

Svetlana V. Ivanova*, Gennadiy N. Toshev**

LATE ENEOLITHIC AND BRONZE AGE
PROLOGUE PONTIC SOCIETIES.
FOREST-STEPPE MIDDLE DNIESTER
AND PRUT DRAINAGE BASINS
IN THE 4TH/3RD-2ND MILLENNIUM BC:
A HISTORY OF INVESTIGATIONS

ABSTRACT

The paper presents a historiographic context helpful in the current investigations of the cultural contacts between the societies of the east and west of Europe in the borderland of Podolia and Moldova in the Late Eneolithic and the prologue of the Bronze Age. The focus is on the state of research (chiefly taxonomic and topogenetic) into the sequence of taxa in the age of early 'barrow-building', identified in the funerary rituals of societies settling the forest-steppe of the north-western Black Sea Coast in the 4th/3rd-2nd millennium BC.

Key words: Late Eneolithic, forest-steppe of north-western Black Sea Coast, Gordinești type, Zhvotilovka-Volchansk type, Yamnaya culture, Budzhak culture, Catacomb culture, Edineț culture, Babyno culture, Noua culture

The present investigations concentrate on 4th/3rd-2nd millennium BC societies settling the Dniester and Prut interfluvium and drainage basins, in particular their northern portion: the area of the forest-steppe that forms the borderland between Podolia and Moldova, an area of special interest on the map of transit routes, facil-

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

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

itating contacts between societies inhabiting the drainages of the Black (to which it belongs) and Baltic seas. For it is there that the watersheds of the Prut and Dniester as well as Dniester and Southern Bug rivers are located. They are associated with the development, beginning with the 4th millennium BC, of the network of stable exchange routes [Klochko, Koško 2009].

Any reconstruction of the economy of prehistoric societies entails to a larger or smaller degree the reconstruction of a climate and surrounding landscape, because these two factors may have a significant impact on the major occupations of human populations. Special attention to the natural context and research perspectives into the palaeo-environment of the Dniester Area was given by the Polish-Ukrainian research project focused on the north-western settlement limit of Pontic zone cultures in the prologue of the Bronze Age [Makohonienko, Hildebrandt-Radke 2014].

The archaeological study of the landscape in question involves answering two major questions. The first refers to the relationship between man and the natural environment while the second to the discussion about natural zone boundaries. These questions are closely interrelated, for any analytically justified distinction between natural zones determines the correctness of conclusions drawn not only by geologists or geographers but also archaeologists. In this case, it is absolutely necessary to have a clear idea of boundaries between zones, in particular the boundary between the steppe and forest-steppe on the north-western coast of the Black Sea. Its delimitation raises controversies, hence the history of research and its current state shall be discussed below.

1. THE ENVIRONMENTAL ASPECT AND THE RELEVANCE OF NATURAL ZONE DISTINCTION

Together with the spread of a production economy, on the steppes of the north-western Black Sea Coast, a complex system developed, featuring ecologically intricate relationships between vegetation, animals and man. Hence, the reconstruction of the surrounding environment and climate is particularly relevant for the study of the history of societies at various chronological stages, especially those from which no written records survive. The distinctive features of the economy, settlement and cemetery topography, trade routes and population movements to a greater or lesser degree are related to the climate and landscape, which ultimately determine not only the conditions people live in but also their way of life. Therefore, the studies of archaeological cultures and historical-cultural processes have relied for the last few decades on research results supplied by

geologists, pedologists, botanists, biologists, and ecologists. This has permitted a reconstruction of the environment in which primitive societies lived. Researchers begin to see a relationship between the dynamics of archaeological culture development and climate changes. Climate changes must have had an impact, either directly or indirectly, on the transformations of the economic and social systems of ancient groups of humans. This, in turn, made for the development and survival of the best-adapted models of social organization. Under the favourable conditions of moist periods, the anthropogenic impact on the environment grew stronger. Conversely, when the climate became more arid, conditions were more conducive to the development of mechanisms, allowing for adaptation to climate changes [Kremenetskiy 1991: 177].

The steppes of the north-western Black Sea Coast are the most humid region of all Eurasian steppes. It is believed that Black Sea transgressions moderated aridity, leaving the climate more humid and thus influencing the development of the economic-cultural varieties of Bronze Age societies. The adaptation of populations to climate changes and the anthropogenic impact on the environment must have been interrelated and balanced, which is seen in both the absence of gaps in the cultural-historical development of such societies and the lack of clear traces of ecological crises.

The settlement of new territories, population movements and contacts are to a certain degree dependent on a terrain type and the natural zone of habitation. Nomadism is usually connected with the steppe zone. It is believed that climate changes may result in the movement of subzones north (in the case of increasing aridity) and south (in more humid periods) [Pustovalov 2001-2002]. For this reason, it is crucial to delineate the boundary between the steppe and forest-steppe, i.e. to find out what type of natural environment the societies of the Eneolithic and the Bronze Age lived in.

2. PHYSIOGRAPHIC FEATURES ON THE NORTH-WESTERN BLACK SEA COAST

Traditionally, the north-western Black Sea Coast is defined as the area extending between the Southern Bug, Prut and Danube rivers (administratively speaking: the Republic of Moldova and the Odessa Region in Ukraine). In the south, it is bounded by the coast of the Black Sea, while in the north its limit coincides with the boundary between the steppe and forest-steppe, which is variously delineated by specialists.



Fig. 1. Regional division of natural and vegetation zones in the Dniester-Prut interfluvium I – Bukovina beech and hornbeam-oak forests; li – meadows turned into a steppe, now ploughed; II – Romankivtsi forest-steppe with the greatest share of oak; III – forest-steppe on the Prut; IV – Sorotsk forest-steppe; V – Bălți steppe, multispecies: fescue-feather grass, now ploughed; VI – Codrii including the areas that used to be covered by hornbeam-oak forests; VII – Codrii including the areas that used to be covered by beech-oak forests; VIII – Northern Budzhak steppes, multispecies: fescue-feather grass, now ploughed; IX – Southern Budzhak steppes, multispecies: fescue-feather grass, now ploughed; X – tussock-sagebrush steppes; XI – freshwater vegetation limanowa; XII – saltwater vegetation limanowa. After Shabanova *et al.* 2010: 10, revised

The region of interest to us here (the interfluvium between, and drainages of, the Prut and Dniester rivers) is part of the north-western Black Sea Coast together with adjacent forest-steppe areas in the north (Fig. 1).

There are no dissenting voices in respect to terrain descriptions made by specialists. Thus it can be said that a large portion of Ukraine's territory covers the south-western fringe of the East European Plain and is rather flat or undulating. Within Ukraine, the Plain consists of lowland and upland areas. The Podolian Upland (on the left bank of the Dniester) extends northwest-southeast, from the upper reaches of the Southern Bug River. The southern portion of Ukraine is occupied by the Black Sea Lowland, slightly tilted southward and consisting of broad valleys and flat watersheds. It adjoins the Black and Azov seas and forms a crescent about 120-150 km wide.

The watershed between the Prut and Dniester tilts southward, while its northern part is covered by a range of high hills (Khotyn Upland). Its edge on the Dniester side is steep, while on the Prut side, it is rather flattened out.

In terms of physiography, the north of the Republic of Moldova is occupied by the Moldavian Plateau, featuring flattened reliefs and flat interfluviums. In its western portion, adjacent to the Prut River, a range of chalk hills rises, known as *Tovtry* (a bar of separate rounded massifs 50-80 m high). South of the Moldavian Plateau, there extends the North Moldavian Plain, the surface features of which are rather monotonous. In the central part of the right-bank Prut drainage basin, the Ciuluc Plateau lies, cut by a network of deep valleys and ravines. In the east, between the valleys of the Răut and Dniester, Dniester Hills rise, densely cut by valleys and ravines.

Centrally located, the Central Moldavian Plateau – *Codrii* – has the highest elevations in the country: 350-430 m. The relief is rather diversified there, featuring many bars, hills and deep ravines.

South of the *Codrii*, the country has a small flatland known as the South Moldova Plain, characterized by broad valleys and ravines. In Moldova's southwest, between the Prut and Ialpuș rivers, the Tigheci Plateau is known for its undulating, erosional-landslide terrain [Shabanova *et al.* 2014].

The question of the boundary between the steppe and forest-steppe represents a greater challenge as far as archaeological enquiry is concerned. We shall not, however, relate to the rather long discussion of the origins of the forest-steppe (natural or anthropogenic) or the time it came into existence. These questions are answered in detail by specialists. What we shall focus on instead is the demarcation of the two natural zones.

Already in the first half of the 20th century, L.S. Berg summed up the results of research into this question and observed that as a forest-steppe (from the point of view of surface features) one should consider the areas where forests and brush were still found on watershed plateaus. Thus, the forest-steppe-steppe boundary can be drawn from northern Bessarabia, along the northern edge of the

Bălți Steppe in the direction of Balta (or slightly further south, in the direction of Ananyiv), along the upper course of the Inhul River as far as Poltava and Kremenchuk, next between Kharkiv and Iziium and further east. In support of his conception, L.S. Berg adduced data on the character and distribution of soil types and climate parameters, observing that the southern forest-steppe limit coincided with the axis of the belt of a mid-latitude barometric pressure maximum (so-called Voyeykov axis). He also studied other elements such as mean annual temperatures in July, specificity of isotherms in January and mean annual precipitation. Within the steppe belt, two ‘forest-steppe’ islands stand out: *Codrii* in Moldova and the Donetsk Upland, divided between Ukraine and Russia [Berg 1947: 285-287].

F.N. Milkov considered the boundary delineated by L.S. Berg artificial and related it to the impact of an anthropogenic factor – deforestation. As the main criterion, he considered not a complex of characteristics but the presence of watershed forests. Under this assumption, he drew the forest-steppe boundary from the southern edge of the *Codrii*, through Dniepropietrovsk, Samara valley, Donetsk and further east [Milkov 1951: 7-12]¹.

As can be seen, in the case of the interfluves between the Prut, Dniester and Southern Bug rivers, the difference in the course of the boundary, as delineated by the above two scientists, between the steppe and forest-steppe is considerable.

Many specialists had followed the findings by F.N. Milkov for quite a long time. However, recent decades have witnessed a fully justified return to L.S. Berg’s conception. Additional arguments in its favour include the calculations of the hydrothermal coefficient [Fedotov 2008: 10]. The ‘Berg Line’ is recognized by the following Ukrainian geographers: M.I. Davydova, A.I. Kamienskiy, N.P. Nekliukova, G.K. Tushynskiy [Fedotov 2008: 11].

As for the existing forests on the watersheds of the *Codrii*, Donetsk and Volga uplands, specialists believe that they cannot serve as the criterion for demarcating a horizontal (latitudinal) zone, because they are connected to altitudinal zonation, being the first (and the only) plant layer². The watersheds show zonation traits characteristic of the middle and lower climate-vegetation layers; however, on both the *Codrii* and Donetsk Upland, they are covered by steppes. The use of the altitudinal diversification of lowland landscapes for demarcating the zones of the steppe and forest-steppe (as well as forest-steppe and forest zones) bore out L.S. Berg’s conception and proved that the boundary between the geographical zones he delineated was accurate [Fedotov 2008: 9-11].

¹ The boundary lines, as drawn by the above named scientists, partially overlap in some sections in the east.

² It is a well-known fact that a high-mountain layer may be found in a different latitudinal zone.

3. THE HISTORY OF INVESTIGATIONS OF LATE NEOLITHIC AND BRONZE AGE PROLOGUE SITES IN THE CENTRAL, FOREST-STEPPE PRUT-DNIESTER INTERFLUVE AND THE DNIESTER DRAINAGE BASIN

The Eneolithic, in the area in question, includes Tripolye culture (TC) settlement complexes and barrow burials of various cultural groups.

The first *Tripolye sites* were discovered close to the village of Krinichki, Balta uyezd, in the late 19th century. In the early 20th century, S.S. Hamczenko excavated dozens of TC *ploshchadki* in the vicinity of the villages of Krinichki and Korytnoe. In the 1950s, the Odessa Museum of History and Archaeology, headed by A.L. Yesipenko, discovered Tripolye sites in the villages of Timkovo and Slobodka, and investigated settlements in the vicinity of the villages of Aleksandrovka and Cherkasov Sad. A.A. Kravchenko and L.G. Garkusha discovered the settlement of Perlikany. The 1970s witnessed the resumption of excavations at already-known and newly-discovered settlements: Aleksandrovka (K.V. Zinkovskiy), Slobodka-Lesnichestvo, Timkovo (N.B. Burdo, M.Y. Videyko), Nemirovskoe, Stanislavka (M.Y. Videyko), Cherkasov Sad (L.Y. Polischuk). Now, in the Prut and Dniester interfluve, we know of sites related to all the development stages of the TC: early (Tripolye A-Precucuteni III), middle (Tripolye BI-Cucuteni A and Tripolye BII-Cucuteni A-B) and late (Tripolye CI-Cucuteni B), as well as single CII sites [Burdo, Polischuk 2013: 43-44].

The investigations of *barrow sites* in the middle Dniester drainage basin began in the late 19th century. It is from that time that excavations headed by N.E. Brandenburg date. They were carried out in the vicinity of the village of Camenca but did not yield any Eneolithic sites at that time. Investigations concentrated then on the southern, steppe regions. The early 20th century saw amateur barrow excavations near Ciocîlteni of which no documentation has survived, hence, it cannot be known what period they concerned [Rafalovich, Ketraru 1966: 103].

For a long time, field investigations had not gone beyond rare excavations of single barrows and small barrow groups. Only rescue excavations on new construction sites in the 1970s and 1980s were to provide an opportunity to expand the database concerning the Copper Age.

3.1. EARLY-BARROW, 'LATE-ENEOLITHIC' CULTURAL GROUPS

The first discoveries of Eneolithic barrows in the middle Prut drainage basin were made by an expedition headed by V.A. Dergachev in 1975-1976 [Dergachev

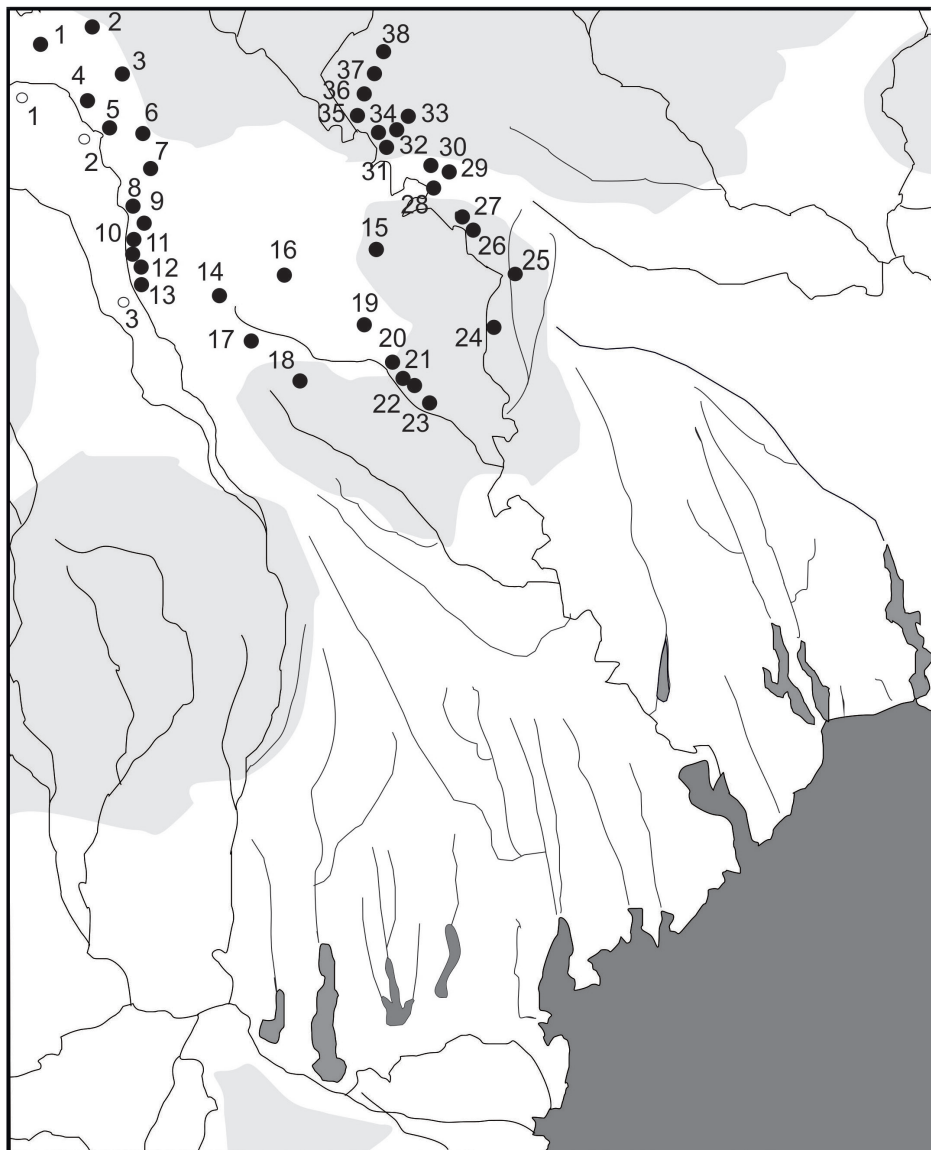


Fig. 2. Yamnaya culture sites in the drainage basins of the middle course of the Dniester and Prut rivers (above the Budzhak steppe zone). • Dniester-Prut interfluvium: 1 – Medveja, 2 – Cotiujeni, 3 – Corjeuți, 4 – Pererita, 5 – Tețcani, 6 – Burlănești, 7 – Hancăuți, 8 – Corpaci, Bădragii Vechi, 9 – Cuconești Vechi, 10 – Scherbaki, 11 – Dumeni, 12 – Duruitoarea Nouă, Vărătic; 13 – Costești, Costești Noi, 14 – Iabloana, 15 – Mărculești, 16 – Frunzeny, 17 – Bursuceni, 18 – Mîndrești, 19 – Rogojeni, 20 – Codrul Nou, Brînzani Noi, 21 – Ciocîlteni, 22 – Brăviceni, 23 – Orhei, 24 – Mocra, 25 – Timkovo, 26 – Podoima, 27 – Camenca, 28 – Cuzmin, 29 – Hristovaia, 30 – Ocnița, 31 – Prydnistryanske, 32 – Sloboda Pidlisivska, 33 – Pidlisivka, 34 – Severynivka, 35 – Porohy, 36 – Dobrianka, 37 – Pysarivka, 38 – Klembivka; ○ Prut western bank: 1 – Corlăteni, 2 – Iacobeni, 3 – Glăvănești-Vechi

1982]. Among Gordinești type features, he counted a burial from barrow 4 near Costești and burials from barrows 16-18 in the vicinity of Dumeni, excavated by V.A. Safronov [Dergachev 1982:126]. A burial from barrow 2, Costești site, containing pennant projectile points, had been initially associated with the influence of the Maikop culture, but was later rightly included in the Zhivotilovka-Volchansk cultural group (type) [Rassamakin 1994; 1997: 294]. A clear group of three Zhivotilovka burials with a characteristic inventory was discovered near Bursuceni [Yarovoy 1979]. Zhivotilovka-type burials were excavated on the following sites: Scherbaki [Larina 1989], Cuconești Vechi [Dergachev 1982], Duruitoarea Nouă [Demchenko 2007].

In the 1980s and 1990s, extended burials were investigated in barrows on the following sites: Ocnîța, Camenca district [Manzura *et al.* 1992], Bursuceni [Yarovoy 1979: 491-492], Văratîc, Prut drainage basin [Larina 1989], Timkovo (on the bank of the Rybnitsa River, a left tributary of the Dniester) [Ostroverkhov *et al.* 1993].

Eneolithic burials were also discovered in barrows investigated near Yampil in 2014 by the Yampil Expedition of the Adam Mickiewicz University in Poznań and the Institute of Archaeology, Ukrainian NAS in Kyiv [Prydnistryanske 1: *see* Klochko *et al.* 2015].

Summing up, Eneolithic burials beneath barrows are few in the region in question in contrast to the Budzhak Steppe to the south and the interior of the interfluvium of the Dniester and Southern Bug. This picture is made complete by Gordinești-type burials both barrow and flat ones [Larina 2003; Topal, Tserna 2010: 294; Yarovoy *et al.* 2012: 300; Włodarczak *et al.* 2015; Klochko *et al.* 2015].

3.2. YAMNAYA CULTURE (FIG. 2)

For the first time, barrows in the middle Dnieper drainage basin, near Camenca, Olgopol district, Podolia Governorate, were investigated in 1899-1900. The investigations were carried out by N.E. Brandenburg, director of Petersburg's Artillery Museum [*Zhurnal Raskopok Brandenbura* 1908: 173-175]. Four barrows were built in the Bronze Age while only two features belong to the Yamnaya culture (YC) [Kachalova 1974].

For a long time, excavations had been carried out only in the southern, steppe portion of the region. The first extensive barrow excavations, which resulted in the discovery of many YC burials in the north of the Prut-Dniester interfluvium, were carried out on the construction site of the Costești water-power plant in 1974-1976. Tens of barrows were excavated and found to contain burials from various periods, including the YC. Cemeteries and single barrows were found near Costești, Ivano-

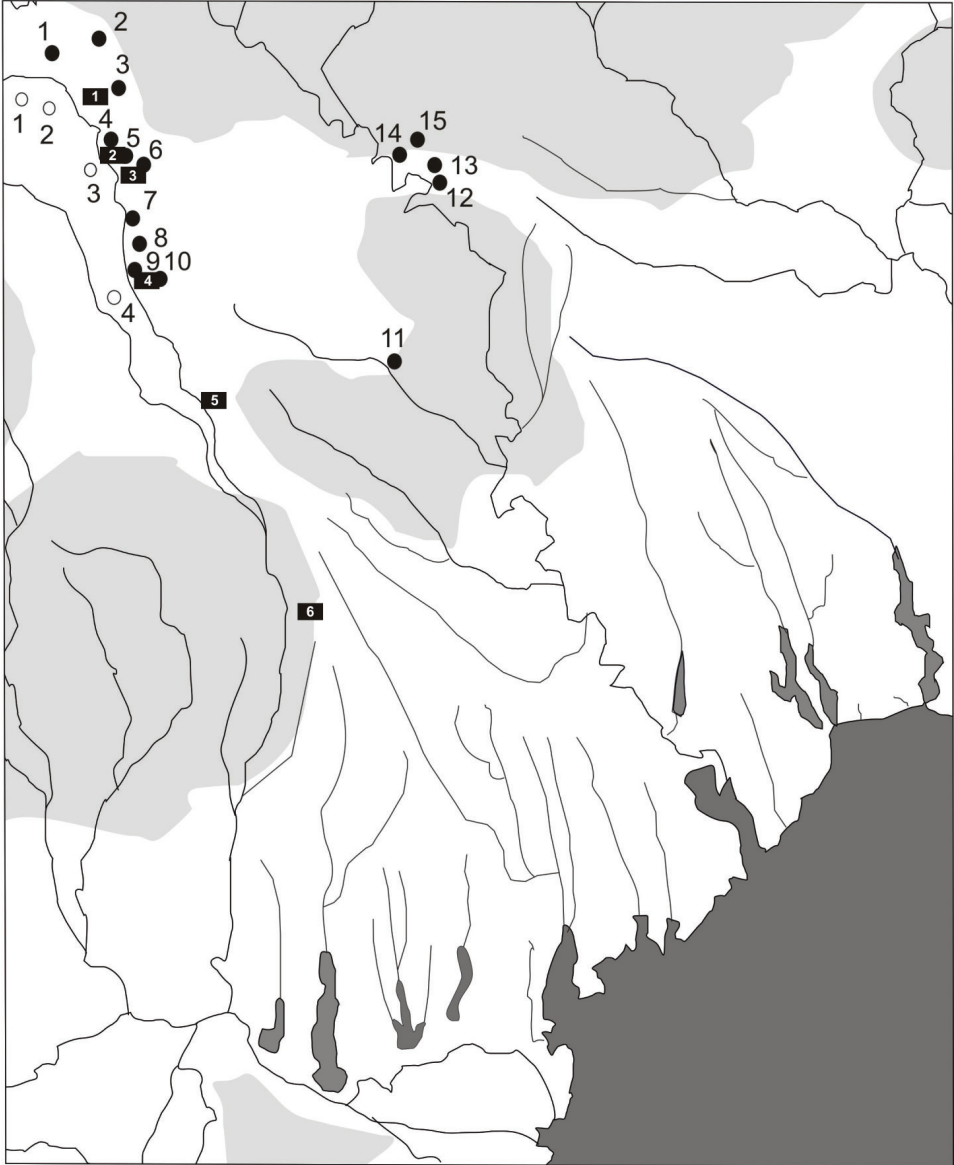


Fig. 3. Catacomb culture and Edineț culture sites in the drainage basins of the middle course of the Dniester and Prut rivers (above the Budzhak steppe zone). Catacomb culture sites. ● Dniester-Prut interfluve: 1 – Medveja, 2 – Cotiujeni, 3 – Corjeuți, 4 – Tețcani, 5 – Bezeda, 6 – Hancăuți, 7 – Corpaci, 8 – Cuconești Vechi, 9 – Dumeni, 10 – Duruitoarea Nouă, 11 – Codrul Nou, 12 – Cuzmin, 13 – Ocnîța, 14 – Prydnistryanske, 15 – Pidlisivka; ○ Prut western bank: 1 – Corlăteni, 2 – Slobozia Hănești, 3 – Iacobeni, 4 – Glăvănești-Vechi; ■ Edineț culture sites: 1 – Brînzeni, 2 – Cuconești Vechi, 3 – Vărătic, 1/4; 1/7, 4 – Cuconești Vechi II 4/?, 5 – Pruteni, 6 – Tochile-Răducani

vca, Rîșcani District, Cuconeștii Vechi, Scherbaki, Corpaci, Hancăuți, Edineț District, [Dergachev 1982; Yarovoy 1984; Larina 1989], Hristovaia, Camenca District [Yarovoy 1980] and Iabloana, Glodeni District [Yarovoy 1983], Orhei District *loco* [Dergachev 1973; Popovich 2008], Dumeni District.

In the 1980s, barrows on the following sites were excavated: Medveja, Briceni District [Savva, Dergachev 1984], Mărculești, Florești District [Levinskiy, Tentiuk 1990; Beylekchi 1992], Tețcani and Bezeda, Briceni District [Yarovoy 1990; Glazov, Kurchatov 2005], Cotiujeni, Șoldănești District [Agulnikov 1992], Duruitoarea Nouă, Rîșcani District [Demchenko 1988; 2007], Ciocîlteni [Ketraru, Khakheu, 1990], Brăviceni, Orhei District [Larina *et al.* 2008].

In 1988, a cemetery in the vicinity of the village of Ocnița, Camenca District [Manzura *et al.* 1992] was excavated; in 1989, barrows on the Podoima and Cuzmin sites, in the same area, were investigated [Khakheu, Bubulich 2002] while 1990 saw excavations on the Mocra site, Rîbnița District [Kashuba *et al.* 2001-2002]. In 1991, a single barrow in the vicinity of the village of Timkovo, on the left bank of the Dniester, in the Odessa *Oblast* was excavated [Ostroverkhov *et al.* 1993].

After 1991, for a long time, no archaeological investigations were conducted in this region. Only in 2013, were rescue excavations carried out of a barrow on the Rogojeni site, Șoldănești District [Agulnikov *et al.* 2014] and another on the Brînzenii Noi site, Telenești District [Agulnikov, Mistreanu 2014].

In the area known as the *Yampil Barrow Cemetery Complex*, bordering on the north-western Black Sea Coast, on the left bank of the Dniester, excavations were carried out from the mid-1980s to the early 1990s. Barrows on sites: Dobrianka, Pysarivka, Porohy, Severynivka, and Sloboda Pidlisivska were investigated [Potupczyk, Razumov 2014]. The year 2010 saw the beginning of a new stage in the investigations of *Yampil barrows*. They were located on sites: Pidlisivka 1 [Koško *et al.* 2014], Porohy 3A [Razumov *et al.* 2012; Klochko *et al.* 2015a], Klembivka 1 [Razumov *et al.* 2013; Klochko *et al.* 2015b], Prydnistryanske 1 [Klochko *et al.* 2015].

A list of YC sites in the area under discussion is given in the Annex: *Catalogue of Sites*.

3.3. CATACOMB CULTURE (FIG. 3)

The first Catacomb culture (CC) sites in the area in question were explored only in the mid-1970s. These were burials from barrows found on the Corpaci and Hancăuți sites [Dergachev 1982: 131; Yarovoy 1984: 71]. The excavations of barrows on the Dumeni site, headed by V.A. Safronov in 1974-1975, have never been published and are known only from information notices [Dergachev 1986]. The

1980s saw further discoveries of CC sites in the north of the Prut-Dniester interfluvium. These were such sites as Medveja [Savva, Dergachev 1984: 103, 107-108], Očnița [Manzura *et al.* 1992: 92] and others. Unfortunately, the largest CC barrow cemeteries – Tețcani and Bezeda sites, numbering 25 burials, and Codrul Nou with 14 burials – have not been published yet [Yarovoy 1990]. Generally speaking, in the region in question, barrows with single or few CC burials dominate.

Field investigations conducted throughout the north-western Black Sea Coast made for moving the western boundary of the catacomb historical-cultural community as far as the Prut River [Toshev 1981; Dergachev 1983]. However, for a long time, generalizing works mentioned only single sites west of the Southern Bug drainage basin [Bratchenko, Shaposhnikova 1985: 415]. At the same time, the series of assemblages in barrows on the right bank of the Prut River had long remained unexplored; only from the mid-1980s on, were they investigated and interpreted [Dergachev 1986; Burtănescu 2002].

In the mid-1980s, the question of including the Prut-Dniester interfluvium in the impact zone of catacomb groups was finally settled [Toshev 1982; 1986; Dergachev 1986]. To a large extent, the conclusions were borne out by materials obtained thanks to new excavations in the north of Moldova [Demchenko 1988; 2007; Yarovoy 1981; 1983; Savva, Dergachev 1984; Bubulich, Khakheu 2002; Yarovoy 1990; 1990a] carried out in the late 20th century. The new data were presented in synthesizing publications [Dergachev 1986; Toshev 1986; Burtănescu 2002; Ivanova 2013].

Due to their meagreness, materials from the forest-steppe are traditionally discussed in the context of the other sites in the Prut-Dniester interfluvium. Researchers distinguish early and late assemblages, which are jointly dated to the 25th-20th century BC [Kaiser 2003; Ivanova 2013].

Investigations carried out in the Yampil Region in the recent years have yielded new CC sites on the left bank of the Dniester [Klochko *et al.* 2015].

A list of CC sites in the area under discussion is given in the Annex: *Catalogue of Sites*.

3.4. EDINEȚ CULTURE (FIG. 3)

The first sites of this culture in the area under discussion were identified by V.I. Markevich in Brînzeni, Edineț District, in the early 1970s. Successive excavations carried out on a flat cemetery, permitted V.S. Titov to raise the issue of distinguishing a separate culture, which was given the name of Edineț culture (EC). He compared the EC to such cultures as Schneckenberg, Pitváros and So-

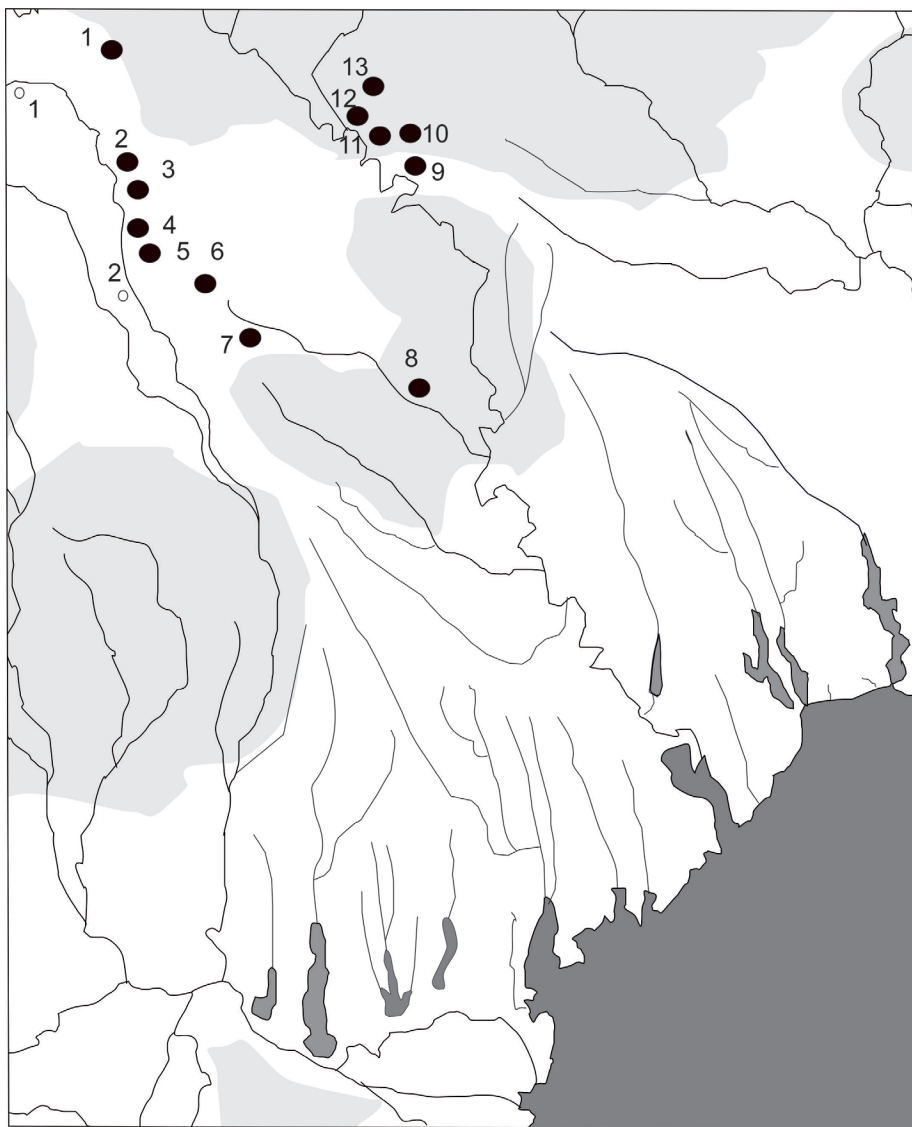


Fig. 4. Babyno culture (Mnogovalikovaya pottery) culture sites in the drainage basins of the middle course of the Dniester and Prut rivers (above the Budzhak steppe zone). ● Dniester-Prut interfluvium: 1 – Cotuijeni 1/4; 1/5; 3/1; 3/2 [Agulnikov 1992]; 2 – Corpaci 2/1 [Yarovoy 1984]; 2/2; 2/5; 3 – Cuconești Vechi 4/2; 8/10; 9/2, 26, 28, 31 [Dergachev 1986]; 4 – Dumeni 74, 8/8, 8/10 [Sava, 1992]; 5 – Duruitoarea Nouă [Demchenko 2007] - Vărătic 1/5 [Demchenko 1989]; 6 – Iabloana -1/5, 1/10 – [Yarovoy, 1983]; 7 – Bursuceni 1/13 (?) [Yarovoy, 1979]; 8 – Brăviceni 3/2; 7/1,7; 15/1,2; 16/2; 18/4 [Larina *et al.* 2008]; 9 – Ocnîța (Camenca) 2/2; 3/2; 3/7; 4/2; 5/2; 6/7; 6/26; 7/13 [Manzura *et al.* 1992]; 10 – Pidlisivka 1/5,7, 13(?); 11 – Severynivka 1/2, 2/2; 12 – Porohy 3/5; 4/1; 4/5; 4/9; 13 – Dobrianka 1/3; 1/10; ○ Prut western bank: Corlăteni - 1949 1/3 [Morintz 1978]; Glăvănești-Vechi-1949 1; 3; 1/10; 1/11; 1/17 [Burtănescu 2002]

mogyvár [1975]. Another flat cemetery was investigated by V.A. Dergachev on the Cuconești Vechi site in 1975 [Dergachev 1982] and in the course of next ten years barrow complexes were discovered on the Văratice, Edineț District [Demchenko 1989] and Bădragii Vechi, Costești VIII sites. The EC includes not only funerary sites but also settlement ones, for instance a short-term Trinca camp [Demchenko 2008].

Few EC materials (fewer than 10 sites) were described and summed up in the works by V.A. Dergachev [1986; 1994] and T.I. Demchenko [2008]. The former believes the EC to be genetically related to the Hatvan culture whose sites can be found in north-eastern Hungary [Dergachev 1999: 208, 214]. J. Machnik [1991:42] records the affinities of the EC with the Schneckenberg-Glina III, Somogyvár-Vinkovci and other cultures of the middle Danube drainage basin. P. Roman [1994] links the EC origins to the cultures of northern Thrace. T.I. Demchenko draws, however, a close parallel between the EC and a number of European cultures of the Bronze Age: Belotić-Bela Crkva, Somogyvár-Vinkovci, or Nagyrév [Demchenko 2008:199].

A list of EC sites in the area under discussion is given in the Annex: *Catalogue of Sites*.

3.5. BABYNO CULTURE (FIG. 4)

The discovery of Babyno culture (BC) sites (*see* the Mnogovalikovaya culture) goes back to barrow explorations already in the 19th century [Dergachev 1973]. Until the mid-1950s, they were discussed together with Late Bronze Age materials. Extensive investigations in the 1960s and 1970s and the identification by S.S. Berezanskaya of the separate Mnogovalikovaya culture gave rise to the question of distinguishing similar complexes on the north-western Black Sea Coast [Cherniakov 1975]. They were held to include above all burials with multiple-roll pottery and belt-buckles. As far as the cultural identification of burials without any grave goods is concerned, various, often contradictory opinions have prevailed to this day. Some of such complexes are interpreted as ‘Babyno’ [Lytvynenko 2009] or ‘Sabatinovka’ [Savva 1992; Sava, Agulnikov 2003].

A credible discovery of the first BC sites in northern Moldova was made in the 1970s on the construction site of the Costești water-power plant and a water reservoir on the Prut [Safronov 1975; Nikolaeva, Safronov 1976; Savva 1992]. An assemblage from the Cuconești Vechi (9/28) site, with a knife-khanjar, gained some fame [Berezanskaya 1986].

Carried out in the middle drainage basins of the Prut and Dniester in the last decades, sporadic excavations have nonetheless contributed toward the rise of the number of BC sites in the region in question. These are: Bursuceni [Yarovoy 1979], Corpaci [Yarovoy 1984], Văratci [Demchenko 1989], Ocnîța-Camenca [Manzura *et al.* 1992], Iabloana [Yarovoy 1983], Cotiujeni [Agulnikov 1992], Brăviceni [Larina *et al.* 2008].

These materials have been included in the research of G.N. Toshev [1982], V.A. Dergachev [1986], E.N. Savva [1992], in which they are discussed together with assemblages coming from further south.

The number of known sites in the region under discussion rose considerably owing to the excavations of *Yampil barrows* in the 1980s and 1990s and in 2010-2014 [Koško *et al.* 2014; Razumov *et al.* 2011; Razumov *et al.* 2013].

The opinions of researchers as to how to interpret BC assemblages in the western portion of the area vary. Once, S.S. Berezanskaya distinguished sites on the north-western Black Sea Coast as a separate south-western variant. Later, E.V. Savva considered assemblages from the Prut-Dniester interfluvium a uniform, fully fledged social organism, which had settled this area [Savva 1992: 157-158; 177]. In his post-doctoral dissertation, R.A. Lytvynenko [2009] believed, in turn, that within the ‘Babyno circle’, a local Dniester-Prut BC variety could be distinguished.

Furthermore, individual BC artefacts are also known from the upper Dniester drainage basin (present-day Lviv, Ivano-Frankivsk and Ternopil Regions Oblasts). The area yielded both single funerary assemblages (Ostapie, Palikorovo, Zhorniv) and finds of pottery and bone belt-buckles within settlements. In the latter case, they were often found together with the materials of other cultures (Svitiazhev, Pereveredovo, Zvenigorod). For a long time, it had been these finds that were used as a justification for synchronizing the BC with local cultures and cultural groups [Sveshnikov 1974; Berezanskaya *et al.* 1986].

Two views on the interpretation of ‘Babyno’ artefacts in the upper Dniester drainage basin have emerged. R.A. Lytvynenko believes that the artefacts show that ‘Babyno’ population groups penetrated the upper Dniester drainage basin, i.e. an area settled by neighbouring tribes [Lytvynenko 2009: 12]. There is, however, another opinion, holding that this area ought to be included in the BC-settled area [Pâslaru 2006: 233].

Due to the meagreness of source data, the problem, in our opinion, remains open.

A list of BC sites in the area under discussion is given in the Annex: *Catalogue of Sites*.

In the region under discussion – the forest-steppe in the Prut-Dniester inter-fluve – the Late Bronze Age is considered to encompass the Noua culture (NC).

The first to draw attention to the peculiarity of materials from a number of sites, especially the cemetery in the vicinity of the village of Noua, close to the city of Braşov (Romania), was I. Nestor in the 1930s. Successive investigations showed that the area settled by this culture covered a considerable part of the Dniester-Carpathian Region. At present, we know of a large number of settlements, flat cemeteries, ritual ash piles (ger. *Aschehügel*) and bronze hoards – over 500 altogether [Dergachev 1986: 153-156].

The investigations of Moldova sites have been conducted since the mid-1950s (V.I. Markevich, A.I. Meliukova, N.A. Ketraru, G.I. Smirnova, I.A. Rafalovich) [Dergachev 1973: 61]. Both settlements and flat cemeteries have been excavated. In the sub-Carpathian Region, NC materials have been actively investigated by G.I. Smirnova, E.A. Balaguri, L.I. Krushelnitskaya [Balaguri 1985; Krushelnitskaya 2006].

In the 1970s-1990s, investigations in the Prut-Dniester area covered both settlement sites and cemeteries. At present, we know of about 250 settlements alone; on some of them (e.g. Odaia-Miciurin), ritual ash piles have been studied for years [Sava, Kaiser 2011].

Of great significance was the discovery of biritual cemeteries (with flat graves and ones underneath barrows), for instance at Pererîta and Burlăneşti; and barrow cemeteries, for instance at Chirilen [Savva 2002] and Brînzezii Noi, which opened up new vistas in the study of the Noua culture, its rituals and contacts with neighbouring cultures.

Separate categories of metal goods, both single finds and hoards, have been comprehensively described in a number of works by V.A. Dergachev [1997; 2010].

The question of the culture's origin has not been settled yet. It is presumed that it had evolved from a number of Middle Bronze Age cultures on the Danubian Lowland above all Monteoru, as well as Costişa, Tei and Wittenberg; researchers do not exclude, however, some influence by the representatives of the Sabatinovka culture or – more generally – 'eastern impulses' [Lytvynenko 2009; Cherednichenko 2014].

The NC is considered to be contemporaneous with the Sabatinovka culture and the late stage of the Komarov culture, which it bordered on.

There is no clear answer to the question about the chronological brackets of the NC or the entire Sabatinovka-Noua-Coslogeni complex for that matter. While in the 1980s, it was believed that these taxa could be dated to the 14th/13th-12th century BC [Dergachev 1986: 170], today, a clear tendency to make them older is observed [Klochko 2006: 307-308; Sava, Kaiser 2011: 394-395].

Table 1

¹⁴C Dates for late Eneolithic and Bronze age prologue cultures in the Prut-Dniester interfluve

Site/feature	Lab number	¹⁴ C Age BP	¹⁴ C date calibrations	Taxonomic assignment
Bursuceni 1/20	HD-19362	4548±28	3345–3120	Zhivotilovka type
Bursuceni 1/21	HD-19933	4452±22	3110+3030	Zhivotilovka type
Dubinovo 1/8	Ki-11200	3940±70	2575–2349	CC
Dubinovo 1/11	Ki-11202	3720±70	2267–1981	CC

A summary outline of NC sites in the Prut-Dniester interfluve can be found in the works by E. Sava and V.A. Dergachev [Sava 2002: 141-158; Dergachev 2010: 305-308].

4. RADIOCARBON CHRONOMETRY

Only few radiocarbon dates are available for the forest-steppe zone: these are two burials of the Zhivotilovka type from the Bursuceni site and relatively close (geographically) CC burials from Dubinovo on the Southern Bug River (Table 1).

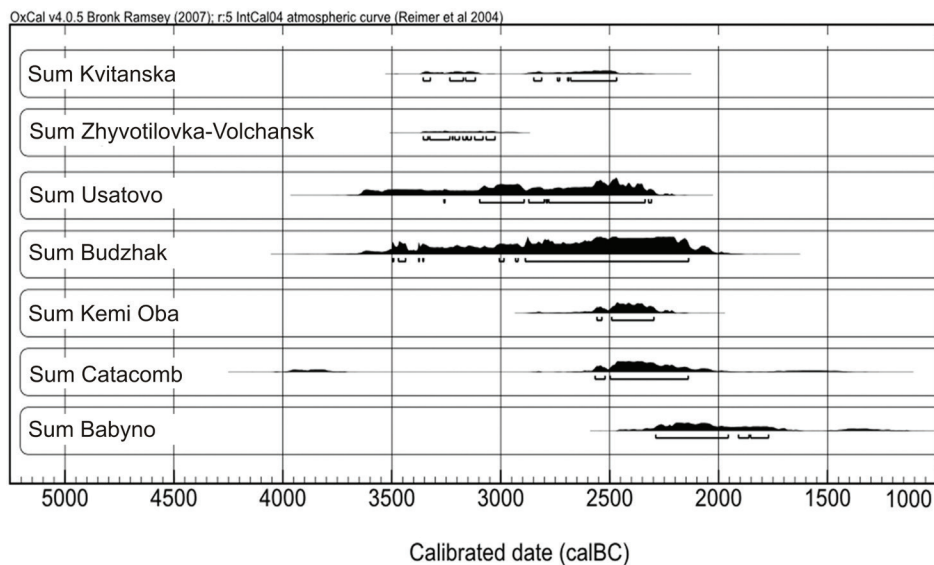


Fig. 5. Graphic presentation of the sum of dates for the cultures of the Late Eneolithic, and Early and Middle Bronze Age on the north-western Black Sea Coast

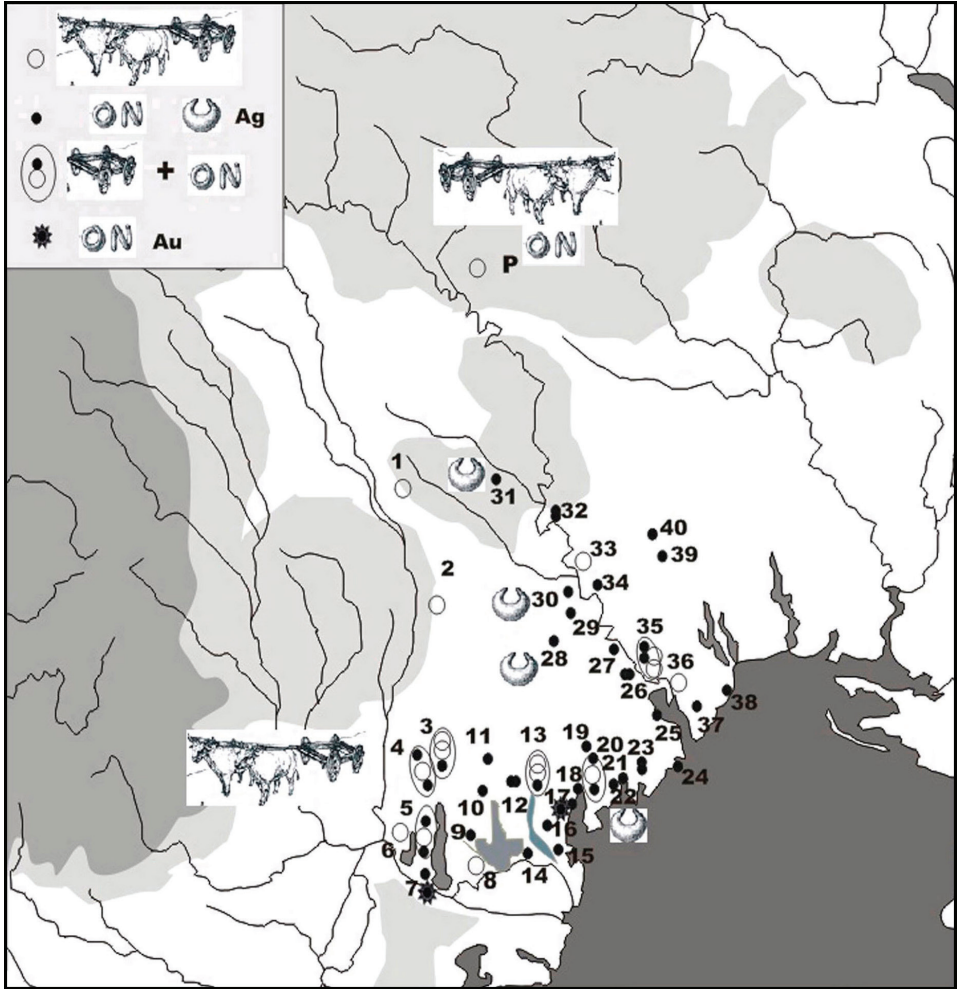


Fig. 6. Budzhak culture burials with wagons and silver ornaments on the north-western Black Sea Coast

This set of dates is supplemented by data for regions lying further south. Generally, the data are consistent with the overall chronology of the cultures discussed above (Fig. 5).

Now, this picture should be expanded to account for the information obtained by the *Yampil Expedition* mentioned earlier [see Goslar et al. 2015].



Fig. 7. Budzhak culture burials with copper products on the north-western Black Sea Coast

5. THE CULTURAL CONTEXT OF THE BLACK SEA STEPPE: THE PERSPECTIVE OF THE BUDZHAK CULTURE

Comparing the two regions – the Prut and Dniester drainage basins – a difference can be noticed in the way they were settled by the tribes of Bronze Age prologue cultures. The difference can be illustrated by the Budzhak culture (or, more broadly, the YC circle).

The Dniester drainage basin holds more of its prestigious artefacts – wagons, silver ornaments, metal goods – than its Prut counterpart. The same can be said about the distribution of burials with weapons (Fig. 6-8). The lower Dniester drainage basin is where western and north-western directions of relations kept by ‘Budzhak’ populations crossed; the northern route is documented. The middle Dniester drainage basin must have joined the Budzhak steppe to northern territories

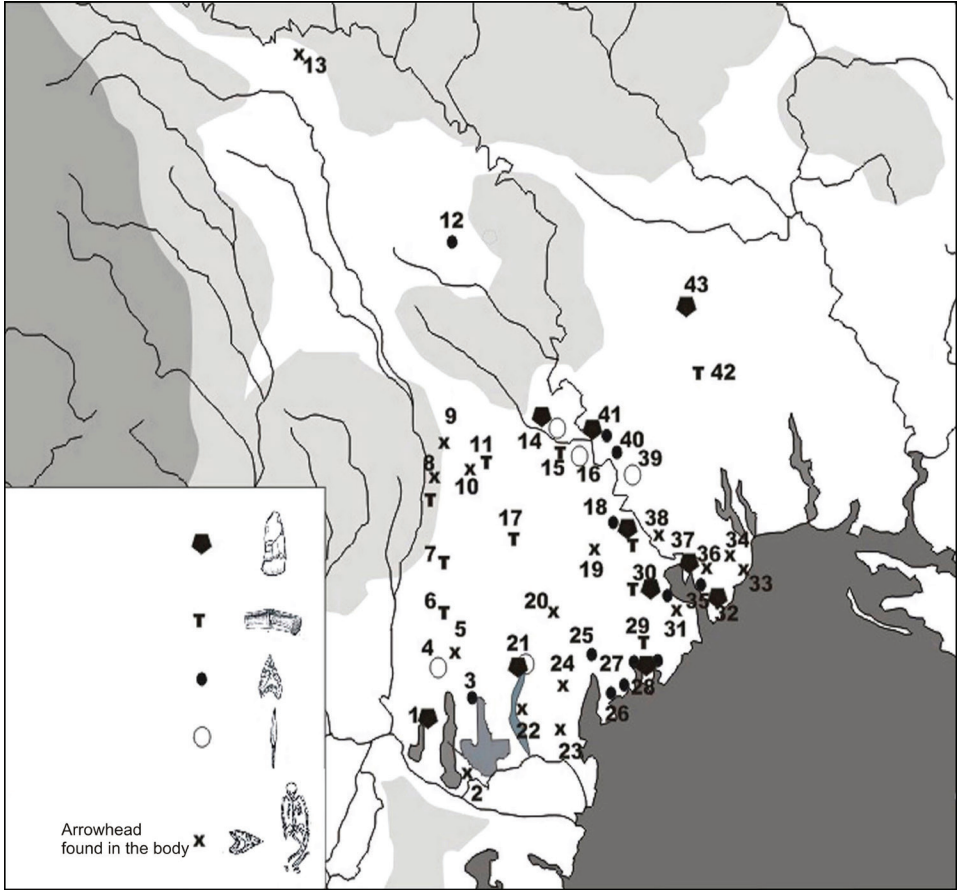


Fig. 8. Budzhak culture burials with weapons on the north-western Black Sea Coast

and central European cultures [Ivanova 2014: 26]. About the possible existence of the Dniester route, researchers wrote already earlier [Koško, Klochko 2009].

Whereas in the Prut drainage basin, the sites of both the Budzhak culture and the CC and BC are located close to known river crossings (Ungheni-Iași, Dumeni, Corpaci, Tețcani, Lipcani). Moreover, the Prut River may have been thought of as an obstacle on the westward route and not as a westward route as such.

CATALOGUE OF SITES ³**Yamnaya culture****Prut-Dniester Interfluve and Dniester Drainage Basin**

1. Medveja 1/4; 3/1; 4/2; 4/4; 5/1; 5/2; 5/3; 5/4 [Savva, Dergachev 1984].
2. Cotiujeni 1/3; 1/6; 3/3; 3/6; 3/8; 3/10; 3/11; 3/12; 3/14; 3/15; 3/15; 3/17 [Agulnikov 1992].
3. Corjeuți 1/3; 2/1; 3/1; 4/1; 4/7; 4/8; 4/9; 5/1; 6/3; 7/3; 8/1; 8/4; 8/5; 9/2; 9/3 [Levițki, Demcenko 1994].
4. Pererîta 1/1; 1/9; 1/10; 2/1; 2/5; 2/6; 2/10 [Kurchatov 2006].
5. Tețcani 1/1; 1/2; 1/7; 1/8; 1/9; 1/11; 1/12 [Glazov, Kurchatov 2005].
6. Burlănești 1/3; 1/4; 1/7; 1;12; 1/13; 2/3; 3/3; 3/7; 4/3; 4/5; 4/6; 4/7; 4/12; 4/13; 5/3; 4/4 [Demchenko, Levitskiy 2006].
7. Hancăuți 1/2; 1/3; 1/4; 1/7; 1/9; 1/12; 2/4; 2/5; 2/6; 2/7; 2/8 [Dergachev 1982].
8. Corpaci I 1/5; 4/1; 4/3; 4/5; 5/3; 5/5; 5/6 [Dergachev 1982]; Corpaci II 2/4; 2/6; 2/7; 2/8; 2/9; 2/11; 2/12; 2/13; 2/14; 2/15; 2/16; 3/1; 3/2; 3/3; 3/4; 3/5; 3/6; 4/1; 4/2; 4/4; 4/5 [Yarovoy 1984].
9. Cuconești Vechi 1/1; 1/3; 1/7; 2/2; 2/3; 3/5 [Dergachev 1982].
10. Scherbaki 1/1; 1/2; 1/5; 1/6 [Dergachev 1982]; 2/2; 2/3 [Larina 1989].
11. Dumeni 1/7; 1/10; 3/2; 3/5 [Dergachev 1986].
12. Duruitoarea Nouă I 1/2 [Dergachev 1982]; Duruitoarea Nouă II (Vărativ) 1/1; 1/5; 1/6; 1/7; 1/8; 1/10; 1/11 [Larina 1989]; Duruitoarea Nouă III 1/2; 1/3; 1/5; 2/1; 2/3; 2/4 [Demchenko 1988]; 3/3; 3/4; 4/1; 4/2; 4/3; 5/4; 5/5; 5/6; 6/2; 6/5; 7/2; 7/3 [Demchenko 2007].
13. Cuconești Vechi 1/5; 1/6; 1/7; 1/9; 1/12; 3/1; 3/2; 3/5; 5/2; 6/1; 8/2; Costeștii Noi 1/1 [Dergachev; 1982].
14. Iabloana 1/1; 1/3; 1/4; 1/7; 1/8; 1/11; 1/15; 1/16; 1/17; 1/18; 1/19 [Yarovoy 1983a].
15. Mărculești 1/1; 1/2; 2/2 [Levinskiy, Tentiuk 1990]; 3/1; 3/2; 3/3; 3/5; 3/6; 3/8; 3/9; 3/10; 3/11; 3/12; 3/14; 3/15; 3/16 [Beylekchi 1992].
16. Frunzeny 1/1; 1/2; 1/4; 1/6 [Dergachev 1973].

³ (?) = marks burials whose cultural interpretation in the publication or the report raises doubts with the present Authors.

17. Bursuceni 1/2; 1/6; 1/9; 1/10; 1/12; 1/14; 1/15; 1/16; 1/18; 1/19; 1/3; 1/24; 1/26 [Dergachev 1986].
18. Mîndreşti 1/1; 1/3; 1/4; 1/8 [Dergachev 1973].
19. Rogojeni 1/1; 1/2 [Agulnikov *et al.* 2014].
20. Codrul Nou 1/2; 1/3; 1/6; 1/7; 2/1; 3/6 [Dergachev 1986]; Brînzani Noi 1/2; 1/3; 1/4 [Agulnikov, Mistreanu 2014].
21. Ciocîlteni 2/6; 2/9; 2/10; 2/13; 3/3; 4/1; 4/2; 4/3; 4/4; 4/5; 5/3; 5/6; 5/7; 5/9 [Ketraru, Khakheu 1990].
22. Brăviceni 1/1; 1/10; 1/11; 1/12; 1/14; 2/2; 2/3; 2/4; 2/5; 2/7; 2/8; 2/9; 3/1; 4/4; 7/2; 7/4; 7/8; 7/9; 7/12; 7/13; 9/5; 9/6; 11/1; 11/8; 11/9; 12/1; 12/2; 12/3; 13/4; 13/5; 13/6; 13/7; 15/4; 16/1; 16/4; 16/6; 16/8; 16/9; 16/10; 16/11; 17/1; 17/3; 17/4; 17/5; 18/1; 18/2; 18/3; 18/5; 19/1; 19/4; 19/5; 19/7. 19/8; 19/11; 23/1; 23/3; 23/7; 24/3 [Larina *et al.* 2008].
23. Orhei 1/1; 1/2; 1/3; 1/4; 1/5 1/6; 1/8; 1/9 [Popovich 2008].
24. Mocra 1/3; 1/6; 1/7; 1/8; 1/9; 1/12; 1/13; 1/14; 1/15; 3/1; 3/4; 3/6; 3/7; 3/8; 4/2 [Kashuba *et al.* 2001-2002].
25. Timkovo 1/1; 1/2; 1/4; 1/6 [Ostroverkhov *et al.* 1993].
26. Podoima 3/6. 3/7; 3/8 [Bubulich, Khakheu 2002].
27. Camenca 444/3; 445/7 [Kachalova 1974].
28. Cuzmin 1/2; 2/2; 2/6; 2/7; 3/1; 3/2; 4/1; 4/3; 4/4; 4/5 [Bubulich, Khakheu 2002].
29. Hristovaia 1/1; 1/2; 1/3; 1/4; 1/5; 1/6; 1/7; 1/8; 1/9 [Yarovoy 1980].
30. Ocnița 1/1; 1/3; 1/4; 1/7; 1/8; 1/9; 2/3; 2/4; 2/5; 2/6; 3/1; 3/3; 3/6; 3/8; 3/9; 3/10; 3/12; 3/13; 3/14; 3/15; 3/16; 4/1; 4/3; 4/4; 4/5; 4/6; 4/7; 5/4; 5/5; 5/6; 5/7; 5/8; 5/9; 6/3; 6/8; 6/9; 6/10; 6/11; 6/13; 6/16; 6/17; 6/18; 6/19; 6/20; 6/21; 6/22; 6/25; 6/27; 6/28; 7/1; 7/3; 7/4; 7/5; 7/6; 7/7; 7/8; 7/9; 7/10; 7/11; 7/12 [Manzura *et al.* 1992].
31. Prydnistryanske 4/3; 4/4; 4/6; 4/8; 4/9 [Włodarchak *et al.* 2015].
32. Sloboda Pidlisivska 2/?; 2/?; 2/?; 2/? [Potupchyk, Razumov 2014: 37].
33. Pidlisivka 1A; 1Aa; 1B 1/4; 1/8; 1/9; 1/10; 1/11 [Koško *et al.* 2014].
34. Severynivka 1/5; 2/1; 2/4; 2/5; 2/6; 2/7; 2/8; 2/9; 2/10; 2/11; 2/12; 2/13 [Harat *et al.* 2014].
35. Porohy 1/1; 1/2; 2/3; 2/4; 2/5; 2/6; 3/2 (1985 r.); 3/4 (1985 r.); 4/8 [Harat *et al.* 2014]; Porohy 3A (2011 r.); 3A/1; 3A/2 (?); 3A/3; 3A/7 (?); 3A/10; 3A/11; 3A/12; 3A/14 (?); 3A/15; 3A/17; 3A/18; 3A/19; 3A/20 [Razumov *et al.* 2011].
36. Dobrianka 1/4; 1/5; 1/6; 1/7; 1/8 [Harat *et al.* 2014].
37. Pysarivka 1/1; 1/2; 2/3; 3/1; 3/2; 3/3; 4/1; 4/2; 5/1; 5/2; 6/1; 6/2; 6/3; 7/2; 8/2; 9/2; 9/3 [Harat *et al.* 2014].
38. Klembivka 1/5 (?); 1/14; 1/15 [Razumov *et al.* 2013].

West Bank of the Prut

1. Corlăteni - 1949 1/3 [Burtănescu 2002].
2. Glăvănești-Vechi - 1949 1; 3; 1/10; 1/11; 1/17 [Burtănescu 2002].

Catacomb culture

Prut-Dniester Interfluve and Dniester Drainage Basin

1. Medveja 4/6 [Savva, Dergachev 1984].
2. Cotiujeni 1/1 [Agulnikov 1992].
3. Corjeuți 4/10 [Levițki, Demchenko 1994].
4. Tețcani [Yarovoy 1990].
5. Bezeda [Yarovoy 1990].
6. Hancăuți 1/8 [Dergachev 1982].
7. Corpaci 1/2; 1/3 [Dergachev 1982].
8. Cuconești Vechi 1/9; 3/7 [Yarovoy 1984]; 5/3; 5/7; 9/21A; 9/22; 9/27; 10/2; 16/3; 16/13; 18/1; 19/3 [Dergachev 1982; 1986].
9. Dumeni 1/4; 1/9 [Dergachev 1986]; 3/4 [Demchenko 1988].
10. Duruitoarea Nouă 1/4; 1/6; 2/2; 2/5; 3/2; 4/6 [Demchenko 1988; Demchenko 2007].
11. Codrul Nou 1/4; 1/5; 1/9; 2/3; 2/4; 2/5; 2/6; 2/7; 2/8; 3/1; 3/2; 3/3; 3/4; 3/10 [Yarovoy 1990; Dergachev 1986].
12. Cuzmin 2/5 [Bubulich, Khakheu 2002].
13. Ocnița (Kamenka) 3/5 [Manzura *et al.* 1992].
14. Prydnistryanske 1/4 [Włodarchak *et al.* 2015; Klochko *et al.* 2015].
15. Pidlisivka 1/5(?) [Koško *et al.* 2014].

West Bank of the Prut

1. Corlăteni I 1/2 [Burtănescu 2002].
2. Slobozia Hănești 1/3 [Burtănescu 2002].
3. Iacobeni 1/19 [Burtănescu 2002].
4. Glăvănești-Vechi 1/13 [Burtănescu 2002].

Edineț culture

1. Brînzeni [Titov 1975].
2. Cuconești Vechi [Dergachev 1982].
3. Văratice 1/4; 1/7 [Demchenko 1989].
4. Cuconești Vechi II 4/ ? [Dergachev 1986].
5. Pruteni [Dergachev 1986].
6. Tochile-Răducani [Dergachev 1986].

Babyno culture**Prut-Dniester Interfluve and Dniester Drainage Basin**

1. Cotuijeni 1/4; 1/5; 3/1; 3/2 [Agulnikov 1992].
2. Corpaci 2/12; 2/2; 2/5 [Yarovoy 1984].
3. Cucuonești Vechi 4/2; 8/10; 9/2; 9/26; 9/28; 9/31 [Dergachev 1986].
4. Dumeni 74; 8/8; 8/10 [Savva 1992].
5. Duruitoarea Nouă 3/1 [Demchenko 2007]; Văratice 1/5 [Demchenko 1989].
6. Iabloana 1/5; 1/10 [Yarovoy 1983].
7. Bursuceni 1/13 (?) [Yarovoy 1979].
8. Brăviceni 3/2; 7/1; 7/7; 15/1; 15/2; 16/2?; 18/4 [Larina *et al.* 2008].
9. Ocnița (Camenca) 2/2; 3/2; 3/7; 4/2; 5/2; 6/7; 6/26; 7/13 [Manzura *et al.* 1992].
10. Pidlisivka 1/5; 1/7; 1/13(?)⁴ [Harat *et al.* 2014].
11. Severynivka 1/4; 2/2 [Harat *et al.* 2014].
12. Porohy 2/1(?); 3/5; 4/1; 4/5; 4/6(?); 4/9 [Harat *et al.* 2014]; Porohy 3A/5(?); 3A/8(?); 3A/22(?) [Razumov *et al.* 2011].
13. Dobrianka 1/1(?); 1/2; 1/3; 1/9(?); 1/10; 1/11 [Harat *et al.* 2014].
14. Pysarivka 8/4(?); 9/1(?) [Harat *et al.* 2014].
15. Klembivka 1/1; 1/2(?); 1/3(?); 1/6(?); 1/7(?); 1/8(?); 1/10(?); 1/11(?); 1/12(?); 1/13(?) [Razumov *et al.* 2013].

West Bank of the Prut

1. Corlăteni - 1949 1/3 [Burtănescu 2002].
2. Glăvănești-Vechi - 1949 1; 3; 1/10; 1/11; 1/17 [Burtănescu 2002].

Translated by Piotr T. Żebrowski

⁴ When publishing the materials; S. Razumov classified all burials with the deceased lying crouched on the side as the BC. In a number of cases; however; the present authors do not agree with this interpretation. In such cases; the burials are marked with a question mark.

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