

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

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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).

Svitlana Ivanova

CONNECTIONS BETWEEN THE BUDZHAK CULTURE AND CENTRAL EUROPEAN GROUPS OF THE CORDED WARE CULTURE

Dergachev referred to the North-Western Pontic Region (the territory between the southern Bug, the Prut and the Danube) as the “contact zone” that displayed interactions between various cultural entities and the region manifested itself as an area of interaction between several cultural and historical factors. In his opinion, the south-eastern European one was predominant in the Eneolithic and the Bronze Age. The eastern European was the second most important; the third (middle European) was less significant [Dergacev 1988]. The role of each of the factors changed in different epochs. Włodarczak noted the impact of four factors in the early Bronze Age: the local late Tripolye (Usatovo), the eastern one, connected to the Northern Pontic and Northern Caspian cattle-breeding steppe entities; the Western one, connected with the Early Bronze Age of Anatolya and the Balkans; and the Northern, which was determined by the emergence in direct proximity of the Globular Amphora culture area. The influence of different cultures from the west and the east was manifested in the formation in the region of a specific Budzhak culture of the early Bronze Age [Włodarczak 2010].

Graves of the North-Western Pontic Region were identified by Merpert into a specific cultural version of the Yamnaya cultural-historic entity community [Merpert 1974]. Later on, Klein referred them to a particular “Nerushayska” culture [Klein 1975], which Cherniakov renamed into the “Late Yamnaya Budzhak” culture [Cherniakov 1979]¹. In our view, the specificity of the Budzhak culture was manifested already at its formation stage, which allows synchronizing it with the Yamnaya cultural-historical region in general (3100–2200 BC; Fig. 23:11) and not only with the late Yamnaya period. Two stages in the genesis of the Budzhak culture can be identified: the early and the late, with the boundary within the range of 2600/2500 BC.

¹ Other researchers also suggested their names, but the name introduced by Chernyakov, in its various versions (Budzhak culture, Budzhak culture version, Budzhak culture group) proved to be the most commonly used.



Fig. 1 Cultural-historical Yamnaya community (=Yamnaya culture) and Budzhak culture distribution. Legend: GAC = Globular Amphore culture; CWC = Corded Ware cultures

To date, almost 500 Eneolithic and Early Bronze barrows have been excavated in the North-Western Pontic Region; over 2600 burials of the Budzhak culture have been found (Fig. 1; Fig. 2). It is significant that, three fourth of the barrows were built by Budzhak tribes themselves, while in other cases they used Eneolithic or Usatovo mounds. No settlements have been known to occur in the North-Western Pontic Region, but there are traces of short-term Yamnaya settlements – Tashlyk II and Tashlyk III – on the left bank of the Southern Bug River [Shaposhnikova *et al.* 1986: 8]. Possibly, season's settlements of the Budzhak tribes, like those in other regions, could be located in river, lake and estuary floodplains and are now hidden under the sludge.

Barrows of the Budzhak culture are located in groups and form burial sites; single mounds also occur. The barrows' height ranges from 1 to 3 m (with the diameter of 30-60 m) only some of the barrows were higher than 5 m (with a diameter of 80-100 m), some barrows lower than 1m also occurred. Other elements of barrow architecture were ditches (ring-shaped, with one or more bridges). The graves could be grouped into curves and circles (Fig. 3:1) and the bodies had been placed with a clockwise or counterclockwise orientation [Dvorianinov *et al.* 1981]. The burial chambers were rectangular pits; other shapes were rare (Fig. 3:6, 9). About one-third of the pits were made with rectangular shelves; round or square shelves also occurred (Fig. 3:2, 11).

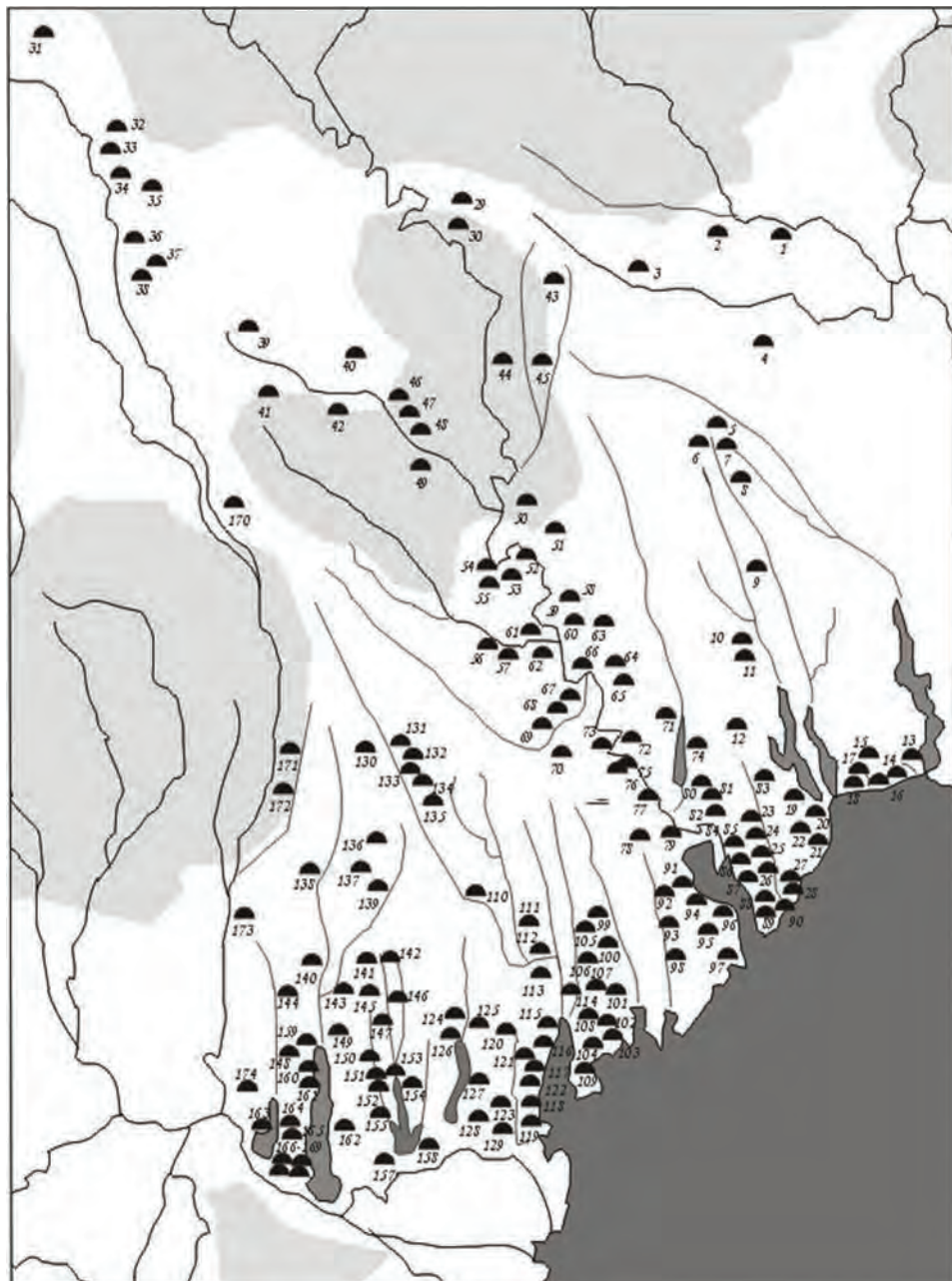


Fig. 2. Budzhak culture sites in north-west Black Sea area: 1 – Dubinovo; 2 – Nedelikovo; 3 – Golma; 4 – Ageevka; 5 – Grigorevka; 6 – Marianovka; 7 – Novogrigorevka, “Liubasha” barrow; 8 – Revova; 9 – Velikoziminovo; 10 – Katarzhyno; 11 – Baranovo, “Soldatskaya slava” barrow; 12 – Scherbanka; 13 – Popilnoe; 14 – Koshary, Sychavka; 15 – Starye Beliary; 16 – Bolshoi Adzhalyk;

17 – Vapniarka; 18 – Schevchenkovo (Odessa); 19 – Kholodnaya Balka; 20 – Slobodka-Romanovka; barrow Odesskiy; 21 – Chernomorka; 22 – Dalnik (Ovidiopol District); 23 – Mirnoe 24 – Petrodolinskoe; 25 – Novaya Dolina; 26 – Novogradkovka; 27 – Aleksandrovka, Velikodolinskoe; 28 – Sanzheyka; 29 – Cuzmin; 30 – Hristovaia; 31 – Camenca (Ocnița); 32 – Medvezha; 33 – Corjeuți; 34 – Burlănești; 35 – Tețcani; 36 – Hancăuți; 37 – Corpaci; 38 – Cuconeștii Vechi; 39 – Scherbaki; 40 – Dumeny; 41 – Duruitoarea Nouă; 42 – Costești, Costești Noi, Ivanovka; 43 – Iabloana; 44 – Mărculești; 45 – Podoima; 46 – Frunzeny; 47 – Bursuceni; 48 – Mîndrești; 49 – Timkovo; 50 – Mocră; 51 – Novokrasnoe; 52 – Codrul Nou; 53 – Ciocîlteni; 54 – Brăviceni; 55 – Orhei (Orgeev); 56 – Doibani; 57 – Pohrebea; 58 – Krasnoe; 59 – Corjova; 60 – Dubăsarii Vechi; 61 – Bălăbănești; 62 – Cimișeni; 63 – Speia; 64 – Chetroasa; 65 – Anenii Noi; 66 – Gura Bîcului; 67 – Roșcani; 68 – Butor; 69 – Bîcioc; 70 – Nikolscoe; 71 – Constantinovca; после Frunze; 72 – Tiraspol; 73 – Parcani; Ploskoe; Tîrnauca; Serbka; 74 – Slobozia; 75 – Hagimus; 76 – Chircăiești; 77 – Ursoaia; 78 – Căușeni; 79 – Cioburciu; 80 – Hlinaia; 81 – Novocotovsc; 82 – Limanskoe; 83 – Purcari; 84 – Răscăieții Noi; 85 – Olănești; 86 – Khadzhillar; 87 – Căplani; 88 – Tudora; 89 – Yasski; 90 – Belaevka; 91 – Mayaki; 92 – Nadlimanskoe; 93 – Yefimovka; Nikolaevka; 94 – Ovidiopol; Dalnik (Ovidiopolraion); 95 – Roksolany; 96 – Karolino-Bugaz; 97 – Semenovka; 98 – Podgornoe; 99 – Karnalievka; 100 – Sadovoe; 101 – Turlaki; 102 – Mologa; 103 – Zatoa (Akkembetskiy barrow); 104 – Alkaliya; 105 – Khadzyder; 106 – Sergeevka; 107 – Diviziya; 108 – Liman; 109 – Zholtzi Yar; 110 – Vishniove, Kochkovatoe; 111 – Zaria; 112 – Mikhailovka; 113 – Belolesie; 114 – Tatarbunary; 115 – Zarechnoe; 116 – Novoselitsa; 117 – Trapovka; 118 – Berezino; 119 – Sarata; 120 – Artsiz; 121 – Pavlovka; 122 – Borisovka; 123 – Vinogradovka 124 – Bashtanovka; 125 – Strumok; 125 – Glubokoe; 177 – Nerushay; 128 – Desantnoe; 129 – Primorskoe; 130 – Kholmnskoe; 131 – Chervonyi Yar; 132 – Mirnoe (Kiliyskiy District); 133 – Schevchenkovo; 134 – Parapory; 135 – Ostrovnoe; 136 – Dzinilor; 137 – Gura Galbenei; 138 – Valea-Perjei; 139 – Gradishte; 140 – Ecaterinovca; 141 – Cimișlia; 142 – Carabetovca; 143 – Comrat; 144 – Beșalma; Congaz; 145 – Tomai; 146 – Svetlîi; 147 – Cazaclia; 148 – Balaban; 149 – Taraclia; 150 – Ogorodnoe; 151 – Gavanoasa; 152 – Copceac; 153 – Kubey; 154 – Kalcheva; 155 – Bannovka; 156 – Bolgrad; 157 – Zhovtnevoe; 158 – Kalanchak; 159 – Kamenka (Ukraine); 160 – Novokamenka; 161 – Suvorovo; 162 – Utkonosovka; 163 – Ozernoe; 164 – Bogatove; 165 – Kislitsa; 166 – Kurchy; 167 – Mresnota Mogila; 168 – Vladychen; 169 – Nagornoe; 170 – Chaush; 171 – Plavni; 172 – Novoselskoe; 173 – Orlovka; 174 – Gradeshka; 175 – Petrești; 176 – Chirileni; 177 – Sărăteni; 178 – Crihana Veche; 179 – Zîrnești; 180 – Vadullui Isac; 181 – Etulia; 182 – Giurgiuiești; 183 – Frikatsey

The pit floor was covered with remainders of plant litter, sprinkled with ochre of various shades; there were traces of woven mats on the shelves (Fig. 3:2). Traces of various rituals could be registered not only in the burial chamber, but also on its roof: remainders of bonfires, animal bones or skeletons. Burial chambers often had stone or wooden roofs (Fig. 3:2, 5). A boat-like construction was found on the roof of grave 8/8 near the village of Semenovka (Fig. 23:1, 2). A wooden roof could be longitudinal or transverse; a stone roof could be made of large and small stones, processed slabs, among which anthropomorphic stellae occurred (Fig. 3:4, 5). Burials in stone cist graves were found in barrows of the North-Western Pontic Region (Fig. 4).

In our view, burials of that type, including the ones connected with influences and traditions of other (Kemi-Oba, Globular Amphorae) cultures should be regarded within the framework of the Budzhak culture. Indicators of that include

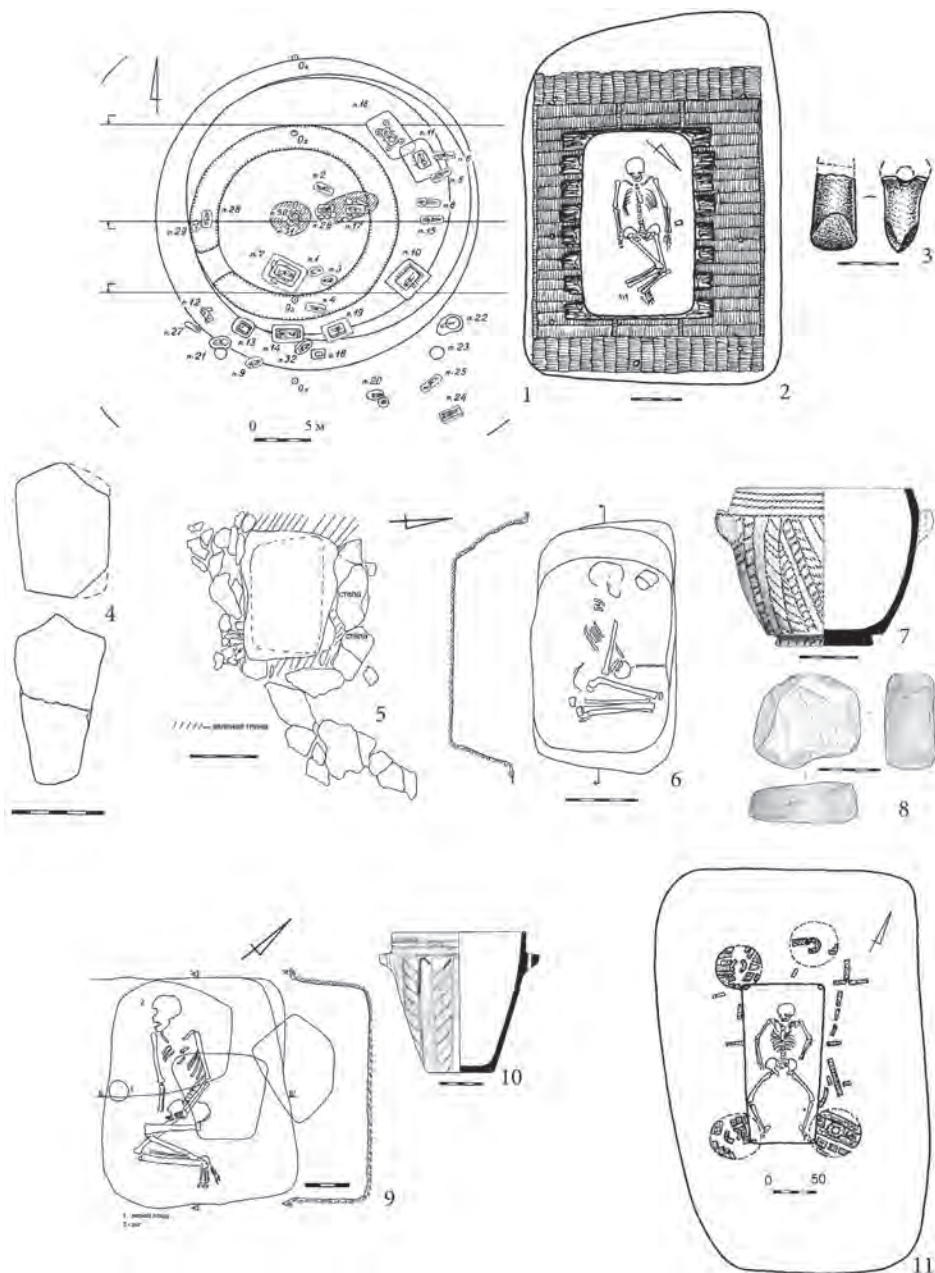


Fig. 3. Burials of Budzhak culture: 1 – Plan of barrow 19 near the village of Novoselitsa; 2, 3 – Semenovka 14/12 (2 – plan of the grave, 3 – fragment of stone axe); 4–8 – Sychavka 1/15 (4 – anthropomorphic stellae, 5 – stone cover, 6 – general plan, 7 – vessel, 8 – stone pestle); 9, 10 – Vapniarka 4/16 (9 – general plan, 10 – vessel); 11 – Novoselitsa 19/16 [after 1 – Subbotin *et al.* 1995; 2, 3, 11 – Subbotin 1985; 4–8 – Ivanova, Savelev 2011; 9, 10 – Ivanova *et al.* 2012]

the key components of the funeral ritual: the method of inhumation, the position of the body and the grave goods. Some burials were made in stone cist graves with the walls covered with drawings made with red ochre (Velikoziminovo 1/1, Stari Belyary 1/14, Alkaliya 33/3, Katarzhino 1/1). Radiocarbon dates for that group of graves (2700–2200 BC) synchronous with the period of existence of the Budzhak monuments in the region [Szmyt, Cherniakov 1999; Ivanova *et al.* 2005: 98].

Some 17 graves of the North-Western Pontic Region contained remainders of wooden carts – both wheels and parts of the carcass (Fig. 3:11). Complexes with four cart wheels are predominant, though in some cases the burial contained three wheels (Kholmiskoye 2/10) and two wheels (5 graves).

Five main positions of the buried body can be identified: (1) curled on the back, arms stretched along the body (Fig. 3:2, 11; 4:8) legs had been placed with knees up, but then fell to one side or the other, or fell apart (or has been deliberately placed?) in a rhomb position (57.2 %) (2) bent to the right, the left arm bent in the elbow, the hand at the pelvis, stomach or chest; the right arm stretched along the body (16.3 %) (3) legs bent to the left, the right hand placed at the pelvis (13.1 %) (4) on the right side (Fig. 3:9), with different positions of arms (7.3 %) (5) on the crouched left side (Fig. 3:6), with different positions of arms (6.1 %). While some researchers trace more fractional gradation within these variants [Yarovoy 1985], others merge them into three groups: on the back, on the right side, on the left side [Rychkov 1990, Nikolova 1992]. Inhumations of variant 1 dominate in numbers and in most cases are the main ones in burial mounds. Graves with dissected skeletons and cenotaphs also occur. Rare features of the funeral ritual include single cases of cremation and the sitting position of the body. Individual categories of grave goods (some types of vessels and jewellery) correlate, more or less clearly, with certain positions of the body, this fact allowed Yarovoy to identify “ritual groups” [Yarovoy 1985: 95].

The information obtained as a result of many years of excavations of barrows of the North-Western Pontic Region allow defining the Budzhak culture not only as a unique structural entity within the Yamnaya cultural-historical area, but also as a mobile community opened to “cultural dialogue” and capable of long-distance migrations. Indications of that include imports, imitations, derivatives in the material complex, as well as the population’s westward movement to the Balkan – Carpathian Region. Merpert was the first to define the territory from which the westward migration occurred: the area between the Bug and the Danube rivers [Merpert 1982: 329], i.e., the area populated by the Budzhak tribes. The work of Ukrainian and Polish archaeologists within a joint project allowed interpretation of available materials, clarification of their cultural affiliations and identifying parallels in various cultures.

The pottery (467 intact and restored vessels) comprises over 40 % of the total number of finds. The production technique used to make the vessels was a traditional one: handmade, with admixtures of grog, limestone or sand, with the surface treatment with a putty knife, tufts of vegetation, glazers. The colour varies from

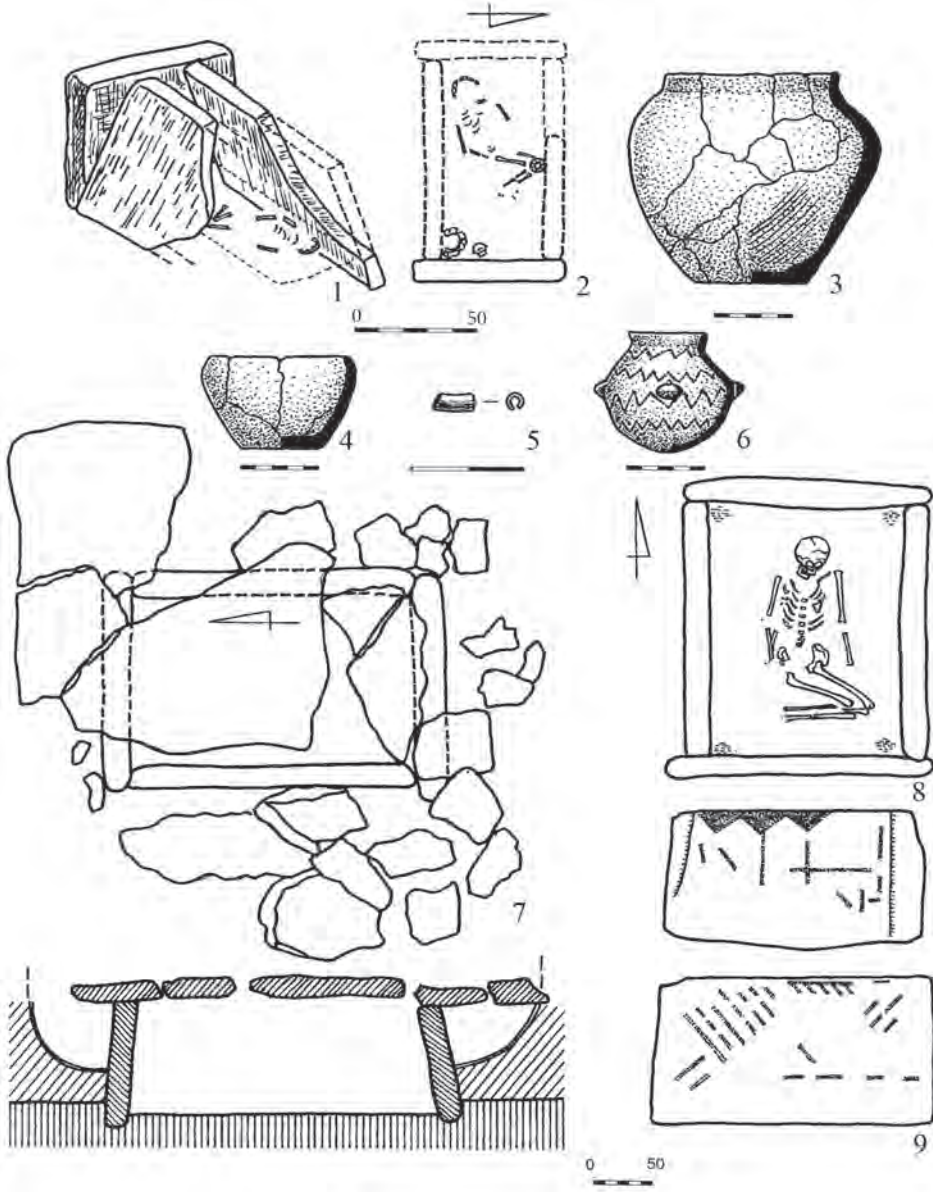


Fig. 4. Burial of Budzhak culture in stone cist graves: 1-6 – Baranovo 1/9 (1, 2 – stone cist (tomb), 3, 4, 6 – vessels, 5 – copper necklace); 7-9 – Katarzhyno 1/1 (7, 8 – stone cist (tomb), 9 – tile frescoes) [Ivanova *et al.* 2005]

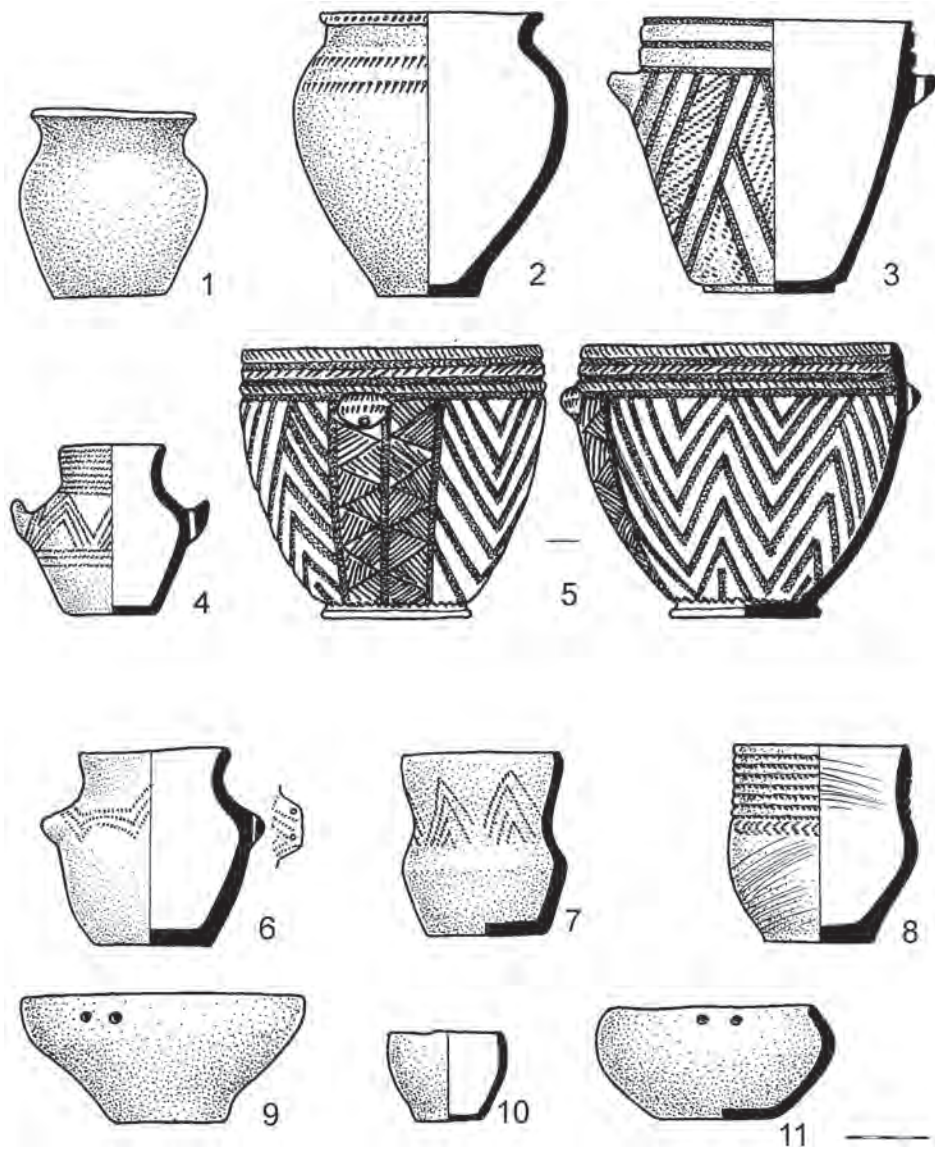


Fig. 5. Main Budzhak culture ceramic forms from burials: 1 – Scherbanka 1/7; 2 – Novogradkovka 1/4; 3 – Sergeevka 11/7; 4 – Liman 3A/30; 5 – Semenovka 12/2; 6 – Kubey 1/16; 7 – Trapovka 4/5; 8 – Trapovka 6/20; 9 – Primorskoe 1/34; 10 – Olănești 1/14; 11 – Hagimus 2/17 [Ivanova 2013]

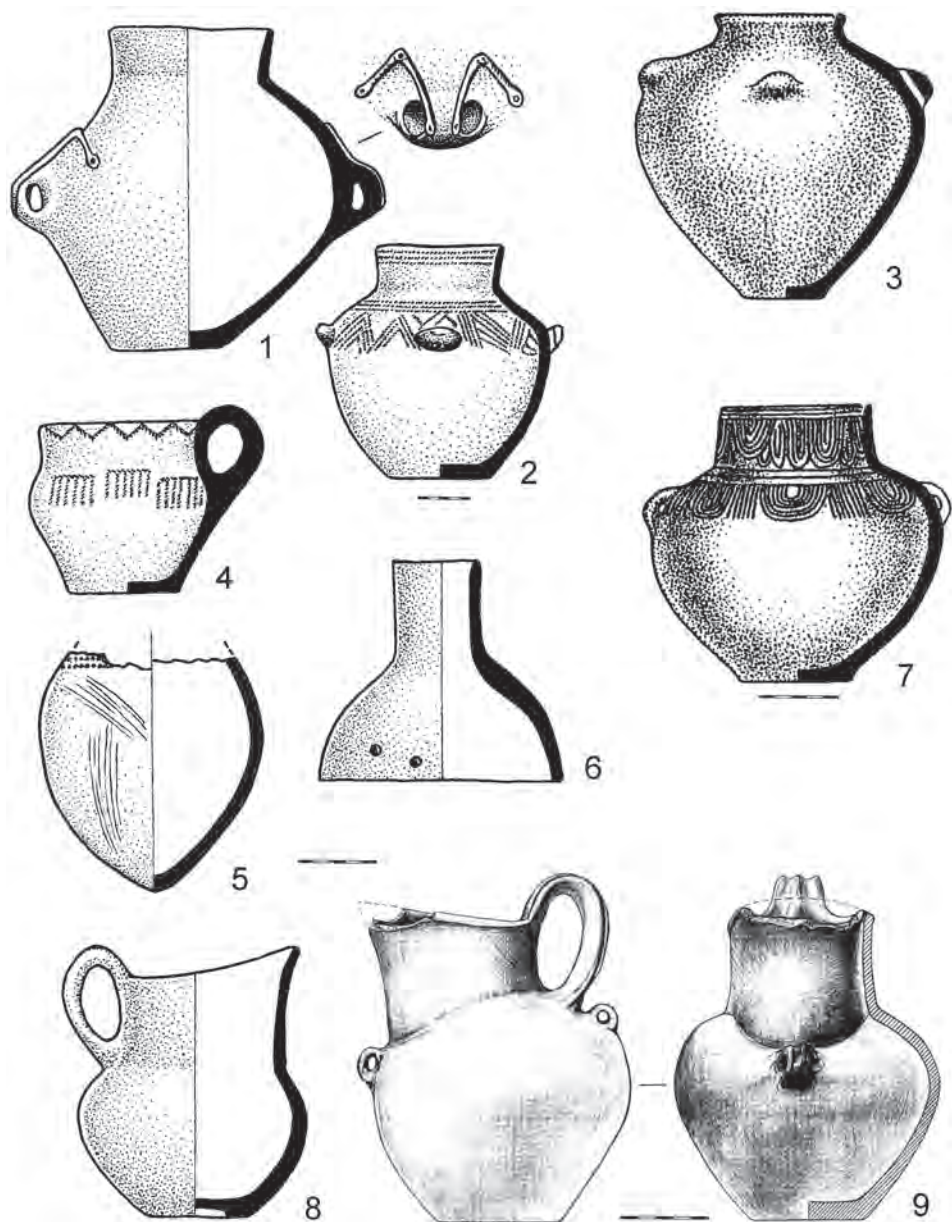


Fig. 6. Rare and imported ceramic forms in Budzhak culture graves: 1 – Gradeshka I, 5/11; 2 – Gradeshka I, 5/11; 3 – Corpaci 2/13; 4 – Olănești 1/28; 5 – Sergeevka 1/10; 6 – Novogradkovka 1/10; 7 – Corpaci 2/7; 8 – Glubokoe 2/11; 9 – Matroska, devastated barrow [Ivanova 2013]

rose and yellow hues to dark-grey. The surface of some kind of vessels is covered with engobe.

The main kinds of vessels are pots (Fig. 5:1, 2), “Budzhak jars” (Fig. 5:3, 5), amphorae (Fig. 6:1-3, 7), amphora-like vessels (Fig. 5:4, 6), beakers and beaker-like vessels (Fig. 5:7, 8), bowls (Fig. 5:10, 11), cups (Fig. 5:9). Round-bottomed vessels (Fig. 6:5), jars, cups (Fig. 6:4) and arkoses (Fig. 6:8, 9) were less common. Apart from the pottery, burials contained tools and weapons (Fig. 7): stone and flint axes, copper and bronze knives and awls and jewellery made of silver, copper, gold and bone (Fig. 8).

To a large extent, it is the pottery that allows identifying the directions of the Budzhak tribes’ relations and contacts. Some of the vessels have parallels in terms of their shapes and styles in various cultures of the late Eneolithic – Early Bronze Age in south-eastern and central Europe (Fig. 9:10). *At the early stage* we are able to reconstruct the relations in two main directions: eastbound (with tribes of the Yamnaya cultural-historical area) and westbound (with cultures of the Carpathian – Balkan Region). In the late Eneolithic and the early Bronze Age, the same categories of pottery – amphorae, beakers and askoses – occurred both in the Balkan – Danube Region and the Budzhak culture. It is possible to speak about similarity of some forms with vessels of the Coțofeni, Cernavoda II and Zimnicea cultures (Fig. 9). Some elements of decoration of the Budzhak pottery, as well as most of the stone axes, have parallels in the Ezero and Ezerovo II cultures. The connection between the two cultures is reflected by a group of amphorae that have their analogies in the Globular Amphora culture [Szmyt 1999]. *At the late stage* the Budzhak population, probably, made connections with synchronous cultures of the Carpathian basin. The Budzhak pottery complex displays influences of the Glina III – Schneckenberg, Makó-Kosihý-Čaka, Somogyvár-Vinkovci (Fig. 10) cultures. Some elements of pottery from Budzhak graves of that period have parallels with several cultures at the same time and that is not surprising. Machnik included those cultures into the so-called “European civilization of the Early Bronze Age”, while the proximity of their pottery complex (identification of some types of pottery that were common in that horizon) and similarity of metal artefacts is one of the distinguishing features of that entity [Machnik 1991: 174–181].

Some of the later amphorae are similar to those of the Makó-Kosihý-Čaka culture² (e.g., Kamenka 3/13, 6/18, etc.). In that context, it is interesting to compare an amphora from the Battonya settlement of that culture [Vollman 2009: 284, Plate 2:12] with an amphora from Kamenka 3/13 (Fig. 14:20). Apart from two loop-like handles both amphorae have an additional protrusion; however, it is located at the amphora’s neck in Battonya and on its body in Kamenka; in the latter case it looks like a typical handle with a vertical through hole, which has been known to occur on Budzhak jars and small amphorae. An amphora from Sărăteni 2/10 (Fig. 14:18)

² I would like to thank Professor Jan Machnik for drawing my attention to this.

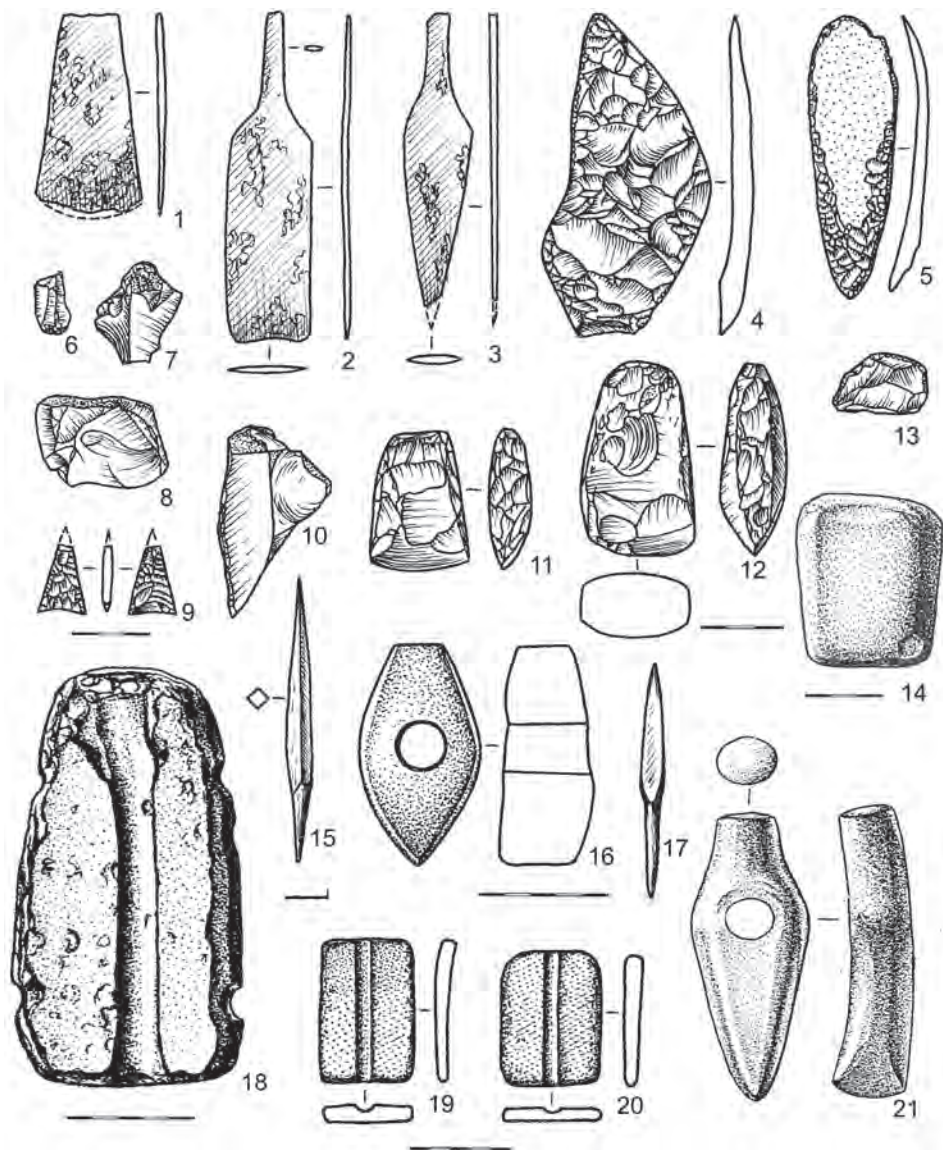


Fig. 7. Work tools from graves of Budzhak culture: 1 – Alkaliya 35/6, pick, adze 2 – Taraclia II, 10/19, knife-razor, 3 – Frikatsey 4/12, knife-dagger, 4 – Utkonosovka 1/6, knife-dagger, 5 – Kholmское 2/8, sickle (knife for harvesting), 6 – Nagornoe 14/16, knife, 7 – Vishniovoe 17/43, knife for carving wood, 8 – Vishniovoe 1/43, wood saw, 9 – Congaz 11/5, arrow, 10 – Chaush 20/2, shave, 11 – Kholmское 5/14, axe, 12 – Grigorevka 1/10, axe, 13 – Vishniovoe 17/43, scraper, 14 – Schevchenkovo 3/11, pestle for copper ore, 15 – Brăviceni 7/2, awl, 16 – Svetlii 3/25, axe, 17 – Hlinaia 1/1, arrow blades, 18 – Chervonyi Yar I 1/6, tools for straightening arrow shafts, 19, 20 – Olănești 6/2, tools for straightening arrow shafts, 21 – Alkaliya 5/6, axe (1-3, 15 – copper/bronze, 4-13 – flint, 14, 16, 18- 21 – stone, 17 – bone) [Subbotin 2003]

is similar to the vessels of the same kind from the Somogyvár-Vinkovci culture [Kalicz-Schreiber 1989: 281, Fig. 3:16].

Researchers note the arrival of metal to the North-Western Pontic Region from the Ezero metallurgical source [Kamenski 1990]. The proliferation of silver objects in south-eastern Europe was linked with the Yamnaya tribe migration to the area [Jovanovich 1994]. However, the sources of silver were probably located in the Transylvania. Possibly, Transylvanian copper and poly-metal ores were used, given that we know of natural bronze deposits in the area [Duffy 2010]. The finds of Budzhak pottery in Romanian Moldova and Dobrogea [Simion 1991] confirm the fact that the westward proliferation of the Yamnaya cultural-historical entity should be primarily connected with the migration of the Budzhak population. An indirect proof of that is the geographic location of the North-Western Pontic Region.

1. CONTACTS AND CONNECTIONS WITH CORDED WARE CULTURES: EARLY STAGE

Judging by the finds, contacts with the Corded Ware cultures had been already established in the first half of the 3rd mill. BC (Fig. 11). The early-stage pottery includes two beakers (Butor 9/3, Trapovka 6/20), which, most probably, may be referred to Horizon A³ (Fig. 13:2, 3). The same common European horizon may include a beaker from Myrne 1/12⁴ (Fig. 13:1). According to Włodarczak and Koško, most of the amphorae, found in the Budzhak culture area, were connected to the early stage (2800–2600 BC) (Fig. 14). Some items with a spherical body also have their parallels with Horizon A (Fig. 14:2, 3, 14), others – with later groups of the Corded Ware, the Bohemia-Moravia and the middle German cultures (Fig. 14:1, 6, 12). Of particular interest are so-called “oval” amphorae with relief décor on the handles and the body in the form of rolls with incisions (Fig. 14:5, 15, 19).

This kind of amphorae was not common, but it still occurs in southern areas of the Corded Ware culture and its origin is believed to be connected to the Carpathian Basin culture circle. Włodarczak explains the emergence of innovations in the southern areas of the Corded Ware culture (genesis of the barrow ritual, proliferation of individual graves and some other elements of the material culture, in particular, “oval” amphorae, as compared with the spherical “Thuringia” amphorae) by the absorption of new ideas from the Carpathian basin and the Northern Balkans District. The transformations under way in that territory were greatly influenced by

³ I would like thank Dr. P. Włodarczak for his help in the identification of cultural parallels and the chronological position of those beakers and a range of vessels of the Budzhak culture.

⁴ I would like to thank Professor Jan Machnik for defining the chronological position of this vessel.

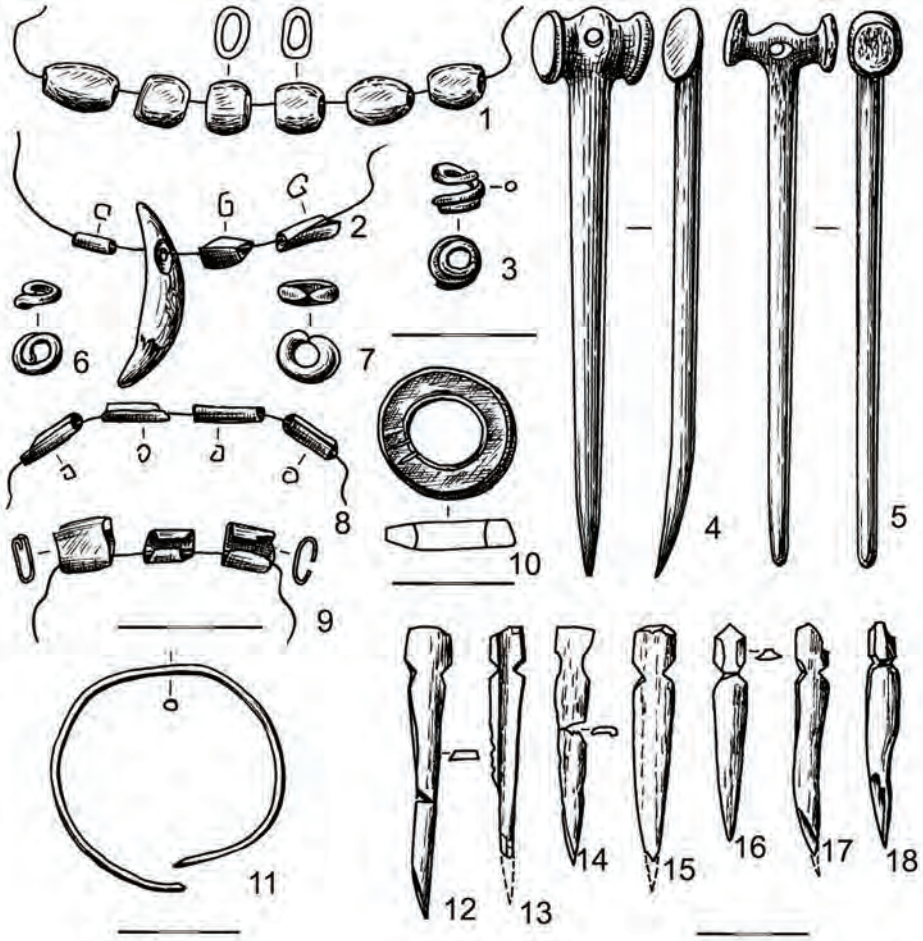


Fig. 8. Bone and metal ornaments, artefacts from Budzhak culture burials: 1 – Novoselitsa 19/2; 2 – Nerushay 10/14; 3 – Yasski 1/18; 4 – Nikolskoe 7/28; 5 – Starye Beliary 1/14; 6 – Gura Bîcului 3/13; 7 – Orhei (Orgeev) 1/2; 8 – Semenovka 8/15; 9 – Semenovka 2/2; 10 – Dobroaleksandrovka 1/5; 11 – Răscăieții Noi 1/11; 12–18 – Glubokoe 1/21 (1,4,5, 12-18 – bone; 2 – copper, beast of prey tooth; 3,7 – silver; 6,8,9 – copper/bronze; 10 – lead [Subbotin 2003]

the Yamnaya tribes, which served as a transit environment that ensured proliferation of innovations [Włodarczak 2010: 305]. The Yamnaya population moves far westwards, Yamnaya graves bearing local features (Vucedol) are known in Gönyü in the West of Hungary, Neusiedl-am-See in eastern Austria; Essling near Vienna and Bleckendorf, Saxony-Anhalt [Harrison, Heyd 2007; Heyd 2011].

The search for analogies to the so-called “corded” (or “ovoid”, “oval”) amphorae from burials of the Budzhak culture demonstrated the complexity of a univocal

solution of the problem. The point is that the type of pottery in question is typical not only for the Corded Ware cultures but is also broadly represented in cultures of the Balkan – Danube Region. Analogies and handles of some amphorae have been found there (Fig. 14:5, 8). A visual study of available items of that type of amphorae allows speaking about various technological methods and, hence, a possibility that some of them are of a different origin.

Some amphorae resemble pottery of several cultures (Cernavodă II, Corded Ware culture), while comparing others is rather conditional due to obvious differences. These kinds of amphorae have their parallels not only in the Corded Ware culture, but also in the cultures of the Carpathian hollow: Makó-Kosihý-Čaka (Kamenka 3/13, 6/18, Trapovka, b. 1), in the central Balkan area – Vinkovci (Sarateny 2/10). Most probably, we may speak about local (imitation) production of the majority of amphorae, which have their analogies in cultures of south-eastern and central Europe, mostly in the Balkan – Danube Region. Manifestations of that include the decoration of amphorae with a plastic ornament and in the shape of handles and in the combination of various cultures' elements in a single object.

Of particular interest is an amphora from Trapovka 1/18 (Fig. 14:15), made in accordance with Corded Ware traditions but having a slightly asymmetric body and a slant rim, which makes it related to askoses known in the Lower Danube Region's cultures. The vessel demonstrates an original combination of several cultural traditions; probably, it was locally produced. On some amphorae, there were three (Kamenka 3/13) or four handles (Gradiška I, 5/11) instead of two. In these cases the extra handles were similar to typical "Budzhak" handles (pseudo-tunnel and tang-like), which indicates local production of those amphorae. An amphora with four handles (two of them pseudo-tunnel) was found in 2013 during the excavations of the Hlinaia burial mound in the Dniester Region, Moldova.⁵

Amphorae of elongated proportions occasionally occurred in complexes of the Corded Ware culture [Buchvaldek 1958]. Nevertheless, the shape of the body of the amphora and its decoration style are an important chronological feature. The early stage (and the "common European horizon of the Corded Ware culture") is characterized by the proliferation of amphorae with a spherical body. Amphorae with an elongated body belong to a somewhat later time; Buchvaldek connects their origin with cultures of the Lower Danube and identifies a special "Danube type" with its distinguishing relief (rolled) ornament, which is rather common in synchronous cultures of the Lower Danube [Buchvaldek 1997: 182]. Włodarczak points to the fact that "oval" amphorae had existed since the Early Bronze Age practically throughout the entire Balkan – Carpathian basin, but in the Corded Ware Region they were found only in the areas adjacent to the proliferation of the Yamnaya culture, i.e., in the Transnistria and the southern groups: Bohemia, Moravia and Lower Austria.

⁵ I would like to thank the authors of the excavation V. Sinik, S.N. Razumov and S.D. Lysenko for this information.

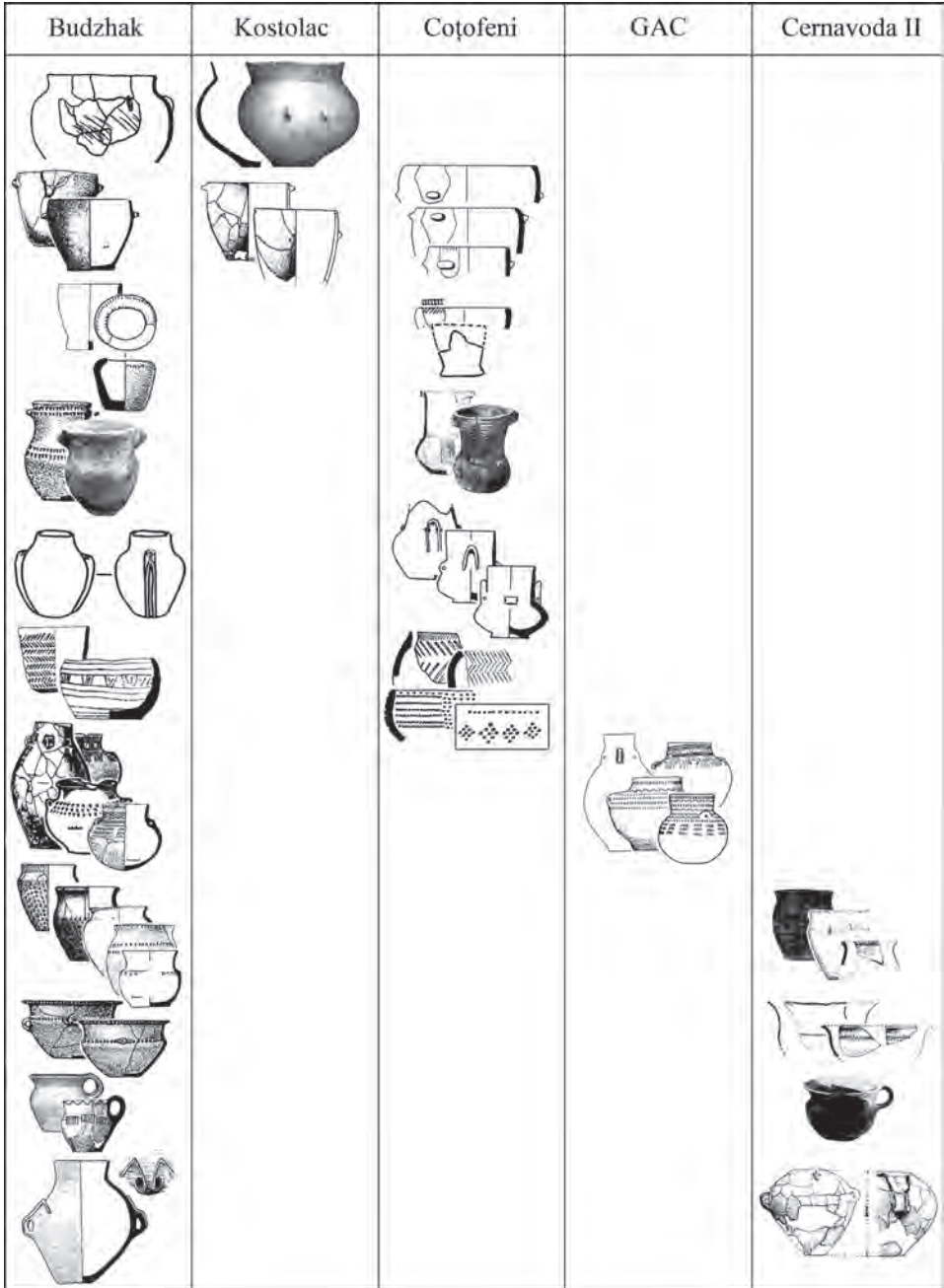


Fig. 9. Analogies in Budzhak culture ceramic ware and Carpathian-Danube cultures: 3000 – – 2500 BC


























Budzhak culture	Schneckenberg-Glina III	Makó-Kosihy-Čaka	Samogyvár-Vinkovci	Balkan-Danube & Prut-Carpathian regions
				
				
				
				
				
				
				
				
				

Fig. 10. Analogies in Budzhak culture ceramic ware and Carpathian-Danube cultures: 2500 – 2200 BC























Budzhak culture	A – Horizon	CWC – Moravia group	CWC – Mittelbe-Saale group	CWC tradition
				
				
				
				
				+
				
				+
				
				+
				
				

Fig. 11. Ceramic ware from Budzhak culture inhumations and its analogies in Corded Ware culture: 3000 – 2500 BC








Budzhak culture	CWC – Moravia group	CWC – Mittelbe-Saale group	CWC – Subcarpatian cultural region	CWC tradition
				+
				+
				
				+
				+
				
				
				
				+
				+
				+

Fig. 12. Ceramic ware from Budzhak culture inhumations and its analogies: 2500 – 2200 BC

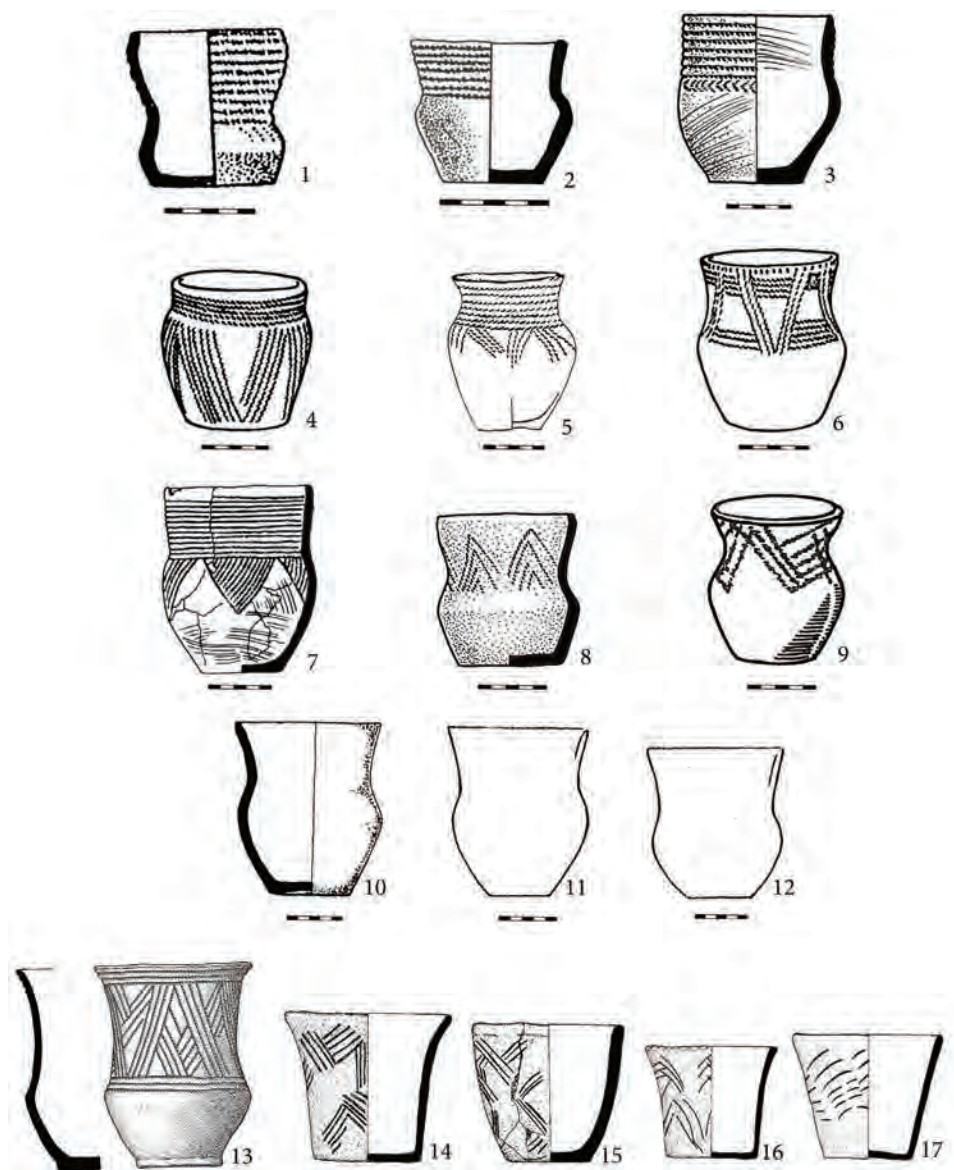


Fig. 13. Beakers and beaker vessels of Budzhak culture (1–12) and Ceramic Ware culture from Germany (13) and Denmark (14–17): 1 – Mirnoe 1/12; 2 – Butor 3/9; 3 – Trapovka 6/20; 4 – Bashtanovka 7/21; 5 – Kurchy 3/9; 6 – Bashtanovka 7/12; 7 – Kholodnaya balka 1/13; 8 – Trapovka 4/5; 9 – Yefimovka 9/17; 10 – Ogorodnoe III, 1/16; 11 – Yasski 5/24; 12 – Beliaevka 1/32; 13 – Taubertal; 14, 15 – Kongehajem; 15 – Tottrup; 17 – Skivum [after 1, 11, 12 – Alekseeva 1992; 2 – Sinika, Razumov, Telnov 2013; 3, 8 – Subbotin *et al.* 1995; 4, 6, 9 – Shmagliy, Cherniakov 1970; 5 – Toshev 1992; 10 – Subbotin *et al.* 1984; 13– Dresely 2004; 14–17 – Hübner 2005]

At the same time the researcher, having identified the “Danube way”, also noted a certain influence of the Yamnaya culture on the formation of a pottery complex in some groups of the Corded Ware culture. The Yamnaya population served as the intermediary that enabled the Corded Ware communities to absorb the types of amphorae that were typical for Carpathian cultures, as well as some elements of the funeral ritual. The Yamnaya influence is the most visible in the Moravia group [Włodarczak 2010: 302].

In addition to parallels in the group of large amphorae, some similar elements, in the view of Włodarczak, could be traced among small amphorae and amphora-like vessels. The stylistics of an amphora-like vessel from Olănești 1/15 (Fig. 14:25) is similar to that of vessels of the middle German group of the Corded Ware culture. Corded Ware traditions could also be traced in the décor of small amphorae from Gradiška I, 5/1 (Fig. 14:22), Mykhailovka 3/6 (Fig. 14:23), Nikol'skoye 16/16 (Fig. 14:24). The amphora from Gradiška I, 5/1 and a fragment of an amphora from Curci 1/6 were of terracotta colour and polished; their shape and décor are comparable with central European samples.

An amphora-like vessel from Purcari 1/28 (Fig. 14:21) is similar to the vessel from the late Corded Ware burial Viktorov, b. 8 [Machnik 1960: 69–72]. In its turn, it shows similarity with vessels from the territory of middle Germany; the complex of Abtsbessingen, containing similar vessels, is dated within the range of 2600–2500 BC: KI-4139, 3960 + 85 BP [Dresely, Müller 2001: 310, Fig. 17]. Hence, it is quite acceptable to date the Purcari vessel to the mid-3rd mill. BC or some time later. It is worthy of note that some burials bearing Yamnaya traces have been found in central Europe on the territories of the contemporary Czech Republic, Slovakia, eastern Germany and Poland (Fig. 15). However, here these graves (about two dozen all in all) do not comprise any single cultural group and were found in burial mounds of different cultures – the Corded Ware, the Funnel Beaker, Nitra and Únětice [Bátora 2006: 190].

Therefore, we may speak about parallels between pottery complexes of the Corded Ware and the Budzhak cultures. Reproductions, borrowings and imitations in the Budzhak pottery reflect the presence of certain connections and impulses from the Corded Ware cultures. The production and decoration technique of some of the amphorae found in the North-Western Pontic Region (clay, processed surface, extra handles, similar to those present on the “Budzhak jars” and amphora-like vessels) point to syncretism, the emergence of local traditions and the Corded Ware culture.

In addition to pottery, there are other goods reflecting connections with the Corded Ware culture. Those include polished stone axes⁶ – Berezino 1/2 (Fig. 16:11), Slobozia 1/19 (Fig. 16:12). Usually researchers of the North-Western classed all axes, found in Budzhak graves, to the Corded Ware culture, which is incorrect.

⁶ I would like to thank Dr. V. Klochko for their definition.

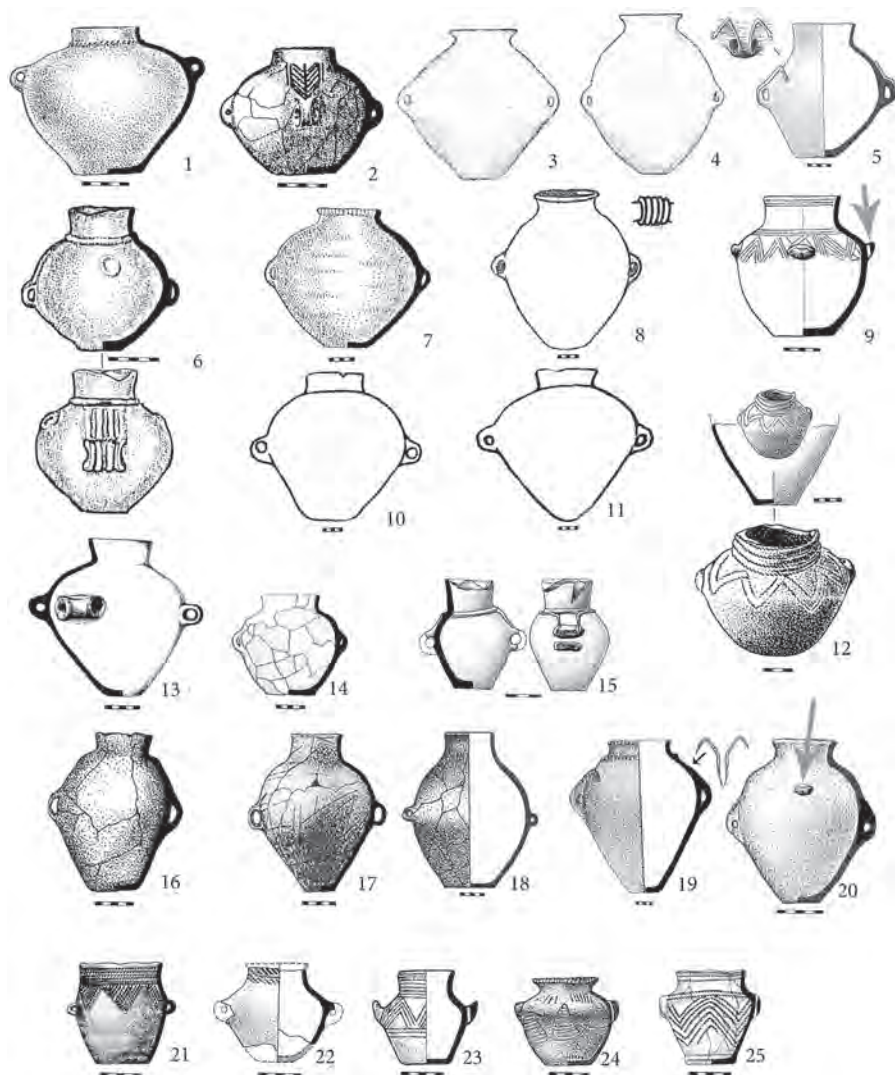


Fig. 14. Amphorae (1 – 20) and amphorae-like vessels (21 – 25) from burials of Budzhak culture, with analogies in Corded Ware culture: 1 – Gura Galbenei 2/5; 2 – Olănești 14/1; 3 – Bursuceni 1/19; 4 – Bursuceni 1/14; 5, 9 – Gradeshka I, 5/11; 6 – Căușeni 1/4; 7 – Căușeni 1/18; 8 – Yefimovka 10/7; 10 – Ostrovnoe 2/12; 11 – Yasski 5/26; 12 – Belolesie, barrow 1, fill; 13 – Ogorodnoe III, barrow 1, fill; 14 – Iabloana 1/1; 15 – Trapovka, barrow 1, fill; 16 – Taraclia 10/19; 17 – Cazaclia 3/13; 18 – Sărăteni 2/10; 19 – Camenca 6/18; 20 – Camenca 3/13; 21 – Purcari 1/28; 22 – Gradeshka I, 5/1; 23 – Mikhailovka 3/6; 24 – Nikolskoe 16/16; 25 – Olănești 1/15 [after 1 – Dergachev 1973; 2, 21, 25 – Yarovoy 1990; 3, 4 – Yarovoy 1985; 5, 9, 22 – Subbotin *et al.* 1995; 6, 7 – Chebotarenko *et al.* 1989; 8 – Shmagliy, Cherniakov 1985; 10, 11 – Alekseeva 1992; 12, 15 – Subbotin *et al.* 1995; 13 – Subbotin *et al.* 1984; 14 – Yarovoy 1983; 16 – Agulnikov 2002; 17 – Agulnikov 2008; 18 – Levitki *et al.* 1996; 19, 20 – Manzura *et al.* 1992; 22 – Subbotin *et al.* 1995; 23 – Subbotin 2000; 24 – Agulnikov, Sava 2004]

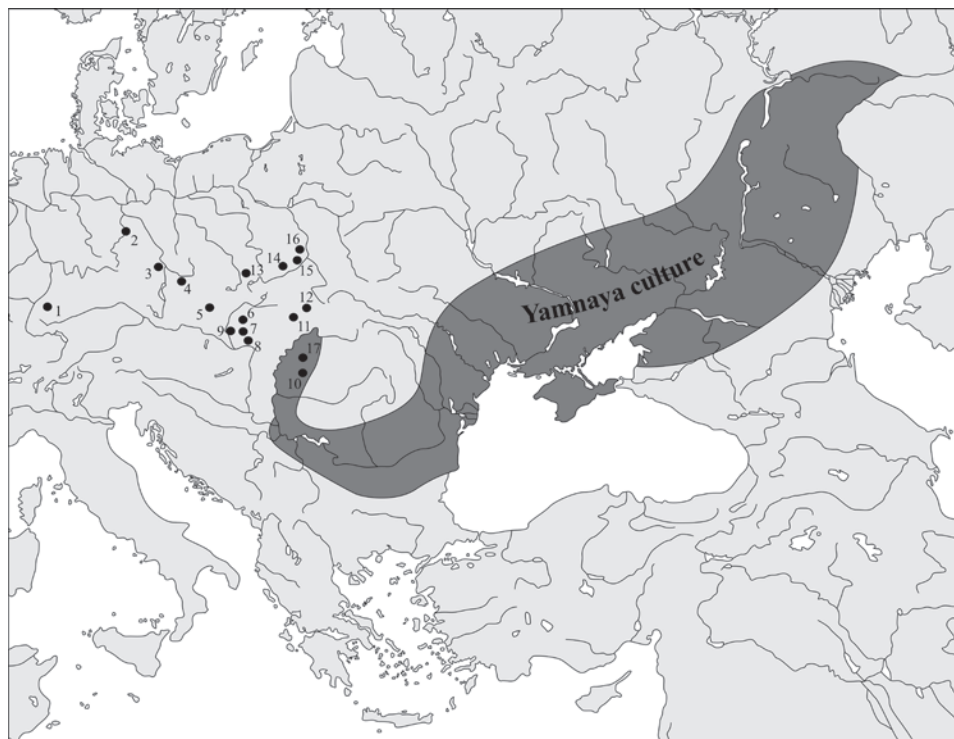


Fig. 15. Localisation of central European cemetery complexes with elements of Pit Grave culture [Bátora 2006]

Flint axe-adzes from the territory of the North-Western Pontic Region (Fig. 16:1-10) are not identified clearly enough and they may be provisionally referred to either the Globular Amphorae or the Corded Ware culture [Szmyt 2000]. Razumov links their origin with the Corded Ware cultures [Razumov 2010; 2011].

2. CONTACTS AND CONNECTIONS WITH CORDED WARE CULTURES: LATE STAGE

Connections with Corded Ware cultures continued in the second half of the 3rd mill. BC (Fig. 12). There are two burial sites that contain sets of weapons of the Corded Ware culture: Purcari 1/38 and Alcalia 33/3 (Fig. 17). The first (Fig. 17:1) is believed to be the evidence of close contacts between the Corded Ware and

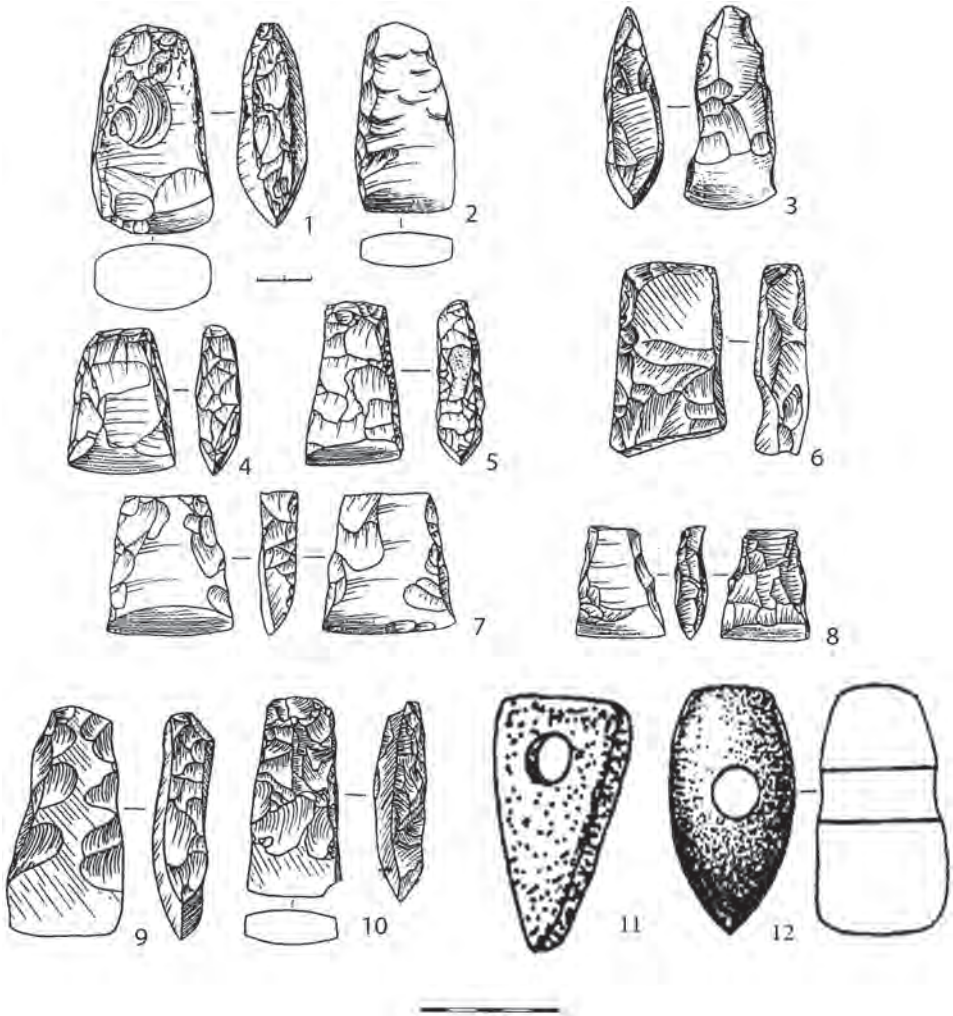


Fig. 16. Stone and flint axes- analogies in Corded Ware culture (from burials of Budzhak culture): 1 – Grigorievka 1/10; 2 – Purcari 1/4; 3 – Semenovka 8/13; 4 – Kholmokoe 5/14; 5 – Mayaki 9/1; 6 – Gavanoasa 9/2; 7 – Aleksandrovska 1/16; 8 – Alkaliya 33/3; 9 – Roşceni 1/13; 10 – Nikolskoe 11/7; 11 – Berezino 1/2; 12 – Slobozia 1/19 [after 1-10 – Subbotin 2003; 11 – Alekseeva 1992; 12 – Agulnikov, Sava 2004]

Yamnaya (in this case, the Budzhak) cultures of the late stage [Klochko 2006: 67]. The collection of weaponry present in the second burial (Fig. 17:2) may also be considered to belong to the late Corded Ware, although the flint axe is somewhat shorter than axes of the Corded Ware type and the black diorite mace resembles Catacomb objects [Klochko 2006: 70]. All kinds of weapons, found in the Budzhak

graves, are mostly located in the Lower Dniester area and in the Budzhak territory that is adjacent to the sea. The presence of weapons in the Budzhak graves can be explained in different ways: by the tension that emerged in relations between different groups of the population and by the borrowing of such practice from the Corded Ware environment, contacts with which were rather visible.

Decoration of pottery in some cases may also point out to connections between the Budzhak and the Corded Ware cultures. The borrowing of “alien” ornamental compositions and translating them into traditional pottery have been known to occur in various cultures of the Bronze Age. Another way of adopting foreign cultures’ traditions of vessel decoration – altering the ornamentation technique while preserving the previous ornamental schemes – was registered in the Balkans [Katincharov 1987: 173].

Some borrowings of this kind can be also found on Budzhak pottery. Hence, the motif represented by shaded triangles – Semenovka 8/18 (Fig. 18:1), is similar to the pottery decoration in Halle (Saale) Region (Saxony – Anhalt State) (Fig. 18:13), as well as in Bohemia (Fig. 18:23), although individual finds of vessels with similar ornaments (but of different shapes) were registered in the Sokal ridge (Fig. 18:25, 26), where they represented imported goods [Machnik 2009].

Stylistics in the decoration of some middle German beakers [Matthias 1982: Plate 54: 10; 109. 6] are similar to those of the North-Western Pontic Region, for example, a vessel from the Kholodnaya Balka 1/13 (Fig. 13:7), on which horizontal marks of a cord (arranged in a spiral) are located on the rim and shaded triangles with their tops up are located on the body. According to Włodarczak, the influence of late cultures of the Corded Ware circle can be traced on the beakers from Curci 3/9 (Fig. 13:5), Bashtanovka 7/12 (Fig. 13:6), Yefimovka 9/17 (Fig. 13:9). The local production of these beakers is indicated not only by the vessel’s shape, but also by the disfigured ornamental schemes, interrupted rhythm of the ornament and the horizontal frieze broken by a zigzag. However, such infringements on the standards do occur in the periphery of the Corded Ware culture. For instance, similar “non-standard” motifs with a broken ornamental rhythm were noted on beakers from the territory of the extreme western periphery of the Corded Ware culture: from the south-western part of Germany, on the Tauber River (Fig. 13:13) and from Denmark (Fig. 13:14-17). A beaker-like vessel from Bashtanovka 7/21 grave (Fig. 13:4), decorated with horizontal impressions in the ornamentation on beakers of the late group of the Corded Ware culture in Germany, according to Włodarczak [Matthias 1982: Plate 29: 7].

A variety of methods of making the cord ornament on the vessel’s surface: around the rim in the shape of a spiral (Fig. 19:1), with a single cord (Fig. 19:2), with a triple cord or a braid (Fig. 19:3-5) have been registered in the Budzhak culture. The first and the third versions have analogies in the decoration of pottery in central Germany (Fig. 19:6-10). Some researchers expected that corded ornaments would appear on Budzhak pottery under the influence of Catacomb

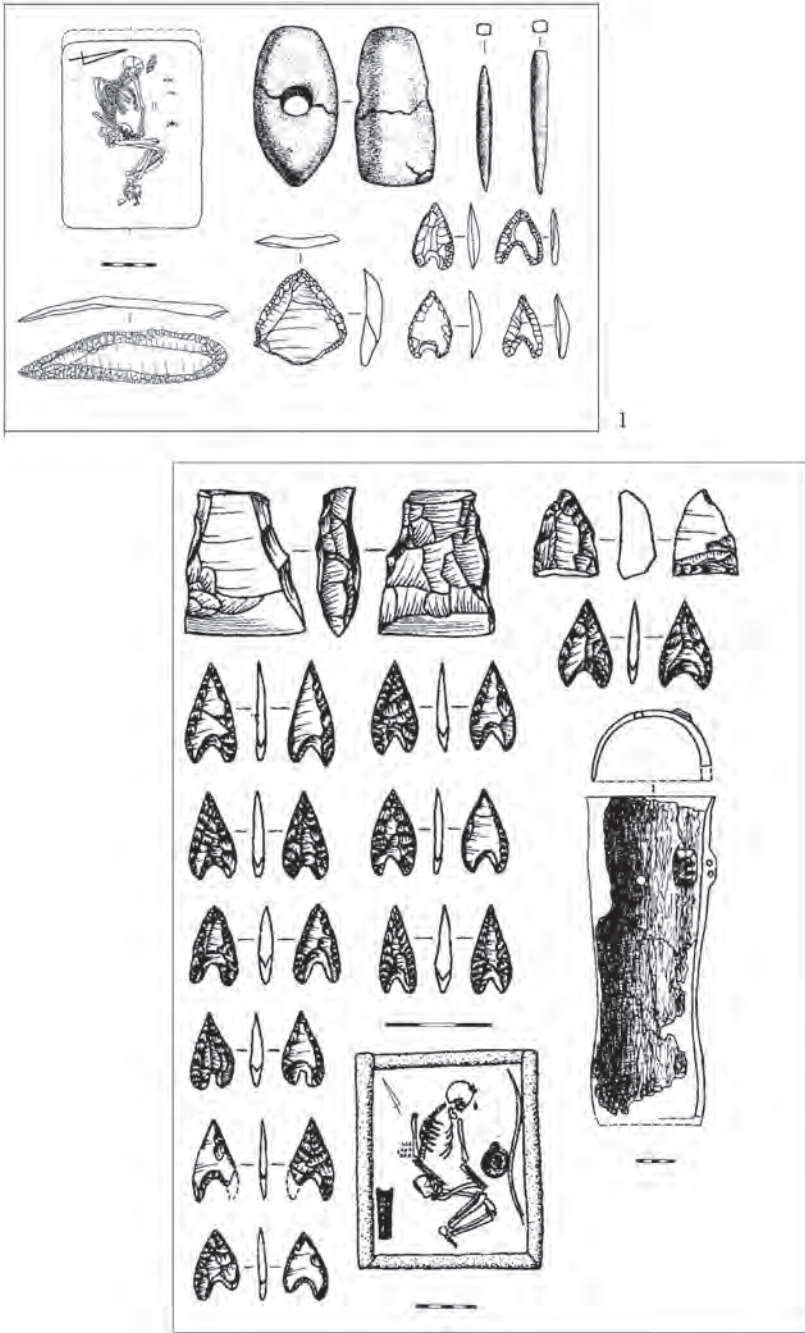


Fig. 17. Budzhak burials with grave goods that have correspondences in Corded Ware culture: 1 – Purcari 1/38; 2 – Alkaliya 33/3. [after 1 – Yarovoy 1990; 2 – Subbotin 2003]

cultures. However, the drawn ornament was predominant on Catacomb vessels of the North-Western Pontic Region and the area between the Bug and the Dnieper rivers; hence, we may assume that the ornamentation technique used for decoration of some of the vessels could be connected with the influence of the Corded Ware culture.

Włodarczak reconstructed the Danube way of westward migration of the Yamnaya tribes [Włodarczak 2010]. The routes of migration to Alfeld could be restored based on archaeological finds with the use of written sources and historic data from later epochs, e.g., about the migration of Medieval nomads to Pannonia. Pechenegs and Cumans mastered three ways from the southern Rus steppes to the central European Plain, to Hungary: the first, through the Iron Gates; the second, through the southern Carpathians in the headwaters of the Olt, Mures and Szomes rivers; the third, from the Upper Siret and Prut rivers to the Tisza [Rasovski 1993: 3].

The first two ways were connected with crossing over the River Prut, while the third way did not require crossing major water obstacles. According to Dergachev, the Yamnaya tribes got to the Middle and Upper Tisza River area on the Suchava highland road, which ran in the north of Transylvania [Dergachev 1986: 81]. Ciugudean reconstructed the movement of the Yamnaya tribes to Transylvania by the rivers of Mures and Szomes [Ciugudean 2011: 29–30]. Meanwhile, the way along the Danube or the Carpathian hollow was not the only one used in the relations between the Budzhak and the Corded Ware cultures. We may also speak about the movement towards the west (north-west). The amphorae, comparable to the Corded Ware samples, found in the north of the Republic of Moldova, marked the westward direction of the contacts along the Prut and the Dniester.

The researchers pointed out to the Dniester way [Klochko, Koško 2009: 300], which, most probably, linked the Budzhak culture and the Corded Ware culture. A burial found on the San River combined the features of the Corded Ware, Yamnaya and Catacomb cultures [Koško, Klochko, Olszewski 2012]. In this context, interesting finds were made in Yamnaya graves in the Vinnitsa Region in the Middle Dniester area (information provided by Razumov). Hence, finds in the burial mound near the village of Porohy included amphorae of various kinds – both of oval shape that had been usual for the early types of the Corded Ware culture (Porohy 2/6) and of elongated proportions, with a cut-apart little relief roller at the bottom of the rim (Porohy 1/8).

A unique amphorae handle from Sloboda Podlesna was made in the shape of a bucranium; most probably, it could be compared with handles of the ovoid amphorae from the North-Western Pontic Region and vessels belonging to cultures of the Balkan-Carpathian Region: Cernavodă III, Cernavodă II, Glina III, on which the relief roller resembles, rather schematically, bucrania. Grave Pysarivka 6/2 of the Vinnitsa Region on the Dniester contained a wooden cart [Zahoruiko *et al.* 1993]. Probably, its emergence was also connected with the Budzhak population's northward migration from the North-Western Pontic Region along the Dniester.

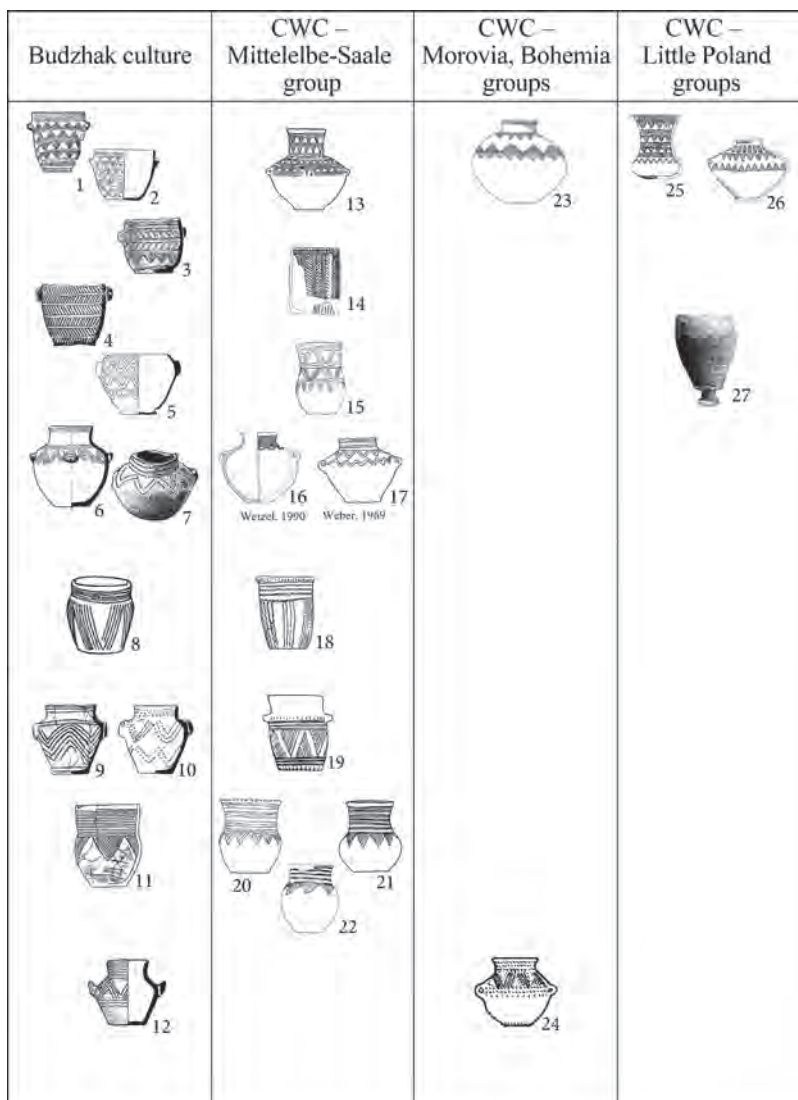


Fig. 18. Ornamental motifs on ceramics: Budzhak and Ceramic Ware cultures: 1 – Semenovka 8/18; 2 – Pohrebea 4/4; 3 – Grigorievka 1/12; 4 – Purcari 1/23; 5 – Nagornoe 14/15; 6 – Gradeshka I, 5/1; 7 – Belolesie, k. 1, fill; 8 – Bashtanovka 1/21; 9 – Olănești 1/15; 10 – Plavni 5/3; 11 – Kholodnaya balka 1/13; 12 – Mikhailovka 3/6; 13 – Saalegebiet; 14 – Gleina; 15 – Schftstadt; 16 – Pritzen; 17 – Wurtzen-Deuben; 18 – Gorsleben; 20 – Schotterey; 21 – Keuschberg; 22 – Mockerling; 23 – Marefy 1/1; 24 – Praha-Vinohrady; 25 – Werszczycast. 1/12; 26 – Klekacz 10, 1/1; 27 Złota “GrodziskoI”; [after 1 – Subbotin 1985; 2 – Toshev 1987; 3 – Subbotin 1982; 4, 9 – Yarovoy 1990; 5 – Toshev 1992; 6 – Subbotin *et al.* 1995; 7 – Subbotin *et al.* 1995; 8 – Shmaglyi, Cherniakov 1970; 10 – Andruk *et al.* 1985; 11 – Petrenko 2010; 12 – Subbotin 2000; 13, 24 – Buchvaldek 1966; 15, 18, 19, 20, 21, 22 – Matthias 1982; 14 – Witkowska 2006; 16 – Wetzel 1990; 17 – Matthias 1969; 23 – Šebela 1999; 25, 26 – Machnik 2009; 27 – Krzak 1961]

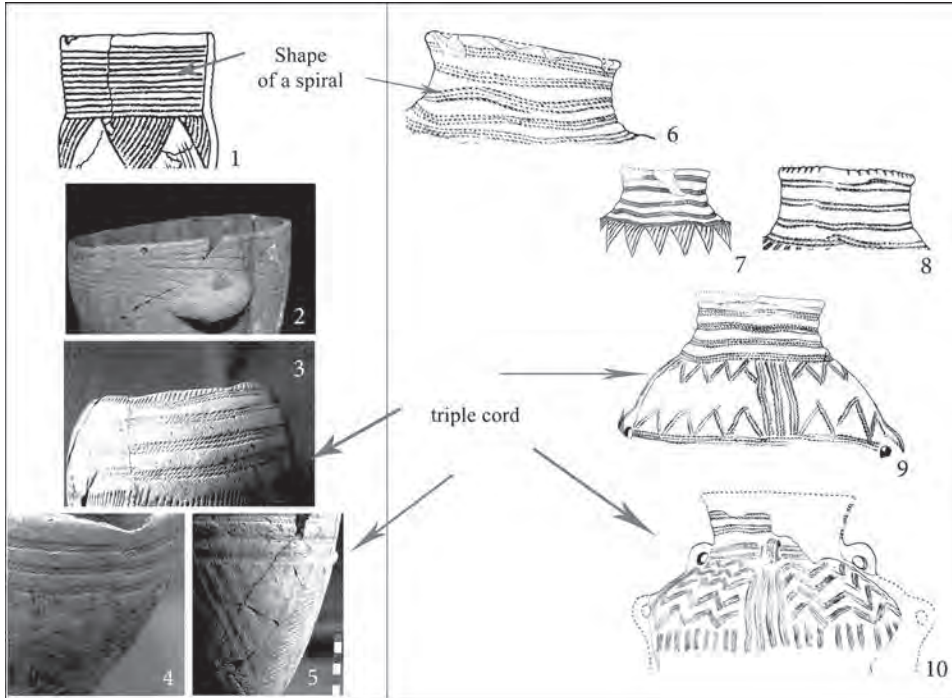


Fig. 19. Techniques for corded ornamentation application: 1-5 – Budzhak culture; 6-10 – CWC – Mittelbe-Saale group; [after 1 – Petrenko 2010; 2-4 – collections of the Museum of Archaeology in Odessa, author's photograph; 6-10 – Mattheas 1982]

The authors believe that the Dniester way linked the population of the late Eneolithic – Early Bronze Age of the North-Western Pontic Region not only with the Sokal ridge or Malopolska, where the pottery complex of the Złota culture contained vessels comparable with the pottery of the Usatovo type [Włodarczak 2008: 520]. Probably, the Budzhak population migrated westwards to central Europe across Malopolska and northern slopes of the Carpathians. The evidence of such connections could be found in the presence of Yamnaya graves in the central European area (Fig. 15), as well as in the similarity of individual shapes of pottery and ornamental motifs (Fig. 11, 12, 18-20). The possibility of using that route is confirmed by modern-time written sources. At the end of XIX century, a group of peasant wine-makers moved from the Swiss town of Vevey to the Lower Dniester area and founded the Shabo settlement (Belgorod-Dniestrovsky District of the Odessa Region). Thirty people, including women and children, accompanied by cattle, arrived in eight carts drawn by oxen and horses; they brought grape seedlings with them. Their route went through St. Gallen, Munich, Vienna and further southwards from Kraków to Lemberg, then through Chişinău to the banks of the

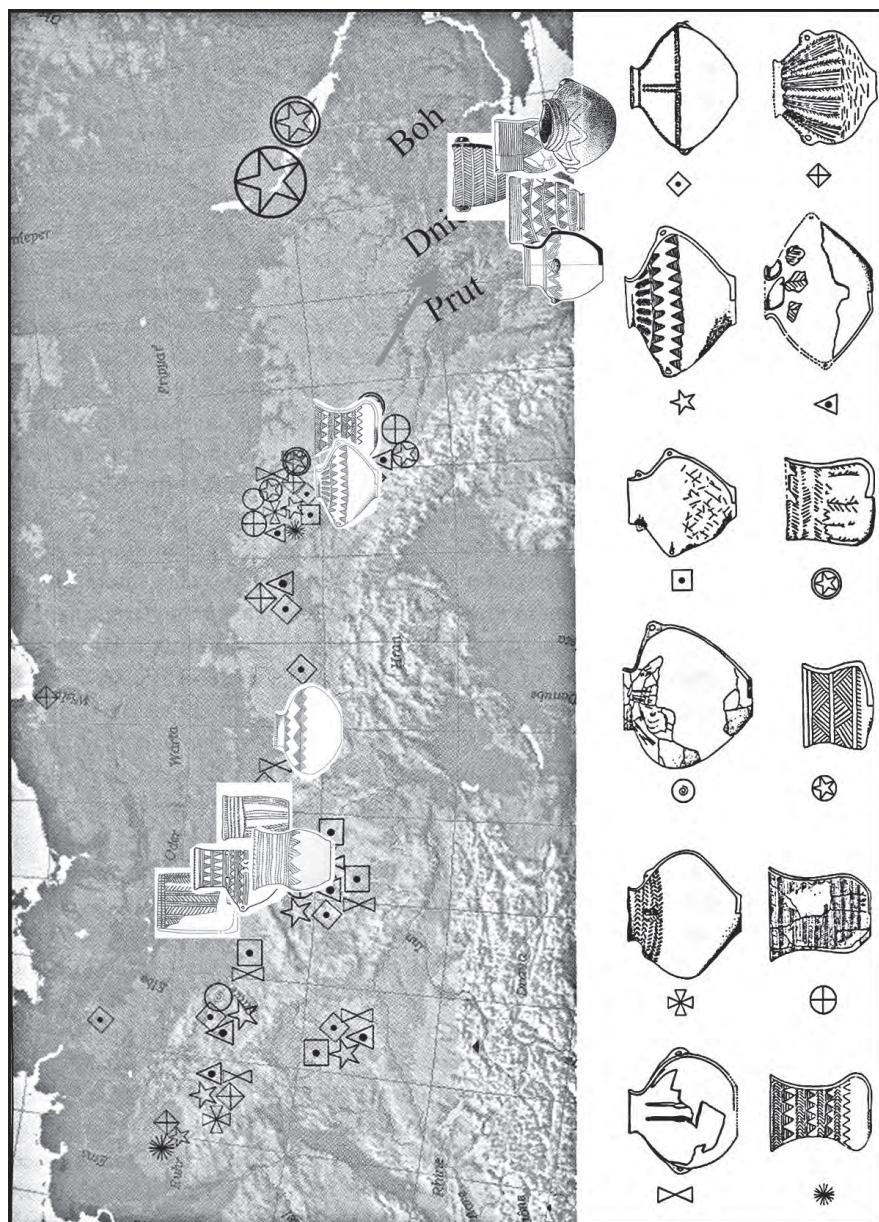


Fig. 20. Distribution of some types of pottery decoration in Central Europe and other regions [Machnik 2009, complemented by the author]

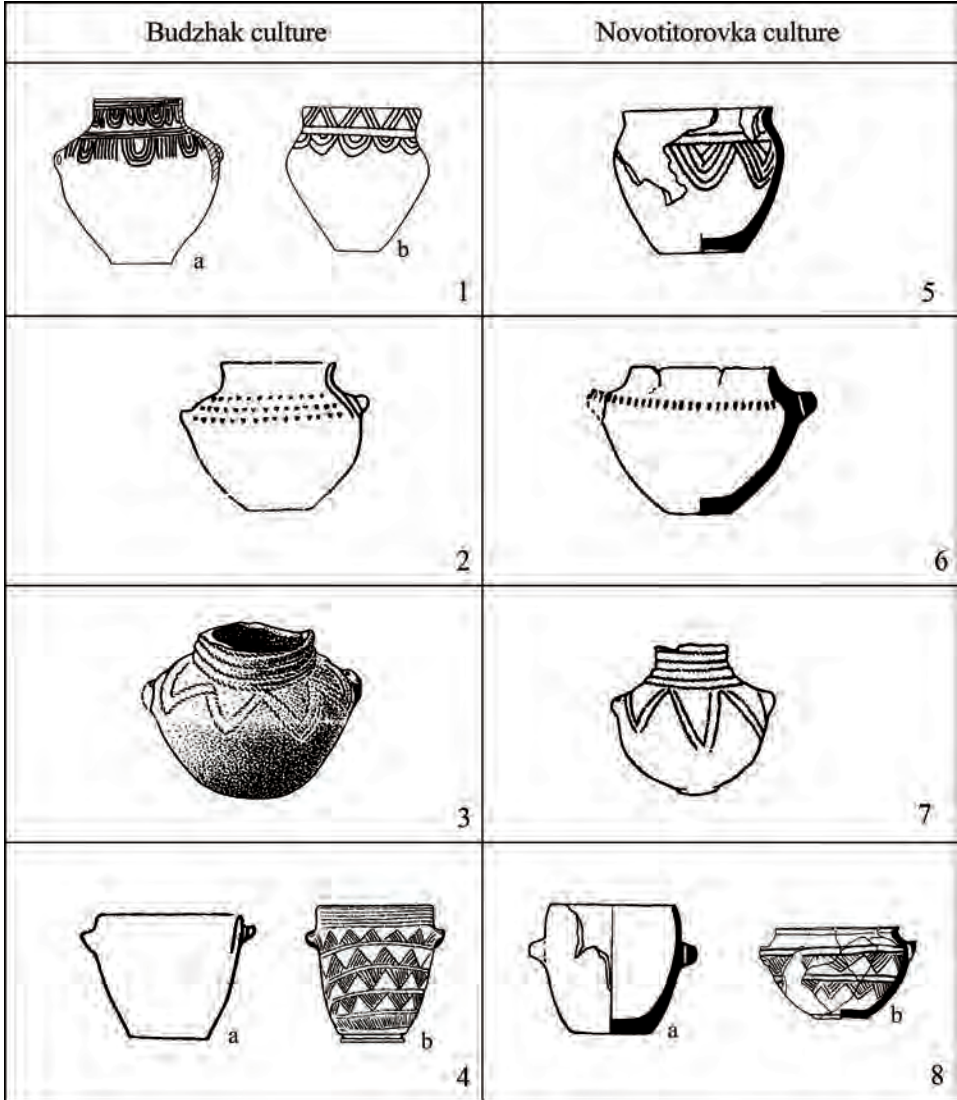


Fig. 22. A comparison of Budzhak culture and Novotitorovka culture ceramics: 1a – Corpaci 2/7; 1b – Orhei 1/3; 2 – Yefimovka 2/14; 3 – Belolesie, barrow 1 fill; 4a – Corjova 2/13; 4b – Semenovka 8/18; 5 – Briukhovetskaya II, 4/1; 6 – Briukhovetskaya II, 6/15; 7 – Ust-Labinskaya, barrow 1; 8a – Ovalnyi, inhumation 38; 8b – Lebedi I, 2/120; [after 1a – Yarovoy 1985; 1b – Popovich 2008; 2 – Shmagliy, Cherniakov 1985; 3 – Subbotin *et al.* 1995; 4a – Borziyayk *et al.* 1983; 4b – Subbotin 1985]

Dniester estuary, to the area of the future Shabo settlement. It took the migrants 3 months and 10 days to cover the distance of 2649 km.⁷

Machnik believes that the Globular Amphora population had served as kind of a barrier that blocked the proliferation and migration of other cultures and that contacts between them became possible only after the decay of the Globular Amphora culture in the second half of the 3rd mill. BC [Machnik 1979: 60]. However, the analysis of the pottery complex and the dates of some complexes indicate rather early connections between the Budzhak culture and the Corded Ware culture, which had not been encountered by the populated territories in the Pre-Carpathian Region. The evidence of that can be seen in the early types of beakers and amphorae in the North-Western Pontic Region as well as to the north of it. Possibly, those objects marked the routes connecting the Budzhak culture with cultures of the central European circle.

Arguably, these conclusions are contradicted by the absence of Yamnaya graves in the Upper Dniester area and Malopolska. Probably, one needs to refer to anthropological data in order to explain that phenomenon. Ethnologists are aware of taboos that banned the inhumation of the dead on foreign territories (the presence of hostile deities, alien ancestors, or other reasons). Given the symbolic nature of the funeral ritual, one may assume that the populations in question had different cultural traditions and different semiospheres.⁸

Toshev provided justification of his opinion that during the Bronze Age the Crimea had served as a transit territory linking the Northern Pontic steppes with the Northern Caucasus [Toshev 2007: 8]. The eastward proliferation of the Budzhak traditions shall now be considered. In this context, an interesting inhumation can be found at Istochnoye 12/5 (Fig. 21:3), which contained a Corded Ware-looking beaker [Gening, Korpusova 1989: 33], which had analogies in the North-Western Pontic Region. One should also take note of the pottery from the Crimean Yamnaya burials, which likewise resembles the Budzhak items [Toshev 2007: 43, Fig. 13:10; 44, Fig. 14:1; 45, Fig. 15. 7 *et al.*]. When analysing the Yamnaya pottery of the Steppe Ukraine, Nikolova emphasised a rather significant degree of similarity between the North-Western Pontic Region, the south of the Kherson Region and the Crimea [Nikolova, Mamchych 1997].

Taking into account all the above observations, the proliferation of a common anthropological type on those territories does not appear coincidental [Kruts 1997: 381] in a rather diverse anthropological composition of the population of the Yamnaya cultural-historical entity as a whole [Kruts 1997: 380–383; Shishlina 2007: 121–122]. Yet another part of the picture of the Budzhak culture's western and eastern connections and its possible status as a transfer medium of

⁷ The information was obtained in the Wine Culture Museum in Shabo, Odessa Region.

⁸ “The semiosphere can be understood as a system above all other semiotic formations and at the same time, one that coalesces them into a united whole. The semiosphere in itself embraces all semiotic spaces and functions as a field of interaction of sign systems of various types” [Lotman 1992: 11].

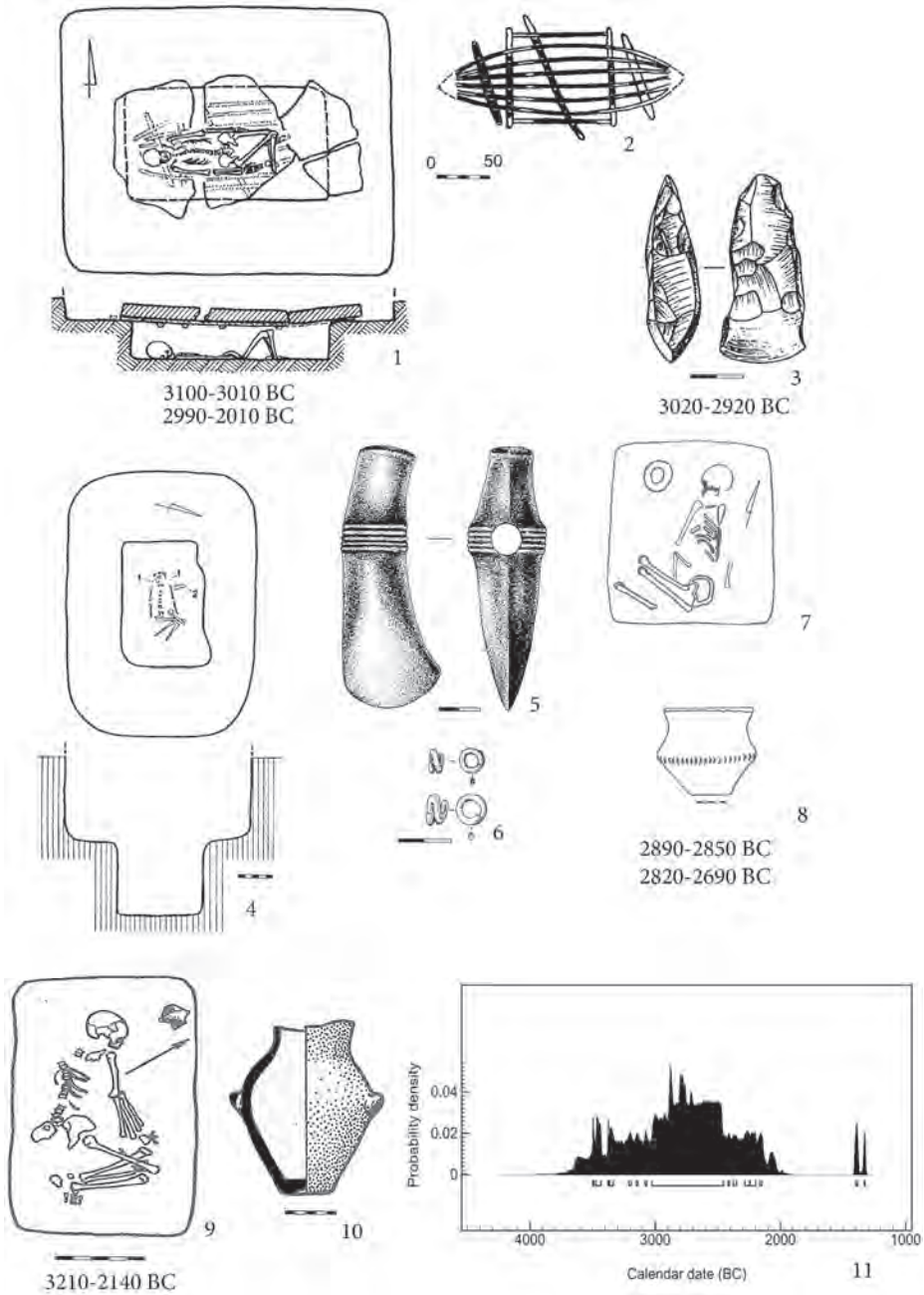


Fig. 23. Radiocarbon dating of Budzhak culture inhumations: 1, 2 – Semenovka 8/8; 3 – Semenovka 8/13; 4-6 – Baranovo 1/10; 7, 8 – Nikolaevka 8/10; 9, 10 – Semenovka 2/6; 11 – summary chart of radiocarbon dates for Budzhak culture: [after 1-3, 9, 10 – Subbotin 1985; 4-6 – Ivanova *et al.* 2005; 7, 8 – Alekseeva, Bulatovich 1990]

different cultural traditions are vessels of the Globular Amphora and the Corded Ware.

Radiocarbon dating. The project involved the identification of radiocarbon dates for several burials of the Budzhak culture.⁹ Seven dates were performed on the basis of samples of human bones and wood (Plate 1; Fig. 23:1–10). One of them appears too young (Sychavka 1/10) and, possibly, is incorrect.

The dating of a wooden cart from 2/2 (the burial itself has not been published) produced a date that is synchronous with available dates for wooden carts of the Yamnaya cultural-historical area. Almost all of them date back to the first half of the 3rd mill. BC [Nikolova 2006]. The burials of Baranovo 1/10 (with a stone axe comparable to axes of the Ezero culture), Nikolayevka 8/10 (with a beaker that had analogies in the Lower Danube area, the cernavodă II culture), Semenovka 8/8 (with a model of a wooden boat on top of the roof of the grave) and Semenovka 8/13 (with a flint axe) were linked to a rather early stage of the Yamnaya cultural-historical entity. The date of Semenovka 8/13 is probably not fully reliable and appears too old. The grave contained a flint axe, similar to Corded Ware axes; however, the date of the grave was older than the initial stage of the Corded Ware culture. Possibly, the reason was the age of the wood itself. Researchers noted before that the dates obtained for wooden samples appeared older than those obtained for bone. The burial of Semenovka 2/6, containing an amphora-like vessel, belongs to the second half of the 3rd mill. BC.

In general, all dates are comparable with the date range of the Budzhak culture (Fig. 23:11).

3. CONCLUSION

A specific feature of the cultural – historical genesis of the North-Western Pontic Region at the turn of the 4th to the 3rd mill. BC is manifested by relations of its population with a foreign cultural environment. This concerns, first and foremost, the Budzhak culture that is a component of the Yamnaya cultural-historical region. The Budzhak culture represents connections with the Carpathian and Danube, the Corded Ware and the Globular Amphora cultures. The contacts were reflected in two aspects: imports, imitations and parallels in the Budzhak pottery and the occurrence of the Yamnaya burials found in other territories. Some forms of pottery and elements of its décor are rather surprisingly similar to central European groups

⁹ An attempt to date some ceramic ware samples turned out to be unsuccessful in respect to the insufficient amount of carbon in these artefacts.

T a b l e 1

Radiocarbon dates for burials of the Budzhak culture (performed within the Polish-Ukrainian project)

1.	Baranovo 1/10, human bone	Ki -17903	4350 ± 50	1 TM 3020-2900 BC 2 TM 3100-2880 BC
2.	Nikolayevka 8/10, human bone	Ki -18044	4210 ± 50	1 TM 2890-2850, 2820-2690 BC 2 TM 2910-2620 BC
3.	Semenovka 8/8, wood	Ki -17899	4410 ± 30	1 TM 3100-3010 BC 2990-2910 2 TM 3110-2910 BC
4.	Semenovka 8/13, wood	Ki -18042	4380 ± 30	1 TM 3020-2920 BC 2 TM 3100-2910 BC
5.	Semenovka 2/6, human bone	Ki -18043	3800 ± 50	1 TM 2310-2140 BC 2 TM 2460-2120, 2090-2040 BC
6.	Yassky 2/2 (wood)	Ki -17902	4080 ± 50	1 TM 2860-2810 BC 2700-2560 2 TM 2870-2800 BC 2760-2470
7.	Sychavka 1,10, human bone	Ki -17906	3340 ± 70	1 TM 1690-1520 BC 2 TM 1780-1440 BC

of the Corded Ware culture. The analysis of the mainland culture of the Budzhak population enables us to assume the existence of contacts with the Corded Ware culture circle as early as in the first half of the 3rd mill. BC.

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