

**THE INGUL-DONETS  
EARLY BRONZE CIVILIZATION  
AS SPRINGBOARD FOR TRANSMISSION  
OF PONTIC CULTURAL PATTERNS  
TO THE BALTIC DRAINAGE BASIN  
3200 – 1750 BC**

**Jacek Górski**

**Svitlana Ivanova**

**Liubov Klochko**

**Viktor I. Klochko**

**Aleksander Koško**

**Mikola Kryvaltsevich**

**Sergey D. Lysenko**

**Roman O. Lytvynenko**

**Przemysław Makarowicz**

**Vitaliy V. Otroshchenko**

**Gennadiy N. Toshev**

**BALTIC-PONTIC STUDIES**

---

**V O L U M E 18 • 2013**

BALTIC-PONTIC STUDIES  
61-809 Poznań (Poland)  
Św. Marcin 78  
Tel. 618294799, Fax 618294788  
E-mail: antokol@amu.edu.pl

EDITOR  
Aleksander Koško

EDITOR OF VOLUME  
Aleksander Koško  
Viktor I. Klochko

EDITORIAL COMMITTEE  
Sophia S. Berezanskaya (Kiev), Aleksandra Cofta-Broniewska  
(Poznań), Mikhail Charniauski (Minsk), Lucyna Domańska  
(Łódź), Elena G. Kalechyts (Minsk), Viktor I. Klochko (Kiev),  
Mykola N. Kryvaltsevich (Minsk), Roman Litvinenko (Donieck),  
Jan Machnik (Kraków), Przemysław Makarowicz (Poznań), Vi-  
taliy V. Otroshchenko (Kiev), Marzena Szmyt (Poznań), Petro  
Tolochko (Kiev)

SECRETARY  
Marzena Szmyt

SECRETARY OF VOLUME  
Karolina Harat  
Danuta Żurkiewicz

ADAM MICKIEWICZ UNIVERSITY  
INSTITUTE OF EASTERN STUDIES  
INSTITUTE OF PREHISTORY  
Poznań 2013  
ISBN 83-86094-18-4  
ISSN 1231-0344

**THE INGUL-DONETS  
EARLY BRONZE CIVILIZATION  
AS SPRINGBOARD FOR TRANSMISSION  
OF PONTIC CULTURAL PATTERNS  
TO THE BALTIC DRAINAGE BASIN  
3200 – 1750 BC**

**Jacek Górski**

**Svitlana Ivanova**

**Liubov Klochko**

**Viktor I. Klochko**

**Aleksander Koško**

**Mikola Kryvaltsevich**

**Sergey D. Lysenko**

**Roman O. Lytvynenko**

**Przemysław Makarowicz**

**Vitaliy V. Otroshchenko**

**Gennadiy N. Toshev**

**BALTIC-PONTIC STUDIES**

---

**V O L U M E 18 • 2013**

© Copyright by BPS and Authors  
All rights reserved

Cover Design: Eugeniusz Skorwider

Linguistic consultation: Ryszard J. Reisner

Printed in Poland

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

Printing: Zakłady Poligraficzne TMDRUK in Poznań



THIS VOLUME IS DEDICATED TO THE MEMORY OF

PROFESSOR ALEKSANDRA COFTA-BRONIEWSKA  
(13 JANUARY 1926 – 12 MAY 2013)

AND

PROFESSOR MIKHAILO CHARNIAUSKI  
(7 MARCH 1938 – 20 JANUARY 2013)

EDITORIAL COMMITTEE, BALTIC-PONTIC STUDIES



# CONTENTS

EDITOR'S FOREWORD . . . . .	7
EDITORIAL COMMENT . . . . .	8
Viktor I. Klochko, Aleksander Koško, THE BALTIC DRAINAGE BASIN IN THE RECONSTRUCTION OF THE MENTAL MAP OF CENTRAL EUROPE HELD IN COMMON BY NORTHERN-PONTIC EARLY-BRONZE CIVILIZATION COMMUNITIES: 3200-1600 BC. AN OUTLINE OF THE RESEARCH PROGRAMME. . . . .	9
PART 1 – CENTRES OF EARLY BRONZE AGE CIVILISATION (COMPOSITE BRONZE METALLURGY) IN THE NORTHERN BLACK SEA DRAINAGE BASIN: TURN OF THE 4TH/3RD MILLENNIUM BC TO CLOSE OF THE 3RD MILLENNIUM BC. . . . .	21
Vitaliy V. Otroshchenko, THE CATACOMB CULTURE PHENOMENON . . . . .	21
Viktor I. Klochko, Liubov Klochko, COMPLEX OF METAL GOODS BETWEEN THE VISTULA AND DNIEPER RIVERS AT THE TURN OF THE 4TH/3RD TO THE 3RD MILLENNIUM BC. CONCEPT OF THE CARPATHIAN – VOLHYNIA “WILLOW LEAF” METALLURGY CENTRE . . . . .	39
PART 2 – THE BALTIC PERSPECTIVE (CENTRAL EUROPEAN) IN THE SYSTEM OF EXOGENOUS CONTACTS OF EARLY BRONZE AGE NORTHERN PONTIC CENTRES: 3RD MILLENNIUM BC TO TURN OF THE 3RD/2ND MILLENNIUM BC . . . . .	72
Gennadiy N. Toshev, IN THE WEST OF THE CATACOMB AREA . . . . .	72
Svitlana Ivanova, CONNECTIONS BETWEEN THE BUDZHAK CULTURE AND CENTRAL EUROPEAN GROUPS OF THE CORDED WARE CULTURE . . . . .	86
Roman O. Lytvynenko, CENTRAL EUROPEAN PARALLELS TO THE DNIEPER – DON CENTRE OF BABYNO CULTURE . . . . .	121
Mikola Kryvaltsevich, BABYNO-TYPE CERAMICS IN THE EASTERN POLESSIYE. .	139
Przemysław Makarowicz, Jacek Górski, Sergey D. Lysenko, PONTIC AND TRANSCARPATHIAN CULTURAL PATTERNS IN THE TRZCINIEC CIRCLE BETWEEN THE PROSNA AND DNIEPER . . . . .	162
References . . . . .	203
List of Authors. . . . .	245



## Editor's Foreword

In 2009, the 14th volume of *Baltic-Pontic Studies (BPS)* ran a series of papers summing up the state of research at that time into the routes between the Baltic and Black seas between the 4th and 1st mill. BC. They are an expression of an early reflection prompted by the need to look more closely at the impact Pontic cultural environments – where composite metallurgy was practised, designated as Early Bronze in this volume – had on the Decline Neolithic and Proto-Bronze settlement centres in the Baltic drainage basin. It is to this question that successive volumes of the *BPS* shall be devoted.

Specifically, according to the research programme aims mentioned above (initial fruits being the papers included in *BPS*, vol. 18) the environments of Northern Pontic cultures – Yamnaya, Catacomb and Babyno – and the Trzciniec cultural circle were identified as generators of the Ingul-Donets Early Bronze Civilization or their immediate neighbours. In proposing this modification of the gamut of phenomena making up the prologue to the European Bronze Age, we intend to suggest the need for a more integrated ('extra-taxonomic') and at the same time, territorially wide-ranging reading of Northern Pontic civilization environments and its cultural interaction in the period from the 3rd to the first half of the 2nd mill. BC.

More arguments in favour of the above opinion can be found in the introductory paper: *The Baltic Drainage Basin in the Reconstruction of the Mental Map of Central Europe Held in Common by Northern-Pontic Early-Bronze Civilization Communities; 3200 – 1600 BC, An outline of research programme.*

## 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).

**Viktor Klochko, Liubov Klochko**

COMPLEX OF METAL GOODS BETWEEN THE  
VISTULA AND DNIEPER RIVERS AT THE TURN  
OF THE 4TH/3RD TO THE 3RD MILLENNIUM BC.  
CONCEPT OF THE CARPATHIAN – VOLHYNIA  
“WILLOW LEAF” METALLURGY CENTRE

This study aims at identifying a complex of metal objects at the turn of the 4th/3rd to 3rd mill. BC in the region between the Vistula and the Dnieper Rivers, based on hoards, grave materials and random finds, providing analysis of the main features of that complex, their origin and chrono-typology. The study is based on hoards and finds from graves that are traditionally viewed as those of the Corded Ware culture. The metalware complex of the Corded Ware culture has not been an object of a specialized research so far. A major number of finds, which thus need to be introduced into scholarly discussion, significantly expand the contemporary base of sources and allow raising the issue of identifying a new Carpathian-Volhynia metallurgy centre at the turn of the 4th/3rd to 3rd mill. BC in the region between the Vistula and the Dnieper Rivers.

1. THE SOURCE BASE OF THIS STUDY COMPRISES THE  
FOLLOWING COMPLEXES:

*The Stublo Hoard.* Found in 1927 near the village of Stublo (Steblivka) of the Dubno District of Volhynia [Antoniewicz 1929], the hoard included two bronze axes, six “willow-leaf” temple pendants, two flat bracelets, a “lunula” and six bracelets of a round rod (Fig. 1: A).

*The Mezhyhirszi Hoard.* Found in 1998 near the village of Mezhyhirszi of the Galysky District the Ivano-Frankivsk Region [Klochko, Tkachuk 1999], the hoard

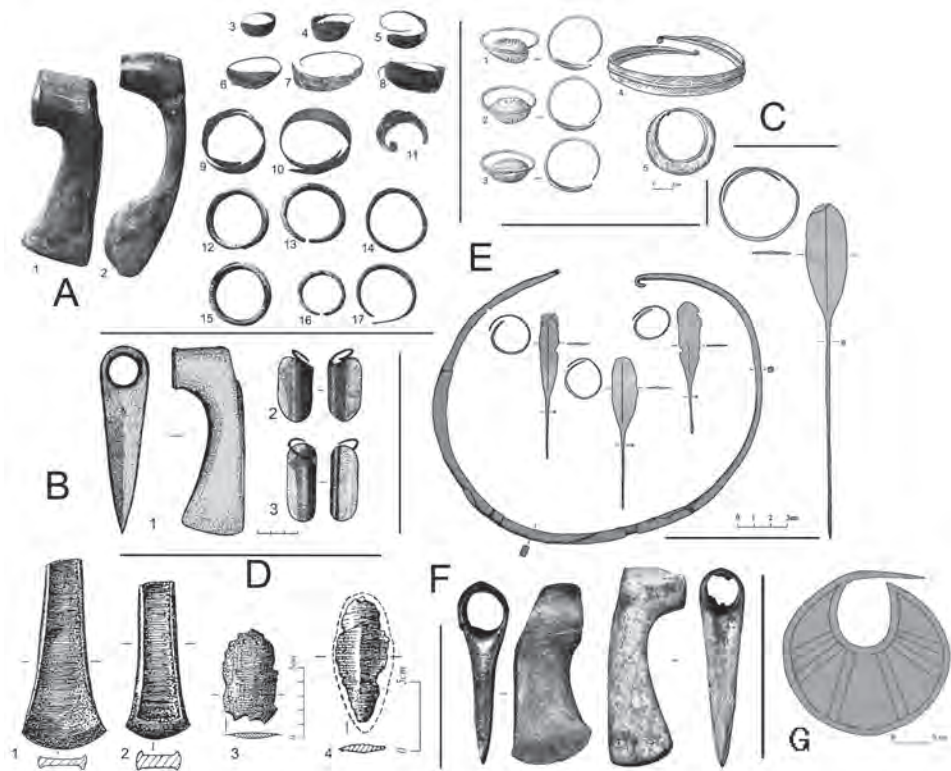


Fig. 1. Hoards and finds in inhumation of the Coded Ware cultures: A. Stublo hoard; B. Mezhyhircsi hoard; C. Kyiv hoard; D: 1. Sokal, Lviv Region, 2. Pochapy, Lviv Region, 3. Vysotske, Lviv Region, 4. Sirnyky; E. Grzęda Sokalska; F. Kyrylivski Heights hoard; G – Węgliny hoard. [after A – Antoniewicz 1929; B – Klochko, Tkachuk 1999; C – Movsha 1957; D – Sveshnikov 1974; E – Bagińska, Koman 2011; F – Klochko 2012; G – Blajer 1990]

contained a bronze axe of the “Stublo” type and two golden pendants of the “Irish” type (Fig. 1: B).

*The “Kyiv Hoard”.* Found in 1905 in Tryokhsvyatytska Street in [Movsha 1957: 96-99], the hoard contained three “willow-leaf” temple pendants, a “diadem” and a “lunula” (Fig. 1: C; 2).

*The Kyrylivski Heights Hoard.* Found at the Kyrylivski Heights in Kyiv in 2004 [Klochko 2012: Fig. 1:2], the hoard consisted of two axes, one of the “Kolontaivka” type (the Catacomb a culture) and the other of the “Stublo” type (Fig. 1: F).

*Finds in graves* include temple pendants and a torc from the grave at the Grzęda Sokalska, Lublin Region [Bagińska, Koman 2011] (Fig. 1: F).

*Daggers:* barrow VII in Balychi, barrow 1 in Sirnyky, barrow in Vysotske [Sveshnikov 1974: 50, 67, Fig. 10:9; 19, 3] (Fig. 1: D: 3, 4).

*Flat axes with flanges*: random finds from Khilchytsians Sokal of the Lviv Region [Sveshnikov 1974: 67, Fig. 19:4, 5] with wide curved blades (Fig. 1: D: 1, 2).

Therefore, the Corded Ware metal complex, primarily based on the analysis of complex finds, consists of *flat axes with flanges*, *axes of the Stublo type*, “*proto-Únětice*” – *type daggers* and “*willow-leaf*” *temple pendants*.

## 2. ANALYSIS OF METAL COMPLEX CONSTITUENTS

### 2.1. “WILLOW-LEAF” TEMPLE PENDANTS AND OTHER JEWELLERY.

The decor of the Bronze Age jewellery found in the European territory was based on geometric ornaments, among which various kinds of spirals prevailed. Among those, the most worthy of note were phytomorphic decorations that resembled a willow leaf. When they were first noted by archaeologists, the search for archetypes of the objects began, followed with the research of their proliferation, usage and semantics.

Specialists have been studying willow-leaf-shaped jewellery for a number of decades (Sveshnikov, Machnik, Movsha, and Artemenko). Their research has proved that jewellery of that kind had been found in graves of various Corded Ware tribes. Therefore, the objects can be united by the notion of an “industry”: the collection of artefacts of a certain category, the taxonomic analysis of which allows assuming that those objects were produced by the same community.

The research into metal gives a reason to speak about a single source of the raw material and the same production methods: forging followed by treatment of the workpiece (chopping off the edges, engraving the ribs and relief lines). The finds were registered in graves and hoards on a vast territory. The so-called “Kyiv Hoard” is of particular interest (Fig. 1: C; 2). The bronze objects (5 items) were discovered by construction workers during works in Tryokhsvyatyetska Street in Kyiv in 1905. Objects from the hoard changed owners several times until they were given to the Ukrainian National Taras Shevchenko Museum in 1925. However, the first publication did not appear till 1957: the objects of all categories that comprised the hoard were studied by Movsha, who based her research on similar materials from monuments of the Corded Ware culture [1957: 96-99]. Artemenko considered the “Kyiv Hoard” to be the evidence of connections between the Middle Dnieper tribes and the Corded Ware tribes that had populated the Volhynia and the Western Podolia [1987: 123].



Fig. 2. "Kyiv hoard"

After the "Kyiv Hoard", another was found near the village of Steblivka (Stublo) in the vicinity of the town of Dubno in the Volhynia Region. Various objects lay 0.5 m deep from the present-day surface, including two axes, copper bracelets – two plated and six made of round wire, pendants, consisting of a leaf-shaped corymb and a long wire bracket (10 items) and a moon-shaped "lunnytsya" pendant (Fig. 1: A).

The hoard was included in scholarly discussion rather quickly and in 1929 was published by Antoniewicz [1929: 135-148]. He analyzed all the found objects, but since this part of the article looks at pendants with a leaf-shaped corymb, our attention has been primarily focused on his views about such jewellery, i.e., phytomorphous items. Their dimensions are as follows: d – 83 mm; 73 mm; 72 mm; 72 mm; 70 mm; 65 mm; 60 mm; 55 mm; 46 mm; 45 mm; 40 mm, with the width ranging from 15 to 22 mm [Antoniewicz 1929:138, Fig. 12-13,14-19]. The researcher addressed peculiarities of willow-leaf jewellery, its chronology and its place among the Bronze Age finds. As to their analogies, the author mentioned finds in the Volhynia Region: in a grave near Horodok (Rivne Region), at Podolia, at the Dniester River: near the village of Peredivanie (Horodenky District) and Pre-Carpathia: the village of Khlopy near Lviv. The jewellery items differ in size but demonstrate a certain consistency of proportions.

Antoniewicz studied several versions in order to identify the jewellery archetype, but believed it most likely that decorations with an oval corymb and a rib in the middle to have emerged as a syncretic type, based on spiral pendants with



Fig. 3. Reconstruction of the head-gear

boat-like ends and wire jewellery with one of the ends shaped like a flat spiral that resembles an oval corymb [Antoniewicz 1929:145]. It is worthy of note that, Antoniewicz's idea of the emergence of the shapes of jewellery was not supported by subsequent research into the issue. For instance, pendants with a flat-spiral corymb belong to the Únětice culture of a later time [Antoniewicz 1929: 143, Fig. 22-25]. He also suggested that the pendants had similarities among monuments of the Carpathian-Danube circle and that their subsequent routes led through the Bukovyna or Eastern Carpathian mountain passes, through Podolia and the Red Rus to the Volhynia Region [Antoniewicz 1929:145].

Much later, the Stublo Hoard was included in the Pochapy culture [Kostrzewski 1938-1948: 206]. Meanwhile, Sveshnikov regarded the above items from the hoard as artefacts of the Strzyzów culture [Sveshnikov 1974:137, Fig. 50, 9-26].

Analogies to the pendants that comprise a part of the Steblivka (Stublo) Hoard can be seen among willow-leaf-shaped jewellery found in Kyiv (Fig. 1: A, C; 2). The hoard from Tryokhsvyatytska Street included three items with a typical outline of the corymb and a long wire tail. All of them look like a leaf with a rounded edge, narrowing down to a long petiole made of wire, round in section. The wire is curved; one of its ends goes behind the leaf-shaped corymb. In the middle of each there is a convex roller that imitates the central fibril of the leaf. The pendants differ in size and in some details. One of the leaves is oblong, smooth (d – 85-90 mm; length – 66-68 mm; width of the leaf – 41 mm). Two other are distinguished by short relief lines, three at each side. The items' dimensions are as follows: d – 80-84 mm; length – 70-75 mm; width of the leaf – 39 mm; d – 84-87 mm; 62-66 mm; width – 43 mm.

According to Sveshnikov, the jewellery, whose shape resembles a leaf with a long petiole, were found in a grave near the village of Peremozhne (the Upper Dniester group), Peredivannya (Podolia group) of the Sub-Carpathian culture, the Pochapy-type burial mounds (v. Pochapy, Ripniv), Nitra, as well as in the monuments of the Strzyzów culture (graves near Ozliev, Torchyn, Dubno) [Sveshnikov 1974: 51; 67-68; 71-79].

The pendants, most probably, belonged to the head gear, as they were usually found next to the skull, mostly in female graves. Yet, Antoniewicz noted that, according to the information he had, in a grave found near Horodok the decorations were located near a male skeleton [1929:140]. The items varied in general shapes and size: most were 30 – 40 mm in diameter. In addition to the “Kyiv Hoard”, large pendants – about 80 mm in diameter – were found in a grave near the village of Semaky [Sveshnikov 1974: 138, Fig. 49, 37].

The inspection of the finds – willow-leaf-shaped pendants – allows identification of their typological features. Apart from the leaf-like plate, a significant difference is in the method of finishing the longitudinal relief line (imitation of the central fibril). Sveshnikov identified three types: smooth-surfaced items, those with other impressed sulcus in the middle of the leaf-like corymb and those with three relief lines. According to the observations made by Nosek, pendants of types 1 and 3 were common on the territory of Poland [Nosek 1947: Plate XV, XVII]. Pendants of type 2 (with a central sulcus) belong to typical features of monuments of the Corded Ware culture in the territory of Volhynia, Transnistria and Podolia.

Interestingly, pendants with a different decoration of the corymbs were found in a grave near the village of Peremozhne: one piece's leaf has a central relief sulcus, while another piece has two relief lines, impressed parallel to each other [Sveshnikov 1974: 46, Fig. 10, 3, 4]. The spectral analysis of items of that grave produced the results suggesting that the pendants had been made of copper with

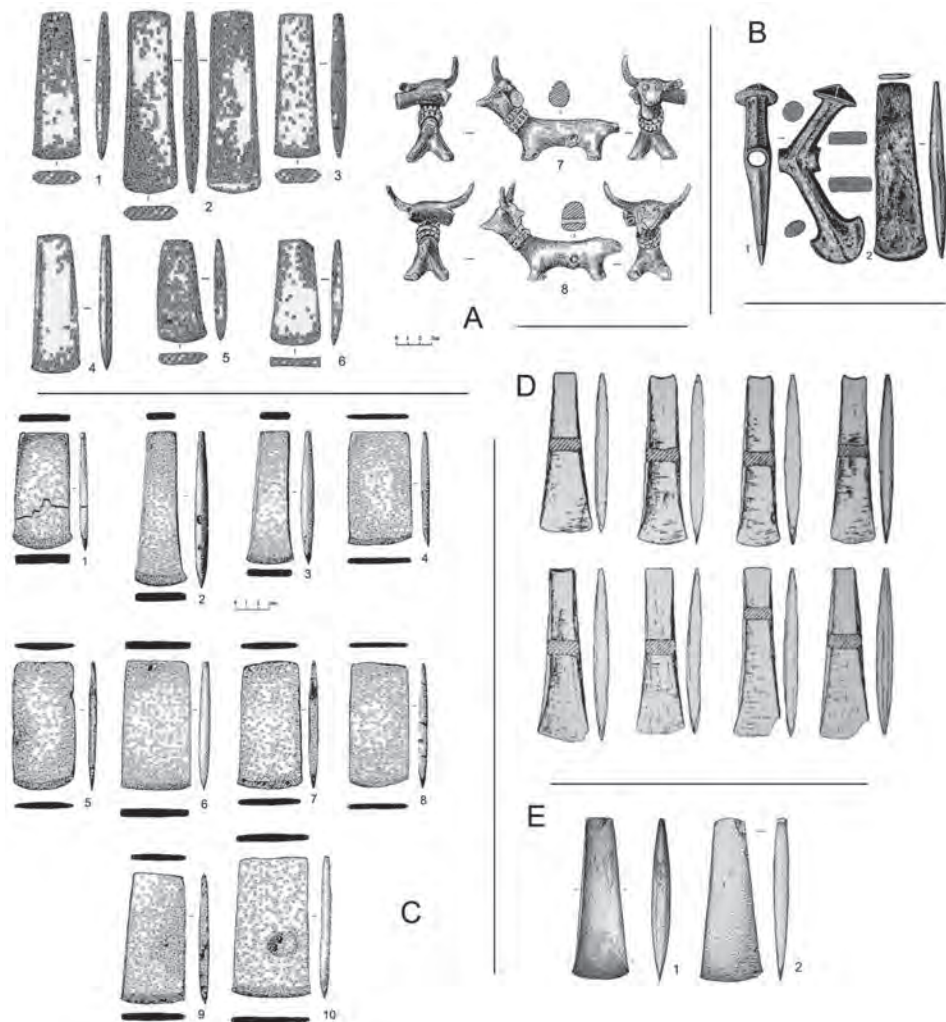


Fig. 4. Hoards of the 4th/3rd mill. BC: A. Bytyń hoard; B. Śmierdnica hoard; C. Kietrz hoard; D. Hoard from Remedello, Italy; E: 1. Flanged axe of the mummy from the Hauslabjoch, Italy; 2. Flint flat axe of the Globular Amphora culture with Tovryzhyn, Volhynia Region. [after C – Łęczycki 2004; D: E:1 – Egg 1992; E:2 – Klochko 2001]

minor admixtures of silver, bismuth, magnesium, calcium, lead and tin. The jewellery from a grave near the village of Peredivannya were made of fused copper containing a small amount of tin and lead [Sveshnikov 1974: 69, Fig. 19:7]. The same could be said about the finds from barrows near the village of Pochapy, Ripnevo: the pendants were forged from copper, which contained tin (1%), lead (up to 2%) and arsenic (1-3%).

Finds from the Mierzanowice culture, discovered near the village of Machnowek (Grzęda Sokalska), resemble willow-leaf jewellery from Ripnevo by their shape and the impressed relief line [Sveshnikov 1974: 76, Fig. 22, 3, 4]. Grave № 1 (near Machnowek) contained two pendants (dimensions d – 24 mm, length 89 mm, length of the leaf – 50 mm, width – 13 mm; d – 23 mm, length – 94 mm, length of the leaf – 45 mm, width – 16 mm) placed next to the skull [Bagińska, Koman 2011: 374, 376, Fig. 9]; grave № 2 contained a piece of jewellery (dimensions d – 49 mm, length – 200 mm, length of the leaf – 69 mm, width – 24 mm) located behind the skeleton's back [Bagińska, Koman 2011: 376, Fig. 10]; in grave № 4 there was one piece of jewellery (dimensions d – 23 mm, length – 82 mm, length of the leaf – 52 mm, width – 15 mm) found at the temple of the skull [Bagińska, Koman 2011: 379, Fig. 12] (Fig. 1: E).

The time of existence of the “willow-leaf” jewellery is approximately the same; so far it has been difficult to identify an earlier monument. Analysis of the willow-leaf pendants allows making conclusions about the nature of changes in that category of objects. Jewellery from the “Kyiv Hoard” stand out among the finds due to their oval-shaped leaves, a distinct decor (convex lines on the leaf plate), as well as a specially diligent production; most probably they are the oldest. When comparing the Kyiv pendants with others mentioned above, one may see certain peculiar features that inevitably emerge at a later time in products of individual workshops, as the items were most probably made without any mould. However, we can also observe a general trend in the change of properties of the decorations: they gradually become smaller, the corymb transformed into a strip that no longer resembled the shape of a willow leaf. That change was typical of items of the Únětice culture [Sveshnikov 1974: 69, Fig. 19:7]. We may assume that the “Kyiv pendants” belong to the earliest samples of that category of goods.

A stand-alone item of the “Kyiv Hoard” is an elongated copper strip (30 mm wide). It abruptly narrows down towards the ends that are shaped as hooks. The strip resembles a leaf, since a narrow roller was made in the centre with a czekan peak axe to imitate a central fibril. That item may be identified as a forehead ribbon (a diadem). It is oval in section (d – 230 x 200 mm), weights 95.71 g, made of copper with micro-admixtures of other metals (Sn, Pb, Ni, Zn).

Analogies to the forehead ribbon can be observed among the goods of the Steblivka (Stublo) hoard: those include bracelets made of a thin bronze sheet (width 28 mm), narrowed at the ends, which come one behind the other [Antoniewicz 1929: 137, Fig. 4:5]. However, the similarity between the “Kyiv diadem” and the bracelets is relative and limited to the general traces alone: both kinds of decorations are made of a metal plate and have narrowed ends. More similarity can be observed between the ribbon of the “Kyiv Hoard” and the find from the Pochapy burial site: a bracelet made of a narrow strip (width – 20 mm), that could be distinguished by its longitudinal rib impressed from the inner side [Sveshnikov 1974: 76, Fig. 22:2].

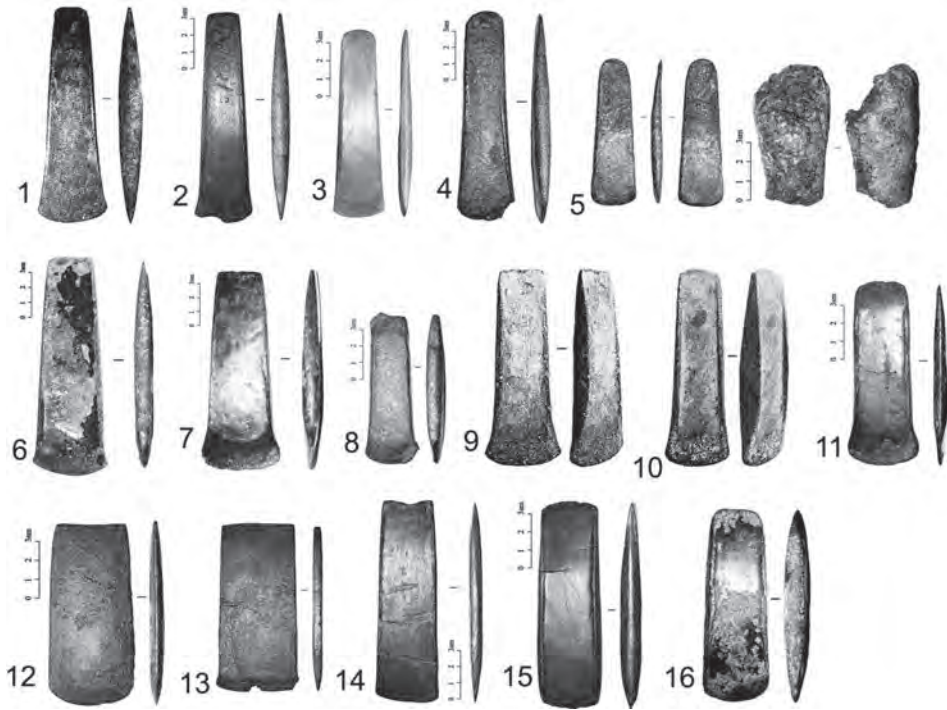


Fig. 5. Flat axes of the Bytyń type: 1. Garazhda, Lutsk District, Volyn Region, 2. Balyń, Dunayevtsi District, Khmelnytsky Region, 3. Ternopil Region, 4. Prykordonne, Ostrog District, Rivne Region, 5. Zelena Lypa, Khotyn District, Chernivtsi Region, 6. Ostrog, Rivne Region, 7. Volyn Region, 8. Stryzhavka, Vinnytsia District, Vinnytsia Region, 9, 10. Volodymyr-Volynsky, Volyn Region, 11. Polonne District, Khmelnytsky Region. Flat axes of the Altheim-Vinca type: 12. Bank of the Dniester river, Sokyryany District, Chernivtsi Region, 13. Parkhomovtsi, Khmelnytsky District, Khmelnytsky Region. Flat axes, type?: 14. c. Anopol, Chernyakhiv District, Zhytomyr Region, 15. “between the towns of Irpin and Bucha”, Kyiv Region 16. Volyn Polissya

One more item from the “Kyiv Hoard”, a moon-shaped decoration (d – 115 x 117 mm; inner d – 862 mm, width – 25 mm), was cut from a copper plate; one of the ends was bent into a loop, the other end was elongated, narrowed and sharpened (length of the “needle” – 110 mm). The item’s body had the following features: bent-in inner edge, short lines impressed on the surface, located in groups at 40 mm from each other. Left to right: a segment with 6 lines 3-4 mm long; farther on, 8 identical lines; then three groups of 8 short (1-2 mm) lines each. The marks are probably connected with the sacral meaning of the “lunnytsya”. The time of emergence of the moon pattern goes deep into thousands of years; in any case, the moon was clearly visible on the early Tripolye monuments. In art, the same meaning was given to the common position of the celestial body, as well as the “horns

up” position or the moon “boat”. The image is woven into the overall fabric of the symbols of the fertility cult of the Neolith – Bronze Age cultures of the Near East and Southern Europe.

As the finds indicate, in the Bronze Age the moon-like shape (lunula, Halbmond) was typical for the head and neck decorations. For instance, items cut of copper were found in graves of the Middle Dnieper culture [Artemenko 1967: 34-35, Fig. 23, 27, 4]. However, the difference between these costume details and the decoration from the hoard from Kyiv can be seen even at first glance. The latter is similar to the item from the Węgliny Hoard (the latter’s dimensions: d – 200, d – 62) [Blajer 1990: 274, Plate CXXII, 1] (Fig. 1: G). Both items have similar outlines and technological qualities, but the Węgliny decoration belongs to the Únětice period and can be distinguished by much larger dimensions. Yet another analogy was found in the Steblivka (Stublo) Hoard: a moon-like decoration cut out of a copper plate, with its ends shaped like spiral curls (one of them broken off). The item’s dimensions: distance between the ends – 80 mm, height – 65 mm; width – 21 mm [Antoniewicz 1929: 137, Fig. 3].

The above lunnytsya from the Węgliny, Stublo and “Kyiv Hoard”s have been conditionally referred to as “pendants”. No doubt, they were decorative elements of the garments. Yet, probably some lunnytsya were worn as neck decorations, while others were part of the head gear (temple pendants). Probably the find from the “Kyiv Hoard” was used exactly that way (i.e., as a temple pendant). The analysis of the “Kyiv Hoard” allows assuming that its items comprised a whole set that belonged to a socially distinct individual, namely a woman. Indications of that include the artistic combination of decorations that reflects not only aesthetic traditions of ornamenting a costume, but also has a symbolic meaning. We therefore suggest hypothetical reconstruction of elements of the women’s costume, based on analysis of the decorative items.

One important aspect in this study is to analyze the components of the costume, characteristic of the population of Central and Northern Europe, as well as findings recorded *in situ* in the graves (burial site Strilytsya, Vetkovskyy District, Gomel Region; graves № 43 and 53) [Artemenko 1987: 8-9].

The main position was occupied by the head gear – a diadem or a forehead ring, to which temple pendants were attached. Probably they were three, i.e., an odd number: a lunnytsya on one side and the willow-leaf decorations on the other. The moon-like lunnytsya pendant was a rather large and heavy item (38.36 gr), but it served as a counterweight to the willow-leaf pendants, attached at the other side. Together the decorations formed a composition, the semantics of which is linked to the fertility cult. It was possible to attach the pendants in a way that to accentuate the shape of the corymb, due to the rather long ‘tail’ of the pendants, bent as a spiral (the weight of the two pendants totaled 43.79 gr).

Yet another willow-shaped item was probably worn on the forearm as a bracelet. Different functions of the willow-leaf decorations can be indicated by various

dimensions of the items included in the sets, as well as the fact that the decorations were not always located next to the skull in the graves. For instance, an item was found behind the back of the skeleton in grave # 2 near Machnowek (Grzęda Sokalska) [Bagińska, Koman 2011: 376, Fig. 10].

All of the pendants can be distinguished by their large sizes, which gave some peculiarity to the head gear. Possibly, it consisted of a diadem and a veil. Both head sets are all-purpose, i.e., they are common for festive and everyday costumes of many peoples. In the costume we shall reconstruct the veil that served as the background for metal ornaments, while the entire gear served as a frame to the woman's face (Fig. 3).

*Flat axes with flanges.* The first metal flat axes with flanges in Central and Eastern Europe were axes of the Bytyń type. In Poland they were found in the hoards of Bytyń, Wielkopolska Region, Śmierdnica, West Pomorania Region and Kietrz, Opole Region [Łęczycki 2004: Fig. 3:7, 8, 9] (Fig. 4: A, B, C). The Bytyń and Kietrz hoards were located in late stage of the FBK culture [Łęczycki 2004]. Similar axes were also found in the hoard from Remedello, Italy and next to the mummy from Hauslabjoch, Italy [Egg 1992] (Fig. 4: D, E1). The mummy from Hauslabjoch dates back to 3350 – 3120 BC [Spindler 1993: 33]. Interestingly, metal axes of the Bytyn type are very similar in terms of their shape and dimensions to the flat axes of the Globular Amphora culture. As an example, a metal axe of the mummy from Hauslabjoch and a flint flat axe of the Globular Amphora culture from Tovryzhyn, Volhynia shall be presented [Klochko 2001: Fig. 18:8] (Fig. 4: E: 1,2).

In the Pre-Carpathia, Podolia and Volhynia, the Bytyn-type axes were found: at the village of Garazhda of the Lutsk District, Volhynia Region [Markus, Okhrimenko 2010: Fig. 4.24, 5] (Fig. 5:1); the village of Balym of the Dunayevetsky District, the Khmelnytsky Region; in the Ternopil Region and the village of Prykordonne of the Ostrog District, the Rivne Region (collection of Kozymenko, Kyiv) (Fig. 5:2-4). In the village of Zelena Lypa of the Khotyn District, the Chernivtsi Region, a minor axe of the Bytyn type was found together with an ingot of “raw” copper (a collection of Kozymenko, Kyiv) (Fig. 5:5). Axes of that type were also found in Ostrog, Rivne Region, the Volhynia Region, the village of Stryzhavka of the Vinnitsa District, Vinnitsa Region (collection by Kozymenko, Kyiv) (Fig. 5:6-8); Volodymyr-Volyńskiy of the Volhynia Region [Markus, Okhrimenko 2010: Fig. 4.25, 4; 4.26, 7] (Fig. 5:9-10); the Polonsky District of the Khmelnytsky Region (collection by Kozymenko, Kyiv) (Fig. 5:11).

Hence, in right-bank Ukraine, primarily in the Volhynia Region, flat metal axes of the Bytyń type proliferated, most probably, as early as the end of the 4th mill. BC, during the existence of the Tripolye and the FBC cultures in those territories. Probably, their emergence in the region was connected with links with the Danube basin.

Markers of connections with the Balkan – Danube Region of that time in the Transnistria are the finds of flat axes of the *Altheim-Vinca type* (similar to axes from the Kietrz hoard [Łęczycki 2004: Fig. 2:3]) at the bank of the Dniester Riv-

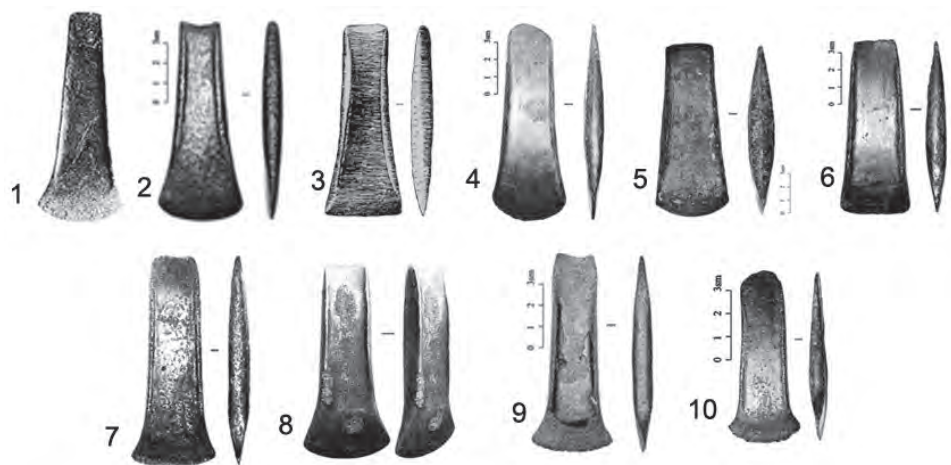


Fig. 6. Flat axes of the Sokal type. 1. t. Novovolynsk, Ivanychi District, Volyn Region, 2. Volyn Region, 3. Volodymyr Volynsky, Volyn Region, 4. Rivne Region, 5. Volyn Region, 6. t. Polonne, Khmelnytsky Region, 7,8. Volodymyr Volynsky District, Volyn Region, 9. v. Yarevyshe, Starovyzhevsky District, Volyn Region, 10. Radekhiv District, Lviv Region

er in Sokyrnyansky District, the Chernivtsi Region and the village of Parkhomovka, Khmelnytsky District, Khmelnytsky Region (collection by Kozymenko, Kyiv) (Fig. 5:12, 13). Probably, a later version of that type (Corded Ware culture period?) should include flat axes with flanges from the village of Anopol of Chernyakhivsky District, Zhytomyr Region, those found between the towns of Irpin and Bucha of the Kyiv Region (collection by Kozymenko, Kyiv) (Fig. 5:14, 15) and from Volhynia and Polissya [Markus, Okhrimenko 2010: Fig. 4.26, 5] (Fig. 5:16). During the Trzynieć culture, such axes become smaller and thinner [Klochko 2001: Fig. 63, 6-11].

In our view, further development of the Bytyn-type flat axe line of the Corded Ware cultures is represented by somewhat smaller flat axes, which we suggest be denoted as the *Dunakomlod-Sokal type*. In addition to the aforementioned finds from Khilchytsi and Sokal of the Lviv Region (Fig. 1: D:1, 2) we can refer to finds from Novo Volhyniask of the Ivanichivsky District, the Volhynia Region and the Volhynia Region [Markus, Okhrimenko 2010: Fig. 4.26, 5] (Fig. 6:1,2); Volodar Volhyniasky of the Volhynia Region [Klochko 2001: Fig. 63, 5] (Fig. 6:3); the Rivne and Volhynia Regions [Klochko, Kozymenko 2011: I Fig. 1. 29-30] (Fig. 6:4-5); from the town of Polonne of the Khmelnytsky Region (collection by Kozymenko, Kyiv) (Fig. 6:6). A Sokal-type flat axe was found in the Dunakomlod hoard together with the Kozarac-type axes (see further, Fig. 19: B 9).

The most recognizable versions (of the Trzynieć culture) of that type of axes are those of the so-called Ūńećice type (Wrocław-Szczytniki type, after Blajer [1990:

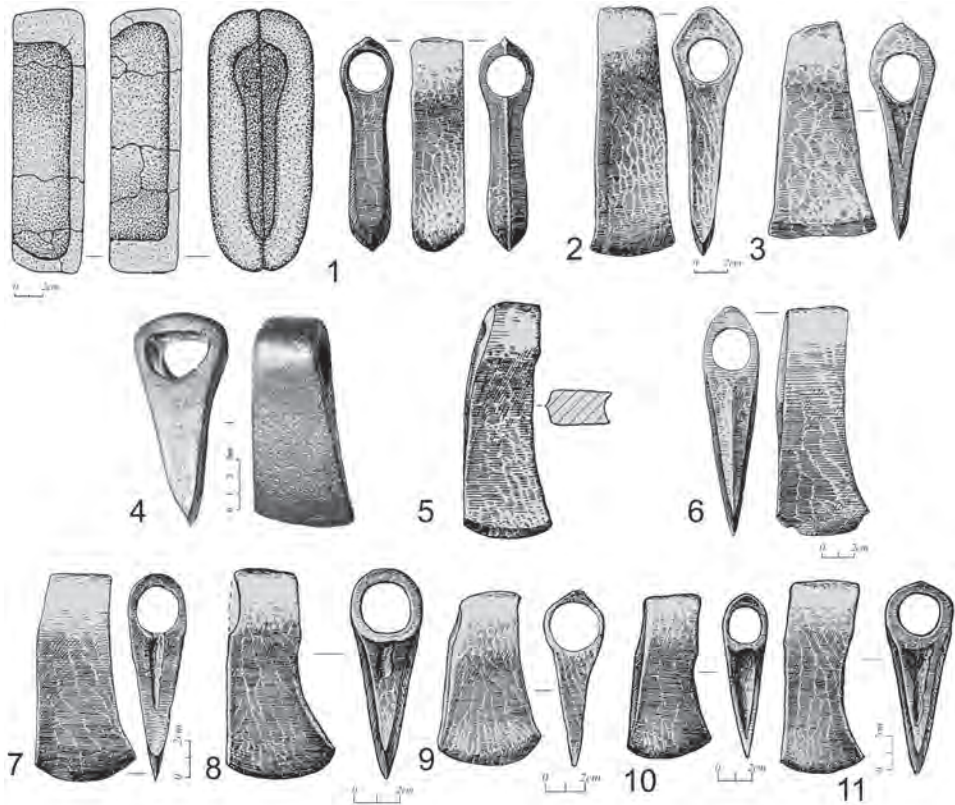


Fig. 7. Axes of the Samara type: 1. Sokolovo, Dnipropetrovsk Region; 2. Zvenyhorodka, Cherkassy Region; 3. Bally, Zaporizhia Region; 4. Ivan'ky, Cherkassy Region; 5. Dolynka, Dnipropetrovsk Region; 6. Hrechanyky, Kyiv Region; Axes of the Baniabic-Pidlissya type: 7. Hnidyn, Kyiv Region; 8. Kyiv Region; 9. Stayky; 10. Chapayivka, Kyiv Region; 11. Pidlissya, Kyiv Region [Klochko 2001]

19-21]). In Ukraine those include finds from Sadraky, Narodychi and Volodymyr Volhyniasky [Klochko 2001: Fig. 63, 1-4]; the Volodymyr Volhyniasky District and the village of Yarevyshe of the Starovyzhevsky District, the Volhynia Region [Markus, Okhrimenko 2010: Fig. 4.24, 4; 4.25, 1, 3] (Fig. 6:7-9) and the Radekhiv District of the Lviv Region (collection by Kozymenko, Kyiv) (Fig. 6:10).

*Axes of the Stublo type.* The origin of the Stublo-type axes has been connected with the Vucedol metallurgical tradition of the north of the Carpathian basin [Klochko 2001: 127-130; Batora 2006: 44]. At the same time, the origin of that metallurgical tradition of central Europe and the Upper Dniester has been linked to the “Caucasian influences” [Sveshnikov 1974, Machnik 1987; 1991; Buniatian 2010], which, in our opinion, is outdated and does not correspond with the contemporary source base, first and foremost, with Ukrainian archaeology materials.




 <p>an 994</p>	<p>29 Cu 85,86 16 S 7,689 33 As 4,529 15 P 1,033 11 Na 0,643 17 Cl 0,183 50 Sn 0,029 47 Ag 0,016 51 Sb 0,012 83 Bi 0,0004</p>	 <p>an 995</p>	<p>29 Cu 82,23 16 S 13,72 33 As 1,862 15 P 1,164 11 Na 1,036 14 Si 0,522 28 Ni 0,297 17 Cl 0,089 26 Fe 0,048 50 Sn 0,016 27 Co 0,008</p>
 <p>an 996</p>	<p>29 Cu 85,82 16 S 8,992 11 Na 2,871 15 P 1,763 14 Si 0,358 17 Cl 0,078 28 Ni 0,07 47 Ag 0,059 50 Sn 0,033 26 Fe 0,011 27 Co 0,011 82 Pb 0,002</p>		

Fig. 8. Hoard, found near v. Ivan'ky, Mankivka District, Cherkassy Region

At some point, all the oldest copper axes found in the steppe territory of Ukraine were classed among the “Caucasian” types and explained by influences from the Northern Caucasus [Chernykh 1967; Korenevsky 1974; Nechytailo 1991]. The situation was changed by the finds of moulds for casting axes in “post-Mariupol” graves near the village of Mayivka of the Dnipropetrovsk District, barrow group XII, barrow 2, burial 10 [Kovaleva, Volkoboy *et al.* 1977: 20 – 22, Tab. XV, XVI] and the Samarsky island near the village of Sokolove, the Novomoskovsk District of the Dnipropetrovsk Region, barrow 1, burial 6 [Kovaleva 1979: 64, Fig. 6] (Fig. 7:1). As of today, those are Europe’s oldest graves of master smelters and the casting forms, found in them, representing Ukraine’s oldest copper bludgeon axes. In addition to the casting forms, such copper axes were found near Zvenyhorodka of the Cherkassy Region and the village of Balky of the Vasylkiv District, the Zaporizhya Region [Nechytailo 1991: Fig. 4:4] (Fig. 7:2,3), in the burial of the Dolyinka Kemi-Oba culture in the Crimea and in a grave from the hamlet of Hrechanyky in the Pereyaslav area [Klochko 2001: Fig. 27, 3,4] (Fig. 7:5, 6) and

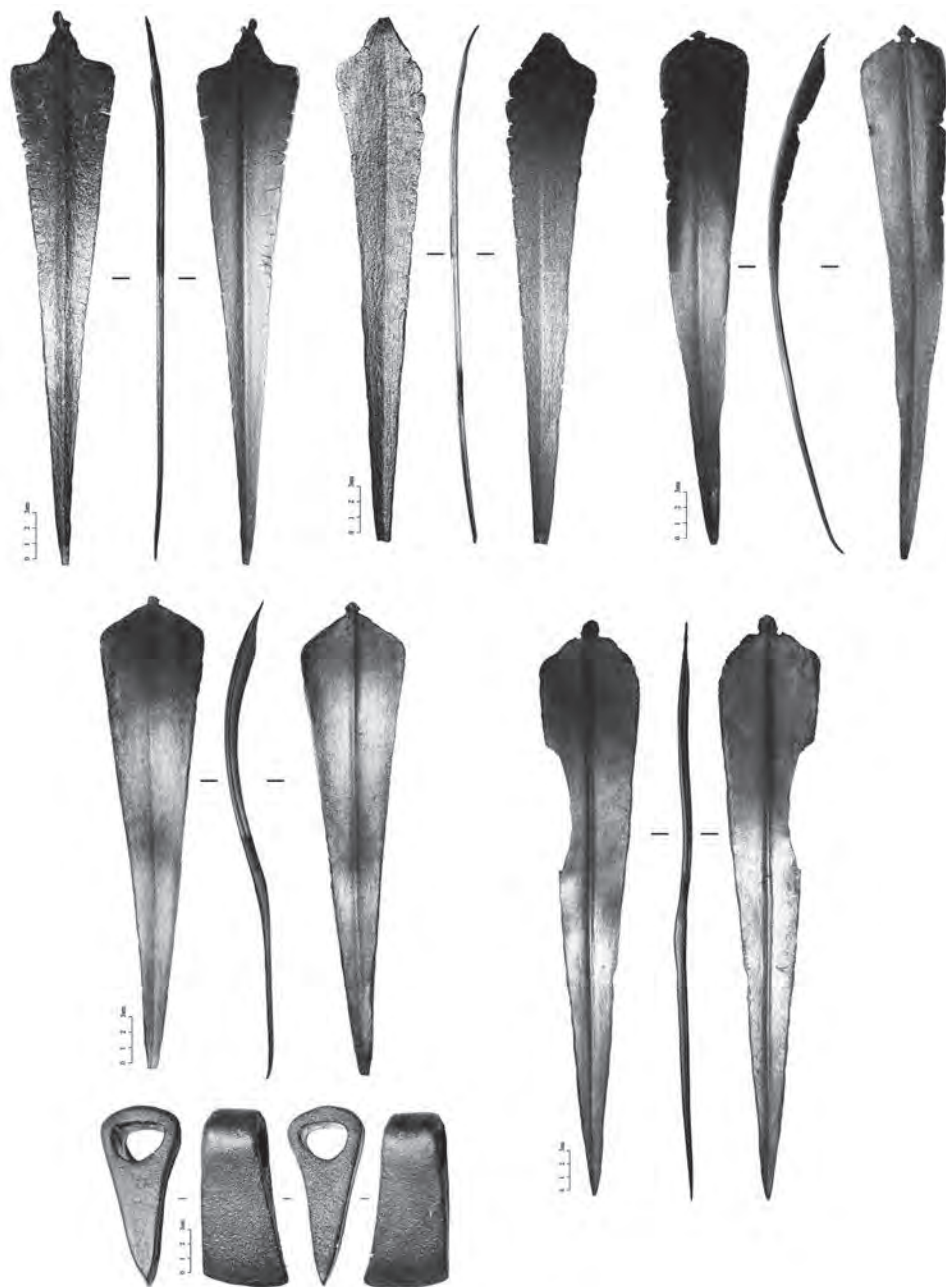


Fig. 9. Hoard, found near v. Ivan'ky, Mankivka District, Cherkassy Region

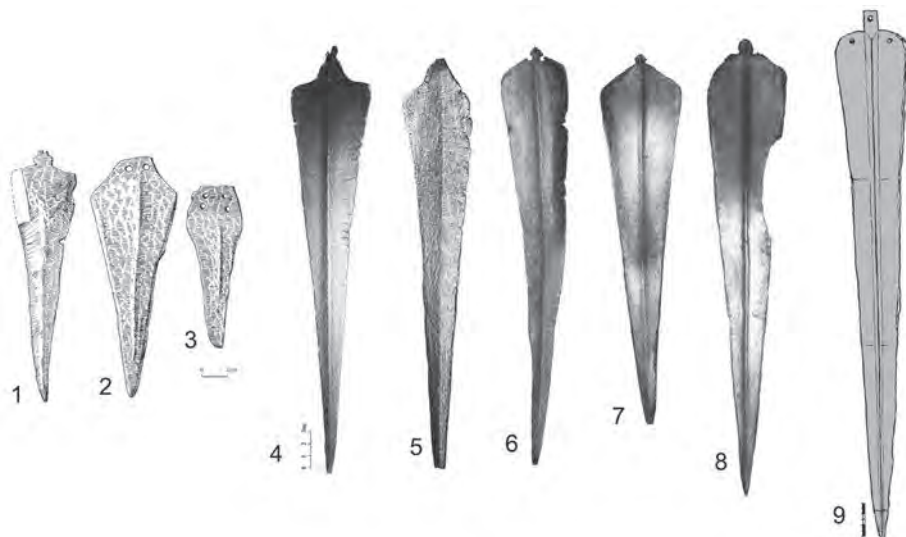


Fig. 10. Dagers of the Usatovo type: 1. Usatovo, Odessa Region 1.1.1.; 2. Usatovo, Odessa Region 1.3.1.; 3. Sukleya, Tiraspol Region (Moldova) 3; 4-8. Ivan'ky hoard; 9. Bibl. [after 3 – Klochko 2001; 4-8 – Sandars 1961]

in a hoard from the village of Ivanky, the Mankivsky District of the Cherkassy Region (collection by Kozymenko, Kyiv) (Fig. 7:4).

The hoard, found in 2013, contained a copper axe and five swords made of arsenic bronze (Fig. 8; Fig. 9). The swords, 28.3 to 41.5 cm long, were close to daggers of the “Usatovo” type from burials of the late Tripolye group of Usatovo (Usatovo culture): Usatovo 1.1.1 and Usatovo 1.3.1 (length – 18.9 cm) in the Odessa Region and barrow 3 near the village of Sukleya in the Tiraspol Region [Klochko 2001: Fig. 13, 4-6] (Fig. 10:1-3). Large daggers of the “Usatovo” type were made of highly alloyed arsenic bronze and clad with arsenic, which gave them a silvery colour (an original way of imitating silver). The composition of the metal and the production technology allowed some researchers to regard the items as imported from Anatolya and date them to mid-3rd mill. BC [Ryndina, Konkova 1982]. The radiocarbon date identification allows moving their existence deeper to the second half of the 4th to the first half of the 3rd mill. BC [Klochko, Koško, Szmyt 2003: 397-398]. Unfortunately, the chronotypology of Middle Eastern metal objects has been developed insufficiently to date and, therefore, does not allow us quote detailed, well-dated analogies to those items; the only object we managed to find is a sword from the village of Biblio [Sandars 1961: 397-398] (Fig. 10:9), which, obviously, is a more developed and younger object than the swords from the Ivanky Hoard.

The finds of casting forms in graves of smelters near the villages of Sokolove and Mayivka point to the local production of such tools. They have received the



Fig. 11. Hoard, found near v. Chapayivka, Cherkassy Region

name of “*Samara-type axes*” [Klochko 2001: 68]. Samara-type axes differ from the oldest Northern Caucasian axes of the Maikop type by their longer and narrower body. In terms of construction, Samara casting forms are close to the oldest currently known axe casting forms from the Kura – Araxes monuments from the Caucasus [Martirosian 1964: 25 – 28; Kushnareva, Chubinshvili 1970: Fig. 40, 4, 5, 9; Munchayev 1975: Fig. 30, 4-6]. However, the shape of Samara axes differs from that of Kura-Araxes axes by its less pronounced butt. The origin of the most ancient metal axes of the Caucasus and Ukraine remains insufficiently explored. A long time ago, Gordon Childe explained their emergence in those regions by close their connection with the Middle East. In the opinion of the authors, this hypothesis has some potential. The Usatovo daggers and swords from the Ivanky Hoard confirm that such connections at the North-Western Pontic Region could be observed from the second half of the 4th to the first half of the 3rd mill. BC.

The “Samara” tradition was further developed during the Yamnaya culture in the Baniabic – type axes, found in the Vilcele Hoard in Romania [Vulpe 1970: Plate 1 – 3] and in a Yamnaya grave near the village of Polissya, the Brovary District of the Kyiv Region and Hnidyn (the town of Brovary near Kyiv), as well as in the Kyiv Region (the village of Stayky, the Kaharlyk District of the Kyiv Region) and the village of Chapayivka, the Zolotonosha District of the Cherkassy Region [Klochko 2001: 79-83] (Fig. 7:7-11). It can therefore be said that the proliferation of axes of the Baniabic-Polissya type covers the steppe zone from the Lower Danube in the west to the Northern Caucasus in the east, with the centre in the Lower Dnieper area.

The most ancient axes of the late Neolithic – Early Bronze Age in Eastern Poland and right-bank Ukraine are the Chapayivka-type axes, which are close to

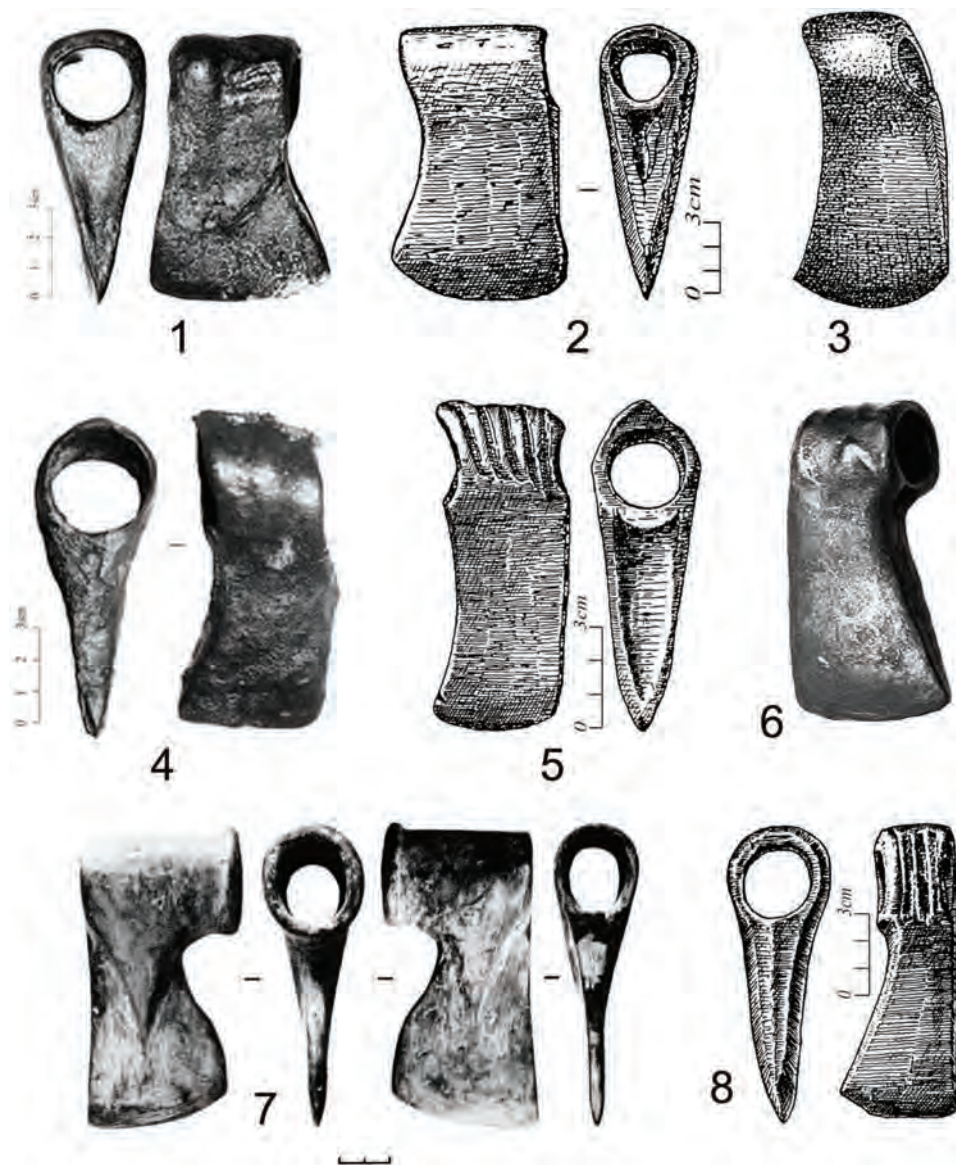


Fig. 12. The most ancient axes of the Early Bronze Age of Eastern Poland and Right-bank Ukraine: 1. Chapayivka hoard, Cherkassy Region; 2. Rudna Mała, Podkarpackie Region; 3. Pistyn, Ivano-Frankivsk Region; 4. Borodyanka, Kyiv Region; 5. Munina, Podkarpackie Region; 6. Bilousivka (Bilousovychi), Vinnytsia Region; 7. Horokhiv, Volyn Region; 8. Smolihiv, Lutsk District, Volyn Region

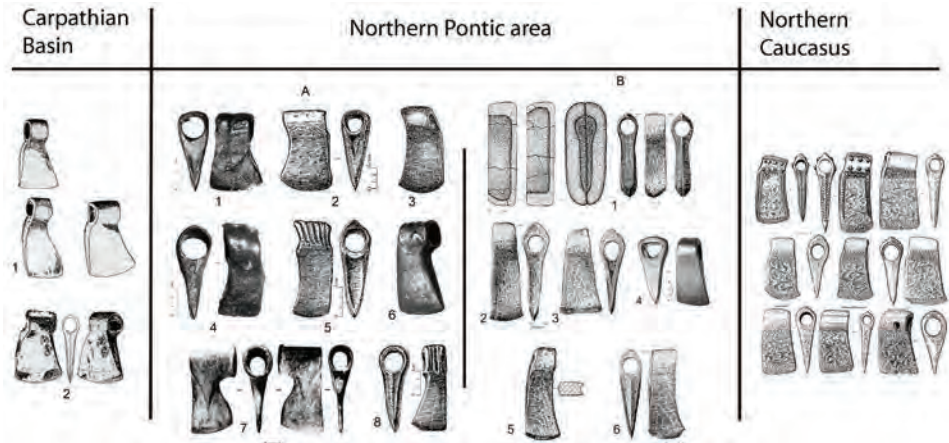


Fig. 13. The most ancient axes of the Early Bronze Age of the Carpathian basin: 1. Fajsz hoard [Kalicz 1968], 2. Brno-Líšeň hoard [Benešová 1956]; Northern Pontic Region (A – Eastern Poland and Right-bank Ukraine, B – Dnieper Ukraine (Naddniprovyanshchyna) and 3. the Northern Caucasus (Majkop)

the axes of the Fajsz type, the oldest in central Europe (see further). Such an axe was found in 2013 in a *hoard near the village of Chapayivka, Zolotonosha District of the Cherkassy Region*, together with a knife of the Bodrogkeresztur type [Vajsov 1993] (Fig. 11). Such knives are typical of the Bodrogkeresztur culture in Hungary and the “Lažniansky” culture group in Slovakia. Those are the most ancient copper knives – daggers in Europe, which fully follow flint prototypes (dating back to the second half of the 4th to the beginning of the 3rd mill. BC) in terms of their shape and the method of fastening the handle. Hence, the Chapayivka Hoard may be referred to the second half of the 4th to the beginning of the 3rd mill. BC.

In addition to the axe from the Chapayivka Hoard (Fig. 12:1) other finds classed among the Chapayivka type of axes include those from Rudna Mała of the Rzeszów Region in the east of Poland [Kostrzewski 1964: Fig. 78, 1] and Pistyn of the Ivano-Frankivsk Region [Sveshnikov 1974: Fig. 18, 2] (Fig. 12:2, 3). Earlier on, we associated them with other types [Klochko 2001: 124-128], but the discovery of the Chapayivka Hoard made it possible to develop a new chronotypological scheme for such axes.

A version of this type is represented by narrower axes from the town of Borydyanka of the Kyiv Region (collection by Kozymenko, Kyiv), an axe with a grooved butt from Munina near Yaroslav in the east of Poland [Kostrzewski 1964: Fig. 53] and the find from the village of Bilousivka of the Tulchyn District, the Vinnitsa Region [Bronzezeit 2013: № 80] (Fig. 12, 4-6). We include an axe with a long bushing from the Horokhiv District of the Volhynia Region and the village of Smolihiv of



Fig. 14. Axes of the Stublo type: 1. Gaisyn District, Vinnytsia Regio; 2. Volyn Region; 3. Komariv, Ivano-Frankirsk Region; 4. Malynivka, Volyn Region; 5. Chertkiv District, Ternopil Region; 6. Burty, Kyiv Region; 7. Vinnytsia Region; 8. Stublo hoard; 9. Mezhyhirska hoard; 10. Zelen'ky, Kyiv Region; 11. Vinnytsia Region; 12, 13. Sadovoye hoard; 14. Kyrilivski Heights hoard; 15. Skakun hoard; 16. Kolontayivka hoard

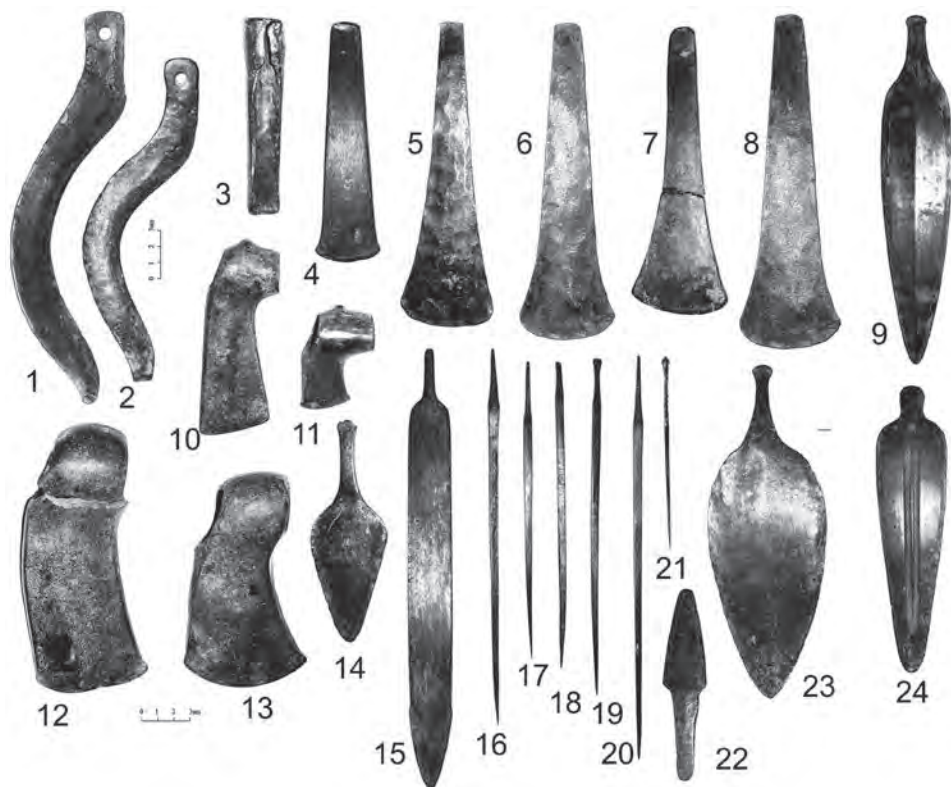


Fig. 15. Sadovoye hoard

the Lutsk District, Volhynia Region [Markus, Okhrimenko 2010: Fig. 4.23, 1, 3] (Fig. 12, 7, 8).

As noted above, the most ancient axes of the Early Bronze Age of the Carpathian basin are the Fajsz – type axes, which Batora dates back to 2890-2770 BC [2006: 29]. As examples, there is the Fajsz Hoard itself [Kalicz 1968] and the Brno-Lisen Hoard [Benešova 1956] (Fig. 13, 1, 2). Earlier on, it was suggested some of the Chapayivka-type axes were borrowings (imports?) from the Carpathian basin [Klochko 2001: 124-128]. However, a more detailed analysis points to distinctions between the central European Fajsz-type axes and the Chapayivka-type of Eastern Poland and right-bank Ukraine; the majority of the latter display visible cannelures, while none such occur on axes of the Danube basin, though they are typical of the Bronze Age axes of Anatoliya (!) (Fig. 13, A 1-8). Practically in parallel, at the same time in central and left-bank Ukraine, the genesis of the Samara type of axes began (Fig. 13, B 1-6) and axes of the Maikop type emerged in the Northern Caucasus [Korenevsky 1974] (Fig. 13).

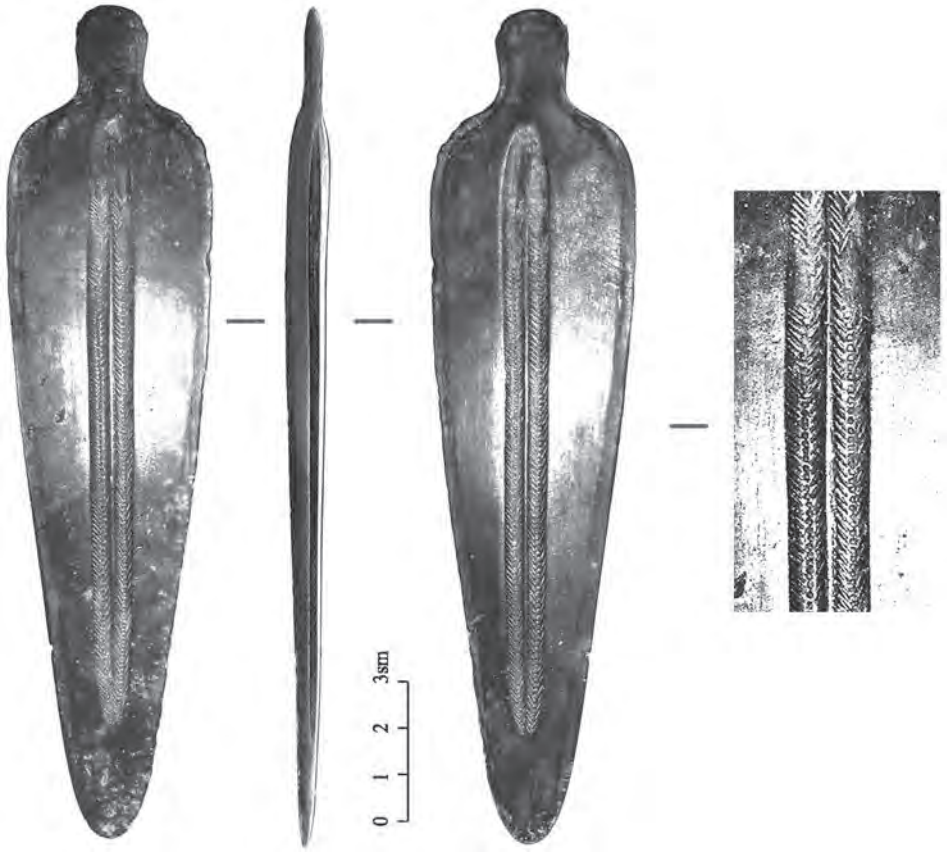


Fig. 16. Dagger from the Sadovoye hoard

Axes of the Chapayivka type found in the territory of Eastern Poland and right-bank Ukraine follow the model of axes of the Stublo type. Those include finds from the Haisyn District of the Vinnitsa Region and the Volhynia Region (collection by Kozymenko, Kyiv) (Fig. 14, 1,2), Komariv of the Ivano-Frankivsk Region [Sveshnikov 1974: Fig. 18,3] (Fig. 14, 3), the village of Malynivka of the Rozhyshche District of the Volhynia Region [Markus, Okhrimenko 2010: Fig. 4.23, 2] (Fig. 14, 4), the Chertkiv Region (collection by Kozymenko, Kyiv) (Fig. 14, 5), the villages of Burty and Zelenky of the Kaharlyk District of the Kyiv Region [Klochko 2001: Fig. 57, 3,4] (Fig. 14, 6,10), 7. (collection by Dobrovanov, Vinnitsa) (Fig. 14, 7, 8). Stublo Hoard [Antoniewicz 1929: Fig. 2] (Fig. 14, 8, 9). Mezhyhirska Hoard [Klochko, Tkachuk 1999] (Fig. 14, 9), the Vinnitsa Region [Klochko 2006: Photo 3] (Fig. 14, 11) Kyrylivski Heights Hoard in Kyiv [Klochko 2006: Photo 8] (Fig. 14, 14), Skakun Hoard [Gimbutas 1965] (Fig. 14, 15) and Kolontayivsky

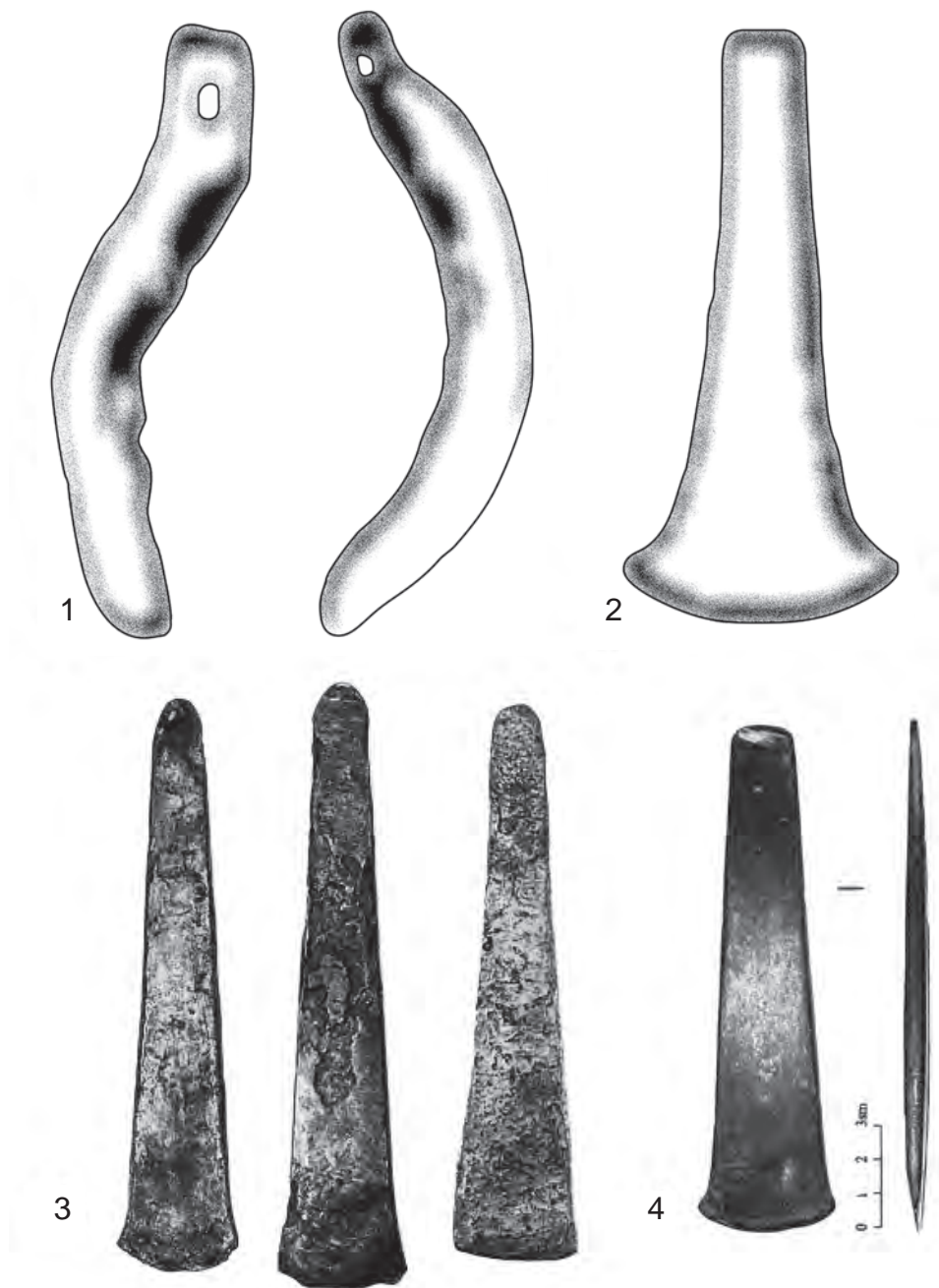


Fig. 17. Sickles and adzes from the Eastern Mediterranean: 1. Cyprus, Stylianon hoard; 2. Palestine, Beisan level XVI; 3. Troy; 4. Sadovoye hoard. [after 1 – Catling 1964; 2 – Schaeffer 1948; 3 – Bronzezeit 2013]

[Korenevsky 1976] (Fig. 14, 16) from the Kharkiv Region in the East of Ukraine. That group also includes two axes from the Sadovoye Hoard (Fig. 14, 12, 13).

The *Sadovoye Hoard* was found in 2012 in the Crimean peninsula (Ukraine) and is kept in the collection of Kozymenko (Kyiv). The hoard was found in the Bakhchisaray District at the village of Velyke Sadovoye at the bank of the Belbeck River, not far from the city of Sevastopol, at the southern edge of the peninsula. The hoard included two sickles, a sleeved adze, five flat adzes, four axes, five daggers and knives, five large awls, one small awl and a dart-head (Fig. 15).

Sickles (length – 19.5 and 22.5 cm, width – up to 2.5 cm, thickness – 0.5 and 0.8 cm) had been cast in stone moulds (Fig. 15:1, 2). The metal had been poured from the side of the blade tip. Holes in the handles had been made during the casting process by means of inserting special rods into the moulds. One side of the sickles had been hammered. The blades had been hammered from both sides and sharpened. Similar sickles (tanged sickle) were found in the Stylianos Hoard, Nicosia, Cyprus [Catling 1964: Fig. 8:1-2; Pl. 5, a, b, c] (Fig. 17:1). Catling referred them to the late LC period; however, in the view of the authors this is a mistake. The hoard should be attributed to the Early Bronze Age.

A chisel with a “twisted” sleeve (length – 12 cm, sleeve diameter – 2.5 cm) had been cast after a wax model (Fig. 15:3). The blade and edges of the sleeve’s “wings” had been hammered. Tools with a “twisted” sleeve (hoes and chisels) were present in Asia Minor since the Early Bronze Age.

Adze (length – 14.5 cm, thickness – 0.7 cm, width of the blade – 4 cm) had been cast in a closed mould (Fig. 15:4). The blade had been hammered and sharpened. Such adzes were quite common in Asia Minor and the Middle Mediterranean in the Early and Middle Bronze Age.

Four large adzes for processing stone (length – 19.8; 19.6; 19.5; 17.4 cm, thickness – 0.7-0.6 cm, width of the blade – 6 cm) had been cast in closed moulds; the metal had been poured from the side of the blade (Fig. 15:5-8). The surface had been strongly hammered on both sides. The blades of all tools had been strongly hammered and sharpened, but then worn out and blunted in the process of use. One adze was broken. The type of adze was typical for Asia Minor and the Eastern Mediterranean during the Early and Middle Bronze Age.

Two axes (length – 15.5 and 12.8 cm, sleeves’ diameters – 3.5 and 3 cm, width of the blades – 7 and 7.5 cm) had been cast in two-folding ceramic casting moulds (Fig. 15:12, 13). Metal had been poured from the “back” into a hole near the rod that had been inserted into the mould for making the hole in the butt. The axes belong to the Kolontayivsky type, which is typical for the Northern Pontic Catacomb culture (the Early Bronze Age) [Korenevsky 1976].

Two axes (length 6.2 and 11.6 cm, sleeves’ diameters – 2 cm, width of the blades – 3.2 and 4.5 cm) had been cast in two-folding stone moulds (Fig. 15:10, 11). Metal had been poured from the butt side. The pouring canals had been whittled away and resurfaced as “cones” on the butt. The blades had been hammered

and sharpened. We do not know of any analogies of these axes. The manufacturing technology and the composition of the metal, similar to those of other objects of the hoard, which originate from Asia Minor (see below) point in the opinion of the authors, to Asia Minor, where stone (soapstone) casting moulds had been known at least since the beginning of the 3rd mill. BC.

Five long tetrahedral rods – “awls” (length – 23, 22, 20, 18, 17 cm, thickness – 0.9-0.6 cm) had been cast in closed casting moulds (Fig. 15:16-20). Metal had been poured from the side of the tangs; the pouring canals had been whittled away. In one case, the tang had been hammered down. The tips had been sharpened. That kind of rod was typical for a wide range of cultures of the Circum-Pontic and Mediterranean Regions in the Early and Middle Bronze Age.

A tetrahedral rod with an intertwined handle topped with a small mushroom-shaped head (an awl?) (length – 17.4 cm, thickness – 0.6 cm, length of the intertwined handle – 5.5 cm, diameter of the head of the handle – 0.8 cm) had been cast in a closed stone casting mould (Fig. 15:21). Metal had been poured from the side of the handle’s head. The pouring canal had been whittled off, the tip had been sharpened. The head of the handle resembles tops of the pins typical for the Early Bronze Age of Asia Minor.

A knife (length – 27 cm, width – 2.8 cm, thickness – 0.3 cm, length of the tang – 3 cm, length of the sharpened end – 5 cm) had been cast in a closed stone mould (Fig. 15:15). Metal had been poured from the side of the handle. The pouring canal had been whittled away and the tip of the tang had been sharpened. Most of the blade had blunt edges and the tip alone had been riveted and sharpened. In general, that knife was close to so-called “daggers of the Pryvilne type” of the Catacomb culture [Chernykh 2011]; however, they differ from the latter by a larger length and more sophisticated production technique. That technique allowed classing the item as an imported piece from Asia Minor.

A dagger (length – 21 cm, width of the blade – 4.3 cm, thickness up to 0.6 cm, length of the tang – 4 cm) had been cast in a closed stone mould (Fig. 15:9). Metal had been poured from the side of the handle. The pouring canal had been whittled away and the tip of the tang had been riveted. The edges of the blade had been hammered and sharpened. The production technique allowed classing the item as an imported piece from Asia Minor.

A dagger with a short tang and a blade decorated with an ornament (length – 17.2 cm, width – up to 4.3 cm, thickness – 0.4 cm, length of the tang – 2 cm) (Fig. 15:24; 16). The dagger had been cast in a closed stone (most probably, soapstone) mould. Metal had been poured from the side of the handle. The pouring canal had been whittled away and the tip of the tang had been riveted. The blade edges had been hammered and sharpened. The central part of the blade had double groove ribs at both sides, decorated with a “pine-tree” (“fishbone”) ornament cut in the mould. That kind of mould could only be cut out of steatite (soapstone), a soft and plastic stone. The ribs on the daggers, decorated with the “pine-tree” or-











 an 889	29 Cu 97,56 33 As 2,04 15 P 0,254 28 Ni 0,087 47 Ag 0,026 27 Co 0,018 26 Fe 0,011 50 Sn trace	 an 843	29 Cu 93,026 14 Si 5,581 33 As 0,928 16 S 0,186 17 Cl 0,11 28 Ni 0,087 20 Ca 0,024 27 Co 0,019 50 Sn 0,016 47 Ag 0,015 26 Fe 0,004 82 Pb 0,004
 an 841	29 Cu 67,626 79 Au 19,369 47 Ag 4,358 14 Si 4,33 50 Sn 2,636 33 As 0,719 30 Zn 0,34 82 Pb 0,3 17 Cl 0,266 28 Ni 0,048 20 Ca 0,01	 an 842	29 Cu 90,649 14 Si 4,492 33 As 4,185 17 Cl 0,375 16 S 0,167 26 Fe 0,04 20 Ca 0,029 50 Sn 0,025 27 Co 0,023 47 Ag 0,016
 an 844	29 Cu 94,845 14 Si 4,185 33 As 0,373 16 S 0,224 17 Cl 0,126 28 Ni 0,106 47 Ag 0,043 26 Fe 0,034 20 Ca 0,025 50 Sn 0,022 27 Co 0,017	 an 895	29 Cu 98,333 15 P 0,732 33 As 0,658 28 Ni 0,167 13 Al 0,049 47 Ag 0,027 27 Co 0,015 26 Fe 0,014 83 Bi 0,005 50 Sn trace
 an 896	29 Cu 98,444 15 P 0,804 33 As 0,53 13 A 10,095 28 Ni 0,08 47 Ag 0,023 27 Co 0,015 26 Fe 0,009 82 Pb trace 50 Sn trace	 an 897	29 Cu 96,275 12 Mg 2,08 33 As 1,222 15 P 0,348 27 Co 0,03 28 Ni 0,023 47 Ag 0,021
 an 846	29 Cu 99,256 16 S 0,221 14 Si 0,2 15 P 0,116 17 Cl 0,095 28 Ni 0,082 27 Co 0,019 50 Sn 0,011	 an 894	29 Cu 91,859 15 P 6,141 33 As 0,991 12 Mg 0,909 27 Co 0,031 28 Ni 0,025 47 Ag 0,021 50 Sn 0,012 26 Fe 0,01 50 Sn trace

Fig. 18. Sadovoye Hoard










 <p>an 885</p>	<p>29 Cu 97,881 33 As 1,315 15 P 0,657 28 Ni 0,071 47 Ag 0,034 27 Co 0,015 26 Fe 0,001 50 Sn trace</p>	 <p>an 886</p>	<p>29 Cu 97,08 15 P 1,478 33 As 1,309 28 Ni 0,075 47 Ag 0,03 27 Co 0,016 50 Sn trace</p>
 <p>an 887</p>	<p>29 Cu 97,627 15 P 1,01 33 As 0,783 12 Mg 0,379 28 Ni 0,077 13 Al 0,067 47 Ag 0,024 26 Fe 0,017 27 Co 0,016 50 Sn trace</p>	 <p>an 888</p>	<p>29 Cu 99,116 33 As 0,274 15 P 0,246 12 Mg 0,235 28 Ni 0,083 27 Co 0,018 47 Ag 0,018 82 Pb 0,011 50 Sn trace</p>
 <p>an 890</p>	<p>29 Cu 97,536 15 P 1,732 33 As 0,577 28 Ni 0,075 26 Fe 0,041 47 Ag 0,023 27 Co 0,016 50 Sn trace</p>	 <p>an 891</p>	<p>29 Cu 94,798 15 P 3,664 33 As 1,396 28 Ni 0,075 26 Fe 0,026 47 Ag 0,026 27 Co 0,015 50 Sn trace</p>
 <p>an 845</p>	<p>29 Cu 97,282 14 Si 1,802 33 As 0,496 16 S 0,147 17 Cl 0,122 28 Ni 0,086 47 Ag 0,021 27 Co 0,02 20 Ca 0,012 50 Sn 0,01</p>	 <p>an 893</p>	<p>29 Cu 96,726 15 P 1,803 33 As 1,038 12 Mg 0,226 28 Ni 0,071 13 Al 0,067 16 S 0,029 47 Ag 0,023 27 Co 0,016 50 Sn trace</p>
 <p>an 892</p>	<p>29 Cu 97,995 33 As 0,836 15 P 0,586 12 Mg 0,319 28 Ni 0,122 13 Al 0,055 47 Ag 0,051 27 Co 0,019 26 Fe 0,015 82 Pb 0,003 50 Sn trace</p>		

Fig. 18. (continued)

nement, are known in monuments found in Asia Minor and Cyprus [Catling 1964: Fig. 3]. The metal used for making that dagger is different from all other objects of the hoard, made of arsenic bronze, by a large percentage of admixtures of gold, silver and tin (Plate 2, an. 841). Its fine shape and the composition of the metal allow attributing that dagger to elite, “royal” items. The production and ornamentation techniques allow attributing it to imports from Asia Minor.

A large leaf-like knife (length – 20 cm, width of the blade – up to 7.2 cm, thickness – up to 0.4 cm, length of the tang – 5 cm) (Fig. 15:23) had been made in a closed casting mould; metal had been poured from the side of the handle. The blade had been strongly riveted and polished, the edges had been sharpened. The tip of the tang had also been riveted. In general, that was a rather typical knife of the Northern Pontic Catacomb culture [Chernykh 2011]; the only distinguishing feature was the unusually large size.

A leaf-like knife (length – 13.5 cm, width – up to 4.7 cm, thickness – up to 0.3 cm, length of the tang – 5 cm) (Fig. 15:14) had been made in a closed casting mould; metal had been poured from the side of the handle. The blade had been strongly riveted and polished, the edges had been sharpened and the tip of the tang had also been riveted. It was a rather typical knife of the Northern Pontic area’s Catacomb culture [Chernykh 2011].

A dart-head (length – 11.7 cm, width – up to 3 cm, thickness – up to 0.5 cm, length of the tang – 5.5 cm) (Fig. 15:22) had been made in a closed casting mould; metal had been poured from the side of the handle. The blade and the tang had been riveted. Such tanged dart-heads are known to occur in monuments of the Catacomb culture of the Northern Pontic Region [Klochko 2001: Fig. 43:5, 9].

Most of the hoard’s goods were made of copper (as the base) with a rather different composition of included elements (Plate 2, an. 889, 843, 842, 844, 895-897, 846, 894, 885-888, 890, 891-893, 845).

Hence, it may be proposed that the Sadovoye Hoard comprises both items of local types (the Catacomb culture) and items imported from the South.

The typochronology of metal objects of the Early and Middle Bronze Age of the Eastern Mediterranean and Asia Minor remain under-explored. With the presently available knowledge, it is possible to argue only that the elongated trapeze-like adzes emerged in Egypt as early as in the early period of the Old Kingdom (Bet Challaf, the Neteri-chet tomb and the Sanachtmastaba) [Müller-Karpe 1974: Plate 36, 18,19; 38, A 18-20]. They have been known in Palestine: Beisan, layer XVI (Fig. 15:2), in Lebanon: Byblos, Temple “Syrien”, hoard “d” [Schaeffer 1948: Fig. 150:47; 61, P], in Asia Minor: Troy II, hoard [Müller-Karpe 1974: Plate 334, A, 17,18] and Troy, hoard “K” [Schaeffer 1948: Fig. 167] (Fig. 17:3), in the Cycladic islands: Chalandriani [Müller-Karpe 1974: Plate 358, 56], the Crete island: the Chamaisi Hoard [Müller-Karpe 1974: Plate 378, B 1] and in Greece: Sesklo, Eutresis, FH II, Lernara Leukas, tomb S [Müller-Karpe 1974: Plate 412, C 4; 407, C 1; 397, C 5; 412, A 31].

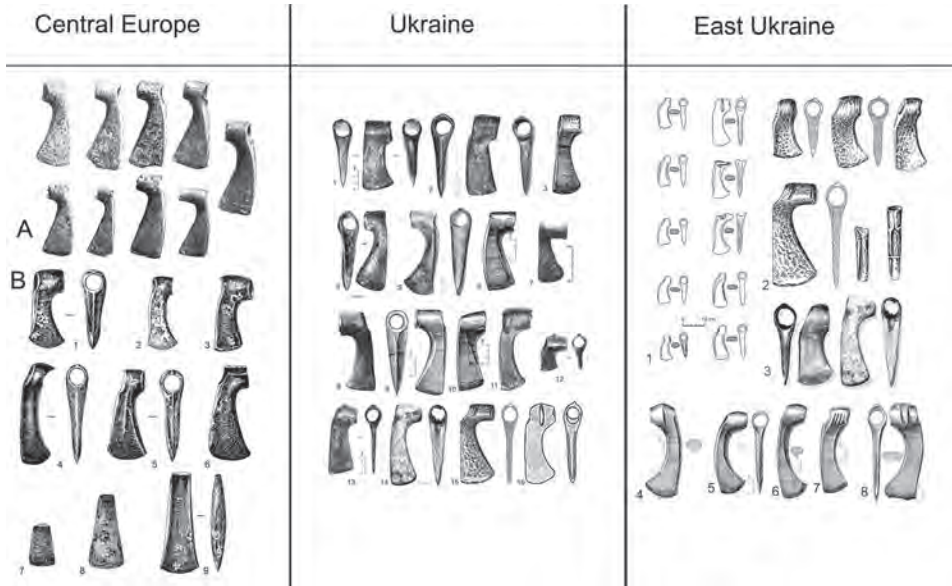


Fig. 19. Axes of the Early Bronze Age from Central Europe: A – Kozarac hoard [Truhelka 1909], B – Dunakömlöd hoard [Róska 1957]; Ukraine (axes of the Stublo type) and Eastern Ukraine: 1. Kolontayivka hoard [Korenevsky 1976], Skakun hoard [Gimbutas 1965], Kyrylivski Heights hoard; Axes of the Rybakovka-Kostromskaya type: 4. Rybakovka hoard; 5. Oleksandriivsk hoard; 6. Kirovohrad Region; 7. Tarasivka, Dnipropetrovsk Region; 8. Veseli Tarny, Krivy Rig Region [Klochko 2001]

Early and Middle Bronze Age objects of the southern type had been known in the Pontic Region before. As an example, we may refer to the hoard from the village of Yankovo of the Shumen province in Bulgaria [Dergachev 2011: Fig. 130], the Yemenska Peshtera Hoard in the north of Bulgaria [Chernykh 1978: Plate 25:5; 27:3, 5; 28:3, 5, 8, 12, 13, 39, 40; 29:1, 22] and the Safaalan Hoard in the north-west of Turkey [Chernykh 1978: Fig. 110], all of them belong to the Early Bronze Age. In the Yankovo Hoard, as an analogy to the Sadovoye Hoard, we can refer to a large knife with a widened sharpened tip of the blade (unlike the knife in Sadovoye, this knife has no tang) and a chisel with a twisted sleeve. The Yemenska Peshtera Hoard contained an adze with a wide curved blade and a hook, the same as in the hooks found in Catacomb graves in the Northern Pontic Region. The Safaalan Hoard contained an elongated trapeze-like adze and small sickles (harvesting knives). However, the Sadovoye Hoard presently is the most northern hoard containing items of the Asia Minor types in the Northern Pontic Region.

Therefore, objects of the Catacomb types – *axes of the Kolontayivka type and leaf-like knives* – play an important role in the identification of absolute chronology of the Sadovoye Hoard. These objects belong to the “classical” period of the

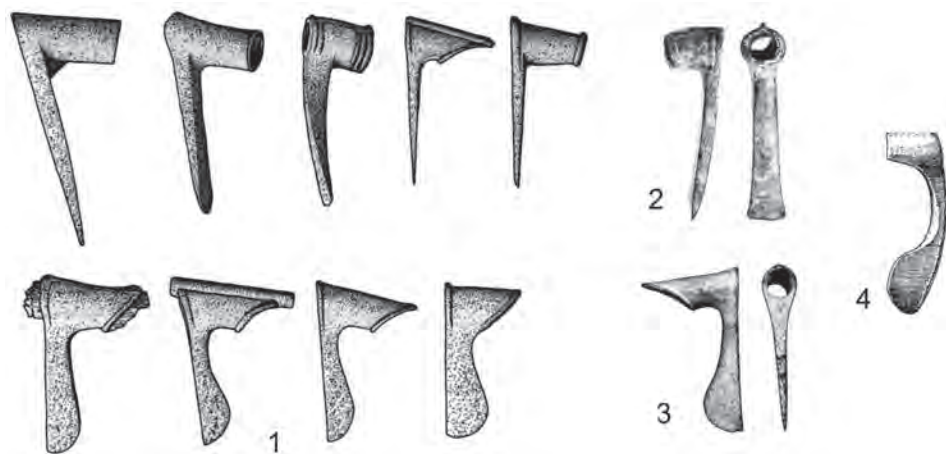


Fig. 20. Axes and battle adzes of the Middle Eastern type: 1. Ur; 2. Cherkassy Region; 3. Vinnytsia Region; 4. Stublo hoard. [1 – Müller-Karpe 1974]

Catacomb culture [Klochko 2001: 100; Chernykh 2011]. Radiocarbon dates for that period are at about 2800 – 2500 BC [Telegin, Pustovalov, Kovaliukh 2003: 183; Bratchenko 2003: 207], which can be accepted as an approximate date of the hoard.

Axes of the Fajsz type in the Carpathian basin took after axes of the Kozarac/Komlod type, which, based on the data gathered by Batora [Batora 2006: 31-39], may be dated within 2800-2500 cal. BC. As examples of complex finds of axes of that type, we may refer to the Kozarac Hoard [Truhelka 1909] (Fig. 19: A) and the hoard of Dunakomlod [Róska 1957] (Fig. 19: B); It is worthy of note that, axes of the Kozarac/Komlod type in that hoard were found together with a flat axe of the Dunakomlod-Sokal type.

At the same time, in Eastern Poland and right-bank Ukraine, *the Chapayivka-type axes took after those of the Stublo type* (Fig. 19) and in Eastern Ukraine *Stublo-type axes of the Corded Ware cultures co-exist with Kolontayivka-type axes of the Catacomb culture*. As examples, in addition to the Sadovoye Hoard referred to above, we may refer to the Kolontayivka Hoard [Korenevsky 1976] and the Skakun Hoard from the Kharkiv Region [Gimbutas 1965] and the Kyrylivski Heights Hoard in Kyiv [Klochko 2006: 88] (Fig. 19:1-3). Based on the dates for the Catacomb culture, quoted above, they could be dated *within 2800-2500 BC*, although, obviously, late versions of axes of the Stublo type continued to exist till a later period, having transformed into the Rybakovka-Kostromskaya type of the Babyno culture circle (Mnogovalikovaya Pottery culture) [Klochko 2001: 172-173]. Examples of axes of the Rybakovka-Kostromskaya type can be seen among

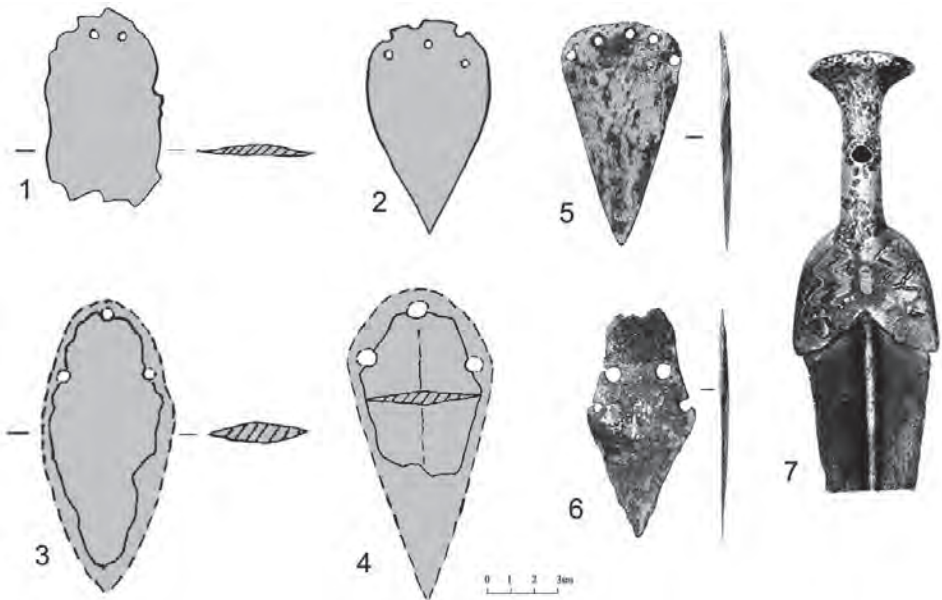


Fig. 21. Daggers: 1. Vysotske, Vysotske Brody District, Lviv Region, barrow VIII; 2. Balychi, Balychi Mostysko District, Lviv Region, barrow VII; 3. Sirnyky; 4. Bilshivtsi, Ivano Frankivsk Region; 5. Lyubar District, Zhytomyr Region; 6. Zaluzhany, Okhtyrka District, Sumy Region; 7. Vinnytsia Region. [4 – Bandrivskyi 2011]

the objects from the hoards of Rybakovka in the Mykolayiv Region and Oleksandrivsk in the Dnipropetrovsk Region, from the Kirovohrad Region, the villages of Tarasivka of the Dnipropetrovsk Region and Veseli Tarny of the Kirovohrad Region [Klochko 2001: 172-173] (Fig. 19:4-8).

The Stublo Hoard included one more axe with a wide heavy blade (Fig. 20:4) that has been traditionally compared to axes of the Faskau type of the Northern Caucasus culture [Korenevsky 1981: Fig. 7:11] and used as evidence of connections with the Northern Caucasus. Axes of the Faskau type represent a version of “heavy”-bladed axes that were widespread in the Middle East. As an example, the authors refer to “textbook” finds of axes and battle adzes from the “royal” Uru tombs (Fig. 20:1). Similar objects have been recently found in right-bank Ukraine. A bronze “battle” hoe, similar to the hoes found in the Uru “royal tombs” in Mesopotamia [Müller-Karpe 1974: Plate 172, 5,10,15,19,24], was found in the Cherkassy Region [Klochko 2012: Fig. 7:2] (Fig. 20:2). A bronze battle axe, similar to the axes from the Uru “royal tombs” in Mesopotamia [Müller-Karpe 1974, Plate 172: 8, 17], was found in the Vinnitsa Region [Klochko 2012: Fig. 7:3, Fig. 18:3].



Fig. 22. Map of location of the “willow-leaf” metal complex

They serve as proof of direct (most probably, trade) links between right-bank Ukraine and the Middle East, rather than the Northern Caucasus.

*Daggers of the “proto-Ůnětice” type.* In addition to old finds from graves of different groups of the Corded Ware culture of Western Ukraine: Vysotske, barrow VIII; Balychi, barrow VII; Sernyky; Bilshivtsi [Bandrivsky 2011: Fig. 12] (Fig. 21:1-4), allow to include new finds from the Lubar District of the Zhytomyr Region; the village of Zaluzhany, the Okhtyrka District of the Sumy Region (collection by Kozymenko, Kyiv) (Fig. 21:5, 6) and the Vinnitsa Region [Klochko 2012: Fig. 3:1] (Fig. 21:7). They represent a common Central and Eastern European type of dagger of the second half of the 3rd mill. BC to the beginning of the 2nd mill. BC (proto-Ůnětice), whose origin is linked to daggers of the Kukuteni – Usatovo type [Klochko 2001: 133], which, in their turn, have Middle Eastern roots. Most probably, the genesis of those daggers occurred in parallel with the genesis of axes of the Fajsz – Kozarac/Komlod type in the Carpathian basin and axes of the Chapayivka – Stublo type in Eastern Poland and right-bank Ukraine.

### 3. CONCLUSIONS

The study of the complex of metallurgical goods from the region between the rivers of the Vistula and Dnieper shows that from the end of the 4th mill. BC a metallurgical centre had emerged in the Pre-Carpathian and Volhynia Regions, based on local deposits of copper [Klochko *et al.* 2000; Kloczko *et. al.* 2003]. The centre was founded by metallurgists of the late Tripolye culture and migrants from central Europe.

From the early 3rd mill. BC, that centre became the main producer of metal goods (the “willow leaf” metal complex) for the Corded Ware cultures between the rivers of the Vistula and Dnieper (Fig. 22). The “willow leaf” metal complex includes the objects referred to above: “willow leaf” temple pendants and other pieces of jewellery, flax axes with flanges of the Dunakomlod-Sokal type, Stublo-type axes and daggers of the “Proto-Únětice” type. The Carpathian-Volhynia centre had connections with the Carpathian basin and the Eastern Mediterranean.

Probably, the theory of the development of metallurgy in the late Neolithic – Early Bronze Age in Europe, in the form of the Circum-Pontic metallurgical province as defined by Evgenij Chernykh [1992], requires revision. First, a new Carpathian-Volhynia centre emerges within the Circum-Pontic metallurgical province that served the Corded Ware cultures. Second, the formation of the Circum-Pontic metallurgical province was determined primarily by direct immediate connections (most probably, maritime trade) of Central and Eastern European Regions with the Middle East and not the relations with the Caucasus, as suggested by Evgenij Chernykh.

*Translated by Inna Pidluska*

## REFERENCES

Agulnikov S.M., Popovich S.S.

2010 Obriad demembratsii v yamnoy kulture Pruto-Dnestrovskogo mezhdurechya. In: *Problemy okhrany i izucheniya pamiatnikov arkheologii stepnoy zony Vostochnoy Evropy. Sbornik statey*, 323-344. Lugansk.

Alekseeva I.L.

1992 *Kurgany epokhi paleometalla v Severo-Zapadnom Prichernomorje*. Kiev.

Alekseeva I.L., Bulatovich S.A.

1990 *Ohrannye istoriko-archeologicheskie issledovaniya yugo-zapade Ukrainy*. Odessa, Zaporozhe: 35-48.

Antoniewicz V.

1929 Der in Stublo in Wolhynien aufgefundene Bronzeschatz. *Eurasia Septentrionalis Antiqua* 4: 135-148.

Andruk S.I., Dobroliubskiy A.O., Toshev G.N.

1985 *Kurgany u s. Plavni v nizoviakh Dunaya*. Moskva. (held in the Deponirovano v INION AN SSSR 13. 06. 85, № 21110).

Artemenko I.I.

1964 Neoliticheskie stoyanki i kurgany epokhi bronzy bliz s. Khodosovichy Gomelskoy oblasti BSSR. In: O.N. Bader (Ed.) *Pamiatniki kamennogo i bronzovogo vekov Evrazii*, 31-38. Moskva.

1967 Plemena Verkhnego i Srednego Podneprovya v epokhu bronzy. In: *Materialy i issledovaniya po arkheologii SSSR*, 148. Moskva.

1976 Mogilnik srednedneprovskoy kultury v urochische Strelitsa. In: S.S. Bezanskaya et al. (Eds) *Eneolit i bronzovyi vek Ukrainy. Issledovannya i materialy*, 69-96. Kyiv.

1987 Kultury shnurovoi keramiki: srednedneprovskaya, podkarpatskaya, gorodoksko-zdolbitskaya, stzhizhovskaya. In: O.N. Bader, D.A. Kraynov, M.F. Kosarev (Eds) *Epokha bronzy lesnoy polosy SSSR*, 35-51. Moskva.

Bader O.N., Khalikov A.Kh.

1987 Balanovskaya kultura. In: O.N. Bader, D.A. Kraynov, M.F. Kosarev (Eds) *Epokha bronzy lesnoy polosy SSSR*, 76-84. Moskva.

Bagińska J., Koman W.

2011 Wyniki badań kolejnych kurhanów kultury ceramiki sznurowej na Grzędzie Sokalskiej. In: H. Kowalewska-Marszałek, P. Włodarczak (Eds) *Kur-*

*hany i obrządek pogrzebowy w IV-II tysiącleciu p.n.e., 371-392. Kraków, Warszawa.*

Bandrivskyi M.

2011 Pokhovannia proto- i ranniounietytskoho typu na Verkhniomu Prydnisteri i problema Verkhniodunaiskykh vplyviv na Zakhid Ukrainskoho lisostepu vprodovzh periodiv BRA1-BRA2. *Materialy i doslidzhennia z arkeolohii Prykarpattia i Volyni* 15: 78-108.

Barich B.E.

1971 Il complesso industriale della stazione di Polada alla luce dei piu' recenti dati. *Bullettino di paleontologia Italiana* 80(22): 79-182.

Bargieł B., Libera J.

2005 Kultura strzyżowska na Lubelszczyźnie w świetle znalezisk grobowych In: V.V. Otroschenko (Ed.) *Na poshanu Sofiyi Stanislavivny Berezanskoyi, 197-211. Kyiv.*

Bartelheim M.

1998 Studien zur böhmischen Aunjetitzer Kultur – Chronologische und chronologische Untersuchungen. Teil 1, 2 [Aus dem Seminar für Ur- und Frühgeschichte der Freien Universität Berlin]. In: *Universitätsforschungen zur prähistorischen Archäologie*, 46. Bonn.

Bátora J.

1998 *Príspevok k otázke kultúrnych vzťahov územia juhozápadného Slovenska k oblasti severne od Karpát v závere staršej doby bronzovej.* In: A. Koško, J. Czebreszuk (Eds) „Trzcinec”: system kulturowy czy interkulturowy proces?, 259-265. Poznań.

2006 *Štúdie ku komunikácii medzi strednou a Východnou Európou v dobe bronzovej.* Bratislava.

Bende L., Lörinczi G.

2002 Kora bronzkori temető és település a Kiskundorozzmai Hosszúhát-Halm-on. In: *Studia archaeologia VIII: 77-107. Szeged.*

Benešova A.

1956 Nález měděných předmětů na Starých Zamcích v Brně-Lišni. *Památky Archeologické* 47: 236-244.

Berestnev S.I.

2001 *Vostochnoukrainskaya lesostep v epokhu sredney i pozdney bronzy (II tys. do n. e.). Kharkov.*

Berezanska S.S. = Berezanskaya S.S.

- 1964 Keramika bilohrudivskoyi kultury (za materialamy rozkopok bilia s. Sobkivka). *Arkheolohiya* 16: 49-75.
- 1986 Kultura mnogovalikovoy keramiki. In: S.S. Berezanskaya, V.V. Otroshchenko, N.N. Cherednichenko, I.N. Sharafutdinova (Eds) *Kultury epokhi bronzy na territorii Ukrainy*, 6-46. Kyiv.
- 1999 Mogilnik epokhi bronzy Gordeevka na Yuzhnom Buge. *Rossiyskaya arkheologiya* 4: 131-148.

Berezanskaya S.S., Gershkovich Ya.P.

- 1983 Andronovskie elementy v srubnoy kulture na Ukraine. *Bronzovyi vek stepnoy polosy Uralo-Irtyshskogo mezhdurechia*. 100-110. Cheliabinsk.

Berezanska S.S., Hoshko T.J., Samoliuk V.O.

- 2004 Kolektyvne pokhovannia tshinetskoyi kultury na r. Horyn. *Arkheologhiya* 1: 111-125.

Berezanskaja S.S., Kločko V.I

- 1998 Das Gräbfeld von Hordeevka. Archäologie in Eurasien. Band 5, Rahden/West.

Berezanskaya S.S., Lobay B.I.

- 1987 *Otchet o raskopkakh mogilnika epokhi bronzy u s. Gordeevka Trostianetskogo rayona Vinnitskoy oblasti* (held in the archives of IA NANU).

Berezanska S.S., Otroshchenko V.V.

- 1997 Bronzovyi vik. In: P. Tolochko (Ed.) *Davnia istoriya Ukrainy, vol. 1*, 384-544. Kyiv.

Berezanska S., Samoljuk W., Taras H.

- 2003 Cmentarzysko kurhanowe kultury trzcienieckiej z okolic Netišyna na Wołyniu (grupa I). *Archeologia Polski Środkowowschodniej* 6: 184-214.

Bertemes F.

- 1989 Das frühbronzezeitliche Gräberfeld von Gemeinlebarn. *Saarbrücker Beiträge zur Altertumskunde*, 45.

Bidzilia V. I., Yakovenko E. V.

- 1973 Ralo iz pozdneyamnogo pogrebeniya kontsa III – nachala II tysiacheletiya do n. e. *Sovetskaya arkheologiya* 3: 146-152.

Blajer W.

- 1990 Skarby z wczesnej epoki brązu na ziemiach polskich. In: *Prace Komisji Archeologicznej PAN*, 28. Wrocław.

- 1998 Przyczynek do dyskusji o znaczeniu metalurgii brązu w zachodnim odłamie kultury trzcinieckiej. In: A. Koško, J. Czebreszuk (Ed.) „*Trzciniec*”: *system kulturowy czy interkulturowy proces?*, 337-342, Poznań.
- 2000 Drugi sezon ratowniczych badań wykopaliskowych na stanowisku 5 w Lipniku, pow. Przeworsk (stan. 155 na obszarze 104-79), *Rocznik Przemyski* (1), *Archeologia*: 37-50.

Bona I.

- 1975 *Die Mittlere Bronzezeit Ungarns und ihre südöstlichen Beziehungen*. Budapest.

Bondar N.N.

- 1974 *Poseleniya Srednego Podneprovya epokhi ranney bronzy*. Kyiv.

Borziyak I.A., Manzura I.V., Levickij O.G.

- 1983 *Korzhevskie kurgany. Arheologicheskie issledovaniya v Moldaviiv 1979 – 1980 gg.* Kishinev: 3-27.

Bratchenko S.N.

- 1976 *Nizhnee Podonie v epokhu sredney bronzy (periodyzatsia i khronologiya pamiatnikov)*. Kyiv.
- 1977 K voprosu o slozhenii babinskoy kultury (mnogovalikovoy keramiki). In: D.Ya. Telegin (Ed.) *Vilnianskie kurgany v Dneprovskom Nadporozhe*, 21-43. Kyiv.
- 2001 *Donetska katakombna kultura rannioho etapu, vol. 1*. Luhansk.
- 2003 Radiocarbon chronology of the Early Bronze Age of the Middle Don. Svatove, Luhansk Region. In: A.Koško, V.I. Klochko (Ed.) *The Foundations of Radiocarbon Chronology of Cultures between the Vistula and Dnieper: 4000-1000 BC. Baltic-Pontic Studies* 12: 185-208.
- 2004 Pradavnia Slobozhanschyna: Svativsky mohyly-kurhany III tys. do n. e. ta maydany. In: *Materialy ta doslidzhennia z arkeolohiyi Skhidnoyi Ukrainy* 2: 65-190. Luhansk.
- 2012 *Leventsovskaya krepost*. Kyiv.

Bratchenko S.N., Balonov F.R., Gershkovich Ya.P.

- 2004 Drevneyshaya gruppa pogrebeniy Aleksandrovskego kurgana № 9 na r. Lugan. In: *Materialy ta doslidzhennia z arkeolohiyi Skhidnoyi Ukrainy*: 30-74. Luhansk.

Bratchenko S. N., Shaposhnikova O. G.

- 1985 Katakombnaya kulturno-istoricheskaya obschnost. In: I.I. Artemenko, S.S. Berezanskaya, V.D. Baran, V.A. Anokin (Eds) *Archeologia Ukrain-skoy SSR*, vol. 1: 403-419. Kyiv.

Braudel F.

- 1992 *Kultura materialna, gospodarka i kapitalizm XV-XVIII wiek. Tom 3. Czas trwania*. Warszawa.

Bronzezeit

- 2013 *Bronzezeit. Europa ohne Grenzen 4. – 1. Jahrtausend v. Chr. Ausstellungskatalog*. Sankt Petersburg.

Brovender Yu.M.

- 2009 Copper Ores of the Northern Pontic Region as Raw Materials for Production Activity in the Paleometal Age (Based on the Study of the Kartamysh Ore Mining and Metallurgy Complex). In: A. Koško, V. Klochko (Ed.) *Routes between the Seas: Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC. Baltic-Pontic Studies* 14: 103-123.

Brovender Yu.M., Otroschenko V.V., Priakhin A.D.

- 2010 Kartamyskyi kompleks hirnycho-metalurhiynykh pamiatok bronozvoho viku v Tsentralnomy Donbasi. *Arkheolohiya* 2: 87-101.

Buchvaldek M.

- 1958 Hroby se šnurovou keramikou ze Sulejovic. *Památky archeologické* 49(1): 15-39.
- 1966 Die Schnurkeramik in Mitteleuropa – Zur Herausstellung der Fundgruppen und der Frage ihrer gegenseitigen Beziehungen. *Památky archeologické* 57(1): 126-171.
- 1987 Sredneevropeyskaya shnurovaya keramika i Severnoe Prichernomorie (k probleme khronologicheskikh i kulturnykh svyazey). In: K.N. Pitskhelauri, E.N Chernykh (Eds) *Kavkaz v sisteme paleometallicheskh kultur Evrazii*, 224-234. Tbilisi.
- 1997 Die südosteuropäischen Elemente in der Schnurkeramik. In: C. Becker, M.L. Duneklmann *et al.* (Eds) *Chronos. Beiträge zur prähistorischen Archäologie zwischen Nord- und Südosteuropa*, 181-185. Espelkamp.

Budziszewski J., Tunia K.

- 2000 A grave of the Corded Ware Culture arrowheads producer in Koniusza, Southern Poland. In: S. Kadrow (Ed.) *A Turning of Ages. Im Wander der Zeiten. Jubilee Book Dedicated to Professor Jan Machnik on His 70th Anniversary*, 127-130. Kraków.

Budziszewski J., Włodarczak P.

- 2010 *Kultura pucharów dzwonowatych na Wyżynie Małopolskiej*. Kraków.

Bukowski Z.

- 1976 *Elementy wschodnie w kulturze łużyckiej u schyłku epoki brązu*. Wrocław.

Buniatian K.P.

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

Buniatian K.P., Kaiser E., Nikolova A.V.

2006 *Bronzezeitliche Bestattungen aus dem Unteren Dneprgebiet*. Langenweissbach.

Buniatian K.P., Samoliuk V.

2009 Manifestations of Middle Dnieper Culture in the Volyn Territory and the Issue of Ancient Routes. In: A. Koško, V.I. Klochko (Ed.) *Routes between the Seas: Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC*. *Baltic-Pontic Studies* 14: 252-268.

Burtănescu F.

2002 *Epoca timpurie a bronzului între Carpați și Prut cu unele contribuții la problemele perioadei premergătoare epocii bronzului în Moldova*. București.

Bychkov N.V.

1982 *Otchet o polevykh issledovaniyakh v 1982 g.* (held in the archives of II NANB, nr. 843).

1983a *Otchet o polevykh issledovaniyakh v 1983 g.* (held in the archives of II NANB, nr. 870).

1983b *Planovaya tema za 1983 god* (held in the archives of II NANB, nr. 1275).

1985 *Issledovaniya v Gomelskoy oblasti*. In: *Arkheologicheskie otkrytiya 1983 goda*, 383. Moskva.

1989 *Planovaya tema za 1986-1989 gody* (held in the archives of II NANB, nr. 1124).

Cabalska M.

1980 *Związki między kulturą Otomani a kulturą trzcieniecką*. *Archeologia Polski* 29: 53-65.

Catling H.W.

1964 *Cypriot bronzework in the Mycenaean world*. Oxford.

Chebotarenko G.F., Yarovoj E.V., Telnov N.P.

1989 *Kurgany Budzhakskoj stepi*. Kishinev.

Cherniakov I.T.

1979 *Kulturno-khronologicheskoe svoeobrazie pamiatnikov epokhi bronzy Severo-Zapadnogo Prichernomoria*. In: *Problemy epokhi bronzy yuga Vostochnoy Evropy: tezisy dokladov konferentsii; Donetsk 3-6 dekabria 1979 g.*, 8-10. Donetsk.

- 1996 Kultura mnogovalikovoi keramiki – vostochnyi areal balkano-dunaiskogo ochaga kulturogeneza. In: *Severo-Vostochnoe Priazovie v sisteme evrazijskikh drevnostey (eneolit - bronzovyi vek. Materialy mezhdunarodnoy konferentsii, vol. 1, 59-64. Donetsk.*

Chernykh E.N.= Chernykh Y.N.

- 1967 *Istoriya drevneyshey metallurgii Vostochnoy Evropy.* Moskva  
 1976 *Drevniyametalloobrabotka na Yugo-Zapade SSSR.* Moskva.  
 1978 *Gornoe delo i metallurgiya v drevneyshey Bolgarii.* Sofia.  
 1992 *Ancient Metallurgy in the USSR. The Early Metal Age.* Cambridge.

Chernykh E.N., Avilova L.L., Orlovskaya L.B.

- 2000 *Metallurgicheskie printsii i radiouglerodnaya khronologiya.* Moskva

Chernykh E.N., Orlovskaya L.B.

- 2004 Radiouglerodnaya khronologiya katakombnoy kulturno-istoricheskoy obschnosti (sredniy bronzovyi vek). *Rossiyskaya Arkheologiya* 2:15-29.

Chernykh L.A.

- 2003 O vozmozhnosti ispolzovaniya medno-rudnikh istochnikov Donbassa v period eneolita, runney i sredney bronzy. In: *Problemy girnichoyi archeologii.* 212-223. Alchevsk.  
 2011 Bronzovye nozhi iz pamiatnikov katakombnoy KIO Ukrainy (klassifikatsia po vyborke predmetov – predvaritelnye itogi). In: *Problemy hirnychoi arkheologii (Materialy VIII-ho mizhnarodnoho Kartamyskoho poliovoho seminaru),* 23-79. Alchevsk.

Chernykh L.A., Pleshivenko A.G.

- 1993 Pogrebeniye liteyshchika katakombnoy kultury u s. Vasilievka. In: *Khoziaystvo drevnego naseleniya Ukrainy, vol. 2, 244-267.* Kyiv.

Chomentowska B.

- 1964 Masowy grób kultury trzcienieckiej w Kosinie, pow. Kraśnik. *Światowit* 24: 237-251.

Ciugudean H.

- 2011 Mounds and Mountains: Burial Rituals in Early Bronze Age Transylvania. In: Berecki S.; Németh R.E.; Rezi B. (Eds). *Bronze Age Rites and Rituals in the Carpathian Basin:* 21-59. Târgu Mureş.

Coirvuc V., Dumitroaia G. (Eds)

- 2001 *Cultura Costișă în contextul epocii bronzului din România.* Piatra-Neamț.

Czopek S.

- 1996 *Grupa tarnobrzaska nad środkowym Sanem i dolnym Wisłokiem*. Rzeszów.
- 2003 Między Południem a Wschodem – importy i naśladownictwa ceramiki w materiałach grupy tarnobrzaskiej. In: J. Gancarski (Ed.) *Epoka brązu i wczesna epoka żelaza w Karpatach polskich*, 215-238. Krosno.

Dascălu L.

- 2007 *Bronzul mijlociu si tarziu in Campia Moldovei*. Iasi.

Dashevska O.D., Golentsov A.S.

- 2003 Zakhidnodonuzlavskiy kurhan doby bronzы. *Arkheolohiya* 3: 5-15.

David V.

- 2002 *Studien zu Ornamentik und Datierung der bronzezeitlichen Depotfundgruppe Hajdúsámson-Apa-Ighiel-Zajta*. Alba Iulia-Karlsburg/Weissenburg.

Dąbrowski J.

- 1977 Oddziaływania śląsko-wielkopolskie na metalurgię kultury trzcinieckiej. In: B. Gediga (Ed.) *Geneza kultury łużyckiej na terenie Nadodrza*, 201-224. Wrocław.
- 2004 *Ältere Bronzezeit in Polen*. Warszawa.
- 2009 *Polska przed trzema tysiącami lat. Czasy kultury łużyckiej*. Warszawa.

Dąbrowski J., Okuliczowa Ł.

- 1962 Skarb brązowy ze Stawiszyc, pow. Pińczów. *Wiadomości Archeologiczne* 28: 243-250.

Dergachev V.A.

- 1986 *Moldaviya i sosednie territorii v epokhu bronzы*. Kishinev.
- 1994 Epoca bronzului. Perioada timpurie. *Thraco-Dacica* 15(1-2): 121-140.
- 1998 Entwicklungen im Raum zwischen Karpaten und Dnepr. In: B. Hänsel, J. Machnik (Eds) *Das Karpatenbecken und die osteuropäische Steppe*, 27-64. München.
- 1999 Osobennosti kulturno-istoricheskogo razvitiya Karpato-Podnestrovia. K probleme vzaimodeystviya drevnikh obschestv Sredney, Yugo-Vostochnoy i Vostochnoy Evropy. *Stratum plus* 2: 169-221.
- 2011 *Topory-kelty pozdney bronzы Karpato-Podunavia, vol. 2*. Chişinău.

Dergachev V.A., Bochkarev V.S.

- 2002 *Metallicheskie serpy pozdney bronzы Vostochnoy Evropy*. Chişinău.

Dergachev V.A., Savva E.N.

- 1985 Raskopki kurganov u s. Kotjala. In: *Archeologicheskie issledovaniya v Moldavii* (1981 g.), 64-82. Kishinev.

- Diachenko O.V.  
2007 Problema istorychnykh interpretatsiy trypils'koi kultury. *Arkheolohiya* 2:83-91.
- Dobrzańska H., Rydzewski J.  
1992 Elementy zakarpackie w materiałach kultury trzcinieckiej w Mysławczycach. *Acta Archaeologica Carpatica* 31: 91-106.
- Dovzhenko N.D.  
1991 Kamiani statui v pokhovalnomu obriadi katakombnykh plemen Pivnichnoho Prychornomia. In: M.M. Bondar (Ed.) *Pokhovalnyi obriad davnioho naseleння Ukrainy*, 122-133. Kyiv.
- Dovzhenko N.D., Soltis O.B.  
1991 O traditsii izobrazheniya "stop" v pogrebalnom obriadye katakombnykh kultur Severnogo Prichernomia. In: *Katakombnye kultury Severnogo Prichernomia*, 117-127. Kyiv.
- Dresely, V.  
2004 *Schnurkeramik und Schnurkeramiker im Taubertal*. Stuttgart.
- Dresely V., Müller J.  
2001 Die absolutchronologische Datierung der Schnurkeramik im Tauber-und Mittel-Elbe-Saale-Gebeit. In: J. Czebruszk, J. Müller (Eds) *Die absolute Chronologie im Mitteleuropa 3000–2000 v. Chr. Studien zur Archäologie in Ostmitteleuropa*, vol. 1, 287-318. Poznań–Bamberg.
- Dumitroaia Gh.  
2000 *Comunități preistorice din nord-estul României. De la cultura Cucuteni până în bronzul mijlociu*. Piatra-Neamț.
- Duffy P. R.  
2010 *Complexity and autonomy in Bronze Age Europe: assessing cultural developments in Eastern Hungary: a dissertation submitted for the degree of Doctor of Philosophy (Anthropology)*. Michigan
- Dvorianinov S.A., Petrenko V.G., Rychkov N.A.  
1981 K izucheniyu orientirovki yamnykh pogrebeniy. In: V.N. Stanko (Ed.) *Drevnosti Severo-Zapadnogo Prichernomia*, 22-38. Kyiv.
- Egg M.  
1992 Zur Ausstattung des Toten vom Hauslabjoch, Gem. Schnals (Sudtirol). In: F. Hopfel, W. Platzer, K. Spindler (Eds) *Der Mann im Eis*, 254-272. Innsbruck.

Evdokimov G.L.

- 1980 O kulturno-khronologicheskikh razlichiyakh katakombnykh pamiatnikov Nizhnego Podneprovia, Priazovia i Kryma. In: *Arkheologicheskie issledovaniya na Ukrainie v 1978-1979 gg. Tezisy dokladov XVIII konferentsii IA AN USSR*, 48-50. Dnepropetrovsk.
- 1987 K voprosu o roli donetskoj katakombnoy kultury v slozhenii katakombnykh kultur Severnogo Prichernomorja. In: *Problemy okhrany i issledovaniya pamiatnikov arkheologii v Donbasse. Tezisy*, 46-48. Donetsk.

Fasani L.

- 1984 L'età del Bronzo. In: A. Aspes (Ed.) *Veneto nell'antichità, Preistoria e Protostoria*, vol. II, 451-533. Verona.
- 1988 La sepoltura e il forno di fusione La Vela di Valbusa (Trento). *Preistoria Alpina* 24: 165-181. Trento.

Feschchenko E.L.

- 1992 Izdelia iz metalla v katakombnykh pogrebeniyakh Dneprovskogo predstepiya. In: *Problemy arkheologii Podnieprovia*, 84-101. Dnepropetrovsk.

Florescu M.

- 1964 Contributii la cunoașterea culturii Noua. *Arheologia Moldovei* 2-3: 143-216.
- 1970 Problèmes de la civilisation de Costișa à la lumière du sandage de Borlești. *Dacia* 14: 51-81.

Fokkens H., Achterkamp Y., Kuijpers M.

- 2008 Bracers or Bracelets? About the Functionality and Meaning of Bell Beaker Wrist-guards. *Proceedings of the Prehistoric Society* 74: 109-140.

Furmánek V., Veliačik L., Vladár J.

- 1991 *Slovensko v dobe bronzovej*. Bratislava.

Gajewski L.

- 1969 Fin du néolithique - début de la période de Hallstatt. *Inventaria Archaeologica Pologne* 22: Planche 130-136.

Gancarski J.

- 1994 Pogranicze kultury trzcynieckiej i Otomani-Füzesabony – grupa jasielska. In: *Problemy kultury trzcynieckiej*, 75-104. Rzeszów.
- 1999 Chronologia grupy pleszowskiej kultury mierzanowickiej i kultury Otomani-Füzesabony w Polsce na podstawie wyników badań wykopaliskowych osad w Trzcinity i Jaśle. In: J. Gancarski (Ed.) *Kultura Otomani-Füzesabony – rozwój, chronologia, gospodarka*, 145-180. Krosno.
- 2011 *Trzcynica – karpacka Troja*. Krosno.

- Gancarski J. (Ed.)  
2002 *Między Mykenami a Bałtykiem. Kultura Otomani-Füzesabony*. Krosno-Warszawa
- Gardawski A.  
1959 Plemiona kultury trzcinieckiej w Polsce. *Materiały Starożytne* 5: 7-189.
- Gardawski A., Wesołowski K.  
1956 Zagadnienie metalurgii kultury trzcinieckiej w świetle „skarbów” z Dratowa, pow. Puławy i Rawy Mazowieckiej. *Materiały Starożytne* 1: 59-103.
- Gebers W.  
1978 Endneolithicum und Frühbronzezeit im Mittelrheingebiet. Katalog. *Saarbrücker Beiträge zur Altertumskunde* 28.
- Gedl M.  
1975 *Kultura przedłużycka*. Wrocław-Warszawa-Kraków-Gdańsk.  
1985 *Epoka brązu i wczesna epoka żelaza w Europie*. Kraków.
- Gening V.V., Korpusova V.N.  
1989 *Arkheologicheskie pamyatniki Krymskogo Prisivashya*. Kurgany u s. Istochnoe i s. Bolotnoe. Kiev
- Gershkovich Ya.P.  
1997 Proiskhozhdeniye i evolutsiya sabatinovskogo keramicheskogo kompleksa. *Arkheologicheskiy almanakh* 6: 125-144.
- Gey A.N.  
2000 *Novotitorovskaya kultura*. Moskva.  
2011 Spornye voprosy i perspektivy izucheniya katakombnoy kulturno-istoricheskoy obshchnosti. *Kratkie soobscheniya Instituta Arkheologii* 225: 3-10.
- Gimbutas M.  
1965 *Bronze Age Cultures in Central and Eastern Europe*. Paris-Hague-London.
- Girić M.  
1971 Mokrin: nekropola ranog bronzanog doba. In: *Dissertationes et monographiae XI*. Beograd.
- Glosik J.  
1968 Kultura strzyżowska. *Materiały Starożytne* 11.
- Gorodtsov V.A.  
1905 Rezultaty arkheologicheskikh issledovaniy v Iziumskom uezdie Kharkovskhoy gubernii 1901 goda. In: *Trudy XII Arkheologicheskogo Syezda*, vol. 1, 174-225. Moskva.

Goshko T., Manichev V., Pryimachenko V., Bondarenko I.

- 2009 Doslidzhennia kolorovoho metalu doby piznioi bronzы z terytorii Pravoberezhnoi lisostepovoї Ukrainy. In: V.V. Otroschenko (Ed.) *Vzaemozviazky kultur epokh bronzы i rannoho zaliza na terytorii Tsentralnoi ta Skhidnoi Evropy. Zbirka naukovykh prats na poshanu Larysy Ivanivny Krushelnytskoi*, 99-118. Kyiv, Lviv.

Górski J.

- 1994 Materiały kultury trzcinieckiej z kopca wschodniego w Rosiejowie. *Materiały Archeologiczne Nowej Huty* 17: 41-64.
- 1995 Grób z początków starszego okresu epoki brązu ze stanowiska 17 w Nowej Hucie-Pleszowie. *Materiały Archeologiczne Nowej Huty* 18: 17-21.
- 1998 Transkarpackie kontakty ludności zachodniej Małopolski w początkach epoki brązu w świetle najnowszych odkryć w Karpatach (próba interpretacji niektórych znalezisk). In: J. Gancarski (Ed.) *Dzieje Podkarpacia* vol. 2, 201-214. Krosno.
- 1999 Die Beziehungen zwischen dem westlichen Kleinpolen und dem Gebiet der Slowakei in der klassischen Phase der Trzciniec-Kultur (ausgewählte Aspekte). In: J. Batora, J. Peska (Eds) *Aktuelle Probleme der Erforschung der Frühbronzezeit in Böhmen und Mähren in der Slowakei*, 251-265. Nitra.
- 2003 Uwagi o datowaniu i kontekście znalezisk ceramiki o „cechach południowych” w strefie zasięgu kultury trzcinieckiej. In: J. Gancarski (Ed.) *Epoka brązu i wczesna epoka żelaza w Karpatach polskich*, 89-137. Krosno.
- 2007 *Chronologia kultury trzcinieckiej na lessach niecki nidziańskiej*. Kraków.
- 2012 Transcarpathian elements in the Trzciniec culture. Wanderings of people or ideas? In: R. Kujovský, V. Mitáš (Eds) *Václav Furmáněk a doba bronzová. Zborník k 70. Narodeninám*, 89-97. Nitra.

Górski J., Jarosz P.

- 2006 Cemetery of the Corded Ware and the Trzciniec Cultures in Gabułów. *Sprawozdania Archeologiczne* 58: 401-453.

Górski, J., Lysenko, S., Makarowicz, P.

- 2003 Radiocarbon Chronology of the Trzciniec Cultural Circle between the Vistula and Dnieper Basins. In: A.Koško, V.I. Klochko (Ed.) *The Foundations of Radiocarbon Chronology of Cultures between the Vistula and Dnieper: 4000-1000 BC. Baltic-Pontic Studies* 12: 253-306.

Górski P., Makarowicz P.

- 2007 Reception of Transcarpathian influence in Trzciniec Cultural Circle as a Sign of Long-Distance Exchange Contacts. In: J. Baron, I. Lasak (Eds) *Long Distance Trade in the Bronze Age and Early Iron Age*, 101-116. Wrocław.

- Górski J., Makarowicz P., Wawrusiewicz A.  
2011 *Osady i cmentarzyska społeczności trzcinieckiego kręgu kulturowego w Polesiu, stanowisko I, województwo łódzkie*. Łódź.
- Górski J., Wróbel J.  
2000 Zbiorowy grób szkieletowy kultury trzcinieckiej z Nowej Huty-Cła, stan. 65. *Materiały Archeologiczne Nowej Huty* 22: 21-34.
- Grigoriev S.A.  
2002 *Ancient Indo-Europeans*. Cheliabinsk.
- Grygiel R.  
1987 Z badań nad kulturą trzciniecką w rejonie Brześcia Kujawskiego. In: *Kultura trzciniecka w Polsce*, 73-88. Kraków.
- Hafner A., Suter P.J.  
2003 Vom Endneolithikum zur Frühbronzezeit: Wandel und Kontinuität zwischen 2400 und 1500 V. Chr. *Archäologisches Korrespondenzblatt* 33 (3): 325-339.
- Harrison R.J., Heyd V.  
2007 The Transformation of Europe in the Third Millennium BC: The Example of 'Le Petit Chasseur I+III' (Sion, Valais, Switzerland). *Praehistorische Zeitschrift* 82 (2): 129-214.
- 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.
- Honti S., Kiss V.  
2013 Bronze hoard from Zalasabar. New Data on the Study of the Tolnanémedi Horizon – Part 2. In: A. Anders, G. Kulcsár *et al.* (Eds) *Moments in Time. Papers presented to Pál Raczky on His 60th Birthday*, 739-755. Budapest.
- Hundt H.J.  
1958 Katalog Straubing I. Die Funde der Glockenbecher-kultur und der Straubinger Kultur. In: *Materialhefte zur Bayerischen Vorgeschichte* 11(1). München.
- Hübner E.  
2005 *Jungneolithische Gräber auf der jütischen Halbinsel. I: typologische und chronologische Studien zur Einzelgrabkultur*. København
- Ignaczak M., Koško A., Szmyt M. (Eds)  
2011 *Między Bałtykiem a Morzem Czarnym. Szlaki międzymorza IV–I tys. przed Chr. Archeologia Bimaris. Dyskusje 4*. Poznań

Iliukov L.C.

- 1985 Pogrebeniya lityeshikov epokhi sredney bronzы iz Severo-Vostochnogo Priazovia. *Sovetskaya Arkheologiya* 2: 226-231.

Isaenko V.F.

- 1976 *Neolit Pripiatskogo Polesiya*. Minsk.

Isaenko V.F., Cherniavskiy M.M.

- 1967 Novye dannye po spornym voprosam bronzovogo veka Belorussii. In: *Belorusskie drevnosti*, 155-181. Minsk.

Ivanova S.V.

- 2010 Torgovye puti i migratsii v Yugo-Vostochnoy Evrope v rannem bronzovom veke. *Materialy po archeologii Severnogo Prichernomoria* 11: 158-248.
- 2013 Kulturno-istoricheskie kontakty naseleniya Severo-Zapadnogo Prichernomoria v rannem bronzovom veke: Zapad-Vostok. Kulturno-istoricheskie kontakty naseleniya. *Stratum plus* 2: 158-248.

Ivanova S.V., Ostroverkhov A.S., Savelev O.K., Ostapenko P.V.

- 2012 *Ocherki istorii i arkheologii Dnestro-Bugskogo mezhdurechia*. Kyiv.

Ivanova S.V., Petrenko V.G. Vetchinnikova N.E.

- 2005 *Kurgany drevnikh skotovodov mezhdurechia Yuzhnogo Buga i Dnestra*. Odessa.

Ivanova S.V. Savelev O.K.

- 2011 Kurgan bilya s. Sichavka Odeskoї oblasti. *Arheologiya* 3: 70-82.

Kadrow S. =Kadrov S.

- 1995 *Gospodarka i społeczeństwo. Wczesny okres epoki brązu w Małopolsce*. Kraków.
- 1998 Osteuropäische Beziehungen des epischurkeramischen karpatenländischen Kulturkreises in der Frühbronzezeit. In: B. Hänsel, J. Machnik (Eds) *Das Karpatenbecken und die osteuropäische Steppe*, 251-260. München.
- 2000 Wczesnobrązowa wytwórczość metalurgiczna w stylu wierzbowego liścia. In: J. Rydzewski (Ed.) *150 lat Muzeum Archeologicznego w Krakowie*, 141-153. Kraków.
- 2001 *Uprogu nowej epoki. Gospodarka i społeczeństwo wczesnego okresu epoki brązu w Europie Środkowej*. Kraków.

Kadrow S., Górski J.

- 2003 Diachronic Micro-Regional Studies concerning Settlement on the Loess Uplands of Southeastern Poland in the Bronze Age. In: H. Thrane (Ed.) *Diachronic Settlement Studies in the Metal Ages*, 71-97. Aarhus.

Kadrow S., Machnik J.

- 1997 *Kultura mierzanowicka. Chronologia, taksonomia i rozwój przestrzenny.* Prace komisji archeologicznej. 29. Kraków.

Kaiser E.

- 1997 Der Hort von Borodino. In: *Universitätsforschungen zur prähistorischen Archäologie* 44. Berlin.
- 2003 Studien zur Katakombengrabkultur zwischen Dnepr und Prut. In: *Archäologie in Eurasien* 14. Mainz.
- 2009 Problemy absolutnogo datirovaniya katakombnoy kultury Severnogo Prichernomoria. *Tyragetia (serie nouă)* 3 (18/1): 59-70.
- 2012 Problemy absolutnogo datirovaniya katakombnoy kultury Severnogo Prichernomoria. *Kratkie soobscheniya Instituta Arkheologii* 225: 15-27.

Kaiser E., Plešivenko A.G.

- 2000 Die bronzezeitlichen Grabsitten im unteren Dneprgebiet. *Eurasia Antiqua* 6: 125-208.

Kalicz N.

- 1968 *Die Frühbronzezeit in Nordostungarn.* Budapest.

Kalicz-Schreiber R.

- 1989 *Die älteste Bronzezeit in Nordwestungarn und ihre Beziehungen.* Praehistorica. XV–XIV: 249-255.

Katincharov R.

- 1987 Ranniy bronzovyi vek Frakii i ego kulturnye sviazi i vzaimootnosheniya s sosednimi oblastiami. In: K.N. Pitskhelauri, E.N Chernykh (Eds) *Kavkaz v sisteme paleometallicheskih kultur Evrazii*, 168-175. Tbilisi.

Kazarnitskiy A.A.

- 2013 Kraniologia naseleniya babinskoy kultury. *Vestnik arkheologii, antropologii i etnografii* 2 (21): 70-78.

Kamenskij A.G.

- 1990 Rezultaty spektralnogo i metallograficheskogo issledovaniya metallicheskih predmetov iz pamyatnikov epoxi bronzы s territorii Moldovy (Prilozhenie 5). In: E.V. Yarovoj (Ed.) *Kurgany eneolita-bronzы Nizhnego Podnestrovyia. Kishinev*, 247-258.

Kempisty A.

- 1978 *Schyłek neolitu i początek epoki brązu na Wyżynie Małopolskiej w świetle badań nad kopcami.* Warszawa.

Kiyashko A.V.

- 1999 *Proiskhozhdeniye katakombnoy kultury Nizhnego Podonia.* Volgograd.

## Klein L.S.

- 1962 Katakombnye pamiatniki epokhi bronzy i problema vydeleniya arkheologicheskikh kultur. *Sovetskaya arkheologiya* 2: 26-38.
- 1970 Katakombnaya kultura ili katakombnye kultury? In: B.A. Kolchin, Ya.A. Sher (Eds) *Statistiko-kombinatornye metody v arkheologii*, 165-179. Moskva.
- 1975 Retsenziya na: Kurgany stepnoy chasti mezhdurechia Dunaya i Dnestra. *Sovetskaya arkheologiya* 1: 297-304.

## Klochko E.O

- 1990 Redkiy pogrebalnyi kompleks katakombnoy kultury na Srednom 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. Zaporozhie

## Klochko V.I.

- 1994 Metallurgicheskoe proizvodstvo v eneolite-bronzovom veke. In: I.T. Cherniakov (Ed.) *Remeslo epokhi eneolita-bronzy na Ukraine*, 96-132. Kyiv.
- 1998 „Loboykivska metalurhiya” (do problemy skhidnoho kordonu skhidnotshynetskoj kultury). In: A.Koško, J.Czebreszuk (Eds) „*Trzciniac*”: *system kulturowy czy interkulturowy proces?*, 217-237. Poznań.
- 2001 Weaponry of Societies of the Northern Pontic Culture Circle: 5000-700 BC. *Baltic-Pontic Studies* 10.
- 2004 Metalurhiya trypilskoj kultury (dosiahnennia ta perspektyvy vyvchennia). In: M.Videiko (Ed.) *Entsyklopediya trypilskoj tsyvilizatsiyi I*: 219-222. Kyiv.
- 2006 *Ozbroyennia ta viyskova sprava davnoho naseleattia Ukrainy (5000-900 r. do R.Kh.)*. Kyiv.
- 2008 Torhovelnii shliakh Bug-Bog. In: J. Bednarczyk, J. Czebreszuk, P. Makarowicz, M. Szmyt (Eds) *Na pograniczu swiatów. Studia z pradziejów międzymorza bałtycko-pontyjskiego ofiarowane Profesorowi Aleksandrowi Koško w 60. rocznicę urodzin*, 239-249. Poznań.
- 2012 „Hordiyivskiy fenomen”. In: W. Blajer (Ed.) *Peregrinationes archaeologicae in Asia et Europa Joanni Chochorowski dedicatae*, 395-404. Kraków.

## Klochko V.I., Koško A.

- 2009 The Societies of Corded Ware Cultures and Those of Black Sea Steppes (Yamnaya and Catacomb Grave Cultures) in the Route Network Between the Baltic and Black Seas. In: A. Koško, V.I. Klochko (Eds) *Routes between the Seas Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC*. *Baltic-Pontic Studies* 14: 269-301.

Klochko V.I., Koško A., Szmyt M.

- 2003 A comparative chronology of the Prehistory of the area between the Vistula and Dnieper: 4000-1000 BC. 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: 396-414.

Klochko V.I., Kozymenko A.V.

- 2011 *Nash nedavniy bronzovyi vek*. Kyiv.

Klochko V.I., Kravets D.P.

- 1991 K absoliutnoy khronologii kultury mnogovalikovoy keramiki. In: M.T. Kaszuba (Ed.) *Drevneyshie obshchnosti zemledeltsev i skotovodov Severnogo Prichernomia (5000 do n.e. – 500 n.e.)*: 115-116. Kishyniev.

Kloczko W.I., Manichev V.I., Kompanec G.S., Kovalchuk M.S.

- 2003 Wychodnie rud miedzi na terenie Ukrainy zachodniej jako baza surowcowa metalurgii kolorowej w okresie funkcjonowania kultury trypolskiej. *Folia Praehistorica Posnaniensia* X/XI: 47-78.

Klochko V.I., Manichev V.I., Kvasnisa V.N., Kozak S.A. Demchenko L.V., Sokhatskiy M.P.

- 2000 Issues concerning Tripolye metallurgy and the Virgin copper of Volhynia. In: A.Koško (Ed.) *The Western Border Area of the Tripolye Culture. Baltic-Pontic Studies* 9: 168-186.

Klochko V.I., Tkachuk T.M.

- 1999 Skarb doby rannoi bronzы z s. *Pidhirtsi ta pyttannia pokhodzhennia sokyr typu „Stublo”*. In: *Arkheolohichni vidkryttia v Ukraini 1998-1999*: 94-95. Kyiv.

Kłoczko W.I., Koško A., Razumow S., Włodarczak P.

- 2014 Problem dniestrzańsko – wiślańskiego szlaku w bałtyckich intruzjach społeczności kultur jamowej i katakumbowej. Zarys aktualnego stanu badań. 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 wczesnobrązowych strefy pontyjskiej (badania z lat 1984-2010)*, *Archeologia Bimaris, Monografie* 6, Poznań. (in print)

Kłosińska E.

- 1997 *Starszy okres epoki brązu w dorzeczu Warty*. Wrocław.

Kolosovskiy Y.V.

- 2000 *Arkheologicheskie issledovaniya v 2000 godu* (held in the archives of II NANB).
- 2001 *Otchet ob arkheologicheskikh issledovaniyakh v 2001 godu* (held in the archives of II NANB, nr. 1926).
- 2002 *Otchet ob arkheologicheskikh issledovaniyakh na gorodische Kimborovka v 2002 godu* (held in the archives of II NANB, nr. 2049).

Kopytsin V.F.

- 2004 *Arkheologicheskie pamiatniki Glusskogo rayona Mogilevskoy oblasti. Mogilev.*

Korenevsky S.N.

- 1974 O metallicheskih toporakh maykopskoi kultury. *Sovetskaya arkheologiya* 4: 16-31.
- 1976 O metallicheskih toporakh Severnogo Prichernomoria i Nizhnego Povolzhia epokhi sredney bronzы. *Sovetskaya Arkheologiya* 4: 16-31.
- 1981 Vtulchatye topory – oruzhie blizhnego boya epokhi sredney bronzы Severnogo Kavkaza. In: B.A. Litvinskiy (Ed.) *Kavkaz i Sredniaya Aziya v drevnosti i srednevekovie*, 20-41. Moskva.

Korpusova V.N., Liashko S.N.

- 1990 Katakombnoe pogrebeniye s pshenitsey v Krimu. *Sovetskaya arkheologiya* 3: 166-175.

Koschik H.

- 1981 Die Bronzezeit im Südwestlichen Oberbayern. In: *Materialhefte zur Bayerischen Vorgeschichte. Reihe A. 50. Kallmünz.*

Kostrzewski J.

- 1928 Groby eneolityczne ze szkieletami skurczonymi w Białym Potoku (w pow. Czortkowskim). *Przegląd Archeologiczny* 3: 9-18.
- 1928a Przyczynki do epoki bronzowej na Wołyniu. *Przegląd Archeologiczny* 3: 111-115.
- 1938-1948 *Od mezolity do okresu wędrówek ludów*. In: Encyklopedia Polska. T. IV. *Kraków.*
- 1964 Skarby i luźne znaleziska metalowe od eneolitu do wczesnego okresu żelaza z górnego i środkowego dorzecza Wisły i górnego dorzecza Watry. *Przegląd Archeologiczny* 15: 3-78.

Kośko A.

- 1991 The Vistula-Oder Basins and North Pontic Region. *The Journal of Indo-European Studies* 19(3-4): 235-257.
- 2002 Fluted Maces in Cultural Systems of the Borderland of Eastern and We-

stern Europe: 2350 – 800 BC. Taxonomy, Genesis, Function. In: A.Koško (Ed.) *Fluted Maces in the System of Long-Distance Exchange Trails of the Bronze Age: 2350 – 800 BC. Baltic-Pontic Studies* 11: 31-81.

- 2011 Z badań nad kontekstem kultur wczesnobrązowych strefy pontyjskiej w rozwoju społeczności środkowoeuropejskich obszaru dorzecza Wisły w III tys. przed Chr. In: U. Stankiewicz, A. Wawrusiewicz (Eds) *Na rubieży kultur. Badania nad okresem neolitu i wczesnego brązu w Polsce Północno - Wschodniej*, 183-195. Białystok.

Koško A., Klochko V.I.

- 2009 Transit Routes between the Baltic and Black Seas: Early Development Stages – from the 3rd to the Middle of the 1st Millennium BC. An Outline of Research Project. In: A.Koško, V.Klochko (Ed.) *Routes between the Seas: Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC. Baltic – Pontic Studies* 14: 9-18.

Koško A., Klochko V.I., Olszewski A.

- 2012 Ritualniy obiekt naselennia prichornomorskoyi kulturnoyi spilnoty doby rannoyi bronzы na r. San. *Arkheologia* 2: 67-75.

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

- 2014 *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 wczesnobrązowych strefy pontyjskiej (badania z lat 1984-2010), Archeologia Bimaris, Monografie 6. Poznań. (in print)*

Kovaleva I.F.

- 1979 Vytianutye pogrebeniya Dneprovskogo areala Volgo-Dneprovskoy kulturno-istoricheskoy obschnosti epokhi eneolita. In: I.F. Kovaleva (Ed.) *Kurgannye drevnosti stepnogo Podneprovia III – I tys. do n.e.* vol. 3, 61-79. Dnepropetrovsk.
- 1983 *Pogrebalnyi obriad i ideologiya rannikh skotovodov. (Po materialam bronzovogo veka Levoberezhnoy Ukrainy)*. Dnepropetrovsk.
- 1995 Metallicheskie topory postmariupolskoy kultury. In: *Problemy arkheologii, drevney i srednevekovoї istorii Ukrainy. Tezisy dokladov nauchnoi konferentsii*, 28-30. Kharkov.

Kovalova I.F., Volkoboy S.S.

- 1976 Mayivskiyi lokalnyi variant zrubnoi kultury. *Arkheologia* 20: 3-22.

Kovaleva I.F., Volkoboy S.S., Larina Z.P.

- 1977 Issledovaniya kurgannykh mogilnikov u s. Verkhniaya Mayevka v stepnom mezhdurechie rek Oreli i Samary. In: *Kurgannye drevnosti stepnogo Podneprov'ia III – I tys. do n.e.*, 8-113. Dnepropetrovsk.

Krainov D.A.

- 1972 *Drevneyshaya istoriya Volgo-Okskogo mezhdurechia. Fatianovskaya kultura. II tysiacheletie do n.e.* Moskva.
- 1987 Fatianovskaya kultura. In: O.N. Bader, D.A. Krainov, M.F. Kosarev (Eds) *Epokha bronzy lesnoy polosy SSSR*, 58-76. Moskva.

Krauss R.

- 1977 Poglądy na kształtowanie się kultury lużyckiej w południowo-wschodniej Polsce. *Materiały Archeologiczne* 17: 5-51.

Krivtsova-Grakova O.A.

- 1955 Stepnoye Povol'ye i Prichernomor'ye v epokhu pozdney bronzy. In: *Materialy I issledovaniya po archeologii SSSR* 46. Moskva.

Krushelnytska L.I.

- 1985 *Vzaemov'iazky nasele'nnia Prykarpattia i Volyni z plemenami skhidnoyi i tsentralnoyi Evropy.* Kyiv.
- 1999 Etnokulturnyi rozvytok nasele'nnia skhidnokarpatskoho rehionu v dobu serednioyi i piznioyi bronzy. In: *Etnogenez ta etnichna istoriya nasele'nnia ukrainskykh Karpat*, 124-144, Lviv.

Kruts S.I.

- 1977 *Nasele'niye Stepnoy Ukrainy v epokhu eneolita-bronzy (po antropologicheskim dannym). Avtoreferat dissertatsii na soiskaniye uchonoj stepeni kandidata istoricheskikh nauk.* Kyiv.
- 1984 *Paleoantropologicheskie issledovaniya Stepnogo Podneprov'ia (epokha bronzy).* Kyiv.

Kruts S.I., Kubyšev A.I., Otroščenko V.V., Pustovalov S.Ž.

- 1991 Das menschliche Gesicht der Bronzezeit. In: R.Rolle, M. Müller-Wille, K. Schietzel (Eds) *Gold der Steppe. Archäologie der Ukraine*, 51-53. Schleswig.
- 1997 Antropolohichnyi sklad nasele'nnia. In: P. Tolochko (Ed.) *Davn'ia istoriya Ukrainy*. vol.1, 374-383. Kyiv.

Kryvaltsevich M.M. (=Krivaltsevich N.N.)

- 1999 *Aziarnoe I – paselishcha epokhi bronzy na pounachy Palessya.* Minsk.
- 2001 Supolnastsi Belaruskaga Palessya i lesastepau-stepau u epokhu bronzy: prablemy kulturnykh suviaz'iaiu. In: J. Czebreszuk, M. Kryvaltsevič,

- P. Makarowicz (Eds) *Od neolityzacji do początków epoki brązu: przemiany kulturowe w międzyrzeczu Odry i Dniepru między VI i II tys. przed Chr.*, *Archeologia Bimaris. Dyskusje* 2, 315-326. Poznań.
- 2004 Belaruskaie Palessie u peryad perahodu ad nealitu da epokhi brony: pablemy i perspektyvy arkhealogichnaga vyvuchennya. In: A. Koško (Ed.) *Wspólnota dziedzictwa kulturowego ziem Białorusi i Polski*, 137-162. Warszawa.
- 2005 Mnogovalikovaya keramika na territorii Belarusi. In: V.V. Otroshenko (Ed.) *Na poshanu Sofii Stanislavivni Berezanskoyi. Zbirka naukovykh prats*, 149-156. Kyiv.
- 2006 *Mogilnik siaredziny III– pachatku II tysiachagoddziau da n.e. na Verkhnim Dniapry – Prorva I*. Minsk.
- 2007 *Prorva I. Cmentarzysko z połowy III – początku II tysiąclecia przed Chr. na górnym Naddnieprzu*, *Archeologia Bimaris. Monografia* 2. Poznań
- 2010 Staryya Yurkovichy 1 – kulturalna-khranalagichnyya aspekty “shnuravoga” kompleksu. *Materiyaly pa arkheologii Belarusi* 18: 217-242.
- 2011a Novyya vyniki dasledavannia pozniaga nealitu – pachatku epokhi brony u Zakhodnim Palessi. In: U. Stankiewicz, A. Wawrusiewicz (Eds) *Na rubieży kultur: Badania nad okresem neolitu i wczesną epoką brązu*, 207-217. Białystok.
- 2011b Pakhavanni siaredziny III – pachatku II tysiachagoddziau da n.e. na terytoryi Verkhniaga Padniaprouya: nekatoryya vyniki struktornykh dasledavannia. In: H. Kowalewska-Marszałek, P. Włodarczak (Ed.) *Kurhany i obrządek pogrzebowy w IV-II tysiącleciu p. n. e.*, 293-308. Kraków, Warszawa.
- Kryvaltsevich M., Kaletshyts A.G.
- 2006 Z dasledavanyav „Tshintsa“ v Zachodnim Pelessi Belarusi, In: H. Taras (Ed.) *Zmierzch kompleksu trzciniacko-komarowskiego. Kształtowanie się nowej rzeczywistości kulturowej w środkowej i młodszej epoce brązu*, 41-81. Lublin.
- Krzak Z.
- 1961 *Materiały do znajomości kultury złockiej*. Wrocław.
- Kubyshev A.I., Nechytailo A.L.
- 1991 Tsenry metalloobrabatyvayuschego proizvodstva azowo–chernomorskoy zony (k postanovke problemy). In: Bratchenko S.N., O.G. Shaposhnikova (Eds) *Katakombnye kultury Severnogo Prichernomia*, 6-21. Kyiv
- Kushnareva K.K., Chubinishvili G.N.
- 1970 *Drevneyshie kultury Yuzhnogo Kavkaza (V-III tys. do n.e.)*. Leningrad.

Kushtan D.P.

2001 Pamiatky z keramikoyu malopolovetskoho typu na Cherkaschyni. In: *Et-nokulturni protsesy u Serednomy Podniprovyi za materialamy arkheolohichnykh doslidzhen. Materialy naukovoyi konferentsii, Fastiv, hruden 2001*, 14-16. Kyiv.

2013 Pivden Lisostepovoho Podniprovya za doby piznioi bronzoy. *Arheolohichniy almanakh 29*. Donetsk.

Kushtan D.P., Lysenko S.D.

2005 Steatytovi kukhli doby piznioi bronzoy is Serednoho Podniprovya. In: *Kamiana doba Ukrainy 7. Do 85-richhya D.Ya. Telehina*, 226-231. Kyiv.

Lahodovska O.F.

1948 Voytsekhivskiy mohylnyk bronzovoi doby na Volyni. *Arheolohiya 2*: 62-77.

Lahodovska O.F., Zakharuk Yu.M.

1956 Novi doslidzhennia Voytsekhivskoho mohylnyka. In: *Arkheolohichni pamiatky Ukrainskoyi RSR, vol. 6*, 69-74. Kyiv.

Lakiza V.L.

2008 *Starozhytnastsy pozniaga nealitu i ranniaga periyiadu bronzavaga veku Belaruskaga Poniamonnia*. Minsk.

Latynin B.A.

1964 K voprosu o pamiatnikakh s tak nazyvaemoy mnogovalikovoy keramikoy. *Arkheologicheskiy sbornik Gosudarstvennogo Ermitazha 6*: 53-71.

Lewandowski S.

1978 Cmentarzysko z epoki brązu i wczesnej epoki żelaza w Paluchach, woj. Przemyśl. *Sprawozdania Archeologiczne 30*: 129-150.

Libera J.

2001 *Krzemienne formy bifacjalne na terenach Polski i Zachodniej Ukrainy (od środkowego neolitu do wczesnej epoki żelaza)*. Lublin.

Libera J., Zakościelna A.

2011 Cyrkulacja krzemienia wołyńskiego w okresie neolitu w we wczesnej epoce brązu na ziemiach polskich. In: M. Ignaczak, A. Koško, M. Szmyt (Eds) *Między Bałtykiem a Morzem Czarnym. Szlaki międzymorza IV – I tys. przed Chr. Archeologia Bimaris. Dyskusje 4*: 83-115, Poznań.

Likhachov V.A.

1981 Ob odnom tipe sosudov katakombnogo vremeni. In: I.F. Kovaleva (Ed.) *Stepnoe Podneprovie v bronzovom i rannem zeleznom vekakh*,: 72-76. Dnepropetrovsk.

Lißner B.

- 2004 Zu den frühbronzezeitlichen Gruppen in Süddeutschland. In: *Beiträge Ur- und Frühgeschichtlichen Archäologie* 13: 1-20.

Litvinova L.V.

- 2001 Naseleniye Srednego Podneprovia v epokhu pozdney bronzy (po materialam mogilnika Malopolovetskoe-3). In: *Etnokulturni protsesy u Seredno-my Podniprovyi za materialamy arkheolohichnykh doslidzhen. Materialy naukovoyi konferentsii, Fastiv, hruden 2001, 10-12*. Kyiv.

Lotman Ju.M.

- 1992 O semiosfere. In: *Izbrannye statyi v 3 t., vol.1, 11-25*. Tallinn.

Lutteropp K.

- 2009 *Untersuchungen zu weiblichen und männlichen Bestattungen der Frühen Bronzezeit: Bestattungsgemeinschaften mit bipolar geschlechtsdifferenzierten Bestattungssitten und ihre Sozialstrukturen im Raum Niederösterreich (Inaugural-Dissertation zur Erlangung der Doktorwürde der Philosophischen Fakultät der Rheinischen Friedrich-Wilhelms-Universität)*. Bonn.

Lysenko S.D.

- 1998 Rezultaty issledovania mogilnika Malopolovetskoe-3 na Kyivschine v 1993-1997 godakh. In: A.Koško, J. Czebreszuk (Eds) „Trzcinniec”: system kulturowy czy interkulturowy proces?, *Archeologia Bimaris. Dyskusje* 1, 95-117. Poznań.
- 1998a K voprosu o pamiatnikakh s keramikoy malopolovetskogo tipa. In: *Problemy izucheniya katakombnoy kulturo-istoricheskoy obschnosti (KKIO) i kulturo-istoricheskoy obschnosti mnogovalikovoy keramiki (KIOMK)*, 91-97. Zaporozhe.
- 1999 Kozarovytskyi mohylnyk doby piznoyi bronzy. *Vita Antiqua* 2: 73-79.
- 2006 Kubki maevskogo tipa iz Srednego Podneprovia. In: *Arkheologicheskoe izucheniye Tsentralnoy Rossii. Tezisy mezhdunarodnoy nauchnoy konferentsii, posviaschennoy 100-letiyu so dnia rozhdeniya V.P. Levkina*: 181-183. Lipetsk.
- 2007 Dinamika razvitiya tshinetskogo kulturnogo kruga na granitse pravoberezhnoy lesostepi i Polesia. In: M. Gierlach, L. Bakalarska (Eds) *Wspólnota dziedzictwa archeologicznego ziem Ukrainy i Polski. Materiały z konferencji. Łańcut* (26- 28 X 2005 r.), 341-389. Warszawa.
- 2011 K voprosu o kulturno-khronologicheskoy i fuktionalnoy prinadlezhnosti kostianykh „priazhek” v Srednem Podneprove. *Kratkie soobscheniya Instituta arkheologii* 225: 123-143.

- 2012 Pamiatniki epokhi bronzy – rannego zheleznoho veka u s. Voloshkovo (po materialam issledovaniy 2009-2011 gg.). In: *Problemy doslidzhennia pamiatok arkheolohii Skhidnoi Ukrainy. Materialy III Luhanskoyi mizhnarodnoi historyko-arkheolohichnoi konferentsii, prysviachenoi pamiaty S.N. Bratchenka*, 278-283. Kyiv.
- 2013 K voprosu o vozmozhnykh kontaktakh kievo-cherkasskoy grupy tshinet-skogo kulturnogo kruga s Donetskimi GMTs. In: Yu.M. Brovender (Ed.) *Problemy hirnychoi arkheolohii (Materialy IX mizhnarodnoho Kartamy-skoho poliovoho arkheolohichnoho seminaru)*, 86-96. Alchevsk.

Lysenko S.D., Gaskevich D.L.

- 1999 Pamiatniki s keramikoy malopolovetskogo tipa basseyna r. *Trubezh*. In: *Arkheolohichni vidkryttia v Ukraini 1998-1999 rr.*, 113-115. Kyiv.

Lysenko S.D., Kushtan D.P.

- 1997 Pro vydilennia pamiatok z keramikoyu malopolovetskoho typu. In: *V Mizhnarodna arkheolohichna konferentsia studentiv ta molodykh vchenykh (kviten 1997 r.)*, 109-112. Kyiv.
- 2005 Steatitovye kruzhki epokhi pozdney bronzy iz Srednego Podneprov'ia. In: *Arkheomineralogiya i rannia istoria mineralogii (Materialy mezhdunarodnogo seminaria)*, 51-54. Syktyvkar.

Lysenko S.D., Kushtan D.P., Pankovskiy V.B., Fedko V.F.

- 2011 Pamiatniki malopolovetskogo tipa v basseyne r. *Supoy*. In: *Drevnosti. Kharkovskiy istoriko-arkheologicheskyy yezhegodnik*, 228-241. Kharkov.

Lysenko S.D., Lysenko S.S.

- 2002 Issledovaniya na mogilnike Malopolovetskoe-3 v 2001 g. In: *Arkheolohichni vidkryttia v Ukraini 2000-2001 pp.*, 168-177. Kyiv.
- 2003 Issledovaniya na mogilnike Malopolovetskoe-3 v 2002 g. In: *Arkheolohichni vidkryttia v Ukraini 2001-2002 pp.*, 168-179. Kyiv.
- 2004 Issledovaniya na mogilnike Malopolovetskoe-3 v 2003 g. In: *Arkheolohichni vidkryttia v Ukraini 2002-2003 pp.*, 198-210. Kyiv.
- 2009 Ground Communications of the Eastern Area of the Trzciniec Culture Circle. In: A. Koško, V. Klochko (Eds) *Routes between the Seas: Baltic – Boh – Bug – Pont from the 3rd to the Middle of the 1st Millennium BC. Baltic-Pontic Studies* 14: 338-367. Poznań.
- 2012 Voytsekhovskiy mogilnik v svete novykh issledovaniy. In: *Kultury stepnoy Evrazii i ikh vzaimodeystvie s drevnimi tsivilizatsiyami. Materialy mezhdunarodnoy nauchnoy konferentsii, posviashchennoy 110-letiyu so dnia rozhdeniya vydayushchegosia rossiyskogo arkheologa Mikhaila Petrovicha Griaznova*, vol.2, 90-95. Sankt Petersburg.

- 2013 Novye issledovaniya Voytsekhivskogo mogilnika. In: *Tsivilizatsionnye tsenry i pervobytnaya periferiya v epokhu rannego metalla: modeli vzaimodeystviya. Tezisy dokladov kruglogo stola, posviaschennogo pamiaty N.Ya. Merperta*, 24-25. Moskva.
- Lysenko S.D., Pankovskiy V.B., Kushtan D.P., Fedko V.F.  
 2011 Pamiatniki rubezha sredney-pozdney bronzy u s. Bespalche na Supoe. *Donetskiy arkhelohichnyi zbirnyk* 15: 133-147.
- Lysenko S.D., Skiba A.V.  
 1998 Pamiatniki s keramikoy malopolovetskogo tipa na Supoe In: *Arkheolohichni vidkryttia v Ukraini 1997-1998 pp.*, 106-109. Kyiv.
- Lysenko S.S.  
 2006 *Prykrasy naseleння Ukrainy doby piznioi bronzy. Avtoreferat na zdobuttia stupenia kandydata istorychnykh nauk*. Kyiv.
- Lytvynenko R.O. = Litvinenko R.A.  
 2001 Kultura Babyno (mnogovalikovoy keramiki) i ee mesto v sisteme bronzo-vogo veka yuga Vostochnoy Evropy. In: *Bronzovyi vek Vostochnoy Evropy: kharakteristika kultur, khronologia i periodyzatsia*, 161-169. Samara.  
 2006 Opyt vyivlenia prostranstvenno-semanticheskikh struktur v pogrebalnom obriade kultury Babyno. *Strukturno-semioticheskie issledovania v arkhelologii* 3: 215-236.  
 2006a Dnepro-donskaya babinskaya kultura (istochniki, areal, pogrebalnyi obriad). *Materialy ta doslidzhennia z arkhelohii Skhidnoyi Ukrainy* 5: 157-187.  
 2007 Obstavyny i chynnyky babynskoi kulturogenezy. *Visnyk Donetskoho universytetu. (Seriya B: Humanitarni nauky)* 1-2: 109-116.  
 2008 Pamiatky typu Babyne III: vid kultury do kulturnoho kola. *Novi storinky istoriyi Donbasu* 15/16: 342-354.  
 2008a Do otsinky peryferiynykh grup Babyne polisko-lisostepovoi Naddnyprianschyny. *Visnyk Donetskoho universytetu (Seriya B: Humanitarni nauky)* 2: 180-190.  
 2009 Geneza, rozvytok ta istorychna dolia kulturnoho kola Babyne. *Materialy ta doslidzhennia z arkhelohii Skhidnoyi Ukrainy* 9: 44-90.  
 2009a *Kulturne kolo Babyne (za materialamy pokhvalnykh pamiatok). Avtoreferat na zdobuttia stupenia doktora istorychnykh nauk*. Kyiv.  
 2011 Babynska kultura na perekhresti Kavkazskoho i Karpatsko-Dunayskoho impulsiv kulturogenezy. In: *Materialy naukovoi konferentsii profesorsko-vykladatskoho skladu, naukovykh spivrobitnykiv i aspirantiv DNU za pidsumkamy naukovo-doslidnoyi roboty za period 2009-2010 rr.*, 249-250. Donetsk.

- 2011a Kulturne kolo Babyno: dosvid kulturohenetychnykh doslidzhen v arkheolohii. *Istorychni ta politolohichni doslidzhennia* 1-2 (47-48): 169-178.
- 2011b Kulturnyi krug Babyno: nazvaniye, taksonomiya, struktura. *Kratkie soobshcheniya Instituta Arkheologii* 225: 108-122.
- 2011c Obriad vtorynnoho pokhovannia v kulturach babynskoho kola. *Donetskyi arkheolohichniy zbirnyk* 15: 7-35.
- 2012 Kavkaz i Nadchornomoria: liniiy synkhronizatsii dlia finalu serednioi bronzy. *Hileya* 61 (6): 104-108.

Łęczycki S.

- 2004 Kietrz, Bytyń, Szczecin-Śmierdnica. Einige Anmerkungen zur Kulturzugehörigkeit des Hortfundes von Bytyń. *Sprawozdania Archeologiczne* 56: 33-59.

Łysenko S.D. Szmyt M.

- 2011 Środkowe Nadniedrze jako graniczny areał osadnictwa ludności kultury amfor kulistych. In: Ignaczak M., Koško A., Szmyt M. (Eds) *Między Baltykiem a Morzem Czarnym. Szlaki międzymorza IV – I tys. przed Chr. Archeologia Bimaris. Dyskusje* 4: 239-246. Poznań.

Machnik J.

- 1958 Z badań nad wczesną epoką brązu na Ukrainie. *Sprawozdania Oddziału PAN w Krakowie* 3: 92-96.
- 1960 Zabytki z kurhanów kultury ceramiki sznurowej w Wiktorowie (USSR). *Materiały archeologiczne* 2: 69-72.
- 1961 Problem osad kultury ceramiki sznurowej w dorzeczu górnego Sanu i Dniestru. *Acta Archaeologica Carpathica* 3: 209-218.
- 1972 Die Mierzanowice-Košfany-Kultur und das Karpatenbecken. *Slovenská archeológia* 20: 177-188.
- 1967 Stosunki kulturowe na przełomie neolitu i epoki brązu w Małopolsce (na tle przemian w Europie środkowej). *Materialy do prahistorii ziem polskich III. Warszawa*.
- 1977 *Frühbronzezeit Polens (Übersicht über die Kulturen und Kulturguppen)*. Wrocław-Warszawa-Kraków-Gdańsk.
- 1978 Wczesna epoka brązu. In: J. Machnik, B. Gediga, J. Miśkiewicz, W. Hensel (Eds) *Prahistoria ziem Polskich, vol. 3*, 1-212. Wrocław.
- 1979 Ze studiów nad kulturą ceramiki sznurowej w dorzeczu górnego Dniestru. *Acta Archaeologica Carpathica* 19: 50-71.
- 1982 Uwagi o wyrobach metalowych z początków epoki brązu w południowo-wschodniej Polsce. *Pamiętnik Muzeum Miedzi* 1: 79-100.
- 1987 *Kultury z przełomu eneolitu i epoki brązu w strefie karpackiej*. Wrocław.
- 1991 *The Earliest Bronze Age in the Carpathian Basin*. Bradford.

- 1999 *Radiocarbon chronology of the Corded Ware culture on Grzęda Sokolska. A middle Dnieper traits perspectives.* In: A. Koško (Ed.) *The Foundations of Radiocarbon Chronology of Cultures between the Vistula and Dnieper: 3150-1850 BC.* *Baltic-Pontic Studies* 7: 221-250.
- 2009 Short and long-distance pastoral journeys along ancient upland routes in Europe in the 3rd Millenium BC. In: A. Koško, V. Klochko (Ed.) *Routes between the Seas: Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC.* *Baltic-Pontic Studies* 14: 214-222.
- Machnik J., Bagińska J., Koman W.  
 2009 *Neolityczne kurhany na Grzędzie Sokalskiej w świetle badań archeologicznych w latach 1988 – 2006.* Kraków.
- Machnik J., Gediga B., Miśkiewicz J., Hensel W.  
 1978 *Prahistoria ziem polskich vol. 3.* Wrocław-Warszawa-Kraków-Gdańsk.
- Makarowicz P.  
 1999 The Problem of Reception of Otomani Culture Patterns on the Polish Lowlands. In: J. Gancarski (Ed.) *Kultura Otomani-Füzesabony – rozwój, chronologia, gospodarka,* 231-247. Krosno.  
 2003 The Construction of Social Structure: Bell Beakers and Trzciniec Complex in North-Eastern Part of Central Europe. *Przegląd Archeologiczny* 51: 123-158.  
 2008 Elitarne pochówki z kurhanu komarowskiego w Ivanju na Wołyniu – zarys możliwości interpretacyjnych. 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,* 333-352. Poznań.  
 2009 Baltic-Pontic Inter Regional Routes at the Start of the Bronze Age. In: A. Koško, V.I. Klochko (Eds) *Routes between the Seas: Baltic-Bug-Boh-Pont from the 3rd to the Middle of the 1st Millennium BC,* *Baltic-Pontic Studies* 14: 301-336.  
 2010 *Trzciniecki krąg kulturowy – wspólnota pogranicza Wschodu i Zachodu Europy.* Poznań.  
 2012 Zwischen baltischem Bernstein und transylvanischem Gold. Der Trzciniec-Kulturkreis – nordöstlicher Partner der Otomani/Füzesabony-Kultur, In: M. Jaeger, J. Czebreszuk, K.P. Fischl (Eds) *Enclosed Space – Open Society. Contact and Exchange in the Context of Bronze Age Fortified Settlements in Central Europe. StudienzurArchäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej* 10. Poznań–Bonn 2012, 179-216.

Makarowicz P., Gorbacz-Klempka A.

- 2014 Osada metalurgów w Szczepidle nad środkową Wartą. Z badań nad wytwórczością z brązu w II tys. BC. *Fontes Praehistorici Posnanienses* 50 (in print).

Makarowicz P., Lysenko S., Kočkin I.

- 2013 Wyniki badań cmentarzyska kultury komarowskiej w Bukivnej nad górnym Dniestrem w 2010 roku. *Materiały Archeologiczne* 29: 101-120.

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

- 1992 *Kamenske kurgany*. Kishiniev.

Markus I., Okhrimenko H.

- 2010 *Ozbroyennia ta znariaddia pratsi naselelnia Zakhidnoi Volyni IV – II tys. do R.Ch.* Lutsk.

Marková K.

- 1998 Kultúrny vývin v závere staršej doby bronzovej na juhu stredného Slovenska a možnosti kultúrnych vzťahov s južným Poľskom. In: A. Koško, J. Czebreszuk (Eds) „*Trzciniac*” – system kulturowy czy interkulturowy proces?, 253-258. Poznań.
- 2003 Austauschentwicklung im Karpatenbecken im Lichte der Bernstainfunde (vorläufige Anmerkungen). In: C. Kacsó (Ed.) *Bronzezeitliche Kulturercheinungen im Karpatischen raum. Ehremsymposium für Alexandru Vulpe zum 70. Geburtstag. Baia Mare 10.-13. Oktober 2001.*, 339-352. Baia Mare.

Martirosian A.A.

- 1964 *Armeniya v epokhu bronzy i rannego zheleza*. Erevan.

Marzatico F., Tecchiati U.

- 2001 The Bronze Age in Trentino and Alto Adige/Südtirol. *Preistoria Alpina* 34: 27-60.

Matthias W.

- 1969 Die Schnurkeramik im westlichen Mitteldeutschland. In: H. Behrens, F. Schlette (Eds) *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen, Veröffentlichungen des Landesmuseums für Vorgeschichte in Halle* 24, 9-29. Berlin.
- 1982 Kataloge zur mitteldeutschen Schnurkeramik. Teil V. Mittleres Saalegebiet. In: *Veröffentlichungen des Landesmuseums für Vorgeschichte in Halle* 35. Berlin.

Matuschik I.

- 1996 Brillen- und Hakenspiralen der frühen Metallzeit Europas. *Germania* 74 (1): 1-43.

Melis E.

- 2013 Data on Early Bronze Age apparel on the basis of a cremation grave excavated at Ménfőcsanak-Széles-Földek. *Hungarian archaeology, autumn 2013*: [http://www.hungarianarchaeology.hu/wp-content/uploads/2013/10/eng\\_Melis\\_130.pdf](http://www.hungarianarchaeology.hu/wp-content/uploads/2013/10/eng_Melis_130.pdf)

Melnik V.I.

- 2012 Problemy urovney obshchnosti katakombnogo kulturnogo kruga. *Kratkie soobscheniya Instituta arkheologii* 225: 10-15.

Melnikovskaya O.N.

- 1967 *Plemena Yuzhnoy Belorussii v rannem zheleznom veke*. Moskva.

Melnyk O.O., Balabanov S.V.

- 2007 *Istorichna entsyklopediya Kryvorizhzhia, vol. I*. Kryvyi Rih.

Melnyk O., Steblina I.

- 2012 *Kurhany Kryvorizhzhia*. Kryvyi Rih.

Merpert N.Ya.

- 1974 *Drevneishie skotovody Volgo-Uralskogo mezhdurechia*. Moskva.  
1982 Eneolit yuga SSSR i evraziiskie stepi. In: V.M. Masson, N.Ya Merpert (Eds) *Eneolit SSSR. Arkheologia SSSR*: 321-331. Moskva.

Motzoi-Chicideanu I.

- 1995 Fremdgüter im Monteoru-Kulturraum. In: B. Hänsel (Ed.) *Handel, Tausch und Verkehr im bronze- und früheisenzeitlichen Südosteuropa; Prähistorische Archäologie in Südosteuropa* vol. 11, 219-242. München – Berlin.

Movsha T.G.

- 1957 Mednye ukrasheniya iz Kyiva. *Kratkie Soobscheniya Instituta Istorii Materialnoi Kultury* 70: 96-99.

Munchayev R.M.

- 1975 *Kavkaz na zare bronzovogo veka*. Moskva.

Müller J. , Czebreszuk J., Kneisel J. (Eds)

- 2010 *Bruszczewo II. Ausgrabungen Und Forschungen in einer prähistorischen Siedlungskammer Großpolens. Studien zur Archäologie in Ostmitteleuropa 6.1-6.2*. Bonn.

Müller-Karpe H.

1974 *Handbuch der Vorgeschichte*, vol. 3. München.

Munteanu R.

2010 Începutul bronzului mijlociu în depresiunile marginale ale Carpaților Orientali. *Bibliotheca Memoriae Antiquitatis* 24. Piatra-Neamț.

Muzolf P.

2012 Osadnictwo kultury trzcienieckiej. In: B. Muzolf (Ed.) *Lutomiersk–Koziówki, stanowisko 3a-c, pow. pabianicki, woj. łódzkie. Wielokulturowy zespół osadniczy od schyłkowego paleolitu po okres nowożytny*, 58-113. Biblioteka Muzeum Archeologicznego i Etnograficznego w Łodzi, Nr 39. Łódź.

Mymokhod R.A.

2010 Radiouglerodnaya khronologiya bloka postkatakombnykh kulturnykh obrazovaniy. In: *Materialy ta doslidzhennia z arkheolohiyi Skhidnoi Ukrainy* 10: 32-55. Luhansk.

2011 Radiouglerodnaya khronologia bloka postkatakombnykh kulturnykh obrazovaniy. In: *Kratkie soobschenia Instituta Arkheologii* 225: 28-53.

2013 Postkatakombnyi period v Nizhnem Povolzhie i Volgo-Donskom mezhdurehie: sodержanie i definitsii. *Arkheologiya vostochnoyevropeiskoi stepi* 10: 167-179.

Nagy M.

2013 Der Südlichste Fundort der Gáta Wieselburg Kultur in Zseny – Kavicsbánya/Schottergrube, Komitat Vas, Westungarn. *Savaria* 36: 75-143.

Nechytailo A.L.

1991 *Sviazi naseleniya Steпноy Ukrainy i Severnogo Kavkaza v epokhu bronzy*. Kyiv.

Neugebauer C., Neugebauer J.-W.

1997 Das frühbronzezeitliche Gräberfeld Franzhausen I. In: *Fundberichte aus Österreich. Materialhefte* 5, 1-1400.

Niculică B.

2004-2005 Considérations sur la période moyenne de l'âge du bronze dans le plateau de Suceava. Le complexe culturel Komarów – Costișa – Biały Potik. *Studia Antiqua et Archaeologica* 10-11: 61-68.

Niedźwiedz J., Taras H.

2006 Schyłek kultury trzcienieckiej i początki kultury łużyckiej we wschodniej Lubelszczyźnie. In: H. Taras (Ed.) *Zmierzch kompleksu trzcieniecko-ko-*

*marowskiego. Kształtowanie się nowej rzeczywistości kulturowej w środkowej i młodszej epoce brązu, 91-109. Lublin.*

Nikitenko I.S.

2011 Do pytania pro vydilennia kamnedobuvnoi hirnychoi provintsii doby bronzы u zoni rozpovsiudzhennia tsentralnykh ta skhidnykh blokiv Ukrainskoho schyta. In: *Problemy hirnychoi arkheolohii (Materialy VIII mizhnarodnoho Kartamyskoho polovoho seminaru)*, 80-88. Alchevsk.

Nikitenko N.N.

1977 O datirovke balkinskogo rala. In: V.D. Baran (Ed.) *Novye issledovaniya arheologicheskikh pamiatnikov na Ukraine*, 44-47. Kyiv.

Nikitin V.I.

1989 Matveevka 1 – poselenie katakombnoy kultury na Yuzhnom Buge. *Sovetskaya Arkheologiya* 2: 136-150.

Nikolova A.V.

1992 *Hronologicheskaya klassifikaciya pamyatnikov yamnoj kultury stepnoj zony Ukrainy: Avtoreferat disertacii na zdobuttia naukovoogo stupenju kandidata istorichnih nauk*. Kyiv.

2006 K voprosu o kulturnoy atributsii pogrebeniy ranney bronzы s ostatkami transportnykh sredstv v Severnom Prichernomorie. *Arheologicheskie pamiatniki Vostochny Evropy* 12: 79-86.

Nikolova A.V., Mamchych T.I.

1997 Do metodyky klasyfikatsiyi posudu yamnoyi kultury. *Arkheolohiya* 3: 101-115.

Nosek S.

1947 Zagadnienie Prasłowiańszczyzny w świetle prehistorii. *Światowit* 19: 1-177.

Okhrimenko G.V.

2012 Zakhidna Volyn-Pripyatida: etnokulturni kontakty. In: *Pratsi Naukovodo-slidnoho Institutu pamiatkoohoronnikh doslidzhen vol. 7*, 258-262. Kyiv.

Ondrůček J., Šebela L.

1985 Pohřebiště nitranské skupiny v Holešově (catalog nálezů). In: *Studie Muzea Kroměřížska*: 2-130. Kroměříž.

Ostojuhevo

1994 *Ostojuhevo nekropola bronzanog doba*. Belgrad.

Otroschenko V.V.

- 2001 *Problemy periodyzatsii kultur serednioi ta piznioi bronzy Skhidnoi Evropy (kulturo-stratyhrafichni zistavlennia)*. Kyiv.
- 2005 Epokha eneolitu – bronzy. In: L.L. Zalizniak (Ed.) *Arkheolohiya Ukrainy*, 105-202. Kyiv.
- 2011 Problemy vyvchennia pamiatok Babynskoyi spilnoty Serednioyi Naddnyprianschyny. *Pereyaslivka. Naukovi zapyski* 5 (7): 159-162.

Otroschenko V.V., Pustovalov S.Z.

- 1991 Obriad modelirowania litsa po cherepu u plemen katakombnoy obschnosti. In: *Dukhovnaya kultura drevnikh obshchestv na territorii Ukrainy*, 59-84. Kyiv.

Palahuta I.V.

- 1996 Kulturna nalezhnist pamiatok serednioi ta piznioi bronzy Cherkaskoho Livoberezhzhia. *Arkheolohiya* 1: 61-69.

Pankovskiy V.B.

- 2005 Do problemy kistianoi industrii tshynetskoho kulturnoho kola (Malopovolovetske-3). In: *Problemy arkheolohii Serednioho Podniprov'ia: Do 15-richchia zasnovannia Fastivskoho derzhavnogo kraeznavchoho muzeyu*, 120-142. Kyiv – Fastiv.
- 2010 Novye dannye o kostianoy industrii tshinetskogo kulturnogo kruga. In: *Arkheolohichni pamiatky Fastivschyny. Materialy ta doslidzhennia: Do 75-richchya N.M. Kravchenko. Pres-muzey* 26-27: 42-50. Fastiv.

Parker Pearson M.

- 1999 *The Archaeology of Dead and Burial*. Sutton.

Perini R.

- 1971 I depositi preistorici di Romagnano-Loc (Trento). *Preistoria Alpina* 7: 7-106.

Petrenko V.G.

- 2010 Kurgan epokhi paleometalla na poberezhie Khadzhibeiskogo limana. *Materialy po arkheologii Severnogo Prichernomoria* 11: 303-368.

Petrun V.F.

- 1967 Petrografiya i nekotorye problemy materiala kamennykh liteynykh form epokhi bronzy Severnogo Prichernomoria. In: *Pamiatniki epokhi bronzy yuga Evropeyskoy chasti SSSR*, 185-194. Kyiv.

Pobol L.D.

- 1964 *Otchet ob arkheologicheskikh issledovaniakh na territorii BSSR v 1964 godu* (held in the archives of II NANB, nr. 238).

- 1966 Pogrebenie epokhi bronzы bliz d. Borisovschina Mogiliovskoy obl. *Sovetskaya Arkheologiya* 2: 294-297.
- Popova T.B.  
1955 Plemena katakombnoy kultury. *Trudy Gosudarstvennogo istoricheskogo muzeya* 24. Moskva.
- Popovich S.  
2008 Issledovaniya kurgana u s. Orxej. *Revista Archaeologica. Serie nouă. IV* (1): 93-99.
- Priakhin A.D.  
1996 *Mosolovskoe poselenie metallurgov-liteyschikov epokhi pozdney bronzы: Kniga vtoraya*. Voronezh.
- Priakhin A.D., Savrasov A.S.  
1989 Glinianye liteynye formy s Mosolovskogo poseleniya metallurgov-liteyschikov. In: A.D. Priakhin (Ed.) *Poseleniya srubnoy obschnosti*, 39-80. Voronezh.
- Przybyła M.S.  
2009 *Intercultural contacts in the Western Carpathian area at the turn of the 2nd and 1st millenia BC*. Warszawa.
- Przybyła M.S., Skoneczna M.  
2012 The fortified settlement from the Early and Middle Bronze Age at Maszkowice, Nowy Sącz District (Western Carpathians). In: *Preliminary results of studies conducted in the years 2009–2012. Recherches Archéologiques* 3: 5-66.
- Pustovalov S.Z.  
1994 Economy and Social organization of Northern Pontic Steppe-Forest-Steppe Pastoral Populations: 2750 – 2000 BC (Catacomb Culture). In: A.Koško (Ed.) *Nomadism and Pastoralism in the Circle of Baltic-Pontic Early Agrarian Cultures: 5000-1650 BC. Baltic-Pontic Studies* 2: 86-134.  
1995 Ob obschestvennom polozhenii masterov-remeslennikov v epokhu sredney bronzы. In: *Khoziaystvo drevnego naseleniya*, 211-221. Kyiv.  
1997 Rekonstruktsiya chyslenosti katakombnogo naselennia za kurhannymy pamiatkami Pivnichnoho Prychornomoria. *Arkheolohiya* 3:40-49.  
1998 K voprosu o yamno-katakombnoy epokhe. In: *Problemy arkheologii Yugo-Vostochnoy Evropy*, 63-64. Rostov-na-Donu.  
1999 Ingul'skaya katakombnaya kultura i kriterii vydeleniya arkheologicheskikh kultur. In: *Etnichna Istoriya ta kultura naselenniya Stepu ta Lisostepu Evrazii (vid kamianoho viku po ranne serednovichchia: Materialy mizhnarodnoi arkheolohichnoi konferentsii, 73-75*. Dnipropetrovsk.

2005 *Sotsialnyi lad katakombnoho suspilstva Pivnichnoho Prychornomoria*. Kyiv.

Rachwaniec A.

1985 Materiały archeologiczne ze starszego okresu epoki brązu oraz kultury lużyckiej z rejonu Kopca Wandy w Nowej Hucie-Mogile. *Materiały Archeologiczne Nowej Huty* 9: 89-191.

Rasovskiy D.A.

1993 Pechenegi, torki i berendei na Rusi i v Ugrii. In: *Sbornik statei po arkheologii i vizantinovedeniyu* 6: 82-142. Praga.

Rassamakin Y.Y.

1994 The Main Directions of the Development of Early Pastoral Societies of the 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.

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.

Razumov S.M.

2010 *Kremiani vyroby naselennia Nadchornomoria doby rannioi ta serednioi bronzy (za materialamy pokhovan): Avtoreferat disertatsiyi na zdobuttia naukovooho stupenia kandydata Istorichnykh nauk*. Kyiv.

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

Razumov S.M., Koško A., Karnaukh Ye.H.

2011 Roboty spilnoi Ukraino-Polskoi Yampilskoi arkheolohichnoi ekspedytsii. In: *Arkheolohichni doslidzhennia v Ukraini v 2010 r.*, 286. Kyiv-Poltava.

Razumov S.N., Lysenko S.D., Koško A.

2012 Babinskoe pogrebeniye s chashey u s. Porogi na Dnestre. In: O.I. Hurzhiy et al. (Eds) *Arkasivski chytannia: materialy II Mizhnarodnoi naukovo-praktychnoi konferentsii*, 84-87. Mykolaiv.

Rogozińska R.

1959 Cmentarzysko kultury komarowskiej w Bukównie. *Materiały Archeologiczne* 1: 97-114.

Romaniszyn J.

- 2013 *Obrzędowość pogrzebowa społeczności kultury komarowskiej w dorzeczu górnego Dniestru i Seretu (manuscript of PhD dissertation, Institute of Prehistory AMU in Poznań)*. Poznań.

Róska M.

- 1957 A fajszi típusú rézbalták. *Folia Archaeologica* 8: 43-46.

Ruckdeschel W.

- 1978 Die Frühbronzezeitlichen Gräber Südbayerns. *Ein Beitrag zur Kenntnis der Straubinger Kultur*. In: *Antiquitas* 11. Bonn.

Rychkov N.A.

- 1990 *Etnicheskaya kharakteristika naseleniya yamnoj kultury Severnogo Prichernomor'ya*. Avtoreferat dissertacii na soiskaniye uchenoj stepeni kandidata istoricheskikh nauk. Kiev.

Ryndina N.V., Konkova L.V.

- 1982 O proiskhozhdenii bolshikh usatovskikh kinzhalov. *Sovetskaya Arkheologiya* 2: 30-42.

Sandars N.K.

- 1961 The first Aegean swords and their ancestry. *American Journal of Archaeology* 65-1: 17-30.

Sangmeister E.

- 1974 Zwei Neufunde der Glockenbecherkultur in Baden-Württemberg. *Fundberichte aus Baden-Württemberg* 1: 103-137.

Sanzharov S.N.

- 2001 *Katakombnye kultury Severo-Vostochnogo Priazovia*. Lugansk.  
 2008 *Streluchnye nabory instrumentov i syria iz katakombnykh pogrebeniy Ukrainy*. Lugansk.  
 2010 *Vostochnaya Ukraina na rubezhe epokh sredney-pozdney bronzy*. Lugansk.

Savva E.N.

- 1992 *Kultura mnogovalikovoy keramiki Pruto-Dnestrovskogo mezhdurechia*. Kishinev.  
 1998 Die Rolle der "östlichen" und "westlichen" Elemente bei der Genese des Kulturkomplexes Noua-Sabatinovka. W: B. Hänsel, J. Machnik (Eds) *Das Karpatenbecken und die Osteuropäische Steppe. Nomadenbewegungen und Kulturaustausch in den vorchristlichen Metallzeiten (4000-500 v. Chr.)*, München-Rahden/Westf., 267-312.

Schaeffer F.A.

1948 *Stratigraphie comparee et chronologie de l'Asie Occidentale*. London.

Schmagliy N.M., Cherniakov I.T.

1985 Kurgany na levoberezhze Nizhnego Dnestra. *Novye materialy po arxeologii Severo-Zapadnogo Prichernomor'ya*, 95-132. Kiev.

Šebela L.

1999 *The Corded Ware Culture in Moravia and in the Adjacent Part of Silesia (Catalogue)*. Brno.

Segeda S.P.

2000 Naselenie katakombnoy kultury Severo-Zapadnogo Prichernomor'ya po dannym arkheologii. In: *Chobruchskiy arkheologicheskii kompleks i drevnie kultury Podnestrovia*, 103-107. Tiraspol.

Shaposhnikova O.G.

1978 Ingul'skaya kultura. In: *Arkheologicheskie issledovaniya na Ukraine v 1976 – 1977 gg. Tezisy*, 6-8. Uzhgorod.

Shaposhnikova O.G., Fomenko V.N., Dovzhenko N.D.

1986 *Yamnaya kulturno-istoricheskaya oblast (yuzhnobugskiy variant)*. Kyiv.

Sharafutdinova I.N.

1989 Khoziaystvo plemen sabatinovskoy kultury. In: *Pervobytnaya arkheologiya. Materialy i issledovaniya (sbornik nauchnykh trudov)*, 168-179. Kyiv.

Shepel K.A.

1985 *Naseleniye basseyna Severskogo Dontsa v epokhu eneolita – bronzy po antropologicheskim dannym. Avtoreferat dissertatsii na soiskaniye uchonoy stepeni kandidata istoricheskikh nauk*. Kyiv.

Shishlina N.I.

2007 Severo-Zapadnyi Prikaspiy v epokhu bronzy (V–III tys. do n. e.). *Trudy Gosudarstvennogo Istoricheskogo Muzeya* 165. Moskva.

2013 Steppe und Kaukasus. Ein Dialog der Kulturen. In: *Bronzezeit. Europa ohne Grenzen 4. – 1. Jahrtausend v. Cr. Ausstellungskatalog*, 128-139. Sankt Petersburg.

Shmagliy N.M., Cherniakov I.T.

1970 Issledovaniya kurganov v stepnoy chasti mezhdurechia Dunaya i Dnestra. *Materialy po arkheologii Severnogo Prichernomor'ya* 6: 5-90.

Shramko B.A., Mashkarov Yu.G.

- 1993 Issledovanie bimetallicheskogo nozha iz pogrebeniya katakombnoy kul'tury. *Sovetskaya arkheologiya* 2: 163-170. Moskva.

Simion G.

1991. O noua cultura de la inseputul epozii bronzului pe teritoriul Istro-Pontic, Peuce X (I): 33–34.

Sinika V.S., Razumov S.N., Telnov N.P.

- 2013 *Kurgany u sela Butory. Arheologicheskie pamyatniki Pridnestrovyia: 1.* Tiraspol.

Siniuk A.T., Matveev Yu.P.

- 2007 *Srednedonskaya katakombnaya kultura epokhi bronzы (po dannym kurgannykh kompleksov).* Voronezh.

Smirnova G.I.

- 1976 Magala I i nekotorye voprosy khronologii pozdnekomarovskoy kul'tury v Prikarpatе. In: S.S.Berezanskaya et al. (Eds) *Eneolit i bronzovyi vek Ukrainy. Issledovannya i materialy*, 119-135, Kyiv.

Spindler K.

- 1993 Die Mumie. In: M. Egg, R. Goedecker-Ciolek, W. Groenman-Van Waateringe, K. Spindler (Eds) *Die Gletschermumie vom der Steizeit aus dem Öztaler Alpen*, 27-35. Mainz.

Stefanović S.

- 2006 Animal canines as possible symbol of rank in early Bronze Age Mokrin. *Strukturno-semioticheskie issledovaniya v arkheologii* 3: 201-214.

Stloukal M.

- 1985 Antropologický rozbor koster z pohřebišť v Holešově. *Studie Muzea Kroměřížska* '85: 131-169.

Subbotin L.V.

- 1982 Dva kurgana epokhi bronzы v Bugo-Dnestrovskom mezhdurechie. In: A.V. Gudkova (Ed.) *Arkheologicheskie pamiatniki Severo-Zapadnogo Prichernomoria*: 100-110. Kyiv.
- 1985 Semenovskiy mogilnik epokhi eneolita-bronzы. In: V.N. Stanko (Ed.) *Novye materialy po arkheologii Severo-Zapadnogo Prichernomoria*: 45-95. Kyiv.
- 2000 Severo-Zapadnoe Prichernomorie v epokhu ranney i sredney bronzы. *Stratum plus* 2: 350-387.
- 2003 *Orudiya truda, oruzhie i ukrasheniya yamnoj kul'tury Severo-Zapadnogo Prichernomorya.* Odessa.

- Subbotin L.V., Dobroliubskiy A.O., Toshev G.N.  
 1995 Pamiatniki epokhi bronzy kurgannogo mogilnika Gradeshka. *Drevnosti Stepnogo Prichernomoria i Kryma* 5: 109-126.
- Subbotin L.V., Ostroverkhov A.S., Dzigovskiy A.N.  
 1995 *Arkheologicheskie drevnosti Budzhaka. Kurgany u s. Trapovka i Novoselitsa*. Odessa.
- Subbotin L.V., Dzigovskij A.N., Majorov V.N.  
 1984 *Ohrannye raskopki u s. Ogorodnoe*. Severnoe Prichernomorje. Kiev: 104-112.
- Sulimirski T.  
 1968 *Corded Ware and Globular Amphorae North-East of the Carpathians*. London.
- Sveshnikov I.K. = Swieszchnikow I.  
 1967 Kultura komarowska. *Archeologia Polski* 12(1): 39-107.  
 1968 Bogatye pogrebeniya komarovskoy kultury u s. Ivania Rovenskoj oblasti. *Sovetskaya arkheolohiya* 2: 159-168.  
 1974 *Istoriya naselennia Peredkarpattia, Podillia i Volyni v kintsi III – na pochatku II tysiacholittya do nashoyi ery*. Kyiv.  
 1976 Problema proiskhozdheniya komarovskoy kultury. In: S.S.Berezanskaya et al. (Eds) *Eneolit i bronzovyi vek Ukrainy. Issledovannya i materialy*, 96-118. Kyiv.  
 1990 Stzhizhovskaya kultura. In: E.A. Balaguri, O.P. Chernykh (Ed.) *Arkheologiya Prikarpatia, Volyni i Zakarpatia. Eneolit, bronza i rannee zhelezo*, 68-74. Kyiv.  
 1993 Novi pokhovannia pochatku bronzovoho viku na Zakhidniy Volyni. *Studia archaeologica* 1: 23-31.
- Syniuk A.T.  
 1996 *Bronzovyi vek basseyna Dona*. Voronezh.
- Szabó Gábor V.  
 1997 A Perjámos-Kultúra leletei hódmezővásárhely környékén. In: *Látták Trója kapuit. Bronzkori leletek a Közep-Tisza vidékéről*: 57-84. Gyula.
- Szathmári I.  
 1983 Kisapostager Gräber im bronzezeitlichen Gräberfeld von Dunaújváros. *Alba Regia* 20: 7-36.  
 1996 Bronze wire and sheet ornaments of the Vatya culture. In: T. Kovács (Ed.) *Studien zur Metallindustrie im Karpatenbecken und den benachbarten Regionen*, 75-87. Budapest.

2002 Neue angaben über die Funde der Vatyá-Kultur in der Umgebung von Szigetszentmiklós. *Budapest Régiségei XXXVI*: 235-246.

Szmyt M.

1999 Between West and East. People of the Globular Amphora Culture in Eastern Europe 2960–2350 BC. *Baltic-Pontic Studies* 8.

2000 In the Far of Two Worlds. On the Study of Contacts between the Societs of the Globular Amphora and Yamnaya Cultures. In: S. Kadrow (Ed.) *A Turning of Ages. Im Wander der Zeiten. Jubilee Book Dedicated to Professor Jan Machnik on His 70th Anniversary*, 443-466. Kraków.

Szmyt M., Cherniakov I.T.

1999 Radiocarbon Chronology of «Akkiembetski Kurgan». A Preliminary Report. In: A. Koško (Ed.) *The Foundations of Radiocarbon Chronology of Cultures Between the Vistula and Dnieper: 3150-1850 BC Baltic-Pontic Studies* 7: 196-202.

Šebela L.

1999 *The Cordered Ware Culture in Moravia and in the Adjacent Part of Silesia (Catalogue)*. Brno.

Ślusarska K.

2006 *Funeral rites of the Catacomb community: 2800-1900 BC ritual, thanatology and geographical origins. Baltic-Pontic Studies* 13.

Taras H.

2007 Oddziaływania wschodnioeuropejskie w starszych fazach epoki brązu na społeczności w dorzeczu górnej i środkowej Wisły (ze szczególnym uwzględnieniem Lubelszczyzny). In: M. Gierlach, L. Bakalarska (Eds) *Wspólnota dziedzictwa archeologicznego ziem Ukrainy i Polski. Materiały z konferencji zorganizowanej przez Ośrodek Ochrony Dziedzictwa Archeologicznego. Łańcut (26-28 X 2005 r., 179-195. Warszawa)*.

Tatarinov S.I.

1993 *Drevniy metall Vostochnoy Ukrainy. Ocherki rekonstruktsii gornogo dela, metallurgii i metalloobrabotki v epokhu bronzy (uchebnoe posobie)*. Artemovsk.

Telegin D.Ya.

1991 *Vartovi tysiacholit. Kyiv*.

Telegin D.Y., Pustovalov S.Z., Kovaliukh N.N.

2003 Relative and absolute chronology of Yamnaya and Katakomb monuments the issue of co-existence. A.Koško, V.I. Klochko (Ed.) *The Foundations of Radiocarbon Chronology of Cultures between the Vistula and Dnieper: 4000- 1000 BC. Baltic-Pontic Studies* 12: 132-184.

Terenozhkin A.I.

1961 *Predskifskiy period na Dneprovskom Pravoberezhje*. Kyiv.

Titenko G.T.

1955 Kamennaya stela iz s. *Pervomaevka*. *Kratkie soobshcheniya Instituta archeologii AN USSR*. 5 78-79.

Toshev G.

1987 *Sredniy period bronzovogo veka yugo-zapada SSSR*. (held in the archives of INION AN SSSR. 19.06. g., № 29903.)

1986 Zapadnye sviazi kultury mnogovalikovoi keramiki v Severo-Zapadnom Prichernomorie. In: V.N. Stanko, I.T. Cherniakov (Eds) *Issledovaniya po arkheologii Severo-Zapadnogo Prichernomoria*: 104-115. Kyiv.

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

1992 *Kurgany epoxi bronzy mezhdurechya Yalpuga i Kagula*. Zaporozhe.

1998 Cultura catacombelor și contactelele ei în partea de vest a arealului. *Thraco-Dacica* 19: 51-69.

2007 *Krym v epokhu bronzy*. Zaporozhe.

Truhelka C.

1909 Kupferfund von Karavida. *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 11: 50-54.

Vajsov I.

1993 Die frühesten Metalldolche Südost- und Mitteleuropas. *Prähistorische Zeitschrift* 68: 103-145.

Vandkilde H.

1999 Social Distinction and Ethnic Reconstruction in the Earliest Danish Bronze Age. In: *Eliten in der Bronzezeit. Ergebnisse Zweier Kolloquien in Mainz und Athen, vol.1*, 245-276, Mainz.

Vasiliev I.B.

1999 Poselenie Lbische na Samarskoy Luke i nekotorye problemy bronzovogo veka Srednego Povolzhia. In: *Voprosy arkheologii Urala i Povolzhia. K 30-letiyu Srednevolzhskoy arkheologicheskoy ekspeditsii*, 66-114. Samara.

2003 Volsk-Lbische – novaya kulturnaya gruppa epokhi sredney bronzy v Volgo-Uralie. In: *Abashevskaya kulturno-istoricheskaya obshchnost: istoki, razvitie, nasledie*, 107-115. Cheboksary.

Vladár J.

1973 Osteuropäische und mediterrane Einflüsse im Gebiet der Slowakei während der Bronzezeit. *Slovenská Archaeologia* 21: 253-357.

Vollmann D.

- 2009 Der Makó-Kosihy-Čaka-Komplex und die früheste Nagyrév-Kultur an Donau und Theiß. In: V.Becker, M.Thomas, A.Wolf-Schuler *et al.* (Eds) *Zeiten – Kulturen – Systeme. Gedenkschrift für Jan Lichardus*, 271-288. Langenweißbach.

Vulpe A.

- 1961 K voprosu o periodizastii bronzovogo veka v Moldove. *Dacia* 5: 106-122.  
1970 Die Äxte und Beile in Rumänien I. In: *Prähistorische Bronzefunde* 9(2). München.

Vynokur J., Hucal A., Mehey V.

- 1998 Doslidzhennia kurhaniv doby bronzy u seli Dorohoschi na Volyni. *Zapysky Naukovoho Tovarystva imeni Shevchenka* 235, *Pratsi Archeolohichnoyi komisii*: 433-465.

Wallerstein E.

- 1974 *The Modern World-System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York.

Wason P.

- 1994 *The archaeology of rank*. Cambridge.

Wetzel G.

- 1990 Die Schnurkeramik in der Oberlausitz und Niederlausitz. *Praehistorica* 19: 43-56.

Witkowska B.

- 2006 Corded Ware culture settlements on Central Europe uplands. *Sprawozdania Archeologiczne* 58: 21-102.

Włodarczak P.

- 1998 Groby kultury mierzanowickiej oraz kultury trzcinieckiej z Żernik Górnych. In: A. Koško, J. Czebreszuk (Eds) „Trzciniec” – system kulturowy czy interkulturowy proces?, *Archeologia Bimaris. Dyskusje* 1, 161-177. Poznań.  
2006 *Kultura ceramiki sznurowej na Wyżynie Małopolskiej*. Kraków.  
2008 *Kultura żłocka i problem genezy kultury ceramiki sznurowej w Małopolsce. Na pograniczu światów. Studia z pradziejów międzymorza bałtycko-pontyjskiego ofiarowane Profesorowi Aleksandrowi Koško w 60 rocznicę urodzin*. Poznań: 555-576.  
2010 Dunajski szlak kultury grobów jamowych a problem genezy kultury ceramiki sznurowej. In: S. Czopek, S. Kadrow (Eds) *Mente et rutro. Studia archeologica Johanni Machnik viro doctissimo octogesimo vitae anno ab amicis, collegis et discipulis oblata*, 299-325. Rzeszów.

Yarovoy E.V.

- 1983 Ohrannyye raskopki u s. Ketrosy. *Pervobytnye drevnosti Moldavii*. Kishinev: 110-128.
- 1985 *Drevneyshie skotovodcheskie plemena yugo-zapada SSSR (klassifikatsiya pogrebalnogo obriada)*. Kishinev.
- 1990 *Kurgany epokhi eneolita-bronzy Nizhnego Podnestrovia*. Kishinev
- 2000 *Skotovodcheskoe naselenie Severo-Zapadnogo Prichernomoria epokhi rannego metalla*. Avtoreferat dissertatsii na soiskanie nauchnoy stepeni doktora istoricheskikh nauk. Moskva.

Yefimenko P.P, Tretiakov P.N.

- 1961 Abashevskaya kultura v Povolzhie. *Materialy i issledovaniya po arkheologii SSSR* 97: 43-110.

Yovanovich B.

- 1994 Eneoliticheskoe srebro Balkan i Severo-Pontiyskogo Regiona. In: E.V. Yarovoy (Ed.) *Drevneyshie obschnosti zemledeltsev i skotovodov V tys. do n. e. – V v. n. e.: materialy mezhdunarodnoi arkheologicheskoi konferentsii; Tiraspol 10–14 oktiabria 1994 g.*, 41–42. Tiraspol.

Zahoruiko V.T., Lotorska T.V., Potupchik M.V., Potupchik M.E.

- 1993 Pokhovannia yamnoyi kultury bilia s. Pysarivka. In: *Podilska starovyna*, 108-125. Vinnitsa.

Ziábka L.

- 1987 Cmentarzysko z II okresu epoki brązu z Borku, gm. Godzieszcze Wielkie (stanowisko 1). In: *Kultura trzcinienska w Polsce*, 89-105. Kraków.

Zolashko G.M. (=Zalashka G.M.)

- 1982 *Otchet ob arkheologicheskikh issledovaniakh v Gomelskoy i Brestskoy oblastsiakh v 1982 godu* (held in the archives of II NANB, nr. 806).
- 1983a Kimbarauskae garadzischa. *Pomniki gistoryi i kultury Belarusi* 4: 37-38.
- 1983b *Otchet o polevykh issledovaniakh na territorii pravoberezhya Pripiatsi v 1983 godu* (held in the archives of II NANB, nr. 881).

## LIST OF AUTHORS

Jacek Górski  
Archeological Museum of Kraków  
Senacka 3  
31-002 Kraków  
Poland  
E-mail: jgorski@ma.krakow.pl

Svitlana Ivanowa  
Institute of Archaeology  
National Academy of Science of Ukraine  
Heroyiv Stalingrada 12  
04210 Kyiv  
Ukraine  
E-mail: svi1956@gmail.com

Liubov S. Klochko  
Museum of Historical Treasures of Ukraine  
Sichnevogo povstannia 21  
011015 Kyiv  
Ukraine  
E-mail: vklochko@ukr.net

Viktor I. Klochko (Kloczko)  
Department of Archaeology  
National University of Kyiv-Mohyla Akademy  
Skovorody 2  
04665 Kyiv  
Ukraine  
E-mail: vklochko@ukr.net

Aleksander Koško  
Institute of Prehistory  
Adam Mickiewicz Univeristy  
Św. Marcin 78  
61-809 Poznań  
Poland  
E-mail: antokol@amu.edu.pl

Mikola Kryvaltsevich  
Institute of History  
Academy of Sciences of Belarus  
F. Skoryna 1  
220072 Minsk  
Belarus  
E-mail: kryvalsevich.arch@tut.by

Sergey D. Lysenko  
Institute of Archaeology  
National Academy of Science of Ukraine  
Heroyiv Stalingrada 12  
04210 Kyiv  
Ukraine  
E-mail: suraganga@andex.ru

Roman O. Lytvynenko  
Donetsk National University  
Arktiki 6.1-47  
83056 Donetsk  
Ukraine  
E-mail: litrom@andex.ua

Przemysław Makarowicz  
Institute of Prehistory  
Adam Mickiewicz University  
Św. Marcin 78  
61-809 Poznań  
Poland  
E-mail: przemom@amu.edu.pl

Vitaliy V. Otroshchenko  
Institute of Archaeology  
National Academy of Science of Ukraine  
Heroyiv Stalingrada 12  
04210 Kyiv  
Ukraine  
E-mail: otrok\_o@ukr.net

Gennadij N. Toshev  
Zaporizhyya National University  
Zhukovskogo Street 66  
69063 Zaporizhzhyya  
Ukraine  
E-mail: gent51@mail.ru

- 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 Atrifacts 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

Orders regarding *Baltic-Pontic Studies* should be addressed directly to the Editorial Office (*B-PS*, Institute of Prehistory, Św. Marcin 78, 61-809 Poznań, Poland). E-mail: [iplib@amu.edu.pl](mailto:iplib@amu.edu.pl); [antokol@amu.edu.pl](mailto:antokol@amu.edu.pl)  
Moreover, we are pleased to inform that *B-PS* volumes currently out of print (1, 2, 3, 4 and 8) are available online at the Adam Mickiewicz University Repository (AMUR): [repozytorium.amu.edu.pl](http://repozytorium.amu.edu.pl)

This publication is part of the National Science Centre research project, grant no. 2011/01/M/HS3/02142, in the context of publishing and related funding from Adam Mickiewicz University, Poznań.

ISBN 83-86094-18-4

ISSN 1231-0344