

**PODOLIA AS A CULTURAL
CONTACT AREA
IN THE 4TH/3RD-2ND MILLENNIUM BC**

**Maciej Chyleński
Tomasz Goslar
Marta Gwizdała
Svetlana V. Ivanova
Mattias Jakobsson
Anna Juras
Viktor I. Klochko
Aleksander Koško
Liudmyla V. Litvinova
Sylvia Łukasik
Helena Malmström
Mykhailo V. Potupchyk
Serhiy M. Razumov
Marzena Szmyt
Gennadiy N. Toshev
Piotr Włodarczak
Danuta Żurkiewicz**

BALTIC-PONTIC STUDIES

V O L U M E 20 • 2015

BALTIC-PONTIC STUDIES

61-614 Poznań (Poland)

Umultowska 89D

Tel. 618291418

E-mail: antokol@amu.edu.pl

EDITOR

Aleksander Koško

EDITORIAL COMMITTEE

Sophia S. Berezanskaya (Kyiv), Lucyna Domańska (Łódź),
Elena G. Kalechyts (Minsk), Viktor I. Klochko (Kyiv), Mykola
N. Kryvaltsevich (Minsk), Roman Lytvynenko (Donieck), Jan
Machnik (Kraków), Przemysław Makarowicz (Poznań), Vitaliy
V. Otroshchenko (Kyiv), Marzena Szmyt (Poznań), Petro
Tolochko (Kyiv)

SECRETARY

Marzena Szmyt

SECRETARY OF VOLUME

Karolina Harat

Danuta Żurkiewicz

ADAM MICKIEWICZ UNIVERSITY
INSTITUTE OF EASTERN STUDIES
INSTITUTE OF PREHISTORY

Poznań 2015

ISBN 83-86094-20-6

ISSN 1231-0344

**PODOLIA AS A CULTURAL
CONTACT AREA
IN THE 4TH/3RD-2ND MILLENNIUM BC**

**Maciej Chyleński
Tomasz Goslar
Marta Gwizdała
Svetlana V. Ivanova
Mattias Jakobsson
Anna Juras
Viktor I. Klochko
Aleksander Koško
Liudmyla V. Litvinova
Sylvia Łukasik
Helena Malmström
Mykhailo V. Potupchyk
Serhiy M. Razumov
Marzena Szmyt
Gennadiy N. Toshev
Piotr Włodarczak
Danuta Żurkiewicz**

BALTIC-PONTIC STUDIES

V O L U M E 20 • 2015

© Copyright by BPS and Authors
All rights reserved

Reviewers: Lucyna Domańska
Przemysław Makarowicz

Cover Design: Eugeniusz Skorwider

Linguistic consultation: Ryszard J. Reisner
Piotr T. Żebrowski

Printed in Poland

Computer typeset by PSO Sp. z o.o. w Poznaniu

Printing: Zakłady Poligraficzne TMDRUK in Poznań

CONTENTS

EDITOR'S FOREWORD	5
EDITORIAL COMMENT.....	6
Svetlana V. Ivanova, Gennadiy N. 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	7
Viktor I. Klochko, Aleksander Koško, Serhiy M. Razumov, Piotr Włodarczak, Danuta Żurkiewicz, ENEOLITHIC, YAMNAYA, CATACOMB AND BABYNO CULTURE CEMETERIES, PIDLISIVKA, BARROW 1, YAMPIL REGION, VINNITSA OBLAST: ARCHAEOOMETRY, CHRONOMETRY AND TAXONOMY	40
Viktor I. Klochko, Aleksander Koško, Serhiy M. Razumov, Piotr Włodarczak, Danuta Żurkiewicz, ENEOLITHIC, YAMNAYA AND NOUA CULTURE CEMETERIES FROM THE FIRST HALF OF THE 3RD AND THE MIDDLE OF THE 2ND MILLENNIUM BC, POROHY, SITE 3A, YAMPIL REGION, VINNITSA OBLAST: ARCHAEOOMETRIC AND CHRONOMETRIC DESCRIPTION, RITUAL AND TAXONOMIC-TOPOGENETIC IDENTIFICATION	78
Viktor I. Klochko, Aleksander Koško, Serhiy M. Razumov, Piotr Włodarczak, Danuta Żurkiewicz, ENEOLITHIC, BABYNO AND NOUA CULTURE CEMETERIES, KLEMBIVKA, SITE 1, YAMPIL REGION, VINNITSA OBLAST: ARCHAEOOMETRY, TAXONOMY AND TOPOGENETICS.....	142
Viktor I. Klochko, Aleksander Koško, Mykhailo V. Potupchuk, Piotr Włodarczak, Danuta Żurkiewicz, Svetlana V. Ivanova, TRIPOLYE (GORDINEȘTI GROUP), YAMNAYA AND CATACOMB CULTURE CEMETERIES, PRYDNISTRYANSKE, SITE 1, YAMPIL REGION, VINNITSA OBLAST: AN ARCHAEOOMETRIC AND CHRONOMETRIC DESCRIPTION AND A TAXONOMIC AND TOPOGENETIC DISCUSSION	183
Tomasz Goslar, Viktor I. Klochko, Aleksander Koško, Piotr Włodarczak, Danuta Żurkiewicz, CHRONOMETRY OF LATE ENEOLITHIC AND 'EARLY BRONZE' CULTURES IN THE MIDDLE DNIESTER AREA: INVESTIGATIONS OF THE YAMPIL BARROW COMPLEX.....	256
Liudmyla V. Litvinova, Sylwia Łukasik, Danuta Żurkiewicz, Marta Gwizdała, Maciej Chyleński, Helena Malmström, Mattias Jakobsson, Anna Juras, ANTHROPOLOGICAL DESCRIPTION OF SKELETAL MATERIAL FROM THE DNIESTER BARROW-CEMETERY COMPLEX, YAMPIL REGION, VINNITSA OBLAST (UKRAINE)	292

Svetlana V. Ivanova, Gennadiy N. Toshev, THE MIDDLE-DNIESTER CULTURAL CONTACT AREA OF EARLY METAL AGE SOCIETIES. THE FRONTIER OF PONTIC AND BALTIC DRAINAGE BASINS IN THE 4TH/3RD-2ND MILLENNIUM BC..... 336

Svetlana V. Ivanova, Viktor I. Klochko, Aleksander Koško, Marzena Szmyt, Gennadiy N. Toshev, Piotr Włodarczak, ‘YAMPIL INSPIRATIONS’: A STUDY OF THE DNIESTER CULTURAL CONTACT AREA AT THE FRONTIER OF PONTIC AND BALTIC DRAINAGE BASINS 406

List of Authors 425

Editor's Foreword

The present volume of *Baltic-Pontic Studies* comprises papers reflecting a segment of research into the *Podolia cultural interchange* of communities genetically related to the drainage basins of the Black and Baltic seas in the 4th/3rd-2nd millennium BC. Accordingly, the papers present the results produced by the Polish-Ukrainian research project whose aim was to explore the *Yampil barrow cemetery complex* located in the southern portion of the Middle Dniester Area (*Vinnitsa Oblast*).*

The respective papers discuss the Yampil cultural background – a taxonomic record of ‘barrow communities’ settling the forest-steppe zone of the drainage basins of the Dniester and Prut rivers (from the position of the state the investigations of them have been until now). Next, they present the archaeometric and taxonomic descriptions of cemeteries explored by the *Yampil Expedition* in 2010-2015 (Klembivka, Pidlisivka, Porohy, Prydnistryanske) and further, examine the chronometry and anthropological characteristics of the populations that co-created the necropolises in question.

This volume of papers includes synthesizing studies that, while continuing to examine the questions raised earlier, focus on ‘Podolia conceptual propositions’ in the context of Baltic-Pontic archaeology. This particular research focus shall be continued in subsequent volumes of *BPS*.

The requirements related to *BPS* going electronic are the reason behind the limited modification of its editorial formula, which readers will see on the pages of this volume.

The present 20th volume has been made possible owing to the generous financial support provided for undertaking scholarly investigation and associated editing, and publishing, as well as administration under the aegis of a grant from the *National Programme for the Development of the Humanities* (no. 108/NPH3/H12/82/2014).

The reviewers of the papers published in this volume were Professors Lucyna Domańska and Przemysław Makarowicz.

* For a broader discussion see: ‘Naddniestrzańskie kompleksy cmentarzysk kurhanowych społeczności z III i z pierwszej połowy II tysiąclecia przed Chr. w okolicach Jampola, obwód winnicki. Z badań nad północno-zachodnią rubieżą osadnictwa kręgu kultur „wczesnobrązowych” strefy pontyjskiej. Badania z lat 1984-2014 In: Aleksander Koško, Mychajł Potupchyk, Serhiy Razumov (Eds) *Archaeologia Bimaris – Monografie* 6. Poznań: Wydawnictwo Nauka i Innowacje.

Editorial comment

1. All dates in the B-PS are calibrated [BC; see: Radiocarbon vol. 28, 1986, and the next volumes]. Deviations from this rule will be point out in notes [bc].
2. The names of the archaeological cultures and sites are standarized to the English literature on the subject (e.g. M. Gimbutas, J.P. Mallory). In the case of a new term, the author's original name has been retained.
3. The spelling of names of localities having the rank of administrative centres follows official, state, English language cartographic publications (e.g. *Ukraine, scale 1 : 2 000 000*, Kyiv: Mapa LTD, edition of 1996; *Rèspublika BELARUS', REVIEW-TOPOGRAPHIC MAP*, scale 1:1 000 000, Minsk: *BYELORUSSIAN CARTOGRAPHIC AN GEODETIC ENTERPISE*, edition 1993).

Svetlana V. Ivanova*, **Viktor I. Klochko****, **Aleksander Koško*****,
Marzena Szmyt****, **Gennadiy N. Toshev*******,
Piotr Włodarczak*****

‘YAMPIL INSPIRATIONS’:
A STUDY OF THE DNIESTER CULTURAL
CONTACT AREA AT THE FRONTIER OF PONTIC
AND BALTIC DRAINAGE BASINS

ABSTRACT

The article presents the present state of research on the general issue of the Dniester Region of cultural contacts between communities settling the Baltic and Pontic drainage basins. Some five domains of research shall be brought to discussion in which it is possible to see fresh opportunities for archaeological study, on the basis of ‘Yampil studies’ on Dniester-Podolia (forest-steppe) barrow-culture ceremonial centres from the latter half of the 4th millennium and first half of the 3rd millennium BC. This relates to the peoples of the Eneolithic and the Early Bronze Age. In terms of topogenesis, embracing the

* Institute of Archaeology National Academy of Science of Ukraine; Heroyiv Stalingrada 12, 04210 Kyiv, Ukraine; svi1956@gmail .com

** Department of Archaeology National University of Kyiv-Mohyla Academy, Skovorody 2, 04665 Kyiv, Ukraine; vklochko@ukr.net

*** Institute of Prehistory Adam Mickiewicz University; Umultowska 89D, 61-614 Poznań, Poland; antokol@amu.edu.pl

**** Institute of Eastern Studies Adam Mickiewicz University; Umultowska 89D, 61-614 Poznań, Poland; marzena@amu.edu.pl

***** Zaporizhya National University; Zhukovskogo Street 66, 69063 Zaporizhzhya, Ukraine; gent51@mail.ru

***** Institute of Archaeology and Ethnology of Polish Academy of Sciences, Centre for Mountains and Uplands Archaeology in Kraków; Sławkowska 17, 31-016 Kraków, Poland; wlodarczak.piotr@gmail.com

Pontic-Tripolye, Yamnaya and Catacomb cultures, as well as Globular Amphora and Corded Ware in central prehistoric Europe.

Key words: ‘barrow cultures’; Eneolithic; Early Bronze Age; Tripolye, Yamnaya, Catacomb, Globular Amphora and Corded Ware cultures, Middle Dniester Area, Podolia

In subsequent articles of this ‘Podolia’ volume of *Baltic-Pontic Studies* the issue of *Yampil inspirations* appears in the light of the **Dniester cultural contact area**. The respective articles have documented the present state of research, embracing studies of materials based on newly found excavation sources from *Yampil barrow cemetery complex*, radiocarbon dating, the anthropological nature of ‘barrow communities’ as creators and users of the local network of barrows, as well as the contextualisation of this Dniester region cultural phenomenon at the turn of the Eneolithic and Bronze Age into the wider cultural frame formed in line with communities differing in topogenesis, arising from the North-West Pont and the Baltic drainage basin¹.

This outline represents an attempt to synthesise a number of research questions based on the analysis of the above mentioned studies and related data, in the main corroborated through a new chronometric record (Goslar *et al.* 2015) with respect to the sequence of the Pontic lineage of ritual funerary customs² understood as archaeological taxa. It is the latter therefore that our research shall focus on – 4th millennium to 3rd millennium BC, where the *Yampil phenomenon* becomes bolder in relief. This by no means, however, signifies a resignation from further discussion on the impact of research results pertaining to ‘Yampil studies’ of the 2nd millennium BC. The presented outline – **having identified five domains of relevant research interest** – can therefore be considered as an introduction to the general question of the aforementioned *Yampil inspirations*.

1. In the light of research, the ‘Yampil’ concept of ‘round barrows’³ arises in the Middle Dniester Area (in the broader context no doubt also in the interfluvium of the Dniester and Prut rivers) in 3350-3200 BC in the context of ‘Late Tripolye’ (broadly speaking: Late Eneolithic) units present in the Dniester forest-steppe.⁴ In the classical categorisation of taxa representative of the CII phase of the Tripolye culture (TC) according to T.G. Movsha [1971], this sub-areage was identified as its northern group. In later research, it was referred to as the Gordinești-Kasperovtsy-Horodiște group [Dergachov 2004].

¹ See Koško *et al.* Eds 2014.

² See the concept of ‘funerary traditions’ in Rassamakin 2004; 2011.

³ See the ‘*process of Kurganization*’ according to M. Gimbutas 1977 – also for discussion of conception.

⁴ Goslar *et al.* 2015; see Ivanova, Toshev 2015a – a record of earlier radiocarbon determinations of corresponding phenomena from the north-western Black Sea Coast.

In the present taxonomy of 'early barrow phenomena' according to Y.Y. Rassamakin, the Eneolithic barrow graves in the forest-steppe are situated mainly in the context of the syncretic Zhyvotilovka-Volchansk group (type), representing a hypothetical community integrating traditions such as Late Tripolye (Kasperovtsy and Gordinești), Caucasian (Maikop), as well as Central European (mainly Baden) [Rassamakin 1994; 1999; 2002]⁵.

Out of Yampil sites, the majority of data on the chronometry of the Eneolithic beginnings of barrow architecture was yielded by Prydnistryanske 1. The data relates to four barrows (I, II, III and IV) with relatively modest mounds (20-30 m in diameter), very poorly preserved, measuring some 0.3-0.4 m deep (extremely difficult to identify in terms of archeometry). These have been classified, both on the basis of a ceramic ware inventory and radiocarbon dating as belonging to the Late TC horizon (CII phase) [Klochko *et al.* 2015]. The technological and stylistic analyses of ceramic ware best lending themselves to taxonomic diagnosis of ceramics from grave III/3 point to cultural analogies relating to Tsviklovtsy, Gordinești, Brînzești and Zhvanets communities⁶.

The complete dimension of the chronology of growth of *Yampil Eneolithic round barrows* remains an open question if it is taken into account that the end date for the TC is most often placed around 2750/2700 BC [Videiko 2002]. Already on account of this, it is possible to assume the co-existence of Eneolithic and 'Yamnaya' barrows in the studied Yampil funerary space. Further, a consequence of this is the presence of clearly marked Eneolithic traits in YC funerary rites [Ivanova 2015: 285, 286].

The list of Eneolithic barrows/graves on the forest-steppe of the Middle Dniester Area appears highly promising in respect to their concentration near Camenca in Moldova [Manzura *et al.* 1992], as well as in the neighbouring north complex in the Yampil Region in Ukraine [Koško *et al.* 2014]. These were excavated in the previous century but alas, there is no radiocarbon dating available. In respect of the former barrow cluster, two Eneolithic barrows were identified (Ocnița, features 6/24 and 7/14), which represent some 25 per cent of excavated mounds, though only 2.63 per cent of Eneolithic and Bronze Age graves in general; in total 76 inclusive of the horizon of Babyno culture, according to Manzura *et al.* [1992: 82-88, 95].

Initially, in the taxonomy of *Yampil concentration funerary features* there was a lack of graves first classified as Eneolithic [Harat *et al.* 2014], though in further discussion and analysis at the publication stage there also arose other views on this matter. They became more pronounced upon expanding the team of experts and learned colleagues researching the *Yampil Project* to embrace Svetlana V. Ivanova,

⁵ Also see Koško 2000; Włodarczak 2008; 2014; Ivanova, Toshev 2015 in respect of the Dniester as a cultural contact area.

⁶ In this place we are beholden to acknowledge the generosity of scholarship on the part of Dr. Serhiy Ryzhov: see Klochko *et al.* 2015.

Viktor I. Klochko and Gennadiy N. Toshev. In the view of V.I. Klochko, one could attribute Eneolithic ritual traits in the earlier published record of ‘Yampil’ barrows to the following sites: Dobrianka 1/6; 1/9 (?); Porohy 1/1; 1/2; Porohy 3/2; 3/5; Pysarivka 1/1(?); Pysarivka 4/2; Pysarivka 5/2; Pysarivka 6/1; Pysarivka 9/2; 9/3 [Harat *et al.* 2014], as well as Pidlisivka 1/10; 1/11; 1/13⁷.

In this opinion, next to ritual traits (architecture of grave pits, positioning of skeleton and grave goods), destruction itself can be said to play a significant role in terms of diagnosis (= effects of robbery), as noted at the Prydnistryanske 1 site as being repetitive (apart from this site this was also confirmed in the case of grave 2/12 in Severynivka), the political-ritual act defining a chronological division (?) – taking over Eneolithic funerary sites (for discussion see point 3). The views of S.V. Ivanova and G.N. Toshev proceeded in a similar vein, though limited to two funerary features (Porohy 3/2 and Severynivka 1/5) among those published in 2014 (investigated in 1985) [Harat *et al.* 2014], as well as others excavated in 2010–2012, hitherto qualified as YC graves: Pidlisivka 1/1B and 1/10 (perhaps also 1/4 and 1/7), Porohy 3A/7 and 3A/14, as well as Klembivka 1/5, 1/14 and 1/15 [Klochko *et al.* 2015a; 2015b; 2015c].

In summing up the taxonomic outline discussed above, it is worth noting three aspects in particular. First, with respect to earlier comments, the case for a clear line of demarcation between the Eneolithic (‘Tripolye’) and Early Bronze Age (in this context, ‘Yamnaya’) funerary rites relating to the use of rounded burial mound(s) is doubtful as to both ‘chronometric proof’ – evidence of date overlapping [Goslar *et al.* 2015; Ivanova, Toshev 2015a] and studies of material culture – the anthropological documentation of long-term *neighbour correspondence* leading to the syncretisation of cultural systems.

Secondly, further research on the part of the above mentioned scholars has given birth to a significant change of opinion with respect to the growth of the Eneolithic in ‘ceremonial experiences’ to around 20 per cent of excavated Yampil graves – 12 Eneolithic out of 60 features explored before 2010 [Harat *et al.* 2014]. This strengthens the case for the proposition that the forest-steppe of the Dniester area (or more precisely the area settled by the Late Tripolye Gordinești, Kasperovtsy and Vykhatintsy groups) can be viewed as a potentially significant genetic centre of the idea of ‘round barrows’, creatively developing vis-à-vis the South, as exemplified by the steppe TC Usatovo group [Klochko *et al.* 1999: 265] and more broadly, the early barrows of the Balkans and Carpathian Basin [Heyd 2011].

The above proposition should be understood as an argument for a wider exploration of small mounds constituting the horizon of the oldest forms of ‘barrow architecture’ in Late TC communities in the Middle Dniester Area [Dergachev, Manzura 1991]. One particular research direction of interest is the attempt to identify early manifestations of barrow trend on the Podolia Upland and in Volhynia,

⁷ See Koško *et al.* 2014.

situated north-west of the *Yampil agglomeration*. In this context of special interest remains the hitherto one-off discovery in this region of ceramic ware from the Gordinești/Kasperovtsy group in the barrow in Zawisznia, Sokal Region [Antoniewicz 1925: 240].

Although enigmatic data on the presence of TC ceramic ware in several other Podolian barrows, as for example in Liczkowce on Zbrucz [Sulimirski 1968: 173], cannot be verified, in the context of Yampil finds the latter, it may be argued, present a stronger case for verification. The case for discovering earlier barrow features in the central and western Podolia Upland is bolstered by the growth of cultural contacts between the Middle and Lower Dniester (CI and CII TC phases), resulting in the rise of new funerary ritual elements such as the catacomb grave in Bilshivtsy [Tkachuk 2001-2002].

Thirdly, Middle Dniester Eneolithic burials clearly differ in terms of funerary ritual, which points to their respective differing chronologies and – first and foremost – to their links to various types/traditions of funerary ritual. Apart from the above discussed graves associated with the ‘Late Tripolye’ Gordinești group, there are also features present that demonstrate other steppe varieties of the Eneolithic. The highly indicative positioning of the dead in this context points to analogies in the post-Mariupol/Kvitanska burial group (such as Ocnîța, graves 6/24 and 7/14) [Manzura *et al.* 1992], Zhyvotilovka-Volchansk burial group (Porohy, grave 1/7 and Klembivka, grave 1/14) [Klochko *et al.* 2015b; 2015c], Lower-Mikhailovka/Khadzider/Cernavoda 1 burial group (Severynivka, grave 1/5) [Harat *et al.* 2014], or post-Stog (Pidlisivka, grave 1/1B; Klembivka, grave 1/15) [Klochko *et al.* 2015a; 2015c].

All of the above represent the ‘main types’ of Eneolithic burials documented in the north-western Black Sea Coast [Rassamakin 1998; 2004; Manzura 2013; Ivanova 2015]. The chronology of at least some of these is late – radiocarbon determinations for Klembivka 1 graves point to the beginnings of the 3rd millennium BC [Goslar *et al.* 2015]. Among Podolia barrows presenting these varying steppe traditions there as yet has not been documentation of those whose chronology could have preceded the establishment of a ceremonial centre in Prydnistryanske (3350-3200 BC) and whose chronology is also defined by the presence of Tripolye ceramic ware from phase CII. Taking into account, however, the actual number and differentiation in taxa of Eneolithic barrows, a search for older barrow complexes providing an inspiration for ‘Late Tripolye’ ritual centres would appear to have some basis. Few such, it should be noted, have been documented in the Dniester-Prut part of the forest-steppe [Levițki *et al.* 1996: 69-73] and it could be argued that their chronology could have preceded the formation of the Gordinești group [Larina 2003: 72].

On the other hand, the Yampil finds point to the survival of various Eneolithic funerary traditions right up to the beginning of the Bronze Age, as well as a significant unification in Yamnaya culture (YC) funerary rituals [Rassamakin 2013]. The

barrow funerary custom therefore became for long periods thereafter one of the ritual elements of communities differing in terms of topogenesis, ones that settled the Middle Dniester Area from the beginnings of the latter half of the 4th up to the middle of the 3rd millennium BC.

2. In the light of the above outline therefore one should argue that the ‘architecture of barrows’ associated in the *Yampil landscape* of the Middle Dniester Area with the Eneolithic (specifically, mainly with the TC), precedes the development of a similar phenomenon that can be observed from 2900/2800 BC in the Upper Dniester Area and drainage basin of the Upper Vistula, associated with the Corded Ware culture (CWC) [Włodarczak 2006; 2007; 2008; Jarosz, Włodarczak 2007; Goslar *et al.* 2015]. The most consuming research question therefore is whether ritual customs making use of Eneolithic (Tripolye) ‘barrow architecture’ could have penetrated northwards along the Dniester route, where Globular Amphora culture (GAC) communities functioned. One could also ask what role the rituals played among the autochthons [Koško 2000; Włodarczak 2008; 2014: 335; Ivanova, Toschev 2015b]⁸.

This issue has already been discussed with a resulting tentative systemic taxonomy in the studies of P. Włodarczak, arguing for the Złota culture (ZC) in the Vistula Region as an illustration of one of the reception centres of civilization inspirations from the oldest Pontic ‘barrow culture’ circle associated with the Eneolithic and Early Bronze Age [Małopolska: Włodarczak 2008]. Notably, it is in the ZC that one can notice a set of cultural traits (catacomb grave construction, burial details, forms and decoration of vessels) analogous to those shared by the north-western Black Sea Coast groups of the forest-steppe Eneolithic (chiefly Zhyvotilovka-Volchansk) and the Late Tripolye circle (chiefly Usatovo-Gordinești-Horodiștea-Kasperovtsy).

One of the main signposts of the continuity of this phenomenon in a later period corresponding to the early phases of the CWC and YC, remains the striking correspondence of style in respect of type A amphorae from the Vistula area (Złota, ‘Nad Wawrem’ site, grave 436) and the Middle Dniester Region, from *Yampil barrow concentrate on* (Porohy, barrow 2, grave 2) [Ivanova *et al.* 2014]. The discovery of flint artefacts from barrows in Porohy (3A/15) and Prydnistryanske (IV/7) points, moreover, to the important role of raw materials from Upper Dniester areas, as well as to technology serving as an inspiration for flint working by CWC communities [Razumov 2011: 141-148]. The number of finds documenting CWC – YC ties, alas is modest and clearly less than finds testifying to GAC – YC cultural exchange.

The above two relations of communities of the Northern Pont with cultures deriving from Central Europe are, however, similar with respect to: (a) the dating of their signs on YC cemeteries and (b) analogical manifestations in the funerary

⁸ For a different view see Bandrivskiy 2005.

rituals of the north-western Black Sea Coast communities (the same basic types of objects used in the same way in funerary rites). Although to date it has not been possible to gain absolute date determinations for GAC and CWC graves and associated artefacts, one can suggest that on the basis of the relative stratigraphy of barrow constructions, these finds can be dated in general to 2800-2600 BC.

The above date determinations for these burials can be precisely set as: younger than central barrow burials (Eneolithic and YC, dated foremost to 3050-2800/2700 BC), at the same time older than graves associated with the late or decline Yamnaya phase (approx. the middle of the 3rd millennium BC and later ?). A good illustration in this context is the corresponding chronology of vessel grave goods featuring GAC and CWC traits in barrows documented in barrows in Corpaci and Očnița, where in a similar stratigraphic context burials were discovered with amphorae that demonstrated stylistic analogies to the above two cultural groups [Yaroyoy 1984; Manzura *et al.* 1992].

The presence of Central European elements of cultural complexes in YC graves relates to the stage of the crystallisation of CWC models (= 'horizon A' – in the traditional view). Of special research interest therefore is the role of communication between the Black Sea Coast and the drainage basin of the Baltic Sea in the formation of a new set of barrow rituals: the old Corded Ware horizon. In this context, the Middle Dniester Area would have played the role of a cultural exchange, though scarcity of finds from the south-eastern reaches of the CWC constitutes a barrier in providing more details (between the *Yampil agglomeration* of Eneolithic barrows of the YC and the Zbrucz River, where the easternmost CWC barrows are found, there is a belt of 'no man's land', measuring some 150 km across).

The marginal concentrations of CWC barrows in the Zbrucz area and also Upper Dniester communities further to the west have thus far provided few materials dated to the first half of the 3rd millennium BC [Jarosz 2012]. The majority of graves are dated to younger phases of the CWC [Machnik 1979; Bunyatyan 2010]. Hence, it is Małopolska at present that provides an insight into the importance of relations between the Northern Pontic Area and the Final Neolithic of Central Europe. It is on this basis that attempts at genetic interpretation are made [Włodarczak 2014]. Importantly, this does not negate the fundamental significance of Podolia together with the main Dniester cultural contact route.

3. Of special research note for an assessment of the autogenesis of Eneolithic 'round barrows' may be radiocarbon dated observations of the extent of the destruction ('robberies') in their grave chambers that were conducted in Prydnistryanske 1 [Klochko *et al.* 2015]. Here, it is worth noting the repetition of this phenomenon (feature III/3 is an exception), which at the same time does not find comparison in the territorially continuing YC. Assessing this phenomenon of particular interest in a broader perspective – that of the 'barrow observation' of the 4th to 3rd millennium BC on the north-western Black Sea Coast – one ought to

opine that apart from acts of destruction, these ‘main burials’ that were destroyed (in the first, sometimes also in the second mound) are also more often tied to the Eneolithic rather than the YC.

At this juncture it is worth placing the above observations in the wider context of Pontic research and note that there are two basic conceptions of how this phenomenon is interpreted.

In the first, there can be observed the clearing of the grave of earlier burials (Eneolithic) by communities of the YC [Subbotin 2000: 356]. Intuitively, such intrusions are explained by robbery of valuable objects (foremost metal). Examples of richly furnished central graves are not a rarity (such as grave 1/21 from Purcari), especially in the Late Tripolye steppe circle (Usatovo group) and may be considered to constitute proof also for such an interpretation.

Scholars working in this particular school of interpretation devote themselves to comparative studies of the destruction of burials among various cultures of the Bronze Age, proposing various reasons for this phenomenon: ritual or symbolic robbery for the purposes of clearing [Kupriyanova 2014: 589], fear of the dead and finally, as a symbol of conflicting systems of communication – ‘us versus them’ [Novozhenov 2014: 622-623]. These scholars emphasise the differing nature of causes according to differing cultures [Podobed *et al.* 2014: 629]. Ethnographic data often indicate the destruction of graves as a means of ‘disarming’ the dead, while the removed bones were later used as ritual attributes. Often such ‘clearings’ were undertaken during the taking of new territories accompanied by exploiting a ‘foreign’ barrow and the destruction of a ‘foreign’ grave – ‘us versus them’ [Podobed *et al.* 2014: 630].

The second hypothesis according to T.M. Potemkina, argues that the ‘destroyed’ burials in fact document the Eneolithic ‘pole temples’ of that time. They were sacrificed by humans, marking the choice of place and the beginning of temple construction as one where rituals were to be conducted regularly, tied to funerary and calendar rituals. Over time, the place of worship transformed into a mound, functioning in the barrow cemetery system, preserving a defined tradition of ritual practices [Potemkina 2004: 221-243].

The above author also notes that in the context of spatial organisation in differing barrows all the later burials defined by scholars as ‘Early Yamnaya’ and ‘Yamnaya’ can be seen to be clearly associated with the main Eneolithic burials and ritual ‘pole-complexes’. This might well indicate the existence of common points of orientation in the model of the World; a common spatial model of *sacrum* shared by Late Eneolithic and YC communities. The following sites are to serve as diagnostic proof for this conception: Krasnoe 9, Kubey 1, Akkermen 11, Revovo 3 [Potemkina 2004: 224-240; 2005: 196-198].

4. In the light of ‘classical’ propositions of generating forces in the ‘disintegration’ of the Late TC (CII phase), and more broadly the closing stage of its autogenesis, it is worth highlighting the associated process of activity of the eastern GAC

circle. Chronometric data from the Podolian and Moldavian Uplands indicates that the communities of the GAC appeared in the neighbourhood of the Middle Dniester Area no later than around 2900 BC [Szmyt 1999: Fig. 2, 17; Mihailescu-Birliaba, Szmyt 2003] – though the beginning date cannot at present be established with any precision. The ‘intrusion’ of foreign communities with a genesis in Central Europe took place therefore, it could be argued, during the time of *Yampil builders* and users of barrows, both Late Eneolithic and Early Bronze Age (YC).

The co-occurrence of these differing communities in terms of topogenesis is probable, even likely, though as yet a clear proof in archaeological sources that would be of relevant interest has not been found. One should note, however, the above mentioned (see point 1) important growth in the number of features from the Late Eneolithic, including those which can be associated with the Zhivotilovka-Volchansk group. This is of particular importance, for this group is seen as one of the main potential partners of the GAC communities in the beginning stage of their influence on the Eastern European forest-steppes and steppes [Szmyt 1999; 2013: 100]. The confirmation of the presence of Zhivotilovka-Volchansk features in the Middle Dniester Area ought to provide an impetus to an intensification of research on the steppe and forest-steppe borderlands of drainage basins of such rivers as the Southern Bug, Ingul, Ingulets and Dnieper.

The present state of data on GAC – YC relations can be said to be quite different. Thus, north of Yampil, in the Dniester-Prut interfluvium, the material evidence for contacts between the GAC and barrow communities of the YC is growing⁹. The burgeoning register of syncretic (GAC – YC) funerary features is alas, as yet, not accompanied by a precise chronometry, which significantly limits the relevant interpretations.

For the time being, the *Yampil complex* has not contributed to the above data, though observations conducted during research on neighbouring concentrations in the region of Camenca and Ocnița on the upper Prut testify to the potential for discovering further sources, ones testifying to YC burial deposits of vessels stylistically related to the GAC [Ocnița, grave 3/14 – Manzura *et al.* 1992: Fig. 12: 6, 7; Camenca, grave 445/7 – Kachalova 1974: Tab. 7, 2]. Moreover, flint axes of analogical relations [Camenca, grave 444/3 – Kachalova 1974: Tab. 7, 1] have been identified there. The intriguing question that arises therefore is whether *Yampil data*, pointing to the presence of YC communities throughout the first half of the 3rd millennium BC [Goslar *et al.* 2015], can find relevance in neighbouring territories.

The above limitations notwithstanding, it may be argued that the present store of knowledge in this context allows for the proposition that it was GAC communities at the threshold of the 3rd millennium BC that activated the meridian axis of cultural contacts in respect of the peoples of the Middle Dniester Area, thus activating the Dniester route – strictly speaking, the Dniester-Prut. Its course, testified to

⁹ See Szmyt 2013: 100-104 for older literature.

by the location of GAC and syncretic features (GAC – YC), embraced not only the upper reaches of the Western Bug, Dniester and Prut, but also the middle portions of the Dniester and Prut drainage basins in the network circulating heterogeneous cultural patterns. One could argue therefore that further research should have as its focus the issue of GAC communities penetrating the lower – steppe – sections of the drainage basins of both rivers. In the broader perspective this relates to the hitherto as yet unresolved problem of topogenesis of a particular form of graves, namely stone cists¹⁰.

5. The turning point of the beginnings of ‘catacomb burial’ use in respect of Yampil barrow architecture can be said to be dated to 3350–3175 BC, which corresponds to the Eneolithic horizon of the oldest signs of this funerary ritual on the Northern Black Sea Coast [Rassamakin 2004; Goslar *et al.* 2015]. A grave with a catacomb construction was identified as the central feature in the hypothetically oldest barrow within the Prydnistryanske 1 (feature IV/10) necropolis and one should not exclude the fact that the semi-niche constructions of graves I/4 and I/7 in Pidlisivka, can also be attributed to the Eneolithic.

The appearance of the CC in the left-bank Dniester area can therefore be dated to the middle of the 3rd millennium BC. This assessment relates to both typo-chronological findings from Ocnîța, Camenca Region, barrow 3, where a grave was found to relate to ‘early CC’ traditions [Otroschenko 2013], as well as the radiocarbon dated feature-grave I/4 from Prydnistryanske 1 (associated with the Donets-Ingul CC traditions): 2600-2450 BC [Klochko 1990; Manzura *et al.* 1992: 92; Goslar *et al.* 2015]. The above chronological determination confirms one of the possible chronometric variants proposed for the CC in the Dniester and Prut inter-fluve as being in the period 2450-1950 BC [Kaiser 2003; 2009] or 2600-2200 BC [Ivanova 2014: 22; Ivanova, Toshev 2015].

In discussing typo-chronological interpretations, recent research argues that in the area there occur in common earlier cultural traits (corner entrance shafts, positioning of the dead), as well as later ones (oval grave chambers, grave goods). This has been interpreted as a consequence of an extended settlement process in this region by CC populations. Another particularity of this region supposedly was the long co-existence of the YC and CC [Toshev 1991: 96; Ivanova, Toshev 2015]. The above interpretation in turn has consequences in the analysis of culture-making effects produced by the Dniester route in the transmission of CC models into the Upper Vistula drainage basin. In this context, one can point to grave 1149 at Święte 11 site on the San River as a worthy example, which may be dated to around 2200-2050 BC [Koško *et al.* 2012] and which could – besides reflecting the local context of the CWC – serve as an example of the fusion of exogenic traditions of the YC and CC [Ivanova, Toshev 2015a].

¹⁰ See Szmyt 2014 for older literature.

The possibility of discovering features demonstrating an ambiguous taxonomy among the *Yampil barrow cemetery complex* – hypothetically syncretic – which could be attributed to the YC or CC, was already at the forefront of research propositions at the stage of field work during 1984 -1993¹¹. Upon publication of research results in 2014 the so-called dominant of YC traditions was recognised [Harat *et al.* 2014]. This particular question was revisited in the context of subsequent analyses undertaken by a team of scholars, which was brought together in 2015 (see point 1). Present research emphasises the presence of ‘atypical’ features in the analysed ‘barrow locus’ in the context of the YC (?) or indeed, showing CC traits (mainly from the later phase) for the sites of Pysarivka 8/4; Severynivka 1/4 and Pidlisivka 1/7 (classification by V.I. Klochko).

The question remains therefore as to what population groups, representing the ‘catacomb funerary tradition’ and in which period of prehistory, set foot on the territories of the Baltic drainage basin, making their way across the **Dniester cultural contact area**? Did this phenomenon relate purely to the decline phase (syncretic) of the CC as exemplified by the site of Święte 11?

In the beguiling panoply of questions that arise in the above discussion – as marked bold by field research in the *Yampil barrow cemetery complex* – the above are not the only ones that ask how one can and ought to answer these question marks in the process of ongoing research in the continuum of this particular archaeological project.

Translated by Piotr T. Żebrowski

¹¹ See for further discussion, the relevant conservation report.

REFERENCES

Antoniewicz W.

- 1925 Eneolityczne groby szkieletowe we wsi Złota w pow. Sandomierskim. *Wiadomości Archeologiczne* 9: 191-242.

Bandrivskyi M.

- 2005 Rol azowo-prychornomorskykh stepovykh kultur u pokhodzhenni i rozvytku skotarskoyi spilnoty na zakhodi Podilskoyi vysochyny (3700-2900 rr. do narodzhennia Khrysta). *Materialy i doslidzhennia z arkheolohiyi Prykarpattia i Volyni* 9: 135-173.

Bunyatyan K.

- 2010 Pidkarpatska kultura shnurovoyi keramiki. *Arkheolohiya* 2: 18-30.

Dergachov V.O.

- 2004 Pizniy period trypilskoyi kultury. In: M.Y. Videiko (Ed.) *Entsyklopediya trypilskoyi tsyvilizatsiyi*, 109-111. Kyiv.

Dergachev V.A., Manzura I.V.

- 1991 *Pogrebalnye komplekсы позднего Tripolia*. Kishinev.

Gimbutas M.

- 1977 The First Wave of Eurasian Steppe Pastoralists into Copper Age Europe. *The Journal of Indo-European Studies* 5-4: 277-338.

Goslar T., Klochko V.I., Koško A., Włodarczak P., Żurkiewicz D.

- 2015 Chronometry of Late Eneolithic and 'Early Bronze' cultures in the Middle Dniester area: investigations of the Yampil Barrow Complex. In: A. Koško (Ed.) *Podolia as a Cultural Contact Area in the 4th/3rd-2nd Millennium BC*. *Baltic-Pontic Studies* 20: 256-291.

Harat K., Potupczyk M., Razumow S.

- 2014 Charakterystyka źródeł archeologicznych pozyskanych w latach 1984-1993. In: A. Koško, M. Potupczyk, S. Razumow (Eds) *Naddniestrzańskie komplekсы cmentarzysk kurhanowych społeczności z III i z pierwszej połowy II tysiąclecia przed Chr. w okolicach Jampola, obwód winnicki. Z badań nad północno-zachodnią rubieżą osadnictwa społeczności kręgu kultur „wczesnobrzązowych” strefy pontyjskiej. Badania z lat 1984-2014*. *Archaeologia Bimaris – Monografie* 6, 45-204. Poznań.

Heyd V.

- 2011 Yamnaya Groups and Tumuli West of the Black Sea. In: E. Borgna, S. Müller-Celka (Eds) *Ancestral Landscapes: Burial mounds in the Copper and Bronze Ages*, 529-549. Lyon.

Ivanova S.V.

- 2014 Stan badań nad osadnictwem kultur jamowej i katakumbowej w zlewni dolnego Dniestru. In: A. Koško, M. Potupczyk, S. Razumow (Eds) *Naddniestrzańskie kompleksy cmentarzysk kurhanowych społeczności z III i z pierwszej połowy II tysiąclecia BC w okolicach Jampola, obwód winnicki. Z badań nad północno-zachodnią rubieżą osadnictwa społeczności kręgu kultur „wczesnobrzązowych” strefy pontyjskiej. Badania z lat 1984-2014. Archaeologia Bimaris – Monografie 6*, 17-33. Poznań.
- 2015 Protobudzhakskiy gorizont Severo-Zapadnogo Prichernomoria. *Stratum plus 2*: 275-294.

Iwanowa S., Koško A., Włodarczak P.

- 2014 Komponent tradycji kultur ceramiki sznurowej. Amfory w północno-zachodnio-nadczarnomorskich grobach kultury jamowej. In: A. Koško, M. Potupczyk, S. Razumow (Eds) *Naddniestrzańskie kompleksy cmentarzysk kurhanowych społeczności z III i z pierwszej połowy II tysiąclecia przed Chr. w okolicach Jampola, obwód winnicki. Z badań nad północno – zachodnią rubieżą osadnictwa społeczności kręgu kultur „wczesnobrzązowych” strefy pontyjskiej. Badania z lat 1984-2014. Archaeologia Bimaris – Monografie 6*, 351-386. Poznań.

Ivanova S.V., Toshev G.N.

- 2015 «Budzhakskie banki» kak markery: transkulturnyi i transterritorialnyi aspekt. In: P.P. Tolochko, S.S. Andrukh, G.N. Toshev (Eds) *Starozhytnosti Stepovoho Prychornomoria i Krymu XVIII*, 17-36. Zaporizhzhia.
- 2015a The Middle-Dniester cultural contact area of early metal age societies. The frontier of Pontic and Baltic drainage basin in the 4th/3rd-2nd millennium BC. In: A. Koško (Ed.) *Podolia as a Cultural Contact Area in the 4th/3rd-2nd Millennium BC. Baltic-Pontic Studies 20*: 336-405.

Jarosz P.

- 2012 Wczesne etapy osadnictwa kultury ceramiki sznurowej w strefie karpackiej. In: *Fortetsia: zbirnyk zapovidnyka „Tustan”*, vol. 2, 322-332. Lviv.

Jarosz P., Włodarczak P.

- 2007 Chronologia bezwzględna kultury ceramiki sznurowej w Polsce południowo-wschodniej oraz na Ukrainie. *Przegląd Archeologiczny 55*: 71-108.

Kachalova N.K.

- 1974 Ermitazhnaya kolleksiya N.E. Brandenburga. Epokha bronzy. In: *Arkheologia SSSR. Svod arkheologicheskikh istochnikov*, V4-12. Moskva.

Kaiser E.

- 2003 *Studien zur Katakombengrabkultur zwischen Dnepr und Prut. Archäologie in Eurasien*, vol. 14. Mainz am Rhein.
- 2009 Problemy absoliutnogo datirovaniya katakombnoy kultury Severnogo Prichernomoria. *Tyragetia. Serie nouă. III [XVIII], nr. 1, Arheologie. Istorie Antică: 59-70.*

Klochko E.O

- 1990 Redkiy pogrebalnyi kompleks katakombnoy kultury na Srednem Dnestre. In: O.G. Shaposhnikova, V.V. Otroschenko, S.Z. Pustovalov, G.N. Toshev, G.I. Shapovalov (Eds) *Problemy izucheniya katakombnoy kulturno-istoricheskoy obschnosti*, 28-30. Zaporozhe.

Klochko V.I., Koško A., Potupchyk M.V., Włodarczak P., Żurkiewicz D. Ivanova S.V.

- 2015 Tripolye (Gordinești group), Yamnaya and Catacomb culture cemeteries, Prydnistryanske, site 1, Yampil Region, Vinnitsa Oblast: an archaeometric and chronometric description and a taxonomic and topogenetic discussion. In: A. Koško (Ed.) *Podolia as a Cultural Contact Area in the 4th/3rd-2nd Millennium BC. Baltic-Pontic Studies* 20: 183-255.

Klochko V.I., Koško A., Razumov S.M., Włodarczak P., Żurkiewicz D.

- 2015a Eneolithic, Yamnaya, Catacomb and Babyno culture cemeteries, Pidlisivka, barrow 1, Yampil Region, Vinnitsa Oblast: archaeometry, chronometry and taxonomy. In: A. Koško (Ed.) *Podolia as a Cultural Contact Area in the 4th/3rd-2nd Millennium BC. Baltic-Pontic Studies* 20: 40-77.
- 2015b Eneolithic, Yamnaya and Noua culture cemeteries from the first half of the 3rd and the middle of the 2nd millennium BC, Porohy, site 3a, Yampil Region, Vinnitsa Oblast: archaeometric and chronometric description, ritual and taxonomic-topogenetic identification. In: A. Koško (Ed.) *Podolia as a Cultural Contact Area in the 4th/3rd-2nd Millennium BC. Baltic-Pontic Studies* 20: 78-141.
- 2015c Eneolithic, Babyno and Noua culture cemeteries, Klembivka, site 1, Yampil Region, Vinnitsa Oblast: archaeometry, taxonomy and topogenetics. In: A. Koško (Ed.) *Podolia as a Cultural Contact Area in the 4th/3rd-2nd Millennium BC. Baltic-Pontic Studies* 20: 142-182.

Klochko V.I., Koško A., Szmyt M.

- 1999 A Comparative Chronology of the Prehistory of the Area between the Vistula and Dnieper: 3150-1850 BC. In: A. Koško (Ed.) *The Foundations of*

Radiocarbon Chronology of Cultures Between the Vistula and Dnieper: 3150-1850 BC, Baltic-Pontic Studies 7: 264-282.

Koško A.

2000 From research into the issue of the development dependencies of the Corded Ware culture and Yamnaya culture In: S. Kadrow (Ed.) *A Turning of Ages / Im Wandel der Zeiten. Jubilee Book Dedicated to Professor Jan Machnik on His 70th Anniversary*, 337-346. Kraków.

Koško A., Klochko V.I., Olshevskiy A.

2012 Rytualnyi obiekt naselennia prychnomorskoyi kulturnoyi spilnoty doby rannoyi bronzy na r. Sian. *Arkheolohiya 2: 67-75.*

Koško A., Potupczyk M., Razumow S. (Eds)

2014 *Naddniestrzańskie kompleksy cmentarzysk kurhanowych społeczności z III i z pierwszej połowy II tysiąclecia przed Chr. w okolicach Jampola, obwód winnicki. Z badań nad północno-zachodnią rubieżą osadnictwa społeczności kręgu kultur „wczesnobrzązowych” strefy pontyjskiej. Badania z lat 1984-2014. Archaeologia Bimaris – Monografie 6.* Poznań.

Koško A., Razumov S., Żurkiewicz D

2014 Nasyp kurhanu: morfometria, stratygrafia oraz planigrafia obiektów. In: A. Koško, M. Potupczyk, S. Razumow (Eds) *Naddniestrzańskie kompleksy cmentarzysk kurhanowych społeczności z III i z pierwszej połowy II tysiąclecia BC w okolicach Jampola, obwód winnicki. Z badań nad północno-zachodnią rubieżą osadnictwa społeczności kręgu kultur „wczesnobrzązowych” strefy pontyjskiej. Badania z lat 1984-2014. Archaeologia Bimaris – Monografie 6*, 209-212. Poznań.

Kupriyanova E.V.

2014 Manipulyatsii s predmetami v pogrebeniyah epohi bronzy: ograblenie ili ritual (po materialam mogilnika Stepnoe-7). In: A.G. Sitdikov, N.A. Markarov, N.P. Derevyanko (Eds) *Trudy IV (XX) Vserossiyskogo arheologicheskogo s'ezda v Kazani*, vol. I, 588-589. Kazan.

Larina O.V.

2003 Pozdnetripolskoe pogrebenie gordineshtskogo tipa na Dnestre. In: E. Sava (Ed.) *Interferențe culturale-chronologice în spațiul nord-pontic*, 57-80. Chișinău.

Levițki O., Manzura I., Demcenko T.

1996 *Necropola tumulara de la Sarateni*. București.

Machnik J.

- 1979 Ze studiów nad kulturą ceramiki sznurowej w dorzeczu górnego Dniestru. *Acta Archaeologica Carpathica* 19: 51-71.

Manzura I.V.

- 2013 Kultury stepnego eneolita. In: S. Hansen, J. Chodorowski, S.D. Kryzhytskiy, G.Y. Ivakin (Eds) *Drevnie kultury Severo-Zapadnogo Prichernomoria*, 115-153. Odessa.

Manzura I.V., Klochko E.O, Savva E.N.

- 1992 *Kamenskie kurgany*. Kishinev.

Mihailescu-Birliba V., Szmyt M.

- 2003 Radiocarbon Chronology of the Moldavian (Siret) Subgroup of the Globular Amphora Culture. In: A. Koško, V.I. Klochko (Eds) *The Foundations of Radiocarbon Chronology of Cultures Between the Vistula and Dnieper: 4000–1000 BC, Baltic-Pontic Studies* 12: 82-123.

Movsha T.G.

- 1971 O severnoy gruppe pozdnetripolskikh pamiatnikov. *Sovetskaya Arkheologiya* 1: 31-54.

Novozhenov V.A.

- 2014 Ograblenie mogily kak kommunikativnyi messedzh (po materialam bronzovykh pogrebeniy Kazakhstana) In: A.G. Sitdikov, N.A. Makarov, N.P. Derevianko (Eds) *Trudy IV (XX) Vserossiyskogo arkhelogicheskogo syezda v Kazani*, vol. I, 622-627. Kazan.

Otroschenko V.V.

- 2013 The catacomb culture phenomenon. In: A. Koško, V.I. 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: 21-38.

Podobed V.A., Usachuk A.N., Tsimidanov V.V.

- 2014 «Ograblenie» mogil v kulturakh epokhi bronzy stepnoy i lesostepnoy Evrazii. In: A.G. Sitdikov, N.A. Makarov, N.P. Derevianko (Eds) *Trudy IV (XX) Vserossiyskogo arkhelogicheskogo syezda v Kazani*, vol. I, 628-630. Kazan.

Potemkina T.M.

- 2004 Osobennosti struktury sakralnogo prostranstva eneoliticheskikh kurhanov so stolbovymi konstruktsiyami (po materialam Severnogo Prichernomoria).

moria). In: A.N. Gey (Ed.) *Pamiatniki arkheologii i drevnego isskusstva Evrazii*, 215-250. Moskva.

Rassamakin Y.Y.

- 1994 The main directions of the development of early pastoral societies of northern Pontic Zone: 4500-2450 BC (Pre-Yamnaya Cultures and Yamnaya Culture). In: A. Koško (Ed.) *Nomadism and Pastoralism in the Circle of Baltic-Pontic Early Agrarian Cultures: 5000-1650 BC. Baltic-Pontic Studies 2*: 29-70.
- 1998 Stanitsa Novosvobodnaya i pontiyskaya step: novyi istochnik resheniya aktualnoy problemy. In: V.Ya. Kiyashko, V.A. Larenok, V.V. Potapov (Eds) *Problemy arkheologii Yugo-Vostochnoy Evropy*, 64-66. Rostov-na-Donu.
- 1999 The Eneolithic of the Black Sea Steppe: Dynamics of Cultural and Economic Development 4500 -2300 BC. In: M. Levine, Y. Rassamakin, N. Kislenko, N. Tatarintseva (Eds) *Late Prehistoric Exploitation of the Eurasian Steppe*, 59-182. Cambridge.
- 2002 Aspects of Pontic steppe development (4550-3000 BC) in the light of the new cultural-chronological model. In: K. Boyle, C. Renfrew, M. Levine (Eds) *Ancient interactions: east and west in Eurasia*, 49-73. Cambridge.
- 2004 *Die nordpontische Steppe in der Kupferzeit (Gräber aus der Mitte des 5. Jt.–Ende des 4. Jt. v. Chr.)*. *Archäologie in Eurasien 17*. Mainz am Rhein.
- 2011 Eneolithic Burial Mounds in the Black Sea Steppe: From the First Burial Symbols to Monumental Ritual Architecture. In: E. Borgna, S. Müller-Celka (Eds) *Ancestral Landscapes: Burial mounds in the Copper and Bronze Ages*, 293-306. Lyon.
- 2013 From the Late Eneolithic Period to the Early Bronze Age in the Black Sea Steppe: What is the Pit Grave Culture (Late Fourth to Mid-Third Millennium BC)? 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*, 113-138. Budapest.

Razumov S.M.

- 2011 *Flint Artefacts of Northern Pontic Populations of the Early and Middle Bronze Age: 3200-1600 BC. Baltic-Pontic Studies 16*.

Subbotin L.V.

- 2000 Severo-Zapadnoe Prichernomore v epokhu ranney i sredney bronzy. *Stratum Plus 2*: 350-387.

Sulimirski T.

- 1968 *Corded Ware and Globular Amphorae North-East of the Carpathians*. London.

Szmyt M.

- 1999 *Between West and East. People of the Globular Amphora Culture in Eastern Europe, Baltic-Pontic Studies* 8. Poznań.
- 2013 View from the Northwest: Interaction Network in the Dnieper-Carpathian Area and the People of the Globular Amphora Culture in the Third Millennium BC. 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*, 93-111. Budapest.
- 2014 Fourth-third millennium BC stone cist graves between the Carpathians and Crimea. An outline of issues. In: A. Koško (Ed.) *Reception zones of Pontic Culture traditions: Baltic Basin – Baltic and Black Sea Drainage Borderlands, 4/3 mil. to First Half 2 mil. BC. Baltic-Pontic Studies* 19: 108-147.

Toshev G.N.

- 1991 Zapadniy areal pamiatnikov katakombnoy kultury. In: *Katakombnye kultury Severnogo Prichernomia*, 85-100. Kyiv.

Tkachuk T.M.

- 2001-2002 Konets etapu CI i nachalo CII tripolskoy kultury verkhnego Podnestrovia (na materialakh poselenia Bilshivtsi. *Stratum plus* 2: 196-217.

Videiko M.Y.

- 2002 *Trypilska tsyvilizatsiya*. Kyiv.

Włodarczak P.

- 2006 *Kultura ceramiki sznurowej na Wyżynie Małopolskiej*. Kraków.
- 2007 Problem chronologii radiowęglowej kultury ceramiki sznurowej w świetle dendrochronologicznych datowań późnoneolitycznych osad palafitowych ze Szwajcarii. *Archeologia Polski* 52: 35-80.
- 2008 Kultura złocka i problem genezy kultury ceramiki sznurowej w Małopolsce. In: J. Bednarczyk, J. Czebreszuk, P. Makarowicz, M. Szmyt (Eds) *Na pograniczu światów. Studia z pradziejów międzymorza bałtycko-pontyjskiego ofiarowane Profesorowi Aleksandrowi Koško w 60. rocznicę urodzin*, 555-576. Poznań.
- 2014 Sekwencja czynności obrzędowych: problem korespondencji tradycji funeralnych kultury jamowej i kultury ceramiki sznurowej na Wyżynie Podolskiej. In: A. Koško, M. Potupczyk, S. Razumow (Eds) *Naddniestrzańskie kompleksy cmentarzysk kurhanowych społeczności z III i z pierwszej*

połowy II tysiąclecia przed Chr. w okolicach Jampola, obwód winnicki. Z badań nad północno-zachodnią rubieżą osadnictwa społeczności kręgu kultur „wczesnobrązowych” strefy pontyjskiej. Badania z lat 1984-2014. Archaeologia Bimaris – Monografie 6, 314-340. Poznań.

Yarovoy E.V.

- 1984 Pogrzebalnyi obriad nekotorykh skotovodcheskikh plemen Srednego Pruta (po materialam raskopok kurganov u s. Korpach). In: I.I. Artemenko (Ed.) *Kurgany v zone novostroek Moldavii*, 37-75. Kishinev.

LIST OF AUTHORS

Maciej Chyleński
Department of History
Institute of Prehistory, Faculty of History
Adam Mickiewicz University
Umultowska 89
61-614 Poznań, Poland
maciejchylenski@gmail.com

Tomasz Goslar
Faculty of Physics
Adam Mickiewicz University
Umultowska 85
61-614 Poznań, Poland
tomasz.goslar@radiocarbon.pl

Marta Gwizdała
Institute of Prehistory, Faculty of History
Adam Mickiewicz University
Umultowska 89
61-614 Poznań, Poland
marta-gwizdala@wp.pl

Svetlana V. Ivanova
Institute of Archaeology
National Academy of Science of Ukraine
Heroyiv Stalingrada 12
04210 Kyiv, Ukraine
svi1956@gmail.com

Mattias Jakobsson
Department of Organismal Biology
and SciLifeLab
Uppsala University
Norbyvägen 18C
SE-752 36 Uppsala, Sweden
mattias.jakobsson@ebc.uu.se

Anna Juras
Department of Human Evolutionary Biology
Institute of Anthropology, Faculty of Biology
Adam Mickiewicz University
Umultowska 89D
61-614 Poznań, Poland
ajuras.anthropology@gmail.com

Viktor I. Klochko
Department of Archaeology
National University of Kyiv-Mohyla Akademy
Skovorody 2
04665 Kyiv, Ukraine
vklochko@ukr.net

Aleksander Koško
Institute of Prehistory
Adam Mickiewicz University
Umultowska 89D
61-614 Poznań, Poland
antokol@amu.edu.pl

Liudmyla V. Litvinova
Department of Bioarchaeology
Institute of Archaeology
Ukrainian Academy of Science
Geroiv Stalingradaave. 12
04210 Kyiv, Ukraine
litvinovalv@ukr.net

Sylwia Łukasik
Department of Human Evolutionary Biology
Institute of Anthropology, Faculty of Biology
Adam Mickiewicz University in Poznań
Umultowska 89D
61-614 Poznań, Poland
lukasik@amu.edu.pl

Helena Malmström
Department of Organismal Biology
and SciLifeLab
Uppsala University
Norbyvägen 18C
SE-752 36 Uppsala, Sweden
helena.malmstrom@ebc.uu.se

Mykhailo V. Potupchik
Department of Culture and Arts
Khmelynske St. 7
21036 Vinnitsa, Ukraine
m_potupchik@ukr.net

Serhiy M. Razumov
Taras Shevchenko University
October 25 128
3300 Tiraspol, Moldova
razum_22@rambler.ru

Marzena Szmyt
Institute of Eastern Studies
Adam Mickiewicz University
Umultowska 89D
61-614 Poznań, Poland
marzena@amu.edu.pl

Gennadiy N. Toshev
Zaporizhya National University
Zhukovskogo Street 66
69063 Zaporizhzhya, Ukraine
gent51@mail.ru

Piotr Włodarczak
Institute of Archaeology and Ethnology
of Polish Academy of Sciences
Centre for Mountains and Uplands
Archaeology in Kraków
Sławkowska 17
31-016 Kraków, Poland
wlodarczak.piotr@gmail.com

Danuta Żurkiewicz
Institute of Prehistory
Adam Mickiewicz University
Umultowska 89D
61-614 Poznań, Poland
danuta@amu.edu.pl

- Vol.1: *Weapons of the Tribes of the Northern Pontic Zone in the 16th–10th Centuries BC.*, by Viktor I. Klochko.
- Vol.2: *Nomadism and Pastoralism in the Circle of Baltic–Pontic Early Agrarian Cultures: 5000–1650 BC*, edited by Aleksander Koško.
- Vol.3: *Cemeteries of the Sofievka type: 2950–2750 BC*, edited by Aleksander Koško.
- Vol.4: *Eastern Exodus of the Globular Amphora People: 2950–2350 BC*, edited by Aleksander Koško.
- Vol.5: *Beyond Balkanization*, edited by Lucyna Domańska, Ken Jacobs.
- Vol.6: *The Trzciniec Area of the Early Bronze Age Civilization: 1950–1200 BC*, edited by Aleksander Koško.
- Vol.7: *The Foundations of Radiocarbon Chronology of Cultures Between the Vistula and Dnieper: 3150–1850 BC*, edited by Aleksander Koško.
- Vol.8: *Between West And East People of The Globular Amphora Culture in Eastern Europe: 2950-2350 BC*, by Marzena Szmyt.
- Vol.9: *The Western Border Area of the Tripolye Culture*, edited by Aleksander Koško.
- Vol.10: *Weaponry of Societes of the Northern Pontic Culture Circle: 5000–700 BC*, by Viktor I. Klochko.
- Vol.11: *Fluted Maces in the System of Long-Distance Exchange Trails of the Bronze Age: 2350–800 BC*, edited by Aleksander Koško.
- Vol.12: *The Foundations of Radiocarbon Chronology of Cultures Between the Vistula and Dnieper: 4000–1000 BC*, edited by Aleksander Koško and Viktor I. Klochko.
- Vol.13: *Funeral Rites of the Catacomb Community: 2800–1900 BC Ritual, Thanatology and Geographical Origins*, by Katarzyna Ślusarska.
- Vol.14: *Routes between the Seas: Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC*, edited by Aleksander Koško and Viktor I. Klochko.
- Vol.15: *‘Cord’ Ornaments on Pottery in the Vistula and Dnieper Interfluvial Region: 5th – 4th Mill. BC*, edited by Aleksander Koško and Marzena Szmyt.
- Vol.16: *Flint Atreifacts of Northern Pontic Population of the Early and Middle Bronze Age: 3200–1600 BC*, by Serhiy M. Razumov
- Vol.17: *Wood Tar in the Dnieper and Elbe Communities: VI – II Millenium BC*, by Sławomir Pietrzak
- Vol.18: *The Ingul-Donets Early Bronze Civilization as Springboard for Transmission of Pontic Cultural Patterns to the Baltic Drainage Basin 3200–1750 BC*, edited by Aleksander Koško and Viktor I. Klochko.
- Vol.19: *Reception Zones of ‘Early Bronze Age’ Pontic Culture Traditions: Baltic Basin – Baltic and Black Sea Drainage Borderlands, 4/3 Mill. to First Half 2 Mil. BC*, edited by Aleksander Koško and Viktor I. Klochko.

Orders regarding *Baltic-Pontic Studies* should be adressed directly to the Editorial Office (*BPS*, Institute of Prehistory, Umultowska 89D, 61-614 Poznań, Poland).
 E-mail: iplib@amu.edu.pl; antokol@amu.edu.pl
 Moreover, we are pleased to inform that *BPS* volumes currently out of print (1-19) are available online at the Adam Mickiewicz University Repository (AMUR): repozytorium.amu.edu.pl

This publication constitutes the fruits of the National Programme for the Development of the Humanities (grant no. 0108/NPH3/H12/82/2014).