histria în epoca Principatului, inscripții noi, inscripții fragmentare, scrisori*, horothesia.
Keywords: *Early Roman Histria, new inscriptions, fragmentary inscriptions, letters*, horothesia.

Rezumat: *Cercetările în sectorul extra muros Poarta Mare-Turnul Mare au demarat în anul 2000 și, cu câteva întreruperi, continuă și astăzi. Zona aflată într-un punct central al Histriei epocii romane timpurii a suferit numeroase intervenții odată cu ridicarea incintei târzii, dar mai ales din momentul începerii săpăturilor arheologice de la Histria, care au dus la distrugerea complexelor contemporane incintei. Articolul de față examinează două inscripții inedite descoperite în această zonă: un fragment dintr-o inscripție honorifică sau funerară și un nou fragment al horothesiei histriene ce aduce noi informații privind dosarul de scrisori ce însoțea decretul lui Laberius Maximus.*
Abstract: *Investigations in the extra muros sector called Main Gate-Main Tower started in the year 2000 and, with a few interruptions, are still ongoing today. The sector is located in the centre of early Roman Histria and underwent numerous interventions during the construction of the Late Roman enclosure, but especially since the beginning of archaeological excavations at Histria, which caused the destruction of the complexes contemporary with the enclosure. The present article examines two new inscriptions discovered in this area: a fragment of an honorific or funerary inscription, and a further fragment of the Histrian* horothesia *providing new insights on the dossier of letters accompanying the decree of Laberius Maximus.*

Cercetările în zona extramurană a incintei romane târzii, având ca repere topografice Poarta Mare și Turnul Mare[1], au fost demarate în anul 2000 și, cu unele

[*] Adela BÂLTÂC: Muzeul Național de Istorie a României, București; e-mail: adela.baltac@gmail.com.
[**] Dragoș HĂLMAGI: Institutul de Arheologie „Vasile Pârvan", București; e-mail: dragoshhalmagi@gmail.com.

[1] Acest sector este cercetat de un colectiv de arheologi al Muzeului Național de Istorie a României (în continuare abreviat MNIR) format din Paul Damian (responsabil sector), Adela Bâltâc și Eugen Paraschiv-Grigore. Din colectiv mai fac parte Virgil Apostol (Institutul de Arheologie „Vasile Pârvan", București), arhitect și Mihai Dima (Banca Națională a României), numismat.

întreruperi datorate unor motive independente de voința noastră[2], continuă și astăzi. Obiectivul principal al cercetării este *Histria* în perioada Principatului, o epocă atât de bine cunoscută, mai ales grație materialului epigrafic, dar încă o mare necunoscută din punct de vedere arheologic. Zona aleasă pentru investigații se afla la 80 m est de zidul incintei elenistice, la 100 m nord de edificiul Terme I și cca 400 m est de incinta romană timpurie, ceea ce, fie și în teorie, o amplasează într-o arie centrală a planimetriei creionate pentru *Histria* în epoca Principatului[3] (**Fig. 1**). Zona suferă intervenții de tot felul, atât pe parcursul secolelor IV–VI p.Chr., odată cu ridicarea și refacerile incintei romane târzii, dar mai ales din momentul începerii cercetărilor arheologice. Odată cu dezvelirea incintei în perioada 1914–1943 au loc intervenții în stratigrafia zonei[4], care au dus la distrugerea straturilor epocii târzii și, pe alocuri, a celor din epoca Principatului. Ulterior, în zonă se mai desfășoară și alte cercetări arheologice, printre acestea cele din perioada 1949–1952[5], când, cu ocazia marii secțiuni est-vest, se execută sondaje în zona Porții Mari[6]. Următoarea intervenție de care avem cunoștință este cea din anul 1965, când în fața turnului F, obiectul direct al cercetării[7], au fost practicate trei secțiuni care au condus la dezvelirea unor elemente anterioare, dar care nu au fost urmate de investigații suplimentare, complexele cercetate fiind secundare în economia articolului[8].

Primele 15[9] campanii desfășurate în sectorul *extra muros* Poarta Mare-Turnul Mare, au pus în evidență complexe arheologice diverse din structura Histriei romane timpurii, fiind cercetate edificii și complexe arheologice databile din epoca elenistică târzie (nivelul G8) până la ultimul nivel roman timpuriu (IC[10]) și chiar contemporane cu incinta târzie. Printre acestea, sunt de enumerat, o porțiune dintr-o stradă de factură elenistică (artera b), un nou traseu de stradă (necunoscut în planimetria generală a Histriei), trei edificii de mari dimensiuni adosate acestor străzi, canale de colectare a apei menajere sau conducte de apă potabilă, alte complexe[11].

Cum era și normal cercetările au condus și la descoperirea unui bogat material arheologic aflat în curs de prelucrare și care va contribui la rafinarea cronologiei complexelor identificate în zonă. Printre acestea se numără și câteva fragmente

[2] Cercetările s-au desfășurat în perioada 2000–2008, 2013–2014, 2016–2019, 2021–2022.

[3] Vezi cele trei propuneri de reconstituire a planimetriei histriene pentru epoca Principatului la SUCEVEANU 1982, fig. 48–50.

[4] Din păcate cele mai multe dintre aceste cercetări au rămas necunoscute, însă pozele din arhiva șantierului sau publicate în diverse studii de către Vasile Pârvan și Radu Vulpe, reliefează amploarea intervențiilor arheologice din zonă, vezi DAMIAN, BÂLTÂC 2003–2005, p. 134 și notele 38–39.

[5] FLORESCU 1954, p. 77–82, fig. 11, 13.

[6] CANARACHE, DIMITRIU 1954, p. 170–171, pl. XII–XIII, XVI și fig. 60.

[7] NUBAR, SION 1980, p. 19–21 și nota 15.

[8] NUBAR, SION 1980, p. 20–21, fig. 2. Zidurile descoperite sunt sumar descrise și se propune o cronologie a acestora pe baza succesiunii lor.

[9] Deoarece în anul 2019 cercetarea a fost finalizată în zona extramurană, dar mai ales pentru completarea datelor obținute, din campania 2021, cercetarea s-a mutat în zona intramurană în limitele acelorași repere topografice, vezi CCA 2021 (2022), p. 222–223; CCA 2022 (2023), p. 199–200.

[10] Pentru siglele stratigrafice din epoca greacă, vezi ANGELESCU, BÂLTÂC 2002–2003, p. 86–88, iar pentru cele romane SUCEVEANU 1982, p. 13–39, 75–92.

[11] Cercetările preliminare au fost publicate în DAMIAN, BÂLTÂC 2003–2005 și sunt de completat anual cu informațiile publicate în CCA.

de inscripții, toate aflate în poziție secundară[12]. Cele două inscripții care constituie obiectul articolului de față au fost descoperite în primele campanii. Prima piesă a fost descoperită în campania anului 2002, în stratul vegetal al casetei H4[13] (**Fig. 2**), la adâncimea de 0,10 m, casetă care se află în imediata vecinătatea a aleii de vizitare. Piesa este fragmentară, are ciobituri recente pe laturi și prezintă urme de mortar alb pe fața cu inscripție, semn că a fost refolosită ca material de construcție. Așa cum menționam și mai sus, în zona sectorului s-au efectuat cercetări arheologice care au dus și la distrugerea celor mai multe complexe din perioada târzie. De asemenea, au avut loc și intervenții odată cu amenajarea circuitului actual de vizitare, astfel încât este greu de precizat dacă fragmentul provine din zidurile incintei sau din zidurile complexelor contemporane ei. Cel de-al doilea fragment a fost descoperit în campania anului 2001, în caseta F2, caroul d1 (**Fig. 2**). Faptul că în această zonă a fost efectuată una dintre suprafețele unei cercetări anterioare[14], adâncimea mică la care a fost descoperită (- 0,22 m) și consistența pământului (care indică un strat de umplutură), ne determină să considerăm că piesa a fost aruncată la loc odată cu acoperirea post-săpătură[15].

1. Fragment dintr-o stelă de marmură, astăzi la MNIR, nr. inv. 359003. Fragmentul este rupt pe toate laturile, iar spatele este lis și prelucrat (șlefuit), măsoară 11 × 14,5 × 11,5 cm și are o inscripție în limba greacă (**Fig. 3.a**). Literele sunt elegante, cu serife pronunțate, cu înălțimea de 0,09–1 cm și un interval de 0,5-0,7 cm între rânduri. *Alpha* are bara orizontală frântă, *mu* este cu picioarele ușor înclinate, *omicron* de mărime egală cu restul literelor și *pi* cu picioarele egale. După paleografie și onomastică, inscripția poate fi datată într-un interval larg care cuprinde secolul I și prima parte a secolului al II-lea p.Chr.

– – – – – – – – – – – – – – – – – –
– – – – – – – –A̤I̤E̤– – – – – – – – –
– – – – – Λεύκιον ΤΑ– – – – – – –
– – – – –ϱεν ἐν τῇ μα– – – – – – –
– – – – – καταλιπεῖν – – – – – – –
5 – – – – – – –ο̣υ πατ̣– – – – – – – –
– – – – – – – – – – – – – – – – – –

După toate aparențele, monumentul a fost dedicat unui anume Lucius, al cărui nume a fost redat în forma elenizată Λεύκιος. Nu se poate stabili dacă după acest

[12] O inscripție descoperită în anul 2007 a fost deja publicată de BÂLTÂC, BOTTEZ 2007–2008 și reluată în catalogul colecției *Lapidarium*, BÂLTÂC, ȘTIRBULESCU, ȘTEFAN 2015, p. 72, nr. 49, cu o intervenție a lui AVRAM 2017, p. 388–389, nr. 19.

[13] Pentru sistemul de săpătură și numerotare, vezi DAMIAN, BÂLTÂC 2003–2005, p. 136 și fig. 2.

[14] NUBAR, SION 1980, p. 20–21.

[15] La începutul cercetării noastre nu se mai observau în teren urmele vechilor secțiuni efectuate de Nubar Hamparțumian. În cercetările pe care le-am efectuat în zonele nederanjate de cercetările acestuia, au fost descoperite fragmente de piese care s-au reîntregit cu fragmente găsite în pământul cu care s-au acoperit vechile secțiuni, ceea ce ne face să credem că nu a fost adus pământ din altă parte.

praenomen urma și un *nomen* sau un alt cuvânt. Cazul acuzativ este frecvent folosit în inscripții onorifice, însă nu ar trebui exclusă posibilitatea ca inscripția să fie funerară-o epigramă.

Pe al treilea rând s-ar putea restitui μά[χη], „în luptă", fie una în care Lucius s-a remarcat, fie, în cazul unui epitaf, ultima sa luptă, cea în care și-a pierdut viața. Poate fi o confruntare militară, dar și o competiție sportivă, un *pancratium* bunăoară[16], sau chiar jocuri de gladiatori, așa cum găsim într-o epigramă tomitană în ritm iambic, ISM II 342: Ἀμάραντον θανόν|τα τῶν ἐν ἡρώων / μάχαις ἔθαψε Ὀφέλλις Λόν|γος, „pe Amarantos cel ucis în lupte eroice l-a înmormântat Ophellis Longus". Pe rândul următor, verbul καταλιπεῖν, „a lăsa", cunoaște multe sensuri secundare, însă textul este prea fragmentar pentru a ne opri doar asupra unuia dintre ele.

2. Fragment de calcarenit, astăzi la MNIR, nr. inv. 359002. Fragmentul este rupt din toate părțile, prezintă urme de mortar cenușiu cu nisip și scoici pisate în unele litere mai adâncite, are dimensiunile 10 × 8 × 3,5 cm și o inscripție în limba greacă (**Fig. 3.b**). Literele sunt gravate adânc, *alpha* are bara orizontală dreaptă, *omicron* este rotund și de înălțime egală cu celelalte litere, *sigma* rectangular, *upsilon* cu hasta tăiată de o bară orizontală. Înălțimea literelor variază între 1,1 și 1,4 cm și intervalul dintre rânduri între 0,4 și 0,5 cm. Pe penultimul rând, literele *eta* și *nu* sunt în ligatură. Scrisul este identic cu cel de pe inscripțiile dosarului horothesiei histriene și permite datarea piesei în a doua jumătate a secolului al II-lea sau la începutul secolului al III-lea p.Chr.[17]

– –
– – – – – – – – – – – – – – – – ΔIE . – – – – – – – – – – –
[*vac*. ἐπιστολὴ Κοδράτ]ου. Κοδρ̣[ᾶτος Ἰστριανῶν]
[ἄρχουσιν βουλῇ δήμῳ χ]αίρειν· A . – – – – – – – –
[– – – – – – – – – – –σκε]υ̣ασθῆν[αι – – – – – – – – –]
5 – – – – – – – – – – – – – –αι ὑμᾶ[ς – – – – – – – – – –]
– – – – – – – – – – – – – – *vacat*

R. 1: la capătul rândului se disting picioarele a două haste verticale. R. 3: din ultima literă se mai vede doar o hastă verticală. R. 4: probabil cu un prefix, κατα –, παρα- etc.

Traducere: ... Scrisoarea lui Quadratus. Quadratus îi salută pe magistrații, sfatul și poporul histrian! ... să fie stabilit(e) ... vouă ...

Inscripția ne oferă un nou fragment din dosarul horothesiei histriene din 25 octombrie 100 p.Chr., păstrat pe mai multe monumente ridicate cu câteva generații

[16] Cf. Pin. O. 8.58: μάχαν ἐκ παγκρατίου. Pentru popularitatea acestui sport în epoca romană, vezi Cass. Dio 59.13 care descrie jocurile organizate de Caligula pentru a comemora ziua de naștere a Drusillei.

[17] Deși monumentele au fost datate inițial în epoca Severilor, Pippidi a admis în comentariul din ISM posibilitatea de a coborî această dată până în timpul lui Marcus Aurelius, așa cum a propus OLIVER 1965, p. 150–151.

mai târziu. Din acest motiv, în rândurile 2–3 am restituit textul după formularul celorlalte scrisori. Pe primul rând se mai disting doar câteva litere dintr-un alt document, probabil tot o scrisoare. Nu este exclus ca verbul din rândul 4 să fi avut un prefix precum κατα- sau παρα- și, eventual, un sens ușor schimbat. De pildă, verbul κατασκευάζω poate fi folosit cu sensul de a elabora un argument sau a stabili un adevăr[18]. Textul se încheie pe rândul 5 sau 6 unde s-ar putea restitui o formulă tipică de rămas bun, [ἐρρῶσθ]αι ὑμᾶ[ς βούλομαι sau εὔχομαι][19], ipoteză în care corpul scrisorii ar fi fost compus dintr-o propoziție foarte scurtă. Alte variante de restituție sunt de asemenea posibile[20] și este deci de preferat ca lacuna să rămână necompletată. Dar ce legătură este între această nouă scrisoare și celelalte inscripții cunoscute?

O ipoteză care merită a fi explorată are ca punct de pornire posibilitatea ca fragmentul să se fi desprins din exemplarul A, ISM I 67, aflat la muzeul Histria (nr. inv. 3). V. Pârvan notează că acest *cippus*, zidit în placajul curtinei *i* lângă turnul *H*, era „foarte rău stricat de umezeală, coșcovit tare și având lipsă mari așchii din fața scrisă”[21] (**Fig. 4**). Una dintre aceste așchii care păstrează începutul rândurilor 51–57, recuperată în circumstanțe necunoscute și păstrată la același muzeu (nr. inv. 190), a fost publicată pentru prima oară în ISM I 417 printre inscripțiile cu cuprins nesigur și valorificată acum câțiva ani ca fragment al inscripției ISM I 67[22]. Monumentul a fost scos din zid la o dată necunoscută și transportat la muzeu, unde a fost descoperit de D. M. Pippidi în 1949. Însă din cauza condițiilor improprii de expunere, piatra s-a deteriorat și inscripția era deja aproape ilizibilă în 1958, când a fost re-examinată[23].

Descoperirea unui alt fragment de calcar în colecțiile Muzeului Național de Antichități (nr. inv. L899), cu inscripții în limba greacă pe cele două fețe adiacente păstrate, a oferit un prilej de reevaluare a întregului dosar[24]. Una din cele două inscripții conține câteva frânturi din scrisoarea guvernatorului Tullius Geminus, cealaltă fragmente ale altor două epistole din care se mai disting doar câteva cuvinte și un nume roman care începe cu Sen- și se termină în -stinus, cu siguranță numele unui guvernator sau al unui prefect. Acest monument purta așadar un al treilea exemplar al textului, care a fost notat cu C[25]. Fragmentul provine din partea inferioară a monumentului și demonstrează că după copia decretului guvernatorului

[18] Unul din exemplele citate în LSJ este Dem. 21.110: ὡς ἐγὼ αἴτιός εἰμι, κατεσκεύαζε, „a pretins că eu sunt de vină”.

[19] ZIEMANN 1910, p. 334–356; OLIVER 1989, p. 15–18.

[20] Exemple din alte scrisori imperiale: καὶ ὑμᾶς în TAM II 905 = OLIVER 1989, nr. 153; γνῶναι ὑμᾶς în IGBulg IV 2263 = OLIVER 1989, nr. 156; καὶ ὑμᾶς în SEG 32, 1097 = OLIVER 1989, nr. 281.

[21] PÂRVAN 1915–1916, p. 556–558, nr. 15, pl. IV.

[22] HĂLMAGI 2019, p. 225–226, nr. 1, fig. 1.

[23] PIPPIDI 1964, p. 332.

[24] HĂLMAGI 2019–2020.

[25] Exemplarul B a fost de asemenea publicat de PÂRVAN 1915–1916, p. 558–593, nr. 16, pl. V și reluat de mai mulți cercetători. El se găsește astăzi la MNIR (nr. inv. 36922), fiind de asemenea publicat în catalogul colecției Lapidarium, BÂLTÂC, ȘTIRBULESCU, ȘTEFAN 2015, p. 45–48, nr. 28. Existența mai multor copii fusese deja anticipată de PIPPIDI 1964, p. 335, n. 6, „posibilitatea ca *Hotărnicia* să fi fost expusă în mai multe puncte ale teritoriului orășenesc nu-i cîtuși de puțin exclusă” și VULPE 1968, p. 52: „Aceste exemplare n-au fost probabil singurele. Un document atît de important trebuie să fi fost expus în mai multe locuri din oraș și chiar de pe întinderea teritoriului său extramuran”.

Laberius Maximus urmau alte scrisori, asemănătoare cu cele deja cunoscute, confirmând dreptul histrienilor de a pescui pe brațul Peuce. Maniera în care au fost concepute inscripțiile este încă vizibilă pe exemplarul A, cu cele două texte în latină gravate în partea superioară a monumentului, iar scrisorile în greacă înscrise în continuare, pe ambele fețe. Cu mare probabilitate, aceste documente au fost invocate de locuitorii cetății în litigiul avut cu Charagonius Philopalaestrus, *conductor publici portorii ripae Thraciae*, cunoscut fiind faptul că asemenea scrisori puteau fi luate în considerare în arbitraje[26].

Având această nouă imagine a monumentului în minte, propunem următoarea ipoteză. Fragmentul publicat de noi s-a desprins de pe fața laterală, care nu a fost expusă cât timp blocul de piatră a stat încastrat în zidul cetății, și s-a pierdut ulterior, în timpul transportului spre muzeu, fiind mai apoi acoperit cu pământ după astuparea sondajelor din anii '60 și redescoperit abia după reînceperea săpăturilor în acest sector.

Revenind la textul inscripției, nu putem încheia fără a chestiona identitatea personajului, fără îndoială și el un guvernator sau un prefect. Cel mai potrivit candidat este legatul Ummidius Quadratus (cca 118–122), a cărui activitate în acest colț al provinciei este cunoscută din două dedicații imperiale tomitane[27]. În acest scenariu am fi nevoiți să admitem că dosarului horothesiei i s-au adăugat una sau mai multe scrisori în primele decenii ale secolului următor, care întăreau decizia favorabilă a lui Laberius Maximus.

BIBLIOGRAFIE

ANGELESCU, BÂLTÂC 2002–2003 – M. Angelescu, A. Bâltâc, *Sondajul „a" din basilica episcopală de la Histria*, Pontica 35–36 (2002–2003), p. 85–122.

AVRAM 2017 – A. Avram, *Notes épigraphiques (VI)*, Pontica 50 (2017), p. 387–406.

BÂLTÂC, BOTTEZ 2007–2008 – A. Bâltâc, V. Bottez, *A New Greek Inscription Discovered at Histria*, Cercetări Arheologice 14–15 (2007–2008), p. 223–227.

BÂLTÂC, ȘTIRBULESCU, ȘTEFAN 2015 – A. Bâltâc, C. Știrbulescu, A. Ștefan, *Muzeul Național de Istorie a României. Catalogul Colecției Lapidarium*. Vol. I: *Piese greco-romane*, București, 2015.

CANARACHE, DIMITRIU 1954 – V. Canarache, S. Dimitriu, *Secțiuni și sondaje*, în: *Histria. Monografie arheologică*, vol. I, București, 1954, p. 163–205.

DAMIAN, BÂLTÂC 2003–2005 – P. Damian, A. Bâltâc, Histria. *Sectorul extra muros, Poarta Mare-Turnul Mare (2000–2004)*, SCIVA 54–56 (2003–2005), p. 131–147.

ELLIOTT 2004 – Th. Elliott, *Epigraphic Evidence for Boundary Disputes in the Roman Empire,* teză de doctorat susținută la University of North Carolina, Chapel Hill, 2004.

FLORESCU 1954 – Gr. Florescu, *Incinta cea mare a cetății*, în: *Histria. Monografie arheologică*, vol. I, București, 1954, p. 66–95.

HĂLMAGI 2019 – D. Hălmagi, *Notes on Greek Inscriptions (I)*, în: A. Avram, L. Buzoianu (ed.), *Varia epigraphica et archeologica, volume dédie à la mémoire de Maria Bărbulescu*, Pontica 52, Suppl. VI, Constanța, 2019, p. 225–235.

HĂLMAGI 2019–2020 – D. Hălmagi, *A New Copy of the Histrian* Horothesia, Il Mar Nero 10 (2019–2020), p. 67–75.

[26] ELLIOTT 2004, p. 22–26.

[27] ISM II 48 și HĂLMAGI 2022, p. 413, nr. 4, fig. 6. Ambele inscripții au fost dedicate în anul 120 p.Chr.

HĂLMAGI 2022 – D. Hălmagi, *Seven New Fragmentary Inscriptions from Istros and Tomis*, Pontica 55 (2022), p. 409–423.

NUBAR, SION 1980 – H. Nubar, A. Sion, *Incinta romano-bizantină de la Histria în lumina ultimelor cercetări*, Revista Muzeelor și Monumentelor (Monumente Istorice și de Artă) 49/1 (1980), p. 19–31.

OLIVER 1965 – J. H. Oliver, *Texts A and B of the* Horothesia *Dossier at Istros*, GRBS 6 (1965), p. 143–156.

OLIVER 1989 – J. H. Oliver, *Greek Constitutions of Early Roman Emperors from Inscriptions and Papyri*, Philadelphia, 1989.

PÂRVAN 1915–1916 – V. Pârvan, *Histria IV. Inscripții găsite în 1914 și 1915*, Academia Română. Memoriile Secției Istorie 38 (1915–1916), p. 533–732.

PIPPIDI 1964 – D. M. Pippidi, *Un fragment inedit al hotărniciei lui Laberius Maximus (SEG I 329)*, Studii Clasice 6 (1964), p. 331–342.

SUCEVEANU 1982 – Al. Suceveanu, *Histria VI, Les thermes romains*, Bucarest, 1982.

VULPE 1968 – R. Vulpe, *Horothesia Histriei*, în: R. Vulpe, I. Barnea, *Din istoria Dobrogei*, vol. II: *Romanii la Dunărea de Jos*, București, 1968, p. 49–54.

ZIEMANN 1910 – F. Ziemann, *De epistularum Graecarum formulis sollemnibus: quaestiones selectae*, Halle, 1910.

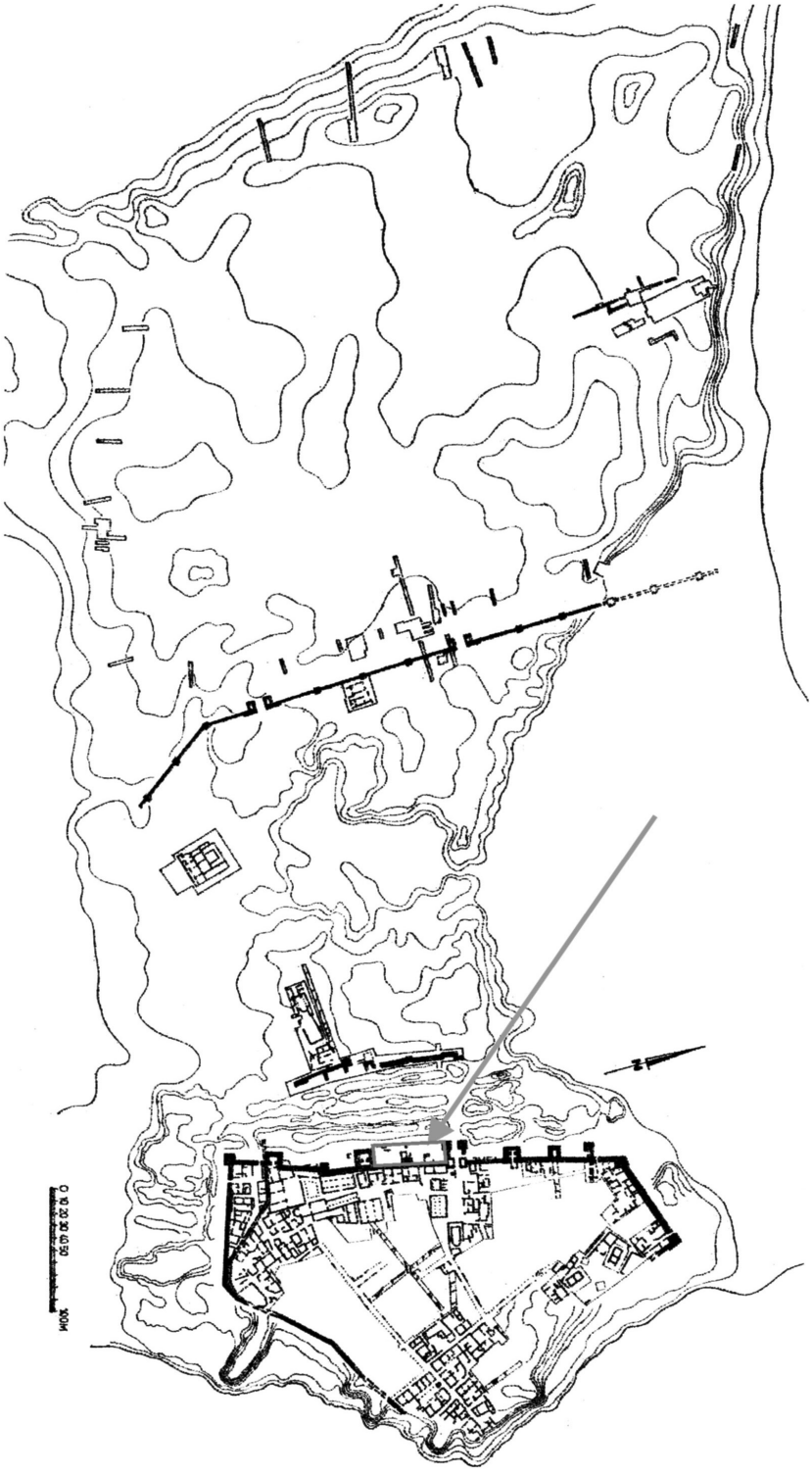


Fig. 1. *Histria,* plan general (*apud* SUCEVEANU 1982, fig. 47), cu localizarea sectorului *extra muros* Poarta Mare-Turnul Mare.

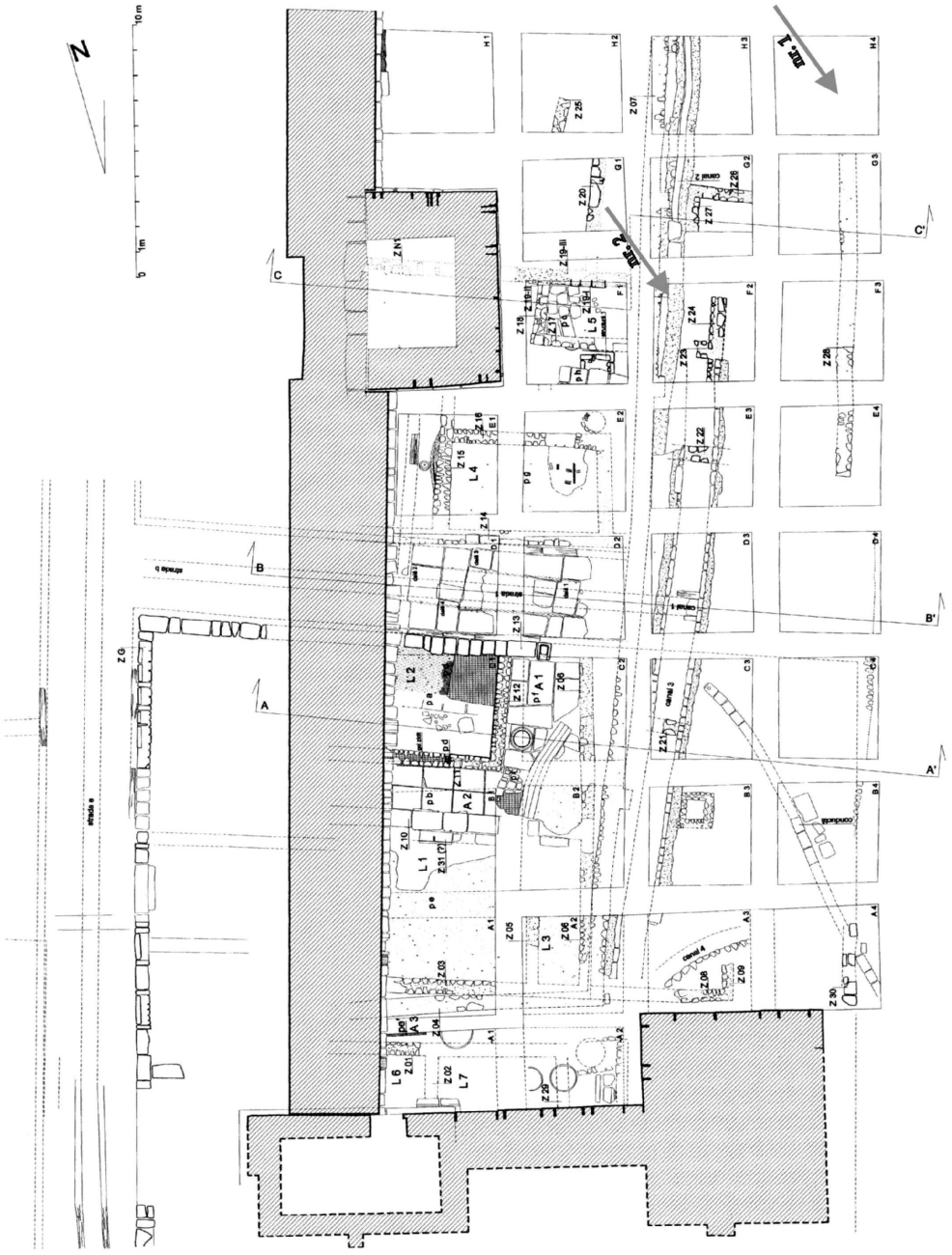


Fig. 2. *Histria*, Sector Poarta Mare-Turnul Mare (plan arh. Virgil Apostol): punctele de descoperire ale celor două fragmente de inscripție.



a.



b.

Fig. 3. a. Fragment de inscripție nr. 1 (MNIR 359003); b. Fragment de inscripție nr. 2 (MNIR 359002).



Fig. 4. Inscripția ISM I 67 (A) încastrată în zid.

NOTES ON THE GREEK INSCRIPTIONS (IV)

Dragoş HĂLMAGI[*]

Cuvinte-cheie: *inscripții funerare, Tomis, onomastică, inscripții creștine.*
Keywords: *funerary inscriptions, Tomis, onomastics, Christian inscriptions.*

Rezumat: *Articolul discută două inscripții grecești tomitane, cu noi sugestii de lectură și restituire:*
1. Epitaf al lui Apollonios, fiul lui Dadas, și al soției sale, Zounis, ISM VI.2, 597;
2. Epitaf pus de Iulius (sau Valerius) Attius pentru soția sa, Bonosa. ISM VI.2, 544.
Abstract: *The present article reviews two Greek inscriptions from Tomis, proposing new readings and restorations:*
1. Epitaph of Apollonios, son of Dadas, and of his wife, Zounis, ISM VI.2, 597;
2. Epitaph set up by Iulius (or Valerius) Attius for his wife, Bonosa, ISM VI.2, 544.

1. Epitaph of Apollonios, son of Dadas, and of his wife, Zounis

Two fragments from the upper half of a funerary stele with circular pediment and two registers in a frame decorated with spiraling vine tendrils. The depiction of the heroised deceased as a "Thracian horseman" facing a seated woman is carved in the upper register. The Greek inscription from the lower register was reappraised recently and published in ISM VI.2, 597 as follows[1]:

Ἀπολ[λ]ώνιος
Δαδα [*vac.* ἀ]νέστη-
σε τὴν [σ]τή[λη]ν
ἑαυτ[ῷ] καὶ
[τ]ῇ ἰδί[ᾳ σ]υμβίῳ
Ζουν[.]τικου
Θι̣ατ̣[–] θυγ[ατρί]
– – – – – – – – – –

On re-examining the stone, I noticed that last letter can hardly be a *gamma*

[*] Dragoș HĂLMAGI: "Vasile Pârvan" Institute of Archaeology, Bucharest; e-mail: dragoshhalmagi@gmail.com.

[1] *Editio princeps*: MUNTEANU 1975, p. 391–394, no. 2, fig. 2. The edition in ISM VI.2 relies heavily on DANA 2014, p. 471–473, nr. 4, fig. 7. Both graphical reconstructions are unconvincing.

(**Fig. 1**). The woman's name and patronym are problematic[2]. In my view, there is a more compelling solution:

Ἀπολ[λ]ώνιος
Δάδα [*v.* ἀ]νέστη–
σε τὴν [σ]τήλ[λ]ην
ἑαυτ[ῷ] καὶ *vac.*
[τ]ῇ ἰδί[ᾳ σ]υμβίῳ
Ζουν[ι]τι Κου– *vac.*
θία τ[οῦ] Οὐι– –
– – – – – – – – – –

Translation: Apollonios, son of Dadas, set up the stele for himself and for his wife Zounis, daughter of Kouthias, son (or freedman) of Oui… (Vi…?) …

The editors of ISM VI.2 noted that another Apollonios, son of Dadas, is recorded in ISM II 295 and perhaps in ISM II 137. All three inscriptions can be dated roughly to the late 2nd or early 3rd century AD., so they could refer to the same individual. The name Dadas is recurrent in the inscriptions from the Pontic coast of Thrace and Asia Minor, but it is most frequent on the northern coast of the Black Sea[3]. The family might have been of Thracian, Sarmatian, or of some other origin[4].

The name of his wife, Zounis, bears no parallels. The Greek accent fell on the first syllable: Ζοῦνις[5]. By contrast, Kouthias, the name of her father, is recorded in numerous inscriptions from Scythia Minor, in Tomis: Θεάδων Κουθίου (ISM II 17), Κουθίας Κουθία (ISM II 157)[6], Κουθίας Καλλικράτου (ISM II 468), and in Istros: Κουσίας Διονυσοδώρου and his son, Διονυσόδωρος Κουσίου, (ISM I 193) and Μενίσκος Κουσίου (ISM I 212). A votive plaque dedicated by Κότυς Κουθείου near Philoppopolis (IGBulg III.1 971) confirms the Thracian origin of this name[7].

[2] The morphological analysis was done at syllable level, but it is unclear how this would work for languages which are scarcely known. The evidence is predictably equivocal. "Une série des noms daces en *thia-*/θια-" was put forward on data from Egypt and the Left Pontus. Incidentally, such names are found in other Egyptian papyri – see, for example, Θιᾶς, -τος (BGU III 700; P. Gen I² 42; P. Hamb IV 257) – and in the inscriptions of the Bosporan kingdom – Θιάγαρος (CIRB 1278), Θιάρμακος and Θιάβωγος (CIRB 1287). On closer inspection, some of the names turn out to be Greek or Roman. Thiadices in O. Faw. 1 = CEL I 73 is most likely a Latin variant of Θεαδίκης (*cf.* Θεάφιλος, Δεινοδίκης, Ξενοδίκης) and not a barbarian name: the author writes in another letter *debio* and *habio* (O. Faw. 2 = CEL I 74; on this type of spelling, see also ADAMS 2013, p. 103–104). In ISM VI.2, 490, col. B, l. 29, instead of -βαλο[ς] Θια –, one should read Βαλερεια|νός in lunate letters.

[3] Using LGPN, I counted 36 occurrences of this name in the inscriptions of the Bosporan Kingdom. Among the non-Greek bearers, see, for example, Φαρνάκης Δάδα (CIRB 1280), Δάδας Χοδιακίου (CIRB 1283), Σάρακος Δάδα (CIRB 1287) in Tanais, Ῥαδάμειστος Δάδα (CIRB 947) in Theodosia. The name Δάδαγος/Δάδακος from several Olbian inscriptions could be also related to it.

[4] See also the discussion in HĂLMAGI 2021, p. 195.

[5] *Cf.* the feminine names ending in -χάρις: Εὐχάριτι (I. Pessinous 62), Ἐπιχάριτι (I. Perge 410), but Ἐπιχάριδι in a Lycian epitaph (I. Bubon 19). By contrast, the oxytone -ίς is always declined -ίδος, -ίδι.

[6] [Κου]|θίας Κουθία in line 6.

[7] The root name is perhaps Latinized as Cutio, -unis in ISM I 331 and Cutus in O. Did 334 and

Finally, the patronym of Kouthias is quite likely a Roman name, a Latin *nomen* or *cognomen* or formed of *dua nomina*[8]. Many restorations are possible here: Οὐι[βίου], Οὐί[κτωρος], Οὐι[ρρίου], Οὐι[ψανίου] etc.

2. Epitaph set up by Iulius (or Valerius) Attius for his wife, Bonosa

Upper half of a stele with a curved pediment and acroteria on both sides, each decorated with a Greek cross. Under the pediment, a *iota-chi* christogram between the letters *alpha* and *omega* is encircled by a stylised laurel wreath with tendrils ending in ivy leaves. The Greek inscription is carved underneath. On its first line, three other crosses are arranged equidistantly on both sides and in the middle of the stone. ISM VI.2, 544 offers the following edition (**Fig. 2**)[9]:

Α ω
τίτο *vac*. λο(ν)
[.]ιουλατζεις βιξιλάρις *vac.*
ὅπου κῖτε ἡ γυνή μου μακα-
ρία vac. Βονῶσα vac. καὶ Τίτῳ προσ-
<ήν>ιν(κα)· <ἀν>ηγ<έρθη καὶ ἐδ>ωρίθη τὼ μνημῖον
ὑπὲρ τῆς μνημοσύνης αὐτῆς,
ὅτι ἐζ<ήσ>αμεν ὁμοῦ ἔτ [η] κα', ὅτι *vac*.
– – – – – – – – – – – – – – – – –

The epitaph is similar in wording to another contemporary inscription, ISM VI.2, 540: ἔθηκεν τὸ τήτολον τοῦτο | Μάρκελλος ὅπου κῖντε | κτλ. Here, the first line was reduced to a heading, τίτολο(ν)[10]. Two decorative marks are used at the end of the lines 2 and 3 instead of *hederae distinguentes*.

The soldier's name has been variously read and interpreted: Ἰούλ(ιος) Ἀτζεῖς[11]. [T.] Ἰούλ(ιος) Ἄτζεις[12] and, finally, [.]ιουλατζεις, a supposed Thracian name[13]. There is another one-letter *vacat* at the end of the same line, so probably the text is centered and follows the alignment of the crosses. Iulius and other *nomina* are well documented in the 4th century[14] and Ἄτζεις is a plausible rendition of

335. Other derivatives: Κουθιούλας in Parthikopolis (IGBulg IV 2282), Κουθιούρας in Istros (ISM I 229) with rhotacism, Κουτιούλης (Quintus Valerius) in Aphytis in Pallene (FEISSEL & SÈVE 1979, p. 304, no. 43), Cutiula (IG X 2, 1, 910 – edited in majuscules) and Κουθιούλης in Thessalonike (IG X 2, 1, 1310), and perhaps also Κούθειν (= Κούθιον) in Thessalonike (IG X 2, 1, 916). The similar spelling variations and phonetic values of θ(ι), see QUAEGEBEUR 1992, p. 271 (Egyptian names), PALUNČIĆ 2019, p. 314–315 (Sarmatian names) and the so-called *tau Gallicum*.

[8] *Cf*. ISM II 261, l. 6: τοῦ Ἰουλίου [– – –] | ἀπελευθέρ[ῳ].

[9] *Editio princeps*: BĂRBULESCU, CÎTEIA 2006, fig. 1 (BE 2008, 373; BE 2009, 612).

[10] Previous translations: "Epitaphe. Iulius Atzeis vexillarius, dans le lieu ou repose ma femme, la bienherueuse Bonosa" (Bărbulescu and Cîteia) and "Épitaphe. [.]ioulatzeis, uexillarius, à l'endroit où repose ma femme, la bienheureuse Bonosa" (Avram, Bărbulescu and Buzoianu).

[11] BĂRBULESCU, CÎTEIA 2006.

[12] BE 2008, 373.

[13] DANA 2014, p. 470–471, nr. 3, fig. 6: „avec le suffixe -zis/-tzis", but the suggested variation is quite unusual.

[14] For other soldiers of the same name in the East, see MAMA I 170, the sarcophagus

Attius[15]. There is also another possibility: if the first vertical hasta is not a letter, but a decorative mark pairing the one at the end of the line, then the soldier was named Οὐα(λέριος) Ἄτζεις[16].

A small *iota* visible at the end of line 5 gives πρόσισιν = πρόσεισιν. Titus must be the owner of the funerary plot and he was a member of the family or perhaps a close friend. In the next clause, ὡριθῆ can be read as a variant spelling of χωρηθῆ and no other emendation is needed. The use of the passive voice prompts me to question whether its meaning here is the same as that of συγχωρηθῆ, "conceded", "allowed", a word occurring in other funerary inscriptions, as well[17]. Summing up my observations, I propose:

Α ω
† τίτο † λο ι †
v. Ἰούλ(ιος) Ἄτζεις βιξιλάρις ι *vac.*
ὅπου κῖτε ἡ γυνή μου μακα–
ρία *v.* Βονῶσα· *v.* καὶ Τίτῳ πρόσι–
σιν ἵνα ἡ γῆ ὡριθῆ τὼ μνημῖον
ὑπὲρ τῆς μνημοσύνης αὐτῆς,
ὅτι ἐζ<ήσ>αμεν ὁμοῦ ἔτη κα′, ὅτι *vac.*
– – – – – – – – – – – – – – – – –

L. 3: or ι Οὐα(λέριος).

Translation: Iulius (or Valerius) Attius, *vexillarius*, (set up) the epitaph (in the place) where my blessed wife Bonosa rests and (which) belongs to Titus, so that the land is (con?) – ceded for a monument in her memory, because we lived together 21 years and …

Based on iconography, the editors dated the stele to the late 5th or the first half

inscription of Marcus Iulius Eugenius, soldier in Pisidia during the persecutions of Maximinus Daia and eventually bishop of Laodicea Combusta; YON 2015, p. 307, no. 10, the epitaph of Iulius Urbanus, centurion of an unnamed *numerus* stationed on limes Arabicus, so probably also from the same period. For the preponderence of Flavius and Aurelius in Late Roman Egypt, see KEENAN 1973, and especially p. 49–51 about the decline of other names. See also BAGNALL *et alii* 1987, p. 36–40 on differences between Western and Eastern elites and SALWAY 1994, p. 137–140 for a brief overview.

[15] The spelling was analysed in BĂRBULESCU, CÎTEIA 2006, p. 442–443; ADAMS 2013, p. 120–121 covers the typical variations for "ti" when followed by a vowel. The same spelling occurs in two other Tomitan inscriptions: Κοσταντζία (ISM VI.2, 548) and Σαβάτζου (ISM VI.2, 714).

[16] This name is quite frequent among the soldiers of the late 3rd and early 4th centuries. See, for example, Valerius Felix, *princeps offici presidis*, in ISM II 373; Valerius [….]inus in ZAHARIADE, ALEXANDRESCU 2011, p. 57–60, nr. 36 (Halmyris). The abbreviation Οὐα. is uncommon, but not wihtout parallel – for example, see ISM II 14, l. 7 (HĂLMAGI 2021, p. 184, nr. 14).

[17] For example, I. Byzantion 318: τὸ ἀν|γ[εῖ]ον τὸ συνχωρηθὲν ἡμεῖν ὑπὸ τοῦ πατρός μου ἐκ τῶν ι [συ]νγενικῶν ἡμῶν μνημάτων ἰς κτῆσιν ἐωνίαν σὺν τοῖς ι [τέ]κνοις ἡμῶν, "the sarcophagus from our family tomb, which was granted by my father to me and my children for everlasting possession".

of the 6th century[18], but the soldier's name urges for an earlier dating[19]. The motif of the christogram surrounded by a laurel wreath appeared during the reign of Constantine I and it became popular across the empire in a short time. Around the middle of the 4th century, two *chi-rho* monograms in wreaths surrounded by pairs of birds were painted on the walls of two adjoining rooms in the Roman villa at Lullingstone[20]. The same motif was carved on a splendid sarcophagus with scenes from the Passion of the Christ (**Fig. 3**), found in the vicinity of the cemetery of Domitilla in Rome and dated to about 350 AD[21]. A monogram in a wreath and two birds were also engraved on a Latin epitaph from the same city, ICUR I 3202 = ILCV 1480[22]. The inscription was set up in 385, during the consulate of Flavius Arcadius and Flavius Bauto. The motif is also common in tomb paintings. On the wall of a tomb from Thessalonike, dated to the second quarter of the 4th century, the christogram in wreath is accompanied by two human figures[23].

Accordingly, I believe that the epitaph of Bonosa should be dated to the 4th century, with a *terminus post quem* sometime in the second quarter. Two other funerary monuments with similar iconography and lettering must be from the same period: ISM VI.2, 540, mentioned above, and ISM VI.2, 545, a Latin inscription for another soldier, Terentius, son of Gaiona[24].

BIBLIOGRAPHY

ADAMS 2013 – J. N. Adams, *Social Variation and the Latin Language*, Cambridge, 2013.

BAGNALL *et alii* 1987 – R. S. Bagnall, A. Cameron, S. R. Schwartz, K. A. Worp, *Consuls of the Later Roman Empire*, Atlanta, 1987.

BĂRBULESCU, CÎTEIA 2006 – M. Bărbulescu, A. Cîteia, *Une inscription funéraire chrétienne récemment découverte à Constantza*, în: L. Mihăilescu-Bîrliba, O. Bounegru (eds.), *Studia historiae et religionis daco-romanae. In honorem Silvii Sanie*, Bucureşti, 2006, p. 439–448.

CAMPENHAUSEN 1929 – H. F. von Campenhausen, *Die Passionssarkophage: zur Geschichte eines altchristlichen Bildkreises*, Marburger Jahrbuch Für Kunstwissenschaft 5 (1929), p. 39–85.

DANA 2014 – D. Dana, *Notices épigraphiques et onomastiques (Scythie Mineure/Dobroudja) (I)*, Pontica 47 (2014), p. 465–493.

FEISSEL, SÈVE 1979 – D. Feissel, M. Sève, *La Chalcidique vue par Charles Avezou (avril-mai 1914). Notes de voyages et inscriptions*, Bulletin de Correspondance Hellénique 103.1 (1979), p. 229–326.

FICKER 1890 – J. Ficker, *Die altchristlichen Bildwerke im Christlichen Museum des Laterans*, Leipzig, 1890.

KEENAN 1973 – J. G. Keenan, *The Names Flavius and Aurelius as Status Designations in Later Roman Egypt*, Zeitschrift für Papyrologie und Epigraphik 11 (1973), p. 33–63.

HĂLMAGI 2021 – D. Hălmagi, *Epigraphica Tomitana (II)*, SCIVA 72 (2021), p. 183–200.

[18] The arguments of OPPERMANN 2010, p. 212, 251–252 were followed in ISM VI.2.

[19] As suggested also by A. Avram in BE 2008, 373.

[20] PAINTER 1969, p. 141–143, with reconstructions in fig. 7 and 9.

[21] FICKER 1890, p. 113–115, nr. 171; CAMPENHAUSEN 1929, p. 67–68 fig. 18.

[22] For an online photo, see http://lupa.at/9662.

[23] MARKE 2006, p. 145–146, 229 fig. 82 pl. 6b; for style and dating, see also PELEKANIDIS 1969.

[24] *Cf.* OPPERMANN 2010, p. 212.

MARKE 2006 – Ευ. Μαρκή, *Η νεκρόπολη της Θεσσαλονίκης στούς υστερορωμαϊκους και παλαιοχριστιανικούς χρόνους: (μέσα του 3ου έως μέσα του 8ου αι. μ.Χ.)*, Αθήνα, 2006.

MUNTEANU 1975 – M. Munteanu, *Inscripţii funerare inedite din Scythia Minor*, Pontica 8 (1975), p. 389–397.

OPPERMANN 2010 – M. Oppermann, *Das frühe Christentum an der Westküste des schwarzen Meeres und im anschließenden Binnenland*, Langenweißbach, 2010.

PAINTER 1969 – K. S. Painter, *The Lullingstone Wall-Plaster: An Aspect of Christianity in Roman Britain*, The British Museum Quarterly 33.3–4 (1969), p. 131–150.

PALUNČIĆ 2019 – F. Palunčić, *Ossetic historical phonology and North-Eastern Iranian anthroponomastics from the North Pontic region 1st–5th c. CE*, în: P. B. Lurje (ed.), *Proceedings of the Eighth European Conference of Iranian Studies (State Hermitage Museum and Institute of Oriental Manuscripts, St Petersburg, 14–19 September 2015)*. Volume I: *Studies on Pre-Islamic Iran and on Historical Linguistics*, St. Petersburg, 2019, p. 311–329.

PELEKANIDIS 1969 – S. Pelekanidis, *Die Malerei der Konstantinischen Zeit*, in *Akten des VII. Internationalen Kongresses für Christliche Archäologie, Trier, 5–11 September 1965*, Citta del Vaticano/Berlin, 1969, p. 215–235.

QUAEGEBEUR 1992 – J. Quaegebeur, *Greco-Egyptian Double Names as a Feature of a Bi-Cultural Society: The Case Ψοσνεῦς ὁ καὶ Τριάδελφος*, în: J. H. Johnson (ed.), *Life in a Multi-Cultural Society: Egypt from Cambyses to Constantine and Beyond*, Chicago, 1992, p. 265–272.

SALWAY 1994 – B. Salway, *What's in a Name? A Survey of Roman Onomastic Practice from c. 700 B.C. to A.D. 700*, The Journal of Roman Studies 84 (1994), p. 124–145.

YON 2015 – J.-B. Yon, *Inscriptions grecques et latines inédites du musée de l'Université du Saint-Esprit à Kaslik (USEK), Liban*, Syria 92 (2015), p. 299–308.

ZAHARIADE, ALEXANRESCU 2011 – M. Zahariade, C. G. Alexandrescu, *Greek and Latin Inscriptions from Halmyris. Inscriptions on Stone, Signa and Instrumenta found between 1981 and 2010*, Oxford, 2011.

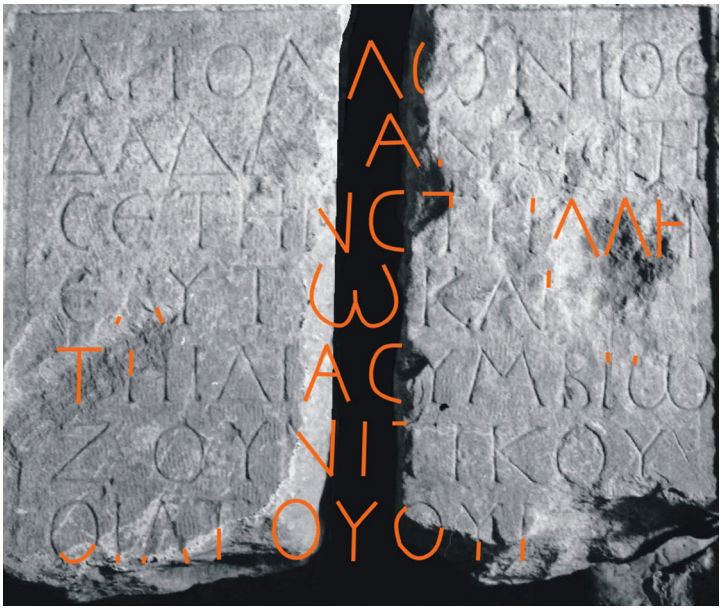


Fig 1. Funerary stele from Tomis (MINAC, inv. no. 4505). Photo from edition and modified by the author.



Fig 2. Funerary stele from Tomis (MINAC, inv. no. 43462). Photo from edition.



Fig 3. Sarcophagus with Passion scene from Rome (Vatican, Museo Pio Cristiano, inv. nr. 31525). Photo: DAIR 1933.0151.

CÂTEVA OBSERVAȚII PRIVIND UN TEZAUR MONETAR COMPUS DIN DENARI ROMANI REPUBLICANI DESCOPERIT ÎN SUD-VESTUL DOBROGEI

Gabriel Mircea TALMAȚCHI[*]

Cuvinte-cheie: *tezaur, denari, Republica romană, Dobrogea, Tracia, secolele II–I a.Chr.*
Keywords: *hoard, denarii, Roman Republic, Dobruja, Thracia, 2nd–1st centuries BC.*

Rezumat: *În urma finalizării unor expertize solicitate de autoritățile abilitate ale statului român, a fost reperat și un tezaur fragmentar roman republican, compus în prezent din patru denari. Descoperirea ar fi aparținut anilor 2020–2021, undeva în zona de sud-vest a teritoriului dobrogean, în apropierea malului fluviului Dunărea. Cei patru denari sunt bătuți în anii 146, 138, 88 și 46 a.Chr. Acest nou tezaur monetar roman republican aparține unui orizont de tezaure specific anilor 50/40 a.Chr., posibil perioadei corespunzătoare campaniei lui Burebista în vestul Pontului Euxin, din care ar face parte și cele descoperite la Aidemir (Silistra, Bulgaria), Mangalia (jud. Constanța) și Dobrogea de Sud (zona Balcic-Cavarna). El completează tabloul general al prezenței denarului roman republican în partea extremă de nord-est a Traciei și întrunește toate condițiile pentru a fi repertoriat și introdus în analizele monetare științifice corespunzătoare.*

Abstract: *Following the completion of some expertise requested by the competent authorities of the Romanian state, a fragmentary Roman republican hoard, currently composed of four denarii, was also spotted. Its discovery would have belonged to the years 2020–2021, somewhere in the southwestern area of the Dobrujan territory, near the bank of the Danube River. The four denarii are minted in 146, 138, 88 and 46 BC. This new Republican Roman monetary hoard belongs to a hoard horizon specific to the years 50/40 BC, possibly to the period corresponding to Burebista's campaign in the west of the Pontos Euxeinos, which would also include those discovered at Aidemir (Silistra, Bulgaria), Mangalia (Constanţa county) and South Dobruja (Balchik-Cavarna area). It completes the overall picture of the presence of the Republican Roman denarius in the extreme north-eastern part of Thrace and meets all the conditions to be cataloged and entered into the appropriate scientific monetary analyses.*

Contactele dintre comunitățile greco-autohtone prezente în teritoriul dobrogean și Roma republicană au fost timpurii, sub diferite forme diplomatice și militare, fiind inițiate încă din primul sfert al secolului I a.Chr. Iar prezența denarului roman

[*] Gabriel Mircea TALMAȚCHI: Muzeul de Istorie Națională și Arheologie Constanța; e-mail: gtalmatchi@yahoo.com.

republican în acest spațiu a reprezentat, pe fondul pierderii poziției influente a coloniilor grecești, expresia ascensiunii politice, militare și economice a Romei în această zonă[1]. Din punct de vedere geografic, teritoriul dobrogean a reprezentat extremitatea de nord-est a spațiului tracic, până în cursul secolului I p.Chr., când devine parte a provinciei romane Moesia.

Analiza descoperirilor monetare romane republicane trebuie făcută în strânsă conexiune cu contextul arheologic și istoric, cu implicațiile prezenței și folosirii sale pentru diferite aspecte ale vieții civile și militare din arealul geografic ales, pentru a înțelege cât mai bine caracteristicile specifice numismaticii elenistice târzii, romane republicane și romane imperiale timpurii. Doar că nu întotdeauna suntem și în posesia contextului arheologic, așa cum ne-am dori[2]. Totuși, amplificarea activităților de profil desfășurate de autoritățile specializate în protecția bunurilor de patrimoniu național mobil în ultimele două decenii, a creat posibilitatea studierii a variate categorii de artefacte arheologice și numismatice. Printre acestea se remarcă și denarii romani republicani.

În catalogul de mai jos sunt prezenți patru denari romani republicani care fac parte dintr-un posibil tezaur compus inițial, foarte probabil, din câteva zeci de exemplare. Piesele din catalog aparțin unui grup redus față de cel anterior de numerar, fapt care ne oferă considerarea sa astăzi ca fiind doar fragmentar. Este foarte posibil ca ultima monedă a tezaurului inițial în general să fie cea din anul 46 a.Chr. sau, oricum, din jurul acestui an. Deoarece, spre exemplu, nu par să fi existat și denari legionari bătuți în monetării aflate în mișcare cu Marcus Antonius în anii 32–31 a.Chr. De ce facem această afirmație? Acești denari, de obicei, se păstrează într-o stare de conservare relativ slabă și foarte slabă în descoperirile cunoscute din Dobrogea, și, astfel, nu mai sunt de interes pentru vânzare sau pentru folosirea în schimburile dintre colecționari. Și astfel am fi avut posibilitatea de a-i regăsi alături de cele patru exemplare precizate. De asemenea, nu există indicii privind asocierea lor în descoperire cu drahme din Dyrrhachium sau Apollonia, respectiv tetradrahme din Macedonia Prima sau Thasos.

Catalog

L. SEMPIR PITIO

1.AR; denarius; 9h; 3,88 g; 20,5 × 20 mm (**Fig. 1**, nr. 1).
RRC, I, p. 256, nr. 216/1, Roma, a. 148 a.Chr., stare de conservare relativ bună.

CN. LVCRETIVS TRIO

2.AR; denarius; 12h; 3,56 g; 18,17,5 mm (**Fig. 1**, nr. 2).
RRC, I, p. 269, nr. 237/1a, Roma, a. 136 a.Chr., stare de conservare relativ bună.

[1] SUCEVEANU, BARNEA 1991, p. 23.

[2] Descoperirea de față a fost identificată cu prilejul efectuării unor expertize solicitate de Direcția Județeană de Cultură Constanța și de către organile abilitate ale Ministerului de Interne din Constanța (Inspectoratul de Poliție al Județului Constanța, Serviciul de Investigații Criminale). Cele mai multe expertize au avut în vedere, în general, dosare penale ale unor persoane care au folosit în condiții ilegale detectoarele de metal. Folosirea acestora din urmă, deși a fost prezentată inițial ca o acțiune de tip hobby, inocentă, în unele situații s-a caracterizat și ca o săpătură ilegală, care a cauzat pierderi pentru patrimoniul arheologic și pentru contextul arheologic corespunzător.

CN. LENTVL
3.AR; denarius; 2h; 3,36 g; 17 × 16 mm (**Fig. 1**, nr. 3).
RRC, I, p. 356–357, nr. 345/1, Roma, a. 88 a.Chr., stare de conservare mediocră.
Observație: O tăietură la suprafața personajului de pe avers.

MN. CORDIVS RVFVS IIIVIR
4.AR; denarius; 6h; 2,88 g; 18,5 × 17 mm (**Fig. 1**, nr. 4).
RRC, I, p. 473–475, nr. 363/3, Roma, a. 46 a.Chr., conservare mediocră.
Observație: O incizie prezentă pe fața personajului de pe avers.

*

Comentariu

Denarul roman republican pătrunde în mod semnificativ în Tracia odată cu începutul secolului I a.Chr.[3]. Direcțiile de infiltrare sunt dinspre sud și sud-vest spre Tracia, de-a lungul și în apropierea râurilor Maritsa și Tundzha, în mod limitat, dinspre granița cu Macedonia, fiind o expresie a jafurilor efectuate de traci asupra provinciei[4]. De asemenea, după cucerirea Macedoniei, Roma a adus printr-un efort remarcabil o cantitate impresionantă de numerar de argint sub forma denarului roman republican în Tracia. Dar, o primă presiune monetară asupra monedelor existente pe piață, a fost pusă prin monedele de tip grec (dar de „perioadă romană") și abia apoi, înainte de mijlocul secolului I a.Chr., prin denarul propriu-zis[5].

Mișcarea denarului roman republican în nord-estul extrem al Traciei nu este influențată doar de statul roman prin armata sa (deși și aici putem despărți direcția de cercetare), este influențată și de sfera particulară. Spre exemplu cea a negustorilor de origine romană sau nu, dar care folosesc denarul în tranzacțiile comerciale acolo unde acesta pe plan local este acceptat. Forma oficială ține de un ritm de batere de la sursa centrală, pe când cea de a doua formă este variabilă și ocazionată de deplasări independente, cu un numerar disponibil variat ca moment de emitere. Și aceste sume sunt disponibile nu doar pentru actul în sine de schimb, ci și pentru costurile de deplasare, taxe portuare sau rutiere (unde este cazul) sau chiar puncte de vamă[6]. De altfel relația dintre circulația monedei și comerț este una deosebit de complexă în Tracia[7]. Reținem cu valoare de inventar și ideea, conform căreia, există posibilitatea ca tezaurele descoperite în interiorul sau în apropierea așezărilor aparținând populației locale să nu aibă roluri comerciale, ci ar putea să aparțină unor elite nobiliare care le-ar deține ca bunuri de prestigiu[8]. Doar că ceea ce scapă autorului ipotezei este faptul că exemplarele prezente în aceste tezaure trădează urme clare de circulație, chiar dacă este dificil de a demonstra că există o legătură între cei care au folosit respectivii denari în comerț și cei care au ajuns să dețină tezaurul în ansamblul său[9].

[3] PROKOPOV 2000, p. 376.
[4] PAUNOV 2013, p. 284.
[5] 90% din denarii prezenți în Tracia ar fi pătruns la acest moment cronologic conform PROKOPOV 2000, p. 386.
[6] HOWGEGO 1995, p. 93.
[7] HOWGEGO 1994, p. 7–8.
[8] LOCKYEAR 2004, p. 70.
[9] Aceeași situație este constatată de DAVIS, PAUNOV 2012, p. 399, pe un lot de imitații după

Tezaurele de denari romani republicani se înșiră spre nordul teritoriul tracic (care ar corespunde ca analiză numismatică cu viitorul teritoriu al provinciei Moesia) odată cu începutul și până către mijlocul secolului I a.Chr. Denarii vin dinspre nord-vest către nord-est, fiind trei zone cu mari concentrări de descoperiri (în nord-vest, nord-centru și nord-estul ariei analizate), situate între văile râurilor Timacus/Timok, Oescus/Iskar și Iatrus/Jantra[10]. În general, în nordul Bulgariei de astăzi, au fost repertoriați la nivelul anului 2000, nu mai puțin de 10.000 de denari romani republicani (în cursul unei cercetări din 2009 acest număr ajunge la cca 12.000[11] și în 2013 la cca 14.500 exemplare[12]), pentru ca în sudul ei să cunoaștem cca 7.000 de exemplare[13] (în cursul unei cercetări din 2013 numărul lor ajunge la cca 7.500 de exemplare[14]).

Prima fază de apariție a denarilor în Balcani se constată în perioada anilor 90–70/60 a.Chr., nu mai devreme de decada a doua sau a treia a secolului I a.Chr., când ajung în mari cantități. La început vin, într-un flux constant, asociați cu tetradrahmele din Macedonia Prima și mai rar din Thasos (între anii 91–87 a.Chr.), și apoi cu drahmele orașelor Dyrrhachium și Apollonia (între 80 și 61 a.Chr.). De asemenea, sunt asociați cu tetradrahme din Maroneia între anii 70–60 a.Chr.[15]. Ulterior denarii continuă să circule între anii cca 60/55–47/46 a.Chr., în paralel cu tetradrahme elenistice târzii[16]. Este și perioada asocierii dintre imitațiile barbarizate și denarii romani republicani[17].

Tezaurul de față ar fi fost descoperit undeva în zona malului Dunării, în zona de sud-vest a teritoriului dobrogean, între localitățile Ostrov (com. Ostrov, jud. Constanța) și Izvoarele (com. Lipnița, jud. Constanța), după toate aparențele în cursul anilor 2020–2021. El aparține, în opinia noastră, unui orizont de tezaure specific anilor 50/40 a.Chr., posibil perioadei corespunzătoare campaniei lui Burebista în vestul Pontului Euxin, din care ar face parte și cele de la Aidemir, Mangalia și Dobrogea de Sud[18].

Tezaurul de la Aidemir (Silistra, district Silistra, Bulgaria)a fost descoperit în circumstanțe necunoscute, înainte de anul 2010[19]. Era compus din peste 55 de denari romani republicani, fără a se cunoaște dacă era păstrat sau nu într-un vas de factură locală, greacă sau romană[20]. Toți emitenții aparțin Romei republicane, astfel: primul denar aparține lui L. TREBANI (RRC I, p. 272, nr. 241/1, Roma, a. 135 a.Chr.), iar ultimul exemplar aparținea lui L. PAPIVS CELSVS IIIVIR (RRC I, p. 481, nr. 472/1, Roma, a. 45 a.Chr.).

Tezaurul de la Mangalia (oraș Mangalia, jud. Constanța) a apărut într-un

---

denari romani republicani descoperiți în zona bulgărească de astăzi a fostelor provincii antice Moesia și Tracia.

[10] PAUNOV 2013, p. 278.
[11] PROKOPOV 2009, p. 249.
[12] PAUNOV, PROKOPOV 2013, p. 111–112, nr. 2 și 11.
[13] PROKOPOV 2000, p. 384–385.
[14] PAUNOV, PROKOPOV 2013, p. 110.
[15] PAUNOV 2013, p. 259–260.
[16] PAUNOV 2013, p. 261.
[17] PROKOPOV 2000, p. 379–380.
[18] TALMAȚCHI 2023, p. 146.
[19] PAUNOV 2013, p. 514–515, nr. 3.
[20] Nu se cunoaște locul de păstrare, poate la Muzeul regional de Istorie din Silistra.

context neprecizat, pe teritoriul șantierului naval, între anii 1985–1989, fiind recuperați 13 denari romani republicani[21]. Se încadrează cronologic între anii 133 și 42 a.Chr.[22]. Toți emitenții aparțin Romei republicane, astfel: primul denar aparține lui I.MINVCIV (RRC I, p. 278–279, nr. 248/2, Roma, a. 133 a.Chr.), iar ultimul exemplar este bătut pentru L. LIVINEIVS REGVLVS IIIIVIR A.P.F P. CLODIVS M.F IIIIVIR A.P.F. L. MVSSIDIVS T.F. LONGVS IIIIVIR A.P.F. C. V(E)IBIVS V(A)ARVS (RRC I, p. 506, nr. 494/23, Roma, a. 42 a.Chr.).

Un tezaur a fost descoperit în anii 1985 sau 1986, într-un ulcior mic de culoare gri, undeva între Balcic și Cavarna (regiunea Dobrici, Bulgaria), pe coasta Mării Negre, fiind compus din 120 de denari romani republicani originali (dintre care 61 văzuți) și nouă imitații[23]. Tezaurul se încadrează cronologic între anii 212–200 și 42 a.Chr. Toți emitenții aparțin Romei republicane, astfel: primul denar aparține unei emisiuni tip Anonymous, cca 212–200 BC (RRC 21/?), iar ultimul exemplar este bătut pentru L. LIVNEIVS REGVLVS IIIIVIR A.P.F, P. CLODIOVS M.F IIIIVIR A.P.F, L., MVSSIDIVS T.F LONGVS IIIIVIR A.P.F, C. V(E)IBIVS V(A)ARVS (RRC I, p. 506, nr. 494/23, Roma, a. 42 a.Chr.). Este cunoscut în bibliografia de specialitate ca tezaurul Dobrogea de Sud[24]. Toate cele patru tezaure par a fi recuperate incomplete, au o istorie a recuperării lor complicată, dar par să fi fost îngropate post 46/42 a.Chr. sau în jurul acestui moment cronologic.

Căpetenie Burebista, în urma unei acțiuni militare de amploare, desfășurată cândva între anii 55–48 a.Chr. (sau 48–44 a.Chr.[25], sau sfârșitul anilor 50 și începutul anilor 40 a.Chr.[26]) și nu în cadrul unui unic eveniment[27], devine stăpânitorul litoralului vest-pontic pentru aproximativ un deceniu de la Olbia la Apollonia Pontica[28]. Burebista și-a consolidat o poziție geostrategică importantă care presupunea o largă stăpânire la Dunărea de Jos[29] până în anii 45/44 sau 42/41 a.Chr.[30], când suveranul dispare de pe scena istoriei antice[31]. Deși independente după 44 sau 41 a.Chr., cetățile vest-pontice dobrogene și zonele lor de influență economică au depins în mare măsură de relațiile avute cu populația autohtonă[32]. De asemenea, este foarte

[21] MITREA 1988, p. 217, nr. 12; VERTAN, GEORGESCU, OCHEȘEANU 1990, p. 221–224; POENARU BORDEA, MITREA 1992, p. 202, nr. 17; PREDA 1998, p. 305; MOISIL, DEPEYROT 2003, p. 113–114, nr. 112; TALMAȚCHI 2006a, p. 188, nr. 11; TALMAȚCHI 2006b, p. 26, nr. 11; CUSTUREA, TALMAȚCHI 2011, p. 261–262, nr. 85.XXXVII.

[22] Se păstrează în colecția numismatică a Muzeului de Istorie Națională și Arheologie Constanța.

[23] Din nefericire, conținutul tezaurului s-a împrăștiat pe piața antichităților din Bulgaria. Toate exemplarele considerate ca imitații se păstrează într-o colecție particulară din Viena.

[24] DAVIS, PAUNOV 2012, p. 392; PAUNOV 2013, p. 543, nr. 61, cu toate detaliile aferente referitoare la descoperire, conținut etc.

[25] AVRAM 1999, nr. 48.

[26] PAUNOV 2013, p. 69.

[27] ALEXANDRESCU 2007, p. 217.

[28] CONDURACHI 1953, p. 515–523; PIPPIDI 1967, p. 239; DAICOVICIU 1972, p. 64; RĂDULESCU 1977, p. 67; CRIȘAN 1977, p. 255; PETRESCU-DÎMBOVIȚA 1978, p. 156; PIPPIDI 1984, p. 175.

[29] DAICOVICIU 1971, p. 91; PETRE 1971, p. 103.

[30] Vezi pentru datele diferite MÓCSY 2001, p. 49–50; JORDANOV 2009, p. 281–282.

[31] LICA 2000, p. 67.

[32] PIPPIDI 1984, p. 175.

posibil ca zona extremă de nord-est a Traciei să se fi aflat în aria de control a regelui trac Sadalas al II-lea, fiul lui Cotys al II-lea, așa cum rezultă din onorarea sa printr-un decret de poporul din Odessos[33]. Mai târziu, în preambulul unui decret este menționat, între anii 12 și 19 p.Chr., ca eponim al orașului Callatis, Cotys, fiul lui Rhoemétalkès, el fiind numit „vecin și protector al orașelor pontice"[34].

Revenind strict la tezaurele din orizontul precizat, vom face câteva scurte alte observații. Astfel, trei din cele patru (75%) se concentrează de-a lungul zonei litorale, cu excepția celui de la Aidemir (25%). O serie de evenimente militare se petrec nu doar în aria cordonului costier vest-pontic, ci și în zona Dobrogei de sud și în zona malului drept al Dunării, în spațiile geografice care cuprind și vadurile facile de traversare ale fluviului de lângă Silistra (Bulgaria, anticul Durostorum) și Izvoarele (com. Lipnița, jud. Constanța, antica Sucidava). Existența unei insecurități datorată campaniei căpeteniei Burebista de cucerire a Pontului Stâng, desfășurată pe parcursul a mai multor ani, este un fapt reflectat în întregul spațiu dobrogean. Această concentrare de descoperiri de tezaure în orizontul cronologic amintit nu are nimic în legătură cu prosperitatea acelei zone, cu o puternică monetizare, ci cu o anumită insecuritate (mai ales conflicte militare) care rezultă și din nerecuperarea lor[35].

Trebuie să menționăm și faptul că, întâmplător, toate tezaurele din acest orizont nu au fost recuperate în totalitate. Mai mult, pentru cele descoperite la Aidemir și Dobrogea de sud cunoaștem doar primul și ultimul denar. Această situație, dacă s-ar putea recupera vreodată restul pieselor, ar putea teoretic să mai modifice posibila lor apartenență și la alte orizonturi de tezaure constatate pentru Dobrogea preromană. Dar, situația constatată în prezent de indică această posibilă coagulare a lor cronologică și cvasi-teritorială. În sfârșit, nu vom face considerați privind modul de ordonare cronologică a pieselor respective, fiind vorba doar de patru denari care au fost supuși unei selecții prealabile intenționate, după criterii subiective. Ce putem doar enumera sunt anii de batere a acestor denari, și anume 146, 138, 88 și 46 a.Chr.

În general, tezaurele care prezintă monede republicane datate în prima jumătate a secolului II a.Chr. exprimă și un caracter pronunțat arhaic, situație similară constată și la nordul Dunării[36]. În Dobrogea pot fi integrate toate sau aproape toate tezaurele descoperite. Toate tezaurele din Tracia, care se închid în perioada lui Augustus, au un profil arhaic de acumulare[37]. Un singur tezaur din Dobrogea (cel descoperit la Silistra[38]), prezintă un singur exemplar din secolul II a.Chr., din anul 101 (de la M. LVCILI RVF/RRC I, p. 327, nr. 324/1, Roma. a. 101 a.Chr.), fiind cel mai puțin semnificativ în ceea ce privește prezența denarilor arhaici. De asemenea, dacă

[33] TACHEVA 2004, p. 139, 144; PAUNOV 2013, p. 80, 289.

[34] BUZOIANU, BĂRBULESCU 2022, p. 210.

[35] DUNCAN-JONES 1994, p. 85; HOWGEGO 1995, p. 88.

[36] LOKYEAR 2007, p. 108, 167–168, 200–201; MIHĂILESCU-BÎRLIBA 2013, p. 156.

[37] Vezi și LOCKYEAR 2007, p. 145–155, 168; PAUNOV 2013, p. 337–338.

[38] În partea de răsărit a orașului actual, a fost descoperit în anii 70 ai secolului trecut, un tezaur compus din 21 denari romani republicani, care se datează între anii 101 și 81 a.Chr. Aparține zonei Durostorum. Se păstrează în colecția numismatică a Bibliotecii Academiei Române. Primul denar aparține lui M. LVCILI RVF/RRC I, p. 327, nr. 324/1, Roma. a. 101 a.Chr., iar ultimul lui A. POST A.F. S.N. ALBIN/RRC I, p. 389, nr. 372/2, Roma, a. 81 a.Chr.; vezi la OCHEȘEANU 1986, p. 76–79, nr. 9–29, PAUNOV, PROKOPOV 2002, p. 41–42, nr. 60, TALMAȚCHI 2006b, p. 40, nr. 59, PAUNOV 2013, p. 541, nr. 57.

unele tezaure nu vin gata constituite din alte areale, tezaurele care conțin denari din secolul II a.Chr. confirmă ipoteza conform căreia denarii republicani romani erau în circulație la peste o sută de ani de la baterea lor.

Concluzii

În concluzie, în zonele de frontieră tezaurele pot fi găsite ca rezultat al economisirii, schimbului, comerțului, mitei și plății salariilor (în speță mai ales militarilor).[39] Este foarte dificil de spus dacă un tezaur aparține unui comerciant sau unui soldat. Dar, este posibil, ca ipoteză de lucru, ca cele care nu sunt omogene în ceea ce privește starea de conservare a exemplarelor constitutive, să aparțină unui comerciant (sau, mai pe larg, fie unui comerciant, fie unui negustor, fie unui producător/vânzător/artizan[40]), pe când cele omogene și foarte bine păstrate din punct de vedere calitativ să aparțină unui soldat (venit ca soldă sau rest de soldă). De asemenea, unele tezaure sunt modeste ca număr de exemplare sau valoare pecuniară la nivelul respectiv al antichității, altele în nici un caz. De asemenea, este foarte dificil de spus dacă tezaurele provin din acumulări locale sau vin gata constituite din alte areale[41]. Posibil ca unele da, altele nu. Ce este sigur este faptul că prezența monedei republicane de argint în secolul I a.Chr. în spațiul dobrogean este relevantă, coagularea sa în tezaure fiind o formă comună de manifestare.

Deși mai sunt păstrate doar patru exemplare din cadrul tezaurului descoperit în sud-vestul teritoriului dobrogean, el se adaugă celor câtorva îngropate în jurul acelorași ani, susținând existența unui orizont de tezaure monetare romane republicane constatat, pe larg, în jurul anilor 50–40 a.Chr., descoperite pe litoral și în zona dunăreană. Deși cele patru tezaure care compun până în prezent acest orizont nu sunt descoperite în condiții clare și sunt identificate doar parțial ca exemplare, se poate observa, independent unul de altul, existența unui tipar de „închidere" a acestora, situat mai precis în jurul anilor 46–42 a.Chr. Pentru restul teritoriului ocupat astăzi de România sunt multe tezaure îngropate sau care se închid cu piese din ani 49–45 a.Chr., fiind repertoriate, spre exemplu, 20 de tezaure cu 1.485 de denari[42].

Acest orizont, prin tezaurele componente, dovedește că evenimentele petrecute cu predilecție pe litoralul de vest și nord-vest al Pontului Euxin, în cadrul campaniei lui Burebista, au avut și manifestări colaterale de la obiectivul central de pe litoralul Pontului, desfășurând acțiuni posibil militare conexe și în zona malului dobrogean al Dunării, în mediul local autohton. Poate că una din căile de pătrundere a armatelor lui Burebista s-a dovedit a fi fost și zonele accesibile de trecere ale Dunării din sud-vestul teritoriului dobrogean. Deși descoperirea celor patru exemplare în condiții necunoscute a condus la ruperea oricăror legături dintre monedă și viața cotidiană specifică perioadei analizate (cu implicații directe asupra unor posibilități conexe de datare, asociere cu alte artefacte arheologice etc.), totuși ceea ce mai

[39] REECE 2008, p. 188.

[40] BOUNEGRU 2002, p. 100; BOUNEGRU 2006, p. 318–326.

[41] Pentru posibilitatea constituirii tezaurelor monetare compuse din denari romani republicani pe piețe monetare din lumea greco-romană vezi păreri mai vechi conform OCHEȘEANU 1981, p. 63; OCHEȘEANU 1986, p. 81; OCHEȘEANU 1992, p. 119.

[42] LOCKYEAR 2007, p. 38.

cunoaștem astăzi din componența sa completează tabloul general al prezenței denarului roman republican în spațiul de sud-vest pontic și în cel specific părții extreme aflate în nord-estul Traciei. Este un nou tezaur care merită a fi repertoriat și introdus în analizele monetare științifice corespunzătoare.

BIBLIOGRAFIE

ALEXANDRESCU 2007 – P. Alexandrescu, *La fin de la zone sacrée d' époque grecque d' Istros*, Dacia N.S. 51 (2007), p. 211–219.

AVRAM 1999 – A. Avram, *Inscriptions grecques et latines de Scythie Mineure, volume III. Callatis et son territoire*, Bucarest-Paris, 1999.

BOUNEGRU 2002 – O. Bounegru, *Comerț și navigatori la Pontul Stâng și Dunărea de Jos (sec. I–III p.Chr.)*, Iași, 2002.

BOUNEGRU 2006 – O. Bounegru, *Notes sur les petits commerçant de Mésie et de Thrace à l'époque romaine*, în: L. Mihăilescu-Bîrliba, O. Bounegru (eds.), *Studia Historiae et Religionis Daco-Romanae in Honorem Silvii Sanie*, Honoraria 3, București, 2006, p. 318–326.

BUZOIANU, BĂRBULESCU 2022 – L. Buzoianu, M. Bărbulescu, *La période de début du Principat dans les villes grecques ouest-pontiques a la lumière des sources littéraires et épigraphiques*, în: J. Boardman, J. Hargrave, A. Avram, A. Podossinov (eds.), *Connecting the Ancient West and East. Studies presented to prof. Gocha R. Tsetskhladze*, vol. I, Leuven/Paris/Bristol, 2022, p. 205–216.

CONDURACHI 1953 – E. Condurachi, *Burebista și orașele pontice*, SCIV 4/3–4 (1953), p. 515–523.

CRIȘAN 1977 – I. H. Crișan, *Burebista și epoca sa*, București, 1977.

CUSTUREA, TALMAȚCHI 2011 – G. Custurea, G. Talmațchi, *Repertoriul tezaurelor monetare din Dobrogea*, Constanța, 2011.

DAICOVICIU 1971 – H. Daicoviciu, *Burebista și Dobrogea,* Pontica 4 (1971), p. 89–96.

DAICOVICIU 1972 – H. Daicoviciu, *Dacia de la Burebista la cucerirea romană*, Cluj, 1972.

DAVIS, PAUNOV 2012 – P. Davis, E. I. Paunov, *Imitations of Republican denarii from Moesia and Thrace,* în: E. Paunov, S. Filipova (eds.), *ΗΡΑΚΛΕΟΥΣ ΣΩΤΗΡΟΣ ΘΑΣΙΩΝ, Studia in honorem Iliae Prokopov sexagenario ab amicis et discipulis dedicata*, Veliko Târnovo, 2012, p. 389–413.

DUNCAN-JONES 1994 – R. P. Duncan-Jones, *Money and government in the Roman Empire*, Cambridge, 1994.

HOWGEGO 1994 – C. Howgego, *Coin circulation and the integration of the Roman economy*, Journal of Roman Archaeology 7 (1994), p. 5–21.

HOWGEGO 1995 – C. Howgego, *Ancient history from coins*, London-New York, 1995.

JORDANOV 2009 – K. Jordanov, *Histoire politique des gètes á l'époque de Burebista et des ses successeurs*, în: A. Zanoci, T. Arnăut, M. Băț (eds.), *Studia Archeologiae et historiae antiquae. Doctissimo viro Scientiarum Archeologiae et Historiae Ion Niculiță, anno septuagesimo aetatis suae, dedicatur*, Chișinău, 2009, p. 277–285.

LICA 2000 – V. Lica, *The Coming of Rome in the Dacian World*, Xenia, Konstanz, 2000.

LOCKYEAR 2004 – K. Lockyear, *The Late Iron Age background to Roman Dacia*, în: W. S. Hanson, I. P. Haynes (eds.), *Roman Dacia. The Making of a Provincial Society*, Journal of Roman Archaeology. Supplementary Series 56 (2004), Portsmouth/Rhode Island, p. 33–74.

LOKYEAR 2007 – K. Lockyear, *Patterns and Process in Late Roman Republican Coin Hoards, 157–2 BC.*, BAR IS 1733, Oxford, 2007.

MIHĂILESCU-BÎRLIBA 2013 – V. Mihăilescu-Bîrliba, *Noi analize și interpretări privind moneda romană republicană*, Arheologia Moldovei 36 (2013), p. 153–158.

MITREA 1988 – B. Mitrea, *Découvertes monétaires en Roumanie–1987 (XXXI)*, Dacia N.S. 32/1–2 (1988), p. 215–230.

MÓCSY 2001 – A. Mócsy, *The Dacian Kingdom*, in: B. Köpeczi (ed.), *History of Transylvania, vol. 1. From the Beginnings to 1606.* (East European monographs 581), New York, 2001, p. 42–60 (http://mek.oszk.hu/03400/03407/html/10.html).

MOISIL, DEPEYROT 2003 – D. Moisil, G. Depeyrot, *Les trésor de deniers antérieurs à Trajan en Roumanie*, Wetteren, 2003.

OCHEȘEANU 1981 – R. Ocheșeanu, *Un tezaur de denari romani republicani descoperit în apropiere de București. Unele aspecte privind începuturile pătrunderii monedei romane în Câmpia română*, Cercetări Arheologice București 3 (1981), p. 56–83.

OCHEȘEANU 1986 – R. Ocheșeanu, *Câteva descoperiri de denari romani republicani din Scythia Minor*, Pontica 19 (1986), p. 75–88.

OCHEȘEANU 1992 – R. Ocheșeanu, *Dinamica penetrării denarilor romani republicani în Dacia secolelor I î.e.n.-I e.n.*, Cercetări Arheologice 4 (1992), p. 119–124.

PAUNOV 2013 – E. Paunov, *From Koine to Romanitas: The Numismatic evidence for roman expansion and settlement in Bulgaria in antiquity* (*Moesia and Thrace, ca. 146 BC-AD 98/117),* A Degree of doctor of philosophy in the school of History, Archaeology and Religion, Cardiff University, February 2013 (pdf).

PAUNOV, PROKOPOV 2002 – E. I. Paunov, I. S. Prokopov, *Am inventory of roman republican coin hoards and coins from Bulgaria (IRRCHBulg)*, Glaux 15, Milano, 2002.

PAUNOV, PROKOPOV 2013 – E. I. Paunov, I. S. Prokopov, *Actium and the "Legionary" coinage of Mark Antony. Historical, economic and monetary consequences in Thrace (the coin evidence)*, în: K. Liampi, C. Papaevangelou-Genakos, K. Zachos, A. Dousougli, A. Iakovidou (eds.), *Proceedings of the 1st International Conference Numismatic History and Economy in Epirus during antiquity, (University of Ioaninna, october* 3rd–7th 2007, KEPMA 3, Athens, 2013, p. 107–130.

PETRE 1971 – A. Petre, *Cucerirea orașelor pontice de către Burebista*, Pontica 4 (1971), p. 97–104.

PETRESCU-DÎMBOVIȚA 1978 – M. Petrescu-Dîmbovița, *Scurtă istorie a Daciei preromane*, Iași, 1978.

PIPPIDI 1967 – D. M. Pippidi, *Contribuții la istoria veche a României*, București, 1967.

PIPPIDI 1984 – D. M. Pippidi, *Parerga. Ecrits de Philologie, d`Epigraphie et d`Histoire ancienne*, București-Paris, 1984.

POENARU BORDEA, MITREA 1992 – Gh. Poenaru Bordea, B. Mitrea, *Découvertes monétaires en Roumanie–1991 (XXXV)*, Dacia N.S. 36/1–2 (1992), p. 199–206.

PREDA 1998 – C. Preda, *Istoria monedei în Dacia preromană*, București, 1998.

PROKOPOV 2000 – I. Prokopov, *The infiltration of Roman money in Thrace-stages, chronology and territorial distribution*, *Studia in memoriam Velizari Velkov,* Thracia 13 (2000), p. 375–386.

PROKOPOV 2009 – I. Prokopov, *Basic coin types in Thrace recorded quantities and their participation in the coin circulation during the 2nd–1st centuries BC*, în: S. Drougou, D. Evgenidou, Ch. Kritzas, N. Kaltsas, B. Penna, I. Tsourti, M. Galani-Krikou, E. Ralli (eds.), *Studies in Honour of Ioannis Touratsoglou*, *ΚΕΡΜΑΤΙΑ ΦΙΛΙΑΣ, Α ΝΟΜΙΣΜΑΤΙΚΗ-ΣΦΡΑΓΙΣΤΙΚΗ*, Athena, 2009, p. 247–253.

RĂDULESCU 1977 – A. Rădulescu, *Dobrogea lui Burebista*, Pontica 10 (1977), p. 65–68.

REECE 2008 – R. Reece, *Choosing denarii*, în: V. Spinei, L. Munteanu (eds.), *Miscellanea numismatica Antiquitatis. In honorem septagenarii magistri Virgilii Mihailescu-Bîrliba oblata*, Bucharest, 2008, p. 187–195.

SUCEVEANU, BARNEA 1991 – Al. Suceveanu, Al. Barnea, *La Dobroudja Romaine*, București, 1991.

TACHEVA 2004 – M. Tacheva, *Власт и социум в римска Мизия и Тракия (I–III v.)*, în: I. T. Rumen, (ed.), *Archaeology of the Bulgarian Land*, I, Sofia, 2004, p. 49–76.

TALMAȚCHI 2006a – G. Talmațchi, *Les monnaies autonomes d' Istros, Callatis et Tomis. Circulation et contexte*, Wetteren, 2006.

TALMAȚCHI 2006b – G. Talmațchi, *The Roman Republican Coinage in Dobrudja, vol. X, Coins from roman sites and collections of roman coins from Romania*, Cluj-Napoca, 2006.

TALMAȚCHI 2023 – G. Talmațchi, *Greeks, Romans and Autochtonomous in the territory between the Danube and the Black Sea (2nd century BC.–1st century AD). A monetary perspective., habilitation thesis,* Iași, 2023 (pdf).

VERTAN, GEORGESCU, OCHEȘEANU 1990 – A. Vertan, N. Georgescu, R. Ocheșeanu, *Un depozit de denari romani republicani descoperit la Mangalia*, Pontica 23 (1990), p. 221–224.



Fig 1. Denari romani republicani din tezaurul monetar descoperit în sud-vestul Dobrogei în anii 2020–2021 (nr. 1–4).

THE FIRST MONETARY ILLUSTRATIONS OF TEMPLES AT TOMIS

Corneliu Bogdan Nicolae BELDIANU[*]

Cuvinte-cheie: *Tomis, emisiuni monetare, temple, dinastiile Julia-Claudia și Flavii.*
Keywords: *Tomis, monetary issues, temples, the Julia-Claudian and Flavian dynasties.*

Rezumat: *Orașul antic Tomis rămâne în bună măsură relativ necunoscut în pofida descoperirilor arheologice importante făcute în decursul timpului. Emisiunile sale monetare, catalogate în mare parte încă de acum mai bine de o sută de ani, sunt un izvor neprețuit de informații, care acoperă multe din respectivele goluri arheologice. Cu toate acestea, decriptarea mesajelor transmise de emisiunile monetare tomitane rămâne o sarcină încă departe de a fi finalizată. În rândurile care urmează încercăm să evidențiem când au fost ilustrate primele edificii pe monedele orașului Tomis și care erau semnificațiile acestor imagini. Demersul ne-a oferit ocazia să facem și câteva observații de ordin cronologic privind unele emisiuni monetare, dar și în legătură cu unele manifestări ale propagandei imperiale romane pe monedele provinciale.*

Abstract: *The ancient city of Tomis remains largely unknown despite important archaeological discoveries made over time. Its coin issues, mostly cataloged from more than a hundred years ago, are an invaluable source of information, filling many of those archaeological gaps. However, deciphering the messages transmitted by the Tomitan monetary issues remains a task still far from complete. In the following lines we try to highlight when the first buildings were illustrated on the coins of the city of Tomis and what were the meanings of these images. The approach gave us the opportunity to make some chronological observations regarding some monetary issues, but also in relation to some manifestations of the Roman imperial propaganda on the provincial coins.*

The depiction of edifices on monetary issues was a common practice in the Roman imperial era. Both on the official Roman monetary issues and on the provincial ones (struck by the autonomous cities in the south-eastern part of the empire) we find represented a varied range of constructions, which can be classified into several general categories: defensive constructions (gates, towers, walls and even entire fortified precincts), triumphal monuments (triumph arches, columns, statues), sanctuaries and various civil constructions (ports, maritime lighthouses, stadiums, theaters, fountains etc.)[1]. Each of these categories can in turn be divided and dealt with in subcategories.

[*] Corneliu Bogdan Nicolae BELDIANU: Raiffeisen Bank Romania, București; e-mail: beldianub@yahoo.com.

[1] Starting from the century XIX a series of important works addressed the subject of

If in the case of official Roman monetary issues things are quite clear, the descriptive monetary legends usually indicate the identity of the illustrated building, and the ruins preserved in Rome or in Italy allow the comparative evaluation of the edifice depicted on the coins with the real construction, things are not the same with the edifices provincial and their monetary representations.

Not as grandiose and resistant, most of the edifices in the provincial cities disappeared in the tumult of history or were preserved in a precarious state, reduced most of the time to the foundation stage. We are mainly talking here about the cities in the West-Pontic area, cities that, from a numismatic point of view, have been the object of our concerns in recent years[2]. Another epigraphic impediment is added to the archaeological difficulties of identifying some edifices illustrated on provincial monetary issues: provincial coins generally lack descriptive legends. Therefore, the identification of the constructions on the Roman provincial monetary issues can only be done by evaluating and deciphering the message transmitted by the image of the monument itself.

If in the case of the defensive, triumphal or civil constructions reproduced on the provincial monetary issues things are relatively simple, they can be studied from an architectural, stylistic and even historical point of view, the same cannot be said about the religious constructions. In the case of these constructions, alongside their material, architectural and historical component, there is another, much more subtle and important, but certainly harder to decipher: the spiritual component.

This is why our desire to deal with the depictions of sanctuaries on West Pontic coin issues in a general way, has inevitably slipped into an individual treating of each individual city, each sanctuary there.

The first representations of sanctuaries, which we will focus on, are those on the monetary issues of the city of Tomis from the time of the Julio-Claudian and Flavian dynasty.

The publication in 2015 of a "Supplement"[3] to the first three volumes of "Roman Provincial Coinage" also brought to the public's attention an interesting coin, issued by the city of Tomis and attributed, in the mentioned volume (not with some reservations), to the emperor Augustus[4].

The coin, which would have belonged to the first Tomitan monetary issue for Augustus, was viewed with particular interest mainly because of its reverse with an architectural theme[5]. Reverse depict a building with four columns and a dome-temple or (perhaps more likely) just a shrine or kiosk ("tetrastyle belvedere[6]")-inside which is an altar, on which sits an eagle with its head turned to the left.

---

illustrations of edifices on Roman coins (DONALDSON 1859; BROWN 1940; ELKINS 2015; TAMEANKO 1999 etc.).

[2] Numismatics evidence of triumphal arches from Lower Moesia (BELDIANU 2021); numismatics and the place of some sculptural works (BELDIANU 2022a); defensive systems of the cities from North and West Pontic area illustrated on monetary issues (BELDIANU 2023).

[3] RPC I–III Supp, p. 93, nr. S–1823A.

[4] The coin, from the Patrick Villemur Collection, became known following its appearance in public auctions (KOVACS FPL 29 (1997), lot 29; Classical Numismatic Group. Inc. MBS 78, from 14 May 2008, lot 1173).

[5] BELDIANU, BELDIANU 2020, p. 53.

[6] Expression from the auction description Classical Numismatic Group. Inc.

Obviously, the construction could only be related to the imperial cult, and its appearance on a monetary issue for Augustus was coming to complete satisfactory the other information related to the beginning of this cult at Tomis[7].

Unfortunately, things did not turn out that way. The coin in question corresponds very well with the description in AMNG II of a Tomitan coin issue for Nero:*"....| ΚΑΙΣΑΡΘΣ" von aussen zu lesen-Kopf m.L.r. Pkr./"TO|MI (quer) ΕΠΙΣΤΡ.. (i.A.)" Tempelfront mit vier Säulen und Kuppeldach, auf zwei Stufen; darin Adler stehend nach vorn, etwasr., zurückblickend, Flügel ausgebreitet, auf eingeschnürter Basis. Auf Nero führt der Beamtenname, das Portrait stimmt kaum zu Nero*[8]".

The coin, described in the well-known catalog, was not illustrated, but the "Gotha" collection was mentioned as a place of keeping.

Fortunately, the "*Berlin-Brandenburgischen Akademie der Wissenchaften*" (BBAW) keeps casts of some coins from the Gotha collection and these are digitized on the web platform www.corpus-nummorum.eu. Therefore, the photo of the mould of the coin mentioned in the AMNG II catalog could be found in this online database[9].

Moreover, the "Gotha" collection is currently going through an extensive digitization process[10], and thanks to the special kindness of Michael Maliczowski (scientific assistant at the "Numismatics" department of the Gotha Museum)[11] we was able to benefit from a photo at high resolution of this numismatic piece[12].

A comparison of the two coins, the one identified in the RPC as an issue for Augustus (**Fig. I, 1**) and the one in the Gotha collection (**Fig. I, 2–3**), shows, beyond any doubt, that they are part of the same monetary issue, the two coins being executed even with the same monetary dies.

Therefore, the attribution of the coinage to Augustus in the RPC I volume proved to be erroneous. The name of the magistrate "Epistra" (*ΕΠΙΣΤΡΑ*) also appearing on another monetary issue for Nero (the second issue for this emperor specified in AMNG II[13]). The error in RPC I was the result of a poor preservation of the coinage and the imperial effigy that "*hardly matches Nero*", as B. Pick and K. Regling also observed over a hundred years ago.

Recently, Mihai Dima reached the same conclusion in relation to the coin presented in the "RPC Supplement", in a material that I unfortunately found out about only after drafted this article[14].

Comparing the two monetary issues, which bear the name of the magistrate

[7] ALEXANDRESCU-VIANU 2021, p. 80–81, article that was constituted in a chapter of the recent book belonging to the same author (to be seen: ALEXANDRESCU-VIANU 2023, chapter II: Les débuts de l`art romain dans la région).

[8] "*The legend is read from the outside. Temple facade with four columns and domed roof, on two levels; inside eagle standing to front, slightly right, looking back, wings spread, on clasped base. The clerk's name leads to Nero, the portrait hardly matches Nero*".

[9] It's about registration: cn coin 29396, in Corpus Nummorum, link: https://www.corpus-nummorum.eu/CN_29396; plaster cast no: cn-tomis_0454, from BBAW, Berlin [de].

[10] The Gotha transdigital 2027 project, funded by the Federal Government Commissioner for Culture and Media.

[11] On this occasion we once again express our thanks and gratitude.

[12] The coin has inventory number: SSFG 1/Co3242.

[13] AMNG II, no. 2588.

[14] DIMA 2020, p. 369–370.

"Epistra" on the reverse (written in two ways "*ΕΠΙCTPA*" and "*ΕΠΙΣTP*") we can see that they are executed with different obverse dies and the effigy of the second issue for Nero from AMNG II (**Fig. I, 6**) can be easily associated with the adolescent portraits of Emperor Nero.

But neither the RPC I coin (wrongly attributed to Augustus) nor the similar from AMNG II coin preserves the obverse legend in its entirety, only the first word "*ΚΑΙΣΑΡΟΣ*" being visible. Therefore, we have no certainty that the second word was "*ΝΕΡΩΝ*". However, if we compare the effigy on this monetary issue with the one on the Tomitan monetary issue for Britannicus-Nero's half-brother[15], we find a strong similarity between the two. This similarity opens the possibility that in reality the coin in question is not an issue for Nero, but (perhaps) one for Britannicus.

Unfortunately, the idealization and classicization of the portraits of those from the Julia-Claudia dynasty make the identification of the character based on the portrait a questionable and uncertain criterion[16]. Therefore, only future appearances of coins from this issue will be able to confirm or deny this assumption.

The observations so far open the possibility of a more in-depth analysis of the monetary activity of the city of Tomis during the time of Emperor Nero. For this emperor, the city of Tomis also minted monetary issues with the obverse legend "*ΝΕΡΩΝ ΚΛΑΥΔΙΟC*", which specifies in the reverse legend the name of the magistrate "Hestiaios" ("*ECTIAIOY*") (**Fig. I, 7**)[17], but also monetary issues with the same legend of the obverse, but without specified magistrate in the legend of the reverse (**Fig. I, 8**)[18].

If we look at the two issues, we can easily notice that they are actually made with the same obverse mold, being contemporary or almost contemporary. The imperial effigy, having a more full-bodied portrait, ensures a later dating as against of the "Epistra" magistrate issues. Also, the issue without the magistrate's name in the reverse legend is the last issue in this sequence. The magistrate's name completely disappearing from the reverse of Tomitian coins starting with Vespasianus. This last issue for Nero, without a magistrate in the reverse legend, can be considered a "transitional" monetary issue from the issues with a magistrate to those without.

Based on these observations and the known historical facts we can try to outline a succession of magistrates at Tomis during the time of Emperor Nero (54–68 AD.).

The first magistrate, from the time when Nero was in charge of the empire, can be supposed to be "Phaidros" ("*ΦΑΙΔΡΟΥ*"), who appears on a monetary issue for Agrippina II (49–59 AD.)[19], but does not appear on monetary issues for Claudius (41–54 AD.), Claudia Antonia, Britannicus (dead in 55 AD.) and not even those for Nero. The next magistrate in this sequence would be "Epistra", which appears on monetary issues for Nero (adolescent effigy) and (possibly) on a monetary issue for Britannicus, minted after the death of Claudius. The last magistrate being, without a doubt, as we have already shown, "Hestiaios" ("*ECTIAIOY*").

[15] AMNG II, nr. 2585; RPC I, no. 1834-magistrate "Herodos?"-"H-PΩ".
[16] SMITH 1987, p. 100.
[17] Possible AMNG II, nr. 2587; RPC I, no. 1836.
[18] Savoca Numismatik on 106th Blue Auction, from 26.06.2021, lot 476.
[19] AMNG II, no. 2586; RPC I, no. 1835.

The monetary issues of the city of Tomis, from the time of Emperor Nero, are also important from a historical-architectural point of view, because their reverse depicts, for the first time for this city, edifices. The sequence of these illustrations (if the order of magistrates proposed by us is correct), first on the monetary issue for Agrippina Minor and only then on the issues for Nero, is not accidental and can be explained on the basis of known historical information.

After the death of the emperor Claudius, the Roman senate grants Agrippina Minor two lictors and the quality of priestess of the cult of the emperor Claudius, meanwhile deified (Tacitus, Annales, XIII, 2). But these honors were not enough for the ambitious empress, who had orchestrated her son's rise to power, and who claimed to rule the Roman state directly, getting involved in both internal and external politics[20].

An inscription discovered in Tomis (dated between 49–59 AD.) confirms the role and status of the empress, not only in Rome, but also in cities in distant provinces: "*Good luck! For the divine Agrippina (...), through the care of Antonius Arch(...), priest of Sarapis and Isis (...) towards the homeland (...) of the gods (...), raised from his own wealth*"[21]. The first and most likely the only name in the dedication is that of the "*divine Agrippina*"[22], a fact that shows her *dignitas* and *auctoritas*[23] similar to those of the emperors, lacking only the *imperium*. The inscription seems to confirm a moment of coinage at Tomis only for Agrippina (magistrate Phaidro), which we are tempted to place immediately after the death of Claudius.

Agrippina's ambitions and the way in which her role wanted to be perceived in the provinces of the empire is the best reflected by the relief discovered in Aphrodisias (Caria, Western Anatolia, Turkey) in a temple[24]. The temple was dedicated (according to an inscription from the 1st century AD.): "To Aphrodite, the Divine Augusti and the People"[25].

The relief represents Agrippina Minor, carrying a cornucopia (like the goddess Tyche/Fortuna), crowning her son Nero (rendered in military attire-symbolizing military and political imperium) with a laurel wreath (**Pl. 2**)[26]. From this relief both the divinity, but especially the authority of Agrippina, is fully apparent. The authority that was the basis of the imperial power of the young Nero, who through the act of coronation is promoted from heir to emperor[27]. In this panel, Agrippina is in no way inferior to Nero, and we could even say that she is superior to him in *dignitas*, *auctoritas* and (not least) *divintas*.

---

[20] TUDOR 1974, p. 134–138.

[21] ISM II, p. 69–70, 37.

[22] Not surprisingly, the divinization of the emperors took place in the eastern provinces during their lifetime and not only after death or as a comparison, for the emperor who was still alive as in Rome. See in this regard CIZEK 1998, p. 236–237.

[23] For the meaning of the concepts expressed by these words see CIZEK 1998, p. 38–39 for dignitas (dignity, behavior, appearance, rank, social status etc.) and p. 232–233 for auctoritas (authority, power, influence etc).

[24] The Sebasteion complex from Aphrodisia consists of four distinct elements: a propylon, two long porticoes, and a temple. To be seen: SMITH 1987, p. 90.

[25] SMITH 1987, p. 90.

[26] SMITH 1987, p. 127–132.

[27] SMITH 1987, p. 129.

The appearance of an edifice on the Tomitian monetary issue for Agrippina Minor, a tholos[28] or monopteral[29] temple, with visible four columns[30] and a round roof with acrotera and antefixes, can be linked to the imperial cult, cult led in Rome by the empress. The empress who at Tomis was considered (as we have seen) divine. That this construction was dedicated to the imperial cult is shown by the monetary issue for Nero or (perhaps) Britannicus, which illustrates this construction, having inside, this time, an altar surmounted by an eagle.

The *tholos* or monopteral temple on the Tomitan monetary issues for Agrippina II and Nero are identical to the temple of Mars Ultor[31] illustrated on the official Roman money issues, struck in Spanish and Pergamum mints, from the time of Augustus[32] (**Fig. I**, **4a**). But on the official Roman monetary issues subsequent to Augustus, the temple of Mars Ultor, in this variant, no longer appears. This was probably also one of the reasons why the Tomitan issue was wrongly attributed to Augustus in the "RPC Supplement".

Some official monetary issues for Nero[33] also illustrate a similar construction, (*tholos*), the temple of Vesta, one of the most illustrated temples in Rome on the official Roman coinage[34], but the visual differences between this and the temple from Tomitan issue are substantial (**Fig. I, 4b**).

Did this monopteral temple exist at Tomis?

It is hard to say in the absence of archaeological evidence, but the identical illustration of the temple on the coins of the city of Tomis and the temple of Mars Ultor from the official Roman monetary issues for Augustus shows, without any doubts, that we are dealing with a local takeover of an imperial theme. In fact, researchers almost unanimously agree that a tholos temple of Mars Ultor in Rome did not exist, being only "*a schematic design of an intended structure*"[35].

Taking over themes of imperial propaganda on provincial coins is not new. Interesting is the appearance of a Roman propaganda theme on the provincial coins quite some time after it was illustrated on the official coins.

I encountered this situation and explained it also in the case of the "triumphal procession" from the monetary issues from Nicopolis ad Istrum from the Septimius Severus-Macrinus period, which take over a propaganda theme from the medals of Marcus Aurelius and Lucius Verus[36].

The two examples mentioned here most likely indicate that provincial engravers worked with "pattern books" from which they took various themes at the request

[28] The tholos was a domed edifice, which could also have a commercial purpose, not just a religious one. See in this sense the tholos of Pompeii (ÉTIENNE 1970, p. 188–189).

[29] Circular temple where the dome is supported by columns, described by VITRUVIUS, *De Arhitectura*, Book IV, Chap. VIII, 3, apud TAMEANKO 1999, p. 177.

[30] Round temples are monetarily represented in the Roman era with two to a maximum of six columns, regardless of the number of columns actually built, BROWN 1940, p. 14.

[31] BELDIANU, BELDIANU 2020, p. 54–55.

[32] RIC I, Augustus, no. 28, 39a-b, 68–74, 103–106; 507.

[33] RIC I, Nero, no. 61–62.

[34] BROWN 1940, p. 9.

[35] In this regard, see the recent article by David M. Jacobson, *"The Temple of Mars Ultor in Rome and the Philippeion in Olympia"* (JACOBSON 2020).

[36] BELDIANU 2022b, p. 134–135, 137.

of the city they worked for. We will return to this important aspect of provincial monetary activity in a future paper.

Returning to the Tomitian coins, we note that in the time of "Epistra" magistrate, a temple with four columns and a triangular pediment (decastyle) begins to appear, illustrated monetarily. It is an "anonymous" temple (there is no clue about the titular deity). Coud be an early illustration of a temple from Tomis or rather an early illustration of the idea of a temple at Tomis. Pattern of this temple is unknown by official monetary issues, but it is found on other provincial monetary issues whose legends speak of urban associations (*koina*)[37].

The increased interest in the monetary promotion in this city (and not only) of the imperial cult as a form of Roman propaganda, after the death of Emperor Claudius, it was not the result of a real belief in the divinity of the emperor and not just a natural consequence of the relations between the empire and the autonomous Greek cities. The situation is very well described by E. Cizek: "*the emperor (*Nero o. n.) *was not a religious spirit (...). This fact did not prevent him from pursuing a religious policy. (...) During the reign of Nero, the cult of the emperor becomes an instrument of absolute power. The providential character of the imperial mission is thus affirmed.*"[38]. And this "*providential mission*" in the Pontic area was more that some words, because Nero "*would have wanted to make the Black Sea a Roman lake*"[39], and the propaganda only came to give an ideological basis to military and diplomatic roman actions, carried out in the area in the years of this emperor's reign[40].

The monetary issues of Tomis from the time of the Flavians continue to illustrate anonymous decastyle temples, but with a grandeur specific to the Roman power[41]. The significance of the monetary illustrations of temples at Tomis, in the time of the Flavians, can only be understood by looking at the monetary issues minted by this city, during this dynasty, as a whole.

The chronological ordering of the Tomitan monetary issues from the time of the Flavians does not raise particular problems. The first is a monetary issue for Vespasianus, on the reverse of which are the effigies of his sons, Titus and Domitianus. It is a dynastic propaganda monetary issue. The three members of the imperial family bear in the legend only the title of Caesar "*KAICAP*" (**Fig. III, 1**).

Chronologically, there follows an issue for "*Avtokrator*" Titus, is datable between 79 and 81 AD. On its obverse appears a temple (represented "full-front simple type"[42]) with four columns, placed on a height, as shown by the four rows of steps (**Fig. III, 3**). In the case of roman monetary representations of the temples, the steps, when they existed, were always illustrated, even if the number of steps on the coins did not correspond to the archaeological reality[43]. Contemporary with this

[37] Ex. "Koinon of Galatia" (RPC I, no. 3563).

[38] CIZEK 1986, p. 318.

[39] CIZEK 1986, p. 304, where footnote 9 provides an extensive bibliography on the subject.

[40] CIZEK 1986, see chapter VII, p. 304–309.

[41] Monetary issue for Titus (AMNG II, no. 2591; RPC II, no. 403) and for Domitian (AMNG II, 2594–5; RPC II, no. 404).

[42] For the ways of illustrating temples on official Roman coins see: BROWN 1940, p. 20.

[43] BROWN 1940, p. 16.

issue can be suspected to be the issue for Domitianus "Caesar", which has (on the reverse) the name of the city (*TO-MI*) written in a crown (**Fig. III, 5**)[44].

The last monetary issues from the time of the Flavians are minted by Tomis for Domitianus "*Avtokrator*", in two different chronological stages. To the first stage (81–83 AD.)[45] corresponds an issue with Nike/Victoria on revers[46] and another that illustrates, again, a temple with four columns (**Fig. III, 6**)[47]. The temple is this time on a high base, but no steps are visible. On either side of the roof of the temple are rendered two symbols: a *pileus* and a star. The *pileus* has been linked to the Dioscuris[48], but no explanation has yet been found for the star.

This temple, which appears to be a neater reiteration of the decastyle temple illustrated by the last Tomitan monetary issues for Nero, is illustrated in a realistic manner, seen from the front, with elements to individualize the construction, as if it were intended to illustrate an edifice from the city (*the full-front ornate type*[49]) and not in an abstract manner, as in the case of the temple on the Tomitan monetary issue for Titus, in which, through thick lines, only the idea of the temple is expressed, the only detail meant to personalize it being the stair from underneath. It can be assumed that this could be a first monetary illustration of a temple that really existed in the city of Tomis.

The last stage is represented by a monetary issue in which the obverse legend for Domitian also mention the title of "*Germanicus*", a title assigned in 83 AD., assumed in the monetary legends starting from 84 AD[50]. The reverse of this issue is occupied by Nike/Victoria, with crown and palm branch, standing on a globe (**Fig. III, 7**).

Returning to the representations of the temples, we note the unusual illustration for Tomis of the temple from the monetary issue for Titus. Primarily surprise the desire for abstraction, but also for individualization through the pronounced marking of the four massive steps on which the temple stands.

An identical representation, a decastyle temple, with four trapezoidal steps underneath, is found in the case of Cistophoric Tetradrachms, minted in Ephesus or Rome, starting from 80–81 AD., to circulate in Asia (**Fig. III, 4**)[51]. The legend from revers ("*CA-PIT/RESTIT*") clarifies the message of this monetary type: the restoration of the Capitoline temple of Jupiter in Rome, burned down in 69 AD., during the civil war of the year of the four emperors and destroyed again in a fire (after it had been restored by Vespasianus) in 80 AD[52].

---

[44] AMNG II, no. 2596, RPC II, no. 407.

[45] From the obverse legend („*AYTOKPATΩP ΔOMЄTIANOC KAICAP*") of this issue, the title of „Germanicus" is missing.

[46] AMNG II, no. 2592; RPC II, no. 405.

[47] AMNG II, no. 2594–5; RPC II, no. 404.

[48] In AMNG II the pileus is called dioskurenmütze, p. 679, no. 2595.

[49] BROWN 1940, p. 16.

[50] RIC II, p. 237, 244–245.

[51] Issue for Titus (RIC II, no. 515; RPC II, no. 860) and for Domitianus (RPC II, no. 864 and 867).

[52] LINDSAY 2010, p. 177, with the observation that the cistophoric tetradrachms for Titus show that the restoration of the temple of Jupiter Capitolinus began in his time and not after 81 AD.-in the time of Domitianus.

The connection between the themes of the Tomitan issues and those on the cistophoric tetradrachms is also ensured by the existence of other "ephesian" monetary issues from the time of the Flavians, identical thematically and imagistically to the contemporary Tomitan ones: the monetary issue for Vespasian having on the reverse the confronted effigies of Titus and Domitian (**Fig. III, 2**)[53] and the monetary issues for Vespasianus, Titus and Domitianus, which depict Nike/Victoria bearing a crown and palm branch (**Fig. III, 8**).

Seen from this perspective, the Tomitan monetary issues seem to have been part of the same propaganda horizon, promoted by the monetary issues minted for Asia.

Therefore, it becomes very likely that the temple illustrated by the issue struck by Tomis for Titus is in fact an illustration of the Capitoline temple of Jupiter (**Fig. IV**[54]) or rather a symbolic illustration of the idea of its restoration.

And the "Ephesian" and Tomitan issues are not the only ones that illustrate this ideational edifice in the era. Monetary issues of the city of Panticapaeum, dated in 69–79 AD., also illustrate an identical temple, located on a sequence of high steps arranged trapezoidal, but having 5–7 columns[55] (**Fig. III, 9**).

The propagandistic theme of the restoration of the temple of Jupiter Capitolinus was intended to ensure, for the regime of Vespasian and his sons, an element of continuity and connection with the origins and history of Rome[56].

The presence of this theme on a monetary issue of Tomis for Titus seems to be the result of a probable requirement of the Roman authority to illustrate the subject for propaganda purposes or (maybe) a situation similar to that which led to the presence of the *tholos* or *monopteral* temple on the Tomitan monetary issues for Nero and Agrippina, that is, taking over a Roman monetary theme from a "pattern book".

At the same time, there are no indications that the decastyle temple from the Tomitan monetary issues for Domitian are actually an image taken from Roman monetary types or propaganda. Most likely being a monetary depiction of a temple in Tomis.

After Domitian the monetary issues of the city of Tomis no longer depict temples until the time of Septimius Severus[57]. The first monetary illustrations of constructions at Tomis, respectively of cult edifices, from the time of the Julio-Claudian and Flavian dynasties are closely related to the cult of imperial Rome.

The appearance of temples from Rome on the provincial coins is not a novelty[58], but it is meant to show, in the case of the city of Tomis, the degree of integration of this in the Roman world, since the time of the Julio-Claudian and Flavian dynasty, and at the same time importance of this city for the Empire.

---

[53] RPC II, no. 831.

[54] Depiction of the temple of Jupiter Capitoline on one of the relief panels from the time of the emperor Marcus Aurelius, now in the Capitoline Museum in Rome. The high base on which the temple stood, although invisible, can be inferred due to the illustration of the three doors of the temple above the heads of the participants in the imperial ceremony.

[55] ANOKHIN 2011, no. 1474–1476. The odd and imprecise number of columns is meant to show that the engraver was not illustrating a temple in the city, but an abstract idea.

[56] TAMEANKO 1999, p. 139–145; LINDSAY 2010, p. 176–180.

[57] AMNG II, no. 2768.

[58] BROWN 1940, p. 5, footnote 11.

BIBLIOGRAPHY

ALEXANDRESCU-VIANU 2021 – M. Alexandrescu-Vianu, *La pénétration des premiers éléments de culture romaine à Tomis*, Caiete ARA 12 (2021), p. 63–78.

ALEXANDRESCU-VIANU 2023 – M. Alexandrescu-Vianu, *Une cité antique à travers ses sculptures-La sculpture en pierre à Tomis à l`époque du Principat (I–III siècles)*, București, 2023.

ANOKHIN 2011 – V. A. Anokhin, *Античные монеты Северного Причерноморья*, Kiev, 2011.

BELDIANU, BELDIANU 2020 – C. S. Beldianu, C. B. N. Beldianu, *Orașul vest pontic în epoca romană (sec. I–III p.Chr). Evidențe numismatice*, București, 2020.

BELDIANU 2021 – C. B. N. Beldianu, *Triumphal Arches From Lower Moesia,* Caiete ARA 12 (2021), p. 107–114.

BELDIANU 2022a – C. B. N. Beldianu, *Numismatics of the Roman Era and the place of some sculptural works in Antiquity*, Caiete ARA 13 (2022), p. 47–54.

BELDIANU 2022b – C. B. N. Beldianu, *Despre semnificația și originile reprezentării procesiunii triumfale imperiale pe monedele de la Nikopolis ad Istrum (Moesia Inferior*, Pontica, no. LV, Supplementum IX, Constanța 2022, p. 133–146.

BELDIANU 2023 – C. B. N. Beldianu, *A numismatic perspective on the Architecture of North and West Pontic cities in the I–III centuries AD. Defensive systems*, Caiete ARA 14 (2023), p. 65–90.

BROWN 1940 – D. F. Brown, *Temples of Rome as coin types, Numismatic Notes and Monographs*, 1940, 90, The American Numismatic Society, New York, p. 1–37, 39–52.

CIZEK 1986 – E. Cizek, *Secvență romană-Mijlocul secolului I al erei noastre*, București 1986.

CIZEK 1998 – E. Cizek, *Mentalități și instituții romane*, București, 1998.

DIMA 2020 – M. Dima, *Au fost emise monede la Tomis în timpul domniei împăratului Augustus?*, Revista de Cercetări Arheologice și Numismatice 6 (2020), p. 368–380.

DONALDSON 1859 – T. L. Donaldson, *Arhitectura Numismatica; or Architectural Medals of Classic Antiquiti (...)*, London, 1859.

ELKINS 2015 – N. T. Elkins, *Monuments in Miniature: Architecture on Roman Coinage*, Numismatic Studies 29 (2015).

ÉTIENNE 1970 – R. Étienne, *Viața cotidiană la Pompei*, București, 1970.

JACOBSON 2020 – D. M. Jacobson, *The Temple of Mars Ultor in Rome and the Philippeion in Olympia*, Gymnasium 127/3 (2020), Heidelberg, p. 235–249.

LINDSAY 2010 – H. Lindsay, *Vespasian and the city of Rome: the centrality of the Capitolium*, Acta Classica LIII, Proceedings of the Classical Association of South Africa, Pretoria, 2010, p. 165–180.

SMITH 1987 – R. R. R. Smith, *The Imperial Reliefs from the Sebasteion at Aphrodisias*, The Journal of Roman Studies 77 (1987), p. 88–138.

TAMEANKO 1999 – M. Tameanko, *Monumental Coins: Buildings & Structures on Ancient Coinage*, Iola (KS), 1999.

TUDOR 1974 – D. Tudor, *Figuri de împărați romani*, vol. I, București 1974.

CATALOGS

AMNG II – B. Pick, K. Regling, *Die Antiken Münzen Nord-Griechenlands, Dacien und Moesien, Band I, Zweiter Halbband, Abtheilung 1: Die Münzen von Odessos und Tomis mit einer Ergänzungstafel (XXI),* Berlin, 1910.

RIC I – C. H. V. Sutherland, R. A. G. Carson, *The Roman Imperial Coinage, Vol. I, From 31 BC to AD 96*, London, 1984.

RIC II–I. Carradice, T. Buttrey, *The Roman Imperial Coinage, Vol. II, Part 1: From AD 69 to 96*, London, 2007.

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

RPC II – A. Burnett, M. Amandry, *Roman Provincial Coinage II: From Vespasian to Domitian (AD 69–96)*, London, 1999.

RPC I–III Supp – P. P. Ripollès, A. Burnett, M. Amandry, I. Carradice, M. S. Butcher, *Roman Provincial Coinage, Consolidated Supplement, I–III (1992–2015*), Ashmolean Museum, University of Oxford (rpc.ashmus.ox.ac.uk), 2015, link: http://rpc.ashmus.ox.ac.uk/supp/rpc_cons_supp_1–3.pdf.



Fig I. Monetary issues of the city of Tomis (1–3; 5–8) and Rome (4) from the time of the Julia-Claudia dynasty**;** 1. Coin attributed in RPC to Emperor Augustus (photo source: *Classical Numismatic Group. Inc.*[59]); 2. Monetary issue for Nero, magistrate "Epistra"-model of the coin in the Gotha collection (*Berlin-Brandenburgischen Akademie der Wissenschaften*[60]); 3. Photo of the coin from the Gotha collection[61]; 4a. Revers of denarius for Augustus which illustrates the temple of Mars Ultor (*Leu Numismatik*[62]); 4b. Revers of an aureus for Nero which illustrates the temple of the Vestals (*Classical Numismatic Group. Inc.*[63]); 5. Monetary issue for Agrippina Minor, magistrate "Phaidros" (*Helios Numismatik GmbH*[64]); 6. Monetary issue for Nero, magistrate "Epistra" (*Gorny& Mosch Giessener Münzhandlung*[65]); 7. Monetary issue for Nero, magistrate "Hestiaios" (*Jean Elsen & ses Fils S.A.*[66]); 8. Monetary issue for Nero without specified magistrate (*Savoca Numismatik*[67]).

[59] Classical Numismatic Group, Inc., Auction MBS 78, from 14.05.2008, lot 1173.

[60] Plaster Cast No: cn-tomis_0454, de la BBAW, Berlin [de], photo taken from web platform Corpus Nummorum, direct link: https://www.corpus-nummorum.eu/CN_29396.

[61] The coin with inventory number: SSFG 1/Co3242-photo source:"Gotha transdigital 2027 project.

[62] Leu Numismatik, Web Auction 24, from 03.12.2022, lot 487.

[63] Classical Numismatic Group. Inc., Auction Triton XX, from 10.01.2017, lot 676.

[64] Helios Numismatik GmbH, Auction 7, 12.12.2011, lot 475.

[65] Gorny & Mosch Giessener Münzhandlung, online Auction 271, from 29.05.2020, lot 154.

[66] Jean Elsen & ses Fils S.A., Auction 92, from 09.06.2007, lot 477.

[67] Savoca Numismatik, Auction 106th Blue Auction, from 26.06.2021, lot 476.



Fig. II. Relief depicting Nero and Agrippa Minor from the Sebasteion at Aphrodisias-Caria (photo credit: Carlos Delgado; CC-BY-SA).



Fig. III. Monetary issues from Flavian times; 1. Tomitan monetary issue for Vespasianus with facing busts of his sons Titus and Domitianus on the reverse (photo source: *Gorny & Mosch Giessener Münzhandlung*[68]); 2. Roman monetary issue for Asia, with Vespasianus on obverse and Titus with Domitianus on reverse (photo source: *Numismatica Ars Classica*)[69]; 3. Coin strack by Tomis for emperor Titus with a idealize temple on reverse (photo source: *Gorny & Mosch Giessener Münzhandlung*)[70]; 4. Cistophor for Titus, from year 81 AD., which celebrate the restoration of Temple of Jupiter Capitolinus[71]; 5. Tomis monetary issue for "Domitianus Kaisar"[72]; 6. Tomis monetary issue for "Autokrator Domitianos Kaisaros", with a decastyle temple on reverse, between pileus and star[73]; 7. Tomis monetary issue for "Domitianos Kaisaros Germanikos", with flying Nike/Victoria on reverse[74]; 8. Denarius struck by the Ephesus mint for Vespasian[75]; 9. Monetary issue of the city of Panticapaeum[76].

[68] Gorny & Mosch Giessener Münzhandlung, Auction 265, from 14.10.2019, lot 787.

[69] Numismatica Ars Classica NAC AG, Auction 125, from 23.06.2021, lot 551.

[70] Gorny & Mosch Giessener Münzhandlung, online Auction 270, from 12.03.2020, lot 2199.

[71] Numismatik Lanz München, Auction 94, from 22.11.1999, lot 339.

[72] Roma Numismatics Limited, E-sale 71, from 28.05.2020, lot 64 (The William Stancomb Collection).

[73] Roma Numismatics Limited, Auction 18, from 29.09.2019, lot 324 (The William Stancomb Collection).

[74] Savoca Numismatik, 105th Blue Auction, from 12.06.2021, lot 1093.

[75] The Viggo collection of Flavian Imperial Coins from provincial mints, Numismatica Ars Classica NAC AG", Auction 125, from 23.06.2021, lot 555.

[76] Numismatik Naumann (formerly Gitbud & Naumann), Auction 83, from 03.11.2019, lot 373.



Fig. IV. Relief in the Capitoline Museum (Rome), depicting the emperor Marcus Aurelius during a sacrifice made in front of the temple of Jupiter Capitolinus (photo source: wikimedia.org, author user: MatthiasKabel (CC-BY-SA–3.0,2.5,2.0,1.0).

NOI DESCOPERIRI MONETARE BIZANTINE DE PE TERITORIUL DOBROGEI (SEC. VI-XII)[1]

Gabriel CUSTUREA[*]

Cuvinte-cheie: *numismatică bizantină, Dobrogea bizantină, Imperiul Bizantin.*
Keywords: *Byzantine numismatics, Byzantine Dobrogea, Byzantine Empire.*

Rezumat: *Autorul prezintă un număr de 96 monede bizantine din secolele V–VII și IX–XII descoperite pe teritoriul Dobrogei. Piesele provin din colecția MINAC și colecții private.*

Se remarcă descoperirile de la Bărăganu (jud. Constanța), care probează existența aici a unei așezări rurale importante în sec. al VI-lea și, mai târziu, în secolele X–XI. Această ipoteză se bazează și pe descoperirea altor artefacte publicate sau încă inedite.

Pentru Hârșova, Isaccea și Slava Rusă, cunoscute situri arheologice de epocă romană și bizantină, nu apar lucruri spectaculare, dar sunt de menționat descoperirile de la Plopeni și Vâlcele-Hoșcadîn care pun aceste situri pe harta arheologică a Dobrogei, pentru perioada medie bizantină.

Abstract: *The author presents a number of 96 Byzantine coins dating from the Vth to the VIIth century and from IXth to the XIIth century discovered in Dobrudja. The pieces come from MNHAC collection and also from private collections.*

Worth mentioning are discoveries from Bărăganu (Constanţa County) which prove the existence here of an important rural settlement in the VIth century and later, between the Xth and XIth centuries. This assumption is also based on the discovery of published or unpublished artifacts.

For Hârşova, Isaccea and Slava Rusă, wellknown Roman and Byzantine archaeological sites, there are not spectacular findings, but those from Plopeni and Vâlcele-Hoşcadîn have to be mentioned because they put these sites on the archaeological map of Dobrudja, for the middle Byzantine period.

Numărul tot mai semnificativ al monedelor bizantine descoperite în Dobrogea în ultimii ani ne îndeamnă să continuăm publicarea lor. În cele ce urmează prezentăm un număr de 96 monede bizantine din bronz recoltate întâmplător de pe teritoriul provinciei[2]. Ele se adaugă astfel miilor de piese izolate

[*] Gabriel CUSTUREA: Centrul de Studii ale Civilizațiilor Mării Negre, Constanța; email: custurea@gmail.com.

[1] O variantă scurtă a lucrării a fost prezentată la Al III-lea Congres Internațional de Numismatică din România, „Regalitatea în România", Brașov, 9–11 iunie 2016.

[2] Monedele fac parte din colecția MINAC și din colecții private.

publicate până în prezent[3] și aduc informații noi privind puncte cu descoperiri până acum neconsemnate pe harta zonei.

Vom face o scurtă descriere a materialului numismatic provenit din localitățile cuprinse în lucrare, încercând să creionăm tabloul circulației monetare locale. Bărăganu, prin descoperirile cunoscute până în prezent, se înfățișează ca o așezare, probabil rurală, din secolele VI[4], respectiv X–XI[5], cu o viață social-economică activă.

Din punct de vedere numismatic, putem presupune următorul scenariu: prima monedă, din vremea lui Anastasius I, sprijină ipoteza dezvoltării aici a unei așezări rurale importante la începutul secolului al VI-lea. Se constată o întrerupere și o rarefiere puternică a materialului numismatic după anul 538, cu doar două excepții, un *follis* din 546/547 și un sfert de *follis* de la sfârșitul domniei lui Justinianus I. Seria descoperirilor se completează cu piese de la Justinus II și Mauricius-Tibeius, ultima fiind un *hemifollis* din 594/595 și altul probabil chiar din 597/598. Oricum, așezarea dispare în condițiile agitate de la sfârșitul secolului al VI-lea[6].

Pentru perioada bizantină medie avem o posibilă reactivare a locuirii în zonă, cel puțin în ultimul sfert al secolului al X-lea (monede de la Leon VI și Nicefor II), locuire care dăinuie în condiții neprecizate până la invazia pecenegă din anii 1046–1048[7]. Este un scenariu posibil dacă ținem seama de analogiile cu alte situri din provincie[8].

Să mai precizăm că din zonă au mai fost recuperate de la suprafață piese din metal din secolele VI–VII și X–XI, unele publicate[9], altele încă inedite.

Hârșova este un alt punct cu importante descoperiri monetare din aceeași epocă[10]. Pentru secolele VI–VII scenariul posibil poate fi următorul: o reconstrucție a așezării la începutul secolului al VI-lea și o viață social-economică activă până în preajma anului 540. O revenire notabilă are loc în vremea lui Justinus II cu o durată de circa două decenii. Orașul a fost grav afectat de atacurile din 593/594, iar cele două jumătăți de *follesi* de la Focas nu demonstrează decât o reluare a locuirii în timpul său, locuire care va înceta, cel mai târziu în anii 614–619 din cauza raidurilor avaro-slave[11].

Pentru perioada secolelor X–XI, din materialul numismatic cunoscut, putem

[3] CUSTUREA 2012, p. 617–635; CUSTUREA, CLIANTE 2006, p. 423–434; CUSTUREA 2007, p. 629–640; CUSTUREA, ADAMESCU 2013, p. 491–513.

[4] CUSTUREA, VERTAN, TALMAȚCHI 1998, p. 316, nr. 1831, 1832; CUSTUREA 2012, p. 620, nr. 1–5; CUSTUREA 2019a, p. 101–102.

[5] CUSTUREA, ADAMESCU 2013, p. 497, nr. 5–19.

[6] CUSTUREA 2019a, p. 43.

[7] BARNEA, ȘTEFĂNESCU 1971, p. 127; DIACONU 1970, p. 62–65; MĂNUCU-ADAMEȘTEANU 2017a, p. 92, cu bibliografia.

[8] CUSTUREA 2000, p. 117; CUSTUREA 2019b, p. 338–339.

[9] Din zonă au fost publicate un pond romano-bizantin și câteva piese cu caracter creștin, cf. CUSTUREA 2009, p. 675, nr. 10; CUSTUREA, PARASCHIV-TALMAȚCHI 2011, p. 138–139, nr. 14 și 20; CUSTUREA, PARASCHIV-TALMAȚCHI 2016, p. 447–448, nr. 7, 8, 11, 13.

[10] CUSTUREA 1986, p. 277, nr. 2, 4, 6, 10, 12; CUSTUREA 2004–2005, p. 497, nr. 34; CUSTUREA 2008, p. 543, nr. 146; CUSTUREA 2012, p. 622, nr. 33; CUSTUREA, CLIANTE 2006, p. 429, nr. 77–78; CUSTUREA, VERTAN, TALMAȚCHI 1997, p. 379, nr. 1741; CUSTUREA, VERTAN, TALMAȚCHI 1999, p. 352–353, nr. 2035–2038; POENARU-BORDEA, OCHEȘEANU, POPEEA 2004, *passim*; VERTAN, CUSTUREA 1981, p. 341–342, nr. 328–329; VERTAN, CUSTUREA 1982, p. 282, nr. 521–525; VERTAN, CUSTUREA 1986, p. 300–301, nr. 1085–1100; VERTAN, CUSTUREA 1995–1996, p. 316, nr. 1575–1576.

[11] CUSTUREA 2019a, p. 29 și 133; MADGEARU 2011, p. 225.

presupune o existență-probată și arheologic[12] –, începută cândva în cursul secolului al X-lea[13] – dovadă monede de la Leon VI, Roman I, Nicefor II și Ioan I Tzimiskes-și continuată pe parcursul întregului secol următor[14]. Datele statistice ne fac să credem că după invazia uzilor din anii 1064–1065 locuirea de aici s-a restrâns, fără însă să dispară definitiv până la sfârșitul secolului al XI-lea[15].

Isaccea nu este prezentă decât cu monede din secolul al VI-lea. Dintre foarte numeroasele descoperiri monetare[16] din siturile arheologice de aici, cele din secolele VI–VII sunt, cele mai puține în comparație cu perioada secolelor X–XI sau XII–XIII, de când există mii de piese[17].

Scenariul numismatic al sitului de la Isaccea este următorul: începând cu primul deceniu al secolului al VI-lea, în această importantă așezare urbană se reia viața social-economică bulversată de evenimentele secolului trecut, atât de agitat pentru întregul imperiu. Urmează o dezvoltare susținută până spre anul 540, după care se observă o scădere a numerarului de pe piață. Se remarcă un *hiatus* în anii 559–561, poate cauzat de atacurile kutrigure[18]. Revigorarea economică vine în timpul lui Justinus II, dar între anii 594/595–600/601, apare o nouă cezură care ne duce cu gândul la faptul că orașul a căzut pradă raidurilor din acei ani. Totuși, putem vorbi de o economie monetară până la 614–619, când aceasta dispare în întreaga provincie. Prezența unor emisiuni de la Constans II dovedește doar interesul imperiului pentru punctul de sprijin naval de pe Dunăre și nu oglindește vreo activitate economică[19].

Slava Rusa, cu cele peste aproape 500 de piese din secolele VI–VII descoperite aici, este unul dintre cele mai relevante centre urbane ale provinciei Scythia în perioada respectivă[20]. Scenariul în acest caz se găsește în sinteza făcută de cercetătorul tulcean Mihaela Iacob[21].

Descoperirile de la Plopeni (sec. al XII-lea) și Vâlcele-Hoșcadîn (sec. al XI-lea), deși singulare, așează pe harta provinciei două noi puncte. De la Plopeni există informații privind tezaurul monetar descoperit în anul 1934, legat de ultimele ciocniri dintre bizantini și pecenegi în deceniile 9 și 10 ale secolului al XI-lea[22].

Cât despre punctul Vâlcele Hoșcadîn, putem aminti aici câteva descoperiri – monede medievale târzii și un pond otoman[23] –, care arată locuirea în zona centrală dobrogeană, ca și în cazul Plopeni, în diverse etape ale istoriei provinciei.

---

[12] MĂNUCU-ADAMEȘTEANU 2017a, p. 516–532, cu bibliografia.

[13] FLORESCU 1986, p. 172.

[14] CUSTUREA 2000, p. 140, nr. 49.

[15] CUSTUREA 2019b, 339; MĂNUCU-ADAMEȘTEANU 2017a, p. 548–548.

[16] POPESCU, IACOB 2016, p. 196–211, nr. 1072–1177; CUSTUREA 2019a, p. 149 cu bibliografia.

[17] MĂNUCU-ADAMEȘTEANU 2017b, p. 30–61; MĂNUCU-ADAMEȘTEANU 2019, p. 63–140, cu toată bibliografia descoperirilor.

[18] CUSTUREA 2019a, p. 32 și 144–149.

[19] CUSTUREA 2019a, p. 32.

[20] CUSTUREA 2019a, p. 194–197, cu bibliografia.

[21] IACOB 2009, p. 68–79.

[22] DIMIAN 1957, p. 200–201; OBERLANDER-TÂRNOVEANU 2018, p. 143–169; din zonă mai provin un capac de flacon de teriac (fals), cf. CUSTUREA 2019c, p. 433, nr. 1 și o monedă otomană din secolul al XVII-lea, cf. CUSTUREA, VELTER 2017, p. 597, nr. 99.

[23] CUSTUREA,VELTER 2017, p. 600, nr. 141–146; CUSTUREA 2020, p. 486, nr. 8.

CATALOG

BĂRĂGANU
Anastasius I
1. AE 6,69 g, 22 mm,
MIBE, p. 87, nr. 31, K,
CON, a: 498–507.

Justinus I
2. AE 14,64 g, 29,5 mm,
MIBE, p. 96, nr. 11, M,
CON, A, a: 518–522, var .

Justinianus I
3. AE 10,51 g, 29mm,
MIBE, p. 126, nr. 83, M,
CON, A, a: 527–537.

4. AE 2,98 g, 18,5 × 15 mm, ruptă,
MIBE, p. 133, nr. 99–100, I,
CON, a: X/X/X/?= 550–565.

Justinus II
5. AE 5,75 g, 20 mm,
MIB II, p. 102, nr. 70a, K,
TES, a: Є = 569/70.

6. AE 5,75 g, 19,5 × 18,5 mm,
MIB II, p. 102, nr. 70c, K,
TES, a: Є = 569/70.

7. AE 4,67 g, 19,5 mm,
MIB II, p. 102, nr. 70e, K,
TES, a: Є = 569/70.

8. AE 1,63 g, 16 × 15 mm,
MIB II, p. 97, nr. 45, Є,
CON, +, a: 565–578.

Mauricius Tiberius
9. AE? 3,91 g, 21 × 15 mm,
MIB II, p. 117, nr. 73A, I,
CON, B, a: 582/83.

10. AE 11,87 g, 29 × 27 mm,
MIB II, p. 113, nr. 67D, M,
CON, A, a: II/II = 585/86.

11. AE 6,26 g, 20 mm,
MIB II, p. 116, nr. 70D, K,
CON, Є, a: X/III = 594/95.

12. AE 5,74 g, 22 mm,
MIB II, p. 116, nr. 69D–70 D, K,
CON, A, a: X (?) Ч/I = (587/88)
597/98.
Leon VI
13. AE 6,58 g, 25,5 mm, îndoită.
DOC III, 2, p. 518, cls. 3.

Vasile II-Constantin VIII
14. AE 11,30 g, 28,5 mm,
DOC III,2,p. 671,cls. A2, var. 45.

Constantin IX
15. AE 9,93 g, 26 × 25 mm,
DOC III, 2, p. 685, cls. D.

HÂRȘOVA
Justinus II
16. AE 10,38 g, 30 × 28 mm,
MIB II, p. 95, nr. 43 d, M,
CON, Γ, a: Ч/II = 572/73
MINAC 2001, inv. 83.610.

Mauricius Tiberius
17. AE 9,13 g, 27 × 26 mm,
MIB II, p. 119, nr. 85D, M,
KYZ, a: Ч/II = 588/89
MINAC 2014, inv. 83.612.

18. AE 8,71 g, 27 mm, ruptă,
MIB II, p. 118, nr. 76Db, M,
NIC, B, a: Ҁ /II = 589/90
MINAC 2007, inv. 83.611.

Vasile II – Constantin VIII
19. AE 11,27 g, 26 × 25 mm,

DOC III, 2, p. 651 (652,658), cls. A2, var. 3 (5, 20).
MINAC 2004, inv. 83.623.

20. AE ↓ 5,12 g, 24,5 × 22 mm,
DOC III,2,p.668,cls. A3, var. 40b.
MINAC 2007, inv. 83.624.

21. AE 11,36 g, 32 × 30,5 mm,
DOC III, 2, p. 650–675, cls. A2–3
MINAC 2007, inv. 83.625.

22. AE 7,03 g, 26 mm,
DOC III, 2, p. 650–675, cls. A2–3
MINAC 2005, inv. 83.626.

Roman III
23. AE 11,20 g, 29 mm,
DOC III, 2, p. 676, cls. B,
MINAC 2004, inv. 83.627.

ISACCEA
Anastasius I
24. AE 7,86 g, 22,5 mm,
MIBE, p. 86, nr. 26, M,
CON, Є, a: 507–512.

25. AE 5,18 g, 22 × 20 mm,
MIBE, p. 87, nr. 32, K,
CON, A (?), a: 507–512.

26. AE 10,20 g, 26 mm,
MIBE, p. 88, nr. 33, K,
CON, Γ, a: 512–517.

Justinus I
27. AE 11,16 g, 30 mm,
MIBE, p. 96, nr. 11, M,
CON, B, a: 518–522.

28. AE ↓ 7,60 g, 26,5 mm,
MIBE, p. 100, nr. 42a, K,
CON, B, a: 518–522.

29. AE 9,03 g, 26 × 25 mm,
MIBE, p. 97, nr. 19, K,
CON, Є, a: 522–527.

Justinus I sau Justinianus I
30. AE? 7,20 g, 30 mm, ruptă,
MIBE, tip general M,
CON, A (Δ), a: 522–537.

31. AE 6,30 g, 22 × 19 mm,
MIBE, p. 97 (128), nr. 19 (90), K,
CON, A, a: 522–537.

Justinianus I
32. AE 6,96 g, 24 × 22 mm,
MIBE, p. 128, nr. 90, K,
CON, Δ, a: 527–538.

33. AE 6,64 g, 25 mm,
MIBE, p. 128 (135), nr. 90 (109), K,
CON (NIK), B, a: 527–538.

34. AE 6,93 g, 26 × 22 mm,
MIBE, p. 144, nr. 134, K,
ANT, B, a: 529–531/32.

35. AE 3,13 g, 15 mm, ruptă,
MIBE, p. 138, nr. 118a, I,
NIC (?), a: X/X/X/II = 558/59.

36. AE? 2,06 g, 15 mm, ruptă,
MIBE, p. 138, nr. 118a, I,
NIC, a: X/X/?? = 550/51–565.

37. AE 3,08 g, 20,5 mm,
MIBE, p. 133, nr. 99, I,
CON, a: X/XX/? = 556/57–565.

38. AE? 1,00 g, 13 mm, ruptă,
MIBE, p. 133, nr. 99, I,
CON, a: X/XX/? = 556/57–565.

39. AE? 2,41 g, 16 × 15 mm,
MIBE, tip general, I,
?, a: X/X/X? = 556/57–565.

40. AE? 3,95 g, 16 mm, ruptă,
MIBE, tip general, I,

?, a:? = 550–565.

41. AE? 3,00 g, 15 mm,
MIBE, p. 133, nr. 99, I,
CON, a: X/X/? = 546/47–565.

Justinus II
42. AE 2,97 g, 20 mm,
MIB II, p. 96, nr. 44 a, K,
CON, A, a: Ч = 569/70.

43. AE 4,20 g, 22 × 21 mm,
MIB II, p. 102, nr. 680, K,
TES, a: Ч = 569/70.

44. AE 7,48 g, 23,5 × 22 mm,
MIB II, p. 97, nr. 44 d, K,
CON, Δ, a: Ϛ/? = 570/71–575/76.

45. AE 6,14 g, 23 × 22 mm,
MIB II, p. 98, nr. 47 a, K,
NIC, a: Ϛ / I= 571/72.

46. AE 5,31 g, 23 × 22 mm,
MIB II, p. 101, nr. 60 a, K,
ANT, a: ЧII = 571/72.

47. AE 12,40 g, 29 mm,
MIB II, p. 98, nr. 46 a, M,
NIC, A, a: Ϛ /II = 573/74.

48. AE 7,55 g, 31 mm, ruptă,
MIB II, p. 99, nr. 50 b, M,
KYZ, A, a: X = 574/75.

Mauricius Tiberius
49. AE 4,23 g, 22 mm,
MIB II, p. 115, nr. 70 d, K,
CON?, a: Ч = 586/87.

50. AE 3,04 g, 22 × 21mm,
MIB II, p. 116, nr. 69D–70D, K,
CON, A, a: X = 591/92.

51. AE 5,78 g, 22 mm,
MIB II, p. 124, nr. 113D, K,
TES, a: X = 591/92.

Focas
52. AE? 7,85 g, 28 × 27 mm,
MIB II, p. 129–130, nr. 61 (a-e), XXXX,
CON,?, a:? = 603/04–609/10.

53. AE 1,76 g, 22 × 20 mm,
MIB II, p. 131, nr. 65Da, XX,
CON, A, a:? = 603/04–609/10.

Tiberius II sau Focas
54. AE? 3,26 g, 21 × 19 mm,
MIB II, tip general XX,
?? a: 578–82 sau 602–10.

PLOPENI
(1 km N de localitate)
Manuel I
55. AE Tetarteron, 3,40 g, 20 × 19 mm,
Hendy (1969), pl. 17.7–8,
DOC IV, nr. 15, CON, a: 1152–1160.
MINAC, inv. 83.296.

SLAVA RUSĂ
Anastasius I
56. AE 6,90 g, 25 mm,
MIBE, p. 86, nr. 4, M,
CON, Є?, a: 507–512.
MINAC, inv. 83.591.

Justinus I
57. AE 16,45 g, 31,5 × 29,5 mm,
MIBE, p. 96, nr. 12, M,
CON, A, a: 522–527.
MINAC, inv. 83.592.

Justinianus I
58. AE 5,05 g, 22,5 × 17 mm,
MIBE, tip general M,
CON, Є, a? = 527–538.
MINAC, inv. 83.583.

59. AE 9,28 g, 26,5 × 24,5 mm,
MIBE, p. 132, nr. 96, K,
CON, A (Δ), a: XV/III = 544/45,

MINAC, inv. 83.593.

60. AE 8,84 g, 24,5 mm,
MIBE, p. 132, nr. 96, K,
CON, B, a: XXII = 548/49,
MINAC, inv. 83.595.

61. AE 5,72 g, 27,5 × 24,5 mm,
MIBE, p. 141, nr. 121 a, K,
KYZ, a: X/X/V = 551/52,
MINAC, inv. 83.597.

62. AE 3,66 g, 16 mm,
MIBE, p. 133, nr. 99, I,
CON, a: X/XX/II = 558/59,
MINAC, inv. 83.586.

63. AE 1,85 g, 14 mm,
MIBE, p. 142, nr. 123 a, I,
KYZ, a: X/XX/III = 559/60,
MINAC, inv. 83.585.

64. AE 3,19 g, 17 × 16 mm,
MIBE, p. 138, nr. 118 a, I,
NIC, a: X/X/X/V = 561/62,
MINAC, inv. 83.599.

65. AE 1,35 g, 14 × 12,5 mm,
MIBE, p. 138, nr. 118 a, I,
NIC, a: X/XX/V = 561/62,
MINAC, inv. 83.584.

66. AE 3,73 g, 18 × 16 mm, ruptă,
MIBE, p. 138, nr. 118 a, I,
NIC, a: X/XX/ Ϛ = 562/63,
MINAC, inv. 83.596.

67. AE 3.74 g, 15 mm,
MIBE, tip general, I,
CON?, a? = 542/43–565,
MINAC, inv. 83.588.

68. AE 4,73 g, 17 × 16 mm,
MIBE, p. 133, nr. 99, I,
CON, a: X/X?/I = după 547/48,
MINAC, inv. 83.587.

69. AE? 2,63 g, 19 × 16,5 mm,
MIBE, tip general, I,
?, a XX/X/Ϛ = 562/63,
MINAC, inv. 83.594.

70. AE? 3,9 g, 14 mm,
MIBE, tip general, I,
?, a? = 538–565,
MINAC, inv. 82.314.

71. AE 3,03 g, 16 mm,
MIBE, p. 133, nr. 99, I,
CON, a: X/X/X/? = 556/57–565,
MINAC, inv. 83.598.

Justinus II

72. AE 6,65 g, 20 mm,
MIB II, p. 101, nr. 68 a, K,
TES, a: II = 566/67.
MINAC, inv. 83.603.

73. AE 13,02 g, 28 mm,
MIB II, p. 94, nr. 43 a, M,
CON, Γ, a: II/I? = 567/68?.
MINAC, inv. 83.590.

74. AE 5,92 g, 19 × 18 mm,
MIB II, p. 72, nr. 70 c, K,
TES, a:? = 569–571.
MINAC, inv. 83.600.

75. AE 13,13 g, 30,5 × 28 mm,
MIB II, p. 94, nr. 43 a, M,
CON, B, a: X = 574/75,
MINAC, inv. 83.602.

76. AE 5,48 g, 24,5 × 22,5 mm,
MIB II, p. 99, nr. 47 b, K,
NIC, a: X = 574/75.
MINAC, f.n.

77. AE 1,96 g, 17 × 16 mm,
MIB II, p. 97, nr. 45, Є,
CON, B, a: 565–578,
MINAC, inv. 82.313.

78. AE 2,12 g, 14 × 13 mm,
MIB II, p. 97, nr. 45, Є,
CON, Γ, a: 565–578,
MINAC, inv. 83.605.
79. AE ↑ 2,22 g, 15 × 14 mm,
MIB II, p. 97, nr. 45, Є,
CON, Δ, a: 565–578,
MINAC, inv. 83.601.

80. AE 2,10 g, 15 × 12 mm,
MIB II, p. 97, nr. 45, Є,
CON, +, a: 565–578,
MINAC, inv. 83.606.

81. AE 1,29 g, 13 × 12 mm,
MIB II, p. 97, nr. 45, Є,
CON, +, a: 565–578,
MINAC, inv. 83.589.

Mauricius Tiberius
82. AE 1,77 g, 13,5 mm,
MIB II, p. 117, nr. 74 c, Є,
CON, +, a: 584/85,
MINAC, inv. 83.604.

83. AE 2,23 g, 22 × 14 mm, frag.,
MIB II, tip general, K,
CON, A (Δ), a? = 582–602,
MINAC, f.n.

84. AE 1,76 g, 14 × 12,5 mm,
MIB II, tip general.

Focas
85. AE? 5,50 g, 22 × 21 mm,
MIB II, p. 132, nr. 73 a, XX,
NIC,?, a: II = 603/04 .
MINAC, f.n.

VÂLCELE-HOȘCADÎN
Roman III
86. AE 11,89 g, 30 × 29 mm,
DOW III, 2, p. 676, cls. B,
surfrapare pe cls. A?
MINAC, inv. 83.362.

PASSIM
Justinus I
87. AE 14,08 g, 31 × 30 mm,
MIBE, p. 96, nr. 11, M,
CON, Γ, a: 518–522,
MINAC, inv. 83.096.

Justinianus I
88. AE 15,54 g, 32,5 mm,
MIBE, p. 130, nr. 95 a, M,
CON, Δ, a: X/X/X/III = 559/60.
MINAC, inv. 83.097.

Justinus II
89. AE 1,00 g, 12,5 mm,
MIB II, p. 97, nr. 45, Є,
CON, B, a = 565–578.
MINAC, inv. 83.098.

Vasile II-Constantin VIII
90. AE 9,37 g, 31 × 30 mm,
DOC III, 2, p. 661, cls. A2, var. 24 b
MINAC, inv. 83.099.

91. AE 3,99 g, 25,5 × 24,5 mm,
DOC III, 2, p. 668, cls. A3, var. 39 (40)
MINAC, inv. 83.621.

Roman III
92. AE? 12,07 g, 29 mm,
DOC III, 2, p. 676, cls. B,
MINAC, inv. 83.100.

Mihail IV
93. AE 7,96 g, 26,5 × 25,5 mm,
DOC III, 2, p. 681, cls. C,
MINAC, inv. 83.101.

Constantin IX
94. AE 7,70 g, 29 × 26 mm, ruptă,
DOC III, 2, p. 777, cls. 2,
MINAC, inv. 83.622.

Alexius I
95. AR Numisma histamenon

3,58 g, 30,5 × 29 mm,
DOC IV, nr. 2 C 3, CON, a: 1082–1087.

96. AE Tetarteron,2,89 g, 21 × 19,5 mm,
DOC IV, nr. 38, TES.
MINAC, inv. 83.620.

BIBLIOGRAFIE

BARNEA, STEFĂNESCU 1971 – I. Barnea, Șt. Stefănescu, *Din istoria Dobrogei. III. Bizantini, români și bulgari la Dunărea de Jos*, București, 1971.

CUSTUREA 2000 – G. Custurea, *Circulația monedei bizantine în Dobrogea (sec. IX–XI)*, Constanța, 2002.

CUSTUREA 2004–2005 – G. Custurea, *Date noi privind circulația monedei bizantine în Dobrogea (sec. V–VII)*, Pontica 37–38 (2004–2005), p. 491–536.

CUSTUREA 2007 – G. Custurea, *Monede bizantine descoperite recent în Dobrogea (sec. IX–XIII)*, Pontica 40 (2007), p. 629–640.

CUSTUREA 2008 – G. Custurea, *Noi descoperiri monetare bizantine din Dobrogea (sec. V–VII)*, Pontica 41 (2008), p. 533–562.

CUSTUREA 2009 – G. Custurea, *Ponduri antice și medievale descoperite recent în Dobrogea*, Pontica 42 (2009), p. 671–682.

CUSTUREA 2012 – G. Custurea, *Monede bizantine recent descoperite în Dobrogea (sec. VI–VII)*, Pontica 45 (2012), p. 617–635.

CUSTUREA 2019a – G. Custurea, *Circulația monedei bizantine în Dobrogea (sec. VI–VIII)*, Constanța.

CUSTUREA 2019b – G. Custurea, *Câteva repere cronologice privind circulația monetară în Dobrogea în sec. X–XI*, Pontica 52 (2019), p. 333–347.

CUSTUREA 2019c – G. Custurea, *Două noi capace de teriac descoperite pe teritoriul Dobrogei*, Pontica 52 Supplementum VI (2019), p. 431–443.

CUSTUREA 2020 – G. Custurea, *Date noi privind ponduri antice și medievale târzii descoperite în Dobrogea*, Pontica 53 (2020), p. 483–490.

CUSTUREA, VERTAN, TALMAȚCHI 1997 – G. Custurea, A. Vertan, G. Talmațchi, *Descoperiri monetare în Dobrogea (XI)*, Pontica 30 (1997), p. 371–387.

CUSTUREA,VERTAN, TALMAȚCHI 1998 – G. Custurea, A. Vertan, G. Talmațchi, *Descoperiri monetare în Dobrogea (XII)*, Pontica 31 (1998), p. 309–328.

CUSTUREA, VERTAN, TALMAȚCHI 1999 – G. Custurea, A. Vertan, G. Talmațchi, *Descoperiri monetare în Dobrogea (XIII),* Pontica 32 (1999), p. 347–365.

CUSTUREA, CLIANTE 2006 – G. Custurea, Tr. Cliante, *Monede bizantine descoperite în Dobrogea (sec. VI–VII p.Chr.)*, Pontica 39 (2006), p. 423–434.

CUSTUREA, PARASCHIV-TALMAȚCHI 2011 – G. Custurea, Cristina Paraschiv-Talmațchi, *Small crosses from the Byzantine Period discovered on the Danube-Pontic territory*, Études Byzantines et Post-Byzantines 6 (2011), p. 135–148.

CUSTUREA, ADAMESCU 2013 – G. Custurea, L. Adamescu, *Noi descoperiri de monede bizantine în Dobrogea (sec. IX–XIII)*, Pontica 46 (2013), p. 491–513.

CUSTUREA, PARASCHIV-TALMAȚCHI 2016 – G. Custurea, Cristina Paraschiv-Talmațchi, *Piese creștine descoperite în Dobrogea*, în: A. Panaite, R. Cîrjan, C. Căpiță (eds.), *MOESICA ET CHRISTIANA. Studies in Honour of Professor Alexandru Barnea*, Brăila, 2016, p. 445–454.

CUSTUREA, VELTER 2017 – G. Custurea, A. M. Velter, *Monede medievale și moderne descoperite în Dobrogea (1223–1872)*, Pontica 50 (2017), p. 573–631.

DIACONU 1970 – P. Diaconu, *Les Petchenegues au Bas-Danube*, București, 1970.

DIMIAN 1957 – I. Dimian, *Câteva descoperiri monetare bizantine pe teritoriul RPR*, Studii și Cercetări de Numismatică 1 (1957), p. 189–216.

FLORESCU 1986 – R. Florescu, *Limesul dunărean bizantin în vremea dinastiilor isauriani și macedoneană*, Pontica 19 (1986), p. 171–177.

IACOB 2009 – M. Iacob, *La circulation monétaire à (L)Ibida (Scythia Mineure) du V*e *siècle au début du VII* e, în: M. Wolosyn (ed.), *Byzantin Coins in Central Europe between the 5*th *and 10*th *Century* Moravia Magna. Seria Polona, III, Krakov, 2009, p. 61–79.

MADGEARU 2011 – A. Madgearu, *Istoria militară a Daciei post-romane 275–614*, Târgoviște, 2011.

MĂNUCU-ADAMEȘTEANU 2001 – Gh. Mănucu-Adamești eanu, *Istoria Dobrogei în perioada 969–1204. Contribiții arheologice și numismatice*, București, 2001.

MĂNUCU-ADAMEȘTEANU 2017a – Gh. Mănucu-Adamești eanu, *Monede bizantine descoperite în Dobrogea. 2. Monede bizantine descoperite în nordul Dobrogei. Secolele VII–XIII*, București, 2017.

MĂNUCU-ADAMEȘTEANU 2017b – Gh. Mănucu-Adamești eanu, *Monede bizantine descoperite în Dobrogea. 4. Monede bizantine descoperite la Isaccea,județul Tulcea. Secolele IX–XI*, București, 2017.

MĂNUCU-ADAMEȘTEANU 2019 – Gh. Mănucu-Adamești eanu, *Monede bizantine descoperite în Dobrogea. 9. Monede bizantine descoperite în nordul Dobrogei. Secolele XII–XIII (1195–1261)*, București, 2019.

OBERLANDER-TÂRNOVEANU 2018 – E. Oberlander-Târnoveanu, *Tezaure monetare bizantine din colecția Muzeului Național de Istorie a României.Volumul II.Secolele VII–XIII*, București, 2018.

POENARU-BORDEA, OCHEȘEANU, POPEEA 2004 – Gh. Poenaru-Bordea, R. Ocheșeanu, Al. Popeea, *Monnaies byzantines du Musée de Constanța (Roumanie)*, Wetteren, 2004.

POPESCU, IACOB 2016 – A. Popescu, M. Iacob, *Monede romane și bizantine timpurii descoperite la Noviodunum din colecția Muzeului de Istorie și Arheologie Tulcea*, Iași, 2016.

VERTAN, CUSTUREA 1981 – A. Vertan, G. Custurea, *Descoperiri monetare în Dobrogea (III)*, Pontica 14 (1981), p. 331–356.

VERTAN, CUSTUREA 1982 – A. Vertan, G. Custurea, *Descoperiri monetare în Dobrogea (IV)*, Pontica 15 (1982), p. 276–292.

VERTAN, CUSTUREA 1986 – A. Vertan, G. Talmațchi, *Descoperiri monetare în Dobrogea (VII)*, Pontica 19 (1986), p. 297–308.

VERTAN, CUSTUREA 1995–1996 – A. Vertan, G. Talmațchi, *Descoperiri monetare în Dobrogea (X)*, Pontica 28–29 (1995–1996), p. 309–328.

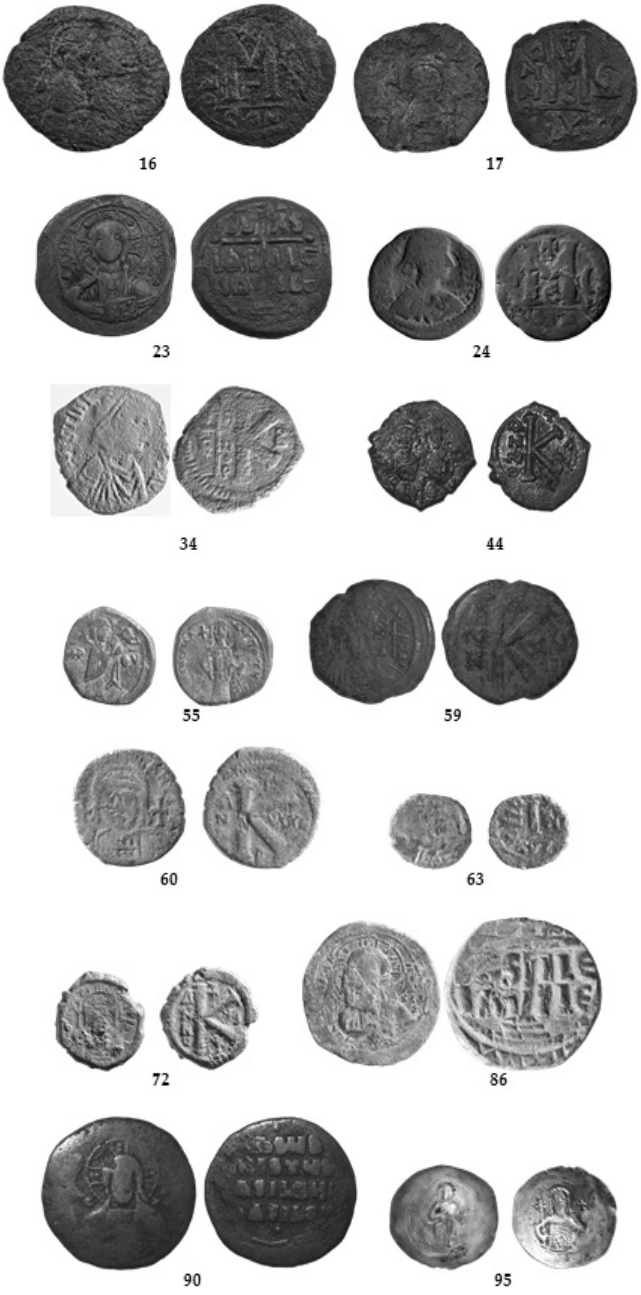


Fig. 1. Monede bizantine descoperite pe teritoriul Dobrogei.

MONEDE RARE ȘI MAI PUȚIN CUNOSCUTE DIN COLECȚIA MUZEULUI DE ISTORIE NAȚIONALĂ ȘI ARHEOLOGIE DIN CONSTANȚA

Ana-Maria VELTER[*]
Gabriel CUSTUREA[**]

Cuvinte-cheie: *dinari de Tours, state cruciate, numismatică medievală.*
Keywords: *dinars of Tours, crusader states, medieval numismatics.*

Rezumat: *Autorii prezintă câteva monede emise de conducătorii statelor cruciate apărute în Grecia în urma Cruciadei a IV-a. Acestora li se adaugă o emisiune a Ordinului Cavalerilor Ospitalieri de Rhodos. Nu poate fi exclusă ipoteza descoperirii lor pe teritoriul dobrogean.*

Abstract: *The authors present some coins issued by the leaders of the Crusader states that appeared in Greece after the IV*[th] *Crusade. They are also accompanied by an issue of the Order of the Knights Hospitaller of Rhodes. The hypothesis of their discovery in Dobrudjan territory cannot be ruled out.*

În urmă cu două decenii am adunat și publicat un număr de 195 monede care nu sunt specifice circulației monetare din țara noastră și, în special, din Dobrogea[1]. Prin aceste rânduri am decis să prezentăm pentru cei interesați câteva piese numismatice mai puțin obișnuite arealului nostru, cu scopul de a face cunoscut patrimoniul muzeului constănțean.

CATALOG

1. ORDINUL CAVALERILOR OSPITALIERI RHODOS

Roger de Pins (1355–1365)
Av. + F. ROGIERIVS: D. PINIBVS Θ D Θ GRAM
Rv. + OSPITAL . S . IhS Θ IRLNI . QT ◦ RODI:
AR; →; Gigliato; 3,74 g; 28 mm; perforată.
Rhodos, f. A. (1355–1365),

[*] Ana-Maria VELTER: Cercetător independent; e-mail: baba.velter@gmail.com.
[**] Gabriel CUSTUREA: Centrul de Studii ale Civilizațiilor Mării Negre, Constanța; e-mail: custurea@gmail.com.

[1] VELTER, CUSTUREA 2003.

SCHLUMBERGER 1878, p. 249–250, tip 2, pl. IX, nr. 21,
Passim, MINAC, inv. 54.834; **Fig. 1**, nr. 1.

2. DUCATUL DE ATHENA
Guillaume I de la Roche (1280–1287)
Av. +: G: DVX. ATEИES
Rv. +: ThEBE: CIVIS:
Bill; ←; Dinar tournois; 0,85 g; 19 mm.
Theba, f. a. (1280–1287)
METCALF 1995, nr. 1058; SCHLUMBERGER 1878, p. 338.
Passim, MINAC, inv. 56.711; **Fig. 1**, nr. 2.

3. PRINCIPATUL LATIN DE ACHAIA
Carol I sau II de Anjou (1278–1285–1289)
Av. + • K • PRINC' Ach.
Rv. +: DE: CLΛRENTIΛ:
Bill; ↑; Dinar tournois; 0,83 g; 19 × 16,5 mm.
Glarentza (Clarentia), f. a. (1278–1285–1289)
METCALF 1995, p. 942–945; SCHLUMBERGER 1878, pl. XII, nr. 19.
Passim, MINAC, inv. 59.876; **Fig. 1**, nr. 3.

4. PRINCIPATUL LATIN DE ACHAIA
Florent de Hainaut (1289–1297)
Av. + FLORENS P: Ach
Rv. + D'CLARENCIA
Bill; ↗; Dinar tournois; 0,80 g; 19 × 16,5 mm.
Glarentza (Clarentia), f. a. (1289–1297),
METCALF 1995, p. 958; SCHLUMBERGER 1878, p. 315.
Passim, MINAC, inv. 56.710; **Fig. 1**, nr. 4.

5. DESPOTATUL LATIN DE EPIR
Filip de Tarent (1294–1313)
Av. + frunză PhS. P. TΛR DESP crin.
Rv. + ⁺NEPΛNTI CIVIS.
Bill; ↘; Dinar tournois; 0,77 g; 18,5 × 16,5 mm.
Lepando, f. a. (1294–1313),
METCALF 1995, p. 1105–1112.
Passim, MINAC, inv. 59.877; **Fig. 1**, nr. 5.

6. DESPOTATUL LATIN DE EPIR
Giovanni II Orsini (1323–1335)
Av. + (IO)Hs. DESPOTVS
Rv. + (D)E ARTA . C(ASTRV)
AE argintat; ↗; Dinar tournois; 0,88 g; 16,5 × 14,5 mm.
Castelul Arta f. a. (1323–1335)
METCALF 1995, p. 1136; SCHLUMBERGER 1878, p. 375.

Passim, MINAC, inv. 62.128; **Fig. 1**, nr. 6.

*

Monedele prezentate sunt de tipul dinarilor touronezi (dinar de Tours) după modelul francez[2], dintre care am publicat recent trei exemplare[3]. Piesele au fost emise de către conducătorii *franci* ai senioriilor grecești[4]. Ele sunt bătute la Theba, Glarentza[5], Lepanto și Arta. Astfel de monede au fost descoperite doar la Silistra[6] și Păcuiul lui Soare[7], cele două centre reprezentând limita nordică a răspândirii acestor nominaluri, cel puțin până în prezent[8]. La cele două localități putem adăuga și descoperirea de la Saraiu unde recent a apărut un sigiliu aparținând unui senior franc[9].

În ceea ce privește moneda cavalerilor ospitalieri și aici avem descoperiri similare de la Silistra. Aici a fost descoperit în anul 1957 un tezaur, din care s-au recuperat 40 de gigliati emiși de Ordinul Cavalerilor Ospitalieri din Rhodos și alte posesiuni *france*, ascuns probabil la sfârșitul secolului al XIV-lea, în condițiile presiunii otomane tot mai insistente în zona Dunării de Jos[10]. Nu putem exclude nici ipoteza prezenței acestor emisiuni în legătură cu participarea cavalerilor occidentali la Cruciada antiotomană de la Nicopole.

Din păcate nu există informații privind locul descoperirii acestor monede, informații care ar fi putut să ofere date suplimentare referitoare la circulația bănească din zonă.

BIBLIOGRAFIE

CECCHINATO 2011 – R. Cecchinato, *Il denaro tornese della Grecia franca*, pdf, http://numismatica-italiana.lamoneta.it >201112, accesat la 14.06.2023.

CHIRIAC, BILAVSCHI 2017 – C. Chiriac, G. Bilavschi, *O mărturie sigilografică privind prezența cruciaților la Dunărea de Jos*, Istros 23 (2017), p. 431–463.

CUSTUREA, TALMAȚCHI 2011 – G. Custurea, G. Talmațchi, *Repertoriul tezaurelor monetare din Dobrogea*, Constanța, 2011.

CUSTUREA, VELTER 2017 – G. Custurea, A-M. Velter, *Monede medievale și moderne descoperite în Dobrogea (1223–1878)*, Pontica 50 (2017), p. 573–631.

ENGEL, SERRURE 1894 – A. Engel, R. Serrure, *Traite de numismatique du Moyen Age tome II-eme. Depuis la fin de l'époque carolingienne jusqu'à l'apparition du gros d'argent*, Paris, 1894.

ILIESCU 1977 – O. Iliescu, *Monede medievale și moderne descoperite la Păcuiul lui Soare în*

[2] ENGEL, SERRURE 1894, p. 369.

[3] VELTER, CUSTUREA 2003, p. 159, nr. 4, 5; CUSTUREA, VELTER 2017, p. 601, nr. 151.

[4] CECCHINATO 2011.

[5] Înființat de Guillaume de Villehardouin orașul Glarentza (gr.)-Clarencia (lat), Chiarenza (it)-lângă localitatea actuală Kyllini din vestul Peloponesului, a fost o așezare prosperă care a decăzut și a fost părăsită în secolul al XVI-lea, sub stăpânirea otomană.

[6] OBERLANDER-TÂRNOVEANU 1989, p. 148.

[7] ILIESCU 1977, p. 155, nr. 10, 11; precizări la OBERLANDER-TÂRNOVEANU 1989, p. 148, n. 149.

[8] Un mic depozit cuprinzând emisiuni *france* a fost descoperit în 1980 la Elhovo (Bulgaria), cf. JURUKOVA 1982, p. 65.

[9] CHIRIAC, BILAVSCHI 2017, p. 431–463.

[10] CUSTUREA, TALMAȚCHI 2011, p. 332, nr. XVIII.

anii 1956–1974, în: P. Diaconu, S. Baraschi, *Păcuiul lui Soare.Așezarea medievală (secolele XIII–XV) II*, București, 1977.

JURUKOVA 1982 – J. Jurukova, *Monetnite nahodki, otkriti v Balgariia prez 1980 g.*, Arheologiia 24/1 (1982), p. 62–65.

METCALF 1995 – D. M. Metcalf, *Coinage of the Crusades and the Latin East*, Oxford, 1995.

OBERLANDER-TÂRNOVEANU 1989 – E. Oberlander-Târnoveanu, *Monedele Asăneștilor în contextul circulației monetare din zona Gurilor Dunării*, în: E. Stănescu (coord.), *Răscoala și statul Asăneștilor*, București, 1989, p. 114–152.

SCHLUMBERGER 1878 – G. Schlumberger, *Numismatique de l'orient latin*, Paris, 1878.

VELTER, CUSTUREA 2003 – A. M. Velter, G. Custurea, *Europa Evului Mediu Timpuriu și de Mijloc văzută prin monede*, Cluj-Napoca, 2003.



Fig. 1. Monede emise de Ordinul Cavalerilor Ospitalieri de Rhodos și de către conducători ai statelor cruciate apărute în Grecia în urma Cruciadei a IV-a.

RELAȚIA DINTRE PODOABELE DACICE ȘI MONEDELE DE IMPORT PRIN PRISMA ANALIZELOR ELEMENTALE

Corina TOMA[*]
Lucian BARBU-TUDORAN[**]
Mihai MUNTEANU[***]

Cuvinte-cheie: *SEM/EDX, podoabe dacice, drahme, denari, îmbogățirea cu argint a suprafeței, aliaje reciclate.*

Keywords: *SEM/EDX, Dacian jewellery, drachms, denarii, surface enrichment silver, recycled alloys.*

Rezumat: *Articolul prezintă rezultatele analizelor SEM/EDX efectuate asupra unor piese de podoabă dacice, drahme illire și denari romani republicani din tezaurul descoperit la Drăgești (jud. Bihor). Măsurătorile SEM/EDX indică pentru piesele de podoabă aliaje cu compoziții diferite: un aliaj cu un conținut ridicat de argint, în care cuprul se situează sub 5%, plumbul sub 1% și fără staniu (pentru brățări) și un aliaj neobișnuit argint-cupru-staniu-plumb (pentru zalele de lanț). Măsurătorile făcute pentru piesele de podoabă păstrate fragmentar arată că rezultatele obținute la suprafața pieselor diferă de compoziția miezului chiar și în cazul acestor aliaje cu standard de finețe ridicat (< 96% Ag în analize de suprafață).*

Scopul cercetării arheometalurgice îl constituie identificarea originii aliajului de argint folosit pentru producerea pieselor de podoabe dacice. Pentru drahmele de Apollonia și Dyrrhachium (originale, imitații și falsuri) au fost folosite și rezultatele măsurătorilor obținute prin metodele PIXE și XRF. Aceste măsurători au demonstrat că drahmele prezintă o diversitate remarcabilă: a) emisiuni „originale" din aliaj de argint cu un conținut variabil (70–93% Ag), în care cuprul este adăugat în mod deliberat; b) drahmele placate care au fost fabricate prin atașarea unui strat de argint înalt pe suprafața unui miez de cupru (și staniu) și c) falsuri din bronz sau staniu. Denarii romani republicani cu un conținut ridicat de argint (96–99%) prezintă compoziții relativ uniforme pentru elementele însoțitoare precum Cu, Au și Pb.

Abstract: *In this paper we present the SEM/EDX analyses results performed on several Dacian silver jewellery, Illyrian drachms and Roman Republican denarii) from Drăgeşti*

[*] Corina TOMA: Muzeul Țării Crișurilor Oradea-Complex Muzeal; e-mail: corinatoma00@yahoo.com.

[**] Lucian BARBU-TUDORAN: Institutul Național de Cercetare și Dezvoltare pentru Tehnologii Izotopice și Moleculare, Cluj-Napoca; e-mail: lucianbarbu@yahoo.com.

[***] Mihai MUNTEANU: Universitatea Tehnică din Cluj-Napoca; e-mail: mihai.munteanu@ethm.utcluj.ro.

hoard (Bihor County). The SEM/EDX analysis shows that the Dacian jewellery have different alloy compositions: a high-silver alloy with less than 5% cooper, less than 1% lead and no tin (for the bracelets) and an unusual silver-cooper-tin-lead alloy (for the chain). Measurements carried out for the fragmented ornament pieces show that the results of the surface differ from the original bulk composition even for these high silver alloys (< 96% Ag in surface analyses).

The purpose of archaeometallurgical research is the origin of the silver alloy used in Dacian jewellery production. For the Illyrian drachms (genuines, imitations and forgeries) we also used compositional data measured by PIXE and XRF methods. These measurements demonstrated that drachms come in a remarkable diversity: a) the „genuine" drachms with a varying silver alloy content (93–70% Ag), the copper being deliberately added to the alloy; b) the plated drachms which have been manufactured by attaching a high-silver layer onto the surface of a copper (and tin) core and c) forgeries made out of bronze or tin. The Roman Republican Denarii with a hight content of silver (96–99%) show relatively uniform compositional profiles of elements like Cu, Au and Pb.

1. Introducere

Relația dintre monedele de import (*i.e.* tetradrahmele Macedoniei Prima și cele de Thasos, drahmele de Dyrrhachium și Apollonia, denarii romani republicani) și fenomenul orfevreriei dacice este un subiect de discuție mai vechi. Cele două categorii de piese apar, adeseori, împreună în tezaure. Ipoteza că monedele au servit ca sursă de materie primă pentru producerea podoabelor este esențială, căci, atunci, începutul orfevreriei este condiționat de pătrunderea monedelor în Dacia preromană.

> *„La confecționarea podoabelor meșterii argintari daci foloseau, în cele mai multe cazuri, argint de foarte bună calitate (…). O întrebare firească se pune în legătură cu sursele de argint și anume, de unde au procurat dacii din acest teritoriu, materia primă?*
> *Multe din tezaurele amintite în repertoriu sînt mixte, adică conținând deopotrivă și monete și podoabe (...), sau sînt găsite separat, dar în locuri totuși foarte apropiate (...). Acest fapt ni se pare elocvent pentru a vedea în monedele antice de tipul celor amintite cel puțin una din sursele de materie primă.*
> *Nu ar fi exclus ca o parte din argintul necesar să fi fost adus din zonele miniere cunoscute, turnat în prealabil sub forma unor bare. Cunoaștem faptul că se foloseau la manufacturarea podoabelor asemenea bare, cel puțin după cum reiese din descoperirile de la Pecica, Stăncuța, Surcea, Tășad. Firește un răspuns mulțumitor nu vom putea obține numai după efectuarea analizelor tuturor tezaurelor de monede și podoabe"*[1].

sau

> *„De un interes particular ar fi cunoașterea cît mai exactă a titlului argintului din respectivele monede* (*n.n.* drahmele de Dyrrhachium și Apollonia) *și din imitațiile lor. Ar mai fi de adăugat faptul că circa 30 de tezaure mixte din Dacia cuprinzând și astfel de monede mai cuprind și obiecte de podoabă sau vase de argint, obținute se pare din topirea monedelor. Ele sunt un indiciu al modului în care era folosită cu precădere moneda de argint în Dacia secolului I î.Hr.: ca sursă de metal prețios, acumulat ca atare sau transformat în*

[1] CHIDIOȘAN 1977, p. 69.

obiecte de prestigiu (...). Este verosimil însă, așa cum ne arată unele tezaure, că o parte a monedelor respective – cele cu greutate mică și deci cu valoare intrinsecă mai scăzută – să fi fost utilizată și în tranzacții comerciale sau de altă natură"[2].

Reciclarea monedelor în vederea confecționării podoabelor este plauzibilă, însă analizele elementale menite a elucida proveniența argintului din podoabele dacice (*i.e.* exploatarea minereurilor transilvănene și/sau reciclarea monedelor de import) sunt puține și nu suficient de concludente. Ca indiciu indirect al exploatării minereurilor transilvănene, nedocumentată arheologic, au fost invocate imitațiile monetare de tip greco-macedonean atribuite fazei târzii a monetăriei locale din Dacia (scyphatele dacice), bătute dintr-un aliaj argint/cupru puternic depreciat ce ar ilustra o criză a argintului declanșată de epuizarea filoanelor de suprafață și limitarea accesului la minereuri sărace în argint[3].

Cronologiile propuse de către numismați și arheologi pentru scyphatele dacice și piesele de podoabă se suprapun (*i.e.* ultimul sfert al secolului II a.Chr. și primul sfert al secolului I a.Chr.), dar cele două categorii de obiecte, produse din aliaje cu standarde de finețe diferite, nu se asociază în tezaure și suprapunerea cronologică a fost trecută cu vederea. Paradoxal, debutul fenomenului orfevreriei dacice a fost fixat după încetarea baterii scyphatelor, dar nu înainte de pătrunderea tetradrahmelor thasiene[4].

Prin urmare, cronologia pieselor de podoabă este legată de datările materialului numismatic care, în cazul monedei de import, vine cu două momente distincte, problematice și adeseori confundate: momentul baterii și cel al pătrunderii lor în Dacia. Separarea celor două momente și rezultatele cercetării numismatice asupra afluxului monedelor străine obținute în ultimele decenii determină coborârea semnificativă a cronologiilor tradiționale, cu impact direct asupra debutului și etapizării fenomenului orfevreriei dacice. În dezbatere sunt două scheme tipo-cronologice: una tripartită, mai lungă ca durată (150/125 a.Chr.–25/30 p.Chr.)[5] și alta bipartită, cu o durată mult scurtată (75 a.Chr.–25 p.Chr.)[6]. Ambele scheme sunt construite pe datările mai vechi sau mai noi propuse pentru afluxul monedelor străine în Dacia. Relația dintre podoabe și scyphatele dacice nu este inclusă în dezbatere, deși cronologia scyphatelor – prin caracteristicile pastilei monetare, împrumuturile iconografice și asocierea în tezaure cu tetradrahmele Macedoniei Prima – este condiționată, de asemenea, de monedele de import.

Dacă cronologiile numismatice ce coboară cu mai bine de o jumătate de secol afluxul monedelor de import în Dacia (în special, al tetradrahmelor Macedoniei Prima și a celor de Thasos) sunt corecte, atunci impactul asupra datării fenomenului orfevreriei dacice este drastic și implică problema scyphatelor dacice, apropiind cronologic cele două fenomene: baterea imitațiilor monetare locale și producția podoabelor. Există însă o condiție: monedele străine să fie într-adevăr

[2] CONOVICI 1992, p. 64.

[3] CHIRILĂ, LUCĂCEL 1970, p. 8–9; DAICOVICIU 1972, p. 182; CHIRILĂ, CHIFOR 1979, p. 70; CHIRILĂ, HUREZAN, BARBU 1987, p. 57 și urm.

[4] HOREDT 1973, p. 147–152.

[5] HOREDT 1973, p. 151; RUSTOIU 2020, p. 11–38.

[6] SPÂNU 2019, p. 167–206.

sursa de materie primă și afluxul lor în Dacia preromană să provoace (sau să contribuie) la debutul producției.

2. Metoda de analiză SEM/EDX și eșantionul de lucru

Analizele de microscopie electronică cu baleiaj au fost efectuate în *Laboratorul Integrat Microscopie Electronică* al *Institutului Național de Cercetare și Dezvoltare pentru Tehnologii Izotopice și Moleculare* din Cluj-Napoca, cu un aparat Hitachi CFEG SEM tip SU8320 HR (Japonia), iar determinarea compoziției elementale (prin metoda spectroscopiei de raze X cu dispersie de energie) s-a realizat cu ajutorul unui detector EDX de la Oxford Instruments (Marea Britanie)–80 Xmax.

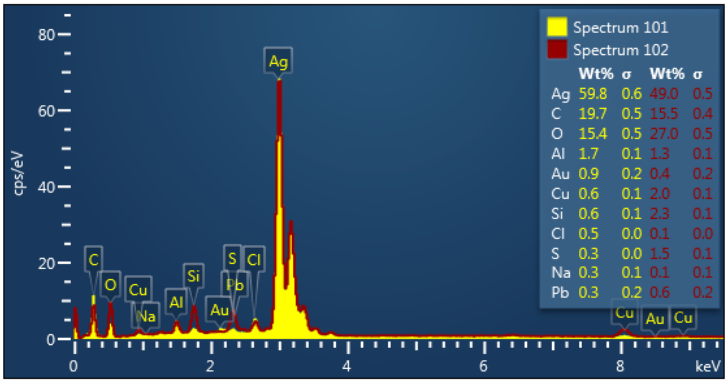


Fig. 1. Brățara din bară torsionată din tezaurul de la Drăgești (jud. Bihor): rezultatele măsurătorilor efectuate la suprafață (Spectrum 101) și în miez (Spectrum 102) înainte de eliminarea contaminărilor.

Analiza elementală SEM/EDX este o analiză calitativă și semi-cantitativă[7] cu o marjă de eroare în jurul valorii de 1%, ceea ce face ca limitele de detecție pentru elementele urmă să fie destul de slabe. Dar, pe lângă faptul că este foarte rapidă, cuplarea cu un microscop electronic cu baleiaj oferă posibilitatea asocierii detaliilor morfologice de suprafață, furnizate de imaginile de înaltă rezoluție, cu compoziția elementală a zonei respective[8]. Astfel, se poate decela ușor prezența unor contaminări în zonele declive (Al, Si, Fe, Ca-elemente specifice pământului și prafului, **Fig. 1**) sau chiar variații ale raportului Ag/Cu în zone cu uzură accentuată. Marele avantaj al acestei metode îl constituie faptul că probele nu necesită nicio preparare, fiind o tehnică complet neinvazivă pentru obiecte de patrimoniu cu o suprafață de până la 100 cm^2.

Studiul morfologic și elemental a vizat un eșantion mai larg format din podoabe dacice din argint și monede (tetradrahme thasiene, drahme illire și denari romani republicani) din colecția Muzeului Țării Crișurilor din Oradea. Articolul de față

[7] În măsurătorile de suprafață, unele elemente (*e.g.* plumbul sau staniul) pot să apară ca fiind mai abundente, altele mai sărace decât cantitățile reale.

[8] Pentru avantajele și dezavantajele metodei SEM/EDX *vezi* LINKE, SCHREINER, DEMORTIER 2004, p. 173.

prezintă rezultatele obținute pentru piesele selectate din tezaurul găsit la Drăgești (jud. Bihor), localitate situată la c. 25 km sud-est de Oradea, în apropierea cetății dacice de la Tășad[9]. Nota specifică a tezaurului de la Drăgești este dată de asocierea pieselor de podoabă dacice (fibule cu noduri, brățări și lanțuri din zale de sârmă) cu drahme de Dyrrhachium și Apollonia (originale și imitații) și cu denari romani republicani.

Pentru un eșantion reprezentativ (în raport cu repertoriul podoabelor dacice), având în vedere că cercetarea a inclus tezaurele de la Sacalasău Nou și Tășad (jud. Bihor), în care fibulele cu noduri ilustrează întregul ciclu de producție (de la faza în curs de prelucrare la forma finită), din tezaurul de la Drăgești au fost selectate fragmente din cele două brățări, o verigă de lanț, o drahmă de Apollonia și doi denari romani republicani (**Pl. 1**).

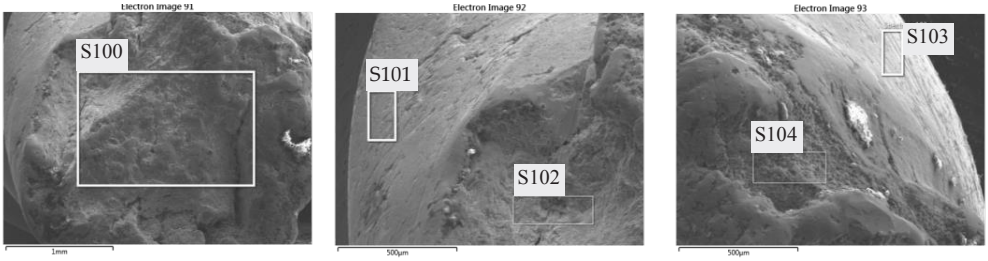
3. Rezultate și discuții

a. *Pieselor de podoabă dacice din tezaurul de la Drăgești (jud. Bihor)*

a.1. Brățara din bară torsionată (**Pl. 1/3**)

Greutatea: 24,21 g; Grosimea max. a barei: 3,1 × 3,2 mm.

Brățară obținută dintr-o bară pătrată în secțiune, obținută prin batere și incizată pe fiecare latură înaintea torsionării. La capete, bara aplatizată formează o buclă, decorată prin poansonare. Brățara a fost ruptă de către descoperitori.



Brățară bară de la Drăgești (inv. 10156)	Măsurători	wt (%)*				
		Ag	Cu	Sn	Pb	Au
	EM 91 Spectrum 100	92,7	5,8	-	1,0	0,5
	EM 92 Spectrum 102	94,4	3,7	-	1,1	0,8
	EM 93Spectrum 104	94,0	4,8	-	0,7	0,5
	Miezul piesei (media)	**93,7**	**4,7**	**-**	**0,9**	**0,6**
	EM 92 Spectrum 101	97,4	0,9	-	0,4	1,3
	EM 93 Spectrum 103	95,8	1,6	-	-	2,6
	Suprafața piese (media)	**96,6**	**1,2**	**-**	**0,2**	**1,9**

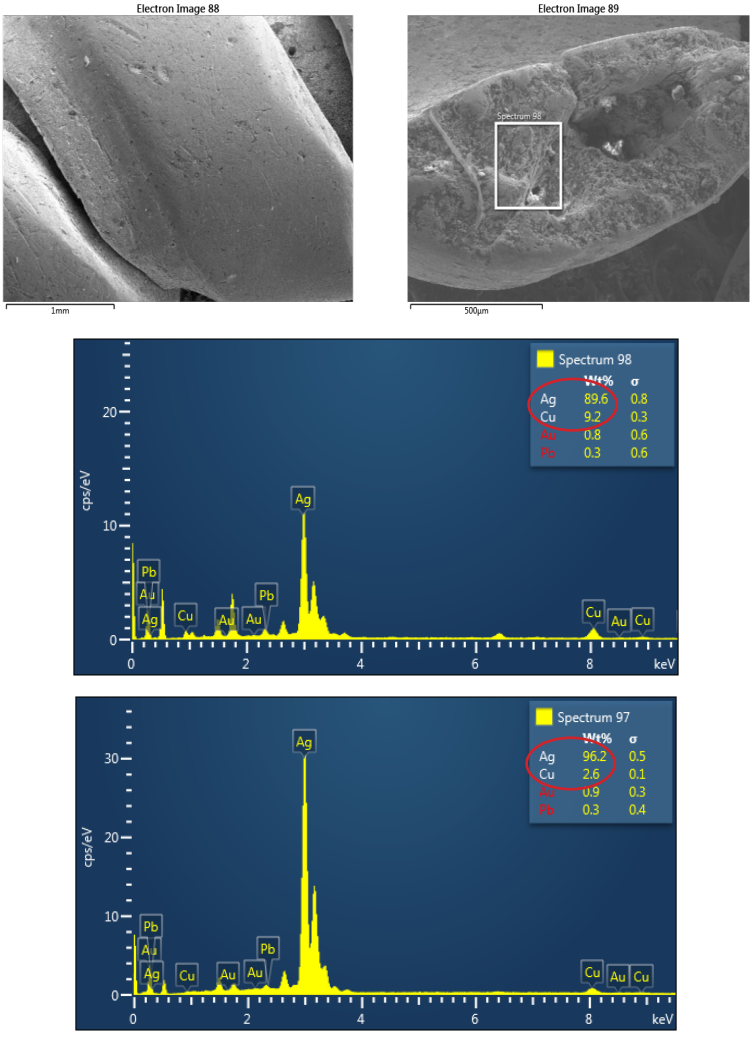
* Wt% (weight percentage) este procentul de masă calculat din masa totală analizată.

Fig. 2. Drăgești-brățara torsionată: imagini SEM și compoziția elementală a zonelor respective.

[9] CHIDIOȘAN *et alii* 1978, p. 27–50; SĂȘIANU 1980, p. 122–124/49; MOISIL, DEPEYROT 2003, p. 29/6; TOMA 2013a, p. 331–333.

Pentru brățara din bară torsionată au fost efectuate cinci măsurători care au vizat atât suprafața, cât și miezul piesei (**Fig. 2; Pl. 2**). Măsurătorile indică, în funcție de zona investigată, fluctuații de câteva procente ale conținutului de Ag (92–97%) și Cu (0,9–5,8%), adeseori pierdute din vedere, căci, potrivit uzanțelor, pentru identificarea aliajului se recurge la calculul valorilor medii.

Într-o oarecare măsură, oscilațiile pot fi puse pe seama neomogenității aliajului Ag/Cu, dar în cazul brățării de la Drăgești, ruptă din vechime, investigațiile arată o creștere de câteva procente a cantității de argint în măsurătorile de la suprafața piesei, comparativ cu cele înregistrate în interiorul barei torsionate (**Fig. 2**). Diferențele nu sunt foarte mari, dar s-a observat că neconcordanța dintre suprafață și miez se repetă în cazul măsurătorilor făcute pentru o altă piesă păstrată fragmentar: veriga de prindere a pandantivului-cui din tezaurul de la Oradea „Sere" (jud. Bihor) (**Fig. 3**).



Veriga de la Oradea (inv. 6457-1)	Măsurători	wt (%)				
		Ag	Cu	Sn	Pb	Au
	EM 86 Spectrum 95	95,2	3,3	-	0,6	0,9
	EM 87 Spectrum 96	95,5	2,2	1,0	0,4	0,8
	EM 88 Spectrum 97	96,2	2,6	-	0,3	0,9
	EM 90 Spectrum 99	96,2	2,5	-	0,6	0,7
	Suprafața piesei	**95,7**	**2,6**	**0,2**	**0,4**	**0,8**
	EM 89 Spectrum 98 (Miezul piesei)	89,6	9,2	-	0,3	0,8

Fig. 3. Oradea „Sere"-veriga de prindere a pandantivului-cui: imagini SEM și compoziția elementală a zonelor respective.

Detaliile morfologice din interiorul piesei surprinse cu ajutorul microscopului electronic și analizele elementale punctuale infirmă, pentru brățara din bară torsionată din tezaurul de la Drăgești, ipoteza unei piese „cu miez și înveliș" propusă în urmă cu un deceniu[10]. „Miezul" observat în imaginile microscopice este rezultatul modificărilor apărute în structura barei în urma operațiunilor la care a fost supusă piesa în timpul manufacturării (batere, torsionare ș.a.) și diferențele de compoziție dintre suprafață și miez nu pot fi explicate prin utilizarea unor aliaje diferite.

Procentele mai mari de argint din măsurătorile de suprafață sugerează *fenomenul îmbogățirii suprafeței piesei* prin dispariția parțială a cuprului în urma procesului de oxidare[11]. Fenomenul a fost observat în special pentru piese realizate din aliaje argint/cupru cu un conținut de Ag < 80%, căci în cazul în care procentul de argint crește în defavoarea cuprului piesele sunt mai puțin afectate și diferențele compoziționale dintre miez și înveliș se reduc. La baza fenomenului stau diverse cauze: alternarea proceselor de batere și recoacere din timpul producției, posibilele tratamente aplicate în faza de post-producție, coroziunea din perioada îngropării sau operațiunile de conservare de după descoperire ce duc la dispariția parțială a cuprului de la suprafață[12]. Potrivit studiilor, adâncimea la care se produce îmbogățirea cu argint variază în funcție de compoziția aliajului (zeci sau sute de microni), dar analizele de suprafață SEM/EDX sau XRF efectuate la adâncimi mult prea mici nu permit traversarea zonei afectate și investigarea miezului care reflectă compoziția originală a aliajului.

Diferențele sesizate în cazul celor două piese de podoabă dacice, a căror stare de conservare a permis analiza în profunzime, sugerează posibilitatea ca fenomenul îmbogățirii cu argint a suprafeței să fie măsurabil și în cazul aliajelor argint/cupru bogate în Ag (≥ 90%)[13] și finețea reală a argintului să fie dată de compoziția miezului.

[10] Vezi TOMA 2013b.

[11] MOUREY 1998, p. 10–13.

[12] CONDAMIN, PICON 1965, p. 110–114; LINKE, SCHREINER, DEMORTIER 2004, p. 172–178; BECK *et alii* 2004, p. 153–162; GIUMILIA-MAIR 2005, p. 35–43; BECK *et alii* 2008, p. 2320–2324; MORENO-SUÁREZ *et alii* 2015, p. 93–97 ș.a.

[13] În studiile de arheometrie realizate pentru piesele de podoabă dacice prin metoda Fluorescenței de Raze X s-a pornit de la premisa că pentru piesele cu peste 90% argint, compoziția înregistrată la suprafața este identică cu compoziția miezului (*Proiect de cercetare. Studii de arheometalurgie pe Aurul și Argintul Dacic folosind metode performante de Spectometrie de Raze X. Faza 5: Caracterizarea arheo-metalurgica a monedelor de argint de tip Geto-Dacic Extra-Carpatice și Transilvane*,

În compoziția aliajului întrebuințat pentru confecționarea brățării din bară torsionată apar aurul și plumbul, metale care se corodează greu, însă măsurătorile avute la dispoziție nu ne arată dacă plumbul, asemeni aurului, urmează soarta argintului[14].

a.2. Brățara din placă (Pl. 1/4)

Greutate: 8,69 g; Grosimea plăcii: 0,7 mm.

Brățară confecționată dintr-o placă de argint obținută prin batere pe un suport (ambutisare) și decorată prin poansonare.

Brățară din placă de la Drăgești (inv. 10157)	**Măsurători SEM/ EDX**	**wt (%)**				
		Ag	**Cu**	**Sn**	**Pb**	**Au**
	EM 94 Spectrum 105	95,0	3,5	-	0,9	0,5
	EM 95 Spectrum 106	94,2	3,7	-	1,1	1,0
	EM 96 Spectrum 107	95,8	2,8	-	1,2	0,3
	EM 97 Spectrum 108	93,7	5,5	-	0,3	0,5
	Valorile medii	**94,6**	**3,8**	**-**	**0,8**	**0,5**

Fig. 4. Drăgești-brățara din placă decorată: rezultatele măsurătorilor SEM/EDX.

Pentru brățările din tezaurul de la Drăgești confecționate prin tehnici diferite din aliaje argint/cupru bogate în argint (**Fig. 2**, **Fig. 4**; **Pl. 3**), măsurătorile nu indică explicit modificări intenționate ale compoziției chimice din rațiuni tehnologice, deși, în principiu, între proprietățile metalului și operațiunile de manufacturare sunt presupuse legături strânse. Procentele de Cu > 1% pot fi considerate un adaos deliberat menit să coboare punctul de topire al aliajului și să crească rezistența mecanică a brățărilor cu capete libere[15]. Urmele de aur și plumb sunt reziduuri din minereu sau, în cazul plumbului, resturi rămase în urma implicării lui în procesul de rafinare a argintului.

Analiza SEM/EDX nu a detectat staniul, dar măsurătorile efectuate prin metoda Fluorescenței de Raze X în cadrul programului ROMARCHAEOMET pentru piese de podoabă dacice prelucrate prin batere și torsionare sau ambutisare indică utilizarea unor aliaje argint/cupru care pot (sau nu) să conțină staniu[16]:

• *Argint aliat cu Cu*

---

citat în continuare CONSTANTINESCU *et alii* 2015). Studiile asupra aliajelor argint/cupru arată că fenomenul îmbogățirii suprafeței este măsurabil în cazul pieselor cu un conținut de Ag < 91,2% (BORGES *et alii* 2017, p. 103–111), dar nu a fost detectat pentru aliaje ce conțin 96–98% Ag (AGER *et alii* 2013, p. 241–244).

[14] Pentru comportamentul elementelor minore și al elementelor urmă vezi HRNJIĆ *et alii* 2020, p. 16–19.

[15] GUERRA 2000, p. 390, 393; MÖDLINGER, DRNIĆ, PICCARDO 2012, p. 1.345.

[16] Proiect PN-II–ID-PCE_2011_3_0078. *Studii de arheometalurgie pe Aurul și Argintul Dacic folosind metode performante de Spectometrie de Raze X. Raport științific pentru perioada octombrie 2011-octombrie 2016 (*citat în continuare CONSTANTINESCU *et alii* 2016*)* și *Caracterizarea arheo-metalurgică a podoabelor și toreuticii de argint dacice*. Comparația între valorile compoziționale ale aliajelor obținute prin metode diferite nu este recomandată, însă în cazul pieselor de podoabă dacice sunt singurele disponibile.

Colan placă de la Sărăcsău (jud. Alba): Ag 94,6%, Cu 2,8%, Au 0,6%, Pb 0,6%, Fe 0,4%[17].

• *Argint aliat cu bronz (Cu+Sn)*

Colan din bară netorsionată de la Sărăcsău (jud. Alba): Ag 90,4%, Cu 5,3%, Sn 2,4%, Au 0,7%, Pb 0,8%.

Colan din bară torsionată de la Slimnic (jud. Sibiu): Ag 94,1%, Cu 3,3%, Sn 1,2%, Au 0,6%, Pb+Bi 0,2%[18].

Brățară din sârmă de la Slimnic (jud. Sibiu): Ag 93,8%, Cu 3,4%, Sn 1,0%, Au 0,7%, Pb+Bi 0,6%[19].

Fără a exclude valori situate sub limita de detecție[20], rezultatele analizei SEM/EDX indică absența Sn din compoziția brățărilor de la Drăgești, adică utilizarea argintului aliat cu cupru.

a.3. Lanțul din zale nepliate (pl. 1/5)

Greutate: 21,28 g; Grosimea barei: 2,1x2,2 mm.

Lanț din verigi de forma cifrei opt realizate prin batere din sârme obținute prin trefilare.

Argintul aliat cu cupru și staniu apare în cazul lanțului din zale nepliate din tezaurul de la Drăgești, dar procentele ridicate de staniu și plumb sunt contrare intenției de a îmbunătăți calitățile aliajului (fig. 5; pl. 4). În mod obișnuit, aurul și plumbul sunt considerate elemente urmă, căci nu exista o metodă pentru separarea aurului, iar plumbul rămas depindea de calitatea procesului de cupelație.

Plumbul peste limita admisă pentru elementele urmă (Pb > 1%) a fost detectat în cadrul aceluiași set de analize SEM/EDX pentru alte două piese, dar și în cazul lotului de podoabe dacice investigate în cadrul programului ROMARCHAEOMET prin metoda Fluorescenței de Raze X:

• SEM/EDX: Pandantiv-cui de la Oradea „Sere" (jud. Bihor): Ag 81,6%, Cu 14,9%, Sn 0,6%, Pb 1,1%, Au 1,1%, Zn 0,4%.

• SEM/EDX: Fibula în curs de prelucrare de la Sacalasău Nou (jud. Bihor): Ag 97,6%, Cu 1,1%, Pb 1,1%.

• XRF: Fibula cu noduri de la Tilișca (jud. Sibiu): Ag 91,5%, Cu 2,8%, Sn 0,4%, Pb 1,3%, Au 0,6%, Fe 3,3%[21].

Plumbul influențează capacitatea de turnare prin creșterea fluidității aliajului, dar nu se adaugă în compoziția pieselor care trec prin batere, căci împiedică deformarea la rece, și nici în a celor care necesită flexibilitate și elasticitate[22]. Analizele

[17] CONSTANTINESCU *et alii* 2016: „Argint aliat cu ceva cupru din considerente mecanice".

[18] CONSTANTINESCU *et alii* 2016: „Argint balcanic (topire tetradrahme thasiene) aliat cu o cantitate de bronz".

[19] CONSTANTINESCU *et alii* 2016: „Obținută cel mai probabil din același lingou ca și torques-ul".

[20] Analiza SEM/EDX nu detectează elementele Bi și Sn dacă valorile sunt sub 0,1% (ppm/părți la un milion).

[21] CONSTANTINESCU *et alii* 2016: „Fibula din aliaj "normal" argint-cupru cu adaos de plumb pentru a-i spori maleabilitatea".

[22] Despre prezența plumbului în aliajele Cu/Sn vezi MÖDLINGER, DRNIĆ, PICCARDO 2012, p. 1.344, 1347–1348.

SEM/EDX indică proporții Cu-Sn-Pb aleatorii care nu susțin ipoteza unei alieri deliberate în scopul obținerii un aliaj mai ușor de topit[23], dar procentul de 1,6% depășește limita admisă pentru elementele urmă. Prin urmare, prezența plumbului în compoziția podoabelor dacice care trec prin operațiuni repetate de batere nu are o explicație metalurgică. Plumbul poate rezulta din minereu sau în urma cupelației, dar se prea poate să fi contaminat cuprul, sau să fi existat în amestecul cupru-staniu utilizat în alierea cu argintul.

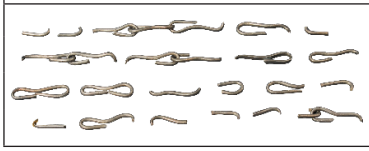
Lanțul din zale (inv. 10159)	**Măsurători SEM/EDX**	**wt (%)**				
		Ag	**Cu**	**Sn**	**Pb**	**Au**
	EM 98 Spectrum 109	91,9	2,8	2,4	1,7	1,2
	EM 99 Spectrum 110	91,8	2,9	3,0	1,6	0,7
	EM 100 Spectrum 111	90,3	3,2	3,9	1,7	0,8
	Valorile medii	91,33	2,96	3,1	1,66	**0,9**

Fig. 5. Drăgești-lanțul de zale nepliate: rezultatele măsurătorilor SEM/EDX.

Procentul ridicat de staniu din compoziția lanțului de la Drăgești este surprinzător. Analizele efectuate pentru lanțurile din zale pliate din tezaurele de podoabe dacice și scordisce indică absența staniului sau procente situate la nivelul impurităților metalurgice în aliaje de argint depreciate prin adaosul de cupru sau cupru/staniu:

• SEM/EDX. Lanțul de la Oradea „Sere": Ag 97%, Cu 2,2%, Pb 0,5%, Au 0,5%[24].

• XRF. Lanțul de la București-Herăstrău: Ag 95,8%, Cu 1,3%, Au 1,7%, Pb 0,7%, Zn 0,1%, Bi 0,1%[25].

• pXRF. Lanțurile de la Zidovar (Serbia)[26]:

Lanțul nr. 1: Împletitura din zale: Ag 96%, Cu 2,6–3,3%, Sn < 0,2%, Pb 0,6–1%, Fe < 0,2%

Veriga de la capete: Ag 93%, Cu 4,4%, Sn < 0,2%, Pb 2,2%, Fe < 0,2%

Veriga de la capete: Ag 93%, Cu 3,6%, Sn 1,6%, Pb 1,7%, Fe < 0,2%

Lanțul nr. 2: Împletitura din zale: Ag 96%, Cu 2,6–3,3%, Sn < 0,2%, Pb 0,6–1%

Veriga de la capete: Ag 91%, Cu 4,3%, Sn 3,1%, Pb 1,3%, Fe < 0,2%

Veriga de la capete: Ag 93%, Cu 2,6%, Sn 4,0%, Pb 0,9%, Fe < 0,2%

• pXRF. Lanțul de la Sisak (Croația)[27]:

Ag 97,6%, Cu 1,4%, Pb 0,1%, Au 0,4%, Fe 0,1%, Ni 0,2%.

Ag 98,2%, Cu 0,5%, Pb 0,2%, Fe 0,3%, Zn 0,1%.

• pXRF. Lanțul de la Psarjevo (Croația): Ag 98,1%, Cu 0,8%, Sn 0,1%, Pb 0,4%, Au 0,5%[28].

[23] Punctul de topire al Cu este de 1083ºC, iar Ag se topește la 961,9ºC, prin amestecul cuprului cu plumb se obține un aliaj eutetic care se topește la o temperatură inferioară punctelor de topire ale elementelor care îl formează.

[24] Analiză efectuată în laboratorul *Institutului Național de Cercetare și Dezvoltare pentru Tehnologii Izotopice și Moleculare* (ICDTIM) din Cluj-Napoca.

[25] SPÂNU, COJOCARU 2009, p. 101, 103–104/3.

[26] ŽIVKOVIĆ *et alii* 2014, p. 164/tab. 11și 12.

[27] DRNIĆ, FRANJIĆ 2014, p. 84, Appendix 3/P–17195, pl. 1/5.

[28] DRNIĆ, FRANJIĆ 2014, p. 88, Appendix 2/P–10674, pl. 1/7.

În setul de analize SEM/EDX efectuate, lanțul de la Drăgești este singura piesă confecționată dintr-un aliaj în care conținutul de staniu îl întrece pe cel al cuprului. Aliaje de acest tip au fost identificate pentru o serie de podoabele dacice analizate prin metoda XRF (programul ROMARCHAEOMET)[29]:

• Fibula de la Gherla (jud. Cluj): Ag 91,4%, Cu 3%, Sn 3,9%, Pb 0,4%, Au 0,7%, Fe 0,4% (ruptă și nituită).

• Fibulă din Transilvania: Ag 91,9%, Cu 2,4%, Sn 4,2%, Pb 0,3%, Au 0,7%, Fe 0,4%.

• Fragment de bară de la Jimbor (jud. Brașov): Ag 94,1%, Cu 1,5%, Sn 2,2%, Au 0,9%, Pb 0,6%, Fe 0,7%.

• Fibula în curs de prelucrare de la Jimbor (jud. Brașov): Ag 94,1%, Cu 1,5%, Sn 2,2%, Au 0,9%, Pb 0,6%, Fe 0,7%.

Același tip de aliaj (în care Sn > Cu), dar mai sărac în argint, îl regăsim în cazul scyphatelor dacice de tip Rădulești-Hunedoara din tezaurul descoperit în situl de la Grădiștea de Munte, jud. Hunedoara (analiză XRF)[30]:

• Ag 90%, Cu 3,1%, Sn 4,6%, Au 0,7%, Pb 0,2%, Bi 0,2%

• Ag 89%, Cu 3,8%, Sn 5,6%, Au 0,6%, Pb 0,3%, Bi 0,3%

Adaosul de staniu are proprietatea de a reduce temperatura de topire a aliajului, care devine mai moale și mai ductil (curge), dar în cantități mai mari, având un punct de topire coborât, se separă și fragilizează aliajul. Lanțul din tezaurul de la Drăgești format din zale simple, curbate în forma cifrei 8, dar rămase nepliate este unic în repertoriul orfevreriei dacice. Aliajul nepotrivit care a cauzat ruperea zalelor fără ca acestea să mai treacă prin procesul plierii ar putea explica unicitatea tipologică a piesei. Pentru lanțuri din zale pliate, îmbinate strâns asemeni unei împletituri, măsurătorile XRF avute la dispoziție indică aliaje maleabile, cu un conținut de cupru redus și fără staniu.

Prin urmare, aliajul folosit la confecționarea zalelor lanțului de la Drăgești nu este rezultatul unui adaos controlat de cupru și staniu, cerut de caracteristicile fizico-morfologice ale piesei. Starea precară de conservare a podoabelor confecționate din acest tip de aliaje (Sn > Cu) și procentele aleatorii ce nu țin cont de funcționalitatea piesei duc spre ipoteza utilizării unor aliaje reciclate. Întrebuințarea unor aliaje „normale" dovedește că meșterii aveau cunoștințe empirice despre proprietățile și caracteristicile metalului, dar, în cazul folosirii aliajelor reciclate, ei nu puteau controla conținutul preexistent de Cu, Sn și Pb.

Alierea argintului cu procente mari de cupru și staniu este specifică monedelor dacice din a doua fază a monetăriei locale, însă, până la descoperirea tezaurului de la Grădiștea de Munte (jud. Hunedoara), analizele au arătat că argintul atinge conținutul maxim în jurul valorii de c. 70%[31]. Aliajul cu o compoziție cvasi-identică

[29] CONSTANTINESCU *et alii* 2016: Compoziția pieselor în care conținutul de Sn > Cu a fost interpretată ca fiind rezultatul „alierii consecutive a argintului cu cupru (normală metalurgic), urmată ulterior de o aliere cu staniu (nejustificată metalurgic-staniul se „separa"-segregheză „izolându-se" de argint sau cupru în aliaj; explicația alierii trebuie să fie alta decât una practică, probabil era impusă de o schimbare în mentalitate)".

[30] CONSTANTINESCU *et alii* 2018.

[31] CONSTANTINESCU *et alii* 2015; CONSTANTINESCU *et alii* 2020; MUNTEANU, TOMA, BARBU-TUDORAN 2020; TOMA, MĂRGINEAN 2021, p. 59–64.

folosit la confecționarea podoabelor dacice și baterea monedelor de tip Răduleşti-Hunedoara, la care se adaugă informațiile numismatice ce pledează pentru coborârea cu câteva decenii a cronologiei scyphatelor dacice, apropie fenomenul baterii imitațiilor monetare din ultima fază a monetăriei locale din Dacia de producția pieselor de podoabă.

b. *Analiza elementală a monedelor de import din tezaurul de la Drăgești (jud. Bihor)*

b.1. Drahmele de Apollonia și Dyrrhhachium[32]

Alături de podoabe, tezaurul de la Drăgești conține 136 de monede: 124 drahme de Apollonia (originale și imitații), 9 drahme de Dyrrhachium și 3 denari romani republicani[33]. Constrânși la o limitare a numărului de piese, analiza SEM/EDX a vizat o drahmă de Apollonia și doi denari republicani, căci, în cazul monedelor, avem la dispoziție rezultatele investigațiilor complementare XRF și PIXE efectuate de Bogdan Constantinescu în anii 1997–2001 în Laboratorul Cyclotron al Institutul Național de Fizică și Inginerie Nucleară „Horia Hulubei" București[34].

Pentru drahma de Apollonia, analiza SEM/EDX a identificat un aliaj argint-cupru, depreciat printr-un adaos de cupru mai mare decât în cazul podoabelor și cu un conținut de plumb ce depășește valorile elementelor urmă (**Fig. 6**). Măsurătorile au fost efectuate la suprafața monedei și diferențele de câteva procente pentru conținutul de argint și cupru sunt determinate de geometria piesei (**Pl. 5a-b**).

Analizele XRF-PIXE efectuate în laboratorul IFIN-HH pe un lot de 11 drahme de Apollonia din tezaurul de la Drăgești indică aliaje cu un conținut de argint variabil, depreciat prin adăugarea cuprului și (posibil) a plumbului (**Fig. 7**). Cantități infime de staniu și bismut au fost detectate la nivel de ppm (≤ 0,1%). Folosirea unor aliaje eterogene este reflectată de variații mari ale raportului argint/cupru înregistrate pentru emisiunile aceluiași magistrat (*i.e.* Timen Damoponthos). Având în vedere că, aceste monede au un conținut mai scăzut de argint, ce le predispune fenomenului îmbogățirii suprafeței, iar măsurătorile au fost făcute la o adâncime de câțiva zeci de microni, cel mai probabil standardul de finețe al drahmelor de Apollonia coboară sub valorilor măsurate[35].

[32] Pentru datarea emisiunilor târzii din care fac parte drahmele din tezaurul de la Drăgești: CONOVICI 1986, p. 75 (Dyrrhachium grupa V: 97–85 a.Chr. și Apollonia subgrupa B II: 104/102-85/83 a.Chr.); PICARD, GJONGECAJ 2000, p. 153–159; PETRÁNYI 2006, p. 263–267; META 2012, p. 22; META 2014, p 326–328. Producția monetară determinată de necesitatea finanțării campaniilor romane în Balcani este intensă și neregulată, greutatea monedelor se reduce, ștanțele celor două orașe-asociate într-un fel de alianță monetară-se amestecă, iar emisiunile *subaerate* sunt produse chiar în monetăriile oficiale.

[33] SĂȘIANU 1980, p. 122–124.

[34] Rezultatele analizelor XRF și PIXE (Emisiei razelor X induse de particule încărcate), efectuate în urma unor contracte de prestări servicii încheiate între Muzeul Țării Crișurilor din Oradea și „Institutului Național de Cercetare și Dezvoltare pentru Fizică și Inginerie Nucleară Horia Hulubei" (IFIN-HH), ne-au fost trimise de către domnul Bogdan Constantinescu. Au fost analizate monede din colecțiile Muzeului Țării Crișurilor și ale Institutului de Arheologie „Vasile Pârvan" din București, selecția fiind făcută de Alexandru Sășianu (MȚCO). Rezultatelor obținute au fost sintetizate în articolele: BUGOI *et alii* 1999; CONSTANTINESCU, SĂȘIANU, BUGOI 2003; CONSTANTINESCU *et alii* 2009.

[35] CONSTANTINESCU, SĂȘIANU, BUGOI 2003, p. 5: În urma comparării valorilor de suprafață cu concentrațiile de la adâncimea de 100 μm, autorii constată o scădere de la 93% la

Drahmă Apollonia (Drăgești, inv. 892-1)	Măsurători SEM/EDX	(%)						
		Ag	Cu	Sn	Pb	Au	Zn	Mg
Aghias Epikadou (Ceka 3)	EM14 Spectrum 17	89,0	8,7	-	1,6	0,3	-	0,4
	EM16 Spectrum 20	92,1	5,7	-	1,6	0,6	-	-
	EM18 Spectrum 22	91,4	6,0	-	2,1	0,5	-	-
	EM19 Spectrum 23	94,5	4,1	-	0,4	0,7	-	0,3
	EM20 Spectrum 24	96,9	2,4	-	-	0,7	-	-
	EM21 Spectrum 25	93,2	5,6	-	-	1,1	-	-
	EM22 Spectrum 26	91,3	6,8	-	1,6	0,3	-	-
	Media	**92,62**	**5,61**		**1,46**	**0,6**		0,35

Fig. 6. Drăgești-drahmă de Apollonia: rezultatele măsurătorilor SEM/EDX.

Drahme Apolonia (Drăgești, inv. 892)	wt%						
	Ag	Cu	Sn	Pb	Au	Zn	Bi
Timen Damophontos (Ceka 115)	92,5	5,2	100 ppm	1,25	0,7	-	-
Timen Damophontos (Ceka 115)	82,5	14,5	450 ppm	2,3	0,5	-	-
Timen Damophontos (Ceka 115)	82	15,2	0,1%	1,9	0,5	-	-
Timen Damophontos (Ceka 115)	91	7	350 ppm	0,7	0,75	-	500 ppm
Nikandros Andriskou (Ceka 83)	90	8	100 ppm	0,9	0,6	-	-
Philon Meniskou (Ceka 438)	87	10	150 ppm	1,55	0,85	-	0,15%
Nespecificat	93	4,8	100 ppm	1,25	0,65	-	-
Niken Aytoboulou (Ceka 88)	90	7	100 ppm	2,05	0,7	-	-
Ariston Ainea (Ceka 24)	93	5	200 ppm	0,95	0,65	-	-
Meniskos Lykiskou (Ceka 325)	88	10	100 ppm	0,85	06	-	-
Meniskos Dionysiou (Ceka 320)	92	6,05	200 ppm	1,1	0,35	-	-

Fig. 7. Rezultatele analizelor XRF-PIXE efectuate pe un lot de 11 drahme de Apollonia din tezaurul de la Drăgești (IFIN-HH, Constantinescu și alții-lot analizat în anul 1998).

Analizele menționate sunt pentru drahmele considerate-prin prisma conținutului ridicat de argint și a calității reprezentărilor monetare-emisiuni ale atelierelor oficiale. Investigațiile extinse, spre exemplu, asupra drahmelor bătute de Apollonia cu ștanțe de Dyrrhachium, scot în evidență amploarea fenomenului deprecierii drahmelor illire considerate de către numismați *monedă de război*: Ag 78–92%, Cu 4–20%, Au 0,2-0,8%, Pb 2–4%, urme de Sn și Bi[36].

Drahmele de Dyrrhachium din tezaurul de la Drăgești nu au fost incluse în lotul de analize SEM/EDX. Măsurătorile XRF-PIXE efectuate pe alte loturi de drahme indică o situație similară (depreciere monedelor prin alierea deliberată cu cantități mari de cupru) și un fenomen al copierii și falsificării ce include exemplare din bronz sau staniu[37]:

82% pentru concentrația de Ag și o creștere de la 6% la 17% pentru Cu; CONSTANTINESCU *et alii* 2009, p. 4.

[36] BUGOI *et alii* 1999, p. 780, tab. 2/grupa II; CONSTANTINESCU *et alii* 2009, tab. 1/grupa II (107 monede).

[37] SĂȘIANU 1987, p. 209–219.

a. Exemplare din bronz acoperite cu un strat subțire de staniu identificate în tezaurul de la Troianul (fost Belitori, jud. Teleorman): Cu 62–72%, Sn 28–33%, Pb 0,1-0,4%[38].

ex. Cu 70,5%, Sn 28,5%, Pb 0,12%, urme Ag 0,05%.

Cu 70,5%, Sn 28,8%, Pb 0,15%, urme Ag 0,03%.

Cu 70%, Sn 29%, Pb 0,08%, urme Ag 0,07%.

Cu 70,5%, Sn 29%, Pb 0,10%.

Cu 70%, Sn 29,5%, Pb 0,09%, urme Ag 0,07%.

b. Exemplare cu un conținut ridicat de staniu (*Sn > Cu*)

Ag 67,3%, Cu 10%, Sn 20%, Au 0,5%, Pb 1,3%, Bi 0,20%[39].

c. Exemplare din staniu (*„bronz alb"*)

Sn 90%, Cu 7%, Pb 0,1% (Tezaurul de la Troianul, jud. Teleorman)[40]

Sn 90%, Cu 6%, Pb 0,1% (Ineu, jud. Arad)[41]

Sn 87,5%, Cu 11,5%, Pb 0,15% (Sarmizegetusa/Grădiștea de Munte, jud. Hunedoara)[42]

Prezența staniului în compoziția drahmelor (în special a imitațiilor) a fost constatată și în cazul drahmelor de Dyrrhachium descoperite undeva în sudul sau sud-estul Ungariei[43]. Rezultatele analizei micro-PIXE au arătat, și de această dată, degradarea calității aliajului de argint (98%→70%Ag) prin substituirea intenționată cu procente mari de cupru. În privința imitațiilor, în cazul uneia dintre piesele susceptibile, miezul s-a dovedit a fi obținut dintr-un aliaj cu un conținut de cupru ridicat: Ag 50,5%, Cu 46%, Sn 2,5%, Au 0,2%, Pb 0,4%, Zn 0,3%, Bi 0,06%[44].

Analizele XRF-PIXE efectuate în laboratorul IFIN-HH au permis, în cazul pieselor fragmentare, identificarea și analiza emisiunilor placate (*subaerate*), presupuse a fi produse chiar în atelierele oficiale: un strat cu un conținut ridicat de argint (c. 95–97%) ce învelește un miez dintr-un aliaj cupru/staniu (Cu 90–97% și Sn 3–10%)[45]. Stratul de argint cu o grosime de c. 0,2-0,5 mm ce nu poate fi străbătut prin investigațiile de suprafață demonstrează dificultatea identificării contrafacerilor cu stil bun și nuanțează problematica aliajelor obținute în cazul reciclării drahmelor illire.

---

[38] BUGOI *et alii* 1999, p. 779–780, Tab. 2/grupa IV; CONSTANTINESCU, SĂȘIANU, BUGOI 2003, p. 7; CONSTANTINESCU *et alii* 2009, tab. 1/grupa IV (54 monede). Exemplificările au fost extrase din listele trimise de B. Constantinescu (analize XRF-PIXE efectuate în decembrie 1999: nr. 738/1–2, 3–4 și octombrie 2001).

[39] Analiză XRF-PIXE efectuată CONSTANTINESCU *et alii* în mai 2001 pentru un exemplar trimis de Al. Sășianu cu mențiunea Oradea.

[40] BUGOI *et alii* 1999, p. 780, Table 2; CONSTANTINESCU, SĂȘIANU, BUGOI 2003, p. 7.

[41] Analiză XRF-PIXE efectuată CONSTANTINESCU *et alii* în februarie 1998. Pentru moneda MȚCO inv. 375, *vezi* SĂȘIANU 1980, p. 131/68-III.

[42] Analiză XRF-PIXE efectuată CONSTANTINESCU *et alii* în august 2000. Se precizează că este vorba de o imitație de Dyrrhachium (*Meniskou*) provenită de la Sarmizegetusa.

[43] UZONYI *et alii* 2000, p. 748–752. Eșantion alcătuit din 27 de drahme târzii de Dyrrhachium (68–43 a.Chr.).

[44] UZONYI *et alii* 2000, p. 752.

[45] BUGOI *et alii* 1999, p. 780; CONSTANTINESCU, SĂȘIANU, BUGOI 2003, p. 8; CONSTANTINESCU *et alii* 2009, p. 7–8.

b.2. Denarii romani republicani

Analiza SEM/EDX a inclus un lot de 5 denari romani republicani selectați din tezaurele de la Drăgești (jud. Bihor) și Moroda (jud. Arad)[46] (**Fig. 8**, **Fig. 9**; **Pl. 6–7**). Pentru toate monedele, măsurătorile arată un conținut de argint ridicat (≥ 96%), uneori mult prea ridicat (aproape pur), ce transformă denarii romani republicani într-o potențială sursă de argint de mare finețe[47].

Analizele intruzive efectuate pe alte loturi au indicat patru elemente care apar, alături de argint, în compoziția denarilor republicani: cuprul, aurul, plumbul și bismutul, toate în relație cu sursa minereului și procesele metalurgice. Principalul reper în ceea ce privește proveniența minereului este aurul, al cărui conținut variază; pentru unul dintre denarii de la Drăgești valorile depășesc cu mult standardul elementelor urmă. Cuprul apare în cantități limitate (< 1%), iar plumbul (un indicator al cupelației de bună calitate)[48] a fost detectat sporadic, într-un singur caz lipsind cu desăvârșire (*i.e.* denarul *L. Calpurnius Piso Frugi*, **Fig. 9**)[49]. Analiza SEM/EDX nu a identificat bismutul aflat probabil sub limita de detecție, însă a reperat uneori zincul. Staniul a apărut accidental într-o singură măsurătoare (denarul *M. Porcius Laeca*, **Fig. 9**)[50].

Unul dintre cei trei denarii ai tezaurului de la Drăgești (nu se precizează care anume) a fost analizat în laboratorul IFIN-HH prin metodele XRF-PIXE, care au detectat urme de staniu și bismut: Ag 99%, Cu 0,20%, Sn 100 ppm (= 0,01%), Pb 0,20%, Au 0,40%, Bi 0,18%[51].

4. Concluzii

Rezultatele analizei de material prin metoda SEM/EDX se dovedesc a fi dificil de interpretat. Comparația dintre măsurătorile de la suprafață și cele de profunzime, obținute în cazul piesele păstrate fragmentar, indică îmbogățirea artificială cu argint a suprafeței, produsă în urma dispariției cuprului. Fenomenul încă neclarificat pentru obiectele cu un conținut de argint ridicat (> 80%), presupuse a fi mai

[46] SĂȘIANU 1980, p. 135/82.II.

[47] Pentru denarii romani republicani analizele arată în mod constant o finețe extrem de ridicată: WALKER 1980, p. 61–64. Analizele XRF pentru denari romani republicani bătuți între anii 169–101 a.Chr., 101–81 a.Chr. și 82–40 a.Chr. au indicat valori medii cuprinse între c. 95,9% și 97,7%. LOCKYEAR 2008, p. 160–168, 170–174, preluat de WOYTEK *et alii* 2012, p. 143: Pentru cei 157 de denari romani republicani (originale și imitații) selectați din tezaurele descoperite pe teritoriul României, măsurătorile efectuate prin metoda AAS (spectrometria de absorbție atomică), ce a presupus preluarea unui eșantion din miezul monedei, evitându-se astfel problema îmbogățirii cu argint a suprafeței, au indicat concentrații de argint cuprinse între 99,5% și 88,6% (media c. 97% Ag).

[48] WOYTEK *et alii* 2012, p. 144–145.

[49] Absența plumbului a fost semnalată în cazul unei copii hibride din tezaurul de la Peștiș, jud. Bihor (GĂZDAC, GHEMIȘ, BARBU-TUDORAN 2020, p. 38–41; GĂZDAC, GHEMIȘ 2023, p. 19–20).

[50] LOCKYEAR 2008, p. 161. În măsurătorile SSE, staniul a apărut constant cu valori sub limita de detecție.

[51] Moneda a fost inclusă în lotul drahmelor analizate de B. Constantinescu și alții în februarie 1998.

puțin predispuse oxidării, lăsă să se întrevadă dificultatea stabilirii finețiialiajelor de argint din care au fost făcute piesele de podoabă dacice.

Tezaur Drăgești (jud. Bihor)	Măsurători SEM/EDX	wt (%)					
		Ag	Cu	Sn	Pb	Au	Zn
Denar roman republican M. Aburius Geminus Crawford 250/1: 132 î.Hr. (Inv. 892-134)	EM24 Spectrum 28	97,6	1,8	-	-	0,6	-
	EM25 Spectrum 29	97,9	1,0	-	0,4	0,6	-
	EM27 Spectrum 31	98,9	0,4	-	-	0,7	-
	EM28 Spectrum 32	99,0	0,3	-	0,3	0,5	-
	EM29 Spectrum 31	98,3	0,3	-	-	1,5	-
	EM30 Spectrum 34	99,3	-	-	-	0,7	-
	EM31 Spectrum 35	99,1	-	-	-	0,5	0,3
	EM32 Spectrum 36	99,4	0,1	-	-	0,6	-
	Media	98,68	0,48		0,08	0,71	0,03
Denar roman republican P. Servilius Rullus Crawford 328/1: 100 î.Hr. (Inv. 363-4)	EM39 Spectrum 43	95,5	0,8	-	1,3	2,5	-
	EM40 Spectrum 44	95,0	0,8	-	0,4	3,3	0,5
	EM41 Spectrum 45	97,7	0,8	-	-	1,5	-
	EM42 Spectrum 46	95,2	1,0	-	0,9	2,9	-
	EM43 Spectrum 47	97,5	0,3	-	-	2,2	-
	EM44 Spectrum 48	97,4	0,4	-	-	2,2	-
	Media	96,38	0,68	-	0,43	2,43	0,08

Fig. 8. Rezultatele măsurătorilor SEM/EDX pentru denarii romani republicani din tezaurul de la Drăgești (jud. Bihor).

Tezaur Moroda (jud. Arad)	Măsurători SEM/EDX	wt (%)					
		Ag	Cu	Sn	Pb	Au	Zn
Denar roman republican L. Calpurnius Piso Frugi Crawford 340/1: 90 î.Hr. (Inv. 363-1)	EM33 Spectrum 37	97,6	1,8	-	-	0,6	-
	EM34 Spectrum 38	95,1	3,4	-	0,4	1,1	-
	EM35 Spectrum 39	97,9	1,6	-	-	0,5	-
	EM36 Spectrum 40	97,3	1,4	-	0,5	0,8	-
	EM37 Spectrum 41	98,1	0,6	-	-	1,2	0,1
	EM 38 Spectrum 42	98,1	1,3	-	-	0,4	0,2
	Media	97,35	1,68	-	0,15	0,76	0,05
Denar roman republican M. Porcius Laeca Crawford 270/1: 125 î.Hr. (Inv. 363-10)	EM112 Spectrum 123	99,9	0,1	-	-	0,1	-
	EM113 Spectrum 124	98,8	0,5	0,2	0,3	0,3	-
	EM114 Spectrum 125	98,9	-	-	0,5	0,6	-
	EM115 Spectrum 126	99,5	-	-	0,3	0,2	-
	Media	99,27	0,15	0,05	0,27	0,3	-
Denar roman republican L. Calpurnius Piso Frugi Crawford 340/1: 90 î.Hr. (Inv. 363-11)	EM108 Spectrum 119	98,5	0,4	-	-	1,1	-
	EM109 Spectrum 120	98	0,5	-	-	1,5	-
	EM110 Spectrum 121	98,7	-	-	-	1,3	-
	EM111 Spectrum 122	99,0	-	-	-	1,0	-
	Media	98,55	0,22	-	-	1,22	-

Fig. 9. Rezultatele măsurătorilor SEM/EDX pentru denarii romani republicanidin tezaurul de la Moroda (jud. Arad).

Fără a ignora diferențele de compoziție dintre suprafață și miez, apreciem că analizele SEM/EDX oferă cel puțin valori orientative pentru compoziția aliajelor din care au fost făcute piesele investigate. Compoziția originală a aliajului argint/cuprula care s-a putut ajunge în cazul pieselor de podoabă deteriorate-poate fi cunoscută exclusiv prin măsurători de profunzime efectuate asupra miezului.

i. Pentru piesele de podoabă dacice au fost identificate aliaje argint/cupru cu un standard ridicat de finețe situat în dreptul valorilor de 91–96% Ag (în măsurătorile de suprafață). Aliajele au fost modificate prin adăugarea cuprului sau a unui aliaj de cupru (cupru/staniu, uneori și plumb), în cantități ce nu pot fi explicate, întotdeauna, prin rațiuni tehnologice. Aliaje inadaptate funcționalității care au cauzat deteriorarea pieselor pot fi indiciu pentru folosirea unor metale reciclate, cu un conținut preexistent de cupru, staniu și plumb.

ii. Stabilirea compoziției metalurgice a drahmelor de Apollonia și Dyrrhachium se dovedește a fi o sarcină extrem de dificilă. Analizele de suprafață (SEM/EDX și XRF-PIXE) arată pentru emisiunile considerate oficiale aliaje argint/cupru cu tendințe de depreciere prin adaos semnificativ de cupru și valori crescute ale plumbului. Rezultatele sunt însă nesigure, căci emisiunile placate (ieșite chiar din atelierele oficiale) nu pot fi identificate fără o analiză metalografică de profunzime. Determinările XRF-PIXE indică pentru emisiunile placate și pentru falsurile evidente utilizarea aliajelor de cupru și a staniului.

iii. Pentru denarii romani republicani analizele arată în mod constant o finețe extrem de ridicată. Chiar dacă concentrațiile de argint de c. 96–99% obținute prin măsurătorile de suprafață SEM-EDX și XRF pentru denarii incluși în studiul de față ar fi în realitate mai joase, denarii romani republicani rămân o potențială sursă de argint de mare puritate.

BIBLIOGRAFIE

AGER et alii 2013 – F. J. Ager, A. I. Moreno-Suárez, S. Scrivano, I. Ortega-Feliu, B. Gómez-Tubío, M. A. Respaldiza, Silver surface enrichment in ancient coins studied by micro-PIXE, Nuclear Instruments and Methods in Physics Research Section B 306/1 (2013), p. 241–244.

BECK *et alii* 2004 – L. Beck, S. Bosonnet, S. Réveillon, D. Eliot, F. Pilon, *Silver surface enrichment of silver-copper alloys: A limitation for the analysis of ancient silver coins by surface techniques*, Nuclear Instruments and Methods in Physics Research Section B 226 (2004), p. 153–162.

BECK *et alii* 2008 – L. Beck, E. Alloin, C. Berthier, S. Réveillon, V. Costa, *Silver surface enrichment controlled by simultaneous RBS for reliable PIXE analysis of ancient coins*, Nuclear Instruments and Methods in Physics Research B 226 (2008), p. 2.320–2.324.

BORGES *et alii* 2017 – R. Borges, L. Alves, R. J. C. Silva, M. F. Araújo, A. Candeias, V. Corregidor, P. Valério, P. Barrulas, *Investigation of surface silver enrichment in ancient high silver alloys by PIXE, EDXRF, LA-ICP-MS and SEM-EDS*, Microchemical Journal 131 (2017), p. 103–111.

BUGOI *et alii* 1999 – R. Bugoi, B. Constantinescu, F. Constantin, D. Catana, D. Plostinaru, Al. Sășianu, *Archaeometrical studies of Greek and Roman silver coins*, Journal of Radioanalytical and Nuclear Chemistry 242/3 (1999), p. 777–781.

CHIDIOȘAN 1977 – N. Chidioșan, *Arta argintarilor daci din nord-vestul României în epoca lui Burebista*, Acta Musei Porolissensis 1 (1977), p. 67–72.

CHIDIOȘAN *et alii* 1978 – N. Chidioșan, Al. Sășianu, N. Beladan, *Tezaurul dacic de la Drăgești*, Crisia 8 (1978), p. 27–50.

CHIRILĂ, LUCĂCEL 1970 – E. Chirilă, V. Lucăcel, *Un tezaur dac din nord-vestul Transilvaniei. Contribuții la tipologia și circulația așa numitelor imitații ale tetradrahmelor Macedoniei Prima în Dacia*, Zalău, 1970.

CHIRILĂ, CHIFOR 1979 – E. Chirilă, I. Chifor, *Tezaurul de monete dace de la Vișea (Contribuții la studiul emisiunilor monetare ale dacilor napocenses)*, Acta Musei Porolissensis 1 (1979), p. 59–79.

CHIRILĂ, HUREZAN, BARBU 1987 – E. Chirilă, P. G. Hurezan, M. Barbu, *Tezaurul monetar de la Feniș (Cronologia și semnificația istorică)*, Ziridava 15–16 (1987), p. 55–58.

CONDAMIN, PICON 1965 – J. Condamin, M. Picon, *Notes on diffusion in ancient alloys*, Archaeometry 8/1 (1965), p. 110–114.

CONOVICI 1986 – N. Conovici, *Contribuții privind cronologia și circulația drahmelor de Dyrrhachium și Apollonia la Dunărea de Jos*, Cultură și Civilizație la Dunărea de Jos 1 (1985), p. 35–43.

CONOVICI 1986 – N. Conovici, *Aspecte ale circulației drahmelor din Dyrrhachium și Apollonia în Peninsula Balcanică și în Dacia*, BSNR 77–79 (1983–1985), 131–133 (1986), p. 69–88.

CONOVICI 1992 – N. Conovici, *Noi contribuții privind circulația drahmelor din Dyrrhachium și Apollonia*: *aspectul metrologic*, BSNR 80–85 (1986–1991), 134–139 (1992), p. 49–67.

CONSTANTINESCU, SĂȘIANU, BUGOI 2003 – B. Constantinescu, Al. Sășianu, R. Bugoi, *Adulterations in first century B. C.: the case of Greek silver drachmae analysed by X–ray methods*, Spectrochimica Acta Part B: Atomic Spectroscopy 58/4 (2003), p. 759–765. (https://www.academia.edu/4449776/%20Adulterations_in_first_century_bc_the_case_of_Greek_silver_drachmae_analyzed_by_X_ray_methods, ultima accesare 18 mai 2023).

CONSTANTINESCU *et alii* 2009 – B. Constantinescu, V. Cojocaru, R. Bugoi, Al. Sășianu, *Some metallurgical aspects of ancient silver coins discovered in Romania-originals and imitations*, Turkish Physical Society 25. International Physics Congress, Bodrum, 25–29 Aug 2008.https://www.academia.edu/1018134/Some_Metalurgical_Aspects_of_Ancient_Silver_Coins_Discovered_in_Romania_Originals_and_Imitations, ultima accesare în 15 aprilie 2023).

CONSTANTINESCU *et alii* 2018 – B. Constantinescu, M. M. Ciută, N. Popa, D. Cristea-Stan, E. Oberländer-Târnoveanu, *Considerații privind tezaurul compus din 12 monede de tip Rădulești-Hunedoara recuperat în urma unor săpături ilegale din zona Dealul Muncelului, vest de Sarmizegetusa Regia*, în: S. Forțiu (ed.): ArheoVest VI/2: In Memoriam Marian Gumă. Interdisciplinaritate în Arheologie, Timișoara, 24 noiembrie 2018, Szeged, 2018, p. 667–681.

CONSTANTINESCU *et alii* 2020 – B. Constantinescu, D. Stan, C. Toma, Fl. Mărginean, *Rezultatele analizelor metalografice (XRF) efectuate pe monede de tip Toc-Chereluș din descoperirile de la Feniș și Pecica (jud. Arad)*, Cercetări Numismatice 26 (2020), p. 51–60.

DAICOVICIU 1972 – H. Daicoviciu, *Dacia de la Burebista la cucerirea romană*, Cluj-Napoca, 1972.

DRNIĆ, FRANJIĆ 2014 – I. Drnić, A. Franjić, *pXRF Analysis of South Pannonian Late Iron Age Silver Artefacts*, în: S. Berecki (ed.): *Iron Age Crafts and Craftsmen in the Carpathian Basin. Proceedings of the International Colloquium from Targu Mureș, 10–13 october 2013*, Târgu Mureș, 2014, p. 83–96.

GĂZDAC, GHEMIȘ, BARBU-TUDORAN 2020 – C. Găzdac, C. Ghemiș, L. Barbu-Tudoran, *A new Roman republican hoard in pre-Roman Dacia (România). A preliminary note. The minting place of a hibrid type*, Journal of Ancient History and Archaeology 7/3 (2020), p. 38–46.

GĂZDAC, GHEMIȘ 2023 – C. Găzdac, C. Ghemiș, *Hoarding for value. Roman Denarii and their imitations. The hoard Peștiș I*, Cluj-Napoca, 2023.

GUERRA 2000 – F. Guerra, *The study of the characterisation and provenance of coins and other metalwork using XRF, PIXE and Activation Analysis*, în: D. G. Creagh, D. A. Bradley (eds.), *Radiation in Art and Archeometry*, Amsterdam, 2000, p. 378–416.

GIUMILIA-MAIR 2005 – Al. Giumilia Mair, *On surface analysis and archaeometallurgy*, Nuclear Instruments and Methods in Physics Research B 239 (2005), p. 35–43.

HOREDT 1973 – K. Horedt, *Die Dakischen Silberfunde*, Dacia N.S. 17 (1973), p. 127–167.

HRNJIĆ *et alii* 2020 – M. Hrnjić, G. A. Hagen-Peter, Th. Birch, G. Hoffmann Barfod, S. M. Sindaek, C. E. Lesher, *Non-destructive identification of surface enrichment and trace element fractionation in ancient silver coins*, Nuclear Instruments and Methods in Physics Research B 478 (2020), p. 11–20.

LINKE, SCHREINER, DEMORTIER 2004 – R. Linke, M. Schreiner, G. Demortier, *The application of photon, electron and proton induced X–ray analysis for the identification and characterization of medieval silver coins*, Nuclear Instruments and Methods in Physics Research B 226 1–2 (2004), p. 172–178.

LOCKYEAR 2008 – K. Lockyear, *Aspects of Roman Republican coins found in late Iron Age Dacia*, în: V. Spinei, L. Munteanu (eds.), *Miscellanea Numismatica Antiquitatis. In honorem septagenarii magistri Virgilii Mihailescu-Birliba Oblata,* București, 2008, p. 147–176.

META 2012 – A. Meta, *Names and mintmarks at the mint of Dyrrhachium (c. 270–60/55 BC): a case study*, Revue belge de numismatique et de sigillographie 158 (2012), p. 21–38.

META 2014 – A. Meta, *La production et la circulation monétaire en Illyrie Méridionale à partir des années 230 av. J.-C. jusqu'au milieu du I*er *siècle*, în: L. Përzhita, I. Gjipali, G. Hoxha, B. Muka (eds.), *Proceedings of the International Congress of Albanian Archaeological Studies. 65*th *anniversary of Albanian Archaeology (21–22 November, Tirana 2013)*, Tirana, 2014, p. 325–333.

MIHĂILESCU-BÎRLIBA 1990 – V. Mihăilescu-Bîrliba, *Dacia răsăriteană în sec. VI–I î. Hr. Economie și monedă*, Iași, 1990.

MÖDLINGER, DRNIĆ, PICCARDO 2012 – M. Mödlinger, I. Drnić, P. Piccardo, *Alloying Elements as Chronotechnological Marker for Second and First Century BC Fibulae from Ancient Pannonia*, The Journal of The Minerals, Metals & Materials Society 64 (2012), p. 1343–1349.

MOISIL, DEPEYROT 2003 – D. Moisil, G. Depeyrot, *Les trésors de deniers antérieurs à Trajan en Roumanie*, Wetteren, 2003.

MORENO-SUÁREZ *et alii* 2015 – A. I. Moreno-Suárez, F. J. Ager, S. Scrivano, I. Ortega-Feliu, B. Gómez-Tubío, M. A. Respaldiza, *First attempt to obtain the bulk composition of ancient silver-copper coins by using XRF and GRT*, Nuclear Instruments and Methods in Physics Research B 358 (2015), p. 93–97.

MOUREY 1998 – W. Mourey, *Conservarea antichităților metalice de la săpătură la muzeu*, București, 1998.

MUNTEANU, TOMA, BARBU-TUDORAN 2020 – M. Munteanu, C. Toma, L. Barbu-Tudoran, *Elemental Analyses Performed on a lot of Toc-Chereluș type Dacian coins*, Acta Electrotehnica 61/3 (2020), p. 246–252.

PETRÁNYI 2006 – G. Petrányi, *The Greek-Illyrian drachms of Apollonia and Dyrrhachium-Trade coins for the North-Eastern Balkan region in the early phase of the 1*st *century BC?*, Bulletin du Cercle d'Études Numismatiques 43/3 (2006), p. 263–267. (https://www.academia.edu/6743981/Bulletin_du_Cercle_dEtudes_Numismatiques_vol_43_3_2006, ultima accesare în 20 mai 2023).

PICARD, GJONGECAJ 2000 – O. Picard, S. Gjongecaj, *Les drachmes d'Apollonia à la vache allaitant*, Revue Numismatique 6/155 (2000), p. 137–160.

RUSTOIU 2020 – A. Rustoiu, *Commentaria archaeologica et historica (III). Chronology of the Dacian silver hoards*, Ephemeris Napocensis 30 (2020), p. 11–38.

SĂȘIANU 1980 – Al. Sășianu, *Moneda antică din vestul și nord-vestul României*, Oradea, 1980.

SĂȘIANU 1987 – Al. Sășianu, *Imitations and counterfeits of the Apollonia and Dyrrhachium type drachmas and their circulation*, în: P. Cabanes (éd.), *L'Illyrie méridionale et l'Épire dans l'Antiquité I, Actes du Colloque international de Clermont-Ferrand (22–25 octobre 1984)*, Clermont-Ferrand, 1987, p. 209–219.

SPÂNU, COJOCARU 2009 – D. Spânu, V. Cojocaru, *The Dacian Hoard from București-Herăstrău. Archaeological and Archaeometallurgical Approaches*, MCA S.N. 5 (2009), p. 97–116.

SPÂNU 2019 – D. Spânu, *Core issues of late La Tène periodization in Romania*, Peuce S.N. 17 (2019), p. 167–206.

TOMA 2013a – C. Toma, *Tezaurul de la Drăgești, jud. Bihor*, în: R. Oanță-Marghitu (ed.), *Aurul și argintul antic al României. Catalog de expoziție*, București, 2013, p. 331–371.

TOMA 2013b – C. Toma, *Observații asupra tehnicii de producere a brățărilor dacice din bară torsionată din tezaurul de la Oradea-Sere și Drăgești (jud. Bihor)*, Sargetia 4/40 (2013), p. 155–164.

TOMA, MĂRGINEAN 2021 – C. Toma, Fl. Mărginean, *Tezaurul de monede dacice de la Feniș (jud. Arad). Studiul ștanțelor aplicat monedelor de tip Mit Bartkranzavers/Toc-Chereluș*, Cluj-Napoca, 2021.

UZONYI *et alii* 2000 – I. Uzonyi, R. Bugoi, Al. Sășianu, Á. Z. Kiss, B. Constantinescu, M. Torbágyi, *Characterization of Dyrrhachium silver coins by micro-PIXE method*, Nuclear Instruments and Methods in Physics Research Section B 161–163 (2000), p. 748–752.

WALKER 1980 – D. R. Walker, *The silver contents of the Roman Republican coinage*, în: D. M. Metcalf, W. A. Oddy (eds.), *Metallurgy in numismatics. Vol. 1, Royal Numismatic Society Special Publication 13*, London, 1980, p. 55–72.

WOYTEK *et alii* 2012 – B. E. Woytek, M. Rodrigues, F. Cappa, M. Schreiner, M. Radtke, U. Reinholz, *Imitations of Roman Republican Denarii: New Metallurgical Data*, American Journal of Numismatics Second Series 24 (2012), p. 133–162.

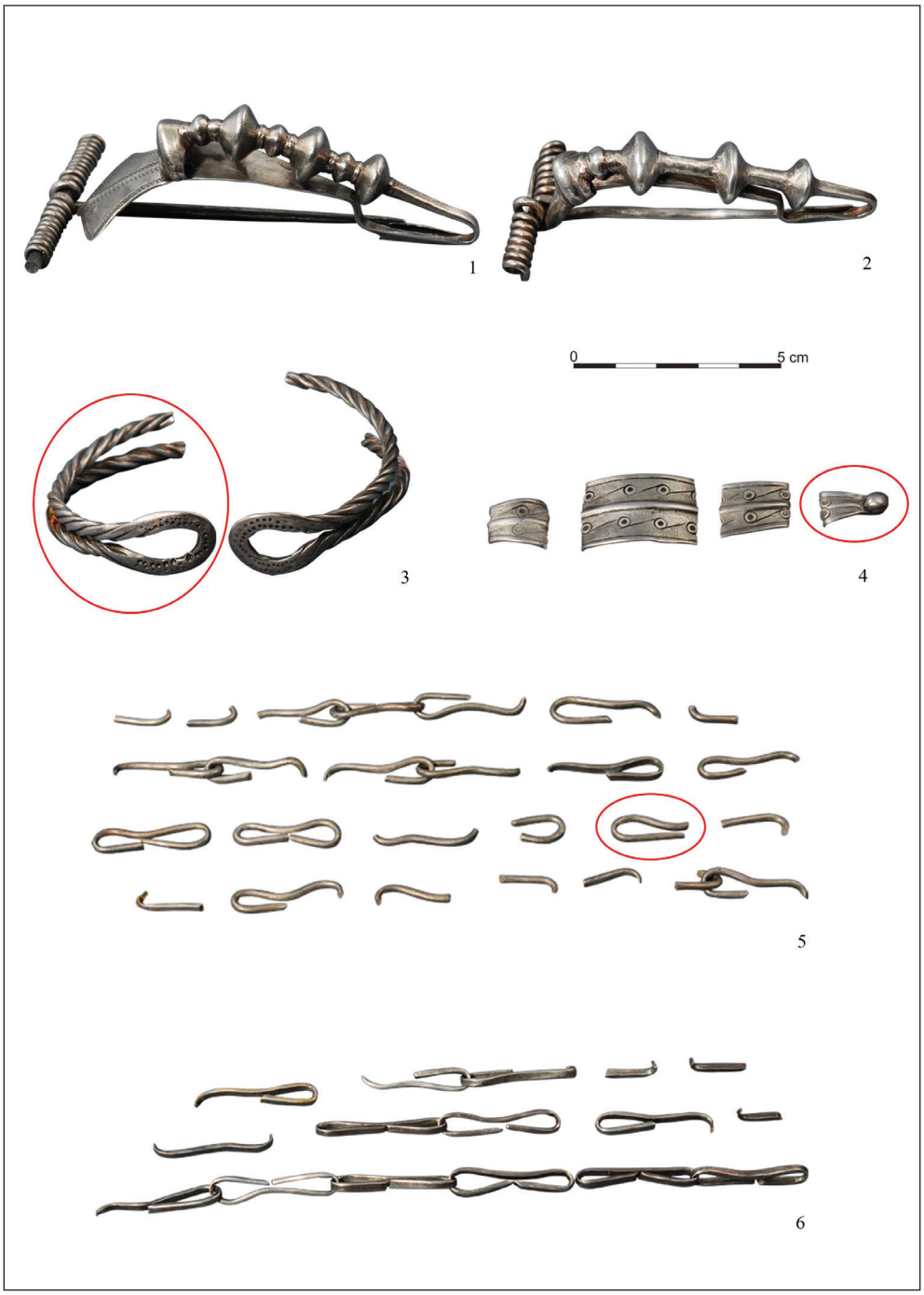
ŽIVKOVIĆ *et alii* 2014 – J. Živković, T. Rehren, M. Radivojević, M. Jevtić, D. Jovanović, *XRF Characterisation of Celtic Silver from the Židovar treasure (Serbia)*, în: E. Pernicka, R. Schwab (eds.), *Under the Volcano: Proceedings of the International Symposium on the Metallurgy of the European Iron Age (SMEIA) held in Mannheim, Germany, 20–22 April 2010*, 2014, *Forschungen zur Archäometrie und Altertumswissenschaft*, Bd. 5, Rahden, 2014, p. 157–173.

Link-uri:

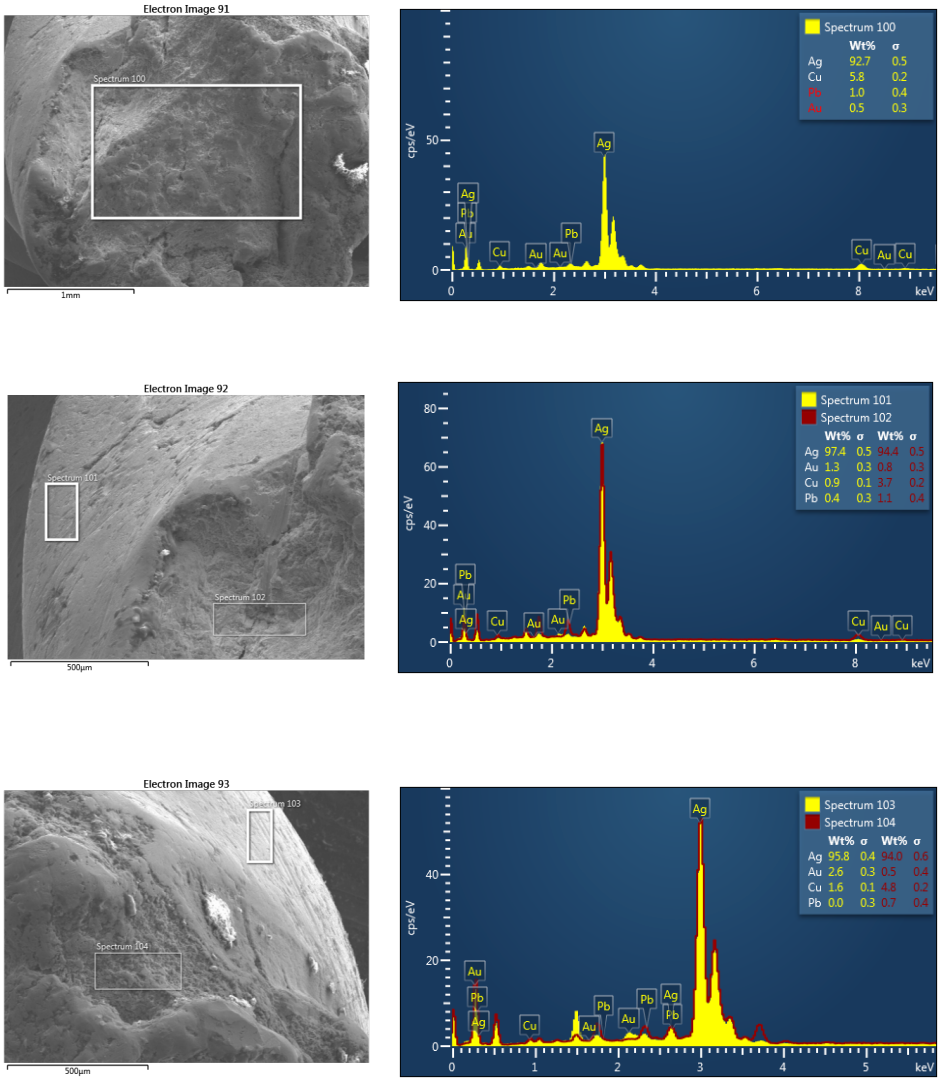
Proiect de cercetare. Studii de arheometalurgie pe Aurul și Argintul Dacic folosind metode performante de Spectometrie de Raze X. Faza 5: Caracterizarea arheo-metalurgica a monedelor de argint de tip Geto-Dacic Extra-Carpatice și Transilvane (director proiect B. Constantinescu). (http://proiecte.nipne.ro/pn2/DacianGoldSilver /rs2015.pdf, ultima accesare în 21 aprilie 2023.

Proiect PN-II–ID-PCE_2011_3_0078. *Studii de arheometalurgie pe Aurul și Argintul Dacic folosind metode performante de Spectometrie de Raze X. Raport științific pentru perioada octombrie 2011 – octombrie 2016 (director proiect B. Constantinescu).* (http://proiecte.nipne.ro/pn2/DacianGoldSilver/RaportSintetic Final.pdf, ultima accesare în 25 aprilie 2023).

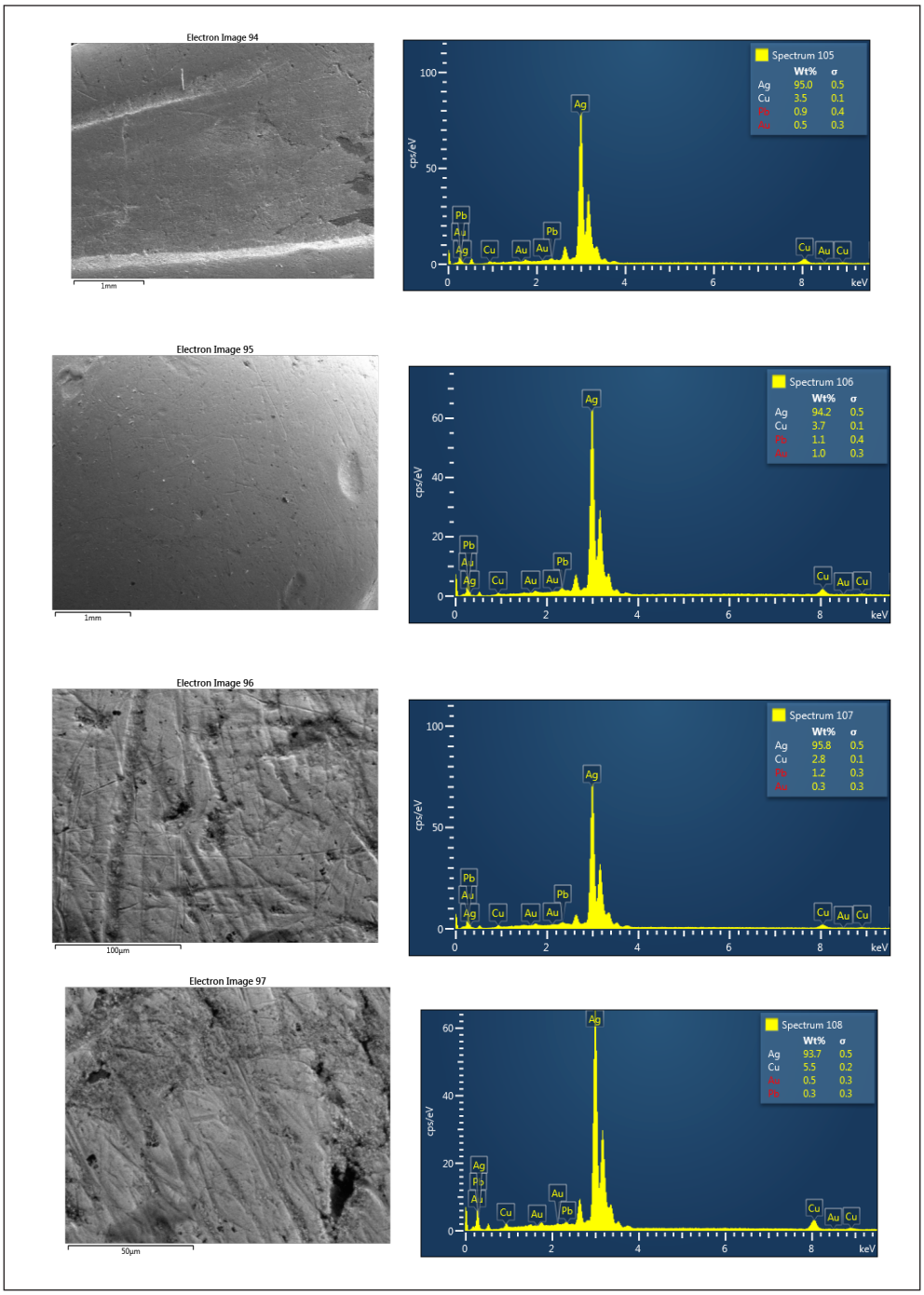
Caracterizarea arheo-metalurgică a podoabelor și toreuticii de argint dacice (director proiect B. Constantinescu). (http://proiecte.nipne.ro/pn2 /DacianGoldSilver/rs2016.pdf ultima accesare în 21 aprilie 2023).



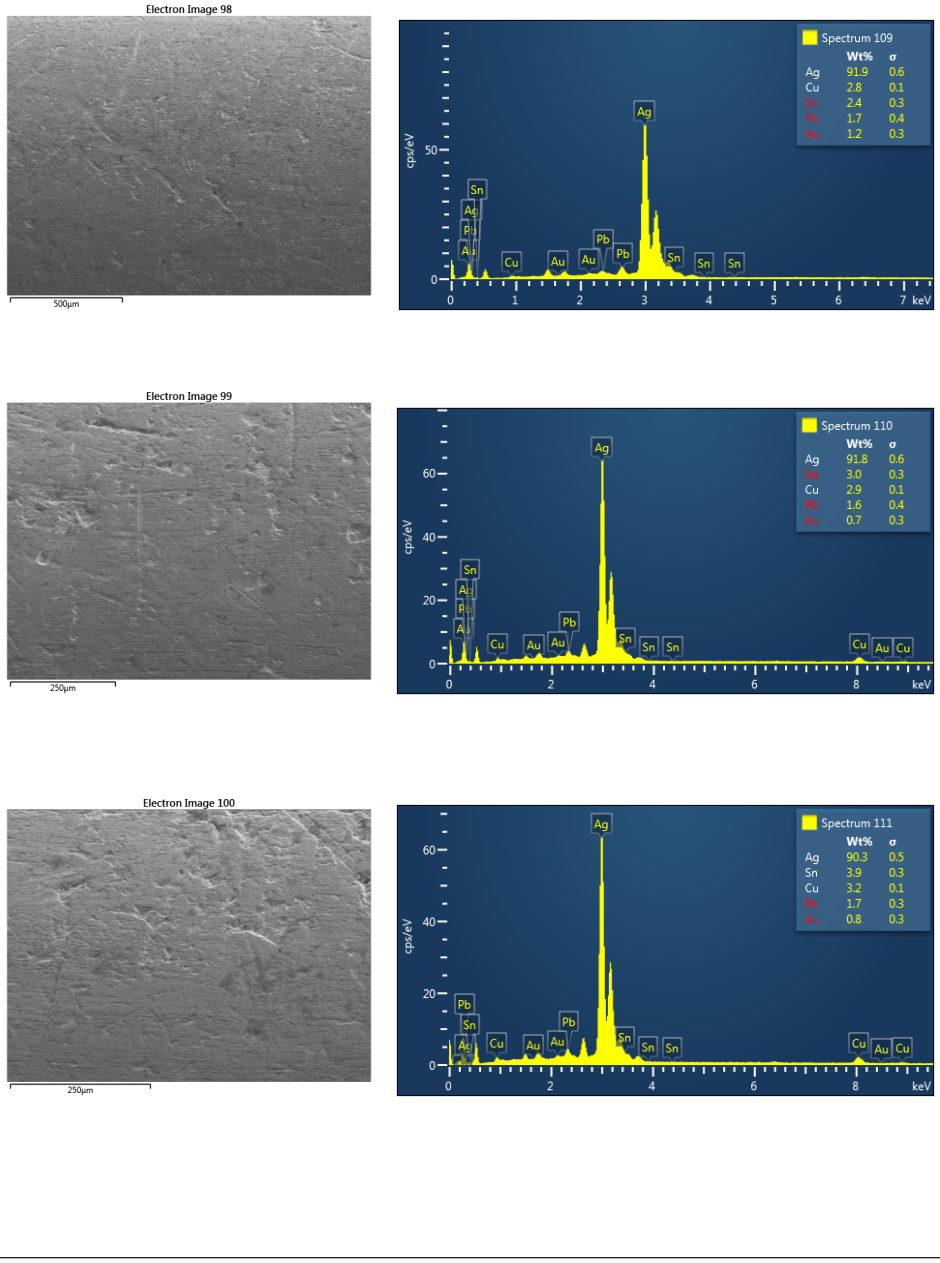
Pl. 1. Tezaurul de podoabe dacice de la Drăgești (jud. Bihor): 1–2. Fibule cu noduri; 3. Brățară din bară torsionată; 4. Brățară din placă; 5–6. Lanțuri din zale.



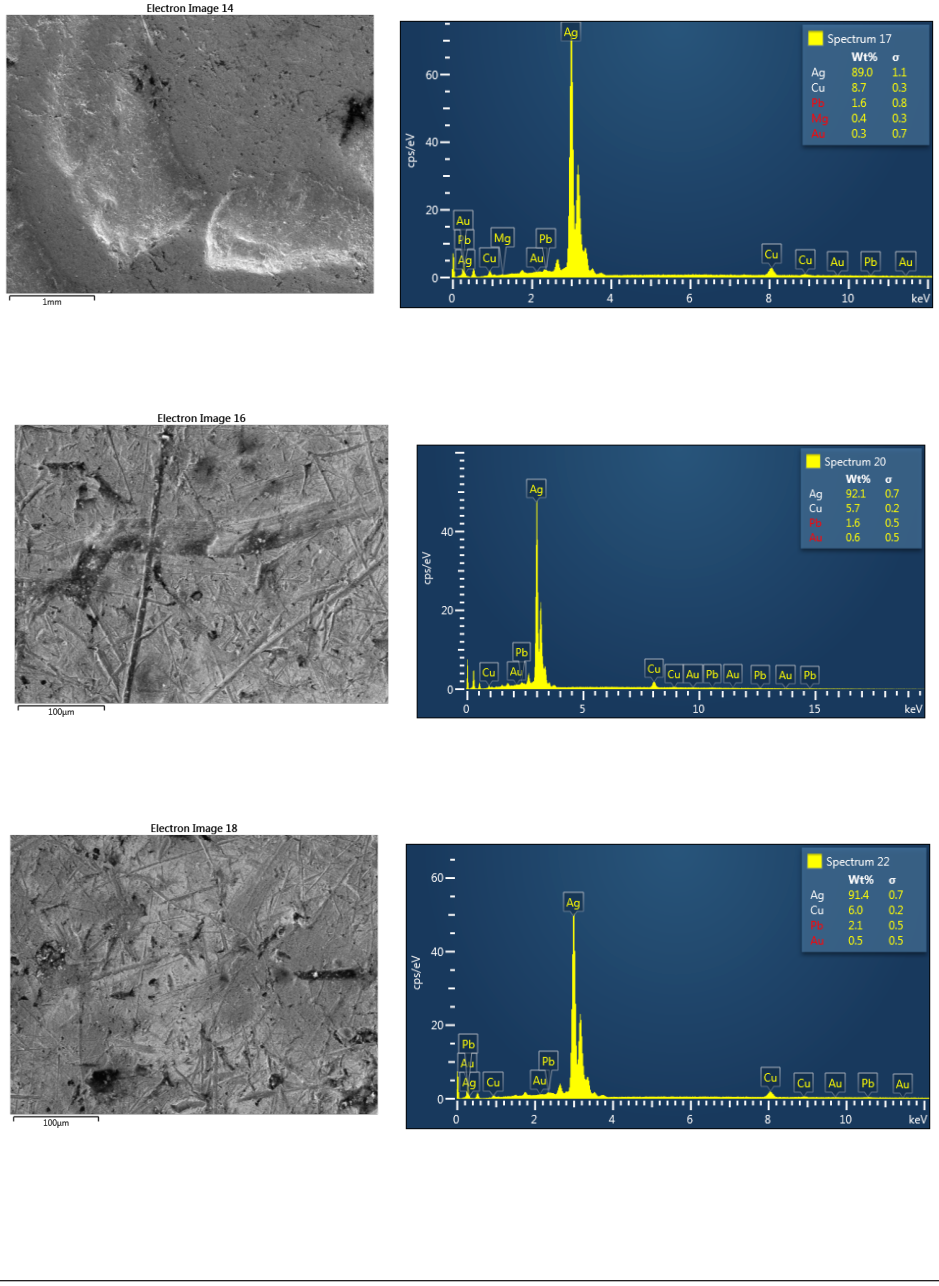
Pl. 2. Brățara torsionată din tezaurul de la Drăgești (jud. Bihor): imagini SEM și analiza elementală EDX.



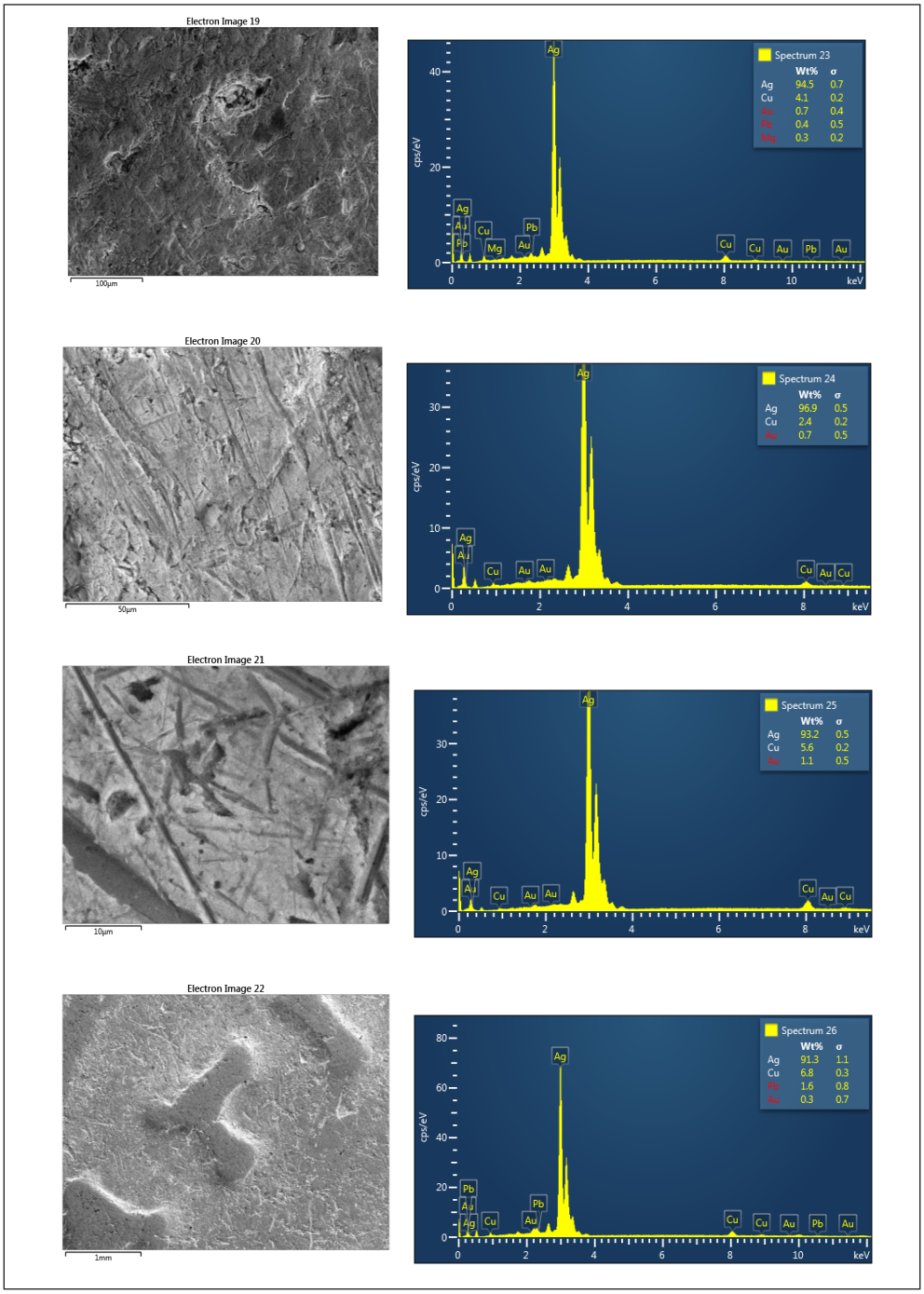
Pl. 3. Brățara placă din tezaurul de la Drăgești (jud. Bihor): imagini SEM și analiza elementală EDX.



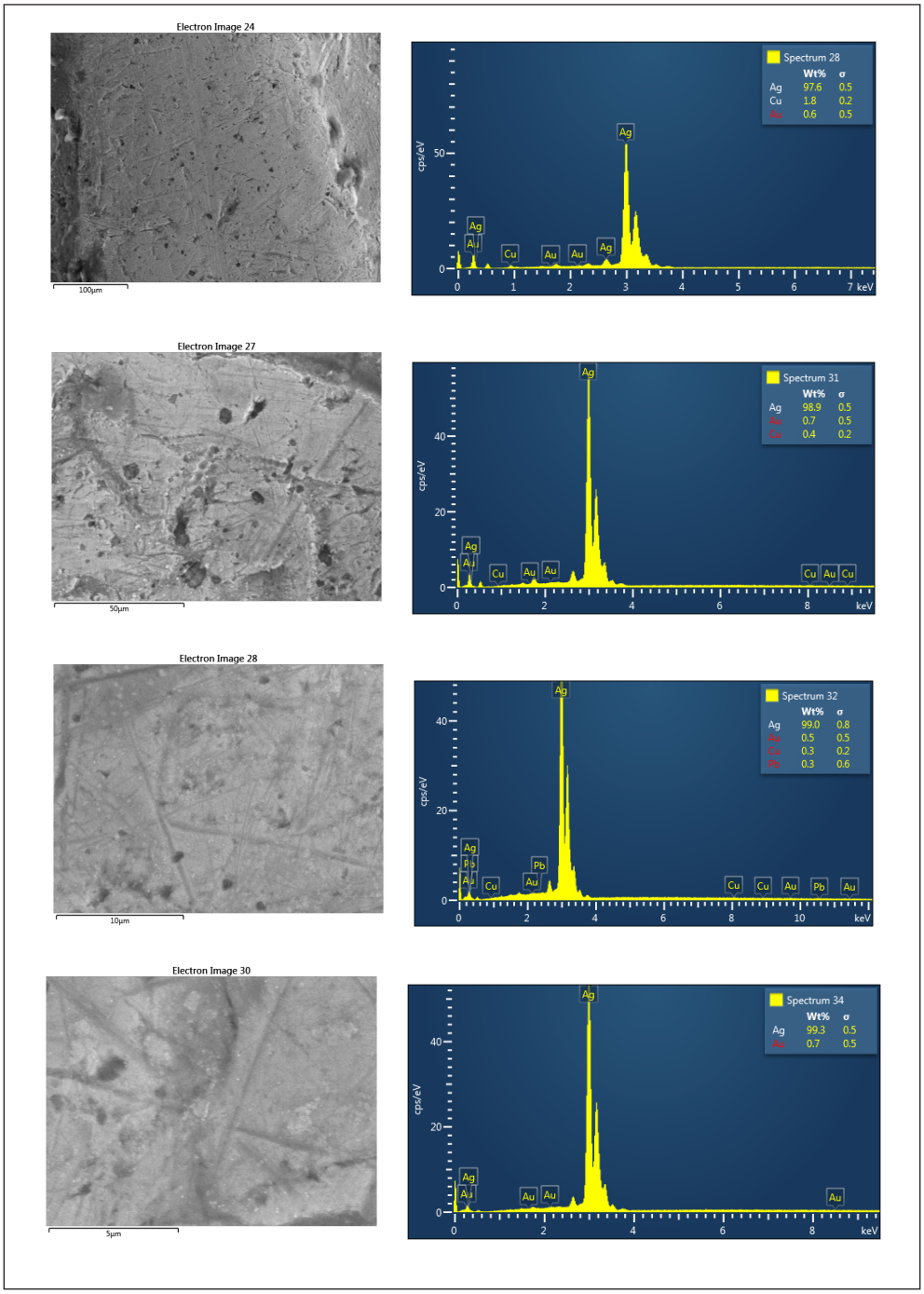
Pl. 4. Lanțul din zale nepliate din tezaurul de la Drăgești (jud. Bihor): imagini SEM și analiza elementală EDX.



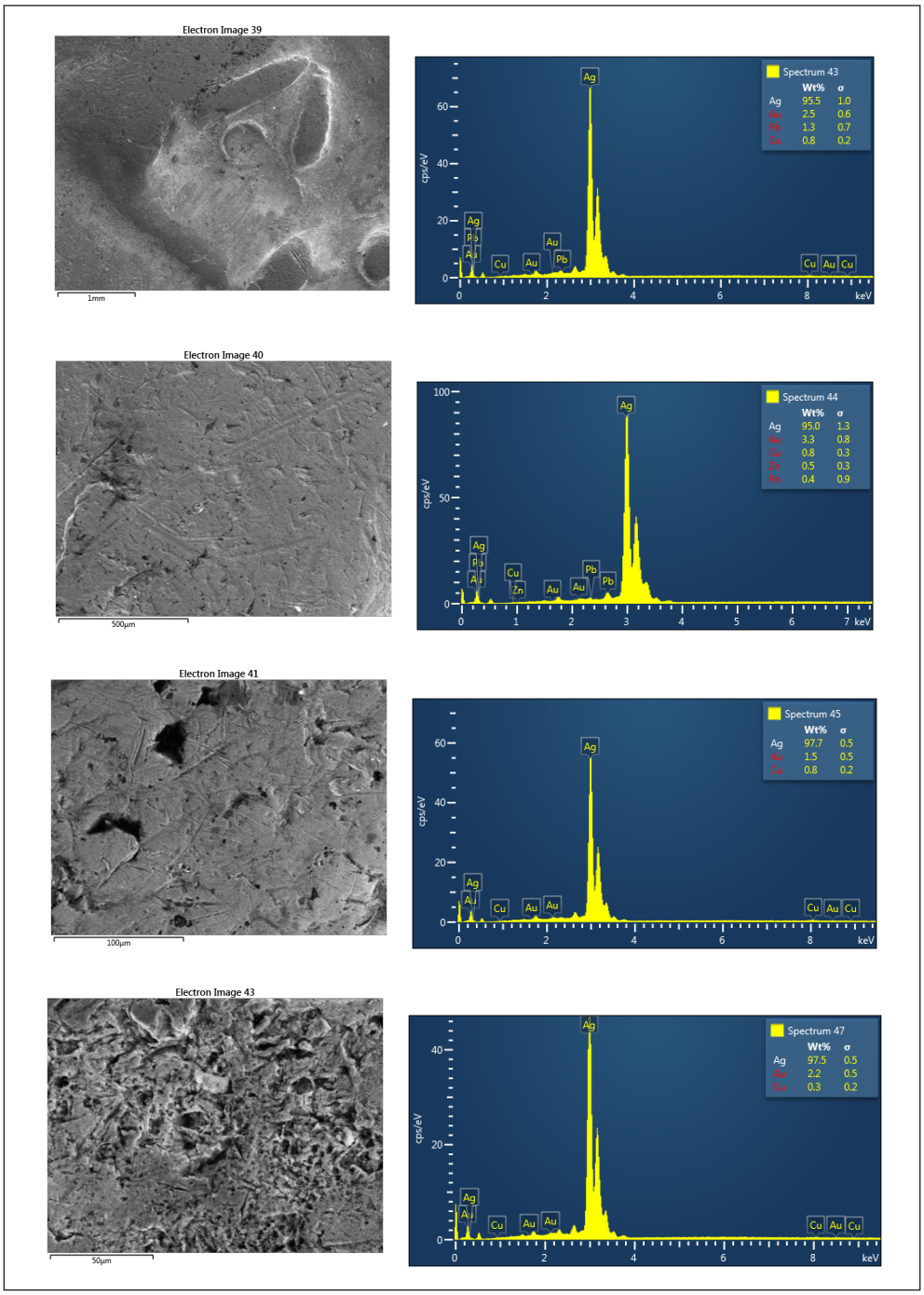
Pl. 5a. Drahmă de Apollonia din tezaurul de la Drăgești (jud. Bihor): imagini SEM și analiza elementală EDX.



Pl. 5b. Drahmă de Apollonia din tezaurul de la Drăgești (jud. Bihor): imagini SEM și analiza elementală EDX.



Pl. 6. Denar roman republican din tezaurul de la Drăgești (jud. Bihor) (inv. 892–34): imagini SEM și analiza elementală EDX.



Pl. 7. Denar roman republican din tezaurul de la Drăgești (jud. Bihor) (inv. 363–4): imagini SEM și analiza elementală EDX.

ANALYSIS OF FINDS (INGOTS AND SCRAP) FROM THE PRODUCTION CENTERS NEAR ZLATAR, PRESLAV DISTRICT AND NOVOSEL, SHUMEN DISTRICT (BULGARIA) (PART I)

Stella DONCHEVA[*]
Nina ARCHANGELOVA[**]
Ákos CSEPREGI[***]
Anikó ANGYAL[****]
Zita SZIKSZAI[*****]

Cuvinte-cheie: *analize chimice, lingouri, rebut, centre de producție, Novosel, Zlatar.*
Keywords: *chemical analysis, ingots, scrap, production centers, Novosel, Zlatar.*

Rezumat: *Istoria cercetărilor metalurgiei a demonstrat faptul că determinarea caracterului aliajului pe baza elementelor chimice este o sarcină simplă în investigarea metalurgică istorică. Este greu de clarificat din ce depozit de minereu a fost extras metalul. Cuprul și alte minereuri din fiecare zăcământ, pe lângă componenta principală cuprul, conțin și multe alte elemente care formează o varietate de combinații calitative și cantitative. Metalul extras din minereu dublează elementele care se află în el. Prin elementele care compun metalul, combinația generală a elementelor minereului poate fi stabilită cu suficientă acuratețe. Găsirea sursei materiei prime este mai importantă decât determinarea tipului de aliaj. Apoi, sunt dezvăluite rutele comerciale pe care metalul și produsele sale au fost difuzate în diferitele comunități și culturi. Astfel, se restabilește relația dintre comunitatea metalurgiștilor, intermediari și consumatorii produselor.*

Grupul de lingouri, ca una dintre principalele materii prime pentru producție, precum și produsele separate ca rebuturi, care se constituie în a doua materie primă importantă, reprezintă un subiect nu mai puțin interesant. Dimpotrivă, generează întrebări fundamentale cu privire la întregul proces de producție, la etapele și succesiunea proceselor sale. Printre principalele sarcini care pot fi rezolvate cu rezultatele cercetării compoziției elementare a

[*] Stella DONCHEVA: Shumen University, Shumen; e-mail: s.doncheva@shu.bg.
[**] Nina ARCHANGELOVA: Shumen University, Shumen; e-mail: n.arhangelova@shu.bg.
[***] Ákos CSEPREGI: Institute for Nuclear Research (ATOMKI)/University of Debrecen, Debrecen; e-m
[****] Anikó ANGYAL: Institute for Nuclear Research (ATOMKI), Debrecen; e-mail: angyal.aniko@atomki.hu.
[*****] Zita SZIKSZAI: Institute for Nuclear Research (ATOMKI), Debrecen; e-mail: szikszai.zita@atomki.hu.ail: csepregi.akos@atomki.hu.

întregului set de produse se numără originea metalului și modalitățile de ajungere a acestuia în atelierele centrelor de producție din vecinătatea orașului Preslav. În plus, pot fi determinate principalele metale și aliaje utilizate la fabricarea acestor produse, precum și compoziția și principalele elemente de aliere din aliaj, care determină caracterul acestuia. Principalele rezultate oferă un punct de plecare pentru analiză în aceste direcții, iar acumularea unei baze de date extinse va permite concluzii mai complete și definitive.

Abstract: *Determining the character of the alloy based on the chemical elements is a simple task in historical metallurgical research. It is difficult to clarify from which ore deposit the metal was extracted. Copper and other ores from each deposit, in addition to the main component-copper, also contain many other elements that form a variety of qualitative and quantitative combinations. The metal extracted from the ore duplicates the elements that are in it. By the elements composing the metal, the general combination of the elements of the ore can be established with sufficient accuracy. Finding the source of the raw material is more important than determining the type of alloy. Then, the trade routes along which the metal and its products traveled in the different communities and cultures are revealed. Thus, the relationship between the community of metallurgists, middlemen and consumers of the product is restored.*

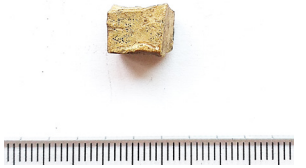
The group of ingots, as one of the main raw materials for production, as well as the products set aside for scrap, which is the second important raw material, is no less an interesting topic. On the contrary, it poses fundamental questions concerning the entire production process and its stages and sequence of processes. Among the main tasks that can be solved with the results of the research of the elemental composition of the entire set of products are the origin of the metal and the ways of its arrival in the workshops of the production centers in the vicinity of Preslav. In addition, the main metals and alloys used in the manufacture of these products can be determined, as well as its composition and the main alloying elements in the alloy, which determine its character, can be determined. The main results do provide a starting point for reasoning in these directions, and the accumulation of an extensive database will make the conclusions even more complete and definitive.

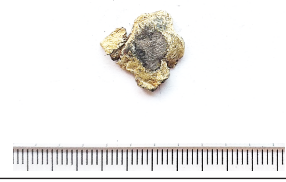
According to the study of selected materials received from the archaeological investigations of the production centers in the vicinity of the capital Preslav, carried out at the Institute for Nuclear Research in Debrecen, only those originating from the complexes near Zlatar (Preslav district) and Novosel (Shumen district) are presented here. These represent two of the three metalworking centers known for the Balkan area for jewelry production in the 10th century. The finds from Zlatar are predominant, so our attention will be directed to them first. This also implies the larger number of objects belonging to the two main groups of materials, tracing the path of production activity in art metal workshops – the ingots and rejected products, the so-called scrap metal (**Tab. I**). Selected samples of the finished product were investigated in several successive projects before, and the results of PIXE analyzes have found a place in prestigious international publications[1].

[1] DONCHEVA *et alii* 2021a, p. 71–98; DONCHEVA *et alii* 2021b, p. 191–208.

Table I

Sample No	Dimensions /cm/	Weigth /g/	Object	Alloy	Main elements obtained after PIXE, sorted by quantity above and about 1%	Image
ZLT 6	8,5/0,3/0,3	4,06	scrap	lead brass	Cu, Zn, Pb	
ZLT 8	1,6/0,8-1,6/0,2-0,7	8,84	Pour lip	multicompo-nent	Cu, Pb, Sn, Zn, Sb	
ZLT 9	3,5-4/1,1-1,3/0,2-0,3	4,17	Pour lip	cooper	Cu, Pb, As, Ag	
ZLT 10	6,5/0,6-1,4/0,2	5,58	Pour lip	brass	Cu, Zn, Pb, As	

Sample No	Dimensions /cm/	Weigth /g/	Object	Alloy	Main elements obtained after PIXE, sorted by quantity above and about 1%	Image
ZLT 17	2,4/0,7-1/0,6	7,47	Pour lip	lead	Pb, Cu, Sn, Sb	
ZLT 19	4/0,5/0,5	8,48	Ingot	lead	Pb, Sb, Cu	
ZLT 20	1,8/1/1	13,49	Ingot	lead	Pb, Sb	
ZLT 21	1,1/0,7/0,6	5,37	Ingot	lead	Pb, Sb, Cu	

Sample No	Dimensions /cm/	Weigth /g/	Object	Alloy	Main elements obtained after PIXE, sorted by quantity above and about 1%	Image
ZLT 22	2,2/1,3/1,2	9,21	Pour lip	lead	Pb, Sb, Cu	
ZLT 23	1,8/1,6/0,1-0,3	2,12	Waste product	lead	Pb, Sb, Cu, Zn	
NVS 2	2,5/1,3-1,5/0,5	18,73	Ingot	lead	**Pb, Sn, Sb**	
NVS 3	5,1/0,5-1,3/0,2	4,45	Pour lip	lead brass	Cu, Zn, Pb	
NVS 5	3-3,2/0,5-0,6/0,3-0,4	6,68	Ingot	tin-lead bronze	Cu, Sn, Pb	

Sample No	Dimensions /cm/	Weigth /g/	Object	Alloy	Main elements obtained after PIXE, sorted by quantity above and about 1%	Image
NVS 18	4,2/0,4-0,7/0,2-0,6	7,63	Ingot	lead	Pb, Sb	
NVS 21	3/1,5/0,2-0,3	11,43	Ingot	lead	Pb, Sb	
NVS 22	1,3/0,7/0,6	4,27	Ingot	lead	Pb, Cu, Sb	
NVS 24	2,1/0,4-0,6/0,3-0,4	3,69	Ingot	lead	Pb, Sb, Cu	

Determining the alloy based on the chemical elements is a simple task in historical metallurgical research. It is difficult to clarify from which ore deposit the metal was extracted. Copper and other ores from each deposit, in addition to the main component-copper, also contain many other elements that form a variety of qualitative and quantitative combinations. The metal extracted from the ore duplicates the elements that are in it. From the elements composing the metal, the general combination of the elements of the ore can be determined with sufficient precision[2]. Finding the source of the raw material is more important than determining the type of alloy. Then, the trade routes along which the metal and its products traveled in the different communities and cultures are revealed. Thus, the relationship between the community of metallurgists, traders and consumers of the product is restored.

The group of ingots, as one of the main raw materials for production, as well as the products set aside for scrap, which is the second important raw material, is no less an interesting topic. On the contrary, it poses fundamental questions concerning the entire production process and its stages and sequence of processes. Among the main tasks that can be solved with the results of the research of the elemental composition of the entire set of products are the origin of the metal and the ways of its arrival in the workshops of the production centers in the vicinity of Preslav. In addition, the main metals and alloys used in the manufacture of these products can be determined, as well as its composition and the main alloying elements in the alloy, which present its character, can be determined. The main results do provide a starting point for reasoning in these directions, and the accumulation of an extensive database will make the conclusions even more complete and definitive (**Tab. IIa-c**).

Objects found at the production center near Zlatar, Preslav district

The predominant alloy in the group of objects measured is **lead**. The extraction of lead became very easy from its ore galena (lead sulfide). Only one incomplete roasting of galena is sufficient for the two parts (roasted and unroasted) to interact and for a certain amount of metallic lead to flow from the ore[3]. This can be done by heating galena in an ordinary, open fire fanned by a natural air current. Galena melts at 1135°C, partially sublimating as early as 755°C. When galena is heated in the presence of air, it begins to oxidize from 360°C upwards. By blowing the molten lead with air at a temperature where the lead oxide that forms melts and can be skimmed off, the conversion to dross or oxide of all the lead can take place. This process was used in ancient times for the separation of lead from the precious metals contained in it by the process of cupellation.

Six out of a total of 10 objects present this second main alloy for the production of articles in art metal complexes, after the alloy of bronzes (**Fig. 2, 18, 20, 21–24**). Models were mainly cast from lead, on which the finished products were subsequently obtained from bronze and, less often, from silver alloy.

[2] CHERNIH 1972, p. 60.

[3] TRIFONOV 1950, p. 72–74.

Table IIa

Cbm.	Conc (wt%)												
Object	**Cr**	**Mn**	**Fe**	**Co**	**Ni**	**Cu**	**Zn**	**As**	**Ag**	**Sn**	**Sb**	**Pb**	**Alloy**
Zl 6	0.038	0.014	0.342	0.006	0.136	69.551	27.440	0.184	0.078	<LOD	<LOD	2.296	lead brass
Zl 8	0.024	0.010	0.412	0.019	0.075	79.292	4.384	0.199	0.078	6.628	0.307	8.770	multicomponent
Zl 9	0.028	0.007	0.249	0.007	0.064	98.542		0.427	0.212	<LOD	<LOD	0.690	cooper
Zl 10	0.022	0.008	0.107	<LOD	0.039	77.613	21.322	0.239				0.650	brass
Zl 17	0.015	0.007	0.198	<LOD	0.010	1.305	0.096		0.029	0.560	0.234	98.492	lead
Zl 19	0.017	<LOD	0.063	<LOD	0.009	0.329	0.012		0.023		0.612	99.145	lead
Zl 20	<LOD	<LOD	0.043		0.011	0.097			<LOD		0.796	99.1	lead
Zl 21	0.009	<LOD	0.051	<LOD	0.010	0.223	0.018		<LOD	0.102	0.565	99.245	lead
Zl 22	0.011	<LOD	0.041		0.008	0.198	<LOD		0.031		0.428	99.447	lead
Zl 23	<LOD	0.009	0.051		0.011	0.864	0.244		<LOD		0.773	98.896	lead
Ns 2	0.014	<LOD	0.049		0.007	0.284			<LOD	2.546	0.729	97.282	lead
Ns 3	0.018	0.012	0.325	0.007	0.056	80.518	14.046	0.187	0.073	1.897	<LOD	3.831	lead brass
Ns 5	0.024	0.012	0.098	0.015	0.035	89.246		0.388	0.049	7.442	<LOD	4.409	tin-lead bronze
Ns 18	0.015	<LOD	0.080	<LOD	0.010	0.204	0.013				0.705	99.059	lead
Ns 21	0.013	<LOD	0.040		0.009	0.178	0.009		<LOD		0.586	99.272	lead
Ns 22	0.015		0.047	<LOD	0.010	2.926	0.080		0.029		0.849	98.423	lead
Ns 24	0.013	0.008	0.036	<LOD	0.013	0.519	0.033		<LOD		0.577	99.362	lead

Table IIb

	Fit.error (%)											
Object	**Cr**	**Mn**	**Fe**	**Co**	**Ni**	**Cu**	**Zn**	**As**	**Ag**	**Sn**	**Sb**	**Pb**
Zl 6	5.82	12.19	1.21	28.9	2.32	0.15	0.23	6.85	25.36			1.85
Zl 8	8.46	16.81	1.08	9.37	3.63	0.13	0.51	10.53	21.98	2.55	17.32	0.62
Zl 9	7.76	22.22	1.49	24.68	4.8	0.14		3.22	15.32			4.45
Zl 10	9.23	20.69	2.66		6.26	0.16	0.28	4.93				4.62
Zl 17	20.47	37.14	1.88		15.81	0.6	3.16		32.86	8.83	13.33	0.13
Zl 19	20.59		4.81		19.77	1.46	17.24		37.74		8.94	0.15
Zl 20			6.23		14.93	2.81					7.57	0.15
Zl 21	39.92		5.96		19.52	1.91	12.96			35.63	9.69	0.15
Zl 22	26.22		5.23		17.15	1.62	46.93		24.77		9.23	0.11
Zl 23		35.01	5.98		17.53	0.78	1.7				8.35	0.15
Ns 2	28.76		5.82		27.34	1.58				4.35	9.96	0.15
Ns 3	14.2	16.47	1.6	30.46	6	0.17	0.38	10.6	34.91	7.87		1.84
Ns 5	9.39	14.93	2.97	10.4	7.76	0.15		4.35	32.4	2.89		1.27
Ns 18	24.52		3.96		18.19	1.93	16.61				8.89	0.15
Ns 21	27.52		7.42		20.79	2.18	24.04				9.75	0.15
Ns 22	24.82		6.75		21.27	0.53	5.31		39.37		8.55	0.16
Ns 24	24.41	33.21	8.02		13.06	1.02	6.93				9.02	0.16

Table IIc

	LOD (wt%)											
Object	**Cr**	**Mn**	**Fe**	**Co**	**Ni**	**Cu**	**Zn**	**As**	**Ag**	**Sn**	**Sb**	**Pb**
Zl 6	0.003	0.003	0.005	0.005	0.004	0.016	0.028	0.059	0.022	0.030	0.057	0.092
Zl 8	0.003	0.003	0.006	0.004	0.005	0.017	0.024	0.150	0.013	0.095	0.060	0.054
Zl 9	0.004	0.003	0.006	0.004	0.054	0.016		0.029	0.035	0.066	0.077	0.146
Zl 10	0.004	0.003	0.006	0.004	0.004	0.020	0.034	0.028				0.103
Zl 17	0.005	0.004	0.004	0.004	0.003	0.003	0.004		0.009	0.095	0.026	0.033
Zl 19	0.006	0.005	0.004	0.004	0.003	0.003	0.004		0.013		0.026	0.065
Zl 20	0.006	0.005	0.004		0.003	0.003			0.013		0.052	0.054
Zl 21	0.007	0.006	0.005	0.004	0.003	0.003	0.004		0.010	0.085	0.066	0.032
Zl 22	0.005	0.004	0.003		0.003	0.002	0.003		0.010		0.025	0.052
Zl 23	0.007	0.005	0.004		0.003	0.002	0.004		0.011		0.044	0.031
Ns 2	0.007	0.006	0.004		0.003	0.002			0.013	0.116	0.067	0.036
Ns 3	0.005	0.006	0.007	0.005	0.006	0.020	0.031	0.095	0.033	0.176	0.107	0.101
Ns 5	0.004	0.003	0.007	0.003	0.005	0.010		0.087	0.022	0.107	0.063	0.128
Ns 18	0.006	0.005	0.004	0.004	0.003	0.003	0.004				0.053	0.045
Ns 21	0.007	0.006	0.005		0.003	0.002	0.004		0.016		0.060	0.044
Ns 22	0.007		0.005	0.004	0.004	0.006	0.006		0.015		0.092	0.053
Ns 24	0.006	0.005	0.005	0.003	0.003	0.003	0.004		0.014		0.051	0.070

One part of the finds consists of ingots of finished metal from which the mentioned articles were cast. For example, among the investigated finds, four are identified as lead ingots (Zl. 17, 19, 20, 21), one is a melt separated for recycling (Zl. 22) and one is a scrap model (Zl. 23). Among these six finds, the leading element is *lead Pb* in its maximum values of 98–99% (**Fig. 4**). Despite the similarity, some slight deviations from these indicators are also observed. For example, two objects show a value of 98.492 and 98.896% (Zl. 17, Zl. 23), while the rest have a value above 99%, i.e. almost pure lead alloy-from 99.1 to 99.447% (Zl. 20, Zl. 22).

A natural impurity of lead ores is *antimony Sb*. Its values enter the lead alloy directly from the raw material and do not depend on the content of the main element lead Pb (**Fig. 14**). The amounts of antimony Sb in the group vary from 0.234 to 0.796%, and in the first case the lead Pb is 98.492% (Zl. 17), and in the second–99.1% (Zl.20), (**Fig. 15, 26**). At alloy values above 99%, antimony Sb amounts to 0.428% (Zl. 22), 0.565% (Zl. 21) and 0.612% (Zl. 19).

An indicative element for lead ores is *silver (Ag)*, which also inserted lead in alloys (**Fig. 13**). Its content in the analyzed group of subjects is barely noticeable, and somewhere below the permissible minimum of registration in the study (**Fig. 16**). Its values are only 0.023% (Zl. 19)-0.031% (Zl. 22), and in three items it does not even reach these amounts (Zl. 20–21, Zl. 23). This comes to show only one thing, namely the very well purified alloy from which silver was previously extracted by the method of cupellation and subsequent refining of the metal, considered the main method of mining and obtaining pure silver from its main carrier-lead ores. Metallic lead is obtained by roasting the ores and subsequent reduction with carbon in shaft furnaces. The melting point of lead is 327°C, but melting requires at least 800°C for the lead to become liquid. Lead ores contain rock impurities (silicates), which at the high temperature of the reduction react with part of the lead oxide and form lead silicate, which passes into the slag. In addition to this method, known as the frying-reduction method, a frying-reaction method is also applied. With it, the ore is fried in a lack of oxygen so that part of the silphite remains unchanged. The temperature is then raised and the air purge is stopped.

Crude lead contains silver, copper, arsenic, antimony, tin, bismuth, etc. It undergoes refining. The copper is separated as the melt cools to near the melting temperature, where the copper crystallizes, trapping small amounts of lead in a corresponding inter-metallic compound. The remaining elements are oxidized by blowing air and float to the surface. Pure silver is relatively rare in nature, and where it is found, its quantities are scarce and do not give the opportunity to talk about silver extraction from its natural minerals. Therefore, lead ores are the main source of obtaining this valuable metal both in ancient times and today.

The other impurity that naturally occurs in lead ores and enters the alloy subsequently is *copper Cu* (**Fig. 3**). Here, unlike antimony, the copper content in the alloy is directly proportional to the percentage amount of lead (**Fig. 17**). That is why the values are the highest in those items where the lead Pb is 98%. So, for example, with lead of 98.492% stands above one percent copper, i.e. 1.305% (Zl. 17); and at 98.896% Pb-0.864% Cu (Zl. 23). For the rest of the samples, the ratio is the same. Where the lead is above 99%, the copper content varies with its percentage and ranges from 0.097% (Zl. 20) to 0.329% (Zl. 19) (**Fig. 32–34**).

An optional element for lead alloys is *tin Sn*. Usually, it is either absent or its values are insignificant and in most cases are below the permissible minimum, therefore they are not taken into account in the analysis of the elemental composition (**Fig. 6**). However, here, in one of the samples, the *tin Sn* values are above the expected level, reaching up to 0.56% (Zl. 17) (**Fig. 22, 34**). In this case, the alloy is defined as tin-lead. Of the remaining examples, there is only one more where the content of tin Sn is recorded, but its value is smaller-0.102% (Zl. 21) and one cannot speak of an alloy influenced by tin.

The presence of *zinc Zn* in the lead alloy is not a natural impurity in the lead alloy, but usually enters together with the copper (**Fig. 5**). Sometimes, when the values are greater, its presence is an indicator of the addition of scrap recycled metal, but in this case the reason for the zinc to be reported is rather the former. Therefore, its values are tied to those of the amounts of copper in the alloys of the individual objects, i.e. where there is a high percentage of copper Cu in the lead alloy, there the presence of zinc is most noticeable 0.244% Zn-0.864% Cu (Zl. 23); 0.096% Zn–1.305% Cu (Zl. 17) (**Fig. 23, 32–33**). And in the ingot with a copper content of 0.097%, the presence of zinc in the alloy (Zl 20) is not even recorded.

The rest of the measured elements-*chromium Cr, manganese Mn, nickel Ni* have values of 0.01% and below (**Fig. 7–8, 11**). In some cases, the amounts are so minimal that they fall under the so-called permissible minimum and were not measured as such (**Fig. 18–20**). Their presence in the lead alloy is the result of entry from the original ore sources. The situation is similar with the recorded values of *iron Fe*, which is a natural impurity of lead ores (**Fig. 9, 21, 37**). Its amounts average 0.04% (Zl. 20, 22)-0.05% (Zl. 21, 23). Somewhere they reach up to 0.063% (Zl. 19) and at most up to 0.198% (Zl. 17). The iron values are also an indicator of the reduction conditions during the melting and casting of the alloys. The low amounts are an indication of the very good conditions of preparation and implementation of this process (**Fig. 35**).

The remaining four objects analyzed in the course of the study are made of alloys of different composition, generally defined as **bronze alloys**. The first of them (Zl. 6) is a representative of *brass alloys*. The Cu content of the copper base is very low–69.551%. On the other hand, the amounts of zinc Zn are very high and reach 27.44% (**Tab. II**). That's why the alloy is brass. The elevated lead Pb values of 2.296% precisely identify the object's alloy as *lead brass* (**Fig. 5, 23**). The amounts of *arsenic As* of 0.184% enter from the raw material-the copper ores. They are also indicative of their origin (**Fig. 12**). It is accepted that the limit concentration of arsenic As in the alloy should be 1% to talk about of artificially obtained bronze[4].

Silver Ag has values of 0.078%, which defines it, along with other trace elements such as *nickel Ni and cobalt Co*, with amounts of 0.136% Ni and 0.006% Co respectively as an indicator of the origin of the copper raw material (**Fig. 10–11, 13**). The value of *iron Fe*, which also enters the alloy from the starting material, is 0.342%. Its low values are indicative of the good conditions provided during the entire reduction process and prove its origin (**Fig. 36**).

Another one of the samples was identified as *brass* (Zl. 10). In it, *copper Cu* is 77.613% Cu, and *zinc Zn*–21.322% (**Fig. 5, 32–33**). Here the *lead Pb* is 0.650%, which

[4] RINDINA, RAVICH 2012, p. 5.

does not define the alloy as lead brass, but rather as a relatively pure zinc alloy. *Silver Ag, tin Sn and antimony Sb* were not registered during the elemental composition analysis, and the amount of *cobalt Co* was below the permissible minimum registration, therefore it was not reported. Of the important trace elements, the percentage content of *arsenic As* is elevated-0.239% (**Fig. 12**). Other elements indicative of raw material sources were also recorded, such as *nickel Ni*-0.039%, *manganese Mn*-0.008% and *chromium Cr*-0.022% (**Fig. 29, 31, 37**). The *arsenic As* increases the hardness of the metal, and the nickel Ni holds the arsenic in the alloy, which can volatilize when heated, making the alloy suitable for quenching and tempering. *Iron Fe* amounts of 0.107% Fe were introduced from the starting materials.

In both examples of brass alloys, additional significant amounts of *zinc Zn* have been added, which, unlike most of the trace elements discussed, is not present in the copper ores, or if there are traces of it, they are insignificant and cannot be registered in the study of the composition of the alloy (**Tab. II**). In the first case (Zl. 6) it is a bronze wire obtained from a metal to which a considerable amount of zinc and lead has been added to improve the casting properties of the alloy and to obtain a color resembling gold. In the second sample (Zl. 10), which is part of a foundry system, recycled metal was added in which the zinc content was significant. Subsequently, when the metal is melted and the scrap scraps are placed in the smelter, zinc falls into the alloy and determines the properties characteristic of brass alloys in the finished products. Undoubtedly, the craftsmen preparing the alloys well understood what amount of ligature was necessary to obtain a metal of the desired qualities.

One of the objects-part of a funnel system ("tree") subjected to analysis shows belonging to the so-called *"pure" copper* (Zl. 9). The base content of 98.542% *Cu* is the highest compared to all samples examined. *Tin Sn and antimony Sb* fall in the column below the permissible minimum and are not registered. *Lead Pb* is 0.69% and in this case is a natural impurity of the natural copper ore (**Fig. 3–4, 17, 34**). One part of the *silver Ag*-0.212% enters from the ore, and another part is the accompanying element Pb. Indicative of the source of raw material are the amounts of *arsenic As*-0.427%, which in these values fall into the alloy from the copper ore (**Fig. 12, 26**). Contrary to most expectations, arsenic As does not readily volatilize from copper, even when the temperature reaches several hundred degrees. In the smelting of copper ores, on the contrary, arsenic is released very efficiently. Therefore, this element can be a good indicator of natural copper[5].

It should be added *nickel Ni*-0.064%, *manganese Mn*-0.007%, *cobalt Co*-0.007% and *chromium Cr*-0.028%, which are natural impurities of "pure" copper (**Fig. 29–30**). *Iron Fe*-0.249% also belongs to the elements accompanying the copper ore, and its low values are an indicator of the excellent reduction conditions provided during the entire process of melting and casting of the metal (**Fig. 27, 35**). Likewise, cobalt Co is always low because, unlike nickel Ni, it often precipitates as carbonate. For the same reason, gold Au is low, while silver Ag is reaching a percentage level. Thus, the pattern of low cobalt Co, antimony Sb and gold Au combined with high silver Ag and/or arsenic As can be considered as an indication of native copper (**Fig. 24,**

[5] PERNICKA 1999, p. 163–171.

26, 30, 36). Unfortunately, such a clear pattern is rarely found[6]. Concentrations of all impurities are usually low and it can be difficult to decide whether the copper is natural or smelted. Nevertheless, the trends are clear.

The variety of alloys used in the complexes of workshops near Zlatar is supported by another common alloy, which is the so-called *multicomponent alloy*. As the name indicates, its composition is determined by two or more alloying elements. A representative of the alloy is a piece of a funnel system (Zl. 8) set aside for scrap. Its composition is identical to that of the group of objects that flew away with it. Therefore, analyzing the elemental composition of such foundry remains is also important for the overall picture of the alloys prepared by the ancient masters. *The copper base Cu* is 79.292%, which is much smaller compared to, for example, the previous sample analyzed (**Fig. 3, 34**). This is due to the significant amounts of the three alloying elements of the bronze alloy-*lead Pb, tin Sn and zinc Zn*. The most significant is the amount of *lead Pb*–8.770%, which was artificially added to the molten alloy (**Fig. 17, 35–36**). It is followed by *tin Sn*–6.628% and *zinc Zn*–4.384%, which also enter the smelter, but not alone, but rather with the added scrap (**Fig. 22–23, 33**). Multicomponent alloys are known to be composed of both raw material additions and scrap, the latter source being the determining factor. For casting and stamping, multi-component alloys obtained by mixing scrap from different sources were used[7].

In this order, the amounts of the remaining elements are determined by the base and alloying attachments of the alloy. For example, *antimony Sb* of 0.307% is mainly an accompanying element of lead Pb (**Fig. 14–15, 25**). The minimum amounts of *silver Ag*-0.078% enter both through lead Pb and copper Cu (**Fig. 13, 16, 24, 36**). *Arsenic As*-0.199% falls not only through the copper, but also from the recycled metal added to the alloy (**Fig. 12, 26**). The same applies to the other trace elements *nickel Ni*-0.075%, *cobalt Co*-0.019%, *manganese Mn*-0.01% and *chromium Cr*-0.024% **(Fig. 8, 10–11, 18–20**). *Iron Fe* is 0.412% and enters mainly through the copper ore, and part of it also from the recycled metal (**Fig. 9, 21, 27–28, 35, 37**).

Copper refining is done to reduce impurities of bismuth Bi, arsenic As, sulfur S, even when they are in an amount not greater than 1–2%, which reduce technical qualities. In the Middle Ages, the method of refining melting was used, in which melting and blowing alternated with abundant access of air. In the latter, the impurities contained in the raw copper are oxidized and removed either by flying out or by producing slag. Thus zinc Zn, lead Pb, arsenic As and antimony Sb for the most part fly off, and iron Fe, nickel Ni, the remaining zinc Zn pass into silicates, giving slag. The copper oxide is removed by sprinkling a layer of charcoal on top of the refractory metal bath and stirring for up to an hour with raw wooden sticks. Through dry refining, it is impossible to completely remove the impurities or separate the precious metals, therefore certain amounts remain in the alloy and are registered in the analysis of the elemental composition of the products obtained from it.

[6] PERNICKA 1990, p. 21–129.

[7] AVILOVA 2010, p. 5–14.

Objects found at the production center near Novosel, Shumen district

The examined small group of finds from the production center near Novosel shows a more compact picture (**Tab. I**). Here, the variety of alloys is not so great, but the number of objects is also not great (**Tab. II**). However, the results provide insight into some of the popular alloys used in the casting process. Out of a total of seven examined objects, five were cast from **lead alloy** (Ns. 2, 18, 21–22, 24) (**Fig. 2**). Some differences are also observed among it. Thus, for example, in one of the samples (Ns. 2), the *lead base* Pb is 97.282%, in contrast to the other samples, where it is 98 and above all over 99% Pb (Ns. 18, 21, 24) (**Fig. 4**). The deviation in the given example is due to the increased content of *tin Sn*–2.546%, the values of which indicate its artificial addition in the alloy (**Fig. 6, 22, 33–34**). The sample is an ingot with a rectangular cross-section and oval edges, with signs of chipping at one end, i.e. in the process of work certain quantities of metal were separated from it and added to the alloy prepared for remelting. The high value of tin Sn also indicates that the ingot was cast on site, in the workshop itself, and in the process of its preparation a certain amount of tin was deliberately added to improve the properties of the raw material. Half of a mold for shapes identical to the present one, found at the production center near Zlatar attests to the casting of ingots on site. Undoubtedly, such tools were also used in the other complexes where such activity was carried out.

The *antimony Sb* value is 0.729% Sb, which is due to its entry from the lead ore, in which antimony is a natural impurity (**Fig. 14–15, 25–26**). An important observation is the fact that the amounts of *silver Ag* are not high and even fall below the permissible limits of a study in which no values were noted not only for this sample but also for two more belonging to the lead alloy group (Ns. 21, 24). This mainly shows one thing-the very good purification of the alloy and the separation of impurities in it, among which *silver Ag* is one of the most important (**Fig. 13, 16, 36**). Purification is carried out in the processes of cupellation and subsequent refining carried out during the preparation of the raw material. The mentioned processes were carried out where the main lead substrate was mined. In the studies of the three known production centers in the vicinity of Preslav, no traces of metallurgical activity have been found so far, which suggests that such activity was not carried out in these places.

Of the trace elements in the lead alloy, which can be a starting point for reasoning in the direction of the origin of the raw material and its deposit, the values of *copper Cu*-0.284% Cu, minimal amounts of *nickel Ni*-0.007%, somewhat *chromium Cr*-0.014% are indicative. (**Fig. 3, 7, 11, 31, 37**). The indicators of *iron Fe* are also a factor-0.049% Fe, especially with their minimal amounts, which, in addition to being a natural impurity, are also an indicator of the very good reduction conditions implemented during the preparation and implementation of the entire process of melting and casting the metal (**Fig. 9, 21, 25, 27–28**).

The representatives of the lead alloy that we mentioned show relatively similar parameters, in contrast to one of them (Ns. 22). The *lead base Pb* in it is 98.423%, and the content of *antimony Sb*, influenced by it-0.849% (**Fig. 15**). In contrast to the first example and those mentioned similar to it in terms of the amount of *silver Ag*, here it has been reported and is 0.029% (**Fig. 16, 36**). Indicators of elements such as *zinc Zn*, which is 0.08% and is missing in the first sample, as well as *nickel Ni*-0.01% Ni

and *chromium Cr*-0.015% show an increase (**Fig. 5, 18, 20**). The *iron Fe* of 0.047% Fe is similar in amount and is a consequence of the lead ores and possibly some added recycled metal (**Fig. 9, 27–28**). Reason to assume such is the content of *copper Cu*, which is close to 3%, i.e. 2.926% (**Fig. 3, 17, 29, 31**). There is no way that such amounts of copper are a natural impurity to the raw material. The high value is a consequence of added "pure" copper or of recycled metal in which the content of copper and that of zinc, which is not a natural impurity of lead ores, is accounted for in the analysis.

The use of different sources of metal is also attested by the remaining three samples (Ns. 18, 22, 24). The *lead base* in all three is similar and ranges from 99.059% (Ns 18) to 99.362% (Ns. 24), which is practically a "pure" lead alloy (**Fig. 4, 17, 32, 36**). In view of these values, the amounts of *antimony Sb* from 0.577% to 0.705%, which is positively correlated with lead, are also based on these values (**Fig. 15**). Silver Ag values that were not reported or fell below the acceptable assay minimum also support the general picture. *Tin Sn*, unlike the first sample (Ns. 2) was not reported. *Zinc Zn* was found in minimal amounts – from 0.009% (Ns 21) to 0.033% (Ns. 24), *nickel Ni* also-0.009%, 0.01 and 0.013% (**Fig. 11, 20, 31, 37**). In one of the samples (Ns. 24) *manganese Mn*-0.008% was found (**Fig. 19, 29–30**). In the other two examples, its content is below the permissible minimum and was not counted numerically in the study. The amounts of *chromium Cr* are similar-0.013-0.015% (**Fig. 7, 18**). A greater variation in percentage content in the three samples shows the *copper Cu* content of 0.178% (Ns. 21), 0.204% (Ns. 22) and 0.519% (Ns. 24) entering the alloy of the three ingots as a natural impurity from lead ores (**Fig. 3, 17, 22, 34–35**). The differences suggest different sources of raw material supplied to metalworking workshops in the form of ingots.

The presence of two sources of raw material-ingots and scrap-is confirmed by the study of the elemental composition of the two **copper alloy** objects. One of them is an ingot (Ns. 5) and the other a caster "tree", part of the caster system in the foundry case, by which the molten metal reached the negative impressions in the sand mold of the case (Ns 3). The ingot is made of *tin-lead bronze*. *The copper base Cu* is 89.246% (Ns. 5), (**Fig. 3, 32, 36**). The main alloying additives of the alloy are tin and lead, and their values are greatly increased. *Tin Sn* is 7.442%, and *lead Pb*–4.409%, which also determines the name of this alloy (**Fig. 22, 33–34**). Both metals are artificially added to the alloy. The expected amount of antimony Sb that would have entered through the lead is below the permissible minimum and is not accounted for. *Silver Ag*, on the other hand, is 0.049%, which is present but at a low percentage, indicating its entry as a natural impurity from the copper ore into the alloy rather than through lead (**Fig. 13, 16, 24, 36**). The latter testifies also to the relatively "pure" metal of the alloying lead plug added during the preparation of the alloy.

Arsenic As is an important trace element providing a starting point for raw material sources. Its value is significant-0.388% and indicates both its entry from copper ores and the addition of a certain amount of recycled metal containing arsenic, the so-called arsenic bronze, from which a significant part of the chronologically earlier metalwork products were cast (**Fig. 12, 26**). An important relation to the deposit of copper ores is given by the amounts of nickel and cobalt. *Nickel Ni* is 0.035%, and *cobalt Co* is 0.015% (**Fig. 10–11, 20, 31**). *Manganese Mn*-0.012% and *chromium Cr*-0.024% should be added to them, which are also decisive for the overall picture of the starting raw materials (**Fig. 18–19, 29**). The low values of *iron Fe*-0.098%

also define it as a natural impurity of the ore and an indicator of the very good reduction conditions during the preparation and melting of the metal, without the separation of slags and overburning of the metal (**Fig. 9, 21, 25, 28, 37**).

Bismuth Bi, arsenic As and lead Pb have the most harmful effect on copper. Thus, 0.01% Bi and more than 0.1% Pb make copper brittle when hot (forging and rolling), and arsenic As, although it does not affect the ductility and strength of copper, even in amounts of 0.01% reduces electrical conductivity by 3%. An admixture of nickel Ni makes copper more ductile, a little tin Sn and zinc Zn, and also manganese Mn and aluminum Al make casting easier and do almost no harm.

In the workshop, the ingots were separated. At the same time, a part of the metal was remelted and used to cast finished products, another part served as raw material for obtaining blanks-sheets, strips, rods, wires. Casters have noticed that ingots cast from highly burned metal have a coarser structure than ingots cast from metal at less heat. Strong heating leads to the destruction of the particles of isomorphous impurities, as a result of which they come out of the crystallization process. Low heating and low casting temperature contribute to the intensification of the processes of "non-spontaneous" crystallization and the obtaining of a fine-grained structure in the castings.

Impurity-free alloys have a columnar structure. The formation of the crystallization structures, in addition to the composition, can also be influenced by the conditions of casting and cooling. By changing these conditions, a different construction of the ingots can be obtained and the ratio between the main structural zones can be influenced. Rapid cooling, high preheating of the metal, elevated casting temperature and relaxed casting promote the formation of columnar crystals throughout the thickness of the ingot, called transcrystallization. Transcrystallization is characteristic of copper and its other alloys (brass, tin bronze, etc.). Such a structure of the ingots is the reason for their destruction during casting, and also during the subsequent processing under pressure.

The fragment of the funnel system (Ns. 3) was cast, together with the rest of the articles on it, subsequently separated, from *leaded brass*. The *copper base Cu* in this case is much lower–80.518%, which is a consequence of the high values of *zinc Zn*–14.046%-the main alloying additive of the alloy (**Fig. 3, 5, 32**). Besides the addition of zinc Zn, high values of *lead Pb*–3.831% and of *tin Sn*–1.897% were recorded in the study (**Fig. 22–23, 33**). The presence of lead, the two metals with relatively high values, is explained by their artificial addition to the alloy, which in all probability happened not so much with their individual addition, as with their entry from scrap recycled metal into the smelter. The content of *silver Ag*-0.073%, as well as *arsenic As*-0.187% are also confirmation of what was said (**Fig. 13, 16, 26**). The latter are also an indicator of ore deposits, but with the addition of recycled metal, their diagnosis becomes vaguer and more conditional. The admixture of lead, the concentration of which is high (up to 1–2%), improves the casting qualities of the metal compared to pure copper. Arsenic and antimony have such an effect. Metallurgists-casters obviously knew the properties of copper obtained from different ores: carefully selected copper minerals (malachite, azurite) or from unrefined polymetallic ores[8].

[8] TEREHOVA 1975, p. 37.

The amounts of *nickel Ni*-0.056% and *cobalt Co*-0.007% are also trace elements important in research in this direction (**Fig. 10–11, 20, 31**). *Manganese Mn*-0.012% and *chromium Cr*-0.018% are indicative in the same respect (**Fig. 7–8, 18–19, 30**). The many and varied elements recorded in the alloy analysis are indicative of the use of recycled metal. *Iron Fe* values are slightly elevated-0.325%, which is indicative of both their natural admixture of ore sources and added scrap (**Fig. 9, 27–28, 35**). However, the indicators show the presence of good reduction conditions in the melting and casting of the metal in the mold, from whose funnel system the present object is also.

With the exception of gold and platinum, the majority of metal artifacts used in antiquity and the Middle Ages were obtained from the smelting of metal-bearing ores, which produced various metals and alloys. One of the first tasks of archaeological chemistry is to trace these metal objects back to their ore sources using the analyzes of the so-called "trace elements", which is a direct method of reconstructing ancient trading patterns. Thus, the use of the term "trace element" is for an element in the alloy that is not deliberately added and which is contained in and is characteristic of the ore from which the metal is derived[9]. Such a "trace element" can be from a fraction of a percent to several tens of percent, and the question of its deliberate addition or accidental fall into the alloy continues.

There are different opinions about the nature of the early processes for obtaining metal alloys. The main thing is that the metal alloys were obtained by the careful mixing of the molten metals. Others suggest that compositional control is achieved by successive additions of relatively pure alloying elements to the alloy. Between these two opinions there is a third, which is that the control over the content of the alloy was already carried out when the ores, mined from different geographical regions, were mixed together, before their smelting. Thus, a proper balance of the composition in the final metal is achieved. Work processes for the preparation of the final metal products further complicate the picture, such as the introduction of high-temperature processes, which may in turn require the additional addition of pure metals. Adding to this the almost invariable practice of adding recycled metals, as well as post-deposit corrosion resulting from electrochemical modification of the composition, the situation is further complicated. The current interdisciplinary study is a small step towards the clarification of all these processes that accompany the products from the production centers for artistic metal in the vicinity of Preslav-the result of the combined efforts of researchers from different fields of knowledge.

BIBLIOGRAPHY

AVILOVA 2010 – *Л.* Авилова, *Обмен металлом на Ближнем Востоке в раннем и среднем бронзовом веке*, Росийская археология 1 (2010), p. 5–14.

CHERNIH 1972 – Е. Черных, *Металл-человек-время*, Москва, 1972.

DONCHEVA *et alii* 2021a – S. Doncheva, N. Arhangelova, Á. Csepregi, A. Angyal, Z. Szikszai, *PIXE-Analyse of Ingots and Scrap from the Metal Art Production Centre near Zlatar, Veliki Preslav Municipality*, Studia Academica Šumenensia 8 (2021), p. 71–98.

DONCHEVA *et alii* 2021b – S. Doncheva, N. Arhangelova, Á. Csepregi, A. Angyal, Z. Szikszai, *PIXE-Analyse of Ingots and Scrap from the Metal Art Production Centre near Nadarevo,*

[9] POLLARD, HERON 2008, p. 193.

Veliki Preslav Municipality, in: K. László, D. Băcueț-Crișan, I. Stanciu, F. Mărginean (eds.), *Orbis Mediaevalis III, Exploring Dwellings and Manufacturing Spaces in the Medieval Context (7th–14th Centuries)*, 2021, p. 191–208.

PERNICKA 1990 – E. Pernicka, *Entstehung und Ausbreiung der Metallurgie in prähistorischer Zeit*, Jahrbuch des Romisch-Germanischen Zentralmuseums 37 (1990), p. 21–129.

PERNICKA 1999 – E. Pernicka, *Trace Element Fingerprinting of Ancient Copper: A Gude to Technology or Provenance?*, in: S. Young, A. M. Pollard, P. Budd, R. A. Ixer (eds.), *Metals in Antiquity*, Oxford, 1999, p. 163–171.

POLLARD, HERON 2008 – A. Pollard, C. Heron, *Archaeological Chemistry*, Cambridge, 2008.

RINDINA, RAVICH 2012 – Н. Рындина, И. Равич, *О металлопроизводстве майкопских племен Северного Кавказа. (по данным химико-технологических исследований)*, Вестник археологии, антропологии и этнографии 2/17 (2012), p. 4–19.

TEREHOVA 1975 – Н. Терехова, *Металлообрабатывающе производство у древнейших земледельцев Туркмении*, *Очерки технологии древнейших производств*, Москва, 1975, p. 14–75.

TRIFONOV 1950 – И. Трифонов, *Кратък курс по металургия на по-важните в технологично отношение цветни метали*, София, 1950.



Fig. 1. Administrative positioning of the production centers of metal art near Zlatar and Novosel (Bulgaria).

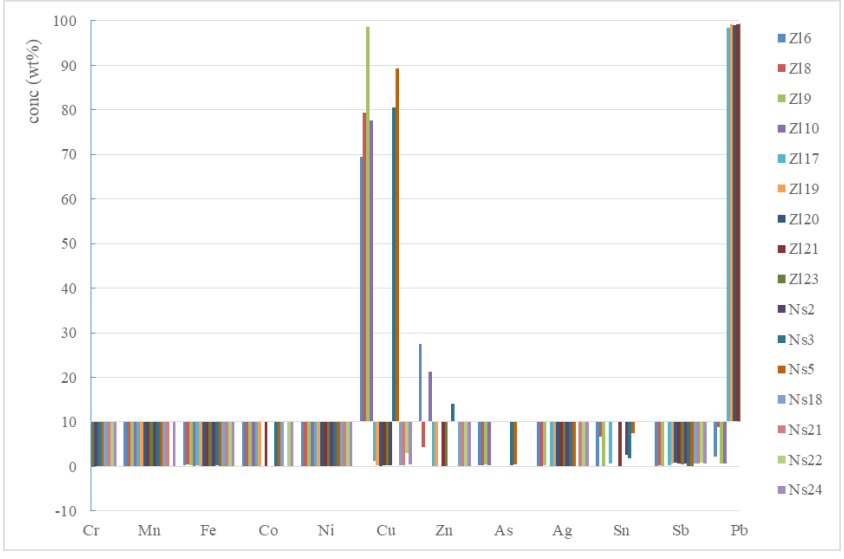


Fig. 2. Elemental composition of artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

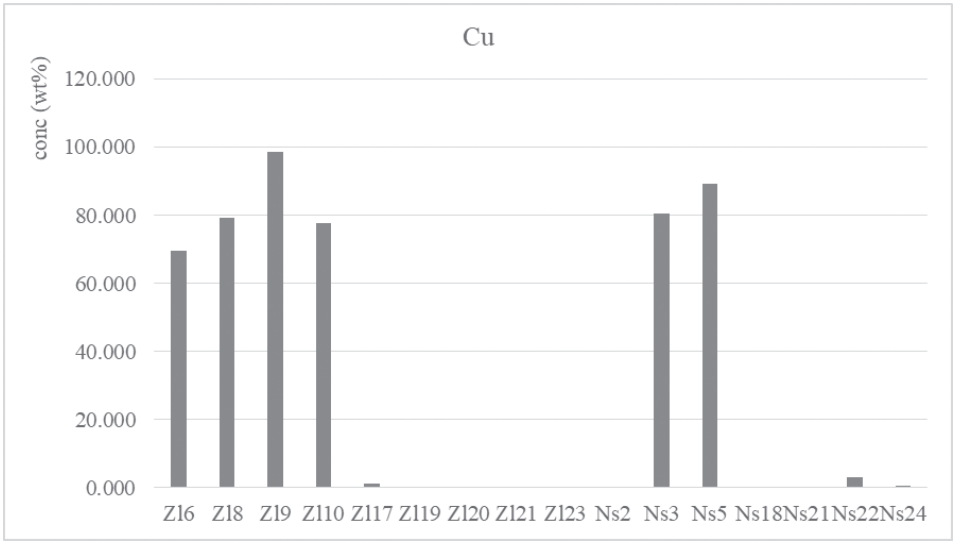


Fig. 3. Concentration of copper (Cu) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

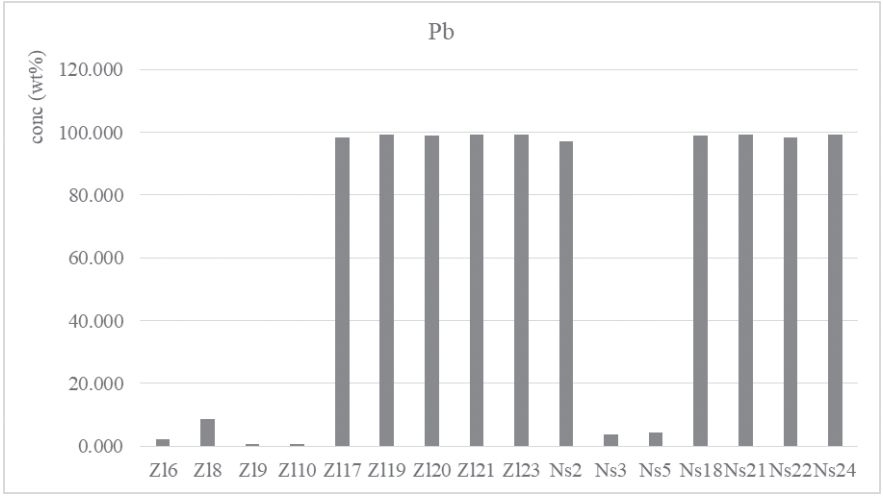


Fig. 4. Concentration of lead (Pb) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

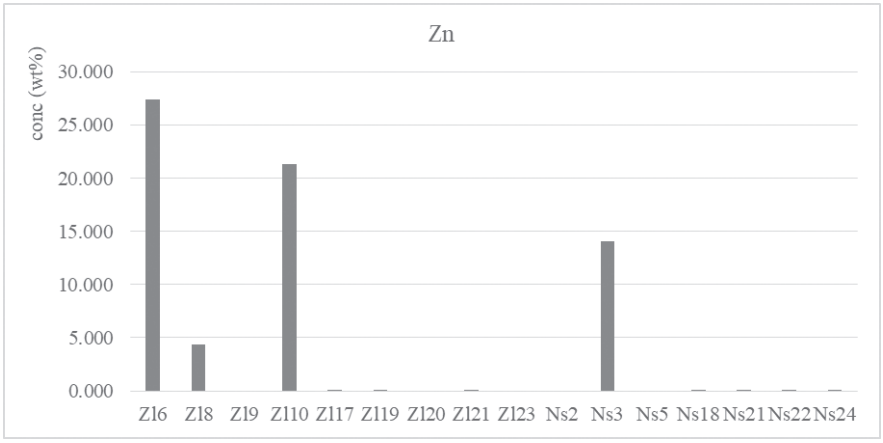


Fig. 5. Concentration of zinc (Zn) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

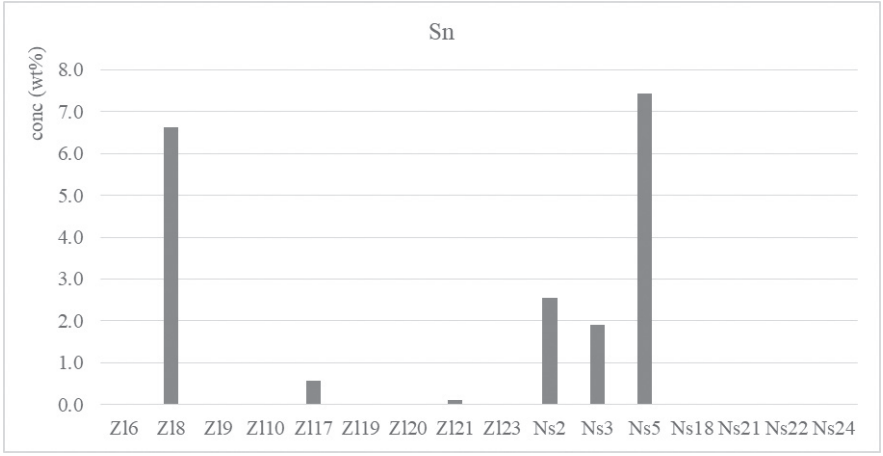


Fig. 6. Concentration of tin (Sn) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

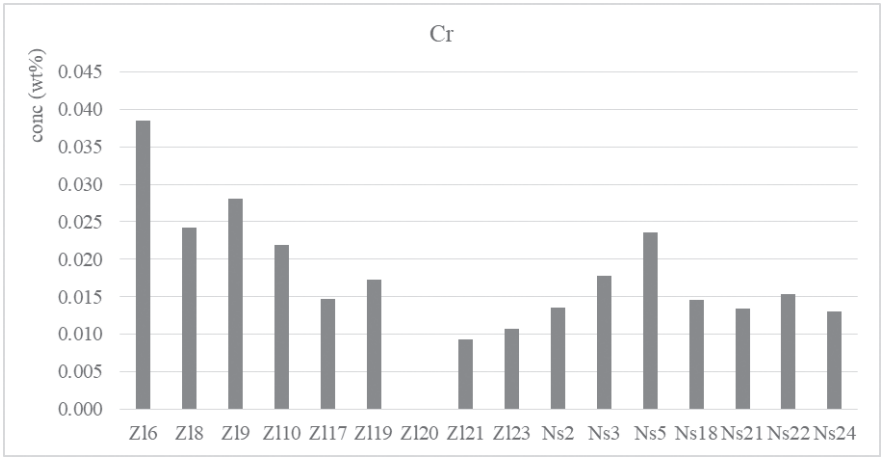


Fig. 7. Concentration of chromium (Cr) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

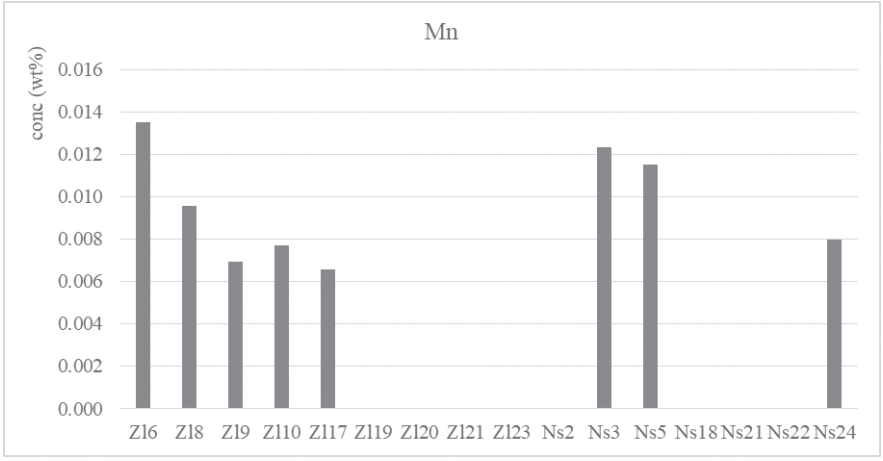


Fig. 8. Concentration of manganic (Mn) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

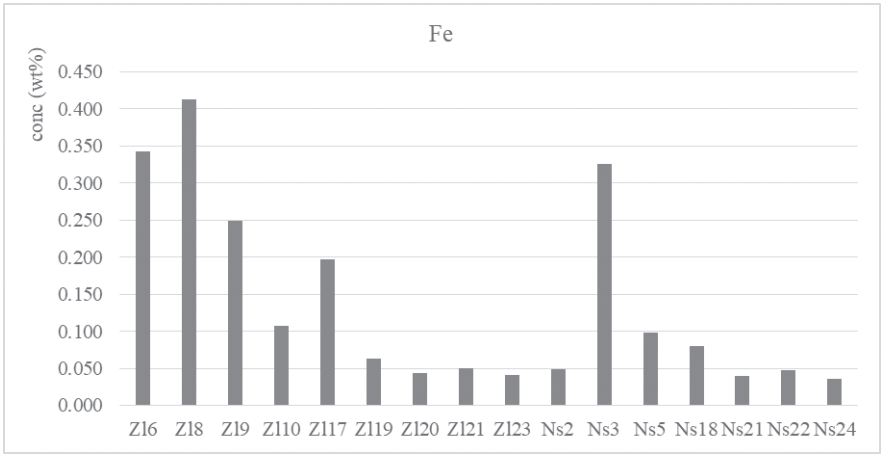


Fig. 9. Concentration of iron (Fe) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

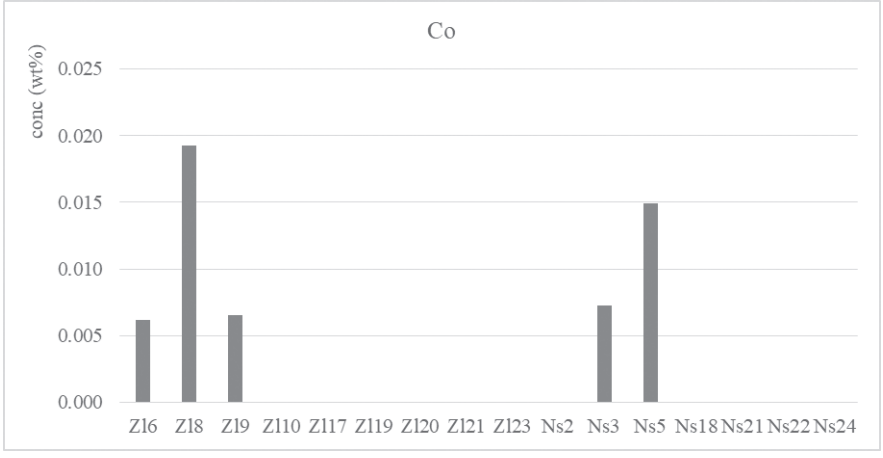


Fig. 10. Concentration of cobalt (Co) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

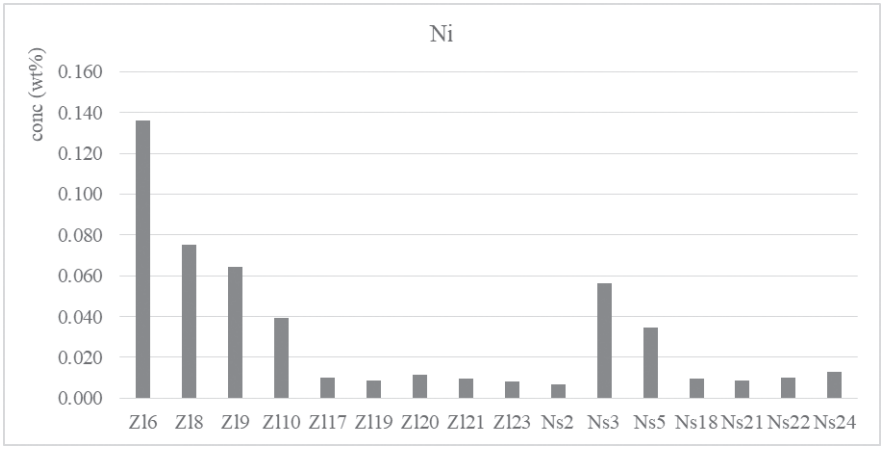


Fig. 11. Concentration of nickel (Ni) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

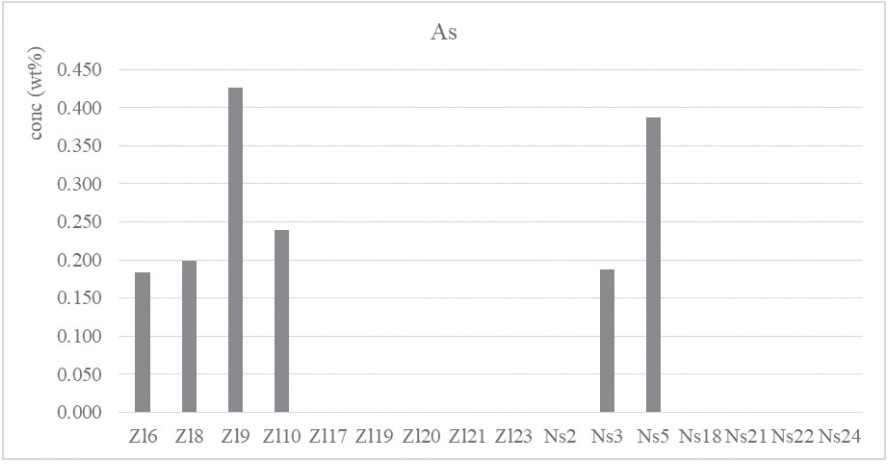


Fig. 12. Concentration of arsenic (As) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

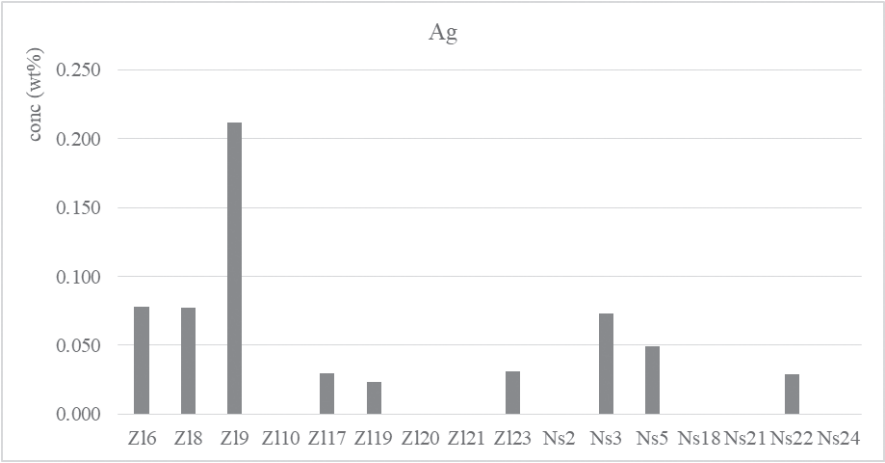


Fig. 13. Concentration of silver (Ag) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

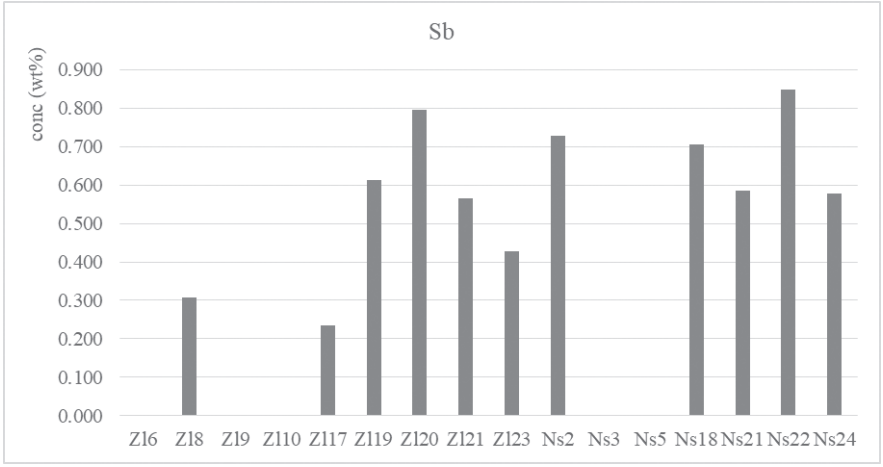


Fig. 14. Concentration of antimony (Sb) in artifacts of non-ferrous metals found on the centers of metal art in Zlatar and Novosel.

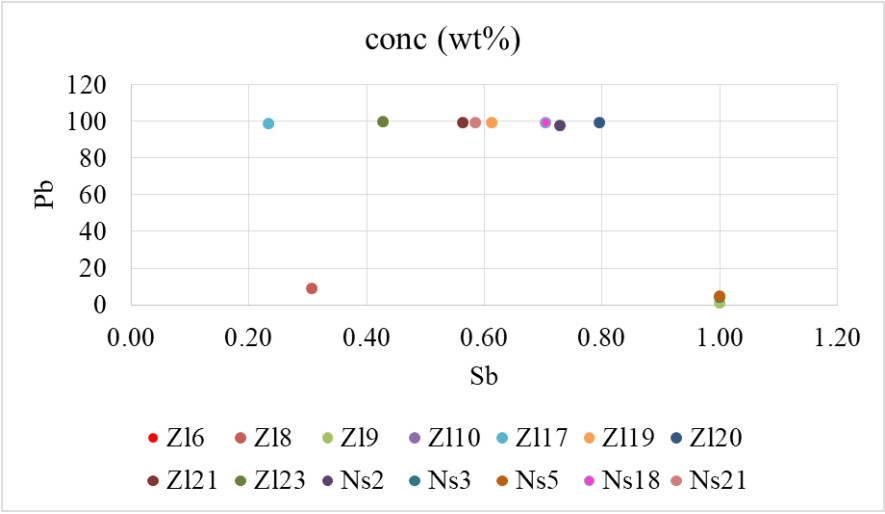


Fig. 15. Scatter graph of the concentration of antimony and lead (Sb-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

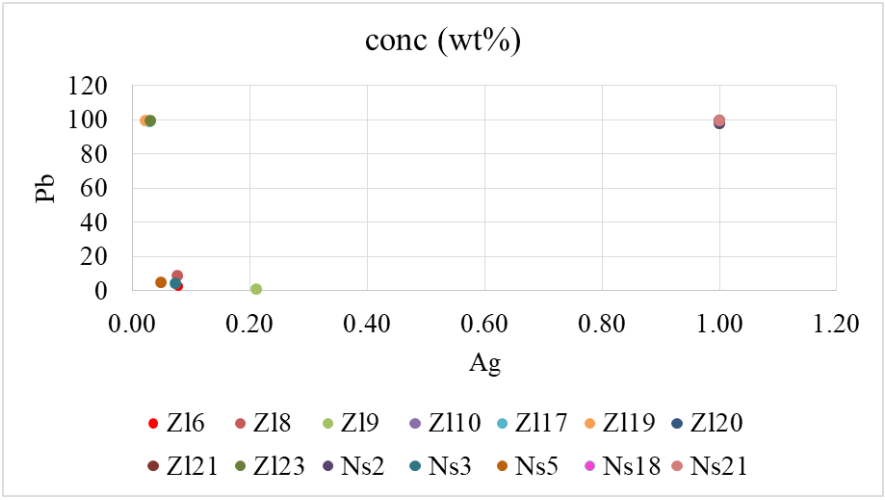


Fig. 16. Scatter graph of the concentration of silver and lead (Sb-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

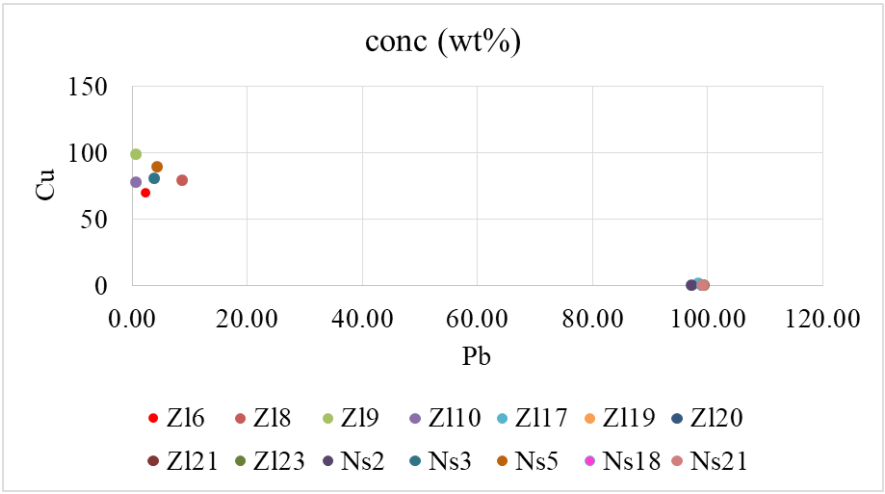


Fig. 17. Scatter graph of the concentration of lead and copper (Pb-Cu) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

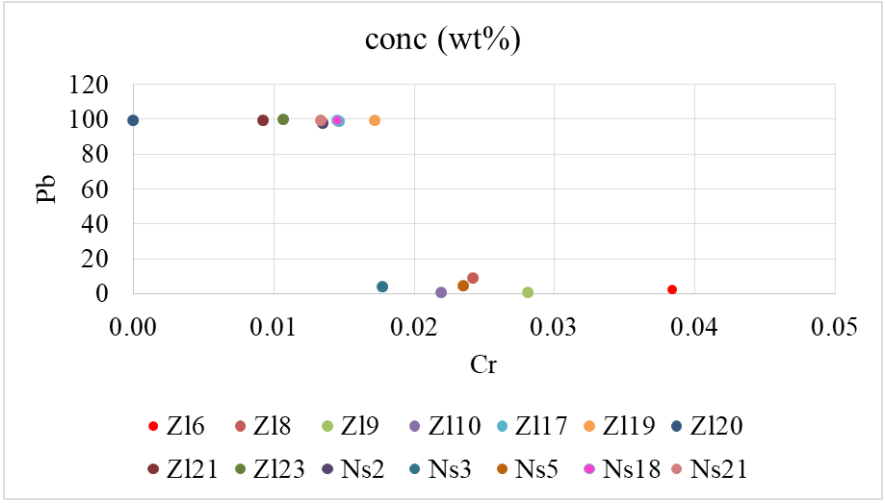


Fig. 18. Scatter graph of the concentration of chromium and lead (Cr-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

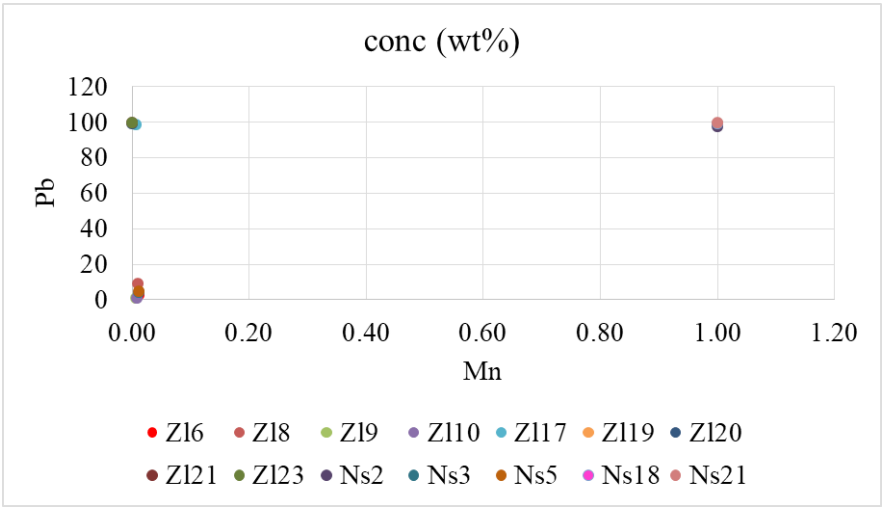


Fig. 19. Scatter graph of the concentration of manganic and lead (Mn-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

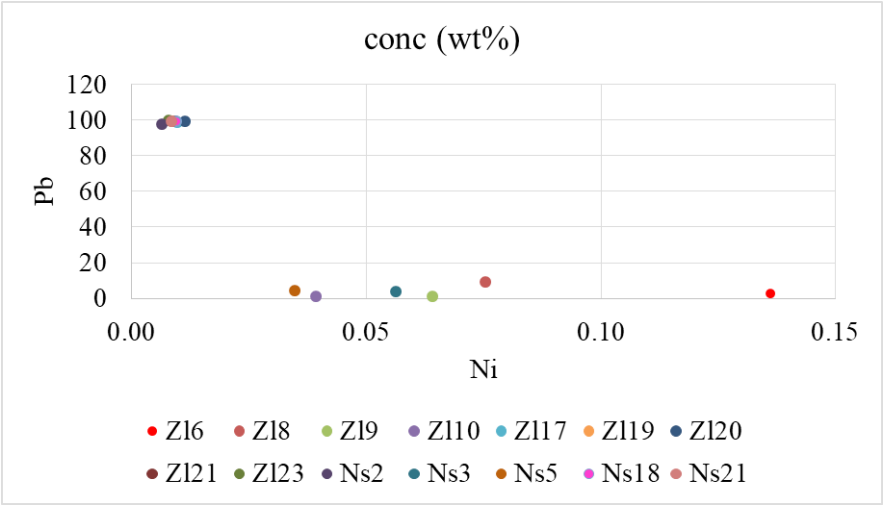


Fig. 20. Scatter graph of the concentration of nickel and lead (Ni-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

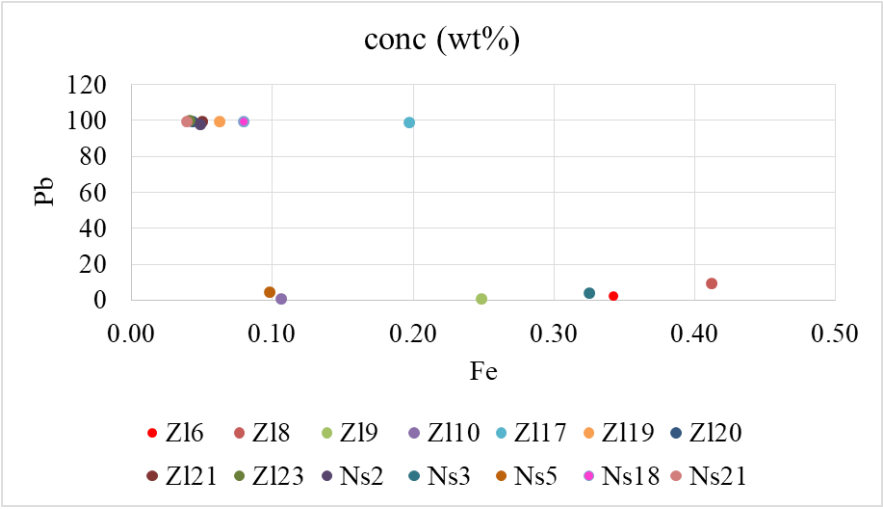


Fig. 21. Scatter graph of the concentration of iron and lead (Fe-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

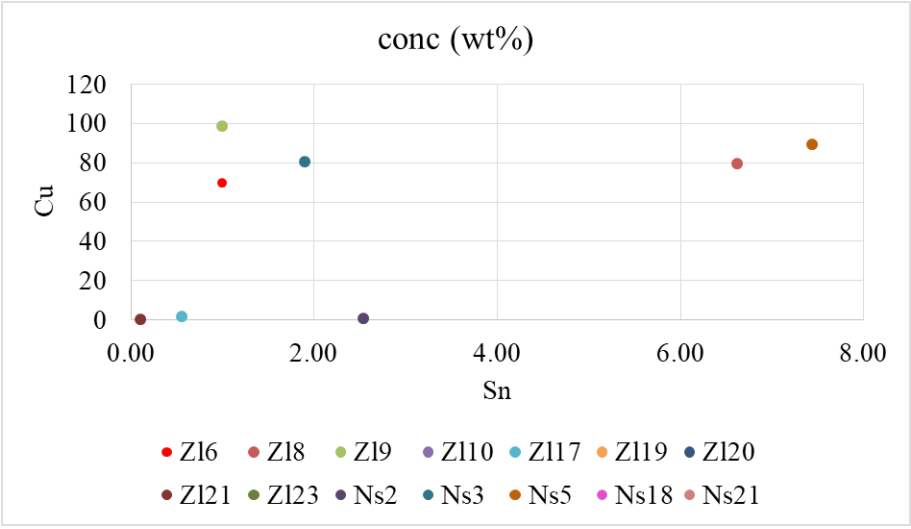


Fig. 22. Scatter graph of the concentration of tin and copper (Sn-Cu) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

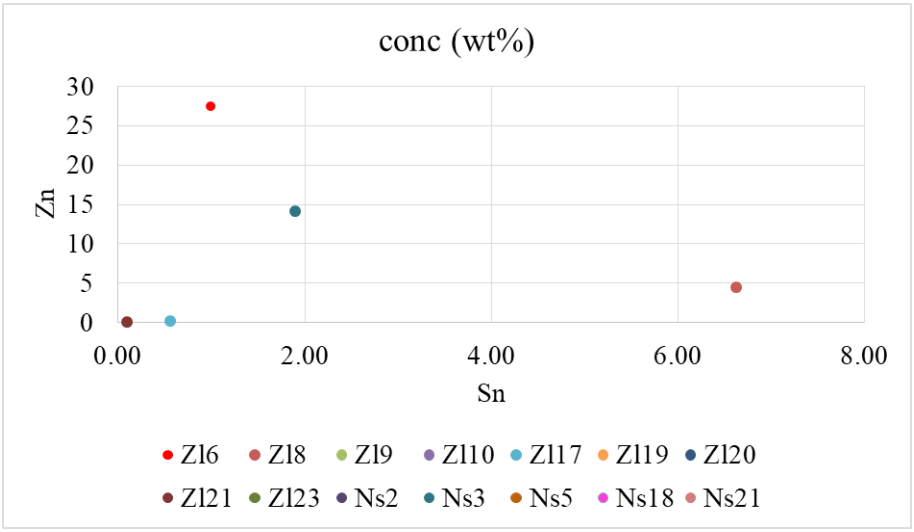


Fig. 23. Scatter graph of the concentration of tin and zinc (Sn-Zn) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

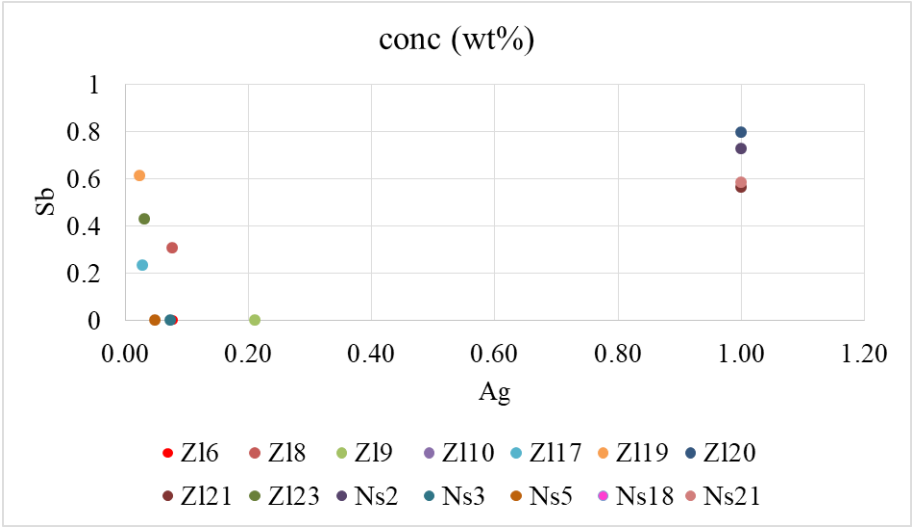


Fig. 24. Scatter graph of the concentration of silver and antimony (Ag-Sb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

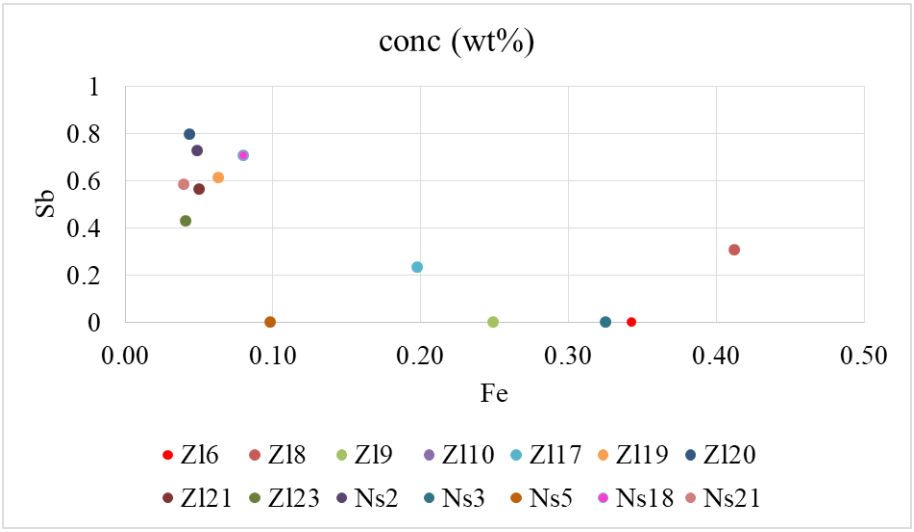


Fig. 25. Scatter graph of the concentration of iron and antimony (Fe-Sb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

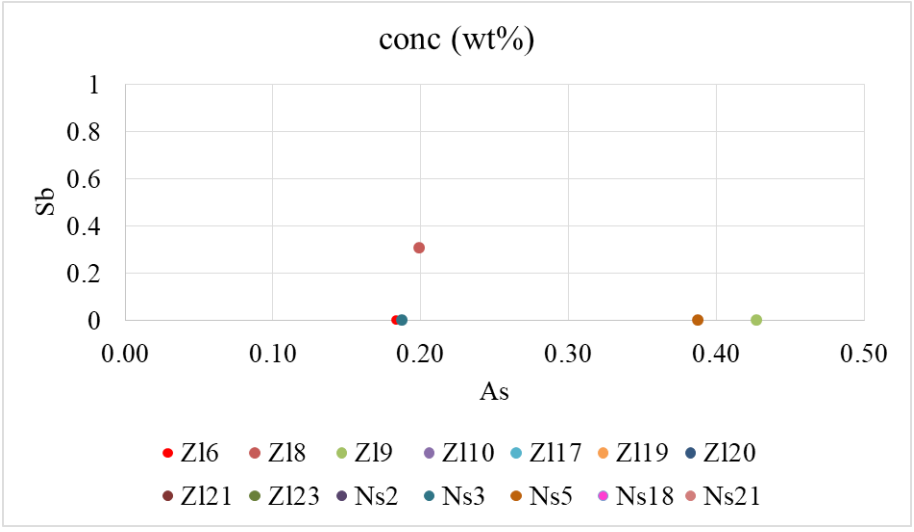


Fig. 26. Scatter graph of the concentration of arsenic and antimony (As-Sb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

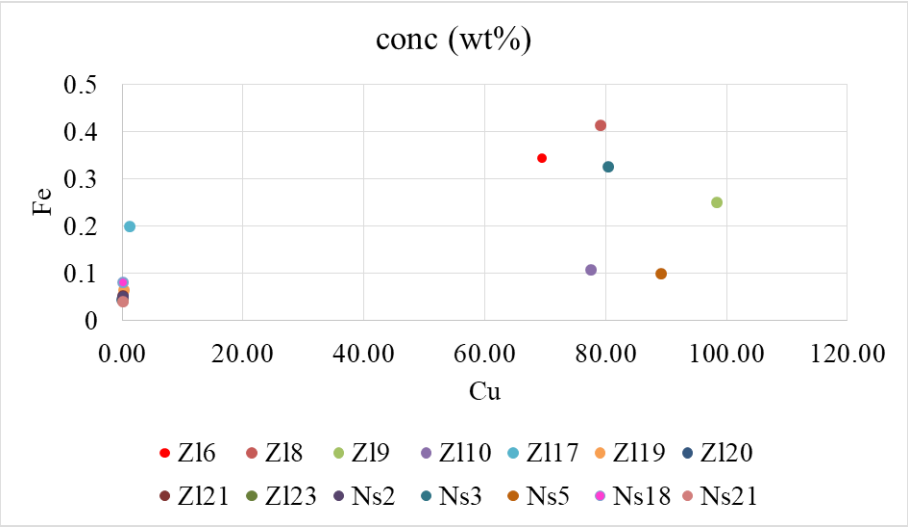


Fig. 27. Scatter graph of the concentration of copper and iron (Cu-Fe) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

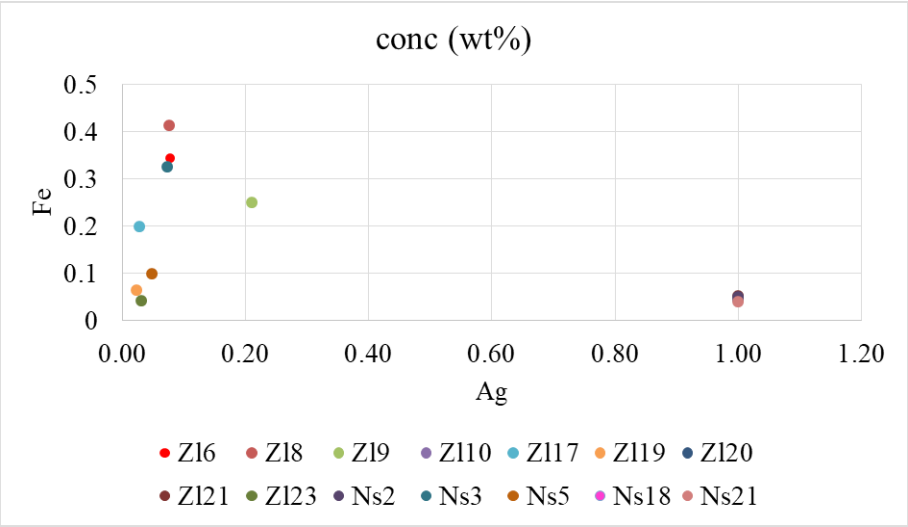


Fig. 28. Scatter graph of the concentration of silver and iron (Ag-Fe) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

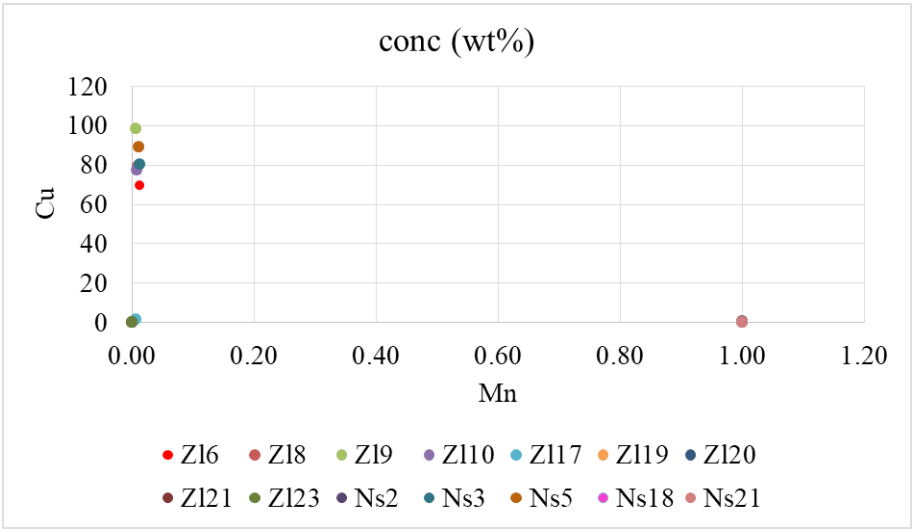


Fig. 29. Scatter graph of the concentration of manganic and copper (Mn-Cu) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

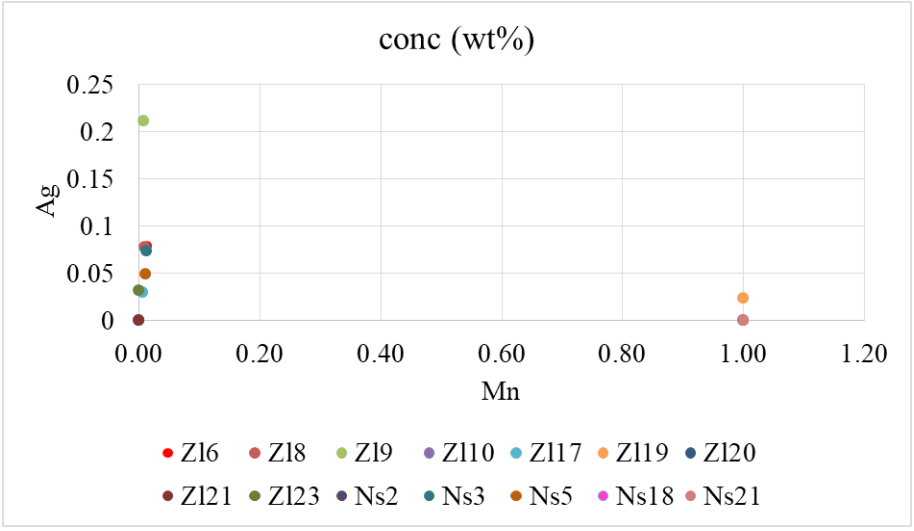


Fig. 30. Scatter graph of the concentration of manganic and silver (Ag-Mn) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

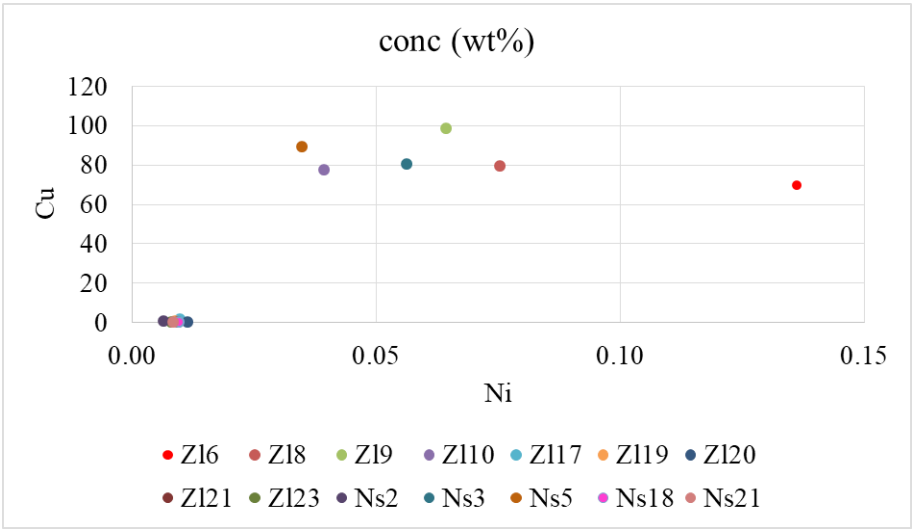


Fig. 31. Scatter graph of the concentration of nickel and copper (Ni-Cu) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

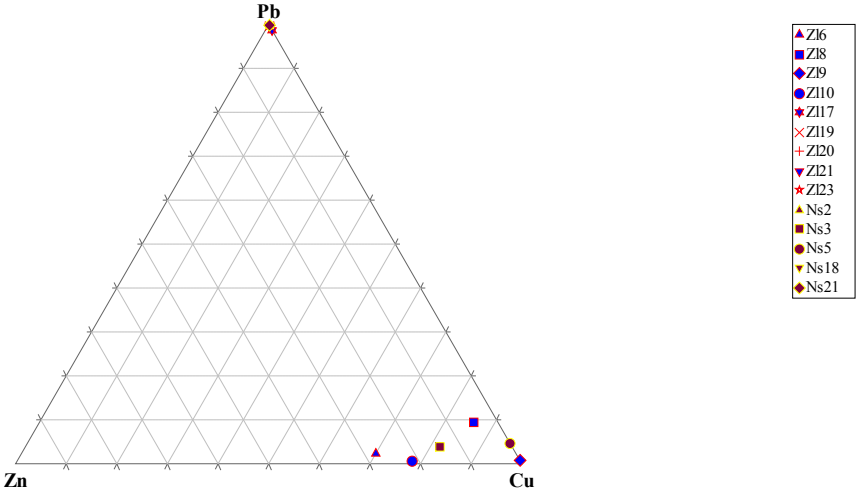


Fig. 32. Triplot of the concentration of zinc, copper and lead (Zn-Cu-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

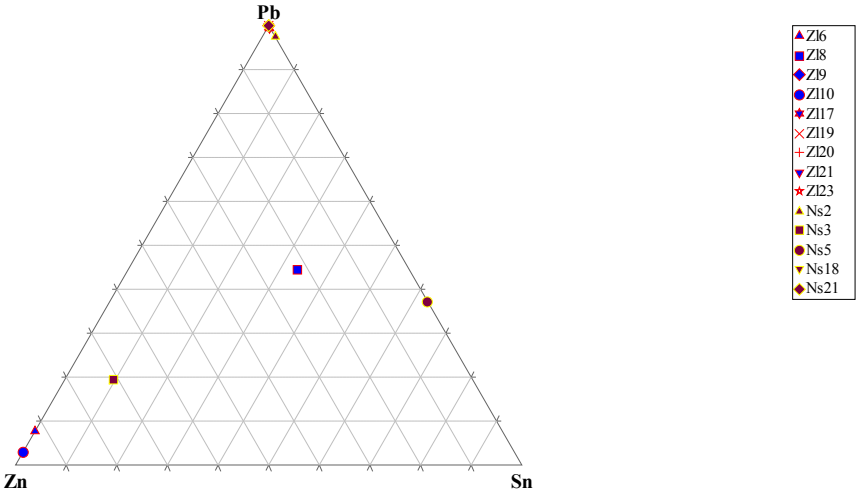


Fig. 33. Triplot of the concentration of zinc, tin and lead (Zn-Sn-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

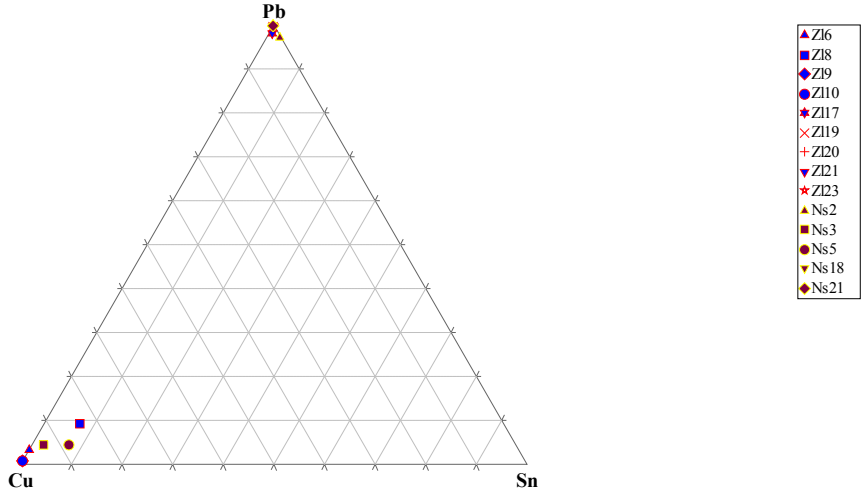


Fig. 34. Triplot of the concentration of copper, tin and lead (Cu-Sn-Pb) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

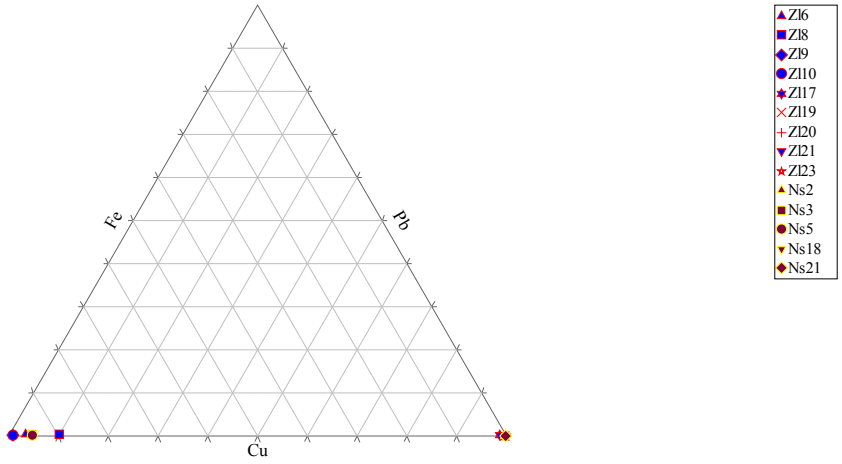


Fig. 35. Triplot of the concentration of copper, lead and iron (Cu-Pb-Fe) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

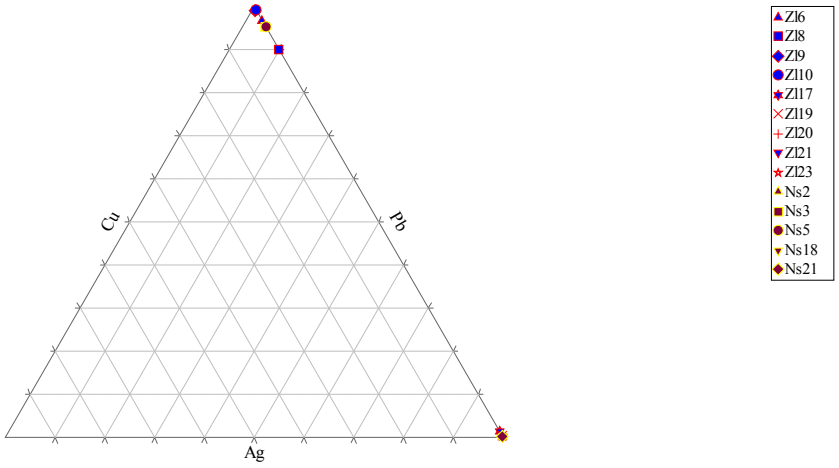


Fig. 36. Triplot of the concentration of silver, lead and copper (Ag-Pb-Cu) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

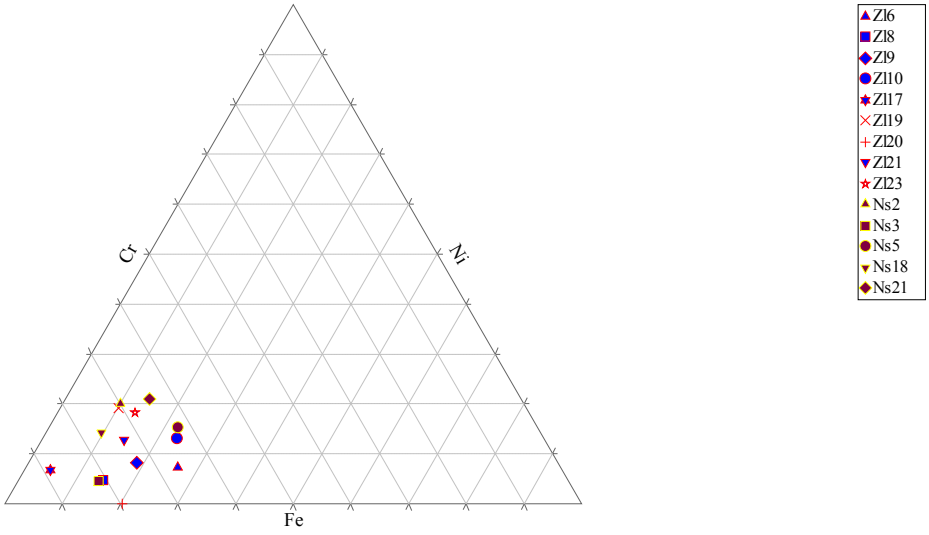


Fig. 37. Triplot of the concentration of iron, nickel and chromium (Fe-Ni-Cr) in non-ferrous metal artifacts found at the production centers of metal art in Zlatar and Novosel.

ANTHROPOLOGICAL AND ARCHAEOLOGICAL INVESTIGATION OF THE NECROPOLIS (14TH–15TH C. AD) EXCAVATED IN 2020 AT CAPE CHIRAKMAN / BIZONE, KAVARVA, BULGARIA

Nadezhda ATANASSOVA[*]
Velislav BONEV[**]
Elena VASILEVA[***]

Cuvinte-cheie: *necropole creștine din Evul Mediu târziu, studiu antropologic și arheologic, identificarea vârstei și sexului, reconstrucția staturii și greutății corporale, investigație paleopatologică.*

Keywords: *Late Medieval Christian necropolis, anthropological and archaeological study, age and sex identification, stature and body weight reconstruction, paleopathological investigation.*

Rezumat: *Prezentul articol evidențiază rezultatele analizelor de teren și de laborator ale rămășițelor osteologice umane descoperite în 2020 în timpul cercetărilor arheologice desfășurate la situl „Cetatea antică și medievală de la Capul Chirakman", situat în apropierea orașului actual Kavarna, în nord-estul Bulgariei. Au fost cercetate douăsprezece morminte cu ritual funerar de „inhumare", conform canonului creștin, și datate în secolele XIV–XV p.Chr. Au fost identificați în total 14 indivizi, folosind metode antropologice standard. Rezultatele analizei rămășițelor osteologice umane din ansamblurile funerare din Evul Mediu târziu, arată un raport aproape egal între copii și adulți. Același fapt este valabil și pentru raportul dintre bărbați și femei. Indivizii de sex masculin se disting prin oase foarte masive, cu o lungime mare și, în mod corespunzător, statura „înaltă" și „foarte înaltă", în timp ce femeile au o statură „medie".*

În general, analiza paleopatologică a scheletelor adulte arată o frecvență foarte mare a bolilor degenerative-distrofice ale coloanei vertebrale și articulațiilor. Deseori au fost identificate modificări morfologice paleopatologice dentare și maxilare, chiar și la un individ de sex masculin, matur (40–50 ani), la care se observă o afecțiune osoasă metastatică (cel mai probabil este necesar un diagnostic diferențial) la nivelul mandibulei.

[*] Nadezhda ATANASSOVA: Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences, Sofia; e-mail: naditimeva@gmail.com.

[**] Velislav BONEV: Sofia University `St. Kliment Ohridski`, Sofia; e-mail: velislav.bonev@abv.bg.

[***] Elena VASILEVA: National Archaeological Institute with Museum, Bulgarian Academy of Sciences, Sofia; e-mail: helengnom@gmail.com.

Abstract: *The present article includes the results of field and laboratory analysis of human bone remains, discovered in 2020, during archaeological surveys at the site "Antique and Medieval fortress at Chirakman cape", located near present-day town of Kavarna, Northeastern Bulgaria. The funeral ritual of the twelve investigated graves was "inhumation" according to the Christian canon, and they were dated to the 14th–15th centuries AD. A total of 14 individuals were identified, using standard anthropological methods. The results of the analysis of the human skeletal remains in the Late Medieval grave constructions show an almost equal ratio between subadults and adults. The same applies to the ratio between males and females. Male individuals are characterised by very massive and large bones with a corresponding "tall" and "very tall" stature, while females are of "middle" stature.*

In general, the palaeopathological analysis of adult skeletons shows a very high frequency of degenerative-dystrophic diseases of the spine and joints. Dental and jaw palaeopathological morphological changes are also often identified, and even in a mature male individual (40–50 years) a metastatic bone involvement of the mandible is observed (most likely differential diagnosis).

Introduction

Archaeological excavations at Cape Chirakman began in 1929[1] and have continued with interruptions until the present days[2]. During the regular surveys carried out in 2020 at the "Ancient and Medieval Fortress of Cape Chirakman", twelve Late Medieval Christian inhumation graves (dated 14th–15th c. AD.) were discovered and studied[3]. The burial structures are surrounded by stones, most of which are vertically driven. In one of the graves, stone plates that cover the pit are found. In others, slate stones were placed in different areas of the upper part of the skeleton. The skeletons are laid on the back, with stretched lower limbs, and the upper ones are bent at the elbow joint and placed on the abdomen. The orientation of the skeletons is E-W, with the head to the west. Bronze buttons were found in two of them, and a bronze hairpin in another. The concentration of the structures in two squares, as well as other graves studied in 2004–2005, suggest that they are part of a necropolis, which is most likely associated with a church or chapel, situated on the remains of the basilica complex located nearby. The stratigraphic position of the excavated graves, as well as the finds from them, allow us to date the structures to the 14th–15th

[1] MĂRCULESCU 1934, 1935.

[2] BONEV *et alii* 2021; BONEV *et alii* 2022; CHOLAKOV, MIHAYLOV, NEYKOVA 1982; GATEV 2007; KITOV 1973; KITOV 1990; KITOV, PETKOV, SALKIN 1987; LAZARENKO 2006; LAZARENKO, MIRCHEVA, DOBREV 2007; MIRCHEV, TONCHEVA, DIMITROV 1962; SALKIN 1982; SALKIN 1984; SALKIN 1986; SALKIN 1987; SALKIN 1989; SALKIN 1996; SALKIN 2007; SALKIN, GEORGIEV, DOBREV 2004; SALKIN, ORACHEV 1989; SALKIN, GEORGIEV 2004; SALKIN, GEORGIEV 2006; SOTIROV, GATEV 1996; SOTIROV, GATEV 2005; SOTIROV, GATEV 2006; SOTIROV *et alii* 1990; THEODOSIEV 2004; TONKOVA, SLAKIN, LAND 2004; TONKOVA, SALKIN 2005; TOPTANOV 1984; VASILEV 1984; VASILEV 1985; VASILEV *et alii* 1973; VASILEV, SALKIN, SOTIROV 1976; VASILEV *et alii* 1977; VASILEV *et alii* 1978; VASILEV *et alii* 1979; VASILEV *et alii* 1981; VASILEV, MIHAYLOV, CHOLAKOV 1985; VASILEV *et alii* 1986; VASILEVA *et alii* 2017; VASILEVA, BONEV, MADZHAROV 2018a; VASILEVA *et alii* 2018 b; VASILEVA, BONEV, MADZHAROV 2019; VASILEVA *et alii* 2020.

[3] BONEV *et alii* 2021, p. 1055–1059.

centuries. This statement is confirmed by a radiocarbon analysis, which shows that the calibrated dates vary between 1358 to 1410 (**Fig. 1**).

Until now, only two Ottoman period Christian necropolises in Northeastern Bulgaria have been anthropologically studied and published-skeletal series near the fortress walls of Kaliakra and on the Cape Chirakman near the town of Kavarna. In Kaliakra, 92 graves dating from the 15th–17th c. AD are discovered[4]. Anthropological analysis shows that almost two-thirds (63%) of the buried are children in early infancy. As reasons for the extremely high childhood mortality in the series, the anthropologist[5] highlights the insufficient development of medicine during this historical period and poor sanitary and hygienic life conditions. The palaeodemographic study shows that the average life expectancy of adults is approximately 45 years, higher in males. Identical values of palaeodemographic indicators are also determined in the population (15th–17th c. AD) of Chirakman[6]. Representation about physical type of the studied population of Kavarna (according to the data of the necropolis of Chirakman) is obtained from the anthropological investigation of a total of 752 skeletons carried out in the 80's of the 20th c. The bones of the limbs in adult individuals are characterised by the predominance of medium dimensions and moderately expressed relief. In females, gracile skeletons are also very common. The studied population shows high percentage of degenerative-dystrophic changes affecting the bone-joint apparatus of the spine and limbs, almost equally in both sexes (a total of 70 skeletons).

A total of 14 individuals are identified–6 subadults (5 children and a male juvenile) and 8 adults (4 males, 3 females and an adult individual of undetermined sex). Investigated human skeletons, especially those of the adult individuals, are relatively well preserved, which allowing detailed, anthropological and paleaopathological studies to be carried out. Approved anthropological methods are used to determine the age at death and sex of the buried[7]. The reconstruction of the stature[8] and body mass[9] of the adults is performed by well-established methods. Palaeopathological bone changes are identified and described according to the well-established methodologies[10]. In one of the cases (Grave No. 7) a radiographic study was also carried out.

The data obtained from the anthropological study of 12 Christian graves excavated at Cape Chirakman in 2020 will be compared with the results of the analysis of other synchronous skeletal series from the territory of Bulgaria, as well as with the stature data from the first registers of the living Bulgarian population after 1878[11].

---

[4] RADICHKOV 1993.

[5] RADICHKOV 1993.

[6] KONDOVA, BOEV, CHOLAKOV 1981; KONDOVA, BOEV, CHOLAKOV 1982; BOEV, KONDOVA, CHOLAKOV 1982; BOEV, KONDOVA, CHOLAKOV 1989.

[7] ALEKSEEV 1966; ALEKSEEV, DEBETS 1964, p. 37; BASS 2005; BROTHWELL 1965; BUIKSTRA, UBELAKER 1994; KÜHL 1985; FEREMBACH, SCHWIDETZKY, STLOUKAL 1980, p. 517–549; GERASIMOV 1955; LOVEJOY *et alii* 1985, p. 57–66; MARESH 1970, p. 157–200; SCHAEFER, BLACK, SCHEUER 2009; ZUBOV 1968.

[8] PEARSON 1899; TROTTER, GLESER 1952.

[9] RUFF, SCOTT, LIU 1991, p. 397–413.

[10] AUFDERHEIDE, RODRIGUEZ-MARTIN 1998; ORTNER 2003; ORTNER, PUTSCHAR 1981; PINHASI, MAYS 2008.

[11] STOEV 2012.

Results

Grave No. 6/2020 (Pl. 1.1; Pl. 6.1)

Burial construction: pit surrounded by vertically placed flat stones of various sizes. At the skull, they are larger; the southern row is missing, with only one preserved in situ; width at skull – 0.46 m; width at lower limbs – 0.26 m; length 1.90 m.

Orientation: West–East

Position of the skeleton: laid on its back with stretched lower limbs. The skull is slightly tilted to the north, on the humerus. The upper limbs are bent at the elbow joints and placed on the abdomen.

Characteristics / note: The grave was covered with flat stones, only 4 were preserved in the field, from the pelvic area to the lower limbs, stone levels – 119.84–119.89 m. They lie relatively horizontally.

Condition of *the bone material*: good. Skull – cranium; postcranial skeleton – fragmented and incompletely represented.

Age at death: 40–50 years old (*maturus*)-determined by the degree of obliteration of the cranial sutures.

Sex: female (determined by pelvic girdle, skull features and limb measurements by BASS 2005, KÜHL 1985, ALEKSEEV 1966):

Bone feature	Size, (mm)	Bone feature	Size, (mm)
Epycond.D hum. dx	58.0	*D caput radii dx*	22.0
Epycond.D hum. sin	58.5	*D caput radii sin*	21.0
Vert D caput humeri dx	40.0	*Trans. D caput hum. dx*	39.0
Vert D caput humeri sin	40.0	*Trans. D caput hum. sin*	38.0
D caput femoris dx	42.0	*D caput femoris sin.*	42.0
Epycond.D fem. dx	73.0	*Epycond.D fem.sin*	73.0
L clavicula dx	125.0	*L clavicula sin*	127.0

The bones are moderately massive, with strong relief on the upper limbs and moderate relief on the lower limbs.

Stature: **Average stature:** 150.61 cm[12] – under middle stature

154,50±4,01 cm[13] – middle stature

151.76±3.64* cm[14]-under middle stature-*reconstructed only by the length of lower limbs

Bone	Length, (cm)
Humerus dx	29.0
Humerus sin	28.5
Radius dx	21.7
Radius sin	21.2
Ulna dx	23.8
Ulna sin	23.7
Femur sin	-

[12] PEARSON 1899.

[13] TROTTER, GLESER 1952.

[14] TROTTER, GLESER 1952.

Femur dx	39.0
Tibia dx	32.0
Tibia sin	31.3
Fibula dx	31.3
Fibula sin	31.1

Body weight: 60.11 kg (reconstructed by the diameter of the head of both femurs).
*Dentition***:** permanent, incomplete:

Right															Left
8	7	6	X	X	X	X	X	1	X	3	4	5	6	7	8
8	7	6	5	X	3	2	X	1	2	3	4	5	6	7	8

1 – permanent tooth preserved in the alveolus; X–tooth, lost *post mortem*
Abrasion of the masticatory surface of the teeth-moderate–3–4 degree.
Number of examined teeth: 24

Dentofacial pathology:
• Tartar;
• Pitting enamel hypoplasia (PEH) in the lower right second and third molars. This defect is due to stress in the physical development of the individual caused by various factors-premature birth, malnutrition and/or change of diet, bacterial or viral infections, trauma, etc. It is often seen in palaeopopulations, including Bulgarian ones[15]. The feature also appears in other populations from 14th c. AD., as studied by the old capital Tarnovo from the church of Holy 40 Martyrs[16].

Skeletal pathology:
• Degenerative Joint Disease DJD (spondylosis and arthrosis) in the thoracolumbar spine (degree 3) and in the right shoulder joint (degree 2);
Anatomical cranial variations: no observed.

Grave No. 7/2020 (**Pl. 1.2; Pl. 6.2**)
Burial construction: elongated trapezoidal shaped burial pit, wider at the skull and narrower at the lower limbs. It is enclosed by stones of various sizes. The east and south sides are missing. Some of the enclosing stones are vertically driven-in.
Grave dimensions: length 2.04 m; width west 0.54 m; width east 0.45 m.
Orientation: West-East
Position of skeleton: laid on its back with stretched lower limbs. The upper limbs are bent at the elbow joint and placed on the abdomen. The skull is tilted slightly to the south, with the right cheekbone resting on the humerus. Most of the upper and lower limbs are not preserved. Southern upper limb bent at the elbow joint and placed in front of the chest. The bones are well preserved; most of the phalanges of upper and lower limbs are missing.
Grave inventory: bronze button, in the pelvic area

[15] RUSSEVA 2010; RUSSEVA 2016, p. 529–531; ATANASSOVA 2018.
[16] RUSSEVA 2013, p. 364–365.

*Characteristics/note***:** 10 fragments of wheel-made pottery from Late Antique period; one from a Hellenistic amphora and 3 fragments from the Late Medieval period were found in the grave fill.

Condition of the bone material: skull and postcranial skeleton – fragmentarily and incompletely represented.

Age at death: 40–50 years old (*maturus*)-determined by the degree of obliteration of the cranial sutures.

Sex: male (determined by pelvic girdle, skull features and limb measurements by BASS 2005, ALEKSEEV 1966):

Bone feature	**Size, (mm)**	**Bone feature**	**Size, (mm)**
Epycond.D hum. dx	66.0	*D caput radii dx*	-
Epycond.D hum. sin	67.5	*D caput radii sin*	-
Vert D caput humeri dx	48.0	*Trans. D caput hum. dx*	47.0
Vert D caput humeri sin	47.0	*Trans. D caput hum. sin*	40.0
D caput femoris dx	51.0	*D caput femoris sin.*	52.0
Epycond.D fem. dx	-	*Epycond.D fem.sin*	90.0
L clavicula dex	149.0	*L clavicula sin*	-

The bones are very massive with moderate relief on the upper and weak – on the lower limbs.

Stature: average stature: 163.52 cm[17] – under middle stature

167.80±3.70 cm[18] – over middle stature

168.24±3.31* cm[19]-over middle stature-*reconstructed only by the length of lower limbs

Bone	**Length, cm**
Humerus dx	32.0
Humerus sin	30.9
Radius dx	-
Radius sin	23.0
Ulna dx	-
Ulna sin	25.5
Femur sin	45.0
Femur dx	44.2
Tibia dx	36.0
Tibia sin	36.3
Fibula dx	-
Fibula sin	35.4

Body weight: 77.63 kg (reconstructed by the diameter of the head of both femurs).

Dentition: permanent, incomplete

[17] PEARSON 1899.

[18] TROTTER, GLESER 1952.

[19] TROTTER, GLESER 1952

Right															Left
8	7	6	X	4	X	X	X	X	X	X	4	5	6	7	0
8	7	6	5	4	0	0	0	0	0	0	0	X	6	7	8

4 – permanent tooth preserved in the alveolus with complete root growth; 0 – tooth lost *ante mortem* or tooth agenesis; X–tooth lost *post mortem*

Abrasion of the masticatory surface of the teeth – moderate – grade 3–4.

Number of examined teeth: 16

Dentofacial pathology:

• Retinated right upper third molar due to underdeveloped radix;

• Distant neoplasia with bone metastasis (probable differential diagnosis[20]) (**Pl. 1.3–1.6**).

Skeletal pathology:

• Degenerative Joint Disease DJD (spondylosis) in the lumbar spine (degree 3).

Grave No. 8/2020 (**Pl. 2.1; Pl. 6.3**)

*Burial construction***:** enclosed by stone slabs to the west, east and south, with part of the southern slabs missing (from the skull to the pelvic area); width at skull – 0.65 m; width at lower limbs – 0.25 m; length 1.93 m.

Orientation: West-East

Position of the skeleton: laid on its back with stretched lower limbs. The skull is slightly tilted to the south, on the humerus. The upper limbs are bent at the elbow joints and placed on the abdomen. Most of the phalanges of the upper limbs are missing.

*Characteristics/note***:** three flat stones were found, placed on the skeleton relatively horizontally. The westernmost is placed in the chest area and covers the entire skeleton up to the pelvis. The middle stone has an elevation of 119.76 m. The westernmost is 0.41 m from the western stone enclosing the burial pit. Single charcoal flecks were recorded within the fill of the burial pit. A small quantity of wheel-made pottery fragments-from the Late Antique and Hellenistic periods, a badly corroded iron object and two iron nails were also found in the soil. Bone remains from another, probably earlier, grave was uncovered 0.20 m to the southwest. Vertebrae, ribs and phalanges were visible in the field. Some of these remains were uncovered on and close to the skull of the individual in grave 8.

Amongst the redeposited bones on the skull of grave 8, the rim of a medieval vessel was found with glazing on the inner surface.

Condition of the bone material: poor. Skull and postcranial skeleton – fragmented and incompletely represented.

*Age at death***:** 40–50 years old (*maturus*)-determined by the degree of obliteration of the cranial sutures.

Sex: female (determined by pelvic girdle, skull features and limb bone dimensions by BASS 2005, KÜHL 1985, ALEKSEEV 1966:

[20] The diagnose was made after X–ray bone observation and consultation with Prof. dr. Georgi Tomov, MD., phd. from Plovdiv Medical University.

Bone	Size, (mm)	Bone	Size, (mm)
Epycond.D hum. dx	56.0	*D caput radii dx*	22.5
Epycond.D hum. sin	56.0	*D caput radii sin*	22.5
Vert D caput humeri dx	41.0	*Trans. D caput hum. dx*	40.0
Vert D caput humeri sin	41.0	*Trans. D caput hum. sin*	39.5
D caput femoris dx	43.5	*D caput femoris sin.*	44.0
Epycond.D fem. dx	-	*Epycond.D fem.sin*	74.5
L clavicula dx	129.0	*L clavicula sin*	134.0

The bones are gracile, with a slight relief on the upper limbs and moderate relief on the lower limbs.

Stature: average stature**:** 154.79 cm[21] – middle stature

158.97±3.93 cm[22] – over middle stature

157.80±3.65* cm[23]-over middle stature-*reconstructed only by the length of lower limbs

Bone	Length, cm
Humerus dx	30.5
Humerus sin	29.9
Radius dx	22.7
Radius sin	-
Ulna dx	24.3
Ulna sin	-
Femur sin	42.2
Femur dx	41.8
Tibia dx	33.4
Tibia sin	34.0
Fibula dx	32.9
Fibula sin	33.1

Body weight: 63.93 kg (reconstructed by the diameter of the head of both femurs).

Dentition: permanent, incomplete:

Right															Left
0	7	0	X	4	X	X	X	X	X	X	X	X	0	7	0
0	7	6	5	X	X	X	X	X	X	3	4	5	6	7	0

4 – preserved permanent tooth in the alveolus; **0** – tooth lost *ante mortem*; – tooth not found in the material and no preserved alveolus; **X–**tooth lost *post mortem*

Abrasion of the masticatory surface of the teeth–4th degree.

[21] PEARSON 1899.

[22] TROTTER, GLESER 1952.

[23] TROTTER, GLESER 1952.

Number of examined teeth: 11
Dentofacial pathology:
• Periodontal changes.
Skeletal pathology:
• DJD in the right knee joint (degree 2–3)-gonarthrosis;
Anatomical cranial variations: no observed.

Grave No. 8A/2020

Bones from an adult individual in the age group *Adultus* (30–35 years old) of undetermined sex. Spondylotic changes (degree 3) with osteophyte formation in the thoracic spine are observed (**Pl. 2.2**).

Grave No. 9/2022 (**Pl. 2.3; Pl. 6.4**)

Burial construction: enclosed by stones of various sizes, most of them vertically driven-in. Most of the enclosing stones on the northern side and the crosswise lying stones at the lower limbs are missing; width at skull, 0.52 m; width at lower limbs, 0.16 m; length 2.10 m.

Orientation: West-East

Position of the skeleton: laid on its back with stretched lower limbs. The skull lies horizontally, with the northern part missing. The upper limbs are bent at the elbow joints and placed on the abdomen.

*Characteristics / note***:** two horizontally laid stones at depth 119.88 m. were found on the skull, in the area of the shoulders. After removal of the stones, it is clear that the lower jaw of the skull lies underneath them. In the fill of the burial pit, single uncharacteristic fragments of wheel-made vessels, dating to the Late Antique period, and one badly corroded iron object, as well as single mussel and snail shells were found. Southwest of the skull, a femur from another skeleton was uncovered. The burial feature (No. 9) disturbed another burial pit to the east.

Condition of the bone material: skull and postcranial skeleton – fragmentarily and incompletely represented.

Age at death: 25–26 years old (a*dultus*)-determined by the relief of the symphyseal surface of the pubic bone.

Sex: male (determined by pelvic girdle (**Pl. 2.4**), skull features, limb measurements by BASS 2005, KÜHL 1985, ALEKSEEV 1966):

Bone	**Size, (mm)**	**Bone**	**Size, (mm)**
Epycond.D hum. dx	74.0	*D caput radii dx*	26.0
Epycond.D hum. sin	75.0	*D caput radii sin*	27.5
Vert D caput humeri dx	49.0	*Trans. D caput hum. dx*	46.5
Vert D caput humeri sin	48.0	*Trans. D caput hum. sin*	46.0
D caput femoris dx	52.0	*D caput femoris sin.*	52.0
Epycond.D fem. dx	93.0	*Epycond.D fem.sin*	93.0
L clavicula dx	177.0	*L clavicula sin*	178.0

The bones are very massive with strong relief on the lower limbs (strong development of the linea aspera) and weaker – on the upper limbs.

Stature: *average stature*: 177.02 cm[24]-tall
184.08±3.70 cm[25]-very tall
183.59±3.31* cm[26]-very tall-*reconstructed only by the length of lower limbs

Bone	**Length, cm**
Humerus dx	36.2
Humerus sin	36.0
Radius dx	28.4
Radius sin	-
Ulna dx	31.1
Ulna sin	-
Femur sin	51.0
Femur dx	50.5
Tibia dx	41.5
Tibia sin	42.4
Fibula dx	-
Fibula sin	42.2

Body weight: 78.87 kg (reconstructed by the diameter of the head of both femurs).
Dentition: permanent, incomplete.

Right															Left
8	7	6	5	4	3	X	X	-	-	-	-	-	-	-	-
8	7	6	5	4	3	X	X	X	2	3	X	X	6	7	8

4 – permanent tooth preserved in the alveolus with complete root growth; **-**tooth not found in the material and no preserved alveolus; X–tooth lost *post mortem*

Abrasion of the masticatory surface of the teeth-moderate–3rd degree.
Number of examined teeth: 17
Dentofacial pathology:
• Pitting enamel hypoplasia (PEH) of the lower right second and third molars;
• Caries of the lower sixth teeth and mandibular cyst in the area of lower right first molar (**Pl. 2.5–2.6**).

Skeletal pathology:
• Premature unilateral (left) synostosis of the *sutura coronalis* (2nd degree). It cannot be determined whether there is a deformation of the skull resulting from the premature synostosis, as the skull is highly fragmented;
• DJD (spondylitis) in the lumbar spine (3rd degree);
• Ossifying myositis on the lateral surface of the proximal end of the right tibia (**Pl. 2.7**).

Traces of cutting/hit (cut marks) *peri mortem* (**Pl. 2.8–2.9**) are registered on the skull of the male from Grave No. 9, excavated in 2020.

[24] PEARSON 1899.
[25] TROTTER, GLESER 1952.
[26] TROTTER, GLESER 1952.

Grave No. 10/2020 (Pl. 3.1; Pl. 6.5)

Burial construction: surrounded by stones of various sizes. A large vertically driven-in stone is in the skull area. Larger in size stones are vertically driven-in at the pelvic area as well. From the north, the stones are smaller and broken. From the south, the burial pit is disturbed and the stones are missing; width at the skull – 0.56 m; width at the lower limbs – 0.44 m; length 1.15 m.

Orientation: West-East

*Position of the skeleton***:** laid on its back with stretched lower limbs. The right femur is only halfway preserved. Its lower part is in grave No 9. The skull lies horizontally, slightly tilted to the north. The upper limbs are bent at the elbow joints and placed on the abdomen. The bones of the feet and the phalanges are missing.

Characteristics / note: it is disturbed by grave 9 in its eastern part. The right lower limb of the individual is preserved in situ, next to the knee joint. The left one has been removed and parts of the femur have fallen into the burial pit of grave No. 9. The other bones from the left lower limb are placed to the north of the right one. Four stones were cleared in the area of the knees and are at the same time the northern border stones of grave No. 9 and lye on the right limb, which is preserved *in situ*.

Position of the skeleton in situ: the field photograph shows that there are disturbances in the anatomical order: dislocations of the last two lumbar vertebrae, the distal end of the sacrum is turned to the left towards the proximal end of the *femur sinister*; *tibia dextra et sinistra* and *fibula dextra et sinistra* are found next to the *femur sinister*.

Condition of the bone material: skull and postcranial skeleton – fragmented and incompletely represented.

*Age at death***:** 40–50 years old *(maturus)*-determined by the degree of obliteration of the cranial sutures.

Sex: male (determined by pelvic girdle, skull features, limb measurements by BASS 2005, KÜHL 1985, ALEKSEEV 1966):

Bone	**Size, (mm)**	**Bone**	**Size, (mm)**
Epycond.D hum. dx	-	*D caput radii dx*	26.5
Epycond.D hum. sin	71.0	*D caput radii sin*	27.0
Vert D caput humeri dx	50.0	*Trans. D caput hum. dx*	50.0
Vert D caput humeri sin	-	*Trans. D caput hum. sin*	-
D caput femoris dx	56.5	*D caput femoris sin.*	56.5
Epycond.D fem. dx	90.0	*Epycond.D fem.sin*	89.0
L clavicula dex	162.0	*L clavicula sin*	163.0

The bones are very massive with moderate relief of the upper and lower limbs.

*Stature***:** *average stature***:** 176.46 cm[27] – tall

182.97±3.91 cm[28] *– very tall*

[27] PEARSON 1899.

[28] TROTTER, GLESER 1952.

184.21±3.37 cm*[29] *– very tall – *reconstructed only by the length of lower limbs*

Bone	**Length,cm**
Humerus dx	36.5
Humerus sin	-
Radius dx	27.2
Radius sin	-
Ulna dx	-
Ulna sin	-
Femur sin	-
Femur dx	-
Tibia dx	-
Tibia sin	41.9
Fibula dx	-
Fibula sin	-

Body weight: 89.97 kg *(reconstructed by the diameter of the head of both femurs).*
Dentition: permanent, incomplete.

Right																Left
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	0	0	R	X	3	X	0	0	X	3	4	5	0	0	0	

4 – permanent tooth preserved in the alveolus with complete root growth; – tooth not found in the material and no preserved alveolus; **0** – tooth lost *ante mortem* or tooth agenesis; **X–**tooth lost *post mortem*; **R** – root of permanent tooth. Abrasion of the masticatory surface of the teeth – moderate to severe – grade 4.

Number of examined teeth: 5

Dentofacial pathology:

• Caries of the left lower second premolar;

• Advanced edentulousness *ante mortem* and resulting mandibular deformity (**Pl. 3.2**).

Skeletal pathology:

• DJD (spondyloarthrosis) in the thoracic spine (2nd degree).

Grave No. 11/2020 (**Pl. 3.3; Pl. 6.6**)

*Burial construction***:** trapezoidal in shape, surrounded by large, flat stones, well stacked, vertically driven-in. Large stone at the skull area; width at skull – 0.54 m; width at lower limbs – 0.26 m; length 1.60 m.

Orientation: West-East

Position of the skeleton: laid on its back with stretched lower limbs. The skull is tilted to the south, on the humerus. The upper limbs are bent at the elbow joints and placed on the abdomen.

*Characteristics/note***:** 4–5 small stones were found on the skeleton, in the abdominal region. Two fragments of Late Antique pottery were found in the fill of the pit.

[29] TROTTER, GLESER 1952.

*Condition of the bone material***:** skull and postcranial skeleton – fragmented and incompletely represented.

*Age at death***:** approximately 10–11 years old (*infans II*)-determined by dental status.

Bone	**Length, cm**	**Attribute**	**Length,mm**
L humerus dx	215.0	*L humerus sin*	215.0
L ulna dx	177.0	*L ulna sin*	178.0
L radius dx	163.0	*L radius sin*	160.0
L clavicula dx	93.0	*L clavicula sin*	95.0
L femur dex	315.0	*L femur sin*	-
L tibia dx	-	*L tibia sin*	-
L fibula dx	270.0	*L fibula dx*	270.0

Sex: undetermined.

Dentition: mixed, incomplete.

Right														Left
-														-
	7°	**6**	**5°**	**4°**	-	**2**	**1**	**1**	-	3°↓	4°	V	6	**7°**	
	7°	6	5°	4°	X	2	1	1	2	3°↑	4°	5°	6	7°	
C															C

V – primary tooth preserved in the alveolus with completed root growth; **6**-permanent tooth preserved inside the alveolus with completed root growth; **6** -permanent tooth preserved outside the alveolus with completed root growth; **5°**-permanent tooth preserved in the alveolus with incomplete root growth;-tooth not found in the material and no preserved alveolus; **C**-embryo of a permanent tooth; X–tooth lost *post mortem*

Number of examined teeth: 27

Tubercle of Carabelli–3rd degree-a morphological dental trait occurring with higher frequency in Europids.

Dentofacial pathology:

• Pitting enamel hypoplasia (PEH) the lower left first and second molars, the result of short-term stress in the physical development of the individual in early infancy.

• Caries of the upper left second deciduous molar and the lower left second premolar.

Skeletal pathology: not identified.

Anatomical cranial variations: on the skull from Grave No. 11 is registered *os apicis multipartitum* (**Pl. 3.4**). *Os apicis* was found in 4% of 3522 examined modern Bulgarian skulls[30].

*Additional bone material***:** *ulna sinistra* (95.0 mm diaphyseal length) from a child about 1 year of age at death.

[30] KADANOV, MUTAFOV 1984, p. 127.

Grave No. 12/2020 (Pl. 4.1; Pl. 7.1)

*Burial construction***:** trapezoidal in shape, surrounded by stone blocks. Flat stones are vertically driven-in at the skull and lower limbs area; width at skull 0.44 m; preserved width at lower limbs 0.26 m; length 0.97 m.

Orientation: West-East

*Position of the skeleton***:** the bones are not well preserved. Laid on its back with stretched lower limbs. The skull is tilted to the north and lies on the humerus. The upper limbs are bent at the elbow joints and laid flat on the abdomen.

*Grave inventory***:** button, bronze

Characteristics/note: two fragments of Late Antique pottery were found in the fill of the pit.

*Condition of the bone material***:** skull and postcranial skeleton – fragmented and incompletely represented.

Age at death: 1–2 years old *(infans I)*-determined by dental status and by the length of long bones of the limbs:

Bone	**Length (diaphysam)**	**Attribute**	**Length (diaphysam)**
L humerus dx	117.0	*L humerus sin*	102.0
L ulna dx	-	*L ulna sin*	-
L radius dx	-	*L radius sin*	-
L clavicula dx	-	*L clavicula sin*	-
L femur dex	-	*L femur sin*	142.0
L tibia dx	-	*L tibia sin*	115.0
L fibula dx	-	*L fibula dx*	-

*Sex***:** it cannot be reconstructed. At this early age, sex identification by anthropological features of the skeleton is very difficult. At this early age, it is very difficult to determine sex from anthropological features of the skeleton.

Dentition: Deciduous, incomplete.

Right																Left
-	-	C	-	-	-	-	-	-	-	-	-	-	C	-	-	
			V°	IV°	III°	II°	I°	X	II°	III°	IV°	V°				
			V°	IV°	X	II°	I°	I°	X	X	IV°	V°				
-	-	C	-	-	-	-	-	-	-	-	-	-	C	-	-	

V° – primary tooth preserved in the alveolus with incomplete root growth; – tooth not found in the material and no preserved alveolus; **C**-primary tooth which is still in the jaw; **X–**tooth lost *post mortem*

Number of examined teeth: 20

Dentofacial pathology: not registered.

*Skeletal pathology***:** pathological changes of the distal end of the left humerus (the right one is unchanged)-most probable Differential Diagnosis 9DD)-trauma (**Pl. 4.2–4.3**).

Grave No. 13/2020 (Pl. 4.4; Pl. 7.2)

*Burial construction***:** pit, surrounded by stones of various sizes. Flat stones are vertically driven-in at the skull and lower limbs area. Some of the stones on the northern side (pelvic area) and southern side (lower limbs) are missing; width at skull 0.44 m; width at lower limbs 0.32 m; length 1.93 m.

Orientation: West-East

Position of the skeleton: laid on its back with stretched lower limbs. The skull lies tilted to the north, on the humerus. Upper limbs are bent at the elbow joints and left on the chest; the right one lies on the abdomen.

*Characteristics / note***:** fragments of Late Antique and Hellenistic pottery were found in the fill of the pit.

Condition of the bone material: skull-fragmented *cranium*. Postcranial skeleton – fragmented and incompletely represented.

Age at death: 5–6 years old *(infans I)*-determined by dental status.

Bone	**Length (diaphysam)**	**Attribute**	**Length (diaphysam)**
L humerus dx	152.0	*L humerus sin*	-
L ulna dx	-	*L ulna sin*	-
L radius dx	117.0	*L radius sin*	-
L clavicula dx	75.5	*L clavicula sin*	-
L femur dex	209.0	*L femur sin*	211.0
L tibia dx	171.0	*L tibia sin*	170.0
L fibula dx	-	*L fibula dx*	-

Sex: It cannot be reconstructed. At this early age, it is very difficult to determine sex from anthropological features of the skeleton.

Dentition: deciduous, incomplete.

Right																Left
-	-	C↓	-	-	-	-	-	-	-	-	-	-	C↓	-	-	
			V	IV	III	X	X	X	X	X	IV	V				
			V	IV	III	II	I	I	II	III	IV	V				
-	-	C↑	-	-	-	-	-	-	-	-	-	-	C↑	-	-	

V – primary tooth preserved in the alveolus with complete root growth; – tooth not found in the material and no preserved alveolus; **C**-primary tooth which is still in the jaw; **X–**tooth lost *post mortem*

Number of examined teeth: 19

Maxillofacial pathology: Not reported.

Skeletal pathology: cribra orbitalia-registered on the left orbit, on the right one-not reported. *Cribra orbitalia* is a pathological bone change that results from multiple nutritional deficiencies associated with anemia, scurvy, rickets, hemangiomas or trauma[31].

[31] WALKER *et alii* 2009.

Anatomical cranial variations: additional intrasutural bone (wormian bone)-in the left half of the lambdoid suture.

Grave No. 14/2020 (Pl. 5.1; Pl. 7.3)

*Burial construction***:** trapezoidal burial pit, surrounded by small stones, many of which were found not on the edge of the trench but in the interior of it. Blocks of larger size stones are vertically driven-in at the skull and lower limbs area; width at skull, 0.75 m; width at lower limbs, 0.43 m; length 1.92 m.

Orientation: West-East

Position of the skeleton: laid on its back with stretched lower limbs. Skull lying back (southwest, secondarily displaced by a root). Small stones are uncovered around the skull. Upper limbs are bent at the elbow joints and laid across the abdomen.

*Grave inventory***:** button, bronze, on the right shoulder bone

*Characteristics / note***:** Late Antique pottery fragments were found in the fill of the pit.

Condition of the bone material: good. Skull-cranium. Postcranial skeleton-fragmented and incompletely represented.

Age at death: 45–49 years old (*maturus*)-determined by the relief of the symphyseal surface of the pubic bone and by the degree of obliteration of the cranial sutures.

Sex: female (determined by pelvic and cranial features, limb measurements by BASS 2005, KÜHL 1985, ALEKSEEV 1966):

Bone	Size (mm)	Bone	Size, (mm)
Epycond.D hum. dx	56.0	*D caput radii dx*	21.5
Epycond.D hum. sin	53.0	*D caput radii sin*	21.0
Vert D caput humeri dx	40.0	*Trans. D caput hum. dx*	39.0
Vert D caput humeri sin	41.0	*Trans. D caput hum. sin*	39.0
D caput femoris dx	43.5	*D caput femoris sin.*	44.0
Epycond.D fem. dx	77.0	*Epycond.D fem.sin*	77.0
L clavicula dx	127.0	*L clavicula sin*	130.0

The bones are moderately massive with moderate relief.

Stature: average stature: 155.32 cm[32]-middle stature

159.61±4.03 cm[33]-tall

162.83±3.67* cm[34]-tall-*reconstructed only by the length of lower limbs

Bone	Length, cm
Humerus dx	30.4
Humerus sin	29.8
Radius dx	21.0
Radius sin	20.8
Ulna dx	23.5

[32] PEARSON 1899.

[33] TROTTER, GLESER 1952.

[34] TROTTER, GLESER 1952.

Ulna sin	23.3
Femur sin	43.2
Femur dx	43.9
Tibia dx	35.3
Tibia sin	35.7
Fibula dx	34.9
Fibula sin	-

*Body weight***:** 63.93 kg (reconstructed by the diameter of the head of the right femur).

Dentition: incomplete

Right															Left
0	7	0	5	X	X	X	X	X	0	3	4	R	0	0	0
0	7	0	5	4	3	2	X	X	2	3	4	5	6	7	0

4 – permanent tooth preserved in the alveolus; **0** – tooth lost *ante mortem*; **X–** tooth lost *post mortem*; **R**-root of permanent tooth

Abrasion of the masticatory surface of the teeth – moderate–4th degree.

Number of examined teeth: 16

Dentofacial pathology:

• *Ante mortem* edentulousness;

• Tartar – large amount on the lower teeth (**Pl. 5.2**);

• Linear enamel hypoplasia-two lines corresponding to 2 and 3 years of age, the result of stress in the physical development of the individual, most often due to a change in diet (transition from breastfeeding to common food).

Skeletal pathology:

• DJD (spondylitis) in the thoracolumbar spine (3rd degree);

• Lateral epicondylitis of the left humerus resulting from chronic, uniform and intense stress of the left upper extremity.

Anatomic cranial variations

• *Os incae multipartitum* (**Pl. 5.3**). Although in 1842 the English physician Bellamy described the Inca bone as typical of the Incas, this additional skull bone localized on *squama occipitalis* is registered as an anatomical variation in all world populations. In the series of modern Bulgarian skulls, the Inca bone occurs with a low frequency of 3.5%, but the type *os incae multipartitum* is identified in only 5 out of 3522 examined skulls[35].

• *Wormian bones–3 pieces each on the left and right;*

• *Os asteriacum–2 pieces each on left and right.*

Grave No. 15/2020 (Pl. 5.4; Pl. 7.4)

Burial construction: the burial pit is dug into the ancient stratum. The fill is the same as that of the layer0gray, ashy earth. The exact borders of the pit are uncertain.

[35] KADANOV, MUTAFOV 1984, p. 147–149.

Three vertically driven-in stones are preserved, in the area of the lower limbs; ca. width at skull-0.44 m; approx. width at lower limbs-0.35 m; approx. length 1.80 m.

Orientation: West-East

Position of the skeleton: laid on its back with extended lower limbs. The skull is tilted to the north and placed on the shoulder joint. Upper limbs bent at elbow joints and placed on the abdomen.

Grave inventory: 3 pieces whole and ½ bronze piece; 1 gold appliqué, in the skull area

Characteristics/note: in the pelvic area is found the toe of a Late Antique amphora, from the fill of the burial pit.

Condition of the bone material: skull and postcranial skeleton-fragmented and incompletely represented.

Age at death: 65–70 years old (*senilis*)-determined by the degree of obliteration of the cranial sutures.

Sex: male (determined by pelvic girdle and limb bone dimensions by BASS 2005, KÜHL 1985):

Bone	**Size, (mm)**	**Bone**	**Size, (mm)**
Epycond.D hum. dx	61.0	*D caput radii dx*	23.5
Epycond.D hum. sin	61.0	*D caput radii sin*	22.0
Vert D caput humeri dx	50.0	*Trans. D caput hum. dx*	45.0
Vert D caput humeri sin	-	*Trans. D caput hum. sin*	-
D caput femoris dx	-	*D caput femoris sin.*	48.5
Epycond.D fem. dx	-	*Epycond.D fem.sin*	82.0
L clavicula dx	-	*L clavicula sin*	-

The bones are moderately massive with moderate relief.

Stature: average stature: 167.43 cm[36]-over middle stature

172.28±3.82 cm[37]-tall

170.08±3.33* cm[38]-tall-*reconstructed only by the length of lower limbs.

Bone	**Length, cm**
Humerus dx	34.5
Humerus sin	34.0
Radius dx	-
Radius sin	23.9
Ulna dx	-
Ulna sin	-
Femur sin	-
Femur dx	-
Tibia dx	-
Tibia sin	36.8

[36] PEARSON 1899.

[37] TROTTER, GLESER 1952.

[38] TROTTER, GLESER 1952.

Fibula dx	-
Fibula sin	36.2

Body weight: 70.23 kg *(reconstructed by the diameter of the head of the left femur).*
Dentition: permanent, incomplete

Right															Left
-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
8	7	6	5	0	3	X	X	-	-	X	X	5	6	0	0

3 – permanent tooth preserved in the alveolus; **0** – tooth lost *ante mortem*; – tooth not found in the material; **X**–tooth lost *post mortem*; **R**-root of permanent tooth

Number of examined teeth: 8

Abrasion of the masticatory surface of the teeth-moderate–4th degree.

Dentofacial pathology:

• *Ante-mortem* tooth loss;

• Tartar.

Skeletal pathology:

• DJD (spondylitis) in the cervical thoracic spine (3rd degree);

Anatomical cranial variations: not observed.

Grave No. 16/2020 (Pl. 5.5; Pl. 7.5)

*Burial construction***:** rectangular in shape, surrounded by vertically driven-in stones. One stone is missing at the lower limbs to the north and the south. Pit breaches earlier wall (Late Antique?); width at skull 0.29 m; width at lower limbs 0.28 m; length 1.15 m.

Orientation: West-East

Position of the skeleton: laid on its back with stretched lower limbs. The skull is slightly inclined to the north and placed on the shoulder joint. The upper limbs are bent at the elbow joints; the right one is placed in the chest area and the left one in the stomach area.

Condition of the bone material: skull-fragmented and incompletely represented. Postcranial skeleton-fragmented and incompletely represented.

Age at death: 5–6 years old (*infans I*)-determined by dental status.

Bone	**Length (diaphysam)**	**Attribute**	**Length (diaphysam)**
L humerus dx	164.0	*L humerus sin*	-
L ulna dx	-	*L ulna sin*	130.0
L radius dx	-	*L radius sin*	120.0
L clavicula dx	85.0	*L clavicula sin*	83.0
L femur dex	-	*L femur sin*	220.0
L tibia dx	171.0	*L tibia sin*	173.0
L fibula dx	170.0	*L fibula dx*	170.0

Sex: it cannot be reconstituted.

Dentition: deciduous, incomplete.

Right																Left
-	-	C↓	-	-	-	-	C	-	-	C	-	C	C↓	C	-	
			V	IV	III	X	X	-	-	-	X	V				
		6°	V	IV	X	II	I	I	II	III	IV	V	6°			
-	-		-	-	-	-	-	-	-	-	-	-		-	-	

V – primary tooth preserved in the alveolus with complete root growth; 6° – permanent tooth preserved in the alveolus with incomplete root growth; – tooth not found in the material and no preserved alveolus; **C**-primary tooth which is still in the jaw; **X–**tooth lost post mortem.

Number of examined teeth: 21.

Tubercle of Carabelli (2nd degree)-a morphological dental trait with a high frequency in the Europoid anthropological type.

Dentofacial pathology: not registred.

Skeletal pathology: cribra orbitalia–1st degree on the left orbit, right orbit-cannot be reported because of its fragmentary state.

Anatomical cranial variations: not registered.

Additional material: fragment of an animal bone.

Grave No. 17/2020 (Pl. 5.6; Pl. 7.6)

*Burial construction***:** probably enclosed by vertically driven-in stones. Heavily disturbed at the moment of discovery. Border stones are preserved *in situ* in the area of the lower limbs. A north-south aligned wall in the northwest corner of the square was disturbed when the pit was dug out. The western part of the pit has an indistinct outline as the construction is cut into the ancient layer and the fill has the same characteristics as the soil-grey, ashy; width at lower limbs – 0.32m; length 1.52 m.

Orientation: West-East

*Position of the skeleton***:** upper part of the skeleton is missing. The remains are preserved from the abdomen to the lower limbs. Most of the ribs are also missing. The skeleton was laid on its back with stretched lower limbs.

*Skeletal parameters***:** length: approx. 1.18 m; width of pelvis: 0.30 m; length of femur: 0.38 m.

Condition of the bone material: skull-no. Postcranial skeleton-fragmented and incompletely represented.

Age at death: 16–17 years old (j*uvenis*)-determined by development of epiphyses.

Sex: male (determined by pelvic girdle and limb measurements by BASS 2005):

Bone	**Size, (mm)**	**Bone**	**Size, (mm)**
Epycond.D hum. dx	-	*D caput radii dx*	-
Epycond.D hum. sin	-	*D caput radii sin*	-
Vert D caput humeri dx	-	*Trans. D caput hum. dx*	-
Vert D caput humeri sin	-	*Trans. D caput hum. sin*	-
D caput femoris dx	44.5	*D caput femoris sin.*	-
Epycond.D fem. dx	-	*Epycond.D fem.sin*	-
L clavicula dx	-	*L clavicula sin*	-

Conclusions

Traces of trauma, interpreted as the result of cutting during a combat are found in the necropolises from this historical period in nowadays Bulgarian territory, including on male skulls from the Cape Chirakman excavated and studied in the 1970s, 1980s[39] and 2020 (Grave No. 9). Cases of survived traumas on cranial and postcranial skeletons are registered in the necropolis of Holy 40 Martys, from the ancient capital Tarnovo[40].

The calculated values according to one of the used formulas for the height of those buried in the studied necropolis, place one of the investigated females in the category of "under middle" and two-in the category of "middle" stature. Following this formula, males fell into the following categories: "under middle"-one individual, one case-in the category "over middle" and two men were defined as "tall". The stature results obtained using the other formula[41] were higher, placing the three studied females in the categories of "middle", "over middle" and "tall". One exception to stature ("under middle") is found only for the female from grave No. 6, when only the lengths of lower limbs are used. For males, calculated values after this formula for stature fell into the categories of "over middle", "tall" and "very tall". These results place the stature of the studied individuals close to and slightly above the published data for the synchronous necropolis from the northern suburb of the old Bulgarian capital Tarnovo[42]. The first records[43] of the stature of the living population in Bulgaria give an average value of the height of men even lower by 5.21 cm (the difference is statistically significant) than that calculated (by Pearson's formula) for the male skeletons excavated in 2020 on Cape Chirakman.

Enamel hypoplasia (EH) on the teeth surface was registered in 28.6% of the examined individuals. EH is a result of a temporary metabolic deficiency (which deficiency disrupts ameloblast physiology) in early childhood of the buried. Enamel hypoplasia is evidence of a change in diet (for example, a transition from breastfeeding to general nutrition) or long-term illness of the individual[44]. Two of the children aged 5–6 years (Graves No. 13 and 16) were distinguished with a pathological porotic bone change cribra orbitalia (CO) of the superior orbital roof as a result of subperiostal bleeding associated with deficiency of vitamin C and B12 predominately in childhood. Active forms of CO are mainly phenomena in childhood. Cribra orbitalia results from multiple nutritional deficiencies associated mainly with anemia (megaloblastic and hemolytic anemias), but also with scurvy, rickets, hemangiomas, or trauma[45].

This is a common paleopathological finding in human skulls from archaeological sites, including the Cape Chirakman necropolis.

[39] BOEV, KONDOVA, CHOLAKOV 1989, p. 159; KONDOVA *et alii* 1981, p. 122.

[40] RUSSEVA 2013, p. 377.

[41] TROTTER, GLESER 1952.

[42] RUSSEVA,MANOILOVA 2020, p. 106

[43] STOEV 2012.

[44] AUFDERHEIDE, RODRIGUEZ-MARTIN 1998; RITZMAN, BAKER, SCHWARTZ 2008; STARLING, STOCK 2007.

[45] WALKER *et alii* 2009.

The majority of the established morphological changes on the examined skeletons are indicative for malnutrition and numerous infectious diseases in this Late Medieval society.

BIBLIOGRAPHY

ALEKSEEV, DEBETS 1964 – V. Alekseev, G. Debets, *Kraniometriya, Metodika antropologicheskih issledovaniy*, Moskva, 1964.

ALEKSEEV 1966 – V. Alekseev, *Osteometriya. Metodika antropologicheskih issledovaniy*, Moskva, 1966.

ATANASSOVA 2018 – N. Atanassova, *Sravnitelna harakteristika na antropologichni pokazateli na kostni ostanki ot Osmanskia period*, PhD. Thesis, Sofia, 2018.

AUFDERHEIDE, RODRIGUEZ-MARTIN 1998 – A. Aufderheide, C. Rodriguez-Martin, *The Cambridge encyclopedia of human paleopathology*, Cambridge, 1998.

BASS 2005 – W. Bass, *Human Osteology: A Laboratory and Field Manual (5th edition)*, Columbia, Missouri, 2005.

BOEV, KONDOVA, CHOLAKOV 1982 – P. Boev, N. Kondova, S. Cholakov, *Antropologichno prouchvane na srednovekovni nekropoli, Chirakman-Karvuna-Kavarna*, Sofia, 1982, p. 62–65.

BOEV, KONDOVA, CHOLAKOV 1989 – P. Boev, N. Kondova, S. Cholakov, *Demografska struktura, zabolyavaniya i rasova tipologiya na naselenieto na Kavarna prez kasnoto srednovekovie (po danni ot nekropola na Chirakman)*, Izvestiya na Narodnia muzey Varna 25 (1989), p. 156–166.

BONEV *et alii* 2021 – V. Bonev, E.Vasileva, K. Madzharov, Y. Dimitrova, *Antichna i srednovekovna krepost nos Chirakman*, Arheologicheski otkritiya i razkopki prez 2020 g., Sofia 2021, p. 1055–1059.

BONEV *et alii* 2022 – V. Bonev, E. Vasileva, K. Madzharov, Y. Dimitrova, R. Peevski, *Archaeological excavations at Cape Chirakman/Bizone, Kavarna 2016–2021*, Pontica 55 (2022), p. 55–114.

BROTHWELL 1965 – D. Brothwell, *Digging Up Bones*, British Museum of Natural History, London, 1965.

BUIKSTRA, UBELAKER 1994 – J. Buikstra, D. Ubelaker, *Standards for data collection from human skeletal remains,* Fayetteville, Arkansas, 1994.

CHOLAKOV, MIHAYLOV, NEYKOVA 1982 – S. Cholakov, M. Mihaylov, M. Neykova, *Prouchvane na kasnosrednovekevniya nekropol na nos Chirakman pri gr. Kavarna*, în: *Arheologicheski otkritiya i razkopki prez 1981 g.*, Mihaylovgrad, 1982, p. 109.

FEREMBACH, SCHWIDETZKY, STLOUKAL 1980 – D. Ferembach, I. Schwindezky, M. Stoukal, *Recommendations for age and sex diagnoses of skeletons*, Journal of Human Evolution 9 (1980), p. 517–549.

GATEV 2007 – Y. Gatev, *Terenni obhozhdaniya na teritoriyata na obshtina Kavarna prez 2006 g.*, in: *Arheologicheski otkritiya i razkopki prez 2006 g.*, Sofia, 2007, p. 597–598.

GERASIMOV 1955 – M. Gerasimov, *Vosstanovlenie litsa po cherepu: (sovremennayy i iskopaemayy chelovek)*, Moskva, 1955.

KADANOV, MUTAFOV 1984 – D. Kadanov, S. Mutafov, *Cherepat na choveka v mediko-biologichen aspekt,* Sofia, 1984.

KITOV 1973 – G. Kitov, *Trakiyska mogilna grobnitsa kray Kavarna*, in: *Rezyumeta na otcheti za razkopani obekti prez 1972 godina*, Sofia, 1973, p. 37.

KITOV 1990 – G. Kitov, *Kupolnite grobnitsi na nos Kaliakra i nos Chirakman kray Kavarna*, Terra Antiqua Balcanica 6 (1990), p. 116–121.

KITOV, PETKOV, SALKIN 1987 – G. Kitov, A. Petkov, A. Salkin, *Arheologiya i geofizika v prouchvaneto na trakiyska nadgrobna mogila kray s. Balgarevo, Tolbuhinski okrag*, in: *Arheologicheski otkritiya i razkopki prez 1986 g.*, Razgrad 1987, p. 101.

KONDOVA, BOEV, CHOLAKOV 1981 – N. Kondova, P. Boev, S. Cholakov, *Antropologichno prouchvane na srednovekoven nekropol, otkrit pri krepostnata stena na nos Chirakman kray gr*. Kavarna, Interdistsiplinarni izsledvaniya 7–8 (1981), p. 123–134.

KONDOVA, BOEV, CHOLAKOV 1982 – N. Kondova, P. Boev, S. Cholakov, *Danni za srednovekovnoto naselenie na Chirakman, Chirakman-Karvuna-Kavarna*, Sofia, 1982, p. 66–69.

KÜHL 1985 – R. Kühl, *Skelettreste aus prähistorische Brandbestattungen und ihre Aussagemöglichkeiten, mit Hinweisen auf spezielle Fragestellungen in Schleswig-Holstein*, Mitteilungen der Anthropologischen Gesellschaft in Wien (MAGW) 115 (1985), p. 113–137.

LAZARENKO 2006 – I. Lazarenko, *Spasitelni arheologicheski razkopki na podmogilno grobno saorazhenie ot elinisticheskiya nekropol pri s. Bozhurets, obshtina Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 2005 g.*, Sofia, 2006, p. 223–225.

LAZARENKO, MIRCHEVA, DOBREV 2007 – I. Lazarenko, E. Mircheva, D. Dobrev, *Arheologicheski prouchvaniya na nadgrobna mogila pri s. Bozhurets, obshtina Kavarna, prez 2006 g.*, in: *Arheologicheski otkritiya i razkopki prez 2006 g.*, Sofia, 2007, p. 326–329.

LOVEJOY *et alii* 1985 – C. O. Lovejoy, R. Meindl, T. R. Prysbeck, R. Mensforth, *Chronological metamorphosis of the auricular surface of the ilium: a new method for the determination of adult skeletal age at death*, American Journal of Physical Anthropology 68/1 (1985), p. 15–28.

MARESH 1970 – M. Maresh, *Measurements from roentgenograms*, in: R. W. McCammon (ed.), *Human Growth and Development*, Springfield IL: C. C. Thomas, 1970, p. 157–200.

MĂRCULESCU 1934 – O. Mărculescu, *Bizone-Portul Cavarna*, Analele Dobrogei 15 (1934), p. 145–162.

MĂRCULESCU 1935 – O. Mărculescu, *Descoperiri arheologice dobrogene*, Analele Dobrogei 16 (1935), p. 119–129.

MIRCHEV, TONCHEVA, DIMITROV 1962 – M. Mirchev, G. Toncheva, D. Dimitrov, *Bizone-Karvuna*, Izvestiya na Varnenskoto arheologichesko druzhestvo 13 (1962), p. 21–109.

ORTNER, PUTSCHAR 1981 – D. Ortner, W. Putschar, *Identification of Pathological Conditions in Human Skeletal Remains*, Washington, 1981.

ORTNER 2003 – D. Ortner, *Identification of Pathological Conditions in Human Skeletal Remains, 2nd Edition,* San Diego, 2003.

PEARSON 1899 – K. Pearson, *Mathematical Contributions to the Theory of Evolution. V. On the Reconstruction of the Stature of Prehistoric Races*, Phil. Trans. Royal Soc. A 193 (1899), p. 169–244. doi:10.1098/rsta.1899.0004.

PINHASI, MAYS 2008 – R. Pinhasi, S. Mays (eds.), *Advances in human palaeopathology*, Hoboken, 2008.

RADICHKOV 1993 – G. Radichkov, *Kasnosrednovekoven nekropol ot XV–XVII vek na Kaliakra*, Dobrudza 10 (1993), p. 168–181.

RITZMAN, BAKER, SCHWARTZ 2008 – T. Ritzman, B. Baker, G. Schwartz, *A fine line: a comparison of methods for estimating ages of linear enamel hypoplasia formation*, American Journal of Physical Anthropology 135 (2008), p. 348–361.

RUFF, SCOTT, LIU 1991 – C. B. Ruff, W. W. Scott, A. Y. C. Liu, *Articular and diaphyseal remodeling of the proximal femur with changes in body mass in adults*, American Journal of Physical Anthropology 86/3 (1991), p. 397–413.

RUSSEVA 2010 – V. Russeva, *Distribution of Enamel Hypoplasia – new perspectives for Interpretation of the Anthropological Material from Archaeological Sites in Bulgaria (preliminary results)*, Interdisciplinarni izsledvania 22–23 (2010), p. 186–192.

RUSSEVA 2013 – V. Russeva, *Zdravoslovnoto sastoianie na individite, pogrebani v nekropola ot XIII–XIV v., pri carkvata "Sv. 40 Machenici", Veliko Tarnovo*, Izvestia na Regionalen istoricheski muzei Veliko Tarnovo, 27 (2012) [2013], p. 355–402.

RUSSEVA 2016 – V. Russeva, *Pogrebanite v nekropola-antropologichna harakteristika,* in: L. Doncheva-Petkova, K. Apostolov, V. Russeva (eds.), Rannobalgarskiat nekropol pri Balchik, Sofia, 2016, p. 511–581.

RUSSEVA, MANOILOVA 2020 – V. Russeva, L. Manoilova, *Demografski harakteristiki, fizichesko razvitie i patologichni izmenenia na populaciata, predstavena v srednovekovnia nekropol v severnoto podgradie na stolichnia Tarnovgrad*, Izvestia na Regionalen istoricheski muzei Veliko Târnovo 35 (2020), p. 99–120.

SALKIN, GEORGIEV 2004 – A. Salkin, P. Georgiev, *Podvodna arheologicheska ekspeditsiya „Kavarna–2003"*, in: *Arheologicheski otkritiya i razkopki prez 2003 g.*, Sofia, 2004, p. 119–120.

SALKIN, GEORGIEV 2006 – A. Salkin, P. Georgiev, *Podvodna arheologicheska ekspeditsiya- „Kavarna–2005"*, in: *Arheologicheski otkritiya i razkopki prez 2005 g.*, Sofia, 2006, p. 254–255.

SALKIN, ORACHEV 1989 – A. Salkin, A. Orachev, *Podvodna arheologicheska ekspeditsiya „Kavarna–88"*, in: *Arheologicheski otkritiya i razkopki prez 1988 g.*, Razgrad, 1989, p. 121–172.

SALKIN 1982 – A. Salkin, *Sledi ot antichnostta, Chirakman-Karvuna-Kavarna*, Sofia, 1982, p. 29–35.

SALKIN 1984 – A. Salkin, *Kavarna i rayonat prez drevnostta (II hil. pr. n. e.-IV v. ot n. e.), Kavarna ot drevnostta do Osvobozhdenieto*, Sofia, 1984, p. 44–61.

SALKIN 1986 – A. Salkin, *Evidence for the earlier foundation of Bizone colony*, Thracia Pontica 3 (1986), p. 251–255.

SALKIN 1987 – A. Salkin, *Podvodni arheologicheski prouchvaniya „Kavarna–86"*, in: *Arheologicheski otkritiya i razkopki prez 1986 g.*, Razgrad, 1987, p. 281.

SALKIN 1989 – A. Salkin, *Dva trakiyski groba ot okolnostite na Bizone*, Izvestiya na Narodniya muzey Varna 25/40 (1989), p. 9–12.

SALKIN 1996 – A. Salkin, *Podvodna arheologicheska ekspeditsiya „Kavarna–95"*, in: *Arheologicheski otkritiya i razkopki prez 1995 g.*, Sofia 1996, p. 114.

SALKIN 2007 – A. Salkin, *Bizone* in: V. Grammenos, E. Petropoulos (eds.), *Ancient Greek Colonies in the Black Sea*, Vol. 1, BAR International Series 1675), Oxford, 2007, p. 37–50.

SALKIN, GEORGIEV, DOBREV 2004 – A. Salkin, P. Georgiev, D. Dobrev, *Obhodna terennna ekspeditsiya „Kavarna-Shabla 2003"*, in: *Arheologicheski otkritiya i razkopki prez 2003 g.*, Sofia, 2004, p. 119.

SCHAEFER, BLACK, SCHEUER 2009 – M. Schaefer, S. Black, L. Scheuer, *Juvenile osteology: A laboratory and field manual*, San Diego, 2009.

SOTIROV, GATEV 1996 – I. Sotirov, Y. Gatev, *Spasitelni razkopki na kasnoantichen nekropol-Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 1995 g.*, Sofia, 1996, p. 78.

SOTIROV, GATEV 2005 – I. Sotirov, Y. Gatev, *Razkopki na nos Chirakman, antichniya Bizone*, in: *Arheologicheski otkritiya i razkopki prez 2004 g.*, Sofia, 2005, p. 202–203.

SOTIROV, GATEV 2006 – I. Sotirov, Y. Gatev, *Razkopki na nos „Chirakman", antichniya Bizone*, in: *Arheologicheski otkritiya i razkopki prez 2005 g.*, Sofia, 2006, p. 255–257.

SOTIROV *et alii* 1990 – I. Sotirov, D. Toptanov, B. Petrunova, A. Salkin, *Razkopki na nos Chirakman kray gr. Kavarna*, in: *Arheologicheski otkritiya i razkopki prez, Kyustendil*, 1990, p. 162–164.

STARLING, STOCK 2007 – P. Starling, J. Stock, *Dental indicators of health and stress in Early Egyptian and Nubian agriculturalists: a difficult transition and gradual recovery*, American journal of Physical Anthropology 134 (2007), p. 520–528.

STOEV 2012 – R. Stoev, *Body height in recruits in Bulgaria (1897–1920),* Acta morphologica et anthropologica 18 (2012), p. 95–101.

THEODOSIEV 1994 – N. Theodosiev, *Thracian tumulus near the town of Kavarna*, Helis 3 (1994), p. 109–122.

TONKOVA, SALKIN 2005 – M. Tonkova, A. Salkin, *Balgaro-frenski proekt za arheologichesko prouchvane na ostankite ot Bizone na yuzhnite terasi na nos Chirakman, Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 2004 g.*, Sofia, 2005, p. 136–137.

TONKOVA, SLAKIN, LAND 2004 – M. Tonkova, A. Salkin, K. Land, *Balgaro-frenski proekt za arheologicheski prouchvaniya na ostankite ot Bizone na yuzhnite terasi na nos Chirakman, Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 2003 g.*, Sofia, 2004, p. 69.

TOPTANOV 1984 – D. Toptanov, *Kavarna i Kavarnenskiyat kray po vremeto na Rannovizantiiyskataimperiya (V–VI v.) i Parvoto balgarsko tsarstvo (VII-XI v.),* in: V. Vasilev *et alii* (eds.), *Kavarna ot drevnostta do osvobozhdenieto*, Sofia, 1984, p. 62–84.

TROTTER, GLESER 1952 – M. Trotter, G. Gleser, *Estimation of stature from long bones of American whites and Negroes*, American Journal of Physical Anthropology 10 (1952), p. 469–514.

VASILEV 1984 – V. Vasilev, *Razkopki na nos Chirakman do Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 1983 g.*, Smolyan, 1984, p. 145.

VASILEV 1985 – V. Vasilev, *Chirakman*, Vekove 24/3 (1985), p. 13–23.

VASILEV *et alii.* 1973 – V. Vasilev, G. Kitov, G. Kuzmanov, I. Sotirov, A. Salkin, *Prouchvania na nos „Charakman" pri Kavarna,* XVIII Natsionalna arheologicheska konferentsiya, Sofia, 1973, p. 58–59.

VASILEV, SALKIN, SOTIROV 1976 – V. Vasilev, A. Salkin, I. Sotirov, *Razkopki pri nos „Charakman" pri gr. Kavarna*, XXI Natsionalna arheologicheska konferentsiya, Smolyan, 1976, p. 79–80.

VASILEV *et alii* 1977 – V. Vasilev, A. Salkin, V. Gerasimova, I. Sotirov, S. Cholakov, *Razkopki na nos Chirakman pri gr. Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 1976 g.*, Sofia, 1977, p. 135–137.

VASILEV *et alii* 1978 – V. Vasilev, A. Salkin, V. Gerasimova, I. Sotirov, S. Cholakov, *Razkopki na nos Chirakman pri gr. Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 1977 g.*, Sofia, 1978, p. 137–138.

VASILEV *et alii* 1979 – V. Vasilev, A. Salkin, I. Sotirov, S. Cholakov, N. Kondova, *Razkopki na Chirakman*, in: *Arheologicheski otkritiya i razkopki prez 1978 g.*, Sofia, 1979, p. 183–184.

VASILEV *et alii* 1981 – V. Vasilev, M. Mihaylov, G. Radichkov, M. Neykova, S. Cholakov, N. Kondova-Cholakova, *Razkopki na nos Chirakman pri gr. Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 1980 g.*, Sofia, 1981, p. 153–154.

VASILEV, MIHAYLOV, CHOLAKOV 1985 – V. Vasilev, M. Mihaylov, S. Cholakov, *Razkopki na nos Chirakman*, in: *Arheologicheski otkritiya i razkopki prez 1984 g.*, Sliven, 1985, p. 248–250.

VASILEV *et alii* 1986 – V. Vasilev, M. Mihaylov, S. Cholakov, S. Goshev, *Razkopki na nos Chirakman*, in: *Arheologicheski otkritiya i razkopki prez 1985 g.*, Veliko Târnovo, 1986, p. 189–192.

VASILEVA *et alii* 2017 – E. Vasileva, V. Bonev, K. Madzharov, Y. Gatev, *Arheologichesko prouchvane na nos Chirakman, obshtina Kavarna,* in: *Arheologicheski otkritiya i razkopki prez 2016 g.*, Sofia, 2017, p. 591–594.

VASILEVA, BONEV, MADZHAROV 2018a – E. Vasileva, V. Bonev, K. Madzharov, *Arheologichesko prouchvane na nos Chirakman, obshtina Kavarna,* in: *Arheologicheski otkritiya i razkopki prez 2017 g.*, Sofia, 2018, p. 518–522.

VASILEVA *et alii* 2018b – E. Vasileva, V. Bonev, K. Madzharov, S. Stoychev, D. Dobrev, B. Totev, *Terenni izdirvaniya v obshtina Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 2017 g.*, Sofia, 2018, p. 599–601.

VASILEVA, BONEV, MADZHAROV 2019 – E. Vasileva, V. Bonev, K. Madzharov, *Arheologichesko prouchvane na antichna i srednovekovna krepost nos Chirakman, gr. Kavarna*, in: *Arheologicheski otkritiya i razkopki prez 2018 g.*, Sofia, 2019, p. 498–500.

VASILEVA *et alii* 2020 – E. Vasileva, V. Bonev, K. Madzharov, Y. Dimitrova, *Antichna i srednovekovna krepost nos Chirakman*, in: *Arheologicheski otkritiya i razkopki prez 2019 g.*, Sofia, 2020, p. 1155–1159.

WALKER *et alii* 2009 – P. L. Walker, R. R. Bathurst, R. Richman, T. Gjerdrum, V. A. Andrushko, *The causes of Porotic Hyperostosis and Cribra Orbitalia: A Reappraisal of the Iron-Deficiency-Anemia Hypothesis*, American Journal of Physical Anthropology 139 (2009), p. 109–125.

ZUBOV 1968 – A. Zubov, *Odontologiya. Metodika antropologicheskih issledovaniy*, Moskva, 1968.

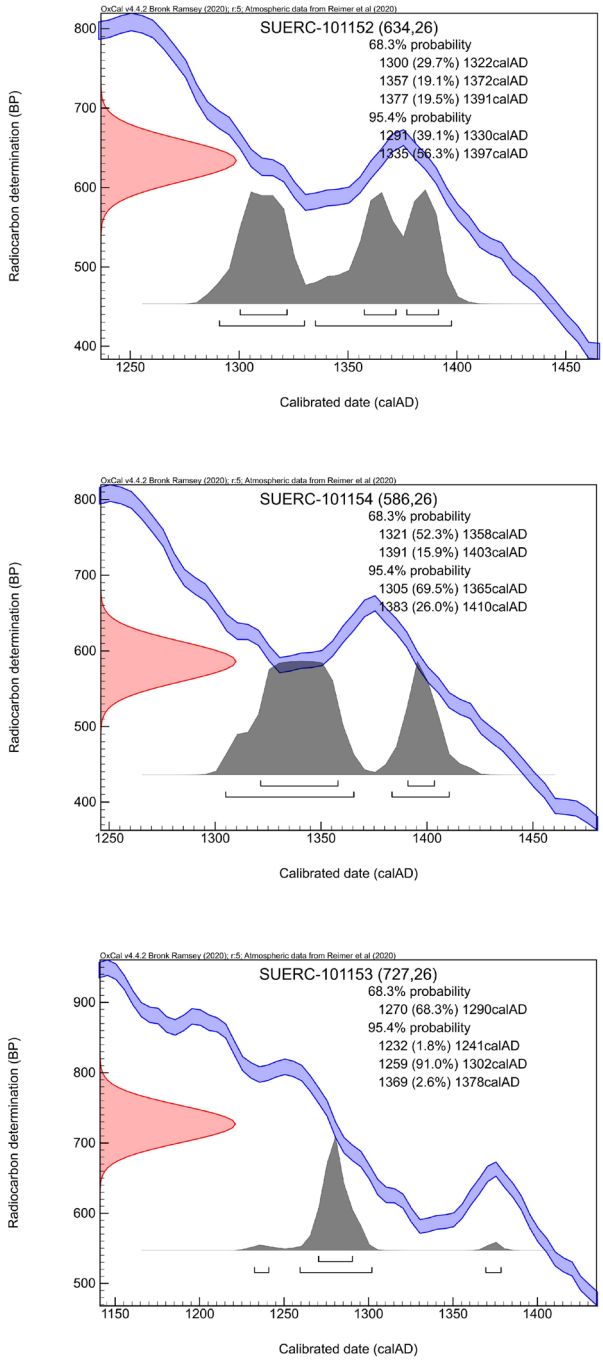
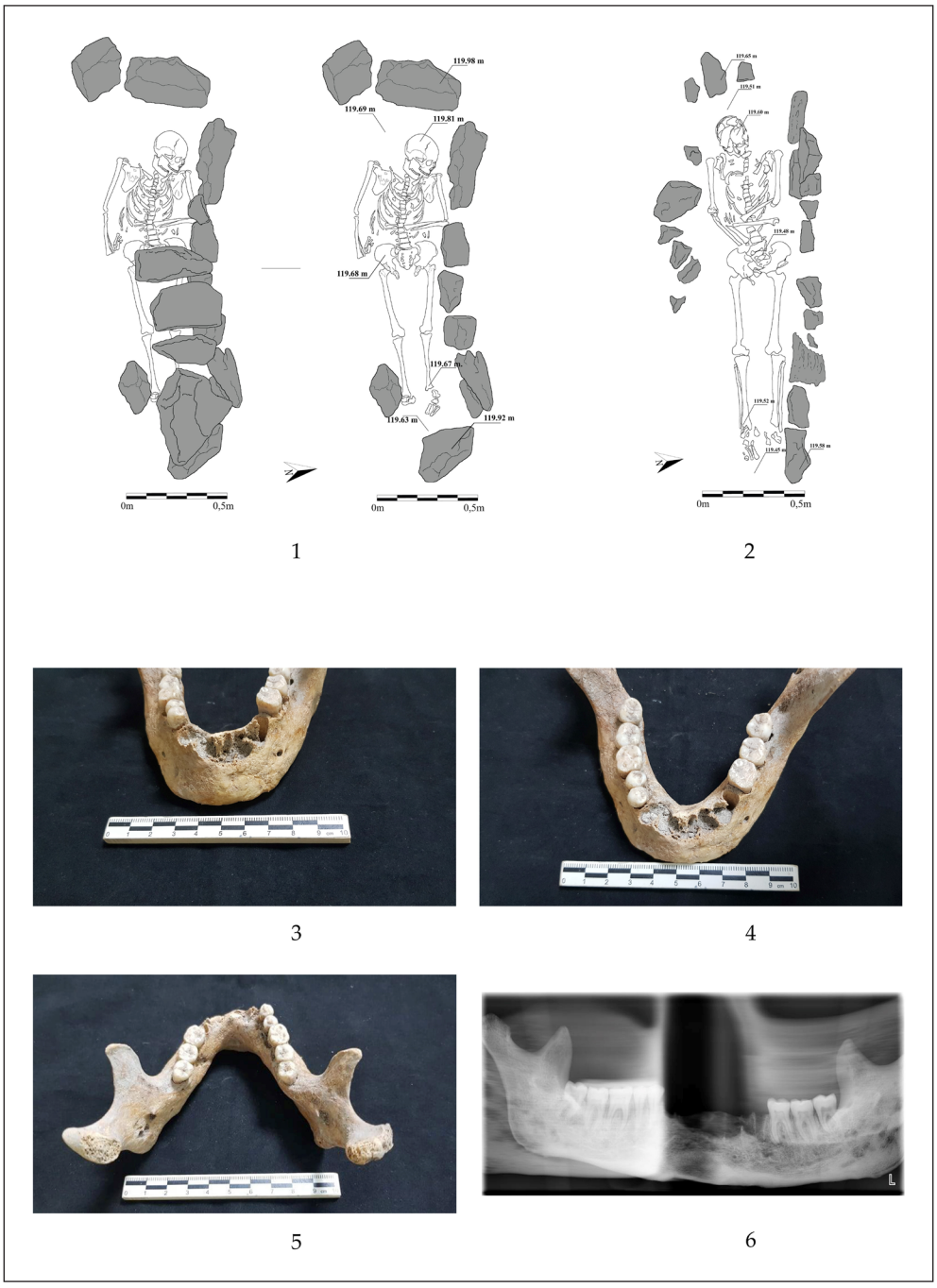
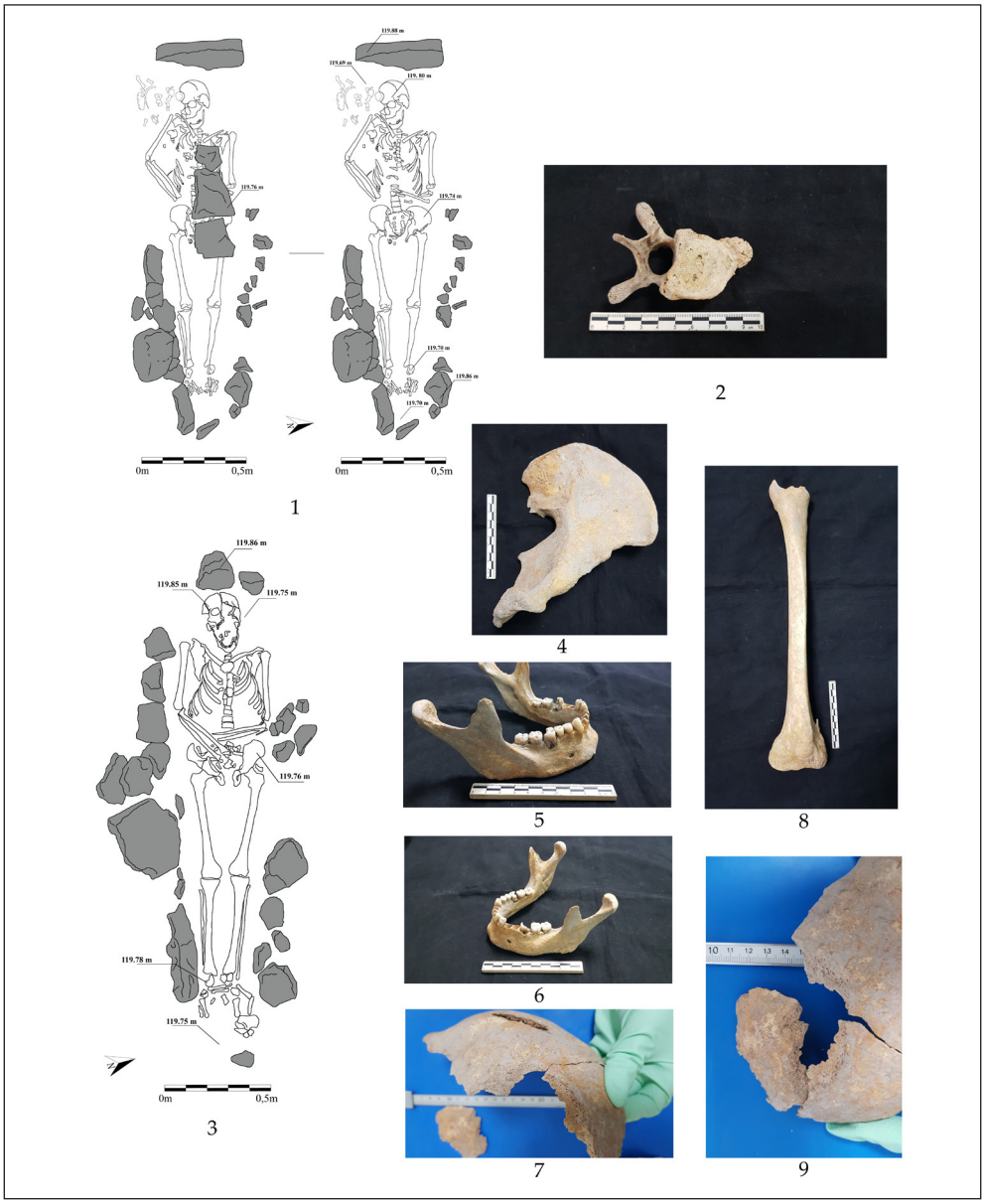


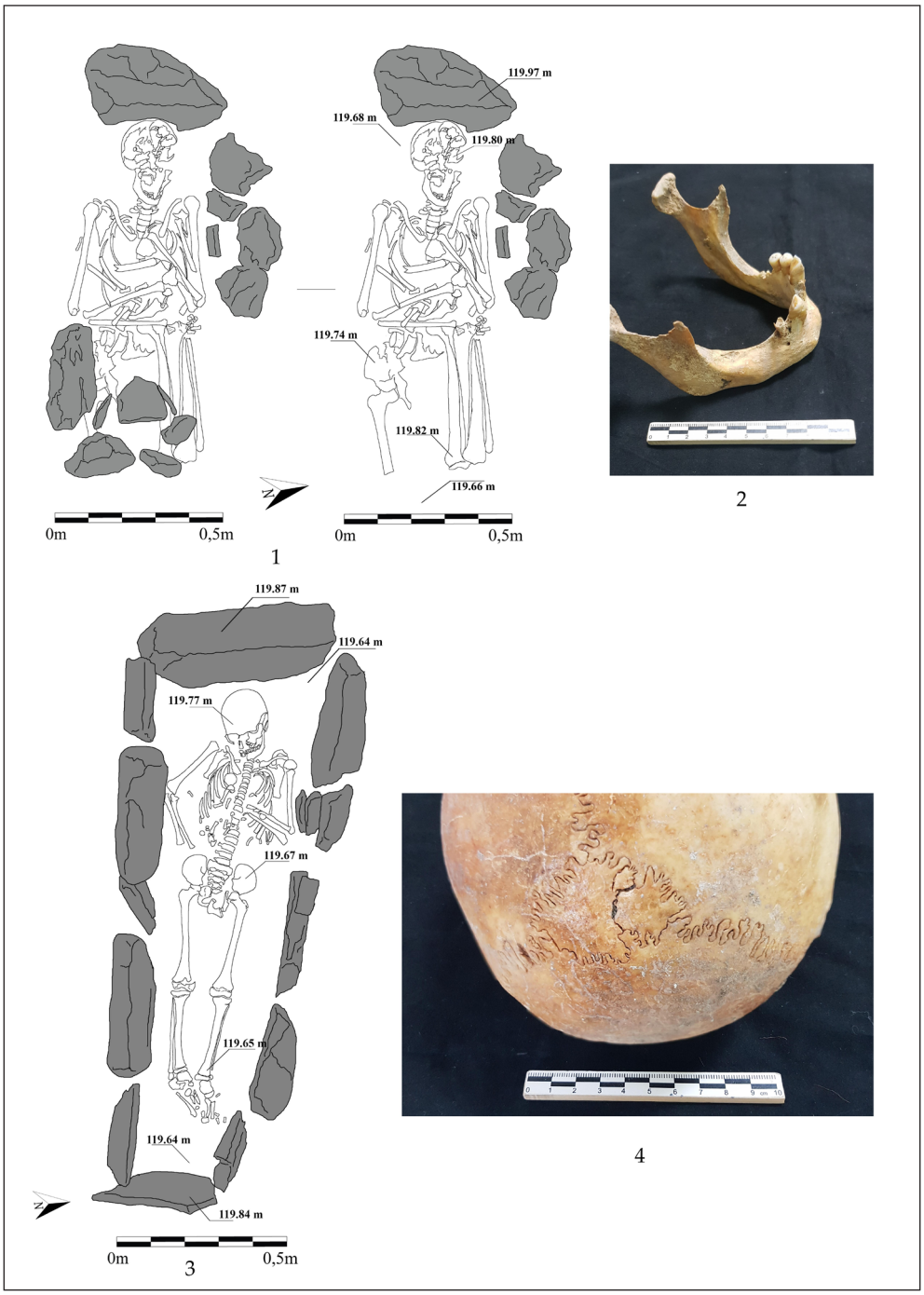
Fig. 1. Radiocarbon dating diagrams.



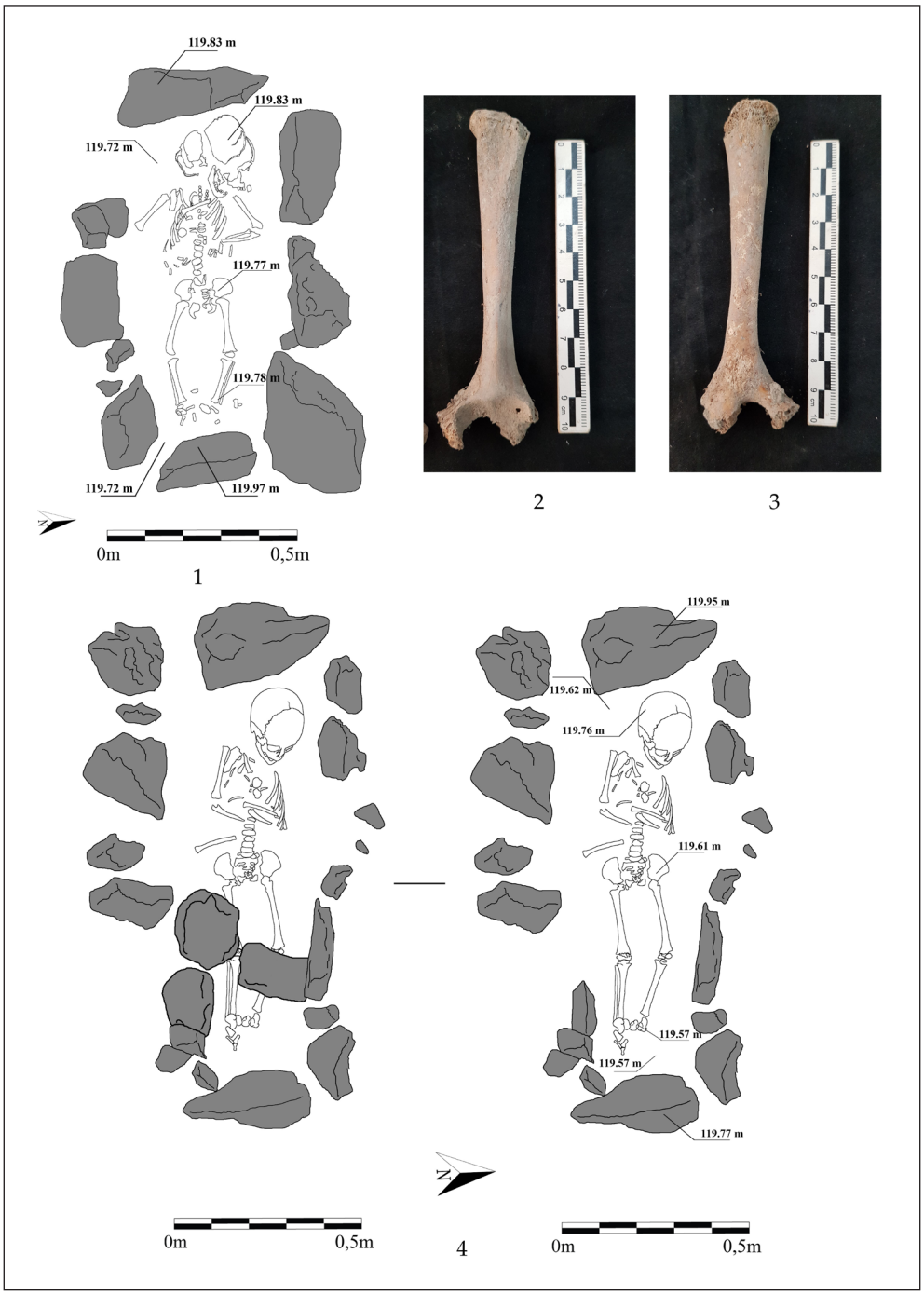
Pl. 1. Graves No. 6 and No. 7. 1.1. Grave No. 6. Female (40–50 years old). Drawing; 1.2. Grave No. 7. Male (40–50 years old). Drawing; 1.3. Grave No. 7. Male (40–50 years old). *Mandible with a strong thickening of the body of bone;* 1.4. Grave No. 7. Male (40–50 years old). *Mandible bone-anterior view;* 1.5. Grave No. 7. Male (40–50 years old). *Mandible bone-lingual surface view;* 1.6. Grave No. 7. Male (40–50 years old). *Mandible bone–X–ray.*



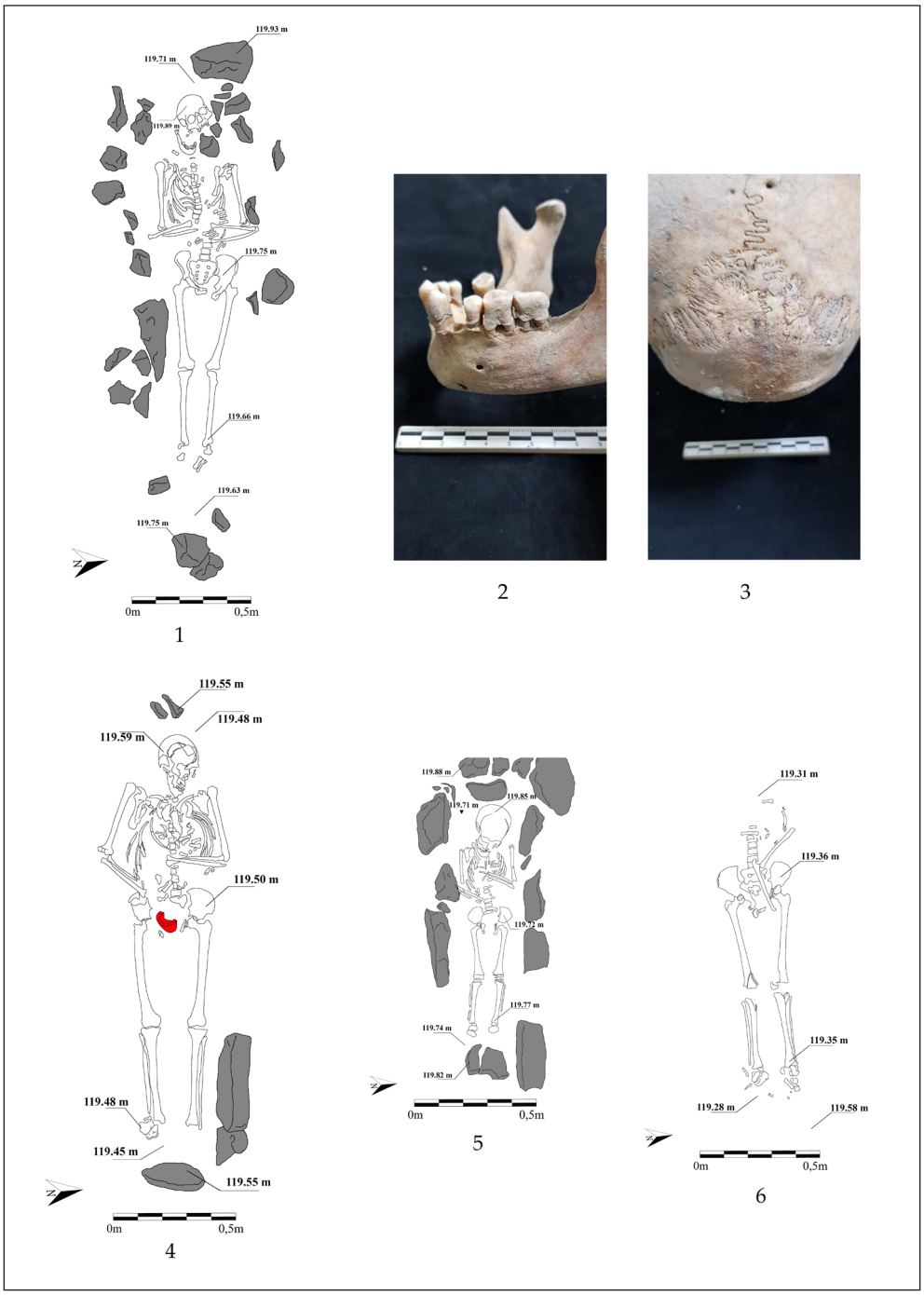
Pl. 2. Graves No. 8, No. 8A and No. 9. 2.1 Grave No. 8. Female (40–50 years old). Drawing; 2.2 Grave No. 8A. Adult individual (30–35 years old) with undetermined sex. *Thoracic vertebra with degenerative-dystrophic changes;* 2.3 Grave No. 9. Young adult male individual (25–26 years old). Drawing; 2.4 Grave No. 9. Young adult male individual (25–26 years old). *Left ilium with a narrow ischial notch*; 2.5 Grave No. 9. Young adult male individual (25–26 years old). *Mandible bone-caries and cyst (right view)*; 2.6 Grave No. 9. Young adult male individual (25–26 years old). *Mandible bone-caries (left view)*; 2.7 Grave No. 9. Young adult male individual (25–26 years old). *Right tibia-Myositis Ossificans on the lateral surface of the proximal bone end*; 2.8 Grave No. 9. Young adult male individual (25–26 years old). *Peri mortem trauma on the left half of the skull*; 2.9 Grave No. 9. Young adult male individual (25–26 years old). *Peri mortem trauma on the left half of the skull.*



Pl. 3. Graves No. 10–11. 3.1 Grave No. 10. Male (40–50 years old). Drawing; 3.2 Grave No. 10. Male (40–50 years old). *Mandible=edentulous ante mortem*; 3.3 Grave No. 11. Child *Infans II* (10–11 years old). Drawing; 3.4 Grave No. 11. Child *Infans II* (10–11 years old). *Os apicis multipartitum.*



Pl. 4. Graves No. 6–7. 4.1 Grave No. 12. Child *Infans I* (1–2 years old). Drawing; 4.2 Grave No. 12. Child *Infans I* (1–2 years old). *Left humerus-anterior view;* 4.3 Grave No. 12. Child *Infans I* (1–2 years old). *Left humerus-posterior view*; 4.4 Grave No. 13. Child *Infans I* (5–6 years old). Drawing.



Pl. 5. Graves No. 14–17. 5.1 Grave No. 14. Female (45–49 years old). Drawing; 5.2 Grave No. 14. Female (45–49 years old). *Tartar*; 5.3 Grave No. 14. Female (45–49 years old). *Os incae multipartitum*; 5.4 Grave No. 15. Male (65–70 years old). Drawing; 5.5 Grave No. 16. Child *Infans I* (5–6 years old). Drawing; 5.6 Grave No. 17. Male (16–17 years old). Drawing.



Pl. 6. Graves No. 6–11. 6.1 Grave No. 6. Photo; 6.2 Grave No. 7. Photo; 6.3 Grave No. 8. Photo; 6.4 Grave No. 9. Photo; 6.5 Grave No. 10. Photo; 6.6 Grave No. 11. Photo.



1



2



3



4



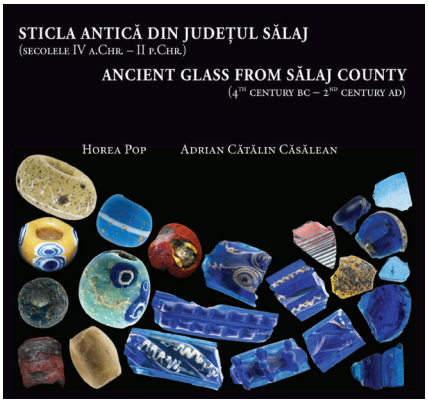
5



6

Pl. 7. Graves No. 12–17. 7.1 Grave No. 12. Photo; 7.2 Grave No. 13. Photo; 7.3 Grave No. 14. Photo; 7.4 Grave No. 15. Photo; 7.5 Grave No. 16. Photo; 7.6 Grave No. 17. Photo.

Horia Pop, Adrian Cătălin Căsălean, *Sticla antică din județul Sălaj (secolele IV a.Chr. – II p.Chr.). Catalog/Ancient glass from Sălaj county (4th century BC. – 2nd century AD.). Catalog*, Editura Mega, Cluj-Napoca, 2022; 161 p., 49 ilustrații și 7 tabele.



Lucrarea de față, apărută în 2022, prelucrează artefacte din colecția Muzeului Județean de Istorie și Artă din Zalău, rezultatul fiind un catalog bilingv (româno- englez) al artefactelor antice din sticlă.

Corpul cărții a fost împărțit în cinci capitole, completate de anexele necesare unei lucrări de specialitate.

Primul capitol, *Introducere* (p. 7–11), face cunoscută cititorului motivația care stă la baza demersului autorilor și parte din metodologia aplicată pentru redactarea capitolelor următoare, în funcție de categoriile de material. Autorii doresc ca acest catalog să fie un instrument în mâna specialistului, motiv pentru care cele 43 de piese dispun de o fișă minimă de identificare (Marca, Șimleu Silvaniei, Nușfălău, Cehei, Aghireș, Meseșenii de Sus, Moigrad, Solomon și Șimișna). Sunt discutate aici locațiile din care provin materialele și modul în care acestea au intrat în colecția muzeului.

Capitolul al doilea, *Siturile arheologice din județul Sălaj* (p. 12–29), prezintă fiecare sit în parte, menționând locația sitului, stadiul cercetării acestuia, descoperiri importante și contextele de descoperire ale pieselor din catalog. Informația scrisă este completată cu fotografii cu detalii de cercetare pentru acestea.

Capitolul al treilea, *Catalog: Artefacte antice de sticlă descoperite în județul Sălaj* (p. 30–123), aduce în discuție mai multe categorii de material, alături de informații generale cu privire la metodologia de studiu a acestuia (p. 30–36).

Prima categorie o reprezintă mărgelele cu un total de 18 piese (p. 36–71), împărțite în șase tipuri.

Primul tip este reprezentat de mărgelele monocrome simple ca formă (p. 36-41), cu trei piese descoperite la Moigrad și Șimleul Silvaniei. Al doilea tip este reprezentat de mărgelele monocrome complexe ca formă (p. 42–44), cu două piese descoperite la Marca și Moigrad. Al treilea tip este reprezentat de mărgelele policrome cu decor circular policrom (p. 46–60), cu șapte piese descoperite la Cehei, Solomon, Șimișna, Meseșenii de Sus, Șimleul Silvaniei și Moigrad. Al patrulea tip este reprezentat de mărgelele policrome cu decor liniar (p. 60–66) cu trei piese descoperite la Meseșenii de Sus și Moigrad. Al cincilea tip este reprezentat de mărgelele de chihlimbar (p. 67–69), cu două piese descoperite la Moigrad. Al șaselea tip este reprezentat de varia (p. 70–71), cu o piesă descoperită la Șimleul Silvaniei.

A doua categorie de artefacte incluse în catalog sunt brățările din sticlă (p. 72–101), fiind analizate aici un număr de 12 piese care au fost incluse în șapte tipuri.

Primul tip este reprezentat de brățări cu cinci nervuri și decor din linie ondulată (p. 75–78), cu 2 piese descoperite la Moigrad și Șimleul Silvaniei. Al doilea tip este reprezentat de brățările cu două nervuri, uneori nedecorate (p. 79–80), cu o piesă descoperită la Șimleul Silvaniei. Al treilea tip este reprezentat de brățări cu trei nervuri, nervura mediană canelată oblic și decorată cu linii ondulate (p. 81–93), cu 5 piese descoperite la Aghireș, Șimleul Silvaniei și într-o locație necunoscută. Al patrulea tip este reprezentat de brățările cu patru nervuri dintre care două mediane segmentate (p. 94–95), cu o piesă descoperită la Moigrad. Al cincilea tip este reprezentat de brățările cu nervuri decorate cu butoane pe unul până la trei rânduri (p. 96–97), cu o piesă descoperită la Moigrad. Al șaselea tip este reprezentat de brățări cu protuberanțe și segmente romboidale decorate cu linii spiralice și ondulate (p. 98–100), cu o piesă descoperită la Șimleul Silvaniei. Un ultim tip este reprezentată de varia (p. 101), cu o singură piesă descoperită la Nușfălău.

A treia categorie de artefacte incluse în catalog este reprezentată de vase din sticlă (p. 102–123), fiind analizate aici un număr de 13 piese incluse în patru tipuri.

Primul tip este reprezentat de vase realizate pe miez de nisip (p. 103–104), cu o piesă descoperită la Șimleul Silvaniei. Al doilea tip este reprezentat de vase suflate într-un tipar (p. 105–110), cu trei piese descoperite la Șimleul Silvaniei. Al treilea tip este reprezentat de vase suflate la liber (p. 111–119), cu 7 piese descoperite la Șimleul Silvaniei, Moigrad și Marca. Al patrulea tip este reprezentat de varia (p. 120–123), cu două piese descoperite la Șimleul Silvaniei.

Capitolul al IV-lea, *Analiza artefactelor* (p. 124–144), reprezintă capitolul cel mai important în economia lucrării, fiind analizate contextul de descoperire, încadrarea tipologică și cronologică a pieselor.

Ultimul capitol este rezervat concluziilor (p. 145–148) cu privire la circulația pieselor de sticlă în perioada studiată și a modalităților în care acestea ar fi putut ajunge în siturile menționate. De asemenea, este discutată funcționalitatea acestor piese, multe dintre ele având păstrate condițiile de descoperire.

Lucrarea este completată cu o listă bibliografică (p. 149–158) și o listă a ilustrațiilor (p. 159–161).

Punctele forte ale lucrării sunt reprezentate de informația accesibilă prezentată bilingv și grafica excelentă. Cu toate acestea și având în vedere titlul, credem că obiectele din alte materiale decât sticla, nu își găsesc locul în acest catalog.

Lucrarea reprezintă un punct de plecare pentru viitoare studii dedicate acestei categorii de artefacte, mai ales având în vedere faptul că, până în prezent, ele nu au beneficiat de foarte multe mențiuni bibliografice. Recomandăm cu căldură lucrarea, specialiștilor interesați, dar și publicului larg, datorită limbajului și ilustrației accesibile.

Ana C. HAMAT*

* Ana C. HAMAT: Muzeul de Istorie Națională și Arheologie Constanța; e-mail: anahamat@yahoo.com.

Maria Alexandrescu Vianu, *Une cité antique à travers ses sculptures. La sculpture en pierre à Tomis à l'époque du Principat (I^er^-III^e^ siècles)*, Bibliothèque de l'Institut d'études sud-est européennes 22, Editura Istros a Muzeului Brăilei „Carol I", Brăila, 2022; 300 p. și 92 ilustrații.

În 2022, sub egida Academiei Române, Institutul de Studii Sud-Est Europene, și în editura Istros a muzeului Brăilei a apărut lucrarea semnată de Maria Alexandrescu Vianu, *Une cité antique à travers ses sculptures. La sculpture en pierre à Tomis à l'époque du Principat (I^er^-III^e^ siècles)*.

Lucrarea se înscrie unui „arc în timp", început cu studiul monumentelor în piatră (a sarcofagelor) din Moesia Inferioară (1970)[1] și definitivat cu studiul atelierelor de sculptură identificate în piesele din provincia romană de la Dunărea de Jos (2021)[2]. Parcursul e marcat de cercetarea grupată sau individuală a monumentelor de piatră de la Tomis și Histria. Autoarea își propune acum o sistematizare a materialului sculptural de la Tomis din perspectiva unor aspecte noi legate de fenomenul artistic (și care privesc în special dimensiunea lui sociologică). Metoda folosită, mărturisită în capitolul de concluzii, constă din dezmembrarea ansamblului în elementele semnificative, urmată de analiza individuală a monumentelor reprezentative din fiecare categorie. Cum monumentele sculpturale „constituie o categorie foarte sensibilă a mutațiilor sociale, politice și culturale", analiza își propune să ofere o interpretare cât mai coerentă și bogată în nuanțe a produsului artistic, perceput „ca expresie a unei societăți în transformare".

De ce interesul pentru Tomis? Explicația este edificatoare și o dăm în citat „L'intérêt de Tomis réside dans son ambivalence: une ville aux traditions culturelles grecques, cultivant des liens importants avec l'Orient grec, en arrive à être fortement impliquée dans les courants artistiques romains, plus que toutes les autres anciennes colonies grecques du Pont occidental dont elle devient la métropole". Pentru Tomis, devenit „oraș al Imperiului" (roman), într-o „regiune de frontieră controlată de Roma", cu populații atrase într-un proces de colonizare rapidă, transformările din interiorul societății sunt vizibile. Tocmai aceste transformări din interior autoarea își propune să le surprindă la nivelul fenomenului artistic. Coordonatele cu care operează se traduc prin sintagme noi: mobilitate socială, romanizare necesară[3], mediu geografic-social, elemente structurale de sociologie a artei, categorie socială (sau medii sociale), niveluri de cultură. Se folosesc termeni și relații noi în analiza obiectului artistic (ex. comanditari – beneficiari – spectatori) sau se face distincție între artizani și creatori de opere de artă sau între „imitație" și „influență".

Desigur, analiza unei opere de artă se raportează în continuare la criteriile

[1] *Les sarcophages romains de la Dobroudja*, Revue des études sud-est européennes 8/2 (1970), p. 269–318.

[2] *Les ateliers de sculpture dans la Mésie Inférieure. Les relations avec la Bithynie*, Caiete ARA 12 (2021), p. 63–78.

[3] Termenul traduce romanizarea oligarhiei grecești (sau a categoriei de *optimates*), dar păstrarea în continuare a limbii grecești în majoritatea inscripțiilor și a denumirii instituțiilor din perioada autonomă.

definite prin tematică, stil, atelier, centre de producție, zone de influență, circulație sau arie de difuziune. Între factorii determinanți pentru producția artistică, enunțați de Catherine Johns, M. Alexandrescu Vianu adaugă alți doi importanți: originea modelului și proveniența artiștilor. Definind arta ca produs social, stabilește pentru Tomis: „L'histoire de l'art de Tomis n'est pas une histoire de chefs-d'oeuvre ou de formules innovatrices, mais l'histoire d'un art de série, souvent utilitaire et d'autant plus dépendant de la société qui l'a produit et qu'il sert, en connexion avec le climat général qui lui a permis d'exister". Recunoaște însă că cercetarea are și limite, care pentru Tomis se datorează lipsei aproape totale a informațiilor privind urbanismul orașului și necunoașterii, pentru multe piese, a locului de descoperire.

Structura cărții se compune din șapte capitole care urmăresc, pe rând, sociologia în arta tomitană (1), începuturile artei în Moesia Inferioară (2), cetatea și elitele; clasicismul roman (3), cetatea și locuitorii (4), cetatea și cultele (5), cetatea și morții (6), concluzii (7).

Începuturile artei romane sunt legate de perioada lui Augustus, când se constată și prezența efectivă a romanilor la Dunărea de Jos. Este analizată pătrunderea ideologiei și formelor romane într-un mediu elenizat ca cel din zona vest-pontică. Rezultatul este un fel de „osmoză", de întrepătrundere între arta romană și cea greacă. Limbajul simbolic oferit de iconografia pieselor monetare, portrete private, statui togate oferă elemente de recunoaștere a acestui fenomen. Autoarea nu oferă certitudini, ci apelează la analogii, pune întrebări, formulează deducții bazate pe afirmații demonstrate. Concluzia: în sec. I p.Chr. Tomis, veche colonie milesiană, era deja orientată spre Roma („poseda monumente de artă de influență romană").

La Tomis, este identificată o categorie socială mai cultivată care își manifestă gustul pentru clasicismul grec. Autoarea realizează un dosar al pieselor care se încadrează în curentul numit „al doilea clasicism". În prezentarea lor aflăm elemente de recunoaștere a stilului, a tiparului iconografic, a încadrării într-o cronologie mai strictă. Nota personală e permanent prezentă în valorificarea (evidențierea) detaliilor; în presupuneri privind proveniența sau amplasamentul unor piese; în posibile alte identificări ale reprezentărilor figurate; în preferința pentru alte formulări decât cele consacrate[4], în opinii separate privind proveniența sau funcționalitatea unor artefacte. Aceasta nu înseamnă totdeauna și neapărat o corectare a unor cercetări anterioare, fie ele consacrate, ci admiterea și a unei alte posibilități de interpretare și un pas avansat în cunoaștere.

Aceleași modalități de analiză și afirmare argumentată a unor opinii personale întâlnim și în capitolul referitor la relația dintre cetate, locuitori și puterea imperială. Problemele ridicate și fără un răspuns sigur sugerează direcții de cercetare (reprezentativitatea comanditarilor, raportul acțiune oficială/inițiativă privată, artă oficială sau „l'art du prince"). Portretelor li se recunoaște calitatea de purtătoare ale unui mesaj; pornind de aici, aflăm indiciile unui cod după care putem recunoaște poziția socială, culturală și politică a personajului reprezentat. Alte indicii ce țin de compoziția marmorei, detaliile tehnice și stilistice conduc la identificarea provenienței

[4] Termenului de „provincial" atribuit unui obiect artizanal, de exemplu, îi sunt preferate formulări de tipul „stângăcii în execuție" sau „simplificarea modelului".

materialelor, a atelierelor de prelucrare sau a traseelor de circulație a lucrătorilor (artizanilor) și a operelor lor.

Atenția specială este acordată portretelor și statuilor masculine; din cele 13 artefacte catalogate câteva suportă comentarii aparte din partea autoarei: posibilitatea identificării unui strateg într-o statuie loricată (cat. 5); imposibilitatea interpretării bustului zeiței Isis (din tezaurul de statui de la Tomis) ca portret imperial (cat. 4). Improbabile sunt și identificările unor portrete imperiale – Filip Arabul (cat. 7) și Constantin cel Mare (cat. 8) în piese ce ar presupune fie reprezentarea unui cetățean roman (prima), fie o datare mai timpurie, în perioada dintre Gordian III și Decius (a doua).

Mai departe, în capitolul consacrat cultelor, Maria Alexandrescu Vianu își propune să pună în lumină, pornind de la monumentele în piatră și de la reprezentările monetare, câteva aspecte iconografice și particularități proprii Tomisului. E subliniat caracterul pergamic al cultului lui Dionysos la Tomis și relația dintre acest cult și doctrina orfică. Revine cu o nouă analiză referitoare la tezaurul de sculpturi de la Tomis, răspunzând întrebării dacă divinitățile prezente în materialele tezaurului au putut coexista în același ansamblu de cult (același templu). Răspunsul este unul afirmativ: piesele provin dintr-un singur templu, iar divinitatea principală a acestui presupus templu ar putea fi Hecate. În interiorul capitolului aflăm noi posibile interpretări privind caracterul votiv sau funerar al unor piese, identificări ale unor reprezentări feminine sau redatări (în funcție de data aceasta și de frecvența atestării unor culte în zona pontică).

Un alt domeniu de interes este cel funerar, domeniu pe care Maria Alexandrescu Vianu l-a abordat de mai mult timp și eșalonat, referindu-se la sarcofagele romane din Dobrogea, clasificarea stelelor funerare, scena banchetului funerar ș.a. Aceleași teme sunt tratate și acum dar într-o cheie nouă: recunoașterea apartenenței reprezentării scenei banchetului funerar de pe stelele funerare și a monumentelor de tip sarcofag, fiecare într-o formă de exprimare artistică comună (*koiné* artistică) cu centre importante din Asia Mică și Proconesos; și identificarea unei scheme tipice atelierelor tomitane în iconografia de pe stelele funerare și personalizarea în atelierele locale a sarcofagelor aduse din Proconesos.

La capătul acestei analize, Tomis se definește ca oraș „în plină dezvoltare, cu puternică amprentă micro-asiatică și care unește (aliază) elemente de civilizație greacă cu inovații romane de urbanism și iconografie". Poziția sa rămâne însă de „oraș de la marginea imperiului, dependent de curentele artistice din marile centre, fără să-și fi pus și propria amprentă" în fenomenul artistic.

Volumul este întregit cu trei anexe care trimit la doctrina orfică sugerată de simbolistica unui relief foarte probabil tomitan (anexa 1), tradiția augustană și mesajul strict militar al reprezentărilor de pe monumentul triumfal de la Adamclisi (anexa 2) și tabelul datelor obținute în urma analizelor isotopice și petrografice pentru 36 de artefacte (anexa 3).

Demersul teoretic este susținut de 92 de ilustrații la sfârșitul volumului, iar în interior de figuri (cu reprezentări de pe monede sau după portrete sau statuaria din diverse zone ale lumii romane, folosite ca elemente de comparație pentru piesele tomitane); de scheme iconografice (în desen), diagrame și hărți.

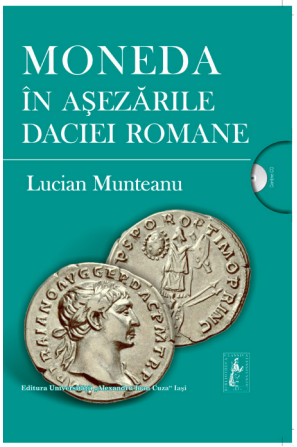
Cartea recent semnată de Maria Alexandrescu Vianu se înscrie în seria

monografiilor tomitane și aduce o perspectivă nouă propunând metode și noi posibilități de interpretare a fenomenului artistic. Autoarea, fără să-și propună, demonstrează că cercetarea este un proces continuu, în care ipotezele reprezintă variante, iar concluziile marchează doar etape de cercetare.

Livia BUZOIANU[*]

[*] Livia BUZOIANU: Muzeul de Istorie Națională și Arheologie Constanța; e-mail: liviabuzoianu@yahoo.com.

Lucian Munteanu, *Moneda în așezările Daciei romane*, Bibliotheca Classica Iassiensis XV, Domeniu: Istorie/Istorie antică, Editura Universității „Alexandru Ioan Cuza", Iași, 2017; 351 p. + CD.



În cursul anului 2017 apărea la editura Universității „Alexandru Ioan Cuza" din Iași, în cadrul seriei Bibliotheca Classica Iassiensis (XV), lucrarea intitulată „*Moneda în așezările Daciei romane*". Editura Universității „Alexandru Ioan Cuza" din Iași a fost creată în anul 1990 și s-a manifestat în cursul celor aproape 25 de ani de activitate ca unul dintre cele mai importante repere în cadrul lumii academice din România (din punct de vedere științific, didactic și cultural), valorificând atât creațiile specialiștilor din Iași, cât și pe cele ale altor cercetători din variate centre științifice și instituții muzeale din țară (implicați mai mult sau mai puțin în proiecte comune cu Universitatea ieșeană). Volumul a beneficiat de doi referenți științifici aflați în topul specialiștilor români privind perioada și tematica descoperirilor monetare din epocă romană, și anume dr. Virgil Mihailescu-Bîrliba de la Institutul de Arheologie Iași (Academia Română) și dr. Cristian Găzdac de la Institutul de Arheologie și Istoria Artei Cluj-Napoca (Academia Română). Lucrarea este semnată de către Lucian Munteanu, cercetător științific I la Institutul de Arheologie al Academiei Române, filiala Iași. Autorul, doctor în istorie din anul 2012 (la Universitatea „Alexandru Ioan Cuza" din Iași, Facultatea de Istorie), este un reputat specialist în domeniul numismaticii antice și medievale, cu numeroase studii științifice publicate în reviste și în volume colective din țară și din străinătate.

Înainte de a se intra în structura propriu-zisă a lucrării, cartea beneficiază de o excelentă *Prefață* semnată de profesorul Virgil Mihăilescu-Bîrliba și de un *Cuvânt înainte* explicativ din partea autorului. Profesorul Virgil Mihăilescu-Bîrliba, într-o prezentare sintetică, surprinde mai multe aspecte interesante din lucrarea domnului Lucian Munteanu, cum ar fi: „în ce măsură lista monedelor descoperite într-un sit este reprezentativă pentru monedele care au circulat în intervalul de timp studiat?"; „numărul minim relevant de exemplare"; „alte modalități de proveniență a materialului, în afara celui din săpăturile arheologice"; „luarea în considerare a tuturor pieselor monetare asociate într-un sit"; „separarea monedelor utile de cele dăunătoare" etc. În *Cuvântul înainte* semnatarul cărții subliniază importanța și relevanța izvoarelor monetare pentru întreaga civilizație romană, explică metodologia de lucru și folosește prilejul pentru a aduce mulțumiri față de o paletă largă de specialiști în domeniul temei pentru ajutorul oferit pe parcursul realizării lucrării de doctorat și a pregătirii manuscrisului pentru publicare. De asemenea, nu în ultimul rând, subliniază rolul documentării sistematice în cadrul unor burse care au permis studiul în biblioteci de specialitate ale unor centre europene de larg prestigiu, așa cum sunt cele din Roma și Viena.

Structura volumului propriu-zis cuprinde patru mari capitole, concise și bine alese, care au ca scop surprinderea tuturor informațiilor existente, arheologice și monetare, care contribuie la analiza exhaustivă a situației descoperirilor monetare, de perioadă romană, în spațiul Daciei romane. În acest scop sunt selectate și analizate eșantioane reprezentative de monede, provenind din toate categoriile de așezări (urbane, rurale, militare) și din castre, cu ajutorul unor metode și instrumente numismatice consacrate. Mai exact, Capitolul 1 cuprinde detaliat situația tipurilor de așezări cunoscute în Dacia romană, atât a celor urbane, cât și a celor corespunzătoare mediului rural și militar. Evident că totul este analizat în ansamblul oraganizării teritoriale și administrative a Daciei romane.

Introducerea în analiza numismatică ne este făcută odată cu Capitolul 2 (*Cercetarea numismatică a siturilor epocii romane*), unde sunt surprinse succint, pe de o parte, aspectele introductive de analiză, cu dificultățile inerente, modelele consacrate metodologice și instrumentele de lucru; pe de altă parte, sunt invocate în sprijinul studiului de față cele mai bune cercetări în domeniul monedei romane în siturile din provincia Britannia, așa cum sunt cele ale reputaților numismați ai epocii romane, P. J. Casey și R. Reece. Este o atitudine corectă dacă avem în vedere că cei doi sunt binecunoscuți în cercetarea de profil privind alegerea unor soluții și metode propuse în analiza și interpretarea listelor de monede din situri, soluții care sunt diferite, mai ales prin natura procedeului de investigație. Suntem pe deplin de acord cu semnatarul volumului, care afirmă că existența unei metode universale, care să fie aplicabilă pentru orice sit, este încă doar un deziderat, o posibilitate în continuare așteptată.

Cel de al treilea capitol (totodată și cel central al lucrării sau nucleul ei) cuprinde totalitatea descoperirilor monetare din siturile Daciei romane, fiind prezentate etapizat modul în care s-a organizat material monetar, din perspectiva catalogului descoperirilor, al fondului bibliografic, a selecției arheologice și numismatice a siturilor, a metodei și instrumentelor de lucru. Sunt eliminate din cercetarea sa, pe baza unor motive foarte bine întemeiate, tezaurele și descoperirile funerare. De asemenea, nu implică în analiză piesele provenind din colecții sau orice monedă care nu are un loc precis și clar de proveniență. Mai mult, așezările, indiferent de mediu, care nu au cel puțin 10 monede descoperite, nu participă la studiul domniei sale. Deci, dl. Lucian Munteanu realizează o selecție riguroasă a listelor de monede din situri înainte de a implica documentul monetar în metoda folosită. Fapt care îl ajută să exceleze în definirea unor concluzii, bine ancorate în realitățile obiective monetare sau în clarificarea multor aspecte de detaliu.

Toate aceste elemente specifice metodologiei de lucru în cadrul cercetării științifice se finalizează prin două subcapitole definitorii pentru tema generală aleasă, și anume circulația monetară în așezările Daciei romane (așezări civile) și cea identificată în arealul castrelor Daciei romane (fortificații). În acest sens, la fundamentarea considerațiilor preliminare, reținem faptul că autorul apelează la compoziția masei monetare și la structura cronologică a descoperirilor monetare. Autorul surprinde trei factori care influențează cronologia descoperirilor monetare din Dacia romană: comportamentul principalelor nominaluri, evenimentele monetare locale și schimbările politice de anvergură, fie aleatorii administrative, fie strategice. Lucian Munteanu ajunge să analizeze structura numerarului pe mai multe etape,

astfel: 98–192 p.Chr. (*„începutul și dezvoltarea circulației monetare în Dacia"*); 193–238 p.Chr. (*„consolidarea circulației monetare în Dacia"*); 238–249 p.Chr. (*„apogeul" circulației monetare în Dacia"*) și 249–275 p.Chr. (*„etapa finală a circulației monetare în Dacia"*). Fără a detalia situația monetară constatată pentru fiecare etapă în parte, putem sublinia, prin intermediul autorului, manifestarea unor situații sau fenomene bine individualizate și anume: dirijarea fluxurilor bănești spre teatrele principale de operațiuni militare; dominarea emisiunilor de argint în nordul spațiului intracarpatic și a celor de bronz în sudul acestuia; emisiunile de denari ale autorităților centrale sunt reflectate mai cu seamă în descoperirile din așezările dacice (situație similară constatată și pe *limes*-urile rhenan și dunărean); preponderența antoninianului până la Valerianus; declinul mediului rural și prezența masivă a bronzurilor de tip *P M S COL VIM* și *PROVINCIA DACIA*; accentuarea diferențelor dintre așezările situate în nordul provinciei și cele aflate în partea meridională a acesteia; diminuarea fluxului monetar în perioada anilor 238–249 p.Chr.; avansarea gospodăriei naturale etc.

Capitolul final, cel al *Considerațiilor finale*, cuprinde, în mod firesc, și *Catalogul descoperirilor monetare din siturile Daciei romane* și listele de monede pe provincii romane, după cum urmează: Dacia, Pannonia Inferior, Pannonia Superior, Noricum, Raetia, Germania Superior, Germania Inferior și Gallia Belgica. Salutăm inițiativa autorului de a sincroniza cercetarea numismatică a arealului Daciei romane cu cel al altor provincii din structura administrativă a Imperiului Roman.

Considerațiilor finale trebuie să le acordăm o atenție specială, întrucât aduc o trecere în revistă a celor mai importante concluzii, bine sistematizate, de natură numismatică și istorică, rezultate din analiza exhaustivă a tuturor informațiilor de natură arheologică (tipul de sit, contextul aflării, natura descoperirii) și monetară (compoziția descoperirilor monetare, structura acestora etc.). În anumite perioade, siturile dacice au trăsături monetare particulare, care permit identificarea și definirea unui tipar monetar specific acestei zone. Pentru fortificații militare și așezări civile se constată că tiparul se explică prin rolul major jucat de componenta militară în alimentarea cu monedă a spațiului geografic analizat. Acesta se constituie ca o parte componentă a unui model regional, care include provinciile romane renane și dunărene, de la granițele septentrionale ale imperiului. Firesc, interpretarea datelor numismatice din regiunea de la nordul Dunării Inferioare trebuie realizată doar în contextul general al lumii romane, fiind aceiași factori monetari, politici și economici. *„În cazul Daciei există cel puțin două momente în care descoperirile urmează un curs propriu: perioada dinastiei Severilor și domnia lui Philippus Arabs. Aceste situații distincte individualizează, în plan numismatic, teritoriul de la nordul Dunării de Jos, definind tiparul monetar al siturilor dacice, în contextul mai larg al lumii romane*". Perioada anilor 259–275 p.Chr. corespunde deplasării trupelor în afara provinciei, fapt care a condus la deconectarea Daciei de la circulația monetară.

Considerăm pozitivă prezența a numeroase opinii personale dezvoltate de autor, lansate la stadiul de ipoteze de lucru, având și o argumentare care, de cele mai multe ori, de la o situație la alta, se dovedește a fi mai mult decât rezonabilă sau chiar concludentă. Una dintre acestea este și aceea, conform căreia, *„pax Romana"* a favorizat mai degrabă cheltuielile decât plățile, în mediul militar din Dacia romană. Nu în ultimul rând, autorul, în linia respectării unei gândiri științifice logice, apelează la

deducții indirecte, binevenite atâta timp cât se înscriu în linia unor analogii identificate în spații imperiale cronologice contemporane.

Cele patru mari capitole sunt urmate, în finalul cărții, de o listă a abrevierilor utilizate, de o bilbliografie adecvată temei (foarte bogată, cu lucrări fundamentale din domeniul numismatic avut în vedere, foarte bine aleasă și în mod chibzuit folosită), un rezumat cuprinzător redactat în limba engleză (pentru un cât mai facil acces al specialiștilor străini la elementele esențiale ale cărții) și o listă a tabelelor și graficelor prezente. În sfârșit, atenționăm asupra listelor de monede judicios întocmite, cu multă acuratețe, corespunzătoare siturilor romane din provinciile Dacia, Pannonia Inferior, Pannonia Superior, Noricum, Raetia, Germania Superior, Germania Inferior, Gallia Belgica, care sunt prezente și în cadrul unui CD ce cuprinde peste 200 de pagini, aflat în atașamentul existent la coperta a treia (pe interior) a volumului.

Subliniem faptul că ne aflăm în fața unei lucrări de excelentă valoare, realizată ca urmare a unei discipline științifice binevenite în ceea ce privește analizarea informației, selectarea arheologică și numismatică a siturilor, respectarea metodelor și a instrumentelor de lucru, realizarea unor eșantioane reprezentative de monede, provenind din toate categoriile de așezări (urbane, rurale, militare) și din castre. Fără dicuție, suntem în fața unei lucrări definită printr-o cercetare clară, sistematică și minuțioasă, care a presupus filtrarea unei cantități impresionante de material monetar. Considerăm că apariția acestei lucrări este salutară, de o valoare incontestabilă, deosebit de utilă și de bine venită pentru cunoașterea stadiului circulației monetare în contextul descoperirilor realizate în spațiul Daciei romane.

În final, dacă mai este nevoie, subliniem încă o dată valorea deosebită a respectivei cărți, fapt recunoscut prin acordarea premiului „Vasile Pârvan" al Academiei Române pe anul 2019. Volumul a fost considerat una dintre cele mai bune lucrări și, totodată, una dintre cele mai deosebite prezențe culturale și științifice românești din cadrul anului 2017. Distincția a fost acordată pentru cele mai valoroase creații științifice și artistice realizate la secțiunea „Științe istorice și arheologie".

Gabriel Mircea TALMAȚCHI*

* Gabriel Mircea TALMAȚCHI: Muzeul de Istorie Națională și Arheologie Constanța; e-mail: gtalmatchi@yahoo.com.

Nova Barrero Martin, *Ornamenta Muliebria. El adorno personal femenino en Mérida durante la Antiqüedad*, Monografías Emeritenses 13, Editura Artes Gráficas Rejas, Mérida, 2022; 447 p. și 249 ilustrații.



În 2022, a apărut sub oblăduirea fundației de studii romane, Fundatión de Estudios Romanos și a Museo Nacional de Arte Romano din Merida, lucrarea *Ornamenta Muliebria. El adorno personal femenino en Mérida durante la Antiqüedad,* a cercetătoarei Nova Barrero Martin. Domnia sa este una dintre cele mai cunoscute cercetătoare și autoare a mai multor lucrării cu privire la bijuteriile antice din Spania, demers centrat pe perioada secolelor I–VIII p.Chr.

Lucrarea de față a fost publicată într-o serie specializată și bine-cunoscută în domeniu, patronată de către Museo Nacional de Arte Romano din Merida și, în care, regăsim studii cu privire la antichitatea romană pe teritoriul coloniei *Augusta Emerita*-actualmente orașul Merida din Spania. Importanța acestei publicații este una deosebită, având în vedere faptul că Merida este unul dintre cele mai bine cunoscute și cercetate situri arheologice din Spania, fiind introdus în UNESCO World Heritage Site din 1993. Prin urmare, cele 459 de intrări în catalog prezentate în cele ce urmează, creionează o imagine fidelă realității antice în această zonă.

Corpul cărții a fost împărțit în șase capitole, prefațate de două intervenții și urmate de anexele necesare unei lucrări de specialitate.

Prefața cărții, *Prólogo* (p. 9–10), este semnată de către Trinidad Nogales Basarrate, director al Museo Nacional de Arte Romano, din partea instituției al cărui patrimoniu este prezentat în această monografie. Această primă intervenție este urmată de cea a autoarei cu *Agradecimientos* (p. 11).

Primul capitol, *Introducción* (p. 19–24), face cunoscută cititorului, motivația care stă la baza demersului autorului și parte din metodologia aplicată pentru redactarea capitolelor următoare, în funcție de categoriile de material.

Capitolul al doilea, *Catálogo* (p. 25–194), prezintă piesele pe categorii, de la inele, intalii și camee, brățări, podoabe pentru gât, cercei și podoabe pentru coafură, tratate în funcție de material și tipologie. Nu putem să nu remarcăm faptul că, deocamdată lipsesc din descoperirile de aici podoabele pentru păr, pandantive și plase pentru coc.

Primul subcapitol se referă la inele, acestea fiind împărțite în inele metalice *1.1. Anillos metálicos* (p. 29–58)–97 de piese, urmate de 12 piese-inele din ambră, sticlă, cărbune și rocă naturală–1.*2 Anillos de á'mbar y azabache* (p. 59–62).

Subcapitolul al doilea, *2. Entales y Camafeos,* tratează 16 intalii și camee (p. 63–68), descoperite în mai multe locații din orașul roman.

Următorul subcapitol tratează brățările *3. Brazaletes* (p. 69–82), între care se află 3 piese din aur și 28 de piese de bronz, de os, cărbune sau sticlă–9 piese.

Bijuteriile pentru împodobitul gâtului, *4. Adornos de cuello* (p. 83–140), se referă atât la lanțurile simple sau cu mărgele, cât și la coliere din materiale diverse și piese de colier, diferite tipuri de pandantive, *bulla* și mărgele, în total 166 de intrări în catalog.

Cerceii, *5. Pendientes* (p. 141–158), prezintă o variație de tipuri, de la cele timpurii la cele târzii, atât perechi cât și exemplare singulare, lucrate din materiale diverse, de la aur și pietre prețioase sau semiprețioase la bronz. La acest subcapitol avem 55 de intrări la catalog.

Elemente din fir de aur folosite la realizare diverselor obiecte, de la plasele de păr la țesături, aplici și fibule, 6. *Hilos de oro y otros adornos aplicados a la indumentaria* (p. 159–170), în total 19 piese, sunt prezentate în cele ce urmează.

Urmează bijuteriile pentru împodobitul capului, 7. *Adornos para el cabello* (p. 171–194), cu referire specială la decorarea coafurii. Acest subcapitol conține 54 de intrări în catalog, piepteni de os și fildeș, precum și ace de păr.

Capitolul este prefațat de o explicația a prescurtărilor, necesară cititorului pentru a putea citi corect indicațiile catalogului.

Capitolul al treilea *Materiales, Técnicas artísticas, rutas comerciales y talleres* (p. 195–264), aduce în discuție materialele și tehnicile în care sunt confecționate bijuteriile prezentate, fie că este vorba despre materiale locale, având în vedere faptul că subsolul peninsulei abundă în metale și prin urmare mineritul este unul dintre domeniile de exploatare înfloritoare, cât și materiale de import, unele dintre acestea venite din afara granițelor Imperiului. Sunt discutate aici și principalele zone pentru extracția aurului, argintului și bronzului și, având în vedere faptul că în epocă romană se exploatează și aurul aluvionar, sunt incluse râurile care puteau servi ca sursă de materie primă. În mod natural, demersul autoarei ia în considerare atelierele și artizanii, care puteau produce piesele. Imaginea se creionează pornind la modul general, cu ajutorul unor dovezii epigrafice sau reprezentări de pe monumentele descoperite în Imperiu, după care demersul revine la situația existentă în oraș, cu ajutorul arheologiei. Printre cele 17 inscripții din Peninsula Iberică în care sunt amintite astfel de meserii, se remarcă și un *collegium fabrum argentariorum et conflatorum.* Din punct de vedere arheologic, pentru *Augusta Emerita*, sunt documentate câteva ateliere de bronzieri, localizate *extra muros* și datate în a doua jumătate a secolului I p.Chr. dar și în perioada de la finalul secolului IV p.Chr. și pe parcursul secolului următor, pentru un atelier care recicla bronz pentru al prelucra. De asemenea, descoperirea unor plăci de agată în fondul muzeului, provenite din excavații în oraș, face posibilă afirmația că există posibilitatea ca o *officina gemmaria* să funcționeze aici. În aceeași notă, ateliere de sticlărie au fost documentate în oraș în intervalul secolului I – secolul al IV-lea p.Chr., fără a ști cu siguranță dacă o parte din producția acestora era dedicată bijuteriilor.

Autoare enumeră și tehnicile de realizare a bijuteriilor, de la turnare în tipar, laminare, tragere în fire, gravare, cloisonné, încastrare, batere, au repousse, filigran și granulație, gravare, modelare la cald, lipire la cald, debitare, sculptare, ștampilare, precum și materiale diverse care au fost folosite pentru realizarea bijuteriilor, cu ajutorul unor fotografii de detaliu. Capitolul este important întrucât identifică

posibilitatea realizării locale ale unor piese, pe baza descoperirilor arheologice și epigrafice, dar și a unei tipologiei specifice.

În mod normal, aceste discuții duc spre unele concluzii în ceea ce privește rutele comerciale și a comerțului cu astfel de piese. Pentru artefactele rare, așa cum sunt perlele și unele pietre prețioase, este bine cunoscut faptul că acestea provin din locații aflate în afara granițelor romane, în Peninsula Iberică fiind exploatate în perioada romană, pe lângă metale, doar granatul și cristalul de stâncă. Așadar, rutele comerciale și contactele orașului se întind în nord până la Marea Baltică, în est până în India și în sud până în Peninsula Arabia și Egipt.

Capitolul al patrulea *Estudio cronotipológico de los adornos y objectos del mundus muliebris* (p. 265–372), prezintă din punct de vedere practic și la nivelul legislației, conceptele de *ornamenta muliebria* și *mundus muliebris*, după care autoarea introduce pentru fiecare obiect al catalogului, o cronologie locală, pe baza tipului de material, a tipologiei generale și a contextului de descoperire. Sunt aduse în discuție nu numai bijuteriile, ci toate tipurile de artefacte, care, în mod normal fac parte din inventarele funerare feminine, de la casete, unguentarii, pixide, diferite vase, piepteni și recipiente, la diverse ustensile cosmetice.

Capitolul cinci *Ornamenta y mundus en contexto. Los ajuares funerarios* (p. 373-402), aduce în discuție bijuteriile descoperite în contexte funerare, prezentând asocierile dintre acestea și locul lor în inventarul mormântului, fiind discutate inventarele funerare din 28 de morminte din necropolele locale.

Ultimul capitol este unul de concluzii generale, *Conclusiones* (p. 403–408), cu privire la schimbările majore care au loc în arta bijuteriilor și în moda feminină, pe parcursul secolelor I–VIII p.Chr.

Cartea este completată cu o listă a concordanței dintre catalog și numerele de inventar, *Listado de concordancia número de inventario y catálogo* (p. 409–418) și o listă bibliografică, *Bibliografía* (p. 419–447).

Lucrarea de față reunește în paginile sale o colecție muzeală de excepție, cea a Museo Nacional de Arte Romano din Merida, artefactele fiind descoperite pe teritoriul coloniei romane *Augusta Emerita*. Datorită capitolelor III–VI, demersul depășește condiția de catalog de colecție și atinge calitatea unei monografii tipologice a acestui tip de *small finds,* descoperite în orașul roman și necropolele sale. Printre punctele forte ale publicației se află și calitatea ilustrației, prezența graficelor și a tabelor care sistematizează informația.

Regretăm faptul că lucrarea nu a fost publicată bilingv și sperăm ca în viitor acest neajuns să se remedieze.

Recomandăm cu căldură lucrarea specialiștilor care doresc să aprofundeze informațiile despre provincia romană Lusitania sau despre circulația și modelele de producție ale comerțului cu bijuterii, ea adresându-se cu precădere acestora.

Ana C. HAMAT*

* Ana C. HAMAT: Muzeul de Istorie Națională și Arheologie Constanța; e-mail: anahamat@yahoo.com.

SUMAR ▪ CONTENTS ▪ SOMMAIRE

HISTORICA ET ARCHAEOLOGICA

MARIAN COSAC
Chronology of the Middle Paleolithic in the Carpathian Area – Past and Present • Cronologia Paleoliticului mijlociu în zona carpatică – trecut și prezent..... 9

REMUS MIHAI FERARU
Saisons, calendrier et vie religieuse dans les cités grecques du Pont-Euxin. Un regard particulier sur les colonies milésiens • Anotimpuri, calendar și viață religioasă în orașele grecești din Pontul Euxin. O privire particulară asupra coloniilor milesiene..... 23

MIRCEA V. ANGELESCU
Histria. Nouvelles données sur le trajet du rempart hellénistique de l'Acropole • Histria. Date noi cu privire la traseul zidului de apărare elenistic al Acropolei..... 45

VLADIMIR P. PETROVIĆ, GORDAN JANJIĆ
New Archaeological Investigations on the Upper Moesian Limes. Ćetaće-Radujevac Site, Located in the Roman *Aquae* Region, at the Confluence of the Timok and Danube Rivers • Noi investigații arheologice asupra Limesului Moesiei Superior. Situl Ćetaće-Radujevac aflat în zona Aquae romană, la confluența râului Timok cu Dunărea..... 85

GEORGI ATANASOV
L'exception scythe d'après Sozomène et les exceptions scythes d'après l'histoire et l'archéologie paléochrétiennes • Excepția scitică după Sozomenos și excepțiile scitice după istoria și arheologia paleocreștină..... 101

GERGELY SZENTHE
A Unique Funerary Assemblage from the Late Avar Period. A Rare Iron Tool and the Issue of Salt Extraction in Transylvanian in the Early Middle Ages • Un ansamblu funerar unicat din perioada avară târzie. O rară unealtă de fier și problema extracției de sare din Transilvania în Evul Mediu timpuriu..... 133

EVGENIA KOMATAROVA-BALINOVA, YAVOR MILTENOV, ANTOANETA GRANBERG
Church № 4 from the Murfatlar Rock Complex – Some Newly Documented Graffiti Along the East-West Axis and Their Analogies • Biserica № 4 din Complexul de piatră de la Murfatlar – unele graffiti nou documentate de-a lungul axei est-vest și analogiile lor..... 161

ELENA VASILEVA
A Settlement from the Late Middle Ages Near Vrashka Chuka, Vidin Region, Northwest Bulgaria • O așezare din Evul Mediu târziu de lângă Vrashka Chuka, regiunea Vidin, nord-vestul Bulgariei……201

INVENTARIA ARCHAEOLOGICA

VANYA STAVREVA
The Anthropomorphic Pendants. Marker of Socio-Economic Changes and Disturbances on the Late Eneolithic Period • Pandantivele antropomorfe. Indicator al schimbărilor și tensiunilor socio-economice de la sfârșitul Eneoliticului ……235

ZHENI VASILEVA
The Journey of the Spiral Hair Ornaments During the Third Millennium BC. How Did It Become So Popular? • Răspândirea podoabelor de păr spiralate în timpul mileniului III a.Chr. Cum au devenit atât de populare?……251

RADU OTA, ANCA MATIȘ, OVIDIU-MAXIM OARGĂ
Un inel cu gemă descoperit recent în Dacia Superior • A Gem Ring Recently Discovered in Dacia Superior……269

ERGÜN LAFLI, MARTIN HENIG
Roman Gemstones from North-Eastern Turkey • Geme romane din nord-estul Turciei…275

ALEXANDER HARIZANOV
An Early Byzantine Ceramic Workshop on the Site of *Scamnum Tribunorum* in *Novae (Moesia Secunda)* • Un atelier ceramic din perioadă bizantină timpurie descoperit în situl *Scamnum Tribunorum* la Novae *(Moesia Secunda)*……289

EPIGRAPHICA

ADELA BÂLTÂC, DRAGOŞ HĂLMAGI
Două inscripții grecești inedite de la Histria • Two Novel Greek Inscriptions from Histria……321

DRAGOŞ HĂLMAGI
Notes on the Greek Inscriptions (IV) • Note asupra unor inscripții grecești (IV)……333

NOMISMATA

GABRIEL MIRCEA TALMAȚCHI
Câteva observații privind un tezaur monetar compus din denari romani republicani descoperit în sud-vestul Dobrogei • Some Observations Regarding a Monetary Hoard Composed of Republican Roman Denarii Discovered in the Southwest of Dobrudja……343

CORNELIU BOGDAN NICOLAE BELDIANU
The First Monetary Illustrations of Temples at Tomis • Primele reprezentări monetare ale templelor de la Tomis..... 355

GABRIEL CUSTUREA
Noi descoperiri monetare bizantine de pe teritoriul Dobrogei (sec. VI-XII) • New Byzantine Monetary Discoveries in Dobrudja (6th-12th centuries)..... 371

ANA-MARIA VELTER, GABRIEL CUSTUREA
Monede rare și mai puțin cunoscute din colecția Muzeului de Istorie Națională și Arheologie din Constanța • Rare and Lesser Known Coins from the Collection of the Museum of National History and Archaeology in Constanța..... 383

AUXILIARIA

CORINA TOMA, LUCIAN BARBU-TUDORAN, MIHAI MUNTEANU
Relația dintre podoabele dacice și monedele de import prin prisma analizelor elementale • The Relationship between Dacian Ornaments and Import Coins through elemental analysis..... 391

STELLA DONCHEVA, NINA ARCHANGELOVA, ÁKOS CSEPREGI, ANIKÓ ANGYAL, ZITA SZIKSZAI
Analysis of Finds (Ingots and Scrap) from the Production Centers Near Zlatar, Preslav District and Novosel, Shumen District (Bulgaria) (part I) • Analiza descoperirilor (lingouri și fragmente) din centrele de producție de lângă Zlatar, districtul Preslav și Novosel, districtul Shumen (Bulgaria) (partea I)..... 419

NADEZHDA ATANASSOVA, VELISLAV BONEV, ELENA VASILEVA
Anthropological and Archaeological Investigation of the Necropolis (14th–15th c. AD) Excavated in 2020 at Cape Chirakman / Bizone, Kavarva, Bulgaria • Investigații antropolgice și arheologice ale necropolei cercetate în 2020 la Capul Chirakman / Bizone, Kavarva, Bulgaria..... 457

RECENZII

Horia Pop, Adrian Cătălin Căsălean, *Sticla antică din județul Sălaj (secolele IV a.Chr. – II p.Chr.). Catalog/Ancient glass from Sălaj county (4th century BC. – 2nd century AD.). Catalog*, Editura Mega, Cluj-Napoca, 2022; 161 p., 49 ilustrații și 7 tabele. (Ana C. HAMAT)..... 493

Maria Alexandrescu Vianu, *Une cité antique à travers ses sculptures. La sculpture en pierre à Tomis à l'époque du Principat (Ier-IIIe siècles)*, Bibliothèque de l'Institut d'études sud-est européennes 22, Editura Istros a Muzeului Brăilei „Carol I", Brăila, 2022; 300 p. și 92 ilustrații. (Livia BUZOIANU)..... 495

Lucian Munteanu, *Moneda în așezările Daciei romane*, Bibliotheca Classica Iassiensis XV, Domeniu: Istorie/Istorie antică, Editura Universității „Alexandru Ioan Cuza", Iași, 2017; 351 p. + CD. (Gabriel Mircea TALMAȚCHI)..... 499

Nova Barrero Martin, *Ornamenta Muliebria. El adorno personal femenino en Mérida durante la Antiqüedad*, Monografías Emeritenses 13, Editura Artes Gráficas Rejas, Mérida, 2022; 447 p. și 249 ilustrații. (Ana C. HAMAT)..... 503

ANDREEA ANDREI
Indexul revistei Pontica (2008–2017) • Pontica review index (2008–2017)..... 507

Lista abrevierilor / Abbreviations / Abréviations 541