

ZIRIDAVA  
STUDIA ARCHAEOLOGICA

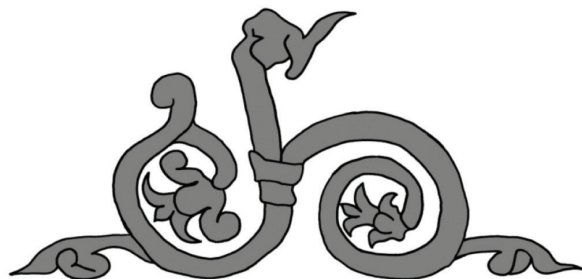
33

2019



MUSEUM ARAD

---



ZIRIDAVA  
STUDIA ARCHAEOLOGICA

---

33  
2019

**Editura MEGA**  
Cluj-Napoca  
2019

## MUSEUM ARAD

### EDITORIAL BOARD

Editors: Florin Mărginean, Victor Sava.  
Editorial Assistant: Norbert Kapcsosa.

### EDITORIAL ADVISORY BOARD

Vitalie Bârcă (Cluj-Napoca, Romania), Marin Cârciumaru (Târgoviște, Romania), Sorin Cociș (Cluj-Napoca, Romania), Florin Gogâltan (Cluj-Napoca, Romania), Adrian Ioniță (București, Romania), Rüdiger Krause (Frankfurt am Main, Germany), Tobias Kienlin (Köln, Germany), Valéria Kulcsár (Szeged, Hungary), Sabin Adrian Luca (Sibiu, Romania), Sorin Nemeti (Cluj-Napoca, Romania), John O'Shea (Michigan, United States of America), Karl Zeno Pinter (Sibiu, Romania), Ioan Stanciu (Cluj-Napoca, Romania), Imre Szatmári (Békéscsaba, Ungaria), Miklós Takács (Budapest, Hungary), Ioan Marian Țiplic (Sibiu, Romania)).

In Romania, the periodical can be obtained through subscription or exchange, sent as post shipment, from Museum Arad, Arad, Piata G. Enescu 1, 310131, Romania.  
Tel. 0040-257-281847.

### ZIRIDAVA STUDIA ARCHAEOLOGICA

Any correspondence will be sent to the editor:  
Museum Arad  
Piata George Enescu 1, 310131 Arad, RO  
e-mail: ziridava2012@gmail.com

The content of the papers totally involve the responsibility of the authors.

Layout: Francisc Baja, Florin Mărginean, Victor Sava

ISSN 2392-8786



EDITURA MEGA | [www.edituramega.ro](http://www.edituramega.ro)  
e-mail: [mega@edituramega.ro](mailto:mega@edituramega.ro)

# Contents

<b>Florian Mihail, Victor Sava</b> The Lithic Material Discovered in the Eneolithic Cemetery from Pecica-Est, in Western Romania.....	9
<b>Adrian Cîntar, Octavian-Cristian Rogoza, Florentina Mărcuți</b> A Sălcuța Settlement Discovered in the Boundary of Ștefan Odobleja Village (Mehedinți County).....	43
<b>Alin Frînculeasa, Bianca Preda-Bălănică, Daniel Garvăn, Octav Negrea, Andrei Soficaru</b> Towards a better understanding of the end of the Fourth Millennium BC in Northern Muntenia: The case of the Burial mound in Ploiești – <i>Gara de vest</i> .....	55
<b>Marian Adrian Lie</b> Bronze Age stone <i>battle-axes</i> of Poiana Type .....	91
<b>Tibor-Tamás Daróczi</b> An Aegean type Bronze Age razor in the Eastern Carpathian Basin.....	111
<b>Ionuț Ledeti, Adriana Ledeti, Gabriela Vlase, Titus Vlase, Octavian-Cristian Rogoza, Dorel Micle</b> An Ancient Method of Mending a Dacian Vessel. Analysis ATR-FTIR of a binder.....	119
<b>Paul Chiorean, Horațiu Cociș, Bogdan Bere</b> The Secondary Roads of Potaissa. Case Study II: Trial Trench on the Road Segment from Livadă-Valea Agrișului-Iara (Cluj County).....	125
<b>Norbert Kapcsos</b> Late Roman Period Cremation Burials in the Eastern Periphery of the Trans Tisa Region – The Lower Mureș Valley.....	137
<b>Aurel Dragotă, Mihai Blăjan</b> Bird Offerings in the 10 <sup>th</sup> –11 <sup>th</sup> Centuries Necropolises From Alba Iulia.....	155
<b>Attila J. Tóth, Florin Marginean, Zsolt Csók</b> Underwater Survey of River Mureș between Semlac and Pecica .....	173
<b>Andrea Demjén</b> Analysis of the Stove Tiles Discovered at the Pricske Quarantine (Harghita County).....	181
Abbreviations.....	205





This volume is dedicated to the memory of George Pascu Hurezan (1949–2016)





# Towards a better understanding of the end of the Fourth Millennium BC in Northern Muntenia: The case of the Burial mound in Ploiești – *Gara de vest*\*

Alin Frînculeasa, Bianca Preda-Bălănică,  
Daniel Garvăn, Octav Negrea, Andrei Soficaru

**Abstract:** An earthen burial mound was excavated in 2014 on the southern border of the city of Ploiești. The feature measured 0.9 m in height and approximately 40 m in diameter. Three prehistoric inhumation burials were uncovered inside the mound, pertaining to six individuals. Three individuals were found in the primary grave, along with a polished stone axe and two small flint fragments. One of the secondary burials contained two individuals and two clay pots, while the last one contained the poorly preserved skeletal remains of a single individual. According to stratigraphic observations, absolute dates but also based on ritual characteristics, the first two burials date to the last third of the fourth millennium BC and the last one to the first half of the third millennium BC. Starting from this funerary monument the authors of the present paper expand the analysis to the archaeological background of the end of the fourth millennium BC north of the Lower Danube. This chronological interval is poorly researched but has the potential of becoming highly significant. It marks the beginning of the outburst of an archaeological phenomenon that has affected large parts of South-Eastern Europe, but also the Western European area. Genetic data, isotopic analyses, and linguistic approaches have started to reset the demographic dynamics of those times, which seem to reverberate in current-day Western Europe in terms of both genetic and socio-cultural heritage. Yamnaya is the name of the phenomenon in question, but the significance of this word, beyond its insipid translation and the barren revelations it may produce, has become a major topic of debate in the Western academic world, reaching some of the most important publications (*Nature*, *Antiquity*, *Plos One*, *Journal of European Archaeology*, etc.). In order to research the Yamnaya and to understand this phenomenon one has to cross a desert of uncertainty stretching back one thousand years, during which the archaeological traces are often inconspicuous or irrelevant. Thus, this article focuses on a particular episode of the many that are yet unknown, but which could contribute, analysed together, to a better understanding of the subsequent Yamnaya historical period.

**Keywords:** Ploiești, burial mound, graves, Cernavoda II, chronology.

## Introduction

The end of the fourth millennium at the Lower Danube is far from a well-known period and cannot be as yet analysed in a comprehensive study. In the intra-Carpathian area, as well as in Banat and Oltenia, the Coțofeni Culture defines the cultural context of this period. In the northern half of Moldavia one knows of Late Cucuteni discoveries researched under various names, such as Horodiștea, Erbiceni, and Gordinești<sup>1</sup>, grouped in a wider/more accessible context/concept called Tripolie CII. Further south, in the middle of Moldavia, one can mention the discoveries from Foltești that can also be added to the context described above<sup>2</sup>. Even further south, in Bărăganului Plain and then beyond the Danube, towards the east/Dobruđa, one finds the so-called Cernavoda II Culture. Less than 20 sites attributed to this culture are known<sup>3</sup>, among which the eponym site has been the focus of researches for almost the last half century. This research has led to a benchmark-study<sup>4</sup> in which the pottery material *performs* on a narrow stage (trial trench 1956, dimensions = 7.75 × 1.50 m, but the

\* Translated by: Ana-Maria Gruia.

<sup>1</sup> Dumitroaia 2000; Dinu 1977.

<sup>2</sup> Roman 1964; 1969; Florescu 1965.

<sup>3</sup> Morintz, Roman 1968, fig. 1; Berciu *et al.* 1973, fig. 4.

<sup>4</sup> Berciu *et al.* 1973.

“*living soil*” was only reached over a length of 3.8 m)<sup>5</sup>. The rest are inconsistent discoveries made during surface research or restricted excavations<sup>6</sup>. One can also include several tumular graves that contained pots which can be attributed to this cultural episode<sup>7</sup>.

Beyond this framework but still within the area of the Lower Danube, one notes that the North-Western Pontic realities had already left traces for almost an entire millennium. The Gumelnița-Karanovo VI Cultural Complex witnessed these first events<sup>8</sup>. The period after the collapse of Old Europe is marked by uncertainties. There was first an episode called Cernavoda I in which one can include several flat burials<sup>9</sup> and randomly located settlements (on both sides of the Danube), both in the low areas<sup>10</sup> and in the hilly area, in the latter in a complicated/complex relation with the Cucuteni B communities/pottery<sup>11</sup>. During the second half of the fourth millennium, tumular burials with a Late Tripolian cultural imprint were already present north of the Danube, the complex in Brăița, part of which one notes M.20<sup>12</sup> (Pl. 8/3) or M.22 in Liești-Arbănașu<sup>13</sup> (Pl. 8/1), already indicate the east-south-eastern extension of a phenomenon that covered the basins of rivers Prut and Dniester<sup>14</sup>.

In this entire picture, sketchily described, a series of discoveries generated by the research of certain tumular burials in the northern part of Muntenia, more restricted to the county of Prahova, can become an outpost for a novel approach/resurrection of the topic/analysis starting from a better documented basis, naturally generated by the cumulative character of archaeological data. By publishing the tumulus researched in 2014 in the municipality of Ploiești we open a topic that we have decided to develop over the following years.

### **The chronicle of a disaster: the tumuli from Ploiești in the archive of the past centuries**

The tumulus in Ploiești – *Gara de Vest* (Ploiești T.III) is located in the northern part of the Romanian Plain (namely Ploieștiului Plain), in a landscape bordered by the Prahova – Teleajen interfluvium and its tributaries Cricovul Dulce and Dâmbu (Pl. 7). More than 350 earthen mounds were identified and mapped in this natural context<sup>15</sup>. The map also includes tumuli that have disappeared from the landscape, but the position of which could be reconstructed on the basis of cartographic sources created during the period between the end of the eighteenth century and the first half of the twentieth century<sup>16</sup>. Data on the presence of tumuli around the municipality of Ploiești (with the corresponding toponyms) can also be found in the different documents published over time in relation to the settlement’s development<sup>17</sup>. Mounds are also marked on cartographic sources such as: the Specht Map (1791), Charta României Meridionale (1864), Foaiă Ploescii, series XIX (1900), Planul orașului Ploiești (1902–1904), Foaiă Ploestii, series XI (1910), Harta Topografică a județului Prahova (1904), Planuri Directoare de Tragere (published after 1918), Planul orașului Ploiești, 1830–1840 (reconstruction Debie, 1967), and the military topographic surveys (1958–1961, 1972–1981)<sup>18</sup>.

Going through this archive and noting the fate of the tumuli on the territory of the city of Ploiești,

<sup>5</sup> Berciu *et al.* 1973, 374.

<sup>6</sup> Morintz, Roman 1968; Berciu *et al.* 1973, 374; Șerbănescu, Trohani 1978; Vasiliu 2002; Vlad, Matei 2004, 200; Vernescu 2013; Gavrilă *et al.* 2016; Șerbănescu, Androne 2016a; 2016b.

<sup>7</sup> Frînculeasa *et al.* 2017b, 39–40.

<sup>8</sup> Anthony 2007; Reingruber, Rassamakin 2016; Frînculeasa *et al.* 2017b, 85–86.

<sup>9</sup> Frînculeasa *et al.* 2017c, 83–85.

<sup>10</sup> Hașotti, Popovici 1992; Hașotti 1997; Manzura 1999; Vernescu 2013; Schuster *et al.* 2016.

<sup>11</sup> Frînculeasa 2012; Munteanu 2017.

<sup>12</sup> Dragomir 1959.

<sup>13</sup> Brudiu 2003, fig. 15/1.

<sup>14</sup> Ivanova, Toshev 2015.

<sup>15</sup> Frînculeasa *et al.* 2017a, tab. 2; 2018a, 77, footnote 4.

<sup>16</sup> Frînculeasa *et al.* 2017a, fig. 4; 2018a, pl. 11/2.

<sup>17</sup> Zagoriț 1914, 33, 51; Ioachimescu 1914, 60; Vulpe, Vulpe 1924, 169, footnote 2; Sevastos 1937; Sava-Petrescu 1937; Debie 1967, pl. II; Groșescu 2008, 141, 375–376, 394; Trestioreanu, Marinică 2003, 107, 114; Frînculeasa *et al.* 2017a, 539.

<sup>18</sup> Frînculeasa *et al.* 2017a.

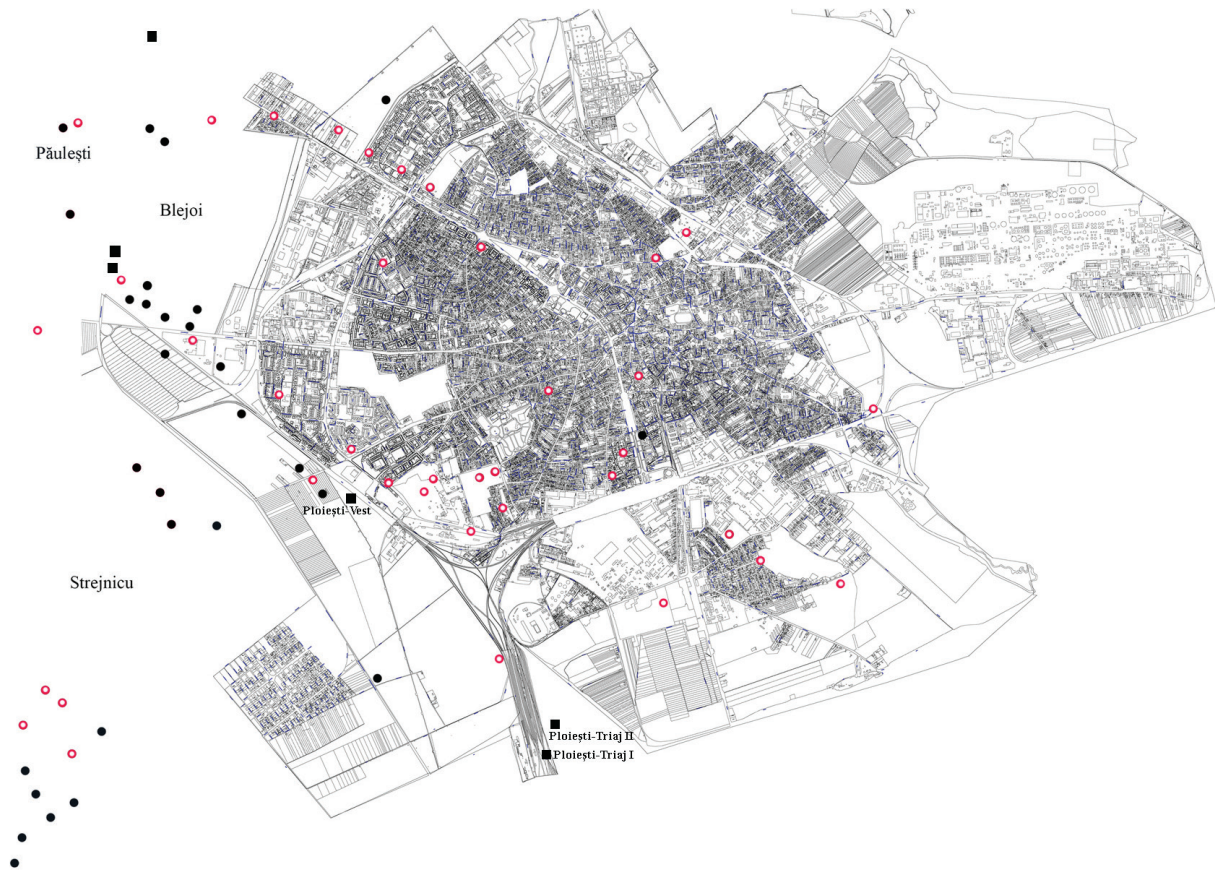


Fig. 1. Present-day ground plan of the city of Ploiești and the limitrophe area with the location of the tumuli (empty circles = destroyed tumuli; full circles = preserved tumuli; squares = researched tumuli).

the disaster seems to follow the settlement's horizontal line of development<sup>19</sup>. Out of the ca. 50 identified tumuli, no more than 12 have survived in the present-day landscape (Fig. 1), and some of them are overlapped by churches, cemeteries, and parks<sup>20</sup>. The only unaffected tumuli are located outside the built area, in the city's unincorporated zones. This does not mean that all were spared. One was destroyed in 2005 through the construction of a Kaufland logistic centre. Another, relatively well-preserved tumulus is located in the green area along the boulevard that connects the centre of the city and *Gara de Sud* (Fig. 1).

Three tumuli have been researched in the area of the city of Ploiești, two of which are located near the train yard and have been excavated during the Second World War (1941–1943)<sup>21</sup>. Archaeologists have discovered graves dated both to the end of the fourth millennium and the first half of the third millennium BC/Yamnaya<sup>22</sup>. Specialists have also identified graves that can be attributed to a chronological segment from the turn between the Middle and Late Bronze Age<sup>23</sup>. The third investigated tumulus is the focus of the present research<sup>24</sup>.

### **Ploiești – Gara de Vest: the excavation and the researched archaeological features**

In the late autumn of 2014 specialists of the Prahova County Museum of History and Archaeology have researched a tumulus located near the West Train Station of the city of Ploiești (Pl. 1). The

<sup>19</sup> Debie 1967, map 1; Catană 2012, fig. 17–21.

<sup>20</sup> Frînculeasa *et al.* 2017a, tab. 2, fig. 6, 7.

<sup>21</sup> Nestor 1943; Nestor 1944a; Nestor 1944b; Comșa 1989; Frînculeasa *et al.* 2013, 28–29.

<sup>22</sup> Frînculeasa *et al.* 2013; 2015a.

<sup>23</sup> Frînculeasa 2016, 124.

<sup>24</sup> Frînculeasa *et al.* 2015b.

monument measured ca. 0.9 m in height and ca. 40 m in diameter. The methodology of the excavation has been mentioned<sup>25</sup> and explained in detail<sup>26</sup>. The research started with the marking of two main baulks measuring one meter in width and 40 meters in length, oriented ca. E-W (baulk I) and N-S (baulk II), that intersected each other in the centre of the mound. Four areas were delimited, labeled in the order in which they were researched: area SW (I), area NE (II), area SE (III) and area NW (IV). These areas were further subdivided into smaller surfaces through other baulks measuring one meter in width, oriented alternatively N-S or E-W. Eight research units were thus created (Fig. 2). All areas were excavated according to altimetric steps, with the aid of mechanical tools.

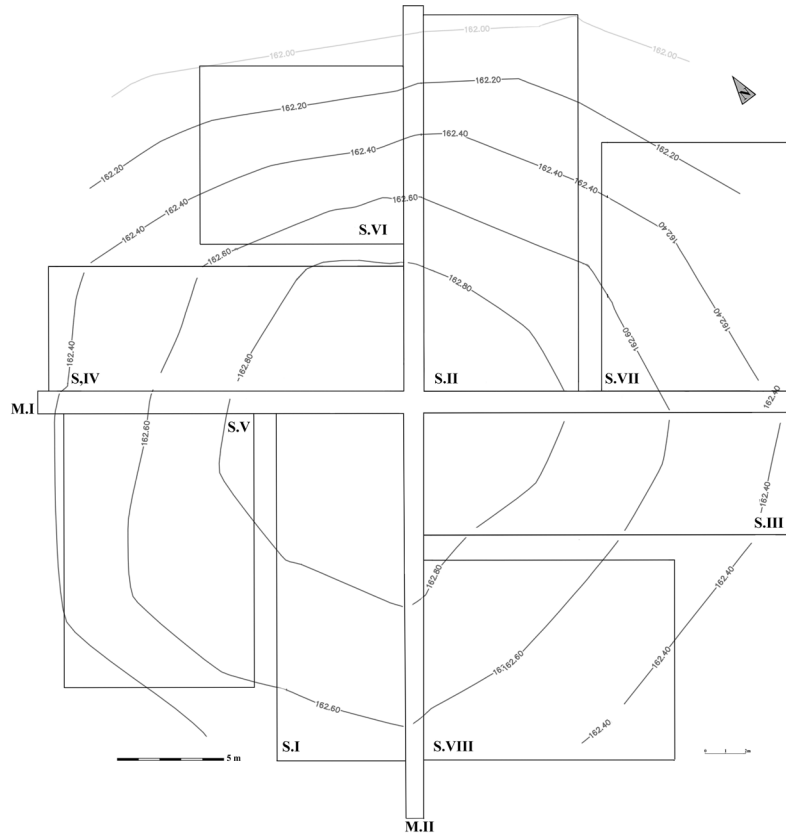


Fig. 2. Ploiești – *Tumul Gara de Vest*, ground plan of the archaeological excavation.

**The stratigraphy** of the tumulus was relatively simple. The team has identified several natural layers overlapped by anthropic depositions. The natural deposit of gravel formed during the *Quaternary Period* that is present in Ploieștiului Plain<sup>27</sup> was overlapped by an alluvial layer of sand (measuring 0.60 m in thickness), followed by the ancient ground level that was clayish, brown in colour (measuring a maximum of 0.3 m in thickness). The mantle of the tumulus had been erected on top of this latter layer. The mantle consisted of yellowish clay and measured a maximum of 0.7 m in height and ca. 25 m in diameter. The mantle overlapped the primary burial (Gr.2) and was sectioned by the two secondary graves (Gr.1, Gr.3). At its periphery the mantle was overlapped by a lens of blackish, clayish soil, measuring 0.20-0.40 m in thickness. The vegetal layer was the last one, 0.25 m-thick, brown in colour.

### Archaeological features

Three inhumation graves have been discovered, all located towards the centre of the mound. They contained six individuals (an individual burial, a double burial, and a triple burial), with the skeletons

<sup>25</sup> Frînculeasa *et al.* 2015b, 218.

<sup>26</sup> Frînculeasa *et al.* 2017b, 33–36; 2018a, 79–80; 2018b. The excavation ceased after the uncovering of the funerary features due to contract-related problems. The baulks were only taken down in 2015 (Pl. 1/4).

<sup>27</sup> Frînculeasa *et al.* 2013, 29–30.

in very poor (Gr.3), poor (Gr.1), and relatively good (Gr.2) states of preservation. Only two of the three graves had inventories: two pots in Gr.1 and a stone axe and two small flint items in Gr.2.

**Grave 1/Gr.1** (Pl. 3) – secondary grave, discovered in the NW area (4), towards the centre of the mound. It became apparent at the depth of -0.94 m and the bottom of its pit was located at a maximum depth of 1.10 m from point zero. The grave cut through the mantle and the clayish ancient layer. The grave pit was rectangular with rounded corners, measured 1.35 × 0.93 m, and was oriented N-S. The pit contained two skeletons:

- Individual A – had been deposited crouching on the left, with the arms bent and brought up towards the mandible, with the legs also bent. The body had been oriented N-S. Anthropological identification: female, age 30–40 years.

- Individual B – had been deposited crouching on the right, with the arms bent and brought up towards the mandible, with the legs also bent. The body had been oriented N-S. Anthropological identification: female, age 15–18 years.

Two pots (Pl. 3/3,5) were found in the SW corner of grave 1, at the feet of individual A (Pl. 3/3,5): a cup with a heightened handle (V.1) and slightly oblique mouth (Pl. 4/1–2,4), made of black-grey fabric, semi-fine, placed inside a tronconic bowl with flared mouth (Pl. 4/3,6,8) modelled out of fine yellowish fabric (V.2). The bowl is provided with four small prolonged prominences placed symmetrically on the body of the pot. Both pots displayed traces of secondary firing. Dimensions: V.1 – h = 95 mm, diam. base = 49 mm; inventory no.: 3.4.–136185; V.2 – h = 65 mm, diam. mouth = 180 mm, diam. base = 108 mm; inventory no.: 3.4.–136186.

**Grave 2/Gr.2** (Pl. 5) – this was the main grave, discovered in area NW (4). It entered both stratigraphic profiles and was directly overlapped by Gr.1. It was identified at the depths of -1.15 m/-1.20 m and the bottom of the pit was located at -1.27–1.30 m from point zero. The grave cut through the ancient clayish layer and the alluvial sand deposit (ca. 0.20 m). The grave pit was rectangular with rounded corners, measuring 2.40 × 1.30 × 1.05 m (the southern part was wider). The pit was oriented N-S and measured approximately 0.50 m in depth. It was probably closed with a wooden cover, as several traces of it were preserved towards the northern part of the feature, in the area that had not been affected by the excavation of grave 1. The grave in question contained three skeletons:

- Individual A – had been deposited in a crouching position, lying on the left side, with the arms and legs bent, oriented N-S, along the pit towards the west. Had no inventory. Anthropological identification: male, age 35 – 45 years.

- Individual B – had been deposited in a crouching position, lying on the right side, the arms bent, the feet only slightly bent (almost straight). The skeleton was oriented N-S, placed along the pit towards the east. Had no inventory. Anthropological identification: male, age 15 – 18 years.

- Individual C – had been deposited in the southern part of the pit, sideways. Had been deposited in a crouching position, on the right side, with the arms bent and raised towards the face. A stone axe had been placed near the deceased's forehead, with the blade oriented similarly to the man's "gaze" (northwards, along the pit's long axis) (Pl. 5/4–5). The axe is made out of granite, provided with a shaft-hole, has a circular poll and is gray in colour. The body is boat-shaped, the longitudinal axis is straight, the blade slightly curved. The edge is cylindrical, plano-convex (Pl. 6/2;5). Dimensions: L = 127 mm; l.max = 54 mm; diam. edge = 37 mm; diam. shaft-hole = 21 mm. Inventory number: 3.4.–136187. Two other flint items (fragments), yellowish in colour, were discovered in the area of the same individual, namely on the pelvis and on the thorax. Dimensions: item 1 = L.21 × 20 mm; inventory no.: 3.4.–136188 (Pl. 6/3,6); item 2 = L: 19 × 0.9 mm; inventory no.: 3.4.–136189 (Pl. 6/4,7). A mammal bone was also discovered in the northern area of the pit. Anthropological identification: male, age 25 – 30 years.

**Grave 3/Gr.3** (Pl. 2/2) – secondary grave, discovered in the area where the two main baulks met. The grave was identified at the depths of - 0.75 m – 0.77 m from point zero. The skeleton, in a poor state of preservation, was oriented W-E (with the skull westwards). The bent feet had collapsed on the left side and the arms seem to have been extended along the body. Had no inventory. Anthropological identification: sex cannot be established, age 20 – 40 years.

### Anthropological data

The state of preservation of the six skeletons ranges from average to poor. The age of all individuals has been determined, but the height could only be established in a single case. The anthropological analysis has identified the signs of certain pathologies and lesions that the deceased suffered from. In the case of Gr.1B, even during excavation one could note on the left parietal a circular perforation around the area of the left eminence that seems to be the result of trephination and the edges of which show signs of healing (Pl. 3/2, Fig. 3/c). Traces of another perforation, almost oval in shape, measuring a maximum of 22.43 mm in width, are visible on the right parietal, ca. 35 mm sideways to the right from the parietal foramen (Fig. 3/d). This latter perforation shows no traces of healing. Taking into consideration the state of the two trephinations, they had been performed at different stages in the individual's life, the second intervention perimortem.

In the case of Gr.2A, the right mandibular wing shows traces of a cut set obliquely to the mandibular body, sectioning the bone in the middle of the alveolus of the third molar and stopping in the lower part of the mandibular body. Taking into account the relatively shallow depth of the cut, it must have been made with a sharp object with a thin blade. The left mandibular wing has been fragmented of old, but shows no clear evidence of having been sectioned like the right wing. Regarding Gr.2C, one notes the absence of left mandibular molars 2 and 3, left mandibular premolar 2, and the fact that the right mandibular molars 1–3 display fragmentations of the dental crowns, both on the lingual and the labial side of the teeth, the result of a blow.

Skeleton no.	Gender	Pathology	Trauma	Height (cm)
<b>Gr.1A</b>	F	Scald	-	-
<b>Gr.1B</b>	F	Hypoplasia	Two trephinations	-
<b>Gr.2A</b>	M	Scald, osteoarthritis, cribra orbitalia	Cuts on the mandible	-
<b>Gr.2B</b>	M	Osteoperiostitis	-	-
<b>Gr.2C</b>	M	Hypoplasia, osteoarthritis, osteoperiostitis	Blows to the teeth	161.16
<b>Gr.3</b>	IND.	-	-	-

Table 1. Synthetic presentation of the anthropological diagnosis.

The practice of trephination is attested during earlier periods, ever since the Neolithic or the Aeneolithic<sup>28</sup>, but a detailed approach of the history of this intervention goes beyond the framework of the present discussion. During the Bronze Age north of the Lower Danube such interventions have been identified in both flat and tumular burials, and in diverse cultural environments. In tumular graves trephinations are not very common occurrences, but this could be due to the small number of skeletons that have been analysed anthropologically – especially because they were found during older researches, and not necessarily the result of an objective absence from the anthropological material. A case similar to the one in Ploiești *Gara de Vest* has been identified in the tumulus from Holboca (Iași County), where traces of such a procedure have been noted in Gr.23, in fact on one of the individuals buried in the triple grave Gr.23-Gr.24-Gr.25<sup>29</sup> (Fig. 3/a-b). The individual in question, a mature man, had gone through a trephination on the right side of the area of the coronary suture, probably as a result of a strong blow<sup>30</sup>. The surgery seems not to have been completed and the absence of scar tissue indicates the fact that the individual did not survive the procedure or died shortly afterwards<sup>31</sup>.

Other trephinations in funerary mounds have been mentioned in Zebil, features Gr.14 and Gr.15; two such interventions are recorded in the latter case<sup>32</sup>. Still, in the absence of an anthropological study *per se*, this piece of information only rests on the interpretation of the archaeologists. Another discovery of this kind, dated to the Early Bronze Age, is published from Dinaș (Timiș County), where

<sup>28</sup> Comșa 2008, 104.

<sup>29</sup> Comșa 1985, 150.

<sup>30</sup> Necrasov, Cristescu 1957, 109.

<sup>31</sup> Necrasov, Cristescu 1957, 109.

<sup>32</sup> Simion 2003, 23.

specialists found the skull of a woman aged 20–25 years, which displayed the traces of a healed trephination<sup>33</sup>. Grave 5 from tumulus 8 in Giurgiulești (The Republic of Moldavia) has been recently published. It contained the remains of a man aged 50–60 years “who displays on the skull cap two relatively circular trephinations, performed perimortem.”<sup>34</sup>

The knowledge of trephination techniques has also been documented in tumular graves attributed to the Livezile Group, also dated to the first half of the third millennium BC. A special case is that of a woman who had died at around 35–40 years of age. In her case the procedure affected a significant proportion of the skull cap (12.2 × 7.2 cm) but she survived a considerable period afterwards, enough to show traces of bone healing<sup>35</sup>. One fragment from another skull with possible traces of trephination has been found in the same cultural environment, in an incineration grave from Meteș<sup>36</sup>. One must also mention a discovery made in Cetățeni (Argeș County), attributed to the horizon of burials in stone cists<sup>37</sup>. It consists of a trephination that was started but never completed<sup>38</sup>.

Southwards, such practices have also been attested among the flat graves researched in the necropolis from Zimnicea. Two cases have been identified, in Gr.26 and Gr.52. Both graves contained pots in their inventory, the one in Gr.52 a pot with oblique mouth typical to such burials<sup>39</sup>. A single intervention had been performed on the woman aged around 30 who had been deposited in Gr.52, but four trephinations had been started but left incomplete on the man in Gr.26, aged between 50 and 60 years, probably interrupted due to his death<sup>40</sup>.

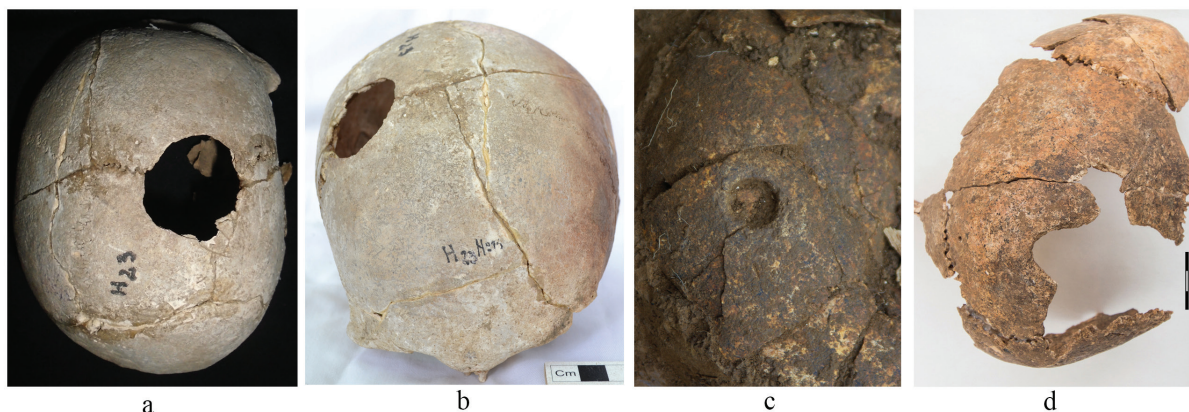


Fig. 3. Traces of trephinations in Holboca (a, b) and Ploiești (c, d).

### Chronological context

From a stratigraphic perspective, Gr.2 is the primary funerary feature, followed by Gr.1. The first element that one must mention in the case of these two graves is the deposition of the individuals in lateral crouching positions, even if their lower limbs appear bent to different degrees. Another shared characteristic is the presence of multiple burials. Gr.3, containing a very poorly preserved skeleton, is the most recent grave. The deceased had been oriented in the western sector and placed in a supine position with the lower limbs bent, raised, and fallen sideways.

One knows of stratigraphic situations inside tumuli when graves with bodies placed in lateral crouching positions were overlapped by burials of individuals placed supine with the lower limbs brought together and raised<sup>41</sup>. Such cases are frequent in the area of interest here. Out of the 23 tumuli researched in Ariceștii-Rahivani, Blejoi, Păulești, Ploiești, Strejnicu, Târgșoru Vechi, Coadă Izvorului,

<sup>33</sup> Comșa 2008, 130.

<sup>34</sup> Ciobanu *et al.* 2019, 51–42, fig. 2/2.

<sup>35</sup> Botezatu *et al.* 1987, 6.

<sup>36</sup> Ciugudean 1996, 56; Comșa 2008, 122.

<sup>37</sup> Morintz 1997, 222.

<sup>38</sup> Comșa 2008, 136.

<sup>39</sup> Alexandrescu 1974, 83, pl. 5/5, 7.

<sup>40</sup> Necrasov 2010, 250–251.

<sup>41</sup> Frînculeasa *et al.* 2013; Frînculeasa *et al.* 2015a; Frînculeasa *et al.* 2017b, 115–116.

Târgșoru Nou, and Ploiești-*Triaj*,<sup>42</sup> 13 contained graves with the deceased placed in lateral crouching positions, features that can be attributed to the chronological horizon that precedes the Yamnaya burials<sup>43</sup>. In a proximal area one notes the researches in Gherăseni<sup>44</sup> and, eastwards and north-eastwards, the discoveries from Ciulnița, Baldovinești, Brăilița, Coslogeni, Liești, Holboca, and Corlăteni<sup>45</sup>. From Dobrudja one should note the tumular graves researched in Baia<sup>46</sup> or Tulcea-*Sud*<sup>47</sup>. Other cases, not very certain, are those from Enisala<sup>48</sup> and probably Medgidia T.6 as well<sup>49</sup>. No such developments are known from Oltenia, but this might be due to the fact that the area is very little researched<sup>50</sup>.

The above mentioned stratigraphic succession also features in Hungary in Püspökladány-Kincsesdomb<sup>51</sup> and Sárrétudvary-Órhalom<sup>52</sup>, in Serbia at Livade<sup>53</sup>, or in Bulgaria in Golyamo Detelina, Pliska, Ovchartersi, Târnovo, Kamen, and Veselets<sup>54</sup>.

In order to complete the stratigraphic observations, two <sup>14</sup>C-AMS dates have been analyzed in 2015 by the Isotoptech Zrt Debrecen (Hungary). The samples were collected from human bones found in Gr.1 (individual A) and Gr.2 (individual C). In the case of Gr.3 the poor state of preservation of the skeleton has prevented the collection of viable samples.

ID LAB	Context	Sample	Date in years BP	Calibrated years, sigma 1/68.2%	Calibrated years, sigma 2/95,4%	Mean value
DeA-5866	Gr.1A	Human bone, femur	4381±31	3021–2926	3090–2913	2994
DeA-5867	Gr.2C	Human bone, tibia	4442±30	3314–3021	3331–2934	3136

Table 2. The results of <sup>14</sup>C-AMS analyses for the tumulus in Ploiești – Gara de Vest.

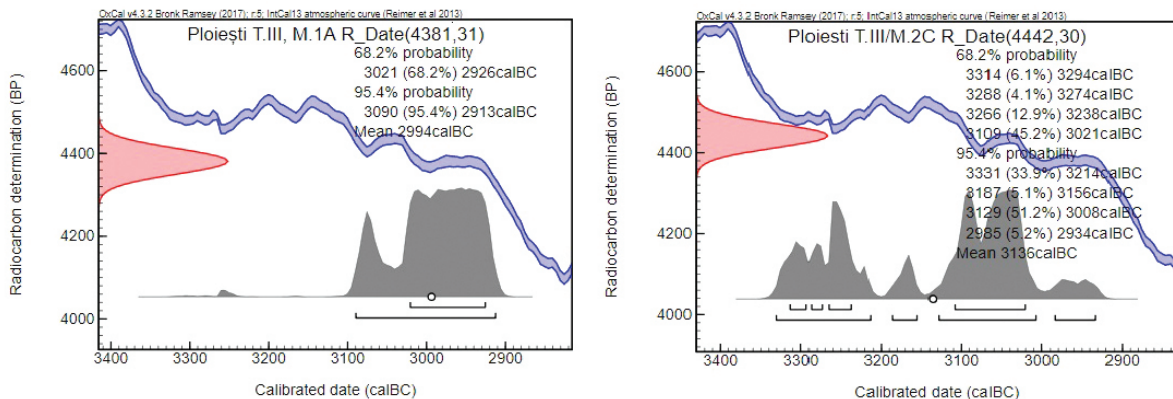


Fig. 4. Graphs with the dating of the graves in Ploiești – tumulus Gara de Vest.

<sup>42</sup> We must also add three other tumuli researched in Blejoi, Nedelea, and Târgșoru Vechi, partially destroyed, inside which we discovered no graves. In the case of the tumulus from Nedelea, researched in 2015, we have identified in the central area an oval pit, though it contained no human bones or inventory items. The isolated grave discovered in 2014 in Târgșoru Vechi – *Biserica Albă* was probably also part of a tumulus (Frînculeasa *et al.* 2015c).

<sup>43</sup> Frînculeasa *et al.* 2013; Frînculeasa *et al.* 2015a; Frînculeasa *et al.* 2017b, 115–116.

<sup>44</sup> Frînculeasa *et al.* 2017b, 42; Garvăn *et al.* 2018, 283, pl. XV/1–3.

<sup>45</sup> Harțuche, Anastasiu 1968; Comșa 1985; Cavruc, Neagu 1995, 76; Harțuche 2002; Brudiu 2003; Rența 2016, 97; Frînculeasa *et al.* 2017b, 115–116.

<sup>46</sup> Lazurcă 1980.

<sup>47</sup> Simion 2003.

<sup>48</sup> Vasiliu 2004.

<sup>49</sup> Schuster *et al.* 2011.

<sup>50</sup> Motzoi-Chicideanu 2011, 261.

<sup>51</sup> Ecsedy 1979, 19.

<sup>52</sup> Dani, Nepper 2006.

<sup>53</sup> Georgevic, Georgevic 2016.

<sup>54</sup> Panayotov 1989; Kitov *et al.* 1991; Nikolova 1999; Alexandrov 2011; 2015; Alexandrov, Kaiser 2016; Dimitrova 2014; 2018; Georgieva *et al.* 2018.



Correlating the stratigraphic data with the information on the ritual and the absolute dates (Tab. 2, Fig. 4) we were able to identify two burial horizons, with three stages. The first horizon is specific to the final third of the fourth millennium BC and the very beginning of the subsequent millennium (Gr.1 and Gr.2). The second horizon, represented by Gr.3, can be easily included in the group of Yamnaya burials specific to the first half of the third millennium<sup>55</sup>. If the date calculated for Gr.2 in Ploiești points to the interval discussed in the present article, the date established for Gr.1 falls during the period when pre-Yamnaya burials coexisted with the Yamnaya ones<sup>56</sup> (Fig. 6).

### On the artifacts and their local and trans-regional cultural contexts

The two pots from Gr.1 and the axe from Gr.2 are artifacts with analogies in the contemporary cultural environment, present both in graves and in settlements<sup>57</sup>.

– cups with heightened handle, slightly oblique mouth, possibly straight, are well represented on this chronological horizon. From the proximal areas one should mention the cup discovered in Gr.5 from tumulus IV in Ariceștii-Rahtivani, a feature that dates to the final quarter of the fourth millennium BC (4532±37 BP/3370-3090 cal BC) (Pl. 9/2)<sup>58</sup>. A similar cup, from the same chronological interval<sup>59</sup>, could be the one from Gr.3/Ploiești-Triaj T.I.<sup>60</sup>. Similar cups have also been identified in several graves from the cemetery in Brăițița, namely Gr.24 (lateral crouching), Gr.36 (lateral crouching), Gr.40 (extended), Gr.46 (extended)<sup>61</sup>. Such a pot was also discovered in Lișcoteanca, in Gr.11, in the grave of a deceased placed in a lateral crouching position<sup>62</sup>. In Gherăseni a cup was discovered in Gr.119 that contained an individual placed in a lateral crouching position (Pl. 8/2) in a rectangular pit with rounded corners<sup>63</sup>. In Răcăciuni, another cup was discovered in a flat grave; it was decorated with oblique impressions at the base of the neck, thus resembling the item from Gr.24 in Brăițița. The pot was associated with a stone axe and two copper items<sup>64</sup>. A similar pot with the same type of decoration was discovered in T.II from Ciulnița, but it lacks a clear context<sup>65</sup>. Such a pot was also found in the settlement from Foltești. It displays the same type of decoration, placed in two rows at the base of the neck. One cannot decide if the mouth was oblique or not, as that part is missing<sup>66</sup>. In Luncavița-*Movila Mocuța* as well, Gr.15 features a cup in a Yamnaya grave<sup>67</sup>. A cup was discovered in T.16/Gr.5 from Taraklia<sup>68</sup>.

From Bulgaria one can mention cups discovered in Kamen-Shekerdzha in association with a gold hair ring<sup>69</sup>, in Boyanovo-*Lozianska Mogila*<sup>70</sup>, in Goliama Detelina II<sup>71</sup>, then in Medikarnovo and

<sup>55</sup> Frînculeasa *et al.* 2015a; Frînculeasa *et al.* 2017b; Frînculeasa *et al.* 2018a; Frînculeasa *et al.* 2018b.

<sup>56</sup> Frînculeasa *et al.* 2017b. The restricted lot of absolute data published so far does not support a detailed analysis. One can nevertheless note that the dates that cover the beginning of the third millennium were sampled from both graves with Yamnaya rituals and graves with the deceased placed in lateral crouching positions. Furthermore, there is no hiatus between the two data sets (Fig. 6).

<sup>57</sup> A series of discoveries that can take us back to the origin of this type of pot originate in Eneolithic sites researched in Oltenia. Thus, a cup with “beak”, but also a fragment, were found in layer II of the site in Sălcuța (Berciu 1961, 297, fig. 99/1, 127/1, 128/1). The same site has revealed other cups with oblique mouth that represent a “very rare shape” in the corpus of Sălcuța pottery (Patroi 2015, 282, pl. 49/3), some from the first habitation/upper layer (Marinescu-Bîlcu, Andreescu 2005; fig. 12). Another pot was found in the “middle layer” of the tell in Drăgănești-Olt (Nica *et al.* 1994, fig. 7/2). Though we do not exclude that these pots were extracted from post-Sălcuța II archaeological depositions, the discovery of a similar cup in the Bubanj I layer in Bor-Kampije, decorated with oblique grooves on the body (Kapurán *et al.* 2014, fig. 70), might trigger the reconsideration of doubts expressed on another occasion (Frînculeasa *et al.* 2017b, 95, footnote 103).

<sup>58</sup> Frînculeasa *et al.* 2014, pl. 9/1, 10/1–2.

<sup>59</sup> Frînculeasa *et al.* 2017b, fig. 24.

<sup>60</sup> Though the artifact has not been preserved, the archive of the MIAP preserves photographs of the pot accompanied by a handle.

<sup>61</sup> Harțuche 2002.

<sup>62</sup> Harțuche 1987, 34, fig. 43/2; 44/4.

<sup>63</sup> Constantinescu, Grigoraș 2004, pl. 1/4, 2/1; Frînculeasa *et al.* 2017b, pl. 71.

<sup>64</sup> Tudor 1973.

<sup>65</sup> Rența 2016, 92, pl. 30/4, fig. 188/1.

<sup>66</sup> Petrescu-Dâmbovița, Dinu 1974, fig. 13/5.

<sup>67</sup> Vasiliu 1995, 92–93.

<sup>68</sup> Agulnikov, Redina 2005, fig. 6/7.

<sup>69</sup> Dimitrova 2014, fig. 10/4.

<sup>70</sup> Agre 2015, 168, fig. 7, 38.

<sup>71</sup> Kunchev 1995.

Iskritza<sup>72</sup>. Another cup with oblique mouth was found in Gr.10 (deceased in a lateral crouching position) from Ovcharts-Movila Mare<sup>73</sup> dated to 4391±29 BP (3091–2919 cal BC)<sup>74</sup>. In a collective grave (four individuals) researched in Sabrano/Zagortsi archaeologists found four cups with oblique mouth. Two C14 samples have been analysed from this feature: 4394±28 BP (3091–2921 cal BC), 4395±28 BP (3092–2921 cal BC)<sup>75</sup>, the same interval as the dating of Gr.1 in Ploiești (Tab. 2). Such cups were also numerous in *Mogila Bereketska* from Stara Zagora, where both *askoi* and cups with oblique mouth were found<sup>76</sup>. One should also add earlier or contemporary contexts from the Ezero A or Ezerovo II cultural environments in Varna, Dubene, Plovdiv-Nebet Tepe, Ezerovo, Nova Zagora, Urdoviza-Kiten, etc.<sup>77</sup>

One should note, for the south-Danubian area during the beginning of the third millennium, the association of cups (generally with the mouth slightly oblique) and handleless cups with oblique mouth, that prefigure the introduction of the Zimnicea-type pots. Cups with slightly oblique mouth can also be encountered east of the Prut, in graves attributed to the recent phase of the Bugeac variant of the Yamnaya Culture; the best-known items are those found in Glubokoe and Kubey<sup>78</sup>. The pot from Glubokoe was discovered in the grave of a child lying supine, with the lower limbs bent<sup>79</sup>. Cups with heightened handles also feature in the Baden cultural environment<sup>80</sup>, but also in Coțofeni contexts<sup>81</sup>. Such items have also been attested in the first layer of Troy, dated to the first part of the third millennium<sup>82</sup>.

– the shape of the bowl found in Gr.1 is rather more rarely identified in contemporary funerary features. The presence of this type of pot on the site in Cernavoda is very significant<sup>83</sup>. One can find analogies in the two pots from Gr.20 (collective flat grave) from Smyadovo<sup>84</sup>. The latter funerary feature produced two <sup>14</sup>C dates, namely 4445±35 BP/3328–3015 cal BC and 4470±30 BP/3338–3025 cal BC<sup>85</sup>. A bowl similar to the one in Ploiești was found in Gr.27 from the above mentioned cemetery, associated with an *askos*; the grave is of the flat type, with the deceased placed supine with the lower limbs bent and raised, and the skull towards the east. The feature has also produced the following radiocarbon date: 4305±35 BP/3015–2882 cal BC<sup>86</sup>. Numerous bowls were found in *Mogila Bereketska* from Stara Zagora<sup>87</sup>. Such a pot was discovered in the settlement from Cățelu Nou, but this latter site is probably dated already to the first half of the third millennium BC<sup>88</sup>.

<sup>72</sup> Panayotov, Alexandrov 1995, pl. 4/6; 9/6.

<sup>73</sup> Alexandrov 2015, fig. 4, 16.

<sup>74</sup> Kaiser, Winger 2015, 127, tab. 1.

<sup>75</sup> Hristova, Uzunov 2012, 67, fig. 2.

<sup>76</sup> Kalčev 2002, abb. 11–12.

<sup>77</sup> Georgiev *et al.* 1979, fig. 36, 172, 174, 176, 183; Tonceva 1981, fig. 7, 10; Roman *et al.* 1992; Leshtakov 1994; Nikolova 1999, 203, fig. 9.2.2.; 1999b, fig.1/6; Kalčev 2002, abb. 17; Agre 2015, 145.

<sup>78</sup> Häusler 1976, pl. 33/6; Ivanova S. 2013, fig. 6/8–9.

<sup>79</sup> Häusler 1976, pl. 33/3.

<sup>80</sup> Mayer 1991; Bodnar, Rakzky 2009; Sachše 2010; Horváth 2017; Horváth *et al.* 2018.

<sup>81</sup> Roman 1976a; Ciugudean 2000; Alexandrov 2007; Tuțulescu 2016.

<sup>82</sup> Weninger 1995; Weninger, Easton 2014; Kromer *et al.* 2003; Krauß 2014. We must mention the fact that we have not included here the *askos*-type cups/ cups with oblique mouth present in the cemeteries with flat burials from Zimnicea (Alexandrescu 1974) or Batin (Nikolova 1999, 209–210, fig. 9.3.1 fig. 9.3.1), pots that are specific to the period between ca. 2850–2650 cal BC. One should note the pot from dwelling 1, part of habitation layer 2a from Celei (Nica 1982, 20, fig. 6/1, 7/2; Tudor *et al.* 1986, fig. 2) from which a sample has been collected (Nica 1982, 23, footnote 13) and has indicated a radiocarbon date calculated at 4225±60 BP/2928–2601 cal BC (Mantu 1995, nr. 110). Layer 2d of dwelling 13 has revealed 10 *askos*-type pots placed in a clay „vat”, though only three have been published and two of those are of the *Zimnicea* type (Tudor *et al.* 1986, 158, fig. 2). Another pot originates from layer 2c that contained a small deposit of jewelry items made of precious metal (Nica 1982, fig. 6; Cojoc 2014, 196, fig. 10.1–3). An *askos*-type cup has been found in Locusteni (Roman 1976b, 160). Another pot with oblique mouth was discovered in a pit in Gherăseni (Garvăn *et al.* 2018, p. XIII/11); the item has as analogy a pot discovered in one of the tumuli in Casimcea (Vasilii *et al.* 2014, 166/fig. 6). A cup with oblique mouth featured in a Yamnaya grave from Vlădești (Brudiu 2003, 68, fig. 32/2). From the area south of the Danube we shall mention the discoveries made on the sites of Ezerovo, Urdoviza-Kiten (Tonceva 1981; Leshtakov 1994), but also the tumuli from Târnavo, Placidol (Panayotov 1989, fig. 91), and Goliama Detelina II (Kunchev 1995, fig. 22–23).

<sup>83</sup> Berciu *et al.* 1973.

<sup>84</sup> Chohadzhiev, Mihaylova 2014, fig. 28b/7–8.

<sup>85</sup> Chohadzhiev, Mihaylova 2014, 40.

<sup>86</sup> Chohadzhiev, Mihaylova 2014, 44, fig. 34/6–7.

<sup>87</sup> Kalčev 2002, abb. 10.

<sup>88</sup> Leahu 1965, fig. 6/6; Roman 1969, 18, nota 15.

– according to Al. Vulpe’s typology, the axe found in Gr.3 from Ploiești is to be included in category A – axes with cylindrical edge and straight longitudinal profile<sup>89</sup>. The typology of this axe covers a wide area and heterogeneous cultural contexts. Such items feature both in tumular and flat graves. Regarding the area of the Lower Danube, the most numerous such items have been found in debatable archaeological contexts<sup>90</sup>. An axe with cylindrical edge was uncovered in Gr.23 from tumulus II in Ciulnița. The skeleton had been disturbed, but the body was probably placed in a lateral crouching position<sup>91</sup>. Another stone axe was discovered in Enisala in Gr.8, a grave with oval pit, with the deceased placed in a lateral crouching position<sup>92</sup>. Gr.5 from Stoicani, identified as a Yamnaya feature through its ritual, has also revealed a similar axe<sup>93</sup>. In Luncavița-*Movila Mocuța*, in Gr.8, archaeologists found a stone axe in a Yamnaya grave<sup>94</sup>. An axe placed near the deceased’s forehead, was found in Gr.14 from the tumulus in Zebil. The body had been placed in a lateral crouching position<sup>95</sup>.

A series of axes feature in secondary positions in the mantles of certain tumuli (Valea Lupului, Roma, Cotârgaci, Slobozia-Hănești, Recia Verbia, Adâncata, and Costâna)<sup>96</sup>. East of the River Prut, we mention a boat-shaped axe discovered in Prydnistryanske in a grave, associated with pottery that reminds one of the characteristics of the Gordinești Group<sup>97</sup>, even if such pots also feature in the Zhivotilovka-Volchansk ceramic repertoire<sup>98</sup>. Another boat-shaped axe was discovered in T.10/Gr.17 from Taraklia, in a feature with the deceased placed in a lateral crouching position, associated with a painted Late Tripolie pot<sup>99</sup>, interpreted as a Zhivotilovka grave<sup>100</sup>. We also mention Gr.4/T.4 in Sărăteni<sup>101</sup>. Such items are numerous in the Yamnaya graves located in the Prut-Dniester interfluvium<sup>102</sup>. Gr.2/T.III in Goran Slatina is also a Yamnaya funerary feature<sup>103</sup>.

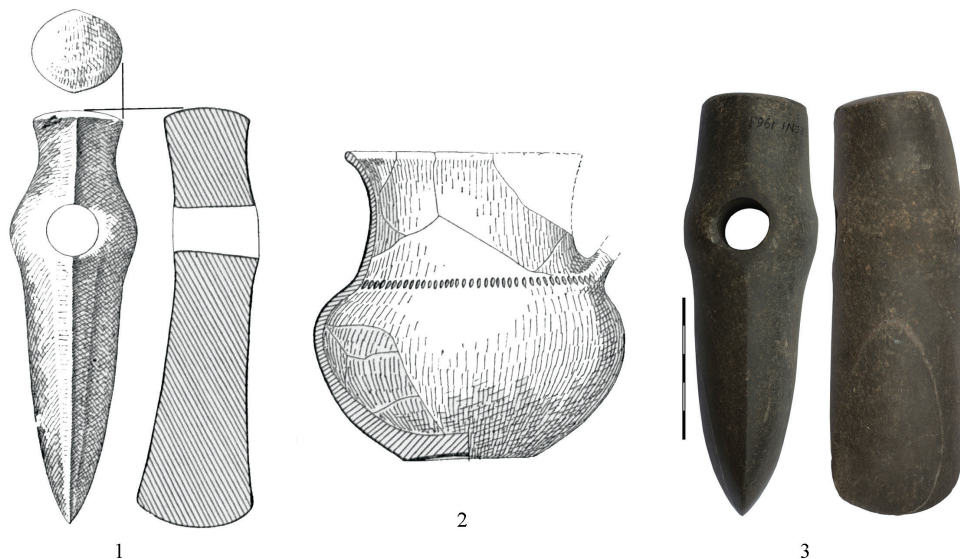


Fig. 5. Stone axe and cup discovered in the grave from Răcăciuni (1–2) (taken from Tudor 1973); stone axe discovered in Coșereni (3).

<sup>89</sup> Vulpe 1959.

<sup>90</sup> Irimia 1981, 349; Niculică *et al.* 2004; Diaconu 2010; Tecar *et al.* 2015; Mecu 2018.

<sup>91</sup> Rența 2016, 87–88, pl. 30/5, fig. 182/3.

<sup>92</sup> Vasiliu 2004, 125–126, fig. 3/1–3.

<sup>93</sup> Petrescu-Dîmbovița 1953, 119, fig. 53/5, 54/5.

<sup>94</sup> Vasiliu 1995, 91, pl. IV/3.

<sup>95</sup> Simion 2003, 22, fig. 10/2.

<sup>96</sup> Buzdugan, Alexoaie 1989; Burtănescu 2002; Ignat 2008; Diaconu 2010; Boghian *et al.* 2016.

<sup>97</sup> Włodarczak 2017, 263.

<sup>98</sup> Manzura 2016; Włodarczak 2017, 263. These contradictions show that this is still uncertain ground. See also Demcenko 2016 who takes one even further down this road.

<sup>99</sup> Dergacev, Manzura 1991, pl. 35/11–14.

<sup>100</sup> Manzura 2016, fig. 5/24.

<sup>101</sup> Levițki *et al.* 1996, fig. 41/3.

<sup>102</sup> Dergacev 1994; Levițki *et al.* 1996, 85–86; Klochko 2001; Bichbaev, Popovici 2016.

<sup>103</sup> Kitov *et al.* 1991, fig.33.

In flat graves one finds stone axes in Răcăciuni<sup>104</sup>, Gârceni<sup>105</sup>, or Cătămărești-Deal. Through the ritual position of the deceased, the latter grave seems to be a Yamnaya feature<sup>106</sup>. Another item was found on the site of Coșereni (Ialomița) that features pottery which can be attributed to the Cernavoda II environment (Fig. 5/3)<sup>107</sup>.

### Notes on absolute chronology

The available absolute dates are not numerous, but they sketch the analysed interval rather well. Based on the tumuli that we have researched, we have obtained 43 dates, 27 of which come from graves that precede the Yamnaya horizon. One should also add the 10 dates from the tumulus in Smeeni, out of which eight are available<sup>108</sup>, and the date from Vitănești<sup>109</sup>. C14 dates from the same period have been analysed from the site in Celei<sup>110</sup>, but also from Horodiște/Gordinești<sup>111</sup>, Zhivotilovka<sup>112</sup>, and Usatovo<sup>113</sup> features, including those with the deceased placed supine in tumular graves<sup>114</sup>, that also set the events in a certain order. We also mention the series of absolute dates from the tumuli in Silvașu de Jos<sup>115</sup>, the dates from the Coțofeni settlements in Ostrovul Corbului<sup>116</sup>, Băile Herculane<sup>117</sup>, Poiana Ampoiului<sup>118</sup>, or those from the settlements in Sărata Monteoru<sup>119</sup> and Pietroasa Mică<sup>120</sup> located in the hilly area of North-East Muntenia.

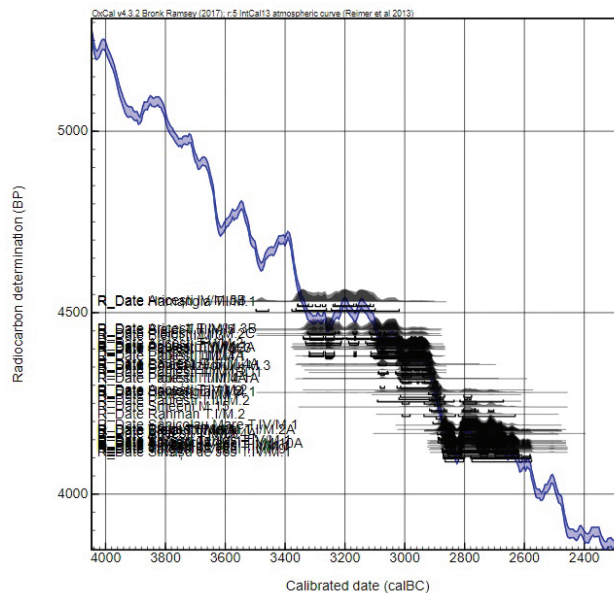


Fig. 6. The calibration curve with the C14 dates from Romania: pre-Yamnaya and Yamnaya graves.

<sup>104</sup> Tudor 1973.

<sup>105</sup> Florescu, Florescu 1959.

<sup>106</sup> Burtănescu 2002, 145–146, pl. LIV.

<sup>107</sup> We thank the representatives of the ‘Vasile Pârvan’ Institute of Archaeology for allowing us to study this item and to include it in the present article.

<sup>108</sup> Frînculeasa *et al.* 2017b, tab. 4 (two dates have been analysed after the publication of the monograph and remain unpublished).

<sup>109</sup> Frînculeasa *et al.* 2017c, fig. 1/B.

<sup>110</sup> Frînculeasa 2017b, footnote 116.

<sup>111</sup> Lazarovici 2010; Goslar *et al.* 2015; Diachenko, Harper 2016.

<sup>112</sup> Petrenko, Kovaljuch 2003; Manzura 2016.

<sup>113</sup> Rassamakin 2012.

<sup>114</sup> Horváth *et al.* 2013; Frînculeasa *et al.* 2017c, fig. 1/A; Włodarczak 2017, p. 266; Bugaj *et al.* 2018. The latter two bibliographic sources mention the primary grave from Šajkaš-Ciganska humka (Serbia), the skeleton inside which has not been preserved. The authors rather mention the characteristics of this feature that resemble those of the post-Mariupol burials.

<sup>115</sup> Diaconescu, Tincu 2016.

<sup>116</sup> Ciugudean 2000, 58.

<sup>117</sup> Ciugudean 2000, 58.

<sup>118</sup> Ciugudean 2015, 168.

<sup>119</sup> Lazarovici 2010.

<sup>120</sup> Munteanu 2017.

For the area of the Lower Danube one still has to understand what happened between the end of the Cernavoda I Culture that, from the perspective of the absolute dates, seems to have ended in the middle of the fourth millennium<sup>121</sup> and this burial horizon that started around 3300/3250 BC. More than two centuries are thus void of discoveries/C14 dates. One should not exclude Cernavoda III presences, as they are already known along the line of the Danube or even slightly northwards<sup>122</sup>, possibly Early Usatovo as some of the C14 dates indicate<sup>123</sup>.

Returning to the Cernavoda II Culture and the literature on the topic, from a chronological perspective it should fill the void between Cernavoda I and Glina. The discussion must also include the analyses regarding the final Foltești phases<sup>124</sup>. Taking into consideration the start and end dates of the two cultures<sup>125</sup>, the discussion expands over almost an entire millennium. In a set of tumuli located in the low extra-Carpathian areas, Cernavoda II Culture seems to be a shapeless phantom. It is documented by a few excavations performed in settlements and a small number of flat graves (that have remained, anyway, unpublished). The indirect signs of the presence of Cernavoda II are connected to the presence of certain specific pots in the contemporary tumular funerary features<sup>126</sup>. A C14 date has been analysed from Smeeni, from a Yamnaya grave that overlaps a Cernavoda II settlement<sup>127</sup>. Thus Gr.5, included in the first burial phase, has the C14-AMS date of 4357±35 BP (3089–2899 cal BC, sigma 2)<sup>128</sup>. A pottery fragment decorated according to the Cernavoda II manner was found in Gr.19, probably ending up there from the fill of the funerary feature<sup>129</sup>. A stratigraphic situation similar to the one in Smeeni has been identified in a tumulus researched in 2019 in the municipality of Târgșoru Nou (Prahova County). The primary Yamnaya grave had been dug into a Cernavoda II habitation layer<sup>130</sup>. Pottery that might be attributed to the Cernavoda II Culture, as well as flint and stone items have also been found in the layer at the base of the two tumuli researched in Ploiești-Triaș, cut by graves chronologically placed towards the end of the fourth millennium<sup>131</sup>. The rarity of the archaeological material and the ca. 200 m distance between the two tumuli<sup>132</sup> can be indicators connected to a certain type of habitation.

At the same time there are tumuli in that area that have revealed Coțofeni pots in the inventory of certain graves from Ariceștii-Rahtivani/T.IV (Pl. 9/7) and T.VI, Păulești/T.IV<sup>133</sup> or pottery in the T.VI base from Ariceștii-Rahtivani<sup>134</sup>. A Coțofeni pottery fragment that might be an import in a Cernavoda II settlement was found in Mănești (Prahova)<sup>135</sup>.

Few certain data are available in relation to Coțofeni funerary contexts, but one should not exclude the association of this social behaviour and the tumuli present in this culture's distribution area<sup>136</sup>. The researches performed in Silvașu de Jos open new perspectives<sup>137</sup>. The discovery of Coțofeni pots in other earthen tumuli as well, located south of the Carpathians in Suharu de Jos, Cîrna, and Coslogeni<sup>138</sup>, south of the Danube (Târnovo)<sup>139</sup>, or east of River Prut (Taraklia)<sup>140</sup> can be said to follow the same topic. Tumulus IV/Gr.3 from Ariceștii-Rahtivani has revealed an amphora-shaped pot with incised angular rows with hachures (Pl. 9/7)<sup>141</sup>, a decoration with analogies in a discovery made in

<sup>121</sup> Frînculeasa 2016, tab. 3.

<sup>122</sup> Roman 2001; Torcică 2013.

<sup>123</sup> Petrenko, Kovaljuch 2003.

<sup>124</sup> Roman 1964; 1969; Leahu 1965; Florescu 1965; Burtănescu 2002.

<sup>125</sup> Băjenaru 1998; Frînculeasa 2016.

<sup>126</sup> Frînculeasa *et al.* 2017b, 39–40.

<sup>127</sup> Simache, Teodorescu 1962.

<sup>128</sup> Frînculeasa *et al.* 2017b, tab. 4.

<sup>129</sup> Frînculeasa *et al.* 2017b, pl. 62/4.

<sup>130</sup> Frînculeasa *et al.* 2018b.

<sup>131</sup> Frînculeasa *et al.* 2013.

<sup>132</sup> Comșa 1989, 181.

<sup>133</sup> Frînculeasa *et al.* 2014; 2017d; 2017e.

<sup>134</sup> Frînculeasa *et al.* 2017d.

<sup>135</sup> Frînculeasa *et al.* 2018a, 85, pl. 9/5. Very few pottery materials have been discovered and except for the Coțofeni pot all others are atypical.

<sup>136</sup> Ciugudean 2000, 43–44.

<sup>137</sup> Diaconescu, Tincu 2016.

<sup>138</sup> Berciu 1939; Bichir 1958.

<sup>139</sup> Panayotov 1989; Jovanović 1992.

<sup>140</sup> Agulnikov 1995.

<sup>141</sup> Frînculeasa *et al.* 2014, pl. 5/4, 6–7.

Movila 1/Cpl.5 from Silvașu de Jos<sup>142</sup> but also in the settlement from Săvârșin<sup>143</sup>. The two features from Ariceștii-Rahtivani and Silvașu de Jos are dated to the final quarter of the fourth millennium<sup>144</sup>. The feature from Movila 1/Cpl.5/Silvașu de Jos has been attributed, on the basis of its inventory, to a Coțofeni IIIb layer<sup>145</sup>, while the habitation layer in Săvârșin has been attributed to the Coțofeni III phase<sup>146</sup>. Still in the Coțofeni environment one should also note the discoveries made in Râmnicu Vâlcea, Basarabi, Ocnele Mari, etc.<sup>147</sup> but also those made south of the Danube<sup>148</sup>. From the contemporary period in the extra-Carpathian area we also mention the discoveries from Horodișteea<sup>149</sup>, Izvoarele<sup>150</sup>, Foltești<sup>151</sup>, Cernavoda<sup>152</sup> and probably most recently the site in Cățelu Nou<sup>153</sup>. This pot shape is also well known in the Tripolie CII cultural environment<sup>154</sup>. A series of amphora-type pots that are closer to the Cernavoda II cultural environment (especially in the absence of decoration and possibly through the presence of notches on the rim) discovered in the tumuli from Ariceștii-Rahtivani T.VI, T.VII, Păulești/T.IV<sup>155</sup>, Ploiești-*Triaj*<sup>156</sup> can also be included in this analysis. We also mention here the amphora-shaped pot from a grave in Koșari, a municipality located east of the Prut<sup>157</sup>.

## Discussions

In the end of the fourth millennium the Yamnaya burials had not yet become predominant at the Lower Danube and if they feature as isolated finds (as a couple of C14 dates seem to indicate) their presence might indicate the exploratory character of the first contacts with this area. In the pre-Yamnaya and Yamnaya chronological and cultural dichotomy, the benchmarks that have been perpetuated are the natural context and the funerary mounds. All of the extra-Carpathian tumular graves from the final part of the fourth millennium are still being viewed from a single perspective – as a widely spread phenomenon, possibly with certain local characteristic. Analysing the ritual and the inventory of the graves that precede the Yamnaya features, the picture no longer seems so simplistic. One initially encounters goods that indicate the contemporaneity with the final development of Cucuteni/Tripolie CII. One subsequently encounters pots that indicate the contemporaneity with Cernavoda II, but also Coțofeni. Between Tripolie CII and Yamnaya one should probably place the Zhivotilovka burials, a group that might have had direct contacts with both of these cultural phenomena.

As for the area between the Prut, the Carpathians, the Danube, and the Olt, the discoveries attributed to Cernavoda II Culture and Foltești I cover this chronological interval. During their final stages they also coexisted with the beginnings of the Yamnaya. Also, one must not forget the relation with the early development of the Culture of the Spherical Amphorae. In the same context one also encounters graves with the deceased placed in extended position. This ritual that derives from older cultural traditions was maintained for a rather longer period in the tumular funerary context and is not a chronological episode to be inserted somewhere between the already mentioned benchmarks. Such graves seem to have existed throughout the second half of the fourth millennium, but also featured discretely during the first half of the third millennium. Then, one encounters them in the Katacombnya funerary environment<sup>158</sup>.

There are a few elements that render certain coherence to the ritual in the case of the tumular

<sup>142</sup> Luca *et al.* 2011, pl. 5/2.

<sup>143</sup> Sava 2015, pl. 33/4.

<sup>144</sup> Frînculeasa *et al.* 2014; Diaconescu, Tincu 2016, tab. 1.

<sup>145</sup> Diaconescu, Tincu 2016, 111.

<sup>146</sup> Sava 2015, 184.

<sup>147</sup> Roman 1976a; Ciugudean 2000; Tuțulescu 2016.

<sup>148</sup> Alexandrov 2007, 226, pl. III.

<sup>149</sup> Dumitrescu 1945.

<sup>150</sup> Vulpe 1957.

<sup>151</sup> Petrescu-Dîmbovița, Dinu 1974, fig. 12/1–3.

<sup>152</sup> Berciu *et al.* 1973.

<sup>153</sup> Leahu 1965, fig. 5.

<sup>154</sup> Ivanova, Toshev 2015

<sup>155</sup> Frînculeasa *et al.* 2017d; 2017e.

<sup>156</sup> Previously unpublished.

<sup>157</sup> Agulnikov, Redina 2005, fig.6/6.

<sup>158</sup> Frînculeasa *et al.* 2017b.

graves from the West-Pontic area at the end of the fourth millennium: the tumuli, the stone rings, the collective graves, the deceased placed in lateral-crouching positions, pots, weapons, jewelry items etc. One notes that during this period one encounters tumular graves that are, through the richness of their inventory, examples of eccentricity/opulence – as compared to the austerity of the Yamnaya graves that appeared at the Lower Danube soon afterwards. One can start from the mouths of the Dniester if one brings into the discussion grave 35 from Alexandrovka. This feature included pots, two flat axes made of copper, one shaft-hole axe, a copper dagger, an awl and two chisels made of copper, a deer antler hammer, a stone hammer, a sickle with inserted microlites, silver jewels etc.<sup>159</sup> Further west there is Gr.21/T.1 from Purcari that has revealed five pots, a flat axe, two daggers, a chisel and an awl made of copper, a deer antler hoe, a flint blade, an antler sickle and microlites from the sickle, temple rings made of silver, and a string of jewels made of semi-precious stones<sup>160</sup>.

Crossing the Prut one mentions Gr.20 from Brăițița (Pl. 8/3)<sup>161</sup> and then reaches the area of Prahova with a series of graves that through the richness of their inventory surpass by far everything found in the other early and Yamnaya tumuli at the Lower Danube. Besides pottery items, they contained flanged axes and a copper torque, spectacle shaped pendants made of copper, copper piercers, a stone axe, jewelry items made of silver, copper, bone, shell, kaolin, burnt clay, and flint items. Crossing south of the Danube one remarks Gr.30 from Kamen with its numerous pots, two flat axes (one was a flanged axe) and two copper daggers, a stone axe, hair rings made of silver and jewelry items made out of Dentalium shells (192 items)<sup>162</sup>. The flat grave (Gr.20) from Smyadovo (copper dagger, hair rings made of silver, two pots, jewelry items made out of Dentalium shells) can be included in this analysis<sup>163</sup>. Despite the fact that this was a collective grave with the deceased positioned rather according to the Yamnaya ritual (probably early), one cannot avoid Gr.5 from Drazhevo, with its inventory consisting of four pots, a dagger made of arsenical copper, two copper awls, six hair rings made of silver, a flint blade, and a shell<sup>164</sup>. Except for the construction of the tumulus, with the onset of the Yamnaya burials in the beginning of the third millennium many of these elements were delegated to the foreground and some became exceptional presences.

## Conclusions

Close to the turn of the fourth and third millennia BC at the Lower Danube the tumuli had already been a part of the landscape for a long enough period to become imposing. The settlements remain for now unapproachable figures due to their discreetness. The interaction of these two elements is a topic that can start to be included in academic debates due to the recent discoveries. At the same time, the intensity of these two elements in the local cultural environment reflects to different degrees the events triggered by phenomena north and east of the Black Sea. The local world, pale as it reveals itself to us, is involved in this story.

When the world seems to have settled down and the already individualized elites expressed themselves to a visible degree, events started to accelerate sometime in the beginning of the third millennium. A group with origins in the North-Pontic area, very compact from an ideological perspective, seems to have appeared suddenly and to have replaced a structure already familiarized with the cultural landscape of the Lower Danube. One now can hardly envisage the contours of these events that unfolded between the Atlantic and the Caucasus, southwards over the Caucasus and the Balkans, reaching Anatolia or the Aegean. This is the period when the Yamnaya funerary phenomenon became predominant. But this is another story, one worthy of being written on another occasion.

## Acknowledgements

We thank Dr. Angela Simalcsik (Olga Necrasov Center of Anthropological Research, Iași) for

<sup>159</sup> Ivanova M. 2013, footnote 32.

<sup>160</sup> Iarovoi 1990, fig. 27–29; Ivanova M. 2013, fig. 6.10, 6.11.

<sup>161</sup> Dragomir 1959.

<sup>162</sup> Dimitrova 2018, 317.

<sup>163</sup> Chohadzhiev, Mihaylova 2014.

<sup>164</sup> Iliev, Bakardzhiev 2018, 327.

providing photographs of the traces of the trephination performed on the skull from Holboca and for allowing us to publish them here. We also wish to thank Dr. Adrian Ioniță (The Vasile Pârvan Institute of Archaeology, Bucharest) for allowing us to research and use some of the photographs of the axe in Coșereni. Along the same lines we also mention Sergiu Popovici (National Archaeological Agency, Chișinău) for providing a series of bibliographic sources useful for the present article.

#### **Alin Frînculeasa**

Prahova County Museum of History and  
Archaeology  
Prahova, ROU  
alinfranculeasa@yahoo.com

#### **Octav Negrea**

Prahova County Museum of  
History and Archaeology  
Prahova, ROU  
octavnegrea@yahoo.com

#### **Bianca Preda-Bălănică**

University of Helsinki  
Helsinki, FIN  
bianca.preda@helsinki.fi

#### **Andrei Soficaru**

“Francisc I. Rainer” Anthropological  
Research Centre  
Bucharest, ROU  
asoficaru@yahoo.com

#### **Daniel Garvăn**

Buzău County Museum  
Buzău, ROU  
daniel.garvan@gmail.com

## **BIBLIOGRAPHY**

- Agulnikov 1995 S. Agulnikov, *Importuri de pe cursul inferior al Dunării în complexe arheologice ale bronzului timpuriu din stepa Bugeacului*. Cercetări arheologice în aria nord-tracă I, 1995, 81–85.
- Agulnikov, Redina 2005 S. Agulnikov, E. Redina, *Могильник эпохи ранней бронзы Змеиная Балка у с. Кошары/Могилник епохи ранней бронзи Змеиная Балка і с. Кошарі*. Revista Arheologică S.N. I/2, 2005, 267–276.
- 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, 141–171.
- Alexandrescu 1974 A. D. Alexandrescu, *La nécropole du Bronze ancien de Zimnicea (dép. de Teleorman)*. Dacia N.S. 18, 1974, 79–94.
- Alexandrov 2007 S. Alexandrov, *Bronze Age Materials from Bagacina (North-West Bulgaria)*. In: M. Stefanovich, Chr. Angelova (eds.), PRAE In Honorem Henrieta Todorova. National Archaeological Institute with Museum. Sofia 2007, 225–248.
- Alexandrov 2011 S. Alexandrov, *Prehistoric Barrow Graves between the Danube and the Balkan Range. Stratigraphy and Relative Chronology*. In: S. Müller-Celka, E. Borgna (eds.), *Ancestral Landscapes: Burial mounds in the Copper and Bronze Ages (Central and Eastern Europe – Balkans – Adriatic – Aegean, 4th – 2nd millennium BC)*. Lyon 2011, 307–320.
- Alexandrov 2015 S. Alexandrov, *Moghilini grobove ot rannata bronzova epoha v Trakija (55 godini po-kijсно)*. Arheologhija LVI, 1–2, 2015, 33–48 // Ст. Александров, *Могилни гробове от ранната бронзова епоха в Тракия (55 години по-късно)*. Археология LVI, 1–2, 2015, 33–48.
- Alexandrov, Kaiser 2016 S. Alexandrov, E. Kaiser, *The Early Barrow Graves in West Pontic Area. Cultures? Migrations? Interactions?* In: V. Nikolov, W. Schier (eds.), *Der Schwarzmeerraum vom Neolithikum bis in die Früheisenzeit (6000–600 v. Chr.). Kulturelle interaktionen in der zirkumpontischen Zone und Kontakte mit ihren Nachbargebieten, Prähistorische Archäologie in Südosteuropa. Band 30*. Rahden/Westf., Verlag Marie Leidorf GmbH 2016, 359–370.



- Anthony 2007 D. W. Anthony, *The horse, the wheel and language. How Bronze-Age riders from the Eurasian steppes shaped the modern world*. Princeton (NJ), Princeton University Press 2007.
- Băjenaru 1998 R. Băjenaru, *Discuții privind cronologia absolută a culturii Glina*. SCIV(A) 49, 1, 1998, 3–22.
- Berciu 1939 D. Berciu, *Arheologia preistorică a Olteniei*. Craiova 1939.
- Berciu 1961 D. Berciu, *Contribuții la problemele neoliticului în România în lumina noilor cercetări*. București 1961.
- Berciu et al. 1973 D. Berciu, S. Morintz, P. Roman, *Cultura Cernavoda II. Așezarea din sectorul b de la Cernavoda*. SCIV(A) 24, 3, 1973, 373–405.
- Bicbaev, Popovici 2016 V. Bicbaev, S. Popovici, *Позднетрипольское погребение у с. Тэура Ноуэ (Сынжерейский р-н, Республика Молдова)*. Starojitnoski stepovogo pricernomor'ia I krımı XIX, 2016, 7–13.
- Bichir 1958 G. Bichir, *Un mormânt cu ocră la Cîrna*. SCIV(A) IX, 1, 1958, 101–112.
- Bodnar, Rakzky 2009 M. Bodnar, P. Rakzky (eds.), *The Copper Age cemetery of Budakalasz*. Budapest 2009.
- Boghian et al. 2016 D. Boghian, S.-C. Enea, A. Simalcsik, V.-M. Groza, S. Ignătescu, *Descoperirile funerare de la Costâna-Imaş (com. Todirești, jud. Suceava, România). Probleme privind încadrarea cultural-cronologică și ritul funerar*. In: L. Sîrbu, N. Telnov, L. Ciobanu, G. Sîrbu, M. Kaşuba, *Culturi, procese și contexte în arheologie*, Volum omagial Oleg LEVIȚKI la 60 de ani. Chișinău 2016, 114–140.
- Botezatu et al. 1987 D. Botezatu, H. Aldea, H. Ciugudean, *Considerații asupra unui craniu trepanat descoperit la Livezile (jud. Alba) aparținând culturii Coțofeni (începutul mileniului II î.e.n.)*. Studii și Comunicări de Antropologie t. 24, 1987, 3–7.
- Brudiu 2003 M. Brudiu, *Lumea de sub tumulii din sudul Moldovei. De la indo-europeni la turanicii târzii-mărturii arheologice*. București 2003.
- Bugaj et al. 2018 U. Bugaj, P. Włodarczak, P. Jarosz, J. Koledin, M. Podsiadło, *Истраживање енеолитског кургана у Шајкашу, Општина Тутел*. Гласник Српског археолошког друштва 34, 2018, 7–22.
- Burtănescu 2002 F. Burtănescu, *Epoca timpurie a bronzului între Carpați și Prut cu unele contribuții la problemele epocii bronzului în Moldova*. Bibliotheca Thracologica XXXVII. București 2002.
- Buzdugan, Alexoaie 1989 C. Buzdugan, I. Alexoaie, *Săpături arheologice într-un tumul din comuna Roma (județul Botoșani)*. Hierasus VII-VIII, 1989, 105–115.
- Catană 2012 M.-C. Catană, *Municipul Ploiești: remodelarea urbană și calitatea vieții*. Târgoviște 2012.
- Cavruc, Neagu 1995 V. Cavruc, M. Neagu, *Date noi privind stratigrafia Grădiștei Coslogeni*. Cultură și Civilizație la Dunărea de Jos 13–14, 1995, 71–80.
- Chohadzhiev, Mihaylova 2014 S. Chohadzhiev, N. Mihaylova, *Smyadovo. Prehistoric Cemetery 2005–2008*. Sofia 2014.
- Ciobanu et al. 2019 I. Ciobanu, A. Simalcsik, S. Popovici, S. Agulnicov, *Cercetările arheologice preventive din cadrul grupului tumular de pe Drumul mare de la Giurgiulești*. Cercetări arheologice în Republica Moldova, Campania 2018. Chișinău 2019, 40–42.
- Ciugudean 1996 H. Ciugudean, *Epoca timpurie a bronzului în centrul și sud-vestul Transilvaniei*. Bibliotheca Thracologica XIII. București 1996.
- Ciugudean 2000 H. Ciugudean, *Eneoliticul final în Transilvania și Banat: cultura Coțofeni*. Timișoara 2000.
- Ciugudean 2015 H. Ciugudean, *Contacte între Cultura Amforelor Sferice și comunitățile Coțofeni în spațiul transilvan*. In: C. Schuster, C. Tulugea, C. Terteci (ed.), *Buridava XII/1, Symposia Thracologica X, Volum dedicat profesorului Petre I. Roman la cea de-a 80-a aniversare*. Râmnicu Vâlcea 2015, 164–175.
- Cojoc 2014 M. Cojoc, *Tezaurul de la Corabia*. In: R. Oanță- Marghitu (ed.), *Aurul și argintul antic al României*. Muzeul Național al României. Râmnicu Vâlcea 2014, 196–198.
- Comșa 2008 A. Comșa, *Aspects of archaic medicine. Human and animal trephination on the territory of Romania*. Târgoviște 2008.
- Comșa 1985 E. Comșa, *Mormintele cu ocră de la Holboca*. Thraco-Dacica 6, 1–2, 1985, 145–160.

- Comșa 1989 E. Comșa, *Mormintele cu ocră din movila II–1943 de la Ploiești-Triaj*. *Thraco-Dacica* 10, 1–2, 1989, 181–188.
- Constantinescu, Grigoraș 2004 E. M. Constantinescu, L. Grigoraș, *Cercetările arheologice de la Gherăseni „Grindul Cremenea”, Campaniile 2002–2003*. *Mousaios* 9, 2004, 9–13.
- Dani, Nepper 2006 J. Dani, I. M. Nepper, *Sárrétudvari-Örhalom tumulus grave from the beginning of the EBA in eastern Hungary*. *Communicationes Archaeologicae Hungaricae*, 2006, 29–49.
- Debie 1967 C. N. Debie, *Începuturile urbanismului în Ploiești. Contribuții la cunoașterea istoriei orașului*. Muzeul de Istorie Ploiești. Prahova 1967.
- Demcenko 2016 T. Demcenko, *K voprosu o vydelenii kulturnoy grupy Bursuceni v ramkakh grodineshtskogo-pozdnemaykopskogo fenomena*. In: L. Sîrbu, N. Telnov, L. Ciobanu, G. Sîrbu, M. Kașuba (eds.), *Culturi, Procese și Contexte în Arheologie*. Volumul omagial Oleg Levițki la 60 de ani. Chișinău 2016, 84–99.
- Dergachev 1994 V. Dergachev, *Epoca bronzului. Perioada timpurie*. *Thraco-Dacica* 15, 1–2, 1994, 121–140.
- Dergachev, Manzura 1991 V. Dergachev, I. Manzura, *Pogrebalnye komplekсы pozdnego Tripolia*. Kishinev 1991.
- Diachenko, Harper 2016 A. Diachenko, T. K. Harper, *The absolute chronology of Late Tripolye sites: a regional approach*. *Sprawozdania Archeologiczne* 68, 2016, 81–105.
- Diaconu 2010 V. Diaconu, *Considerații privind topoarele de luptă din piatră specifice epocii bronzului din regiunile est-carpătice ale României*. *Revista Arheologică S.N.* V, 1, 2010, 5–21.
- Diaconescu, Tincu 2016 D. Diaconescu, S. Tincu, *Considerații arheologice privind necropola tumulară de la Silvașu de Jos – Dealul Țapului (oraș Hațeg, jud. Hunedoara)*. *Analele Banatului, S.N. Arheologie-Istorie XXIV*, 2016, 107–135.
- Dimitrova 2014 D. Dimitrova, *Grobove ot bronzovata epoha pri Kamen, Slivensko*. *Археология* 1–2, 2014, 69–82 // Д. Димитрова, *Гробове от бронзовата епоха при Камен, Сливенско*. *Археология* 1–2, 2014, 69–82.
- Dimitrova 2018 D. Dimitrova, *Могилен гроб от ранната бронзова епоха до с. Камен, община Сливен/Early Bronze Age Tumular Grave near Kamen, Sliven Region*. In: St. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*. Sofia 2018, 316–317.
- Dinu 1977 M. Dinu, *Complexul cultural Horodiștea-Foltești. Contribuția noilor cercetări arheologice la problema perioadei de tranziție de la eneolitic la epoca bronzului din zona est carpatică a României*. Doctoral dissertation defended in 1977 at the Alexandru Ioan Cuza University in Iași, Faculty of History of Philosophy, coordinator M. Petrescu-Dîmbovița.
- Dragomir 1959 I. T. Dragomir, *Necropola tumulară de la Brăilița*. *MCA* V, 1959, 671–694.
- Dumitrescu 1945 H. Dumitrescu, *La station préhistorique de Horodiștea, sur le Prut*. *Dacia*, 1941–1944 (1945) IX–X, 127–153.
- Dumitroaia 2000 G. Dumitroaia, *Comunități preistorice din nord-estul României: de la cultura Cucuteni până în bronzul mijlociu*. *BMA VII*. Piatra-Neamț 2010.
- Ecsedy 1979 I. Ecsedy, *The People of the Pit Grave Kurgan in Eastern Hungary*. Budapest 1979.
- Florescu 1965 M. Florescu, *Unele observații asupra evoluției bronzului timpuriu în Moldova*. *SCIV(A)* 16, 4, 1965, 649–661.
- Florescu, Florescu 1959 A. Florescu, M. Florescu, *Sondaajul de la Gârceni (r. Negrești, reg. Iași)*. *MCA* VI, 1959, 221–229.
- Frînculeasa 2012 A. Frînculeasa, *Despre o datare absolută de la Mălăieștii de Jos (jud. Prahova) și posibilele implicații*. *Memoria Antiquitatis XXVIII*, 2002, 185–222.
- Frînculeasa 2016 A. Frînculeasa, *Developments in mid-second millennium B.C. in Northern Muntenia (archaeological investigations in the Prahova river Basin)*. In: F. Gogâltan, C. Cordoș (eds.), *Prehistoric settlements: social, economic and cultural aspects. Seven studies in the Carpathian area*. Cluj-Napoca 2016, 115–180.
- Frînculeasa et al. 2013 A. Frînculeasa, B. Preda, O. Negrea, A. D. Soficaru, *Bronze Age tumular graves recently investigated in Northern Wallachia*. *Dacia N.S.* LVII, 2013, 23–63.
- Frînculeasa et al. 2014 A. Frînculeasa, B. Preda, T. Nica, A. D. Soficaru, *Un nou tumul preistoric cercetat la Ariceștii-Rahativani (jud. Prahova)*. *Studii de Preistorie* 11, 2014, 189–227.

- Frînculeasa *et al.* 2015a A. Frînculeasa, B. Preda, V. Heyd, *Pit-Graves, Yamnaya and Kurgans along the Lower Danube: Disentangling 4th and 3rd Millennium BC Burial Customs, Equipment and Chronology*. *Præhistorische Zeitschrift* 90, 2015, 45–113.
- Frînculeasa *et al.* 2015b A. Frînculeasa, B. Preda, D. Garvăn, *Ploiești, jud. Prahova*. *Cronica Cercetărilor Arheologice din România, campania 2014, A XLIX-a Sesiune națională de rapoarte arheologice*, 28 – 30 mai 2015, Muzeul Județean Argeș. Pitești 2015, 233–235.
- Frînculeasa *et al.* 2015c A. Frînculeasa, A. D. Soficaru, A. Măgureanu, B. Preda, B. Ciupercă, D. Garvăn, A. Anton, C. Constantinescu, *Un complex funerar preistoric descoperit la Târgșoru Vechi (jud. Prahova)*. *Buletinul Muzeului Județean Teleorman, Seria Arheologie* 7, 2015, 133–156.
- Frînculeasa *et al.* 2017a A. Frînculeasa, M. Frînculeasa, I. Dumitru, C. Buterez, *The dynamics of prehistoric burial mounds of Ploiești metropolitan area (Romania) as reflected by cartographic documents of the 18th–20th centuries*. *Area* vol. 49, 4, 2017, 533–544.
- Frînculeasa *et al.* 2017b A. Frînculeasa, A. Simalcsik, B. Preda, D. Garvăn, *Smeeni-Movila Mare: monografia unui sit arheologic regăsit*. Târgoviște 2017.
- Frînculeasa *et al.* 2017c A. Frînculeasa, P. Mirea, G. Trohani, *Local cultural settings and transregional phenomena: on the impact of a funerary ritual on the Lower Danube in the 4th millennium B.C.* *Buletinul Muzeului Județean Teleorman* 9, 2017, 75–116.
- Frînculeasa *et al.* 2017d A. Frînculeasa, B. Preda, O. Negrea, C. Dumitrescu, A. D. Soficaru, *Ariceștii-Raktivani, jud. Prahova*. *Cronica Cercetărilor Arheologice din România, Campania 2016, A LI-a Sesiune Națională de Rapoarte Arheologice*. Muzeul Național de Istorie a României, București 24–27 Mai 2017. București 2017, 164–165.
- Frînculeasa *et al.* 2017e A. Frînculeasa, B. Preda, O. Negrea, C. Dumitrescu, R. Munteanu, D. Garvăn, A. D. Soficaru, *Păulești, jud. Prahova*. *Cronica Cercetărilor Arheologice din România, Campania 2016, A LI-a Sesiune Națională de Rapoarte Arheologice*. Muzeul Național de Istorie a României, 24–27 Mai 2017. București 2017, 207–208.
- Frînculeasa *et al.* 2018a A. Frînculeasa, B. Preda, A. Simalcsik, O. Negrea, *Peisaje și contexte actuale: un tumul de pământ cercetat în localitatea Coada Izvorului (jud. Prahova)*. *MCA (new series)* XIV, 2018, 77–99.
- Frînculeasa *et al.* 2018b A. Frînculeasa, B. Preda-Bălănică, A. Simalcsik, O. Negrea, B. Constantinescu, D. Stan, *Morminte lamnaia într-un tumul redescoperit și salvat în localitatea Blejoi (jud. Prahova)*. *Mousaios*. *Buletinul Muzeului Județean Buzău* XXII, 2018 (under print).
- Garvăn *et al.* 2018 D. Garvăn, A. Frînculeasa, A. Simalcsik, *Complexe preistorice cercetate la Gherăseni – Grindul Cremenea (jud. Buzău) la mijlocul secolului al XX-lea*. *Buletinul Muzeului Județean Teleorman* 10, 2018, 279–301.
- Gavrilă *et al.* 2016 E. Gavrilă, T. Ignat, M. Vintilă, *Date preliminare privind materiale arheologice din perioada de tranziție de la eneolitic la epoca bronzului descoperite la Dămăroaia, campania 2013*. *Revista de cercetări arheologice și numismatice* II, 2016, 36–40.
- Georgevic, Georgevic 2016 J. Georgevic, B. Georgevic, *Livade kod Panceva. Srednivekovna zirkva i nekropola na eneolitskoj humtzy*. *Narodny Muzej Pancevo* 2016 // J. Ђорђевић, В. Ђорђевић, *Ливаде код Панчева. Средњевековна црква и некропола на енеолитској хумци*. *Народни музеј Панчево* 2016.
- Georgiev *et al.* 1979 G. Il. Georgiev, N. Ia. Merpert, R. V. Katincjarov, D. G. Dimitrov, Ezero. *Rannobronzovoto selische. Bolgarskata aademia na naukite*. Sofia 1979 // Г. Ил. Георгиев, Н. Я. Мерперт, Р. В. Катинчаров, Д. Г. Димитров, Езеро. *Раннобронзовото селище*. *Българската академия на науките*. Sofia 1979.
- Georgieva *et al.* 2018 P. Georgieva, M. Popova, V. Danov, Kozareva Mogila: *A settlement and necropolis in the West Black Sea region*. In: S. Dietz, F. Mavridis, Ž. Tankosić, T. Takaoğlu (eds.), *Communities in Transition. The Circum-Aegean Area during the 5th and 4th Millennia B.C.* Oxford & Philadelphia. Oxbow 2018, 107–119.
- Goslar *et al.* 2015 T. Goslar, V. I. Klochko, Al. Koško, P. Włodarczak, D. Żurkiewicz, *Chronometry of Late Eneolithic and 'Early Bronze' cultures in the Middle Dniester area: investigations of the Yampil barrow complex*. *Baltic-Pontic Studies* vol. 20, 2015, 256–291.
- Groșescu 2008 I. Groșescu, *Mahalalele Ploieștilor*. Ploiești 2008.
- Hartuche 1987 N. Hartuche, *Cercetările arheologice de la Lișcoteanca, I, Așezarea 'Movila Olarului' (1970–1976)*. *Istros* V, 1987, 7–90.
- Hartuche 2002 N. Hartuche, *Complexul arheologic Brăilița*. *Bibliotheca Thracologica* XXXV. București 2002.

- Harțuche, Anastasiu 1968 N. Harțuche, F. Anastasiu, Brăilița, *Așezări și cimitire omenești datând din epoca neolitică până în pragul orânduirii feudale*. Muzeul Brăilei 1968.
- Hașotti 1997 P. Hașotti, *Epoca neolitică în Dobrogea*. Muzeul de Istorie Națională și Arheologie. Constanța 1997.
- Hașotti, Popovici 1992 P. Hașotti, D. Popovici, *Cultura Cernavoda I în contextul descoperirilor de la Hârșova*. Pontica XXV, 1992, 15–44.
- Häusler 1976 A. Häusler, *Die Gräber der älteren Ockergrabkultur zwischen Dnepr und Karpaten*. Berlin 1976.
- Horváth 2017 T. Horváth, *Balatonzöd-Temeti, Hungary: A Late Copper Age Boleráz-Baden opened settlement with human burials and sacrifice*. In: H. Meller, S. Friederich (Hrsg.), *Salzmünde – Regel oder Ausnahme/Salzmünde – Rule or exception? Tagungen des Landesmuseum für Vorgeschichte Halle (Saale) Band 16*, 2017, 389–415.
- Horváth et al. 2013 T. Horváth, J. Dani, A. Pető, L. Pospieszny, E. Svingor, *Multidisciplinary Contributions to the Study of Pit Grave Culture Kurgans of the Great Hungarian Plain*. In: V. Heyd, G. Kulcsár, V. Szeverényi (eds.), *Transitions to the Bronze Age. Interregional Interaction and Socio-Cultural Change in the Third Millennium BC Carpathian Basin and Neighbouring Regions*. Archaeolingua 30. Budapest 2013, 153–179.
- Horváth et al. 2018 T. Horváth, J. Cseh, P. Barkóczy, L. Juhász, S. Gulyás, Z. Bernert, A. Buzár, *A double burial of the Baden culture from Tatabánya–Delphi (northern Transdanubia, Hungary) – A case study of the Dentalium beads of the Baden culture and their interpretation*. Quaternary International, 2018 DOI: 10.1016/j.quaint.2018.09.009.
- Hristova, Uzunov 2012 T. Hristova, J. Uzunov, *Kolektivni grob s trupopologane ot rannata bronzovata epoha pri Sibrano, Novozagorsko*. Arheologhija LIII, 1, 2012, 62–67 // T. Христова, Ж. Узунов, *Коллективен гроб с трупополагане от ранната бронзова епоха при Събрано, Новозагорско*. Археология LIII, 1, 2012, 62–67.
- Iarovoi 1990 E. V. Iarovoi, *Kurgany epokhi eneolita-bronzy Nizhnego Podnestrovia*. Kishinev 1990.
- Ignat 2008 I. Ignat, *Un topor-ciocan naviform de piatră descoperit la Recia Verbia (com. Dimăcheni, județul Botoșani)*. Arheologia Moldovei XXXI, 2008, 205–215.
- Iliev, Bakardzhiev 2018 I. Iliev, S. Bakardzhiev, *Могилен гроб от ранната бронзова епоха до с. Дражево, Ямболско/Early Bronze Age Tumular Grave near the Village of Drazhevo, Yambol Region*. In: St. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), *Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age*. Sofia 2018, 325–327.
- Ioachimescu 1914 N. Ioachimescu, *Cronica mahalalei Sfântul Vasile scrisă în anul 1903*. In: G. Zagoriț (ed.), *Din trecutul Ploieștilor*. Brazda lui Novac. Progresul Soc. Anonimă. Ploiești 1914, 60–70.
- Irimia 1981 M. Irimia, *Observații privind epoca bronzului în Dobrogea în lumina unor cercetări recente*. SCIV(A) 32, 3, 1981, 347–369.
- Ivanova M. 2013 M. Ivanova, *The Black Sea and the Early Civilizations of Europe, the Near East and Asia*. Cambridge University Press. Cambridge 2013.
- Ivanova S. 2013 S. Ivanova, *Connections between the Budzhak culture and Central European groups of the Corded Ware culture*. In: A. Koško, V. Klochko (eds.), *The Ingul-Donets Early Bronze Civilization as Springboard for Transmission of Pontic Cultural Patterns to the Baltic Drainage Basin 3200–1750 BC*. Baltic-Pontic Studies 18. Poznań 2013, 86–120.
- Ivanova, Toshev 2015 S. Ivanova, G. Toshev, *Late Eneolithic and Bronze Age prologue Pontic societies. Forest-steppe Middle Dniester and Prut drainage basins in the 4th/3rd–2nd millennium BC: A history of investigations*. In: A. Koško (ed.), *Podolia as a Cultural Contact Area in the 4th/3rd–2nd Millennium BC*. Baltic-Pontic Studies 20. Poznań 2015, 7–39.
- Jovanović 1992 B. Jovanović, *Chronological relations of late Aeneolithic of the central and eastern Balkans*. Balcanica XXIII, 1992, 243–253.
- Kaiser, Winger 2015 E. Kaiser, K. Winger, *Pit graves in Bulgaria and the Yamnaya Culture*. Praehistorische Zeitschrift 90, 1–2, 2015, 114–140.
- Kalčev 2002 P. Kalčev, *Das frühbronzezeitliche Gräberfeld von Stara Zagora – “Bereketska Mogila” (Bulgarien)*. Saarbrücker Studien und Materialien zur Altertumskunde 8. Bonn 2012, 5–130.

- Kapuran *et al.* 2014 A. Kapuran, A. Bulatović, I. Jovanović, *Bor and Majdanpek. Bor and Majdanpek. Cultural Stratigraphy of Prehistoric Sites between the Iron Gates and Crni Timok.* Belgrad-Bor 2014.
- Kitov *et al.* 1991 G. I. Kitov, I. Panayotov, P. Pavlov, *Mogilni nekropoli v Loveschkija kraj. Ranna bronzova epoha (nekropol Goran-Slatina).* Razkopki i proucivanija 23, Sofia 1991 // Г. И. Китов, И. Панайотов, П. Павлов, Могилни некрополи в Ловешкия край. Рана бронзова епоха (некрополът Горан-Слатина). Разкопки и проучвания 23, София 1991.
- Klochko 2001 V. I. Klochko, *Weaponry of Societies of the Northern Pontic Circle: 5000–700 BC.* Baltic-Pontic Studies 10. Poznań 2001.
- Krauß 2014 R. Krauß, Troy, *Baden Culture and Corded Ware – Correlations in the Balkan-Carpathian Region at the Turn of the 4th Millennium BC.* In: B. Horejs, M. Mehofer (eds.), *Western Anatolia before Troy Proto-Urbanisation in the 4th Millennium BC? Proceedings of the International Symposium held at the Kunsthistorisches Museum Wien, Vienna, Austria, 21–24 November, 2012.* Oriental and European Archaeology, Volume 1. Vienna 2014, 261–274.
- Kromer *et al.* 2003 B. Kromer, M. Korfmann, P. Jablonka, *Heidelberg Radiocarbon Dates for Troia I to VIII and Kumtepe.* In: A. Günther, Wagner, E. Pernicka, H.-P. Uerpmann (eds.), *Troia and the Troad: Scientific Approaches.* Springer. Berlin 2003, 43–54.
- Kunchev 1995 M. Kunchev, *Nadgrobna moghila II (Golyamata moghila) do sela Golyama Detelina, obschina Radnevo (Chasti I), Maritsa-Iztok.* Arheologhiceski proucivanija 3, 1995, 35–63 // М. Кънчев, Надгробна могила II (Голямата могила) до села Голяма Детелина, община Раднево, Часть I, Марица-Изток. Археологически проучвания 3, 1995, 35–63.
- Lazarovici 2010 C. M. Lazarovici, *New data regarding the chronology of the Precucuteni, Cucuteni and Horodiştea-Erbiceni cultures.* In: J. Šuteková, P. Pavúk, P. Kalábková, B. Kovár (eds.), *PANTA RHEI Studies on the Chronology and Cultural Development of South-Eastern and Central Europe in Earlier Prehistory Presented to Juraj Pavúk on the Occasion of his 75th Birthday.* Comenius University Bratislava. Bratislava 2010, 71–94.
- Lazurcă 1980 E. Lazurcă, *Raport asupra noilor cercetări arheologice de la Baia (Hamangia), judeţul Tulcea.* Peuce VIII, 1980, 7–36.
- Leahu 1965 V. Leahu, *Săpăturile arheologice de la Căţelu Nou.* Cercetări Arheologice în Bucureşti II, 1965, 11–74.
- Leshtakov 1994 K. Leshtakov, *The detachment of the Early Bronze age ceramics along the Southern Bulgarian Black Sea Coast.* In: M. Lazarov, C. Angelova (eds.), *Thracia-Pontica V, Les ports dans la vie de la Thrace Ancienne, 17–21 octobre 1991.* Sozopol. Bulgaria 1994, 23–38.
- Leviţki *et al.* 1996 O. Leviţki, I. Manzura, T. Demcenko, *Necropola tumulară de la Sărăteni.* Biblioteca Thracologica XVII. Bucureşti 1996.
- Luca *et al.* 2011 S. A. Luca, D. Diaconescu, C. C. Roman, S. Tincu, *Cercetările arheologice de la Silvaşu de Jos – Dealu Țapului.* Campaniile anilor 2006–2010, Suceava. Anuarul Muzeului Bucovinei XXXVIII, 2011, 7–54.
- Mantu 1995 C. M. Mantu, *Câteva considerații privind cronologia absolută a neo-eneoliticului din România.* SCIV(A) 46, 3–4, 1995, 213–235.
- Manzura 1999 I. Manzura, *Cernavoda I culture.* In: L. Nikolova (ed.), *The Balkans in Later Prehistory. Periodization, Chronology and Cultural Development in the Final Copper and Early Bronze Age (Fourth and Third Millennia BC).* British Archaeological Reports International Series 791. Oxford 1999, 95–174.
- Manzura 2016 I. Manzura, *North Pontic steppes at the end of the 4th millennium BC: the epoch of broken borders.* In: A. Zanoci, E. Kaiser, M. Kashuba, E. Izbitser, M. Băţ (hrsg.) *Mensch, Kultur und Gesellschaft von der Kupferzeit bis zur frühen Eisenzeit im Nördlichen Eurasien (Beiträge zu Ehren zum 60. Geburtstag von Eugen Sava).* Tyragetia International I, National Museum of History of Moldova, Freie Universität Berlin. Chişinău 2016, 53–75.
- Marinescu-Bâlcu, Andreescu 2005 S. Marinescu-Bîlcu, R. Andreescu, *Piscul Cornişorului. 1945–1946.* Studii de Preistorie 2, 2005, 143–180.

- Mayer 1991 C. Mayer, *Berstattungen der Baden Kultur aus Österreich*. *Archaeologia Austriaca* 75, 1991, 29–61.
- Mecu 2018 L. S. Mecu, *Utilaj și tipologie litică în epoca bronzului în Oltenia și jumătatea vestică a Munteniei*. Verguleasa 2018.
- Morintz 1997 S. Morintz, *Descoperiri din epoca bronzului în R. Muscel. Comunicare ținută la institutul de Arheologie București, mai 1961, cu fig. 33/2; 39/1; 78/1; 80; 81; 82*. In: C. Schuster, *Perioada timpurie a epocii bronzului în bazinele Argeșului și Ialomiței superioare*. BTA XX. București 1997, 217–222.
- Morintz, Roman 1968 S. Morintz, P. Roman, *Aspekte des Ausgangs des Äneolithikum und der Übergangsstufe zur Bronzezeit im Raum der Niederdonau*. *Dacia N.S.* XII, 1968, 5–128.
- Motzoi-Chicideanu 2011 I. Motzoi-Chicideanu, *Obiceiuri funerare în epoca bronzului la Dunărea mijlocie și inferioară, vol. I, II*. București 2011.
- Munteanu 2017 R. Munteanu, *Eneoliticul târziu în nord-estul Câmpiei Române. Câteva remarci privind amprenta culturală locală*. *Mousaios XXI*, 2017, 45–55.
- Necrasov 2010 O. Necrasov, *Date noi asupra practicii trepanației la populațiile preistorice și protoistorice din România*. In: L. Bejenaru, M. Știrbu, C. Toma, (ed.), *Olga Necrasov, Opera paleoantropologică*. Iași 2010, 249–256.
- Necrasov, Cristescu 1957 O. Necrasov, M. Cristescu, *Contribuție la studiul antropologic al scheletelor din complexul mormintelor cu ocră de la Holboca-Iași*. *Probleme de antropologie III*, 1957, 73–147.
- Nestor 1943 I. Nestor, *Raport asupra cercetărilor și săpăturilor arheologice de la Ploiești-Triaj și de la Sărata Monteoru-Buzău*. *Anuarul Comisiei Monumentelor Istorice* 1942, 1943, 160–161.
- Nestor 1944a I. Nestor, *Raport asupra cercetărilor și săpăturilor de salvare făcute la Ploiești-Triaj și Brazi, între 21 octombrie și 7 noiembrie 1942*. *Rapoarte MNA*, 1944, 29–31.
- Nestor 1944b I. Nestor, *Raport asupra săpăturilor și cercetărilor arheologice din campania anului 1943*. *Rapoarte MNA*, 1944, 55–57.
- 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, 15–38.
- Nica et al. 1994 M. Nica, Z. Floroiu, T. Zorloiu, M. Vasilescu, *Tell-ul eneolitic gumelnițean de la Drăgănești-Olt punctul Corboaița*. *SCIV(A)* 45, 1, 1994, 41–59.
- Niculică et al. 2004 B. Niculică, V. Budui, I. Mareș, *Considerații privind unele topoare de piatră, din epoca bronzului, descoperite în Podișul Sucevei*. *Suceava XXIX-XXX*, 2004, 267–315.
- Nikolova 1999 L. Nikolova, *The Balkans in Later Prehistory. Periodization, Chronology and Cultural Development in the Final Copper and Early Bronze Age (Fourth and Third Millennia BC)*. *BAR International Series* 791. Oxford 1999.
- Panayotov 1989 I. Panayotov, *Jamnata kultura v bolgarskite zemi*. *Razkopki i prouchvaniya* 21. Sofia 1989 // И. Панайотов, *Ямната култура в българските земи, Разкопки и проучвания*, 21. София 1989.
- Panayotov, Alexandrov 1995 I. Panayotov, C. Alexandrov, *Moghilen nekropol ot rannata bronzova epoha v zemlichata na selata Mednikarovo i Iskritza, Maritza-Istok*. *Arheologijeski prouchvaniya* 3, 1995, 87–113 // И. Панайотов, С. Александров, *Могилен некропол от ранната бронзова епоха в землищата на селата Медникарово и Искрица, Марица-Изток*. *Археологически проучвания* 3, 1995, с. 87–113.
- Patroi 2015 N. C. Patroi, *Cultura Sălcuța în Oltenia*. Craiova 2015.
- Petrenko, Kovaljuch 2003 V. Petrenko, N. Kovaljuch, *Novie dannie po radiouglerodnoi hronologiy eneolita Severo-Zapadnogo Pricernomoriya*. In: O.G. Korvin-Piotrovskij (ed.), *Tripilski poselennya giganti. Materiali mizhnarodnoi konferentsii*. Korvin press. Kiev 2003, 102–110.
- Petrescu-Dîmbovița 1953 M. Petrescu-Dîmbovița, *Cetățuia și cimitirul hallstattian de la Stoicani*. *MCA I*, 1953, 13–211.
- Petrescu-Dîmbovița, Dinu 1974 M. Petrescu-Dîmbovița, M. Dinu, *Nouvelles fouilles archéologique á Foltești (dep. de Galați)*. *Dacia N.S.* 18, 1974, 19–72.
- Rassamakini 2012 J. Rassamakini, *Absolute Chronology of Ukrainian Tripolian Settlements*. In: F. Menotti, A. G. Korvin-Piotrovskiy (Hrsg.), *The Tripolye Culture Giant-Settlements in Ukraine. Formation, Development and Decline*. Oxford/Oakville 2012, 19–69.

- Reingruber, Rassamakin 2016 A. Reingruber, Y. Rassamakin, *Zwischen Donau und Kuban: Das nordpontische Steppengebiet im 5. Jt. v. Chr.*. In: V. Nikolov, W. Schier (eds.), *Der Schwarzmeerraum vom Neolithikum bis in die Früheisenzeit (6000–600 V. CHR.) kulturelle inter-ferenzen in der zirkumpontischen zone und kontakte mit ihren nachbargebieten, Prähistorischearchäologie in Südosteuropa*, band 30. Rahden/Westf.: Marie Leidorf 2016, 367–404.
- Rența 2016 E. Rența, *Cercetările arheologice de salvare de la Ciulnița, județul Ialomița (1994–1997). Așezarea neolitică Boian-Giulești, tumulii I-III și alte descoperiri din eneolitic, epoca bronzului și epoca fierului*. Târgoviște 2016.
- Roman 1964 P. Roman, *Despre unele aspecte ale perioadei de trecere de la epoca neolitică la epoca bronzului în regiunile extracarpătice ale R.P.R.* Revista Muzeelor I, 4, 1964, 314–325.
- Roman 1969 P. Roman, *Conceptul Foltești II și problema începuturilor epocii bronzului în Moldova*. Carpica II, 1969, 17–22.
- Roman 1976a P. Roman, *Cultura Coțofeni*. București 1976.
- Roman 1976b P. Roman, *Complexul Orlea-Sadovec*. SCIV(A) 27, 2, 1976, 147–169.
- Roman 2001 P. Roman, *Die Cernavoda III-Boleraz-Kulturerscheinung an der Unteren Donau*. In: P. Roman, S. Diamandi (Hrsg.), *Die Cernavoda III-Boleráz. Ein vorgeschichtliches Phänomen zwischen dem Oberrhein und der Unteren Donau*. Mangalia/Neptun (18–24 Oktober 1999). București 2001, 13–59.
- Roman et al. 1992 P. I. Roman, A. Dodd-Oprîeșcu, J. Pál, *Beiträge zur Problematik der Schnurverzierten Keramik Südosteuropas*. Heidelberger Akad. Wiss., Internationale Interakademische Kommission für die Erforschung der Vorgeschichte des Balkans, Monographien 3. Mainz 1992.
- Sava-Petrescu 1937 G. M. Sava-Petrescu, *Târguri și Orașe între Buzău, Târgoviște și București în dezvoltarea istorico-geografică economică și comercială*. București 1937.
- Sachße 2010 C. Sachße, *Untersuchungen zu den Bestattungssitten der Badener Kultur (2 Bände)*. Univforsch. Prähist. Arch. 179. Bonn 2010.
- Sava 2015 V. Sava, *The Coțofeni settlement from Săvârșin “Cetățuia”, Arad County*. Acta Terrae Septemcastrensis XIV, 2015, 163–235.
- Schuster et al. 2011 C. Schuster, A. Morintz, R. Băjenaru, A. Ioniță, A. Măgureanu, C. Ștefan, A. D. Popescu, D. Sârbu, D. Măgureanu, R. Kogălniceanu, E. Dumitrașcu, M. Vasile, M. Constantin, C. Constantin, *Peștera, com. Peștera, jud. Constanța*. Cronica Cercetărilor Arheologice din România, campania 2010, A XLV-a sesiune națională de rapoarte arheologice, Sibiu, 26–29 mai 2011. Muz. Naț. Brukenthal. Sibiu 2011, 210–211.
- Schuster et al. 2016 C. Schuster, A. Morintz, I. Tuțulescu, *Cernavoda I culture in the Lower Argeș basin*. In: K. Bacvarov and R. Gleser (eds.), *Southeast Europe and Anatolia in prehistory. Essays in honor of Vassil Nikolov on his 65th anniversary*. Universitätsforschungen zur prähistorischen Archäologie 293, Verlag Dr. Rudolf Habelt GmbH. Bonn 2016, 415–421.
- Sevastos 1937 M. Sevastos, *Monografia orașului Ploiești*. București 1937.
- Simache, Teodorescu 1962 N. I. Simache, V. Teodorescu, *Săpăturile de salvare de la Smeeni*. Materiale VIII, 1962, 273–281.
- Simion 2003 G. Simion, *Migrația popoarelor indo-europene la Dunărea de Jos*. In: *Culturi antice în zona Gurilor Dunării, I. Preistorie și protoistorie*. Tulcea 2003, 13–50.
- Șerbănescu, Trohani 1978 D. Șerbănescu, G. Trohani, *Cercetări arheologice pe valea Mostiștei*. Ilfov. File de Istorie, 1978, 17–42.
- Șerbănescu, Androne 2016a D. Șerbănescu, O. Androne, *Complexele funerare ale culturii Cernavodă II descoperite la Oltenița, jud. Călărași*. In: A. Boroneanț, A. Măgureanu, A. Vilcu, *Sesiunea anuală de comunicări științifice a Institutului de Arheologie „Vasile Pârvan”*. SCIV(A) 67, 1–2, 2016, 139–170.
- Șerbănescu, Androne 2016b D. Șerbănescu, O. Androne, *Some preliminary considerations regarding the spatial organization on the eponymous settlement of the Gumelnița culture*. Revista de Cercetări Arheologice și Numismatice II, 2, 2016, 24–35.
- Tecar et al. 2015 M. Tecar, M. Rotea, L. Săsăran, *Două topoare perforate de piatră descoperite pe raza localității Someșu Rece, jud. Cluj*. Revista Bistriței XXIX, 2015, 15–19.
- Tonceva 1981 G. Tonceva, *Un habitat lacustre de l'age du Bronze Ancien dans les environs de la ville de Varna (Ezerovo II)*. Dacia N.S. 25, 1981, 41–62.

- Torcică 2013 I. Torcică, *Descoperiri Cernavodă III în situl de la Măgura Buduiasca (județul Teleorman)*. Studii de Preistorie 10, 2013, 155–170.
- Trestioreanu, Marinică 2003 C. Trestioreanu, G. Marinică, *Bisericile din Ploiești, I. Bisericile Ortodoxe*. Ploiești 2003.
- Tudor 1973 E. Tudor, *Un mormânt de la începutul epocii bronzului descoperit la Răcăciuni (jud. Bacău)*. SCIV(A) 24, 2, 1973, 283–289.
- Tudor et al. 1986 D. Tudor, O. Toropu, C. Tătulea, M. Nica, F. Bîciu, *Șantierul arheologic Sucidava – Celei (jud. Olt)*. MCA. A XVI-a Sesiune Națională de Rapoarte. Vaslui 1982, 158–168.
- Tușulescu 2016 I. Tușulescu, *Perioada de tranziție spre epoca bronzului în zona deluroasă și montană a Olteniei*. Târgu-Jiu 2016.
- Vasiliu 1995 I. Vasiliu, *Mormintele cu ocră de la Luncavița, Movila Mocuța*. Peuce 11, 1995, 89–115.
- Vasiliu 2002 I. Vasiliu, *Bronzul timpuriu și mijlociu la Dunărea de Jos*. Teză de doctorat susținută la Universitatea «1 decembrie 1918», Facultatea de Istorie și Filologie, Alba Iulia, conducător științific profesor Iuliu Paul, mai 2002.
- Vasiliu 2004 I. Vasiliu, *Date noi privind înmormântările cu ocră din Dobrogea. Mobilele cu ocră de la Enisala–La Bălțișă*. Ialomița 4, 2004 (2003–2004), 123–136.
- Vasiliu et al. 2014 I. Vasiliu, M. Mocanu, D. Paraschiv, *Mormântul în cistă de piatră de la Casimcea (jud. Tulcea)*. Pontica XLVII, 2014, 163–185.
- Vernescu 2013 M. Vernescu, *Bărăganul în preistorie (cca 3500–1200 a. Chr.). Perioada de tranziție de la eneolitic la epoca bronzului și epoca bronzului*. Brăila 2013.
- Vlad, Matei 2004 F. Vlad, G. Matei, *Contribuții la repertoriul arheologic al județului Ialomița*. Ialomița IV, 2003–2004, 197–220.
- Vulpe 1959 A. Vulpe, *Depozitul de la Tufa și topoarele cu ceața cilindrică*. SCIV(A) 10, 2, 1959, 266–276.
- Vulpe, Vulpe 1924 R. Vulpe, E. Vulpe, *Les fouilles de Tinosul*. Dacia I, 1924, 166–223.
- Weninger 1995 B. Weninger, *Stratified 14C dates and ceramic chronologies. Case studies for the Early Bronze Age at Troy (Turkey) and Ezero (Bulgaria)*. Radiocarbon 37, 1995, 443–456.
- Weninger, Easton 2014 B. Weninger, D. Easton, *The Early Bronze Age Chronology of Troy (Periods I–III): Pottery Seriation, Radiocarbon Dating and the Gap*. In: B. Horejs, M. Mehofer (Eds.), *Western Anatolia before Troy Proto-Urbanisation in the 4th Millennium BC?*. Proceedings of the International Symposium held at the Kunsthistorisches Museum Wien, Vienna, Austria, 21–24 November, 2012. *Oriental and European Archaeology*, Volume 1. Vienna 2014, 157–199.
- Włodarczak 2017 P. Włodarczak, *Kurgan rites in the Eneolithic and Early Bronze Age Podolia in light of materials from the funerary ceremonial centre at Yampil*. *Baltic-Pontic Studies* vol. 22, 2017, 246–283.
- Zagoriț 1914 G. Zagoriț, *Din trecutul Ploieștilor. Brazda lui Novac*. Progresul Soc. Anonimă. Ploiești 1914.



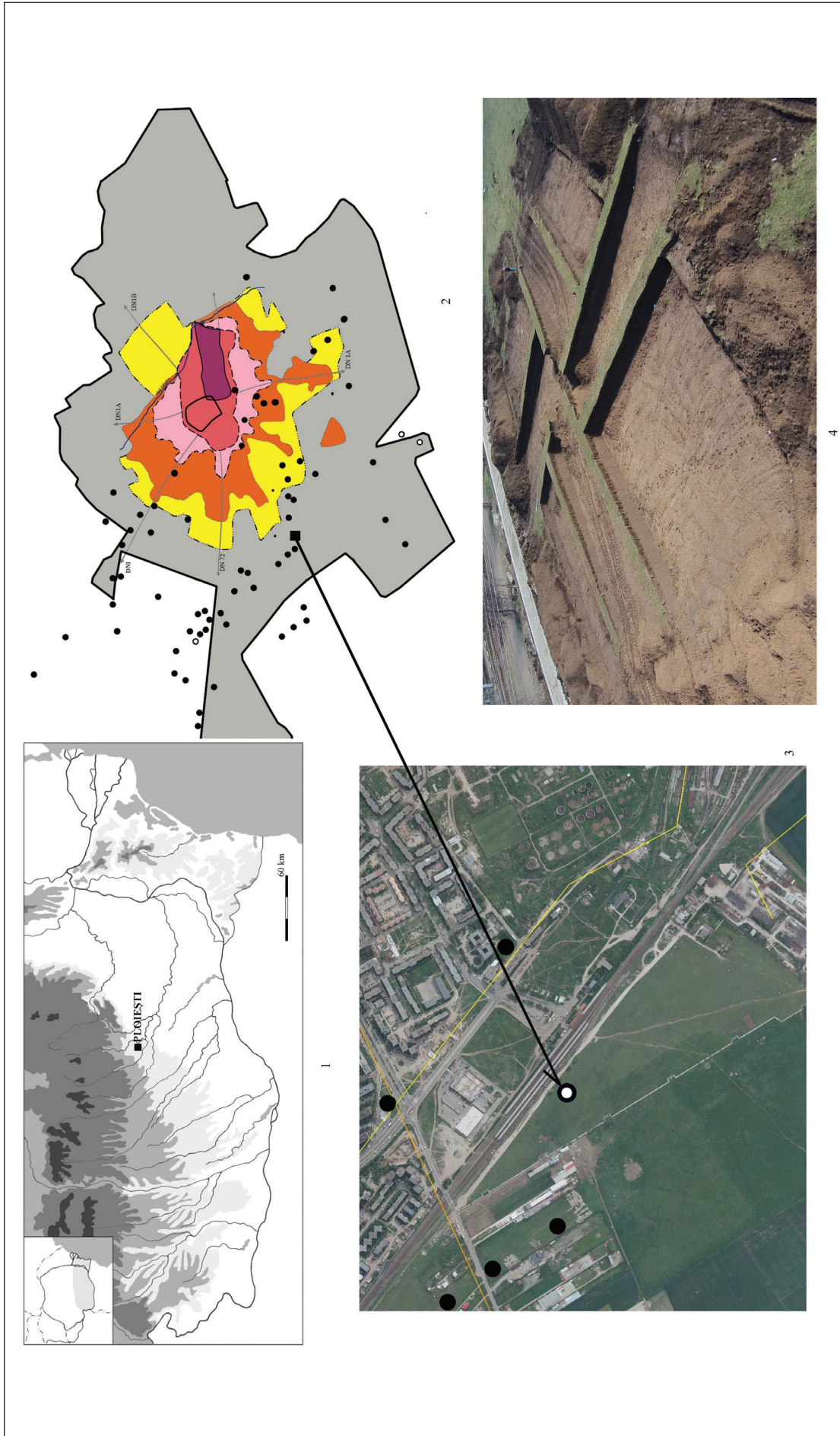


Plate 1. The location of the tumulus in Ploiești-Vest (1–3) and of the tumuli inside the settlement according to the development of the city (2) (taken from Frînculeasa *et al.* 2017a); aerial photo with the excavation of the baulks, 02.03.2015 (4).

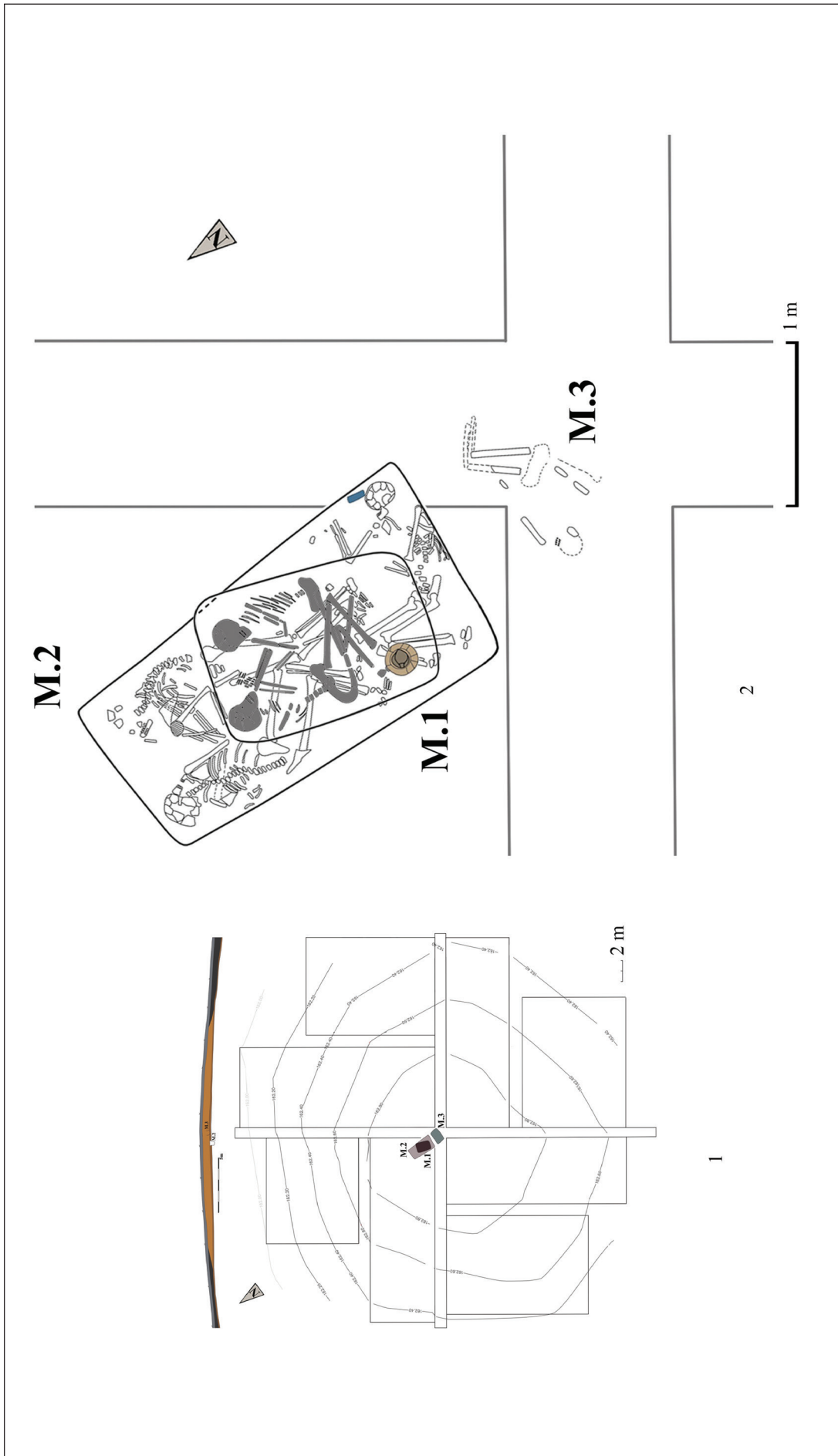


Plate 2. Ploiești-Vest: general ground plan and magisterial profile I (1); detail with the location of the graves on the ground plan (2).



Plate 3. Ploiești-Vest: grave 1 (1,4), detail with the trephination performed on the left side of the skull (2) and the *in situ* position of the pots (3,5).

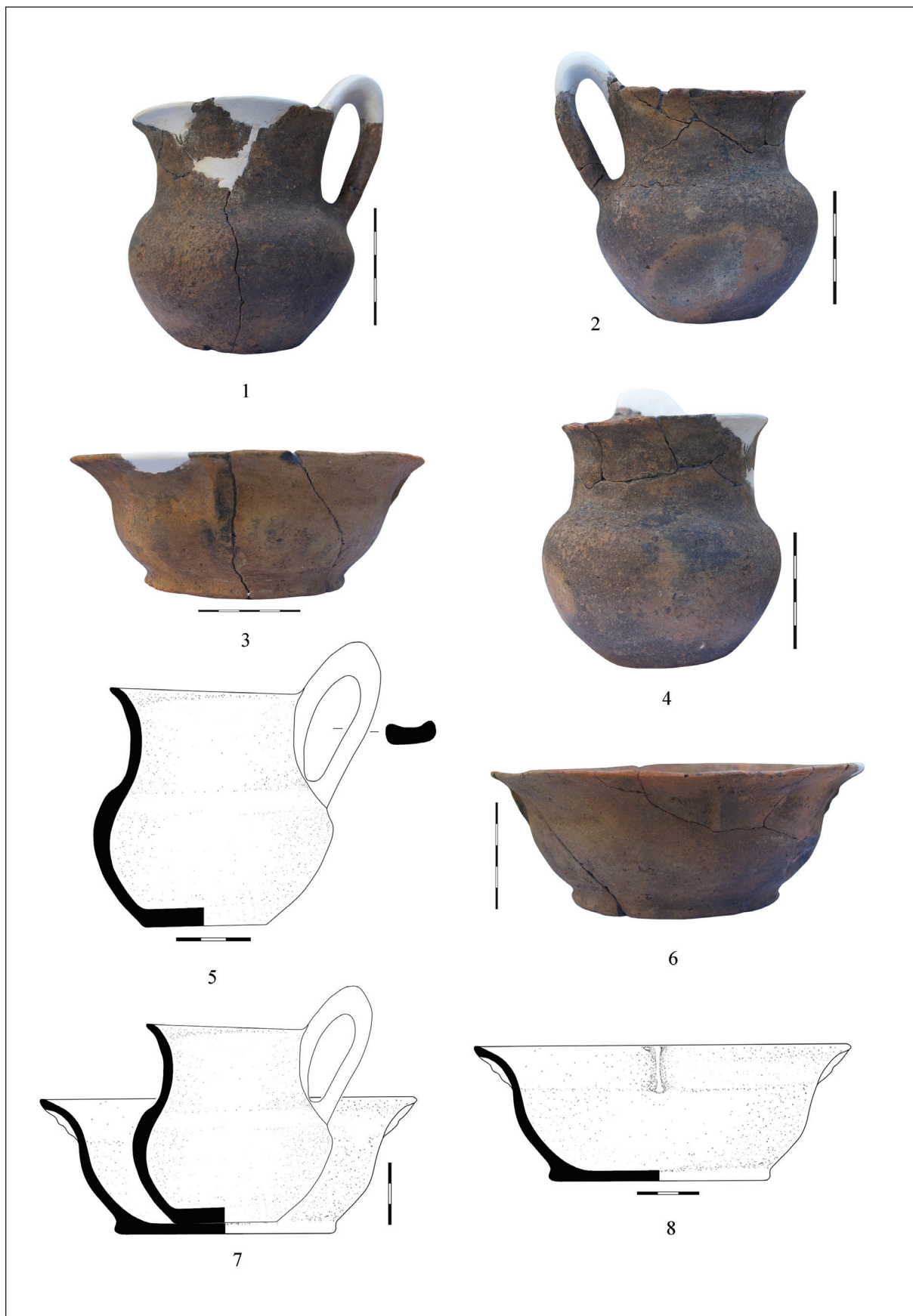


Plate 4. Ploiești-Vest: the cup (1–2,4) and the bowl (3,6,8) discovered in grave 1.



Plate 5. Ploiești-Vest: grave 2 and details of individual C (3) and the stone axe *in situ* (4–5).

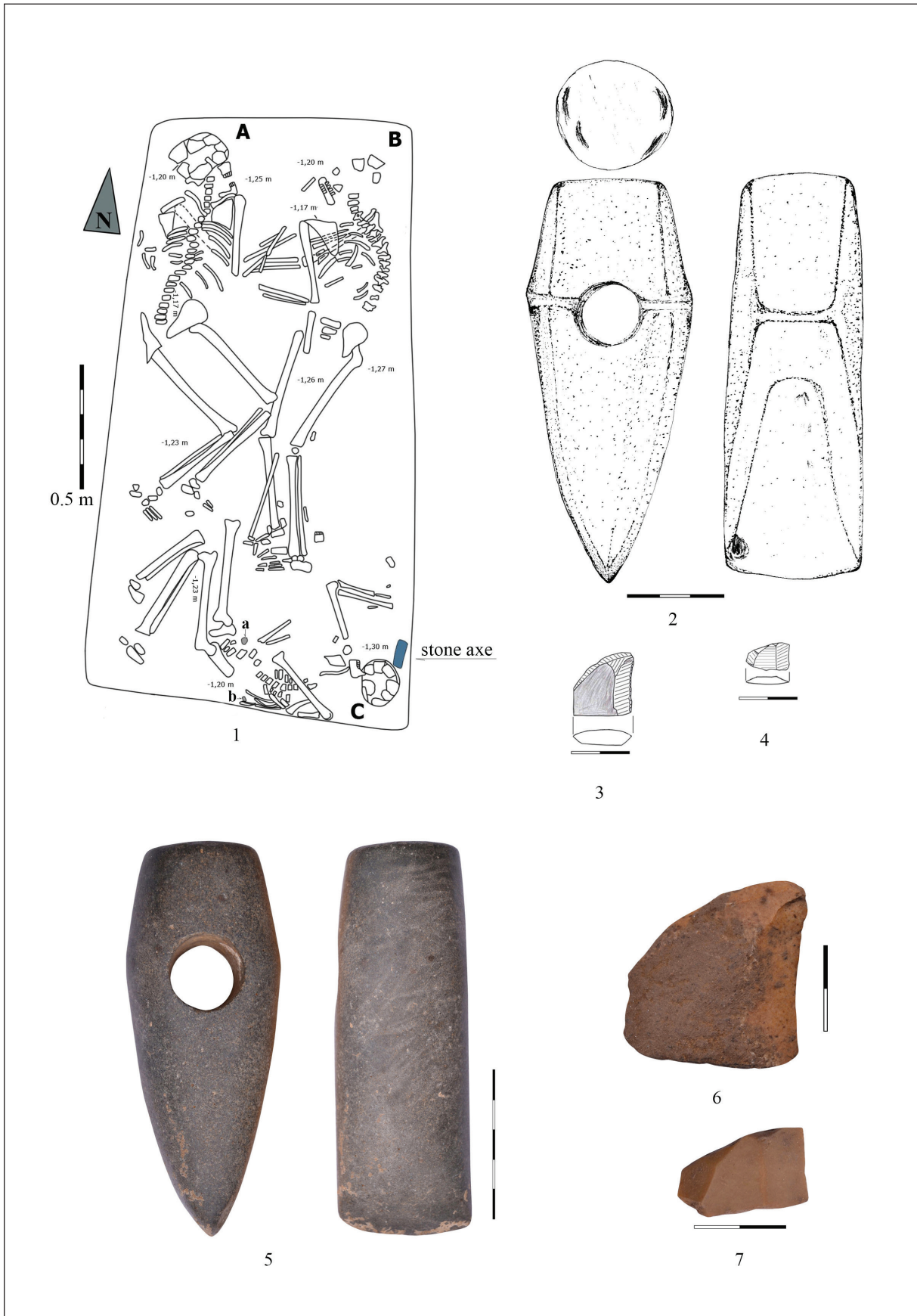


Plate 6. Ploiești-Vest: ground plan of grave 2 (1) and the items in its inventory (2-7).

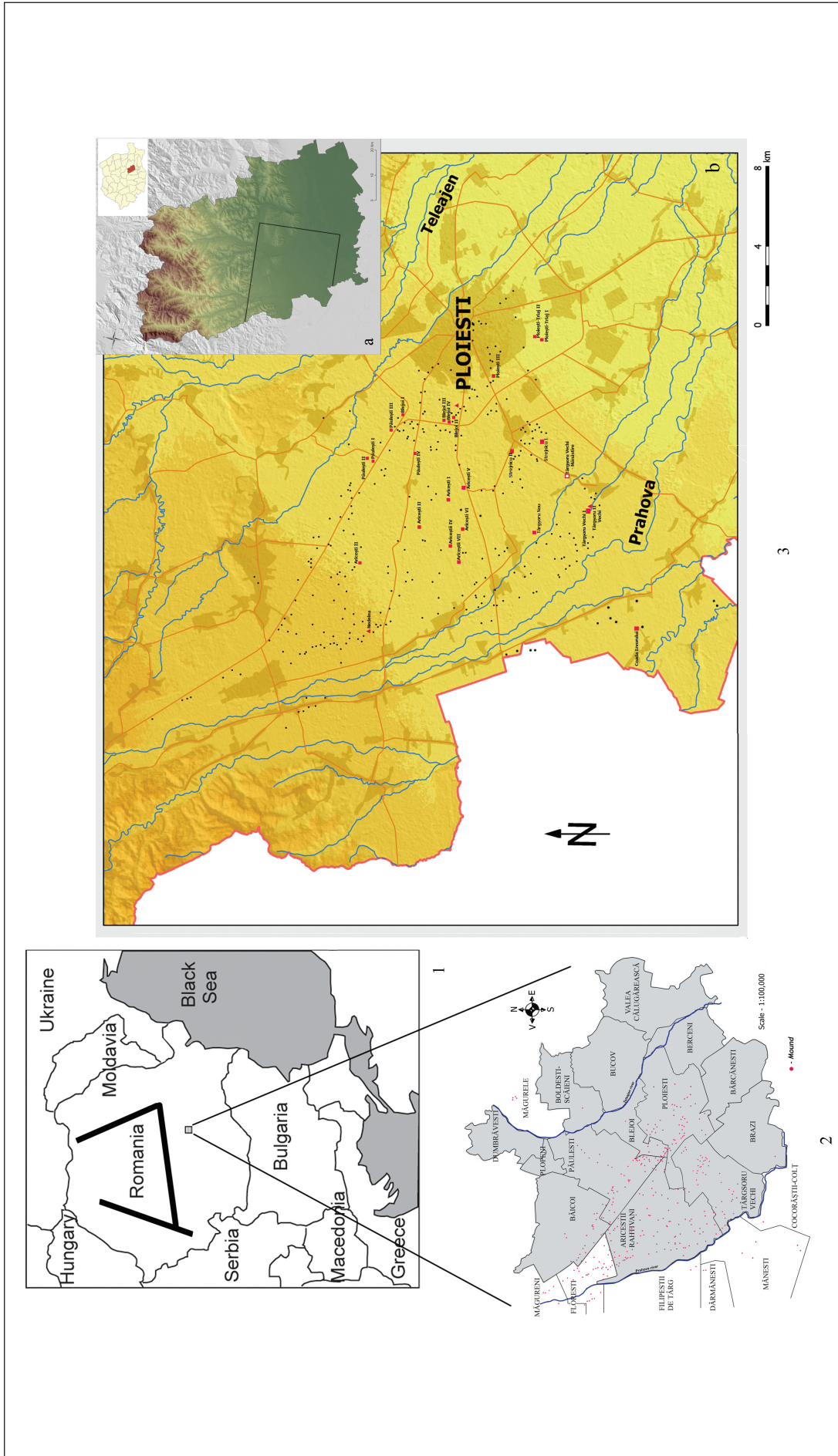


Plate 7. The Prahova Area and the tumuli that have been mapped (2–3) and/or researched (3) (squares = researched tumuli; full circles = mapped tumuli; triangles = tumuli without graves; empty squares = isolated graves); the dynamic of the tumuli in the Prahova area according to settlement borders (2).

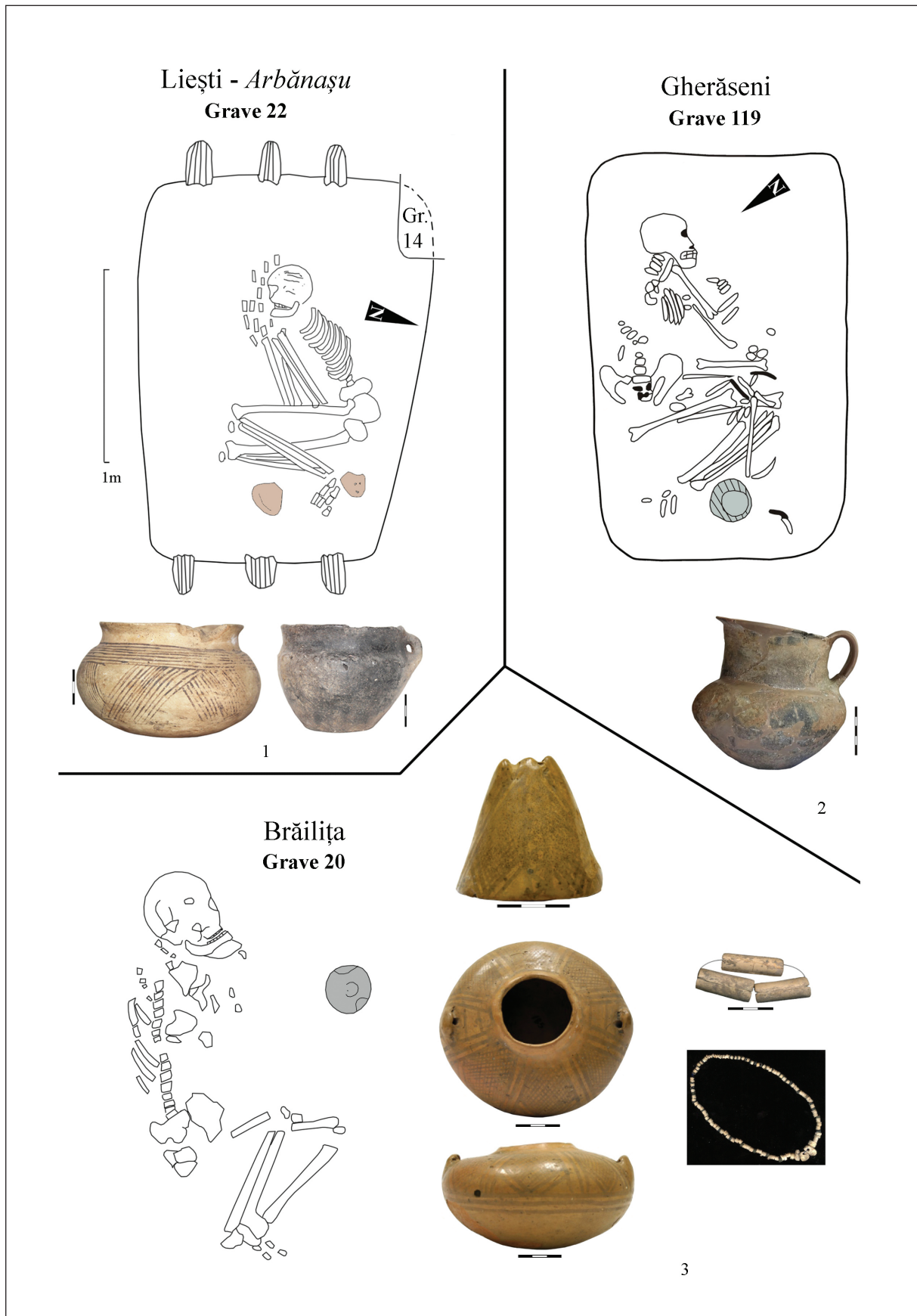


Plate 8. Graves with the deceased placed sideways, in crouching positions: Liești-Arbănașu M.22 (taken from Brudiu 2003); Gherăseni M.119 (taken from Frînculeasa *et al.* 2017b); Brăilița M.20 (taken from Vernescu 2013).



**ARICEȘTII-RAHTIVANI**  
**T.IV/2013**



1

Ind.B=4532±37 BP/  
3370- 3090 cal BC

**Grave 5**  
(main grave)

Ind.A=7-9 yrs.  
Ind.B=male=35.2-38.4 yrs.  
Ind.C=male=45.2-45.6 yrs.  
Stature=165.35 cm



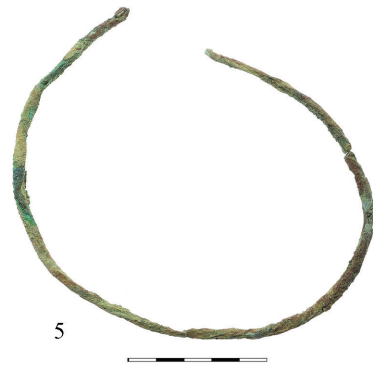
2



3



4



5

**Grave 3**  
(secondary grave)

Ind.A=male=50-60 yrs.  
Ind.B=female=30-40 yrs .  
Ind.C=male=30-40 yrs.



6

Ind.B=4455±37 BP  
3340-2960 cal BC



7

Plate 9. Ariceștii-Rahtivani, tumulus IV: grave 5 (1) and its inventory – cup (2), hair rings made of silver (3), stone pendant (4), copper torque (5); grave 3 (6) and the amphora-shaped pot (7).

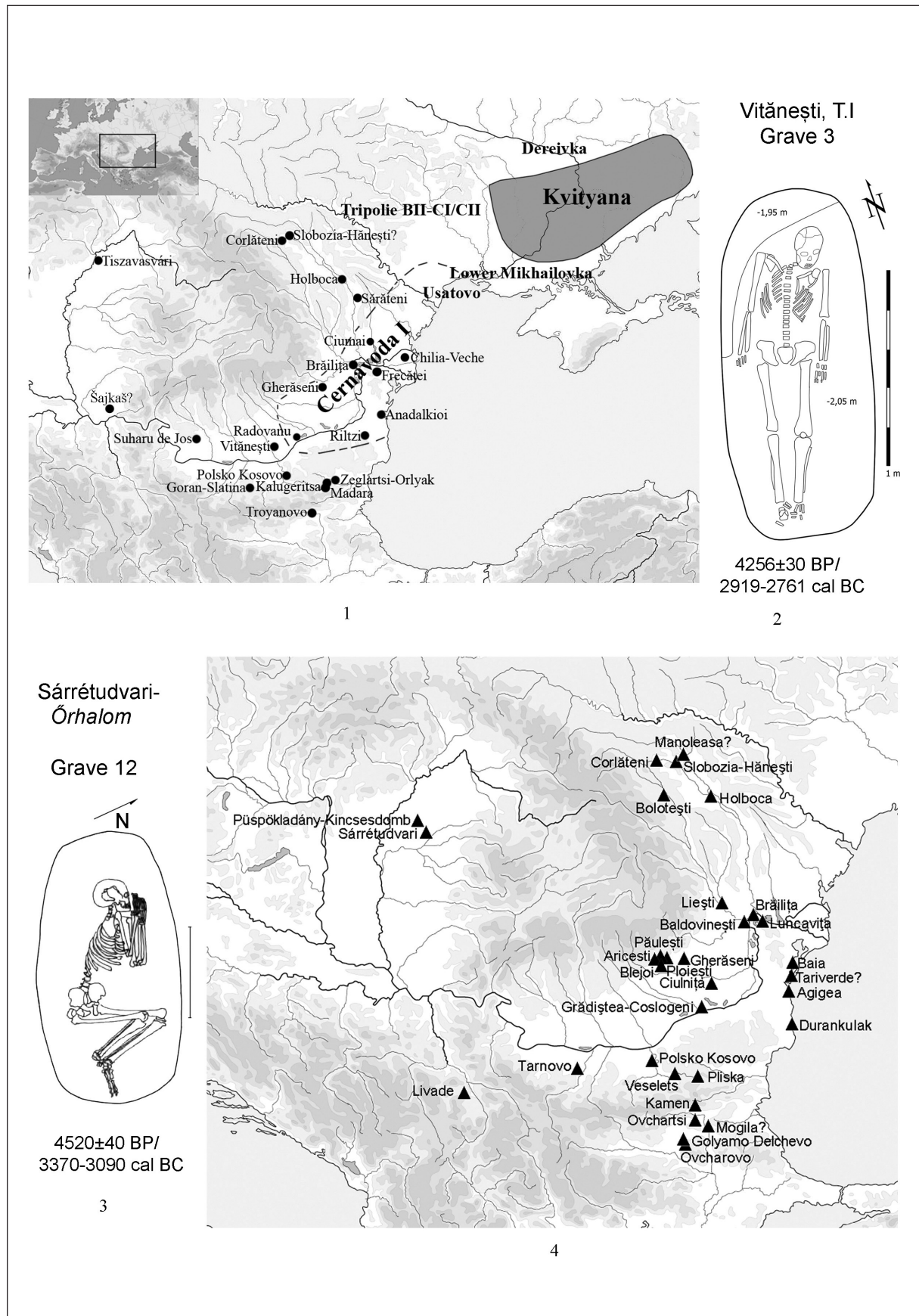
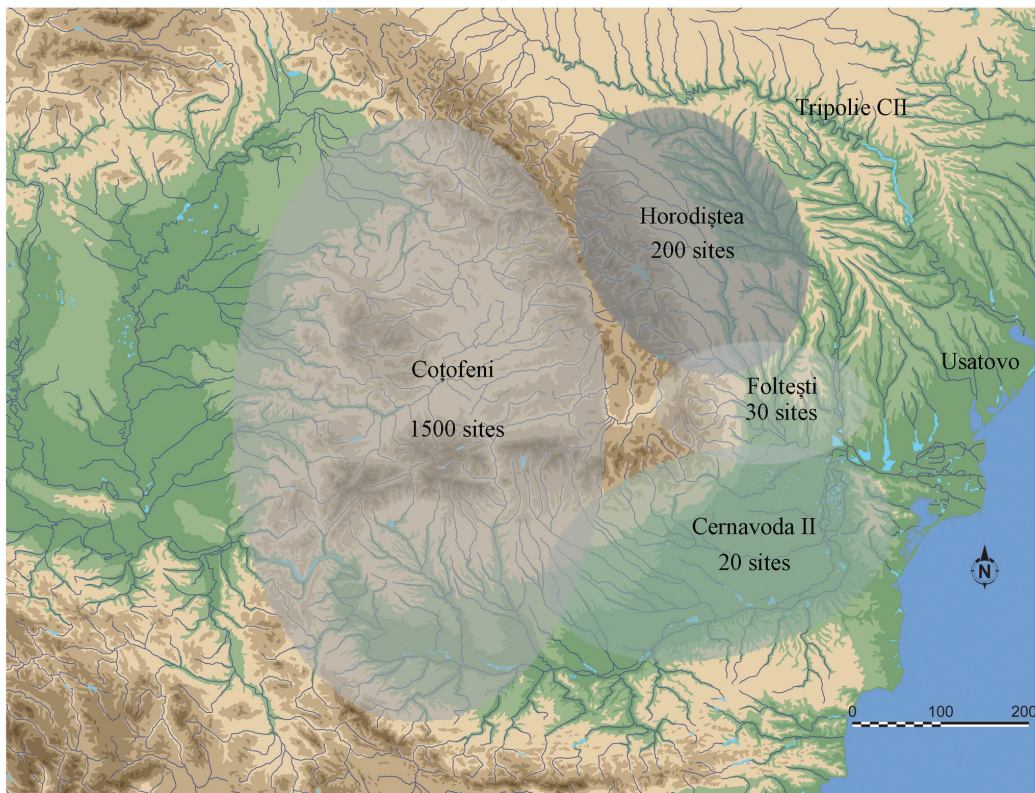
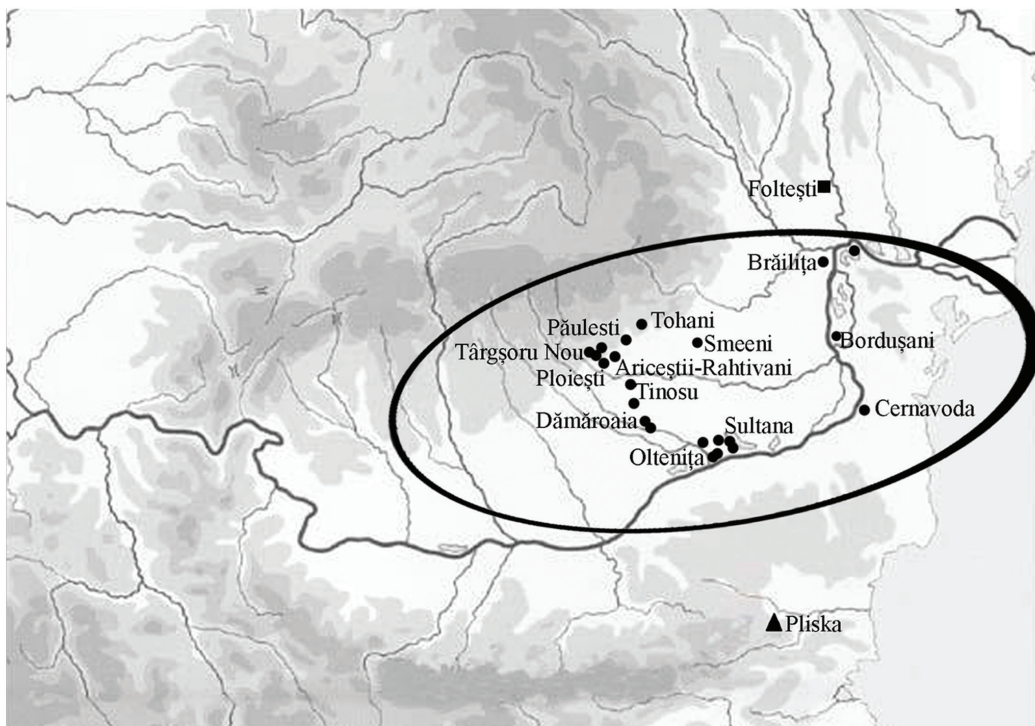


Plate 10. Map with the deceased lying supine (1) (taken from Frînculeasa *et al.* 2017c/with completions), grave 3/T.I in Vitănești (2) (taken from Frînculeasa *et al.* 2017c); grave 12 from the tumulus in Sárretudvari-Órhalom (3) (taken from Dani 2011); with the deceased placed sideways, in crouching positions (4) (taken from Frînculeasa *et al.* 2015a/with completions).



1



2

Plate 11. The cultural dynamic north of the Lower Danube during the final third of the fourth millennium (1); map with Cernavoda II discoveries at the Lower Danube (2).

# Abbreviations

AAASH	Acta Archaeologica Academiae Scientiarum Hungaricae, Budapesta.
AAC	Acta Archaeologica Carpathica, Cracovia.
Alba Regia	Alba Regia. Annales Musei Stephani regis, Székesfehérvár.
Angvstia	Angvstia. Sfântu Gheorghe.
Arabona	Győri Xántus János Múzeum, Győr.
ArchÉrt	Archaeologiai Értesítő, Budapesta.
ArchHung	Archaeologia Hungarica, Series Nova, Budapest.
ArhMold	ArheologiaMoldovei. Iași.
Arheologija/Archeologiya	Arheologija/ Archeologiya. Sofia.
Apulum	Acta MuseiApulensis – Apulum. Alba-Iulia.
AMN	Acta Musei Napocensis, Cluj-Napoca.
AMP	Acta Musei Porolissensis, Zalău.
BAM	Brvkenthal Acta Mvsei. Sibiu.
BHAB	(Museum Banaticum Temesiense) Bibliotheca Historica et Archaeologica Banatica.
BMMK	A Békés Megyei Múzeumok Közleményei. Békéscsaba.
BMA	Bibliotheca Memoriae Antiquitatis, Piatra Neamț.
BMN	Bibliotheca Musei Napocensis.
BudRég	Budapest Régiségei. Budapest.
CCA	Cronica Cercetărilor Arheologice din România, București.
CRSCRCR	Coins from Roman sites and collections of Roman coins from Romania.
Dacia N.S.	Dacia. Revue d'archéologie et d'histoire ancienne. Nouvelle serie. București.
EphNap	Ephemeris Napocensis. Cluj-Napoca.
Ethnographia	Ethnographia. A Magyar Néprajzi Társaság Folyóirata. Budapest.
FADDP/GMADP	Führer zu archäologischen Denkmälern in Dacia Porolissensis/Ghid al monumentelor arheologice din Dacia Porolissensis
FolArch	Folia Archaeologica. Budapest.
Hesperia	Hesperia: The Journal of the American School of Classical Studies at Athens. Athens.
MCA	Materiale și Cercetări Arheologice. Bucharest.
MFME	A Móra Ferenc Múz. Évkönyve. Szeged.
MFME SE	Móra Ferenc Múzeum Évkönyve: Studia Ethnographica. Szeged.
MFME-StudArch	A Móra Ferenc Múzeum Évkönyve, Studia Archaeologica. Szeged.
MGTSZ	Magyar Gazdaságtörténeti Szemle. Budapest.
MMA	Monumenta Avarorum Archaeologica, Budapest.
Mousaios	Mousaios. Buletin Științific al Muzeului Județean Buzău, Buzău.
NyJAMÉ	Jósa András Múzeum Évkönyve. Nyiregyháza.
OM	Orbis Mediaevalis, Arad.
PAT	Patrimonium Archaeologicum Transylvanicum. Cluj Napoca.
PBF	Praehistorische Bronzefunde. Berlin.
PeuceS.N	PEUCE. Studii și cercetări de istorie și arheologie. Serie nouă. Tulcea.
RI, SN	Revista Istorică, Serie Nouă. București.
RMM-MIA	Revista Muzeelor și Monumentelor. seria Monumente istorice și de artă. București.
SA	Sovietskaia Arheologija. Moscova.
SCIV(A)	Studii și Cercetări de Istorie Veche. București.
SlovArch	Slovenská Archeológia. Nitra.
SPMA	Studies in Post-Medieval Archaeology. Prague.

StudArchMed

TRÉT

WMMM

ZSA

Studia Archaeologica et Medievalia, Bratislava

TRÉT – Történelmi és Régészeti Értesítő, Temesvár (Timișoara).

Wosinsky Mór Megyei Múzeum, Szekszárd

Ziridava. Studia Archaeologica. Arad.