



HAL
open science

Once again on the Early Iron Age chronology at the lower Danube, new radiocarbon data from Babadag

Sorin-Cristian Ailincăi, Laurent Carozza, Alexandra Țârlea

► To cite this version:

Sorin-Cristian Ailincăi, Laurent Carozza, Alexandra Țârlea. Once again on the Early Iron Age chronology at the lower Danube, new radiocarbon data from Babadag. 1, St. Kliment Ohridski University Press, pp.21-28, 2022. hal-04015731

HAL Id: hal-04015731

<https://hal.science/hal-04015731v1>

Submitted on 6 Mar 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

ANCIENT THRACE: MYTH AND REALITY

THE PROCEEDINGS OF THE THIRTEENTH
INTERNATIONAL CONGRESS OF THRACOLOGY
KAZANLAK, SEPTEMBER 3 – 7, 2017



VOLUME ONE

Sofia, 2022

St. Kliment Ohridski University Press

Ancient Thrace: Myth and Reality

The Proceedings of the Thirteenth
International Congress of Thracology

Volume One

Софийски университет „Св. Климент Охридски“
Национален археологически институт с музей, БАН
Институт за балканистика с център по тракология, БАН
Исторически музей „Искра“, Казанлък

ДРЕВНА ТРАКИЯ: МИТ И РЕАЛНОСТ

МАТЕРИАЛИ ОТ ТРИНАДЕСЕТИЯ МЕЖДУНАРОДЕН
КОНГРЕС ПО ТРАКОЛОГИЯ
КАЗАНЛЪК, 3 – 7 СЕПТЕМВРИ 2017 Г.

ПЪРВИ ТОМ

под редакцията на Петър Делев, Тотко Стоянов,
Светлана Янакиева, Христо Попов, Анелия Божкова,
Майя Василева, Юлия Цветкова, Маргарит Дамянов,
Петя Илиева, Юлий Емилов

СОФИЯ 2022

Университетско издателство „Св. Климент Охридски“

St. Kliment Ohridski University of Sofia
National Archaeological Institute and Museum, BAS
Institute of Balkan Studies and Center of Thracology, BAS
Museum of History Iskra, Kazanlak

ANCIENT THRACE: MYTH AND REALITY

THE PROCEEDINGS OF THE THIRTEENTH
INTERNATIONAL CONGRESS OF THRACOLOGY
KAZANLAK, SEPTEMBER 3 – 7, 2017

VOLUME ONE

edited by Peter Delev, Totko Stoyanov, Svetlana Yanakieva,
Hristo Popov, Anelia Bozkova, Maya Vassileva, Julia Tzvetkova,
Margarit Damyanov, Petya Ilieva, Juliy Emilov

SOFIA, 2022

St. Kliment Ohridski University Press

The four organizing institutions of the 13th International Congress of Thracology in 2017 have each celebrated important anniversaries thereafter:

- 130 years since the foundation of the National Museum in Sofia (1892) [now the National Archaeological Museum affiliated to the National Archaeological Institute];
- 120 years since the foundation of the Museum Iskra in Kazanlak (1901);
- 100 years since the establishment of the Department of Archaeology at the St. Kliment Ohridski University of Sofia (1920);
- 100 years since the foundation of the Bulgarian Archaeological Institute (1921);
- 100 years since the establishment of the Department of Classical Philology at the St. Kliment Ohridski University of Sofia (1922);
- 50 years since the foundation of the Institute of Thracology at the Bulgarian Academy of Sciences (1972) [now a Center of Thracology affiliated to the Institute of Balkan Studies].

The editors dedicate the publication of the congress proceedings to the commemoration of these six events.

The printing of the proceedings of the 13th International Congress of Thracology has been sponsored financially by:



1892 - 1921 - 1948

National Archaeological
Institute and Museum, BAS



St. Kliment Ohridski
University of Sofia



Institute of Balkan Studies with
Center of Thracology "Prof. A. Fol", BAS



ИСТОРИЧЕСКИ МУЗЕЙ
ИСКРА - КАЗАНЛАК

Iskra Historical
Museum, Kazanlak



ОБЩИНА
КАЗАНЛАК

Kazanlak
Municipality

St. Kliment Ohridski University of Sofia
National Archaeological Institute and Museum, BAS
Institute of Balkan Studies and Center of Thracology "Prof. A. Fol", BAS
Museum of History Iskra, Kazanlak

ANCIENT THRACE: MYTH AND REALITY. THE PROCEEDINGS OF THE THIRTEENTH INTERNATIONAL CONGRESS OF THRACOLOGY, KAZANLAK, SEPTEMBER 3 – 7, 2017. VOLUME ONE

edited by Peter Delev, Totko Stoyanov, Svetlana Yanakieva, Hristo Popov, Anelia Bozkova, Maya Vassileva, Julia Tzvetkova, Margarit Damyanov, Petya Ilieva, Juliy Emilov

© the editors and the respective authors, unless where otherwise indicated
© 2022 NICE AN LTD, Sofia (prepress and graphic design)
© 2022 St. Kliment Ohridski University Press

ISBN 978-954-07-5621-9 (printed edition)

ISBN 978-954-07-5623-3 (E-book, pdf)

TABLE OF CONTENTS

Preface	9
Congress programme	11
Sorin-Cristian Ailincăi, Laurent Carozza and Alexandra Țârlea <i>Once again on the Early Iron Age chronology at the Lower Danube. New radiocarbon data from Babadag</i>	21
Zeki Mete Aksan <i>Reinvestigation of Vize A tumulus in Southeastern Thrace</i>	29
Amalia Avramidou and Despoina Tsiafaki <i>Preliminary results of the research project Attic pottery in Thrace</i>	35
Maguelone Bastide <i>Thracian sanctuaries' myths and realities</i>	45
Dimitar Bayrakov <i>Clay portable hearths from the Chepino Valley (Northwestern Rhodopes) with "Tsepina type" decoration</i>	53
Ioan Bejinariu and Horea Pop <i>Recent research concerning the end of the First Iron Age – beginning of the La Tène in the upper Tisa area</i>	61
Jan G. de Boer <i>A small world and middle grounds in ancient Thrace</i>	73
Anelia Bozkova <i>Towards a chronology of the fourth century B.C.</i>	83
Margarit Damyanov <i>Hand-made pottery in the Greek colonies in the Black Sea: the case of Apollonia Pontica</i>	89
Zdravko Dimitrov <i>The Thracian sanctuary near the village of Angel Voyvoda, the Eastern Rhodopes</i>	99
Diana Dimitrova <i>Fifth-fourth century BC Odrysian burial rites at the big Tundhza River curve</i>	107
Dimitar Draganov <i>The silver coinage of Apollonia Pontica (5th – 4th century BC): iconography</i>	116
Zeynep Koçel Erdem <i>Cult studies in Turkish Thrace: understanding the Thracian religion – new approaches</i>	123
El-Sayed Gad <i>Thrace and the Thracians in the speeches of Demosthenes</i>	129
William Greenwalt <i>Macedonian and Thracian relations through early 334 B.C.</i>	137

Hristomir S. Hristov <i>The “Griffins” tumulus. On the structure and function of Thracian mound facilities in the Classical and Hellenistic Age</i>	145
Rositsa Hristova Hristova <i>Technological changes and craft-specialization of the ceramic production on the territory between Upper Thracian Plain and Burgas Lowland from the Late Bronze Age to the Archaic Period</i>	153
Ekaterina Ilieva <i>Pottery on the move – geographical distribution of the Late Iron Age Tsepina pottery</i>	167
Hristina Ivanova-Anaplioti <i>Apollonia of Pontus and Thrace and the allocation of its weight standards</i>	177
Miroslav Iliev Izdimirski <i>Deported Paeonians in the Achaemenid Empire as kurtaš – workers</i>	185
Hazar Kaba <i>Comparing the metal vessel acquisition patterns and trends of the Thracian and Cypriot elite during the Classical Period</i>	191
Slavtcho Kirov <i>Le passé thraco-phrygien à la lumière de l’inscription RIMA, 2, A.O.100.5, I15B-127</i>	207
Jeffrey D. Lerner <i>Skudrā and Kūšiya under Xerxes I</i>	213
Kalin Madzharov <i>Trading post at Ruse? The evidence of the amphora stamps</i>	221
Dragoş Măndescu <i>Where did they put the akinakes? On the Late Hallstatt Ferigile warriors’ panoply starting from the recent discoveries in the necropolis at Valea Stânii</i>	231
Consuelo Manetta and Daniela Stoyanova <i>Architecture and decoration of the propylon at Seuthopolis</i>	241
Philip Mihaylov and Borislava Galabova <i>The 11th – 4th century BC Dren – Delyan necropolis. Cultural and physical anthropological analyses. Preliminary data</i>	261
Philip Mihaylov and Nikoleta Tzankova <i>Glass beads from Dren – Delyan necropolis (archaeological and archaeometric study)</i>	271
Petar Minkov <i>A Middle Bronze Age Ceramic Jug from Tell Russe</i>	279
Kabalan Moukarzel and Miroslav Izdimirski <i>On Skudrians in the Akkadian versions of the Achaemenid royal inscriptions and some Late Babylonian texts</i>	287
Kate Mower <i>Thracians as σύμμαχοι to the Greek settlements along the West Pontic coast</i>	297
Yana Mutafchieva <i>Bronze biconical oinochoai from Thrace: morphology and chronology</i>	301
Nerantzis Nerantzis and Stratis Papadopoulos <i>Mining in the Thracian world: the case of Lekani Mountains in Northern Greece</i>	313

Ion Niculiță, Aurel Zanoci and Mihail Băț <i>Some considerations regarding the formation of the material culture of the Thracian communities on the territory east of the Prut</i>	323
Meglana Parvin <i>New observations on the inventory from the southwestern chamber of the Ostrusha tumulus complex</i>	339
Angela Pencheva <i>Wreaths in funeral context: chronological and typological distribution in ancient Macedonia, Thrace and the West Pontic Greek apoikiai</i>	349
Vyara Petrova <i>The banquet as depicted on Attic red-figure pottery from the site at “Adzhiyska Vodenitsa”</i>	365
Olivier Picard <i>La monnaie entre les Thraces et les Grecs à l’époque de la domination perse</i>	371
Hristo Popov <i>Ada Tepe – a gold mine or a sanctuary? Between myth and reality</i>	381
Kalin Porozhanov <i>The ancient authors on the Bithynoi, Thynoi and Mariandynoi in Anatolia</i>	395
Lynn E. Roller <i>The Gluhite Kamani LiDAR survey and its implications for our understanding of Thracian cult monuments</i>	401
Mustafa H. Sayar <i>Thracian tribes in Southeastern Thrace under Roman rule</i>	409
Paola Schirripa et Federica Cordano <i>Rois thraces et rois perses dans la tradition grecque</i>	413
Katarzyna Skowron et Tomasz Bochnak <i>Les éléments thraces dans le bassin de la Vistule – un nouvel examen</i>	427
Stephan Steingrüber <i>Figurative representations in Thracian tomb paintings of the 4th and 3rd century BC – themes, iconography, ideology</i>	439
Totko Stoyanov <i>Urbanization in Early Hellenistic Thrace: The case of the Getic capital Helis in North-Eastern Thrace</i>	451
Nino Sulava <i>Alte Kolchis: Mythos und Wirklichkeit (anhand der alten Fibeln)</i>	461
Gabriel M. Talmațchi <i>About possible stages of the significance and role of monetary signs in the Western Pontic area in the light of recent research (6th century BC)</i>	467
Nikola Tonkov <i>Integrated electroresistivity and magnetic prospection of Thracian burial mounds: the case of tumuli 1 and 2 at the village of Granit, Chirpan Eminences</i>	475
Eva Tonkova <i>Black-glazed pottery from the pit fields in Bulgaria</i>	487
Stavri Topalov <i>On the attribution of the first realistic portraits on ancient coins (mid 5th – end of 4th centuries BC)</i>	497

Helena Domínguez-del Triunfo <i>A zoomorphic vase handle of the Classical Period in the Kanellopoulos Collection: rethinking the impact of Achaemenid material culture in the West</i>	509
Maya Vassileva <i>Thracians and Phrygians: state of art and future perspectives</i>	517
Yurii A. Vinogradov <i>Tumulus Baksy near Kerch. Cultural contacts on the Cimmerian Bosphorus in the early 4th c. BC</i>	523
Kalina Yordanova <i>Foureés and barbarian imitations of Apollonia Pontica's coins</i>	529
List of authors.....	537



ONCE AGAIN ON THE EARLY IRON AGE CHRONOLOGY AT THE LOWER DANUBE. NEW RADIOCARBON DATA FROM BABADAG

Sorin-Cristian Ailincăi, Laurent Carozza, Alexandra Țârlea

Introduction

The Early Iron Age settlement from Babadag (SE Romania) is well known due to the archaeological excavations conducted here, with some interruptions, between 1962 and 2010. These researches evidenced the existence of an impressive stratigraphy, over 2 m, which can be split into six archaeological layers dated to the beginning of the 1st millennium BC. In 1964, Sebastian Morintz published an attempt to relative and absolute chronology for the settlement and extending it to the entire Babadag culture.¹ This chronological system, reconfirmed later by the same researcher,² was based on the existence of 3 phases of evolution stratigraphically evidenced in the case of the Babadag settlement. Thus, the first and oldest phase was characterised by the decoration of pottery using exclusively incision motifs. This phase was paralleled with level VIIb₂ from Troy and was dated to the second half of the 11th century BC. The second phase was dated in general lines to the 10th-9th century BC and it was characterised by the decoration of pottery with stamped motifs. The third phase was characterised by channelled pottery and it was considered contemporaneous to the Basarabi phenomenon, being dated in general lines to the 8th century BC.³

This chronology was recently challenged following the study and publication of large batches of archaeological material from Babadag and other contemporaneous sites (Enisala, Niculișel, Revărsarea, Jijila, Garvăn). From our point of view, the existence of the phases I and III (after Morintz) can be put to question.

In most cases, the three decoration techniques are associated in closed complexes.⁴ Even more, these decoration techniques and certain types of decoration bands seem to have been associated with specific categories of ceramic recipients.⁵ In fact, the Babadag culture can be completely confined inside the Early Hallstatt horizon with stamped pottery, together with other ceramic groups like Pșenițevo, Insula Banului, Cozia, or Saharna-Solonceni.

The ¹⁴C data from Babadag

As it was already mentioned, from the point of view of the absolute chronology, the evolution of the Babadag culture was dated to the interval between the end of the 11th/10th – middle of the 8th century BC, based on metal objects and relations with anterior, contemporaneous and ulterior cultural manifestations.⁶ Because very precise dating elements were absent, the necessity of conducting ¹⁴C dating in order to determine a more precise interval for the evolution of the Babadag culture was mentioned very often in the archaeological literature.

A first series of three ¹⁴C data was conducted in 2012 for the settlement from Babadag. The analyses were conducted on cattle bones, collected from Sector Squares 5-9, pits 42, 44, and 45 (**Table 1**). These pits, investigated during the 2010 campaign, were dug out directly in the sterile soil and were attributed to the oldest habitation level from Babadag (level 6). All these complexes contained both incised and stamped pottery (**Figs. 1-3**).

Taking into account the three data (**Table 1**), it can be considered that the settlement from Babadag began its existence bet-

1 Morintz 1964.

2 Morintz 1987.

3 Morintz 1964; 1987; Jugănaru 2005.

4 Ailincăi 2013; 2016a.

5 Ailincăi 2011; 2016b.

6 Ailincăi 2010; 2013; 2016a; Ailincăi et al. 2014.

Lab. No.	Context	Material	¹⁴ C Data	Remark	Results of the OxCal 4.3.2 calibration
Poz-49880	Babadag 2010, level 6, pit 45	bone	2805±30	2.4%N 5.0%C	996BC (68.2%) 921BC 1046BC (94.2%) 894BC 866BC (1.2%) 854BC
Poz-49881	Babadag 2010, level 6, pit 42	bone	2820±30	3.2%N 7.4%C	1006BC (68.2%) 929BC 1054BC (95.4%) 899BC
Poz-49882	Babadag 2010, level 6, pit 44	bone	2805±30	3.6%N 8.5%C	996BC (68.2%) 921BC 1046BC (94.2%) 894BC 866BC (1.2%) 854BC

Table 1. The ¹⁴C data from Babadag.

ween 1054 and 854 BC (probability 95.4%) (Fig. 4/1.b). Calculating the beginning and end limit indicated by the three data shows that the most precise median data are 999 BC (for the beginning of the phase – Fig. 4/1.c) and 924 BC (for the end of the phase – Fig. 4/1.c). The similarity between the data offered by the three samples taken from different complexes is still remarkable. These indicate that the first habitation of the settlement from Babadag can be dated securely during the 10th century BC (Fig. 4/1).

Discussions

These three data, to which one from the settlement from Niculițel⁷ could be added, are the only ones known so far for sites of the Babadag culture (Fig. 4/2). Although still insufficient for a more detailed analysis, these data can indicate in a certain degree the chronological position of the sites with Babadag pottery in relation with other cultural manifestations. In fact, there are relatively few ¹⁴C data known up to present for the Carpathian-Danube area for the end of the Bronze Age and the beginning of the Early Iron Age.

The data known so far from the Noua cultural milieu, from sites such as Mahala,⁸ Crasnaleuca,⁹ Odaia Miciurin¹⁰ or Rotbav,¹¹ indicate a chronological interval clearly antedating the data from Babadag, while the data from Durankulak indicate the possibility of the existence of

the Coslogeni culture also during the 11th century BC.¹² Very interesting also are the data offered by graves 32 and 41 from Câmpina,¹³ which show chronological intervals similar to those from the debut of the settlement from Babadag. Although grave 42 did not offer funerary inventory, grave 32 contained a vessel considered by the author as decorated in the specific style of the Tei culture.¹⁴

If we try a comparison to the ¹⁴C data collected from sites with channelled pottery of Gáva type, we can notice that the data from Siret¹⁵ represent with certainty an earlier chronological interval, while the data known from Teleac,¹⁶ Vlaha,¹⁷ Popești¹⁸ or Pusztataskony–Ledence¹⁹ indicate chronological intervals contemporaneous more or less with those known from the Babadag milieu (Fig. 4/3). The same superposition can be noticed comparing our data to those from the necropolises of the Bełozerk culture from Stepnoj²⁰ and Kockvatoe,²¹ or from the site belonging to the Belogradovka culture – Subotovo (especially phases II-III), on

7 Ailincăi et al. 2017, 220-223 (Poz-72606: 2730±35 BP).

8 László 2015, 304 (Bln-1086: 3260±100; Gak-2448: 3390±90; Bln-1085: 3135±100; GrN-5135: 3100±50 BP)

9 László 2015, 304 (GrN-21797: 3250±50; GrN-21798: 3240±40; GrN-21796: 3190±45 BP).

10 Kaiser, Sava 2009, 147-159 (KIA31490: 3077±26; KIA31491: 3016±28; KIA31492: 30106±27; KIA31493: 2992±22; KIA31494: 3077±27; KIA31495: 3077±31; KIA31496: 2996±32; KIA31497: 2979±24; KIA31498: 2981±26; KIA31499: 3023±25 BP).

11 Dietrich 2014, 62 and sqq. (Hd-27972: 3085±23 BP și Hd28276: 3196±30 BP).

12 A first series of four data were offered for House 15 from the SW part of the island, but with intervals which seem to be too old (the area was periodically flooded, situation which could have affected the precision of the results): 3400±60 BP, 3490±60 BP, 3160±60 BP, 3910±70 BP. The second group of data comes from Houses IVa, Vb and I, indicating for the end of the habitation the following results: 2960±60 BP, 2850±50 BP and 2930±50BP (Görsdorf, Bojandžiev 1996, 150-151).

13 Frînculeasa 2014, 81 (Hd-30840: 2858±23; Hd-30837: 2819±24).

14 Frînculeasa 2014, 66-67.

15 László 2010, 121-132 (Bln-5788: 3056±50; Bln-5786: 3006±37; Bln-5790: 2987±49; Bln-5789: 2929±65 BP).

16 László 2015, 304 (cca. 2830±30 BP).

17 László 2015, 304 (DeA-5095: 2856±25; DeA-5097: 2743±23).

18 Palincaș 2004-2005 (VERA-2512: 2795±30 BP).

19 Kiraly et al. 2013, 309 (Poz-41895: 2640±30 BP)

20 Ostroshchenko 2003, 336 sqq. (Ki-575: 3050±70; Ki-889: 2850±40; Ki-885: 2805±55; Ki-887: 2700±45; Ki-886: 2690±50; Ki-9823: 2920±50; Ki-9596: 2915±45; Ki-9820: 2880±55; Ki-9821: 2930±55; Ki-9822: 2780±55).

21 Ostroshchenko 2003, 363 (Ki-1471: 2900±45).

Middle Dnieper, where the stamped pottery is also abundant.²²

Taking into consideration the data from sites with stamped pottery, we can notice that the data from Babadag indicate a probability interval slightly earlier than that from Niculițel–Cornet,²³ despite the fact that the pottery presents many similarities, and from the data known from Svilegrad²⁴ (Pšeničevo culture, Bulgaria) (Fig. 4/2).

Interesting is also the comparison with the known data from Troy, indicating the contemporaneity between the Babadag milieu and level Troy VII b_{2,3},²⁵ while those from level VIIb₁²⁶ indicate an earlier chronological interval (Fig. 4/4).

Conclusions

The ¹⁴C data obtained from the settlement from Babadag sustain in a certain degree some theories regarding the apparition of the stamped pottery in the Lower Danube region. First, it should be emphasised that there are enough indicia on a possible existence of the Coslogeni culture during the 11th century BC, based both on the chronological data from Durankulak and on the dating of certain metal objects, such as the brooch with one spring from Coslogeni.²⁷ Secondly, as we mentioned in previous occasions, the sites belonging to the Babadag culture were preceded, at least for the eastern part of Muntenia, by sites with channelled pottery, of Gáva tradition.²⁸ These observations are further sustained by the settlement from Vlădești–Popina Lată (found in the area of the Babadag culture, but without containing stamped pottery), the stratigraphy of the settlement from Căndești, the stratigraphy of the necropolis from Sboryanovo, and other finds from Bulgaria. In the same time, in the southern part of Moldova, between

the end of the Noua culture and the apparition in this area of the Babadag culture, there are interposed other cultural manifestations. In this situation are both the Corlăteni group (the stratigraphy from Căndești), present in the area from the 12th century BC, and a horizon characterised by incised pottery, represented until now by the settlement from Tămăoani and the necropolis from Foltești (possibly dated to the 11th century BC – the Belozerka culture). In these conditions there are still some question marks regarding the duration, spatial evolution and succession of several pottery styles from the Lower Danube in the interval preceding the Babadag style.

As the ¹⁴C data known so far and other elements of absolute chronology indicate, we can date the Babadag culture to the 10th-9th century BC, a chronological frame to which are also attributed in general the other groups with stamped pottery. The presence of the stamped and incised decorations at the beginning of the Early Iron Age in SE Europe should be linked in particular to the Protogeometric. This connection is sustained by the associations with pottery decorated in this style from Troy VIIb₃ and Kastanas (levels 10-4), as well as by some analogies already brought forward by Bernhard Hänsel and others among the finds from Babadag, Ljubenkova, Ovčarovo or Rogozinovo and Protogeometric sites in Greece.²⁹

Acknowledgment

Radiocarbon data and analysis thereof were made possible by the project *Société et environnement durant le Néolithique et les âges des métaux dans le Delta du Danube (Roumanie). Territoire des Hommes. Territoire de l'Eau* (2010-2018). We hereby express our gratitude to Dr. Florin Drașovean for his kind assistance and guidance in writing this paper.

22 Гершкович 2016, 181 and sqq. The ¹⁴C data are given there unfortunately only with the calibrated age as BC.

23 Ailincăi et al. 2017.

24 Nekhrizov, Tzvetkova 2012, 189 (2700 ± 40 BP).

25 Koppenhöfer 1997; László 2015, 305 (2820±55; 2812±56; 2795±32; 2786±42).

26 Koppenhöfer 1997; László 2015, 305 (3043±29; 2988±31; 2963±31; 2950±48).

27 Neagu, Basarab 1986, 114, Fig. 18, 24.

28 Ailincăi 2013; Ailincăi 2016.

29 Hänsel 1976; Stoyanov, Nikov 1997, 195 sqq.

Bibliography

- Ailincăi, S.C. 2010: New observations on the First Iron Age Discoveries at Revărsarea–Cotul Tichilești, Isaccea, Tulcea County. – In: Bolohan N., Mățu Fl., Tencariu F. (eds.), *Signa Praehistorica. Studia in honorem magistri Attila László septuagente anno*, Iași, 351-379.
- Ailincăi, S.C. 2011: *Ceramica culturii Babadag. Cu privire specială asupra descoperirilor din Dobrogea*. – *Peuce, S.N.* 9, 55-178.
- Ailincăi, S.C. 2013: Începuturile epocii fierului în Dobrogea. – *Studii și Cercetări de Istorie Veche și Arheologie* 64, 3-4, 223-292.
- Ailincăi, S.C. 2016a: Before the Greeks. The Early Iron Age in Dibrudja. – In: Gogăltan, F., Cordoș, C. (eds.), *Prehistoric Settlements: Social, Economic and Cultural Aspects. Seven Studies in the Carpathian area*, Ed. Mega, Cluj-Napoca, 201-236.
- Ailincăi, S.C. 2016b: Analysis and interpretation of Babadag pottery decorating style. In: Zanoci, A., Kaiser, E., Kashuba, M., Izbiter, E., Băț, M. (eds.), *Mensch, Kultur und Gesellschaft von der Kupferzeit bis zur Frühen Eisenzeit im Nördlichen Eurasien*, Tyragetia International I, Chișinău, 337-346.
- Ailincăi, S.C., Adamescu, A., Mihail, F. 2014: Noi date despre începuturile epocii fierului la Dunărea de Jos. Așezarea de la Vânători–La Jolică, jud. Galați. – *Studii și Cercetări de Istorie Veche și Arheologie* 65, 1-2, 5-48.
- Ailincăi, S. C., Topoleanu, F., Mihail, F., Constantinescu, M., Rafailă-Stanc, S., Livanov, O. 2017: Așezarea din perioada timpurie a epocii fierului de la Niculițel – Cornet. Cercetările arheologice din anul 2000. – *Peuce, S.N.* 15, 175-278.
- Dietrich, L. 2014: Datele radiocarbon din așezarea aparținând epocii bronzului de la Rotbav (jud. Brașov, România). – *Studii și Cercetări de Istorie Veche și Arheologie* 65, 1-2, 59-70.
- Frînculeasa, A. 2014: *Cimitirul din epoca bronzului de la Câmpina (jud. Prahova)*, Editura Cetatea de Scaun, Târgoviște.
- Görsdorf, J., Bojadžiev, J. 1996: Absolute Chronologie der bulgarischen Urgeschichte. Berliner ¹⁴C-Datierungen von bulgarischen archäologischen Fundplätzen. – *Eurasia Antiqua* 2, 106-173.
- Hänsel, B. 1976. *Beiträge zur regionalen und Chronologischen Gliederung der Älteren Hallstattzeit an der Unteren Donau*, Bonn, vol. I-II.
- Jugănar, G. 2005, *Cultura Babadag*, I, Constanța.
- Kaiser, E., Sava, E. 2009: Die absolute Datierung der neuzeitlichen Fundstelle Miciurin-Odaia, Nordmoldawien. – In: Apakidze, J., Govedarica, B., Hänsel, B. (eds.), *Der Schwarmerraum vom äneolithikum bis in die Früheisenzeit (5000-500 v.Chr.)*, PAS 25, 147-159.
- Király, A, Sebök, K., Zoffmann, Z.K., Kovács, G. 2013: Early Iron Age “Mass Graves” in the Middle Tisza Region: Investigation and Interpretation. – In: N. Müller-Scheeßel (ed.), *‘Irreguläre’ Bestattungen in der Urgeschichte: Norm, Ritual, Strafe ...?*, Bonn, 307-326.
- Koppenhöfer, D. 1997: Troia VII. Versuch einer Zusammenschau einschliesslich der Ergebnisse des Jahres 1995. – *Studia Troica* 7, 295-353.
- László, A. 2010: Zur Chronologie der späten Bronzezeit und der älteren Hallstattperiode im nord-östlichen Karpatenraum. Die Radiokarbon-Datierung der Gáva-Holihrady Siedlung von Siret (Bukowina). – In: L. Marta (ed.), *Das Ende de 2. Jahrtausendes v. Chr auf der Theiß-Ebene und Siebebürgen. Satu Mare. Satu Mare.* (= Studii și Comunicări, Seria Arheologie 26. 1), 121-132.
- László, A. 2015: Über die Chronologie des kulturellen Wechsels zwischen der Noua-Coslogeni Kultur und der Nachfolger-Kulturen mit Kannelierter und mit Ritz- und Stempelverzierter Keramik in den Innen- und aussenkarpatischen Gebieten. Einige Lehren der Radiokarbonatierungen. – In: S. Berecki (ed.), *Bronze Age Chronology i the Carpathian Basin. Proceedings of the Iterational Coloqium from Târgu Mureș, 2-4 October 2014*, Târgu Mureș, 297-310.
- Morintz, S. 1964: Quelques problèmes concernant la période ancienne du Hallstatt au Bas Danube a la lumière des fouilles de Babadag. – *Dacia, N.S.* 8, 101-118.
- Morintz, S. 1987: Noi date și probleme privind perioadele hallstattiană timpurie și mijlocie în zona istro-pontică (Cercetările de la Babadag). – *Thraco-Dacica* 8, 1-2, 39-71.
- Neagu, M., Nanu-Basarab, D. 1986: Considerații preliminare asupra așezării eponime de la Grădiștea Coslogeni, județul Călărași. – *Cultură și Civilizație la Dunărea de Jos* 2, 99-128.
- Nekhrizov, G., Tzvetkova, J. 2012: Ritual pit complexes in Iron Age Thrace: The case study of Svilengrad. – In: A. Çilingiroğlu, A. Sagona (eds.), *Anatolian Iron Ages 7. The proceedings of the Seventh Anatolian Iron Ages, Colloqium Held at Edirne, 19-24 April 2010*, Leuven-Paris-Walpole, 177-210.

Ostroschenko, V.V. 2003: Radiocarbon Chronology of the Bilozerka Culture – Based on Barrows near the village of Zapovitne (The “Stepnoy” Cemetery). – *Baltic-Pontic Studies* 12, 336-364.

Palincaş, N. 2004-2005: Zur Chronologischen Stellung der Kanellierten (Vor-Basarabi) Keramik von Popeşti. – *Dacia, N.S.* 48-49, 55-64.

Stoyanov, T., Nikov, K. 1997: Rescue Trench

Excavation of the Early Iron Age Settlement and Sanctuary Near the Village of Rogozinovo, Harmanli District (Preliminary Report). – In: Leshtakov, K. (ed.), *Maritsa Project. Volume 1. Rescue archaeological excavations along Maritsa Motorway in South Bulgaria, Sofia*, 171-240.

Гершкович, Я. П. 2016. *Суботовское городище*. Киев: ИА НАНУ.

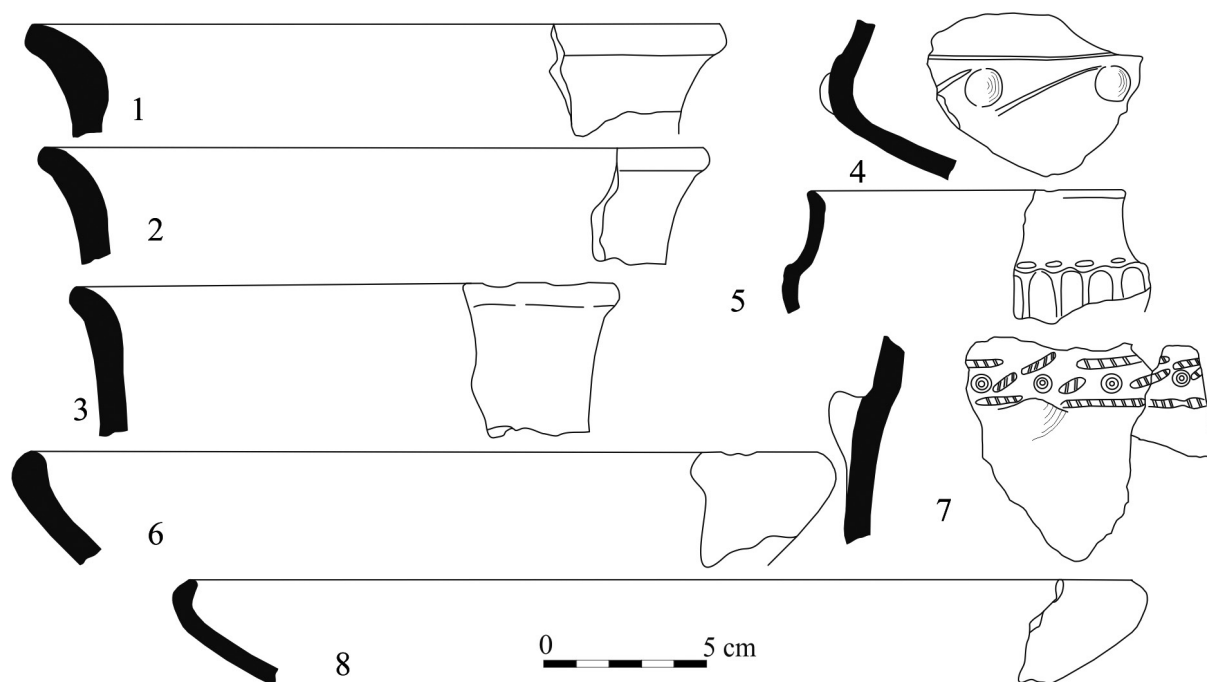


Fig. 1. Inventory of pit 42.

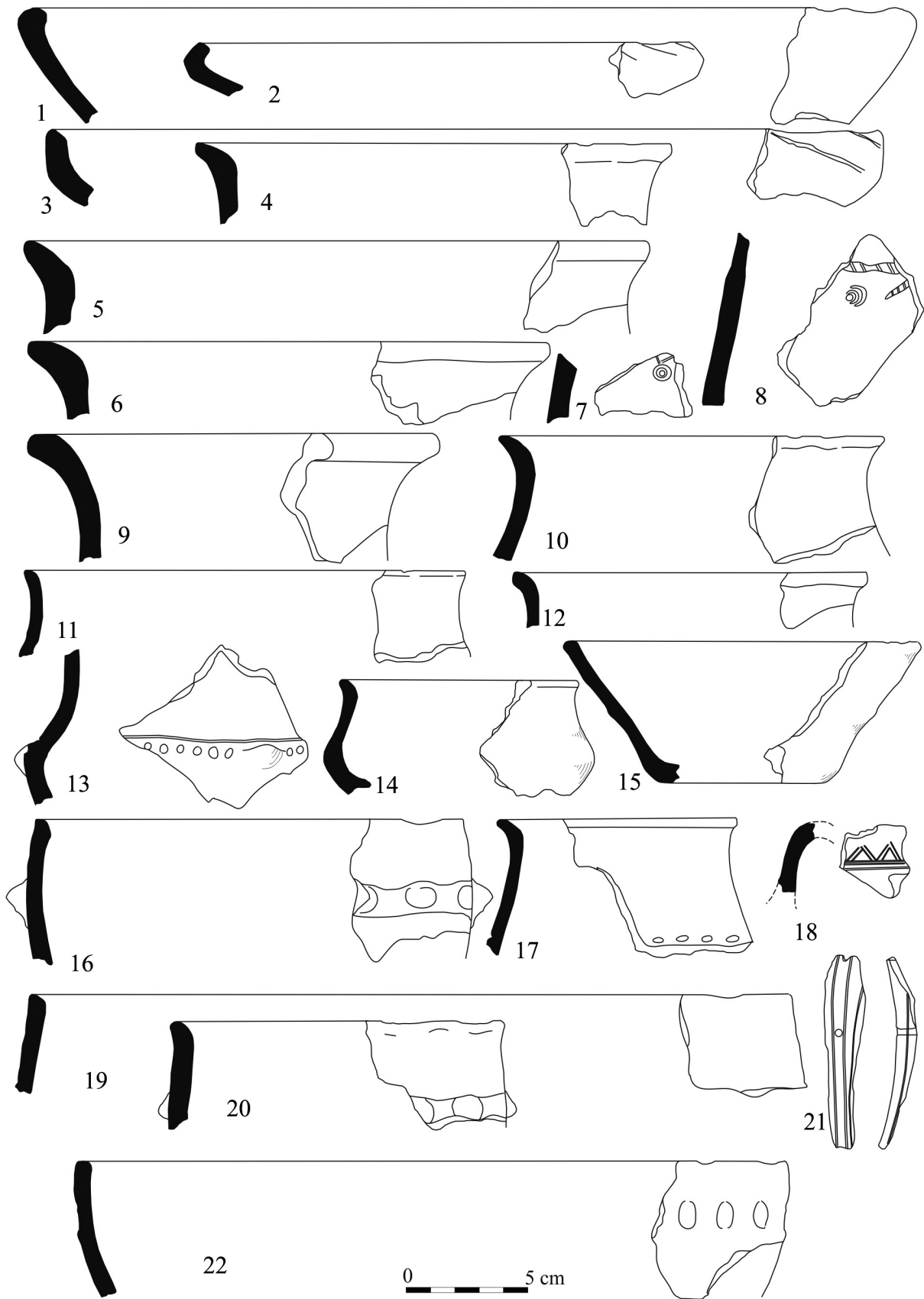


Fig. 2. Inventory of pit 44.

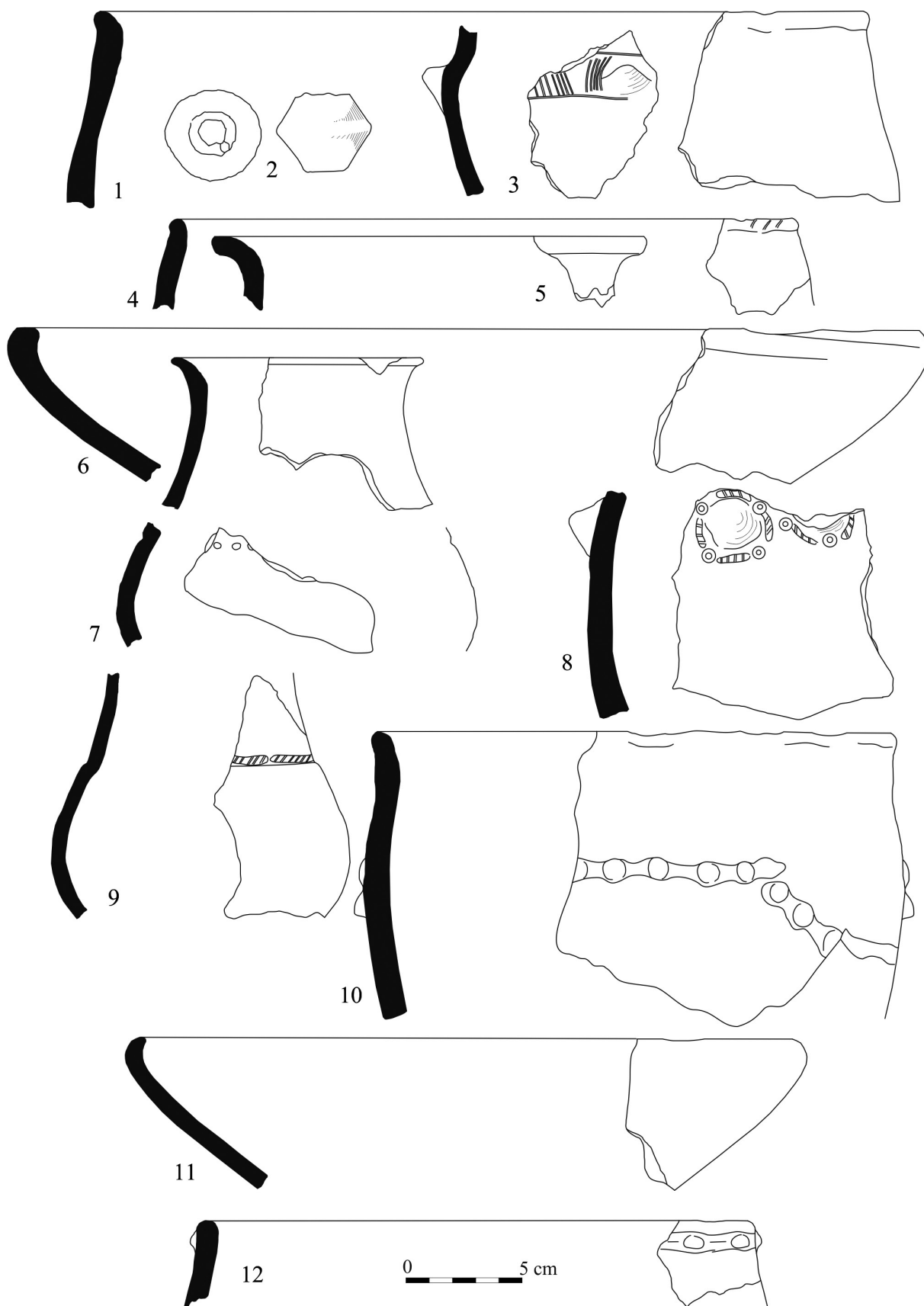


Fig. 3. Inventory of pit 45.

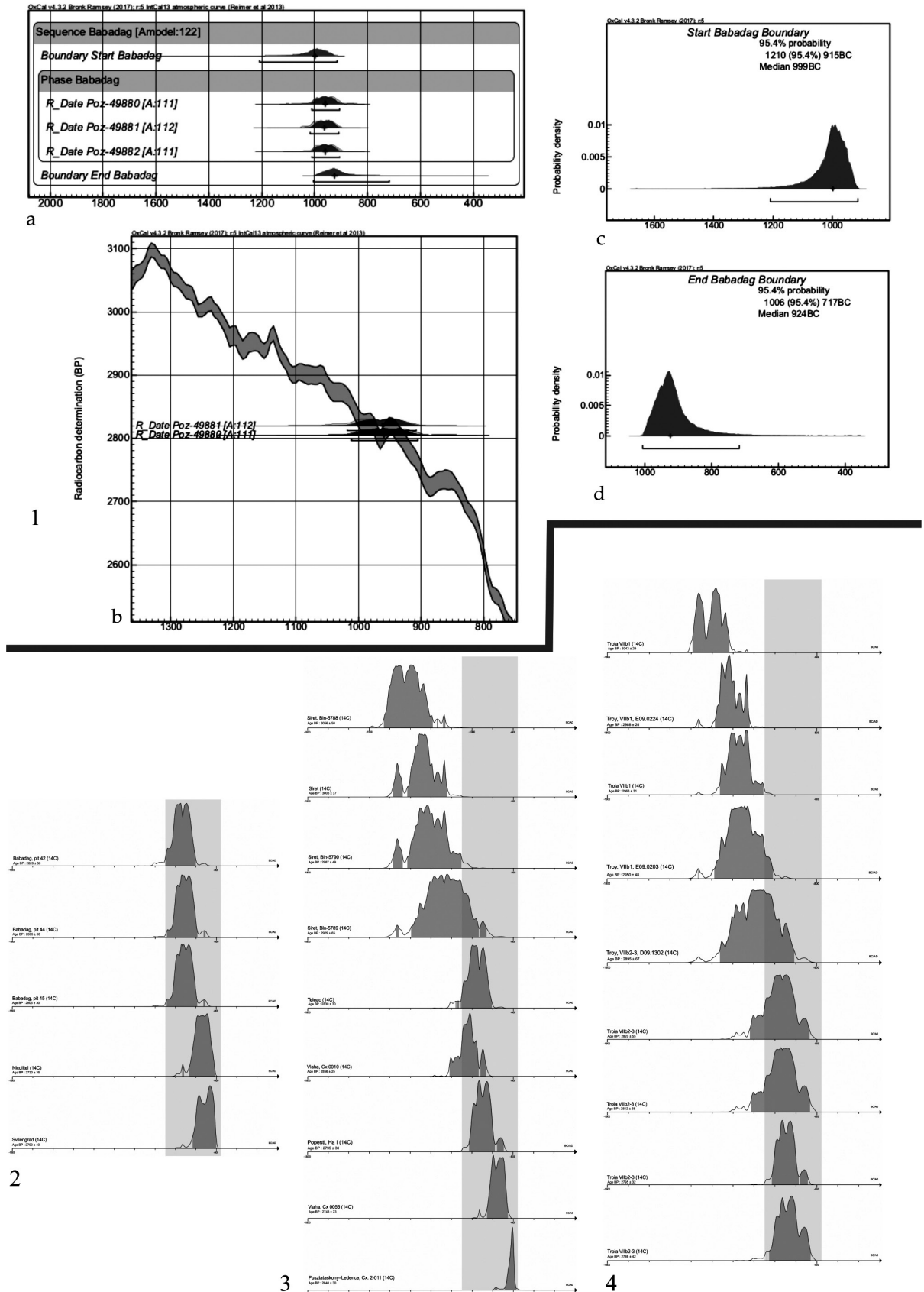


Fig. 4. 1. Modelling of the ¹⁴C data from Babadag; 2. Comparative graphic of ¹⁴C data from EIA sites with stamped pottery; 3. Comparative graphic of ¹⁴C data from EIA settlements with channelled pottery; 4. Comparative graphic of ¹⁴C data from Troy VII.



LIST OF AUTHORS IN THIS VOLUME

Sorin-Cristian Ailincăi

“Gavrilă Simion” Eco-Museum Research Institute,
Tulcea
sailincai@gmail.com

Zeki Mete Aksan

Sinop University, Faculty of Arts and Sciences,
Archaeology Department, Sinop, Turkey
aksanmete@gmail.com

Amalia Avramidou

Democritus University of Thrace
aavrami@bscc.duth.gr

Maguelone Bastide

Université Paris Nanterre
maguelone.bastide@mae.u-paris10.fr

Mihail Băț

Moldova State University, Chișinău, Republic of
Moldova
mb_usm@yahoo.com

Tomasz Bochnak

Instytut Archeologii, Uniwersytet Rzeszowski,
Rzeszów, Pologne
tbochnak@univ.rzeszow.pl

Federica Cordano

Università degli Studi di Milano
federica.cordano@unimi.it

Dimitar Bayrakov

Historical Museum Velingrad
dimitarbayrakov@gmail.com

Ioan Bejinariu

Muzeul Județean de Istorie și Artă, Zalău, RO
bion_1867@yahoo.com)

Jan G. de Boer

Ghent University
jan.g.deboer@kpnplanet.nl

Anelia Bozkova

National Archaeological Institute and Museum,
Sofia
aneliabozkova@yahoo.com

Laurent Carozza

Maison de la Recherche, Université Toulouse 2 le
Mirail
laurent.carozza@univ-tlse2.fr

Margarit Damyanov

National Archaeological Institute with Museum,
Sofia
mmdamyanov@gmail.com

Zdravko Dimitrov

National Archaeological Institute and Museum,
Sofia
zdravkodimitrov74@gmail.com

Diana Dimitrova

National Archaeological Institute and Museum,
Sofia
kittemp@abv.bg

Dimitar Draganov

Numismatic Museum Ruse
dragannum@abv.bg

Zeynep Koçel Erdem

Mimar Sinan Fine Arts University, Faculty of Let-
ters, Department of Archaeology
Istanbul, Turkey
zerdem@gmail.com

El-Sayed Gad

Tanta University, Egypt
gadreeg@ymail.com

Borislava Galabova

Laboratory for human bioarchaeology, TRAKE
humanbioarch@trakelabs.org; galabovab@gmail.
com

William Greenwalt

Santa Clara University
wgreenwalt@scu.edu

Hristomir Smilenov Hristov

Naval Museum Varna
hristomir.smilenov@gmail.com

Rositsa Hristova Hristova

Historical Museum – Karnobat
rositsa11@yahoo.com

Ekaterina Ilieva

Regional Archaeological Museum Plovdiv
ekate.ilieva@gmail.com

Hristina Ivanova-Anaplioti

University of Zurich, Institut für Archäologie,
Fachbereich Klassische Archäologie
hristina.ivanova@uzh.ch

Miroslav Iliev Izdimirski

Institute for Balkan Studies and Centre of Thracology,
Bulgarian Academy of Sciences

Hazar Kaba

Sinop Universitesi, Fen-Edebiyat Fakultesi,
Arkeoloji Bolumu
hazarkaba@sinop.edu.tr

Slavtcho Kirov

PatrimoniVM ERC-StG 716375
UMR 5607 Ausonius – Université Bordeaux
Montaigne
skirov@free.fr

Jeffrey D. Lerner

Wake Forest University
lernerjd@wfu.edu

Kalin Madzharov

National Archaeological Institute with Museum,
Sofia
kalinmadzharov@mail.bg

Dragoş Măndescu

Muzeul Judeţean Argeş, Piteşti, România
dragos_mandescu@yahoo.com

Consuelo Manetta

University of Exeter, Department of Classics
and Ancient History
c.manetta@exeter.ac.uk

Philip Mihaylov

Regional Museum of History Pernik
philip.mihaylov@gmail.com

Petar Minkov

National Archaeological Institute and Museum,
Sofia
petraki_orlovski@abv.bg

Kabalan Moukarzel

Sofia University “St. Kliment Ohridski”,
Faculty of History
Department of Ancient History, Thracian Studies
and Medieval History
nuskuh@yahoo.com; mukarzel@uni-sofia.bg

Kate Mower

University of California, Riverside
kate.mower@gmail.com

Yana Mutafchieva

National Archaeological Institute and Museum,
Sofia
yanamutafchieva@yahoo.com

Nerantzis Nerantzis

Université de Lille – Halma UMR 8164,
nerantzis.nerantzis@gmail.com

Ion Niculiţă

Moldova State University, Chişinău,
Republic of Moldova
ion_niculitsa@yahoo.com

Stratis Papadopoulos

Head of the Ephorate of Drama,
Greek Ministry of Culture
efstratiospa@gmail.com

Meglana Parvin

Historical Museum “Iskra”, Kazanlak
m_parvin@abv.bg

Angela Pencheva

Balkan Heritage Foundation (BHF), Sofia
angelapbh@gmail.com

Vyara Petrova

Archaeological museum “Prof. Mieczysław
Domaradzki”, Septemvri
vyara.petrova.vp@gmail.com

Olivier Picard

Professeur honoraire à la Sorbonne
picard-olivie@bbox.fr

Horea Pop

Muzeul Judeţean de Istorie şi Artă, Zalău, RO
horeapopd@yahoo.com

Hristo Popov

National Archaeological Institute with Museum,
Sofia
director@naim.bg

Kalin Porozhanov

Neofit Rilski South-West University – Blagoevgrad
Institute for Balkan Studies and Centre of Thracology,
Bulgarian Academy of Sciences
kalinsp@abv.bg, kalinsp@swu.bg

Lynn E. Roller

University of California Davis
leroller@ucdavis.edu

Mustafa H. Sayar

University of Istanbul, Department of History
mhsayar@gmail.com

Paola Schirripa

Università degli Studi di Milano
paola.schirripa@guest.unimi.it

Katarzyna Skowron

Muzeum Historyczne Miasta Krakowa, Kraków,
Pologne
katarzyna.joanna.skowron@gmail.com

Stephan Steingraber

Università di Roma Tre, DSU
stephan.steingraber@uniroma3.it

Daniela Stoyanova

University of Sofia, Faculty of History, Department
of Archaeology
stoianova@uni-sofia.bg; daniela.stoyanova.su@
gmail.com

Nino Sulava

Hauptkuratorin des Georgischen Nationalmuseums
nino_sulava@yahoo.com

Gabriel M. Talmațchi

Museum of National History and Archaeology,
Constanța, Romania
gtalmatchi@yahoo.com

Alexandra Țârlea

Faculty of History, Bucharest University
alex_tarlea@yahoo.com

Nikola Tonkov

National Archaeological Institute and Museum,
Sofia
tonkov_n@hotmail.com

Eva Tonkova

Sofia
e.n.tonkova@gmail.com

Stavri A. Topalov

Sofia
stavri.topalov@gmail.com

Helena Domínguez-del Triunfo

University of Pennsylvania (Filadelfia, USA) /
Universidad Rey Juan Carlos (Madrid, Spain)
helena.dominguez@urjc.es

Despoina Tsiafaki

“Athena” Research Center
tsiafaki@ipet.gr

Nikoleta Tzankova

University of Mining and Geology St. Ivan Rilski
niktzankova@abv.bg

Maya Vassileva

New Bulgarian University, Department of
Mediterranean and Eastern Studies
lavagetas@hotmail.com

Yuriy A. Vinogradov

Institute for the History of Material Culture,
St. Petersburg, Russia
vincat2008@yandex.ru

Kalina Yordanova

National History Museum, Sofia, Bulgaria
iordanova.kalina@gmail.com

Aurel Zanoci

Moldova State University, Chișinău,
Republic of Moldova
azanoci@gmail.com

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The text suggests that a systematic approach to record-keeping is essential for identifying trends and making informed decisions.

In the second section, the author explores various methods for organizing financial data. One key recommendation is the use of clear, descriptive labels for each entry. This helps in quickly identifying the nature of the transaction and its impact on the overall financial picture. Additionally, the text highlights the value of regular reviews and reconciliations to catch any discrepancies early on.

The third part of the document focuses on the role of technology in modern accounting. It discusses how software solutions can streamline the recording and analysis of financial data, reducing the risk of human error and saving time. The author notes that while technology is a powerful tool, it should be used in conjunction with sound accounting principles and professional judgment.

Finally, the document concludes by stressing the importance of transparency and accountability in financial reporting. It encourages individuals and businesses to provide clear and honest information to stakeholders, which is crucial for building trust and maintaining a positive reputation. The text also mentions that accurate financial records are often required for tax purposes and legal compliance.