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O.V. Diachenko

CENTRAL PLACE THEORY IN ARCHAEOLOGY. DETERMINATION OF THE RELATIVE DATES AND SETTLEMENTS SIZE

Application of M. Beckmann's model of the distribution of population within the settlements hierarchy makes possible to define the number and size of settlements that are out of samples. A special application of the Central Place Theory may be useful to establish the relative dates of the known settlements and to determine their approximate size.

Keywords: central place theory, relative chronology, spatial analysis, settlement system.

The Central Place Theory (CPT) originally proposed by W. Christaller is a well-known spatial model in geographical and archaeological studies that describes the economic activities of the human communities on the level of the settlements macrostructure (groups of settlements). Analysis of the CPT application may be found in a series of works (Smith 1974, p. 168—173; Crumley 1976, p. 59—66; 1979, p. 151—157; Clarke 1977, p. 17—28; Johnson 1977; Хаггетт 1979, с. 415—423; Колесников 2003, с. 39—42; Minc 2006, p. 82—91). This paper deals with the application of the CPT to the structure of the Trypillian settlement systems, alongside with the determination of relative chronology of sites.

Since even a short survey of literature dealing with the CPT requires a separate study of a monograph size, we will briefly describe the general principles of the theory formulated by W. Christaller, A. Löschian economic landscape and M. Beckmann's model.

The regularities in the settlement systems structure, given their two-dimensional distribution (on a geographical map), were formulated by W. Christaller in a book *Central Places of Southern Germany* (1933). A 'central place' was defined as a settlement which provides other settlements of the region with main (central) goods and services. Since central places are not equal by their functions, the centers of a higher level possess a wider range of goods and services, which they supply to the centers of the lower order. The territories serviced by central places are complementary regions. W. Christaller's model is based on five initial assumptions:

1. The process must occur on an infinitely flat surface with isotropic properties (identical properties of the environment in all directions) and with uniform distribution of purchasing capacity of the population.

2. The purchasing of central goods must take place in the closest central place.

3. All parts of the surface must be serviced by central places; the complementary regions must occupy the entire examined territory.

4. Travelling with the aim of purchasing goods and services must be reduced to a minimum.

5. None of the central places can receive a surplus profit.

In terms of these conditions, given an optimum disposition of settlements in space, the group of identical central places will have complementary regions in the shape of regular hexagons, while central places themselves will constitute a grid in the shape of regular triangles (Christaller 1966). Taking into account the possibility of a change in the disposition of the central place in the hierarchy of settlements and, respectively, in the number of the serviced places, W. Christaller defined three types of optimization. The character of optimization is indicated by a certain K-value determined by the number of the serviced places related to one central place. K-values equal to 3, 4 and 7 are the basic ones.

Optimization of the market structure ($K = 3$). The central place is as much as possible close to serviced places, situated in the angles of hexagons. The central place of a higher level should fully service only two of subordinated settlements (Fig. 1, *а*).

Optimization of the transportation structure ($K = 4$). The borders of complementary regions are changing to ensure the efficiency of transportation net; serviced places are situated in the middle of the sides of hexagons. The central place supplies three neighboring dependent regions and shares its influence on six closest dependent places with a neighboring central place of the identical level in spatial hierarchy (Fig. 1, *б*).

Optimization of the administrative structure ($K = 7$). The central place of the higher level and neighboring centers of a lower level are delimited in space. The central place fully services six dependent ones (Fig. 1, *в*).

The dependencies manifested on the same level of subordination are preserved also for other le-

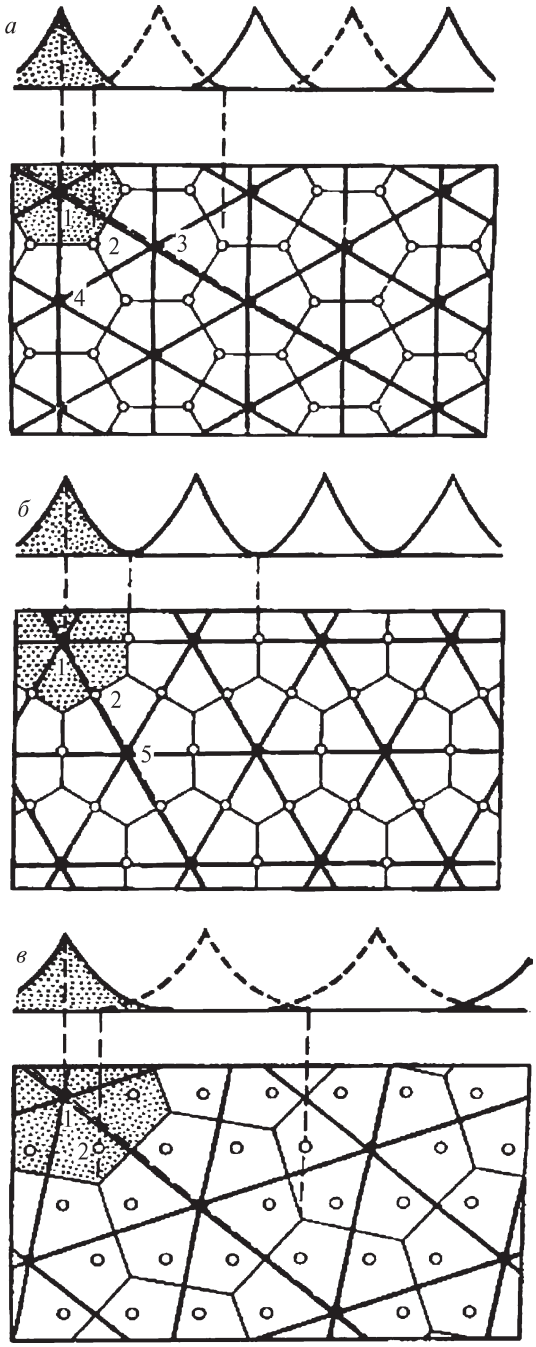

Fig. 1. Basic optimization types of colonization systems according to W. Christaller (after P. Haggett)

vels of subordination, making *K*-values constant (Харгетт 1979, с. 417—422).

Unlike W. Christaller's rigid hierarchical scheme with a stepped distribution of functions of the central places, the CPT modification by A. Lösch is based on the introduction of a certain central place common for all settlements. It predominates in providing for the demand of inhabitants of all settlements of a certain territory. Attribution of properties characteristic of various types of spatial optimization to the central places, with the aim of obtaining a maximum coincidence of types of goods and services of an upper level in the same central places, shapes an essentially different spatial structure. It is characterized by 12 sectors, six of which include a larger number of central places (Fig. 2; Леш 1959, с. 119—141). This modification differs from Christaller's model by a continuous sequence of subordinated centers, in which larger central places cannot fulfill series of functions pertaining to smaller centers (Харгетт 1979, с. 425). The presence of a common center in a united market space, besides three basic types of optimization of settlement system, makes possible to define other types of spatial organization with different *K*-values, shaped on their basis.

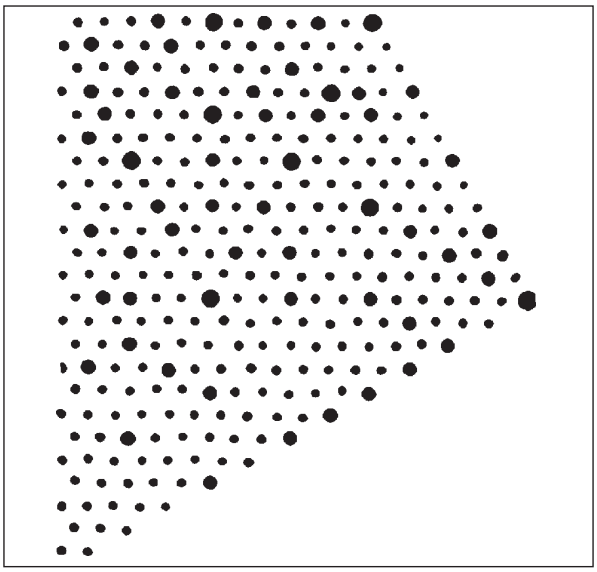

Fig. 2. Optimization of colonization systems according to A. Lösch's modification (after P. Haggett)

In W. Christaller's scheme, the population of a central place is determined as a product of the population of the smallest village and the numeric value of the 'character of system optimization' feature (*K*-value) raised to a power corresponding to the ordinal number of this settlement in the spatial hierarchy (Christaller 1966, p. 67). Therefore, the population increasing exponentially (for example, for a system with the *K*-value $K = 3$, the series of values will correspond to the product of the number of inhabitants of the smallest settlement and the series of factors 1, 3, 9, 27 etc.). Despite the analogies in the contemporary distribution of population (for example, in Southern Germany, the materials of urbanization structure of which were put into the basis of W. Christaller's models: Харгетт 1979, с. 422—423, табл. 14, *2*), the actual distribution of population hardly ever agrees with this ideal model. This problem was solved by

M. Beckmann. The symbolic expression of the CPT is based on a hypothesis about the existence of certain proportions between the size of a town and the number of its population, determined by an 'urban multiplayer':

$$P = \frac{kC}{1-k} \quad (1),$$

where P is the city size, C – the size of a rural settlement, k – the proportion factor.

Further on, M. Beckmann deduced the dependence between the number of inhabitants of a settlement, its size and its order in the spatial hierarchy with a constant K-value:

$$P_r = \frac{LCk^{r-1}}{(1-L)^r} \quad (2),$$

where— P_r is the number of inhabitants of the settlement on the level of r hierarchy, L – ratio of the city size to the rural and town population served, C – the number of inhabitants of the smallest settlement serviced, k – proportion factor (Beckmann 1958, p. 243—244).

On the basis of the data of these four parameters, it is possible to calculate two more variables, which reveals the colossal heuristic potential of the model.

The proportion factor k is determined as the number of the serviced places related to one central place (Beckmann 1958, p. 244). Since the model describes exclusively hierarchical spatial systems, the rank indicator in the hierarchy of settlements r cannot be equal to 1 (in this case the value of variable L is equal to 1, and the denominator of dependence is equal to 0). However, the population of the central place must provide not only for the demand of dependent places, but also for its own demand, which, in conformity with the formula, permits to correlate the value $K = 1$ with the characteristics of I. von Thünen's model of an 'isolated state' (more in detail see in: Хаггетт 1979, с. 438—444; Колесников 2003, с. 26—30). Following P. Haggett, it is possible to argue about the correlation between proportion factor k in M. Beckman's symbolic model and W. Christaller's K-values.

The equation 2 may be written as:

$$\frac{(1-L)^r}{L} = \frac{Ck^{r-1}}{P_r} \quad (3).$$

In this form it reflects a definition devoid of logical contradictions: the ratio of specific weight of the population of all settlements serviced to the specific weight of inhabitants of the servicing settlement is equal to the ratio of the total number of inhabitants of all settlements serviced to the number of inhabitants of the servicing settlement.

Similarly to A. Lösch's CPT modification, M. Beckmann's symbolic model implies a continuous series of centers subordinated to each other, which permits to use it for the analysis of functions of settlements of different ranks.

The issue of the specific character of application of methods of spatial analysis in archaeology has been repeatedly raised in the literature (D. Clarke, I. Hodder, M.A. Kolesnikov and others). Unlike the geographers who almost always have all the necessary initial data, an archaeologist works with fragmented systems of disposition of structures in space. Not all sites are known, a part of known sites is destroyed, most of others have not been excavated or have been excavated only partially, etc. In this connection, the most important task is to reconstruct the system of disposition of a settlement on the level of determination of all its structural components. A particular attention in such elaborations is deserved by the problem of synchrony – diachrony of sites (Crumley 1979, p. 150). As demonstrated by practice, this problem also can be solved through the application of spatial analysis methods.

Initial Data. Some Remarks Regarding the Values

The data of two spatial groups (SG) of the settlements of Western Trypillian culture (WTC) at the Southern Bug and Dnipro interfluve were taken for the verification of CPT applications described above. The SG of settlements centered in Glybochok belongs (according to a relative chronology of sites proposed by us) to the first stage of the second phase of Nebelivka group, while the SG centered in Maidanetske belongs to the second stage of the third phase of Tomashivka group. It should be noted that the mentioned relative chronology of sites is constructed exclusively with the help of spatial analysis methods based on S.M. Ryzhov's pattern (Рижов 1999 and others). Both systems have a primate rank-size distribution. The SG of settlements centered in Glybochok also includes a medium-sized settlement Yampil and small settlements Kolodyste 1 and 2, while the SG of settlements centered in Maidanetske includes a medium-sized settlement Romanivka and small settlements Talne 2 and 3 and Moshuriv 1. In view of discussions in progress regarding the meaning of the feature 'average number of inhabitants of one house', which is of key importance for assessment of the number of inhabitants of settlements, a more reliable indicator based on the number of buildings was used in our calculations. Synchronous coexistence of 78.4

Table 1. **Possible variants of correlation between specific weights of servicing and serviced population**

Specific weight of servicing population	Correlation between the specific weights of servicing and serviced population on various levels (r) of spatial hierarchy						
	r = 2	r = 3	r = 4	r = 5	r = 6	r = 7	r = 8
$L = 0.1$	8.1	7.29	6.56	5.9	5.31	4,78	4.3
$L = 0.2$	3.2	2.56	2.05	1.64	1.31	1,05	0.84
$L = 0.3$	1.63	1.14	0.8	0.56	0.39	0,27	0.19
$L = 0.4$	0.9	0.54	0.32	0.19	0.12	0,07	0.04
$L = 0.5$	0.5	0.25	0.13	0.06	0.03	0,02	0.01
$L = 0.6$	0.27	0.11	0.04	0.02	0.01	0	0
$L = 0.7$	0.13	0.04	0.02	0	0	0	0
$L = 0.8$	0.05	0.01	0	0	0	0	0
$L = 0.9$	0.01	0	0	0	0	0	0

Table 2. **Initial data**

a. **SP of settlements with its center in Glybochok**

Variables	Values
M_1	724
M_n	296
$D_1(1)$	9.5
$D_1(2)$	11.6
$D_n(1)$	11
$D_n(2)$	8.8

b. **SP of settlements with its center in Maidanetske**

Variables	Values
M_1	1468
M_n	482
D_1	7.4
D_n	5.4

per cent of dwellings is taken into account for large and medium-sized settlements (Дяченко 2010, с. 83—154).

The distance between the sites was measured on a two-dimensional plane (on a topographical map with scale 1 cm = 1 km), without adjustments for the uneven surface, and was rounded to one digit after decimal point. Respectively, the 'real' values of this variable are in a regressive relationship with those taken into consideration in this work: even if distance values on a two-dimensional plane are identical, the values of the 'real' distance might differ, and vice versa. Still, in the case of the analysis of sites of the Southern Bug and Dnipro interfluve, we have to do with a rather 'uniform' landscape, without mountain systems and full-flowing rivers. Therefore the two-dimensional distance values may be used here. A special mathematical apparatus has been elaborated for the areas with not uniform landscape (Харвей 1974, с. 204—210; Hodder 1977, p. 294—297, Fig. 36—38; Колесников 2003, с. 36—37 et al.).

Number of Settlements in Macro-Groups of Settlements

Known values of dependence variables (equation 2) include indicators of the number of buildings in the central place and the serviced places (*P, C*). Taking into account unknown settlements or those that have not been included into the sampling, it is necessary to use possible values of the variable describing the number of levels of spatial hierarchy (*r*), from 2 to 8. The lower limit of this interval corresponds to the minimal quantity of levels in hierarchical spatial systems, the upper limit corresponding to the total number of subgroups of the WTC in the region determined by the settlements size. It permits to determine the value of the proportion factor *k*.

Since the ratio of the city size to the rural and town population served (*L*) is unknown, possible numeric values of the correlation between the specific weight of the population of servicing places and that of serviced places are calculated. The received results indicate the impossibility of functioning of spatial systems that include 7—8 levels of hierarchy with serviced places, when the specific weight of their inhabitants is over 60 per cent. Spatial structures including 5—6 levels of hierarchy cannot function if the specific weight of the population of serviced placed exceeds 70 per cent, while structures with three and four levels of hierarchy cannot function if the specific weight of the population of serviced places exceeds 90 and 80 per cent, respectively (Table 1).

Possible values of *L* and *(1-L)* were compared with the basic *K*-values and the *K*-value $K = 2$. Verification of the results is based on the estimation of the number

of dwellings serviced by central places, given different characters of optimization of spatial structures with different number of spatial hierarchy tiers. In both cases factor $K = 2$ turned out to be the most acceptable rate of *K*-value. At the same time the SG centered in Glybochok was fully represented in the sampling. The SG centered in Maidanetske must include one more settlement, identical by its size to Talne 2 or Moshuriv 1 (Дяченко 2010, с. 138—144).

It should be emphasized that at this stage of the reconstruction of the settlement system no methodical innovations were introduced. These calculations are only one of possible variants of application of M. Beckmann's symbolic model.

Distances and the Number of Inhabitants of Settlements in Macro-Groups: is There Any Regularity?

As it is presented here, the reconstruction of settling structures comprises only the problem of working with the fullest possible sampling (variants of sampling, if variants of distribution of structures within one middle-sized/large settlement or several small settlements are possible). A new question that emerges in the process of study is rather sharp, although can be expressed in a rather prosaic way: which of the settlements corresponds to this colonization system if there are several settlements with the specified size on the archaeological map of the region? In the case when the sites considered belong to the same archaeological culture, but do not have distinct relative dates, the indicated problem lies entirely in the synchrony-diachrony plane and requires the elaboration of additional techniques.

M. Beckman's symbolic model is one of few models of analytic geography, the degrees of freedom of which do not include the distance between the settlements. In the meantime, both the repeated successful approbation of the models including this variable and the systematization of empirical data point to the existence of some regularities of mathematical nature. For instance, in the analysis of 67 settlements at the Southern Bug and Dnipro interfluve (64 sites of the Volodymyrivsko-Tomashivska line of development and the Kosenivska group, as well as three settlements of the Kaniv group), clearly distinguishable are groups of values of the feature 'distance between settlements' that provided the basis for distinguishing the SG of settlements (Дяченко 2010, с. 83—89). Certain trends are also visible in the distance between settlements of different levels of spatial hierarchy.

The special application of the CPT for the relative dating of settlements is based on the supposition about the existence of a certain proportion factor that establishes relation between the number of inhabitants of the settlements and the resource zones of a certain size that provide for this population. In this case it would be logical to postulate the congruence of the ratio of centers of different ranks and the distances between these centers and the smallest servicing settlements, which depends on the optimization character of colonization systems and on the rank of servicing places in the hierarchy of settlements:

$$\frac{M_1}{M_n} = R\frac{d_1}{d_n} \qquad (4),$$

where M_1 is the number of population of the main center, M_n is the number of population of the center of rank *n* servicing the population of the main center, d_1 is the distance between the main center and the smallest serviced place, d_n is the distance from the center of rank *n* to the smallest serviced settlement servicing the center of rank *n*, *R* is the difference of ranks of the serviced place and the main central place (= 1):

$$R = r_{min} - 1,$$

where r_{min} is the rank of the serviced place in the spatial hierarchy.

Let us verify our supposition. The initial data are presented in Table 2. Variable M_n corresponds to the number of buildings at Yampil and Romanivka. The value of d_1 describes the distance from Glybochok to Kolodyste 1 (1) and Kolodyste 2 (2) (Table 2, *a*), as well as from Maidanetske to Talne 2 and 3 (Table 2, *b*). Variable d_n corresponds to the distances between Yampil and Kolodyste 1 (1), Kolodyste 2 (2) (Table 2, *a*), as well as between Romanivka and Moshuriv 1 (Table 2, *b*). The value of *R* for Kolodyste 1 (the fourth level of hierarchy) is equal to 3, while that of Kolodyste 2 (the third level of hierarchy) is equal to 2. The value of *R* for small settlements of the SG with its center in Maidanetske is equal to 2. Let us determine the factors of distance between the centers of different levels and the smallest serviced places.

The model value of the distance between Glybochok and Kolodyste 1 is determined as:

$$d_1 = \frac{M_1 \times d_n}{R \times M_n} = \frac{724 \times 11}{3 \times 296} \approx 9.$$

The model distance between Glybochok and Kolodyste 2 is as follows:

$$\frac{724 \times 8.8}{2 \times 296} \approx 10.8.$$

The model distance between Yampil and Kolodyste 1 is determined as:

$$d_n = \frac{RM_n d_1}{M_1} = \frac{3 \times 296 \times 9.5}{724} \approx 11.7.$$

The model distance between Yampil and Kolodyste 2 is as follows:

$$\frac{2 \times 296 \times 11.6}{724} \approx 9.5.$$

The model distance between Maidanetske and Talne 3 is as follows:

$$\frac{1468 \times 5.4}{2 \times 482} \approx 8.2.$$

The model distance between Romanivka and Moshuriv 1 is as follows:

$$\frac{2 \times 482 \times 7.4}{1468} \approx 4.9.$$

Statistical deviation of model rates (at 100 per cent of mensural data) is 5.3—10.8 per cent or 500—800 m on the map.

And now it is opportune to consider the Trypillian sites in the model radius. Basing on the obtained value of the distance between Romanivka and the served places, the settlement lacking in the sampling can be identified with Moshuriv 2 and, respectively, synchronized with Maidanetske. It should be noted that M.M Shmahliy and M.Yu. Videiko also synchronized this site with settlements of the third phase of Tomashivka group, though relating both settlements to the center in Talianky (Шмаглій, Відейко 1992, с. 126—129).

Besides, a considerable number of settlements with established relative chronology are known, the size of which, however, remains debatable. It can be established knowing the factors of planning density of settlements of the respective rank. We are going to try to model the number of structures at the settlements of medium and large size.

The model number of structures in Glybochok (the distance between Yampil and Kolodyste 1 is taken into account) is determined as:

$$M_1 = \frac{RM_n d_1}{d_n} = \frac{3 \times 296 \times 9.5}{11} \approx 767,$$

or (the distance between Yampil and Kolodyste 2 is taken into account):

$$\frac{2 \times 296 \times 11.6}{8.8} \approx 780$$

The model number of structures in Yampil (the distance between Glybochok and Kolodyste 1 is taken into account) is as follows:

$$M_n = \frac{M_1 d_n}{Rd_1} = \frac{724 \times 11}{3 \times 9.5} \approx 279,$$

or (the distance between Glybochok and Kolodyste 2 is taken into account):

$$\frac{724 \times 8.8}{2 \times 11.6} \approx 275.$$

The model number of dwellings in Maidanetske is as follows:

$$\frac{2 \times 482 \times 7.4}{5.4} \approx 1321.$$

The model number of structures in Romanivka is as follows:

$$\frac{1468 \times 5.4}{2 \times 7.4} \approx 536.$$

The statistical deviation of model rates varies within the range of 5.7—11.2 per cent.

Considerable statistical deviations both in the case of distances between the sites and in the case of the demographic component are, most likely, accounted for by the use of distance indicators 'along a straight line' in the calculations. In the case of the distance between sites, rather probable are also certain deviations from 'ideal figures' brought about by the selection of the most convenient place for the placement of settlements. In total, the verification of special application of the CPT shows the appropriateness of its use in archaeological studies with the aim to determine the relative chronology and the size of settlements. In the case when the sites are not present either in the sampling or on the archaeological map of the region, the use of CPT permits to narrow the radius of their search while performing archaeological surveys.

Conclusions

The specific character of the use of methods of spatial analysis in archaeology is often connected with the incompleteness of information about the colonization systems in the past. The application of M. Beckmann's model of the distribution of the population in the central place hierarchy makes it possible to establish the number and the size of settlements not present in the samplings. The special application of the CPT proposed here provides a possibility to relate specific sites without distinct relative dates to the results of calculations. It also permits to establish approximate sizes of dated settlements. We hope that the model will make it possible to obtain the relative dates for sites in the conditions of desk study, which would permit to save long years or even decades of precious field explorations.

The priority tasks of further work in this direction would include the approbation of the model on other macro-groups of population, application of the geographic information systems for obtaining more correct initial data, verification of the model relative dates by the ceramics seriation.

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D.V. Stupak

EXPLORATIONS OF EPIGRAVETTIAN SITES IN THE SOUTH OF THE MIDDLE DESNA AREA

Materials of Epigravettian sites situated in the extreme south of the Middle Desna area are discussed. Besides, images engraved on a mammoth's tusk from the Obolonnya site discovered in 2010 are described and analyzed.

Keywords: Eastern Europe, Middle Desna area, Upper Paleolithic, Epigravettian sites, engraved tusk.

The Middle Desna area represents one of the regions of Eastern Europe richest in Upper Paleolithic sites. High terrace of the right bank of the Desna gashed by ancient ravines and convenient for establishing sites, availability and easy accessibility of high quality flint raw material for producing tools, abundant faunistic resources made this territory suitable and attractive for colonization by ancient people.

Researchers became aware of numerous paleontological remains on the Desna banks as early as the second half of the 19th c. (Смоличев 1925; Чубур 2005, с. 6). Discovery and exploration of the Mizyn site by F. Vovk represented a genuine impulse for purposeful search of Paleolithic sites in this region. As a result of intense surveys and excavations during the 1920s—1930s, the basis for a pool of sources of the Upper Paleolithic in the Desna area was created. Some known sites – such as Suponievo, Tymonivka 1, Yelyseievychi 1, Yudinovo, Pushkari 1, Pohon, Buhorok and other sites of the Pushkari Paleolithic node, Chulativ 1 and 2, Novhorod-Siverska site – were discovered and explored (Чубур 2005, с. 6—34). These and some other sites have been discovered to the north of Mizyn (Fig. 1). At the same time, surveys performed more to the south resulted only in the discovery of isolated pieces of flint near the villages of Vyshenky and Obolonnya, Korop district, Chernihiv region (Рекогносцировка... 1930; Рудинський 1931, с. 150; Виноградський 1937, с. 4 зв.—6 зв.). Datable to the same period seems to be a tusk found near the village of Obolonnya, ornamented by a row of diagonal hatchings, which in the 1950s belonged to the collection of the Sosnytsia Historical and Ethnographic Museum (Виноградский 1955, с. 86—88).

In 1961, a survey performed by Yu.H. Kolosov to the south of Mizyn revealed three sites: Chereshenky, Dyakova Hora and Buzhanka 1. No well-defined cultural layer has been found at the first two sites that did not yield any definite material, while more results were obtained during explorations of the Buzhanka 1 site (Бачинський, Колосов 1963, с.556—559; Колосов 1965, с. 325). In the 1970s, the site was studied by M.I. Hladkykh (Гладких 1972; 1977).

Recently, the works on this territory have been resumed. In 2003, Buzhanka 2 site has been discovered providing interesting and outstanding materials (Ступак 2005, с.40—53; 2006, с.74—85; 2008, с.122—130; 2009, с. 219—230). In 2010, a new site, Obolonny, has been found. The most outstanding object among the finds is represented by a masterpiece of Paleolithic art: an engraved tusk.

Buzhanka 1 and 2 sites will be considered in this article only briefly, since they have already been described in other publications. The main attention will be paid here to the material from the new site, Obolonnya.

The Buzhanka 1 site is situated on a high right bank of the Desna, 1.00 km downstream from the village of Buzhanka, Korop district, Chernihiv region (Fig. 1). According to Yu.H. Kolosov, isolated bones stuck out from the slope of the bank, in straw-coloured loess, at a height of 16.00 m above the September water level. The site has been almost completely destroyed by the Desna floods. A considerable part of the material was collected in the scree of the slope and on the river bank. A part of faunistic remains were collected directly in the Desna, near the site and somewhat lower. Yu.H. Kolosov arranged several test pits and cleanups of the bank at the site (Бачинський, Колосов 1963; Колосов 1965, с. 325). M.I. Hladkykh performed a series of cleanups and arranged more than 30 boreholes at the site (Гладких 1972; 1977). Unfortunately, only a small amount of material, faunistic in the first place, has been collected *in situ*.

The faunistic assemblage is represented mainly by mammoth's bone, as well as by horse's and bear's bones.

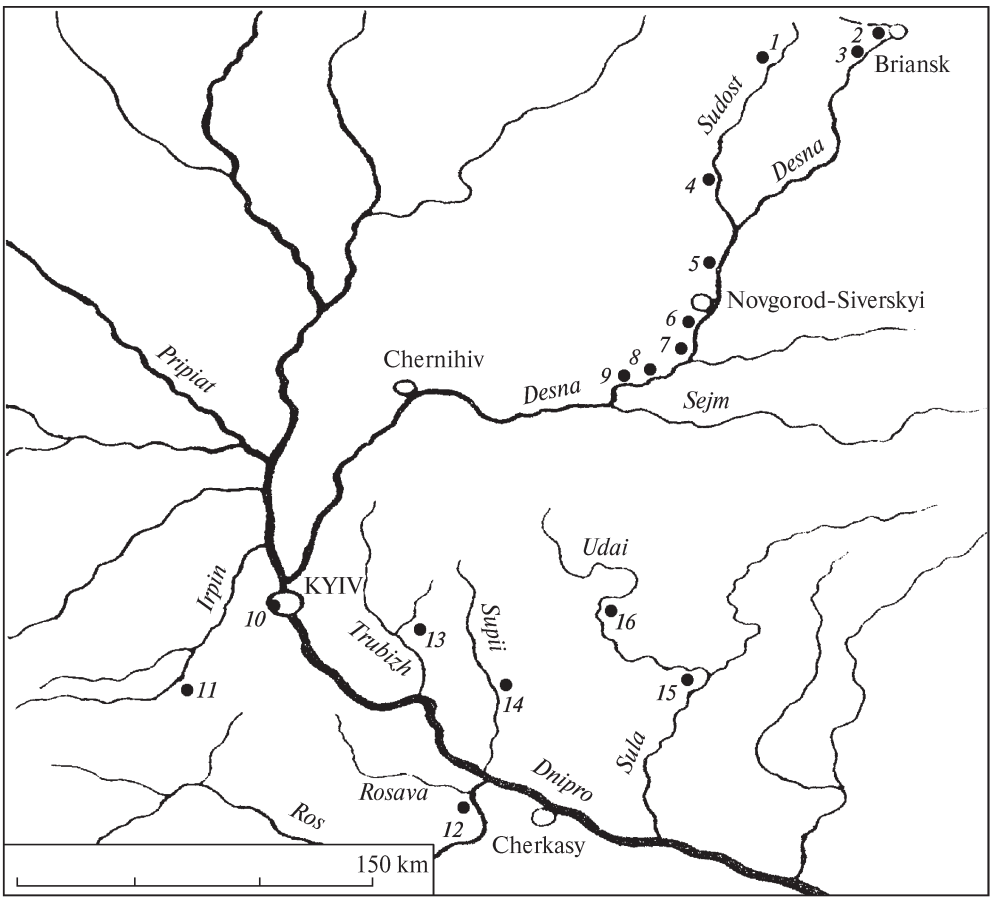

Fig. 1. The map of main Epigravettian sites of the Middle Dnipro basin: *1* — Yelyseievichi 1 and 2; *2* — Tymonivka 1 and *2*; *3* — Suponievo; *4* — Yudinovo; *5* — Buhorok; *6* — Chulativ 2; *7* — Mizyn; *8* — Buzhanka 1 and 2; *9* — Obolonnya; *10* — Kyrylivska; *11* — Fastiv; *12* — Mezhyrich; *13* — Semenivka 1, 2 and 3; *14* — Dobranichivka; *15* — Hintsi; *16* — Zhurivka

The main part of the stone complex was a result of Yu.H. Kolosov's works. He discovered about 500 flint and quartzite items. The latter constitute 9.0 per cent of flint ones. Flint is represented by its typical Desna variety of black or dark grey color with fine light grey specks. This is mostly nodule flint, more rarely slabby one. A part of the material is covered with a white-blue patina (Бачинський, Колосов 1963, с. 557; Колосов 1965, с. 325). The nearest known deposits of this raw material occur 5.00—6.00 km upstream of the Desna, near the village of Rozlety (Ступак 2008, с. 123; 2009, с. 221).

Quartzite used was fine-grained tabular, mostly of light grey shades. Deposits of quartzite, similar by color and quality, were found at the northern environs of the village of Buzhanka, directly under the sites of the Yukhnovo culture, as well as discovered by D.V. Karavaiko and the author of the present article downstream the Desna, 6.0 km from the village of Buzhanka on the eastern outskirt of the village of Chereshenky, on the edge of the river bank. As reported by local inhabitants, quartzite has been found near the village of Rozlety, in the same place as flint (Ступак 2005, с. 42; 2006, с. 76; 2008, с. 124; 2009, с. 221—222).

Tools found at the site are made from flint. The largest group is represented by eight backed bladelets (Fig. 2, *1—8*). All of them are fragmented. Three of them show impact fracture from use. A blade, truncated transversely by retouch on its bottom, most likely belongs to the microliths as well (Fig. 2, *9*). One of the fragments of blades retouched on both sides might have been a fragment of some point (Fig. 2, *10*).

Four burins have been discovered. Three of them are lateral ones; two are made on blades (Fig. 2, *11, 14*), another one, multifaceted, is made on a rough flake (Fig. 2, *13*). The fourth burin is an angular one, made on a flint fragment (Fig. 2, *16*). An obliquely truncated flake of an elongated shape appears to be a blank of a burin (Fig. 2, *12*).

Scrapers are two. One of them, an end one made on a flake (Fig. 2, *15*), is intact, while the other is represented by a small fragment. *Pieces esquillees* are represented by three items (Fig. 2, *17—19*).

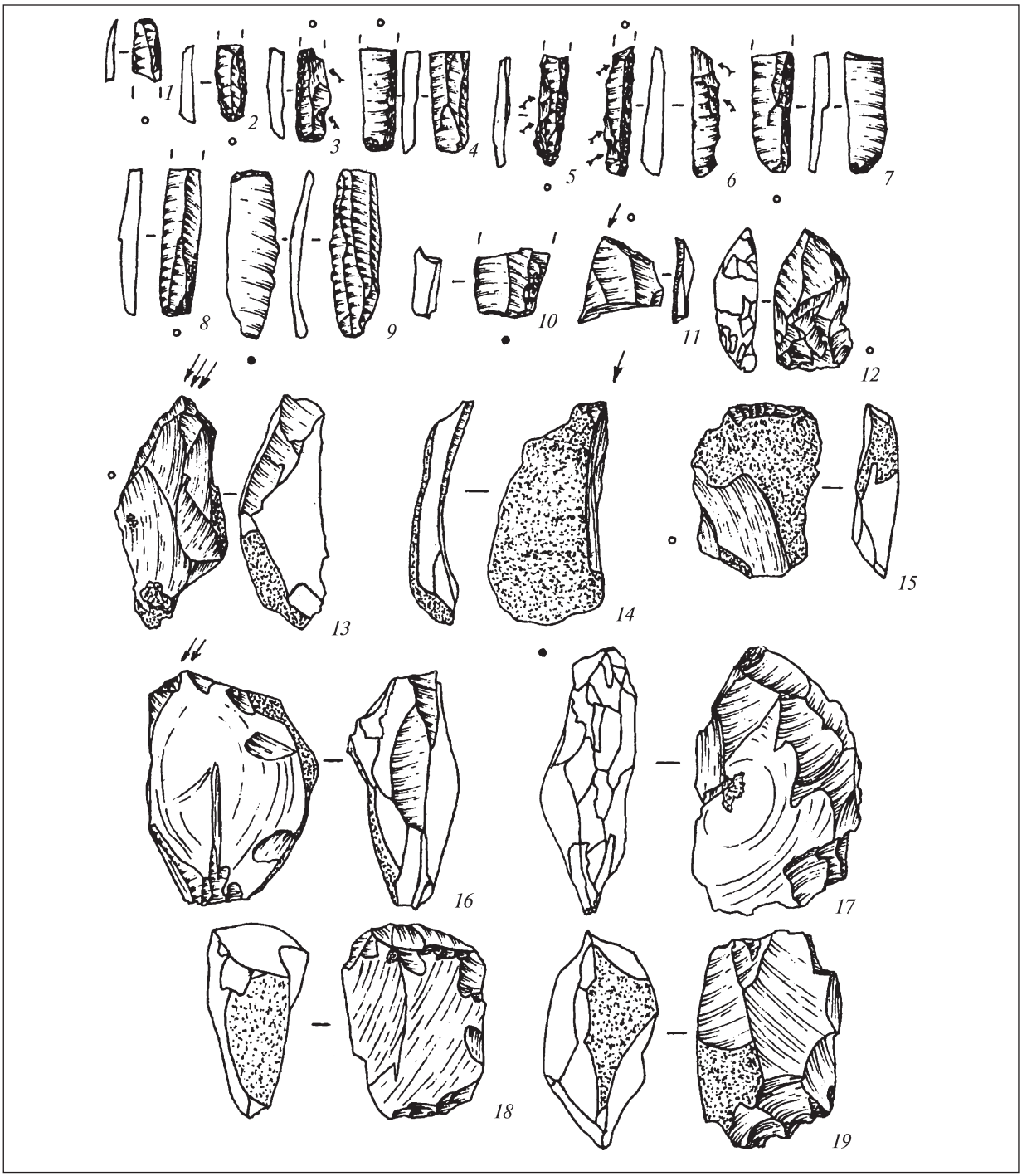

Fig. 2. Tools from Buzhanka 1 site

Articles with secondary modification include also three fragments of retouched blades, two flakes and four fragments of retouched debris of flint.

Yu.H. Kolosov found a similarity between the Buzhanka 1 complex and the material from the Mizyn site, attributing the former, however, to a later period (Бачинський, Колосов 1963, с. 558; Колосов 1965, с. 325—326). M.P. Olenkovskyi did not exclude the possibility to relate Buzhanka 1 to the Late Desna culture described by him (Оленковський 2001, с. 152).

In our opinion, the complex of tools and, in the first place, some microliths from the site have some common features with the material from the upper layer of Buzhanka 2, such as the use of fine retouch in their manufacturing which hardly changed the outlines of the blanks, but scarce quantity and fragmented character of most elements of throwing weapons do not permit to determine clearly the cultural and chronological position of the site. Since a lot of mammoth's bones are continuously being found in the Buzhanka 1 vicinity, it is quite

possible that this site was, first of all, 'mammoth's cemetery', so one cannot ruled out the possibility that this place has been repeatedly visited by various groups of ancient population belonging, probably, to different cultures.

The Buzhanka 2 site is situated immediately in the center of the village (N 51°39'5752" E 033°69'2160"). It occupies the lowland part of the cape situated in the upper part of an ancient ravine, between its two sleeves, cutting the right bank of the Desna. From north and west the site is protected from the wind by upper sections of the Desna terraces. It is situated at a distance of about 1.0 km both from the river and from the Buzhanka 1 site.

In the spring of 2003, during repair works performed on an earth road in the Melnykivka Street, village inhabitants discovered mammoth's bones. The peasants reported that the repairs of the road had been performed nearly every year, due to its intense washing out. For this reason, the level of the road became much lower and almost coincided with the level of cultural deposits, with cultural layers of the site being damaged in some places.

In the course of field works of 2003 and 2006, two cultural layers, the upper and the lower one, were explored. In the area excavated in 2007, one more level of cultural deposits was found at 3.00 m^2 above the upper layer. Its correlation with the upper layer has not been so far determined. It cannot be excluded that these are two separate layers that took shape at a distance of a short period of time. These might be cultural remains of the upper layer that had slid from higher areas of ancient surface of the site. For this material we use a working name of 'upper layer 1'.

The remains of the upper layer 1 were deposited in the loess at 1.00 —14.0 cm above the upper layer. They consisted mostly of a small number of fragments of mammoth's bones (*Mammuthus primmigenius*) and stone artifacts. Interesting are finds of the anatomic group of the hinder left extremity of a wolf *(Canis lupus)* and a fragment of bear's scull *(Ursus* sp.*)*(from now on the definitions are by Dr. S. Pean).

The material from the upper layer is explored on the area of 13.00 m^2. At some squares the upper layer lay directly under the surface of the road and was damaged by repair works in some sections. The depth of the cultural layer, as a rule, does not exceed 5.0—6.0 cm. Usually the material is deposited «as the thickness of the bones». A depression of unknown origin, found in the southern part of the excavated area, is related to the upper layer. A considerable part of large mammoth's bones are concentrated in it. Pit 1, discovered in the northern part of the excavated area, is related to this layer, too.

The bulk of the faunistic complex of the upper layer is constituted by mammoth's bones (*Mammuthus primmigenius*), while other bones are those of wolf *(Canis lupus)*, fox or polar fox *(Alopex lagopus/Vulpes vulpes)*, bear *(Ursus* sp.*)* and reindeer *(Rangifer tarandus)*.

The upper layer is rich in ochre finds. Besides, pieces of chalk and fragments of belemnites have been found there. Articles made from tusks are represented by a medial fragment of a small point (Ступак 2005, рис. 5, *1*; 2006, рис. 3, *1*) and by a medial fragment of a spear.

A tubular bone of a young mammoth from pit 1 provided a radiocarbon date: GrA-38555 14350 ± 60 BP.

The lower layer is separated from the upper one by a 10.00—32.00 cm wide sterile stratum and differs from it by a considerably smaller depth, by the nature of finds and by its planigraphy. The area of 10.0 m^2 has been explored. As in the upper layer, the material is deposited «as the thickness of the bones».

Faunistic remains from the lower layer are represented by more poorly preserved mammoth's bones. Hence come a tusk blade and a fragment of a tusk bearing traces of processing. Bone charcoal is represented only by several fragments.

All layers contained a typical Desna nodule flint of black or dark grey color, sometimes with light grey specks, similar to that found at the Buzhanka 1 site. As a rule, flint was not patinated. Quartzite from all layers is prevalently grey of various shades, from dark to light grey. Quartzite has a tabular shape. It resembles the objects found at Buzhanka 1. Chopped argillite fragments (definition by Dr. K. Derevska) were found in all layers. They are of a greenish grey color. Argillite deposits are known near the Desna at a distance of less than 1.0 km from the site.

133 stone items, 64 flint items (48.1 per cent) and 68 quartzite items (51.2 per cent) have been found in the upper layer 1. Argillite is represented by only one flake (0.7 per cent) (Table). Articles with secondary modification include a flint end scraper (Fig. 5, *4*) and a proximal part of a retouched blade.

The most numerous stone assemblage comes from the upper layer. 5764 items have been found here: 2384 (41.4 per cent) flint items, 3354 (58.2 per cent) quartzite items and 26 (0.4 per cent) argillite ones (Table). Besides, 54 units with secondary modification were identified, constituting 4.6 per cent of stone finds, exclusive of chips. Flint was mostly used for production tools. 53 items are made from it. Only one scraper has been made on a quartzite blank.

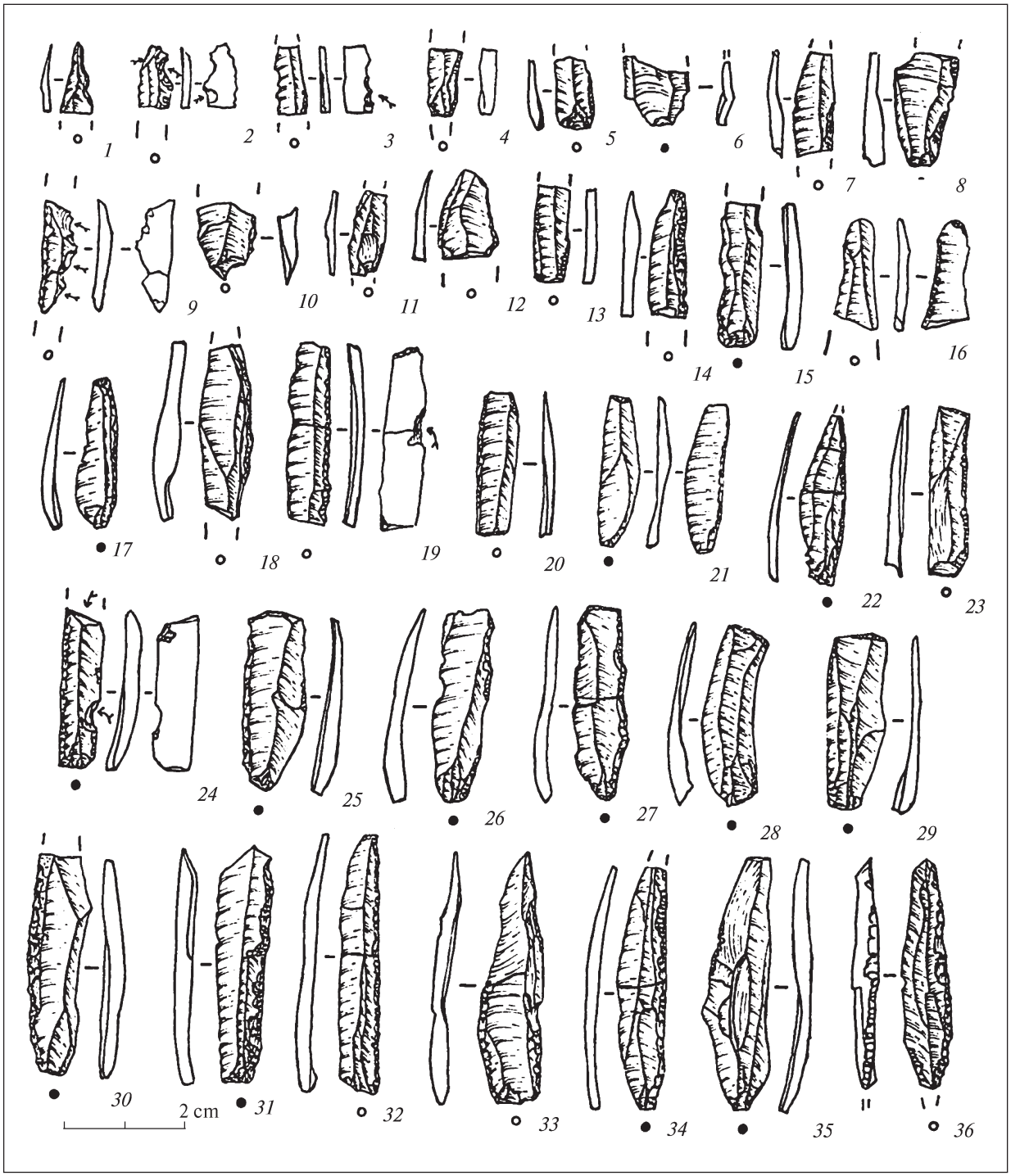

Fig. 3. Buzhanka 2 site. Microliths of the upper layer

Microliths represent the most numerous group. There are 36 points, rectangles and their fragments (Fig. 3). Light abrupt and semiabrupt retouch, which, as a rule, hardly changed the outlines of the blanks, was used for their production. Ventral retouch was used for the production of only two microliths (Fig. 3, *16, 21*). Typical of points is the disposition of the striking part on the distal part of the blank (Fig. 3, *22, 24, 30—36*). Atypical shapes prevail among the rectangles. Their basal part, like that of points, was not worked (Fig. 3, *17, 20—21, 23, 25—29*). The longest samples have a size of 41.0 mm. The width of intact and fragmented items varies within the range of 5.0—10.0 mm.

13 burins and their fragments have been discovered. Most of them – eight – are lateral ones made on blades (Fig. 4, *1—8*). They include one burin combined with an angular item (Fig. 4, *7*) and one lateral double end item (Fig. 4, *6*). Three burins are multifaceted (Fig. 4, *3, 6—7*). Dihedral burins are

represented by three items. Two of them are made on blades (Fig. 4, *9*; 5, *5*), while one is made on a flake (Fig. 5, *8*). Two more items are represented by an angular burin made on a flint fragment (Fig. 5, *9*) and by a fragment of a burin (Fig. 4, *10*).

Scrapers are represented by one flint item made on a blade (Fig. 5, *1*) and by one quartzite item made on a fragment (Fig. 5, *6*). Two end scrapers found in the areas of the site damaged by the road works (Fig. 5, *2—3*) are, probably, related to the upper layer or layers.

Articles with secondary working include also a obliquely truncated blade (Fig. 5, *7*), a retouched flake and an unidentified fragment of a tool.

Judging by a particular character of the microlith production – the use of light abrupt and semiabrupt retouch, which, as a rule, hardly changed the outline of the blanks, the presence of a bulb on many items, the prevalence of lateral burins on blades – the assemblage of tools from the upper layer, and especially microlith, resembles most of all the sites of the Mezhyrichian type. These peculiarities are typical of the Mezhyrichian complex (Гладких 1971, с. 58—63; Нужний 2002, с. 64—65; Komar et al. 2003, p. 264—265). Since the sites with this type of industry are situated over 100.00 km to the south, Buzhanka 2 represents the northmost site containing such an industry.

127 stone items have been found in the lower layer (Table). Prevailing are flint ones, 120 (94.5 per cent), quartzite units are five (3.9 per cent), while argillite ones are two (1.6 per cent).

11 items with secondary working have been discovered (36.7 per cent), exclusive of chips. All of them, except for a retouched flake, were made from flint. Burins prevail. All of them were made on blade blanks. Three of them are lateral, including the one matching with a fragment of a burin spall (Fig. 6, *5—6*), two are dihedral (Fig. 6, *7, 10*), and one is angular (Fig. 6, *9*).

Microliths are represented by two fragments (Fig. 6, *1—2*). By the type of retouch and preserved bulb, they resemble articles from the upper layer.

Flint articles with secondary working include also a scraper on a flake (Fig. 6, *8*) and a retouched blade.

Thus, Buzhanka 2 is the northmost site containing flint complex, similar to that of the Mezhyrichian type sites. Certainly, this conclusion regards, first of all, the better explored upper layer. As far as the material from upper layer 1 and lower layer are concerned, they are sure to belong to the Epigravettian period. Unfortunately, scarce number of found tools does not permit the exact determination of their cultural identity. Most probably, they belong to the same type as the material from the upper layer. However, further explorations are needed to demonstrate it.

The Obolonnya site has been discovered in the center of the Obolonnya village, Korop district, Chernihiv region. It is situated at a distance of 12.0 km from Buzhanka sites (Fig. 1). The site occupies the highest point of a cape formed by the Desna and its right tributary, the Bystrytsia River. It is raised by 6.0—10.0 m above the level of the Desna.

While digging a water well for the boiler house of the local school, workers came across mammoth's bones and tusks, as well as the remains of small predators and pieces of bone charcoal. The most interesting among these finds is an engraved tusk. Several days later the author of this article examined the place.

The examination of the well, with the diameter of 1.50 m, revealed that the cultural layer begins from the depth of 1.15 m from the surface. The scarce depth

Table. **Typological Correlation of Stone Articles of the Buzhanka 2 site**

Denomination of the article	Layer, Material								
	Upper layer 1			Upper layer			Lower layer		
	Flint	Quartzite	Argillite	Flint	Quartzite	Argillite	Flint	Quartzite	Argillite
Pre-cores				1					
Cores				9	5				
Core fragments				5	1				
Debris				2	10				
Blades and bladelets	12	7		348	275	2	8		2
Flakes	5	8	1	179	247	12	5	1	
Chips	45	53		1758	2815	12	92	3	
Burin spalls				29			5		
Tools	2			53	1		10	1	
Total	64	68	1	2384	3354	26	120	5	2

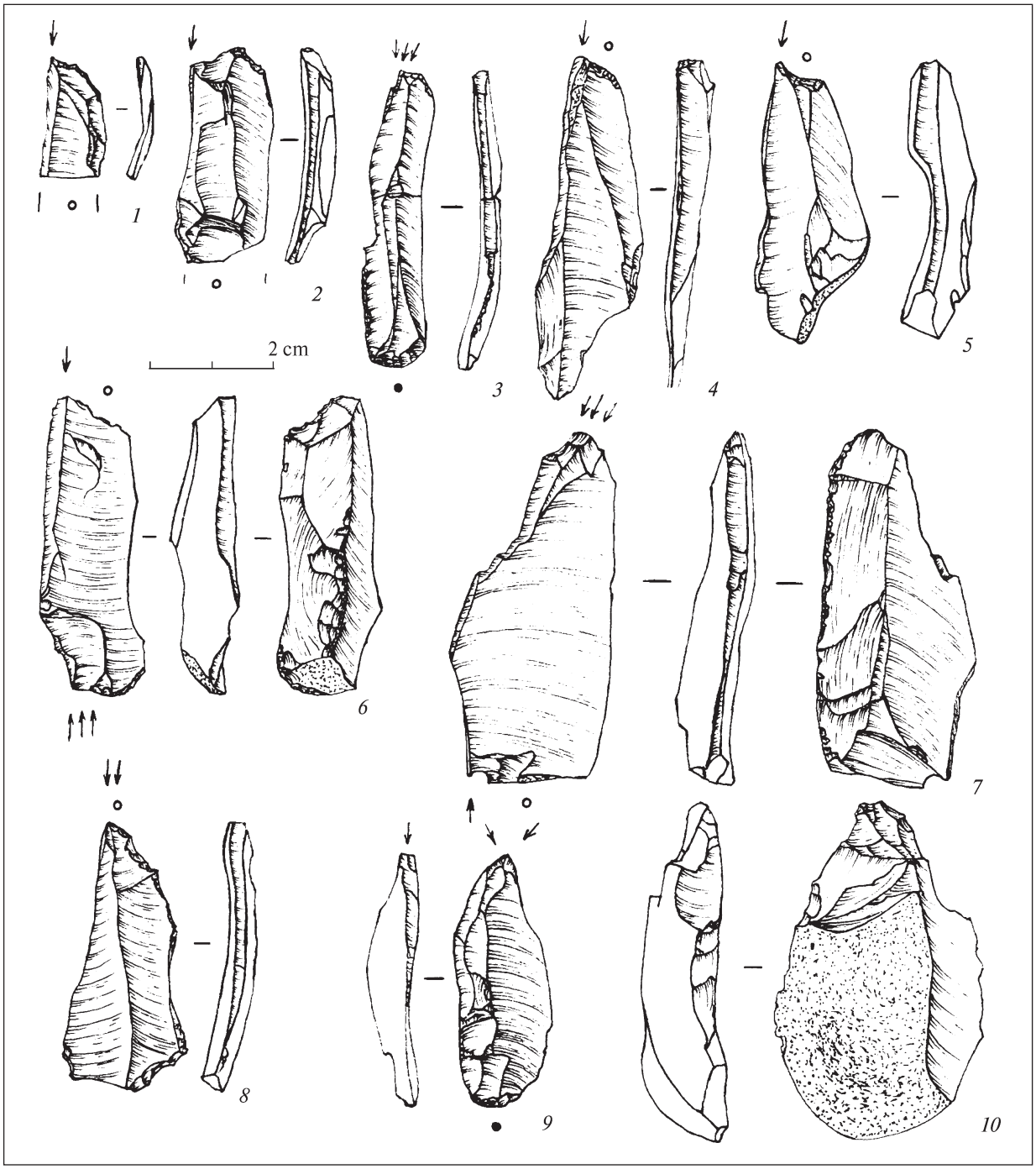

Fig. 4. Buzhanka 2 site. Burins of the upper layer

of occurrence of the material is accounted for by the fact that the surface of the cape was cut off when the school and the boiler house were constructed.

The stratigraphy along the wall of the well from the level of the pavement of the boiler house was as follows:

— 0.00—1.05 m – grey brown sand, lighter in its upper part, containing numerous strata of red brown ortsand;

— 1.05—1.50 – brown loess-like sandy soil. It is in this horizon that the cultural remains occur at a depth of 1.15—1.35 m. The upper boundary of the cultural layer is not clear. It seems that this cultural layer, especially its upper part, was immerged in water for some time. It might have caused a certain 'stretching out' of the layer;

— 1.50—2.10 m – strata of brown sand and sandy soil.

Local inhabitants have partially dug a niche in the southern wall, where the cultural layer was filled with faunistic remains. The niche was made in a layer of loess-like sandy soil at a depth of 1.2—

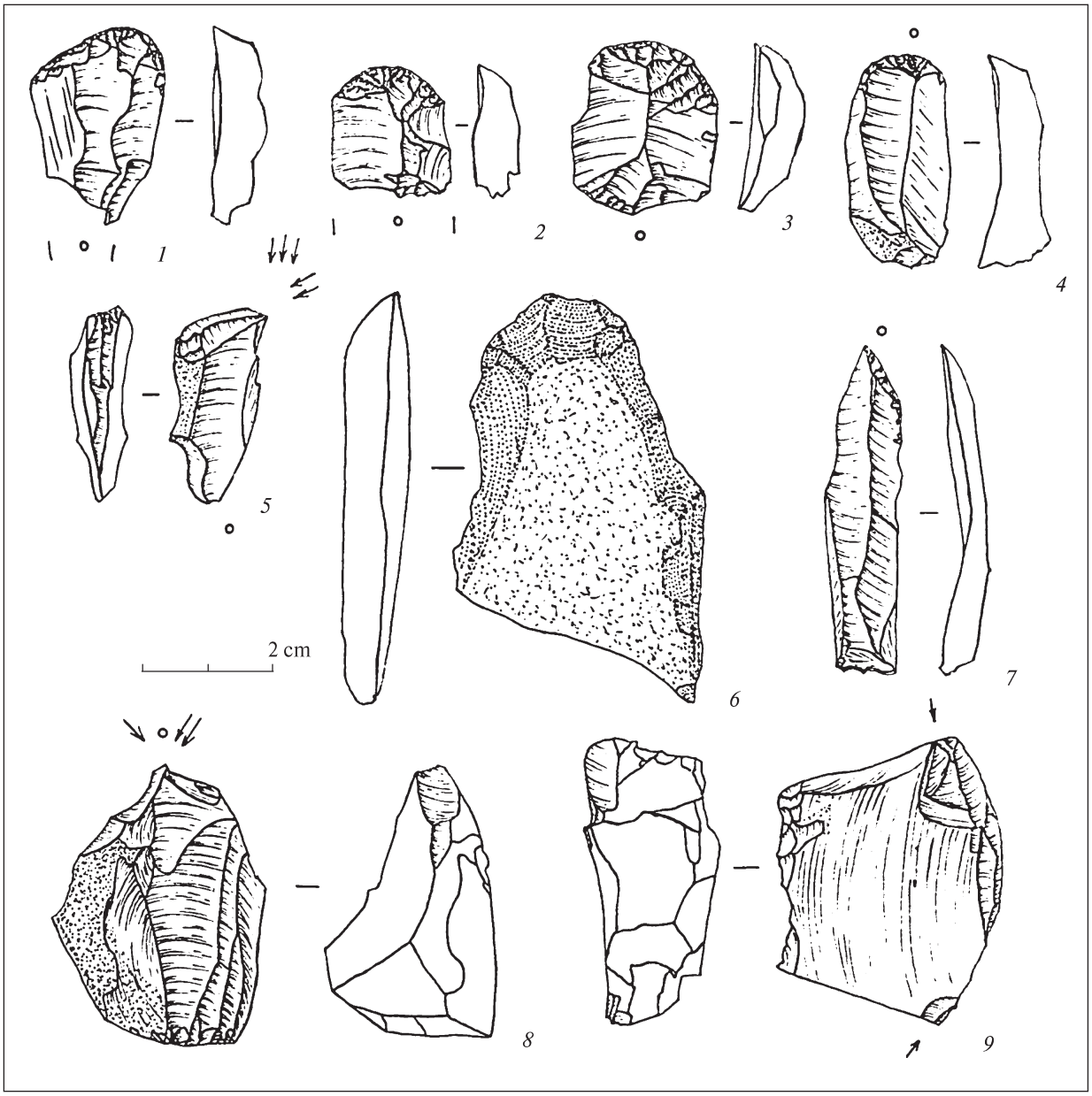

Fig. 5. Buzhanka 2 site : *1, 6* — scrapers from the upper layer; *2—3* — scrapers found not *in situ*; *4* — a scraper from the upper layer 1; *5, 8—9* — burins from the upper layer; *7* — an oblique truncated blade from the upper layer

1.8 m. Its maximum width is 1.3 m, the length of the niche deep into the wall being almost 1.0 m. It is this layer that contains the majority of faunistic finds. It is quite possible that some utility structure was situated here: a pit or remains of a dwelling.

The faunistic complex is represented, first of all, by mammoth's bones. Among them, anatomic groups consisting of six and two vertebrae have been distinguished. Judging by their size, they belonged to one semi-adult mammoth. Besides, three fragments of pelvic bones, two fragments of shoulder blades, three long bones, one large epiphysis of a tubular bone, two fragments of a rib and over 20 smaller and mostly fragmented bones have been discovered. Together with mammoth's bone, bones of small predators, most probably of a fox or a polar fox, have been found. Remains of these animals are represented by three fragments of jaws, two intact tubular bones, intact and fragmented ribs and smaller, mostly fragmented bones.

Five tusks have been found among the bones collected in the niche. One of them broke down almost entirely while it was being extracted from the well, while other four represented distal ends of tusks of young mammoths. They are of approximately the same size and diameter. One bears engraved images on its surface, while not deep longi-

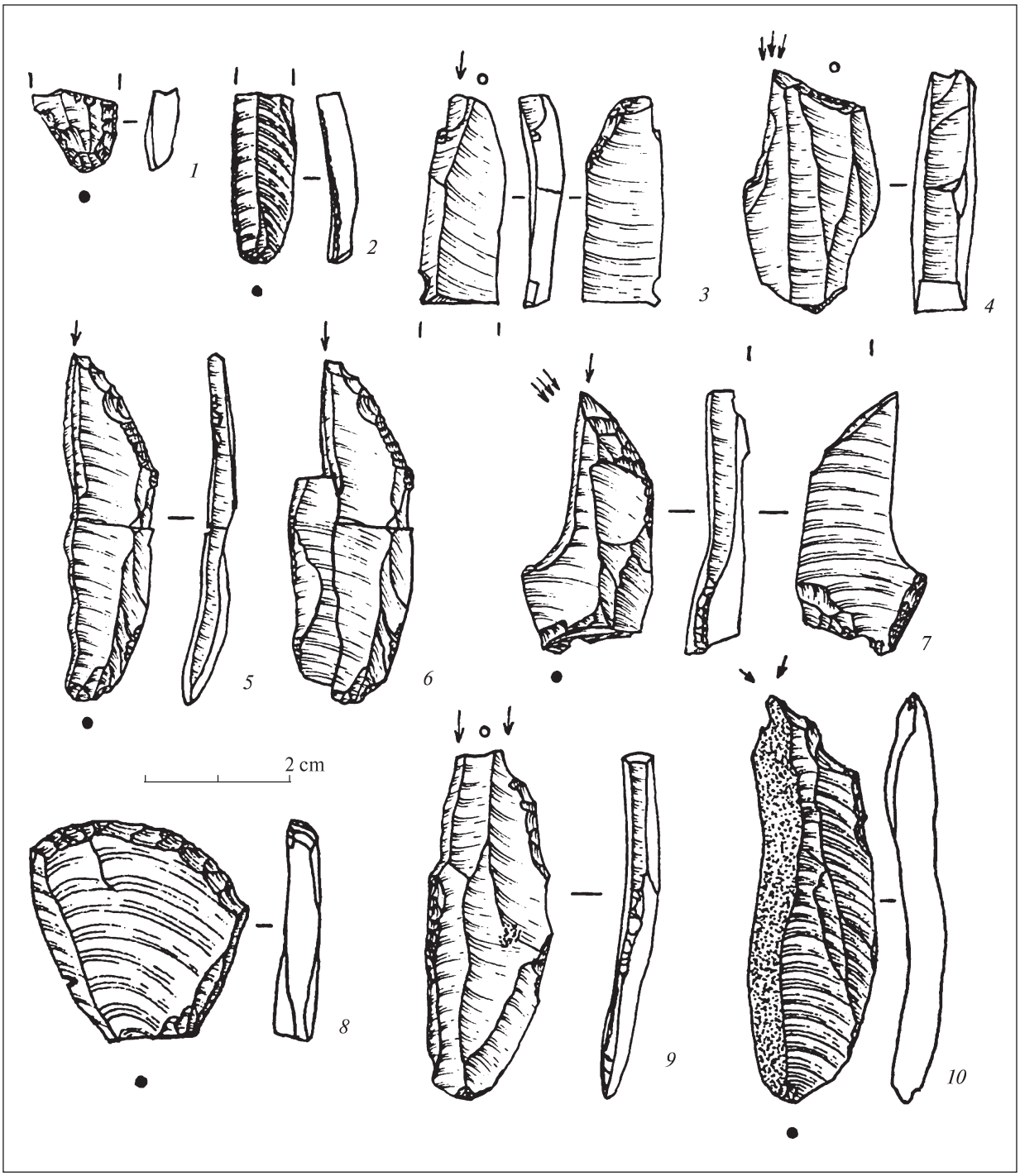

Fig. 6. Buzhanka 2 site. Tools from the lower layer

tudinal lines, which seem to represent the remains of a worked surface, are visible on the surface of another one.

Of particular interest is the tusk bearing engraved images (Fig. 7; 8). Its proximal end was separated from the rest of the tusk by applying a transversal notch on it and then breaking it off completely. Near the place where the notch was applied, four longitudinal lines of various length, depth and width were incised on the surface of the tusk. They might have also been related to the process of fragmentation of the tusk. The length of the separated part of the tusk is 55.50 cm, the maximum diameter in its proximal part being 6.60 cm and that of its middle part being 5.50 cm.

This tusk is better preserved than others. It cannot be excluded that its surface had been specifically worked before the image was applied. The most damaged is its distal part. It bears both natural and mechanical damages. Natural ones are represented

Fig. 7. Obolonnya. The tusk (photo by A.V. Panikarskyi)

by several lengthwise cracks, some of which have been caused by deeply incised elements. Many parts of the tusk bear also traces left by the roots of grass or moss. Mechanical lesions are divided into modern and ancient ones. Modern ones are represented by several scars left by spade blows inflicted during the digging of the well (fortunately, the images almost did not suffer any damage). Ancient mechanical lesions include traces of nine blows diagonal to the axis of the tusk. They are located near the main image.

The main 'story' consists of five related images. The composition is applied on the surface of the tusk closer to its proximal end (Fig. 9).

The first image is of an elongated shape, slightly narrowed in its middle. In the lower part it is slightly damaged by a crack. The maximum length is 6.6 cm. The narrowest part is 1.00 cm wide. The outline is incised by a wide, rather deep line, its maximum width being 1.00 mm. The upper part of the image is filled with rows of notches situated diagonally to the length of the figure, the lower part being occupied by rows of chevrons. Notches are from 3.0 to 7.0—8.0 mm long and were applied (at least most of them) from left to right. The maximum width of hatchings is over 1.0 mm.

This figure resembles very much full face statuettes from the Mizyn site, a part of which are considered to be images of a woman (Мізин 1931; Абрамова 1962, с. 33—34, 58; 1966, с. 20—21, 90—93, 185—186; Шовкопляс 1965, с. 217—236). Chevrons applied on its lower part are traditionally believed to represent an evidence of the female gender. Notches adorning the upper part appear to represent clothes, rendering, probably, their texture as well. A similar method of depicting clothes and their elements by notches of various shapes occurs rather frequently on Paleolithic figurines of women (Окладников 1941, с. 104—108; Абрамова 1960, с. 126—149).

The axis of the position of this figure and the axis of the position of another anthropomorphic figure determined the order in which we describe other images.

Another image is amorphous, rounded in its lower part, and bears two prominences in its upper part,

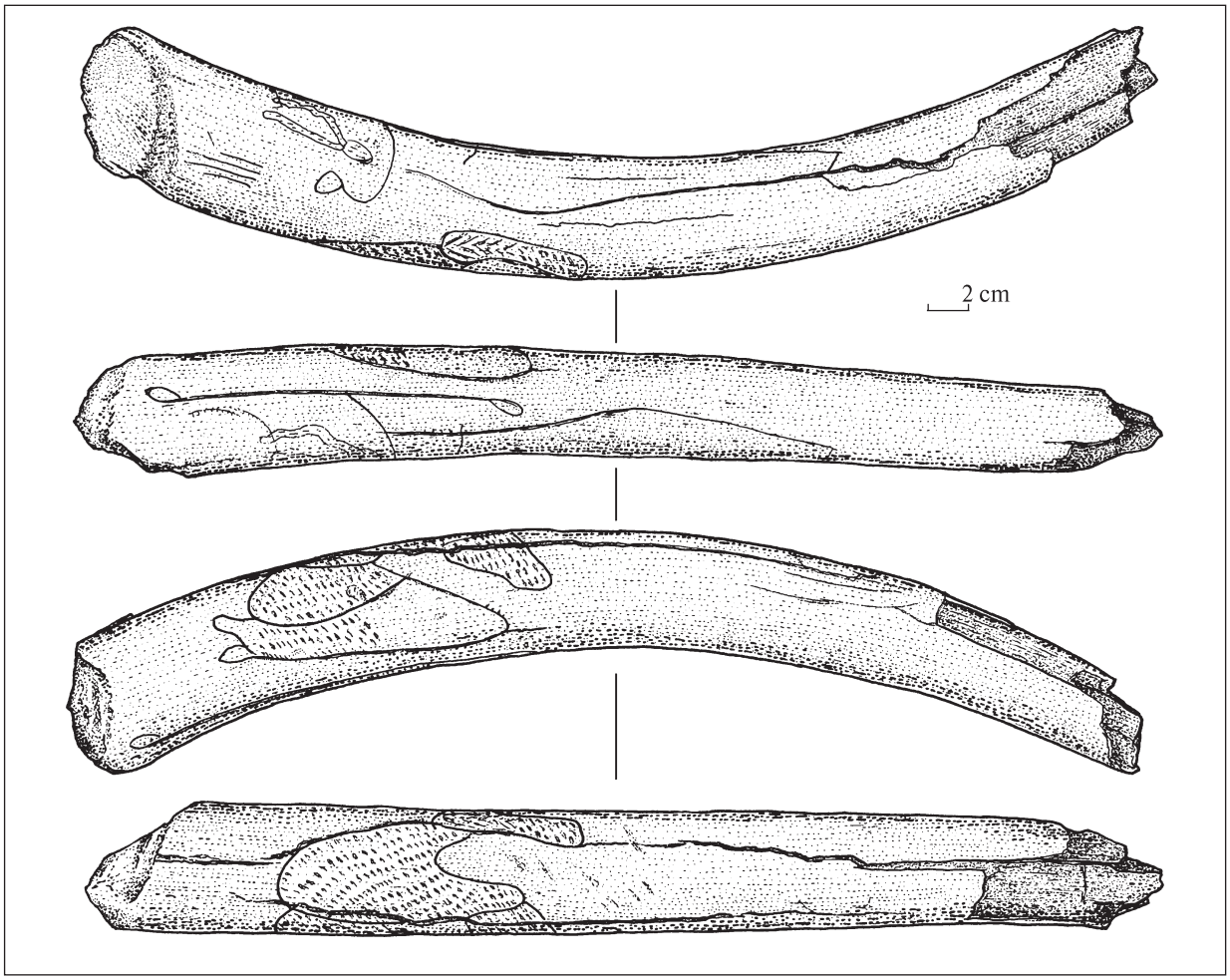

Fig. 8. Obolonnya. The tusk (drawing by A.V. Panikarskyi)

one of them adjoining the first figure. The image is damaged in some places by natural cracks. Its outline represents a continuous line of the same depth as that of the previous image, while its surface is filled with rows of rhythmically disposed notches. They are applied from left to right. In total, ten distinct rows are visible, their lines being broken at the end. This is especially evident on the bulging parts of the image, near the first figure and near the next upper one. Most of the notches are approximately of the same length and width. Their length is from 2.0 mm to 5.0 mm, their width varying within 1.0 mm. The longest notches constitute the first row, the smallest ones occurring in the last rows.

Since the ancient artist did not follow any distinct row structure, and the number of notches is different in each row, one can presume that the number of notches and the number of rows did not have any importance. We believe that notches were used by the artist to render the texture of the object he wanted to depict. Most probably, this composition, like three other ones beside it, represents skins depicted with their fur outside.

The third image is situated close to the upper protruding part of the previous one. Its outline represents a line of the same depth and width as that of previous images. Of particular interest is the lower, twisted part of the outline. While applying it, the artist went somewhat wrong, and then, instead of trying to trace a straight line, which is simpler, he traced it slightly twisted. This fact proves that the ancient artist was very well aware of what he wanted to depict. The surface of this image, like that of the previous one, is filled with rows of notches applied from left to right. Some notches in the first row begin directly from the line separating the second image from the third one. While the first three rows are executed rather precisely, observing a certain rhythm, the order of rows further on is slightly broken. Most of the notches are 4.0—5.0 mm long, they are longer and narrower than those on the previous image. They seem to have been applied by a different burin.

The fourth and the fifths images have a common contour line in their upper part. The fourth figure adjoins the right side of the second one. It

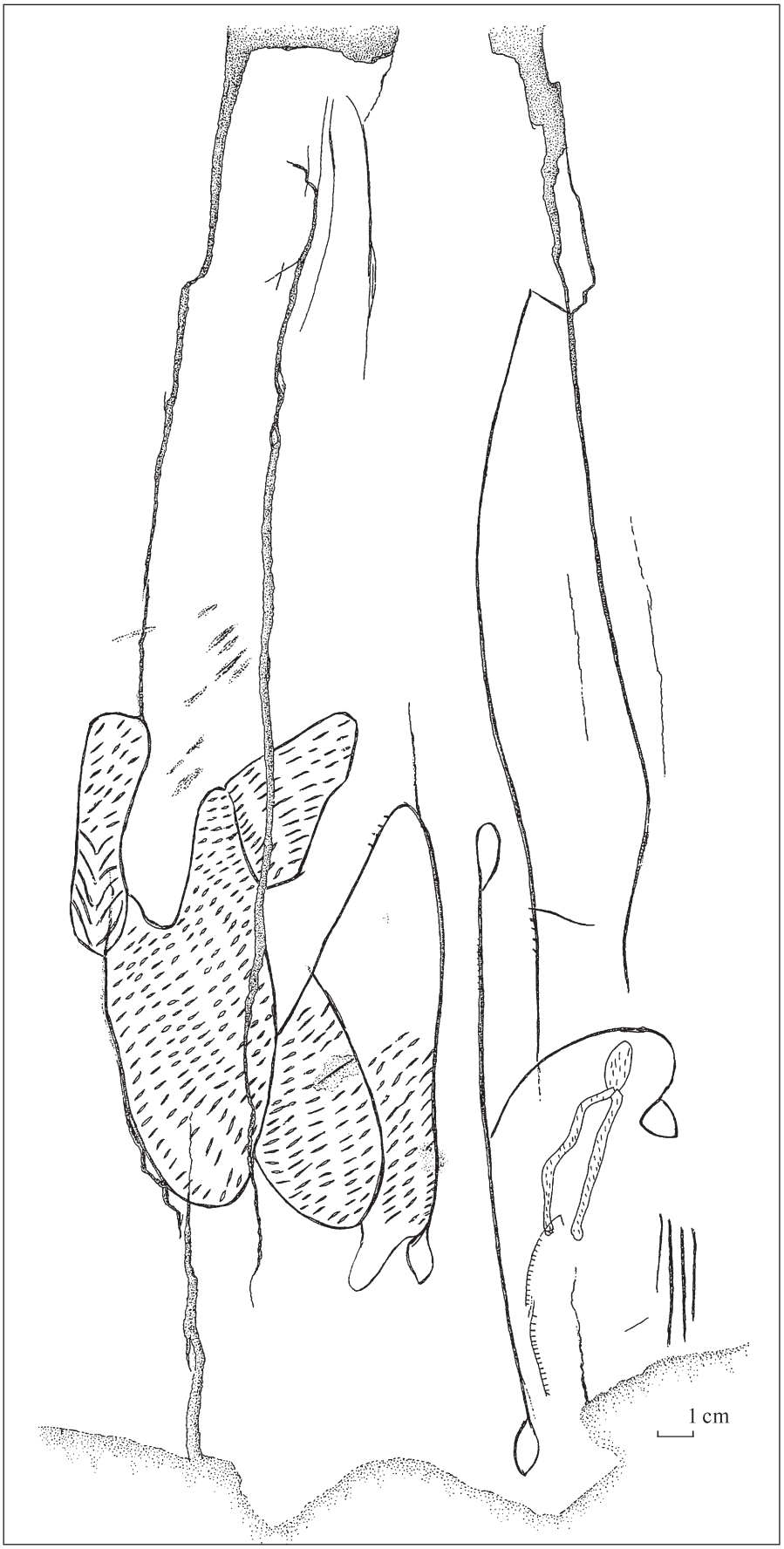

Fig. 9. Obolonnya. Scanogram of the images on the tusk (drawing by A.V. Panikarskyi)

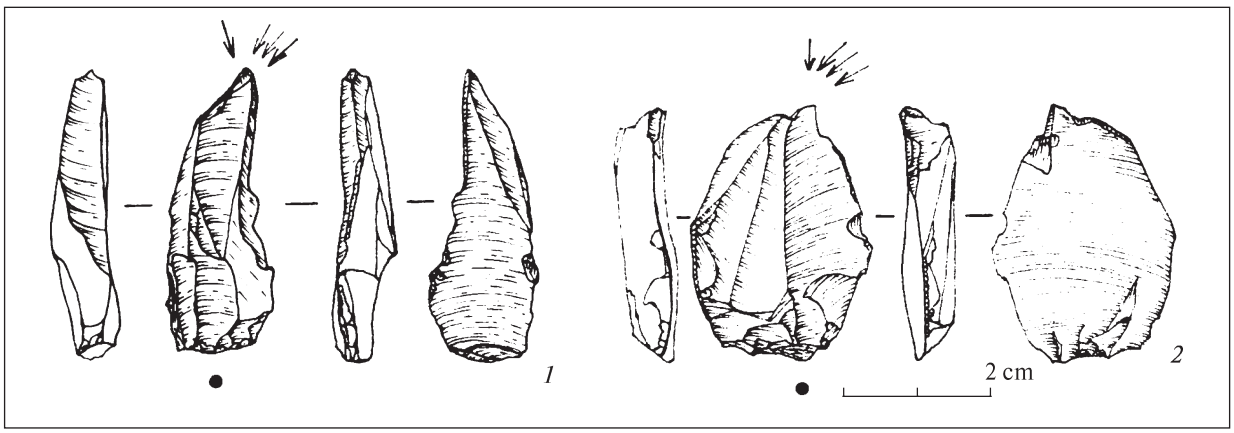

Fig. 10. Obolonnya. Burins

has suffered a slight mechanical damage. The bottom of the figure is rounded, its top ending with a sharp prominence. Its outline is traced by a line of the same thickness and width as that of previous figures. Inside it is filled with five rows of notches, disposed one above the other and incised from left to right. Most of the notches are 4.0—6.0 mm long. Their shape has different proportions than the notches of the previous images. Evidently, they were applied by a different burin.

The fifth figure is of an elongated shape: it resembles a cone in its upper part, while its lower part ends with a prominence and a leaf-like 'tail'. While the largest part of the image is traced with a line having the same proportions as previous figures, its lower part (the prominence and the 'tail') is traced with a finer and less deep line. Only a part of this figure is covered with notches: three rows of strokes applied from left to right are clearly visible. The last row adjoins the contour line. So far only several notches on the third image were traced close to the contour line. Their shape and proportion resemble those of the notches of the fourth image.

The row structure in the upper end of the fifth figure is broken, although there was enough place to continue engraving. This is one more peculiarity that distinguished this image from the other, where the row structure is broken mostly because the area of the figure was limited by the contour line. Thus, we believe that the artist did not fill the entire space of this image with notches quite purposely. Four transversal strokes adjoin the contour line from outside in the upper part of the figure. Together with the 'tail', these are the only elements that go beyond the outer contour of the first composition.

Taking into account specific characteristics of rows of notches, some conclusions can be made: firstly, while working on the composition, the artist held the tusk before himself in the transversal position; secondly, he traced the outline of the images first and then filled in their internal space; thirdly, he used several burins for engraving. All graphic compositions seem to have been executed by the artist knowingly, and he depicted concrete objects he knew.

The first figure, in our opinion, represents a woman. Its shape and the presence of chevrons make this image similar to Mizyn statuettes. Notches on the upper part of the figure depict, probably, fur clothes.

Since the row structure of notches was not strictly observed on any of the other four images, the number of rows and notches was of no importance for the ancient artist. By their means he rendered the texture of the surface of the objects he depicted. As has been already mentioned, we believe these images to be the representations of skins spread with their fur outwards. Among them the fifth one stands out, since its surface is only partially covered with notches. Probably, it is a representation of a skin covered with fur only partially, while the rest of it, apparently, has been treated.

The largest figure incised on the tusk is a stylized representation of a human being in profile. Its maximum length is 20.8 cm. It is traced with a line of the same depth and width as that of the previous image. The figure does not have a head, nor any evidence of its gender. The distinctly traced line of its back makes it anthropomorphic. In front, in the bottom, crosswise the contour line, five fine 1.0 cm long hatchings are situated. A slightly wavy line goes off the upper hatching. It is much finer and less deep as compared with contour and hatchings lines. Engraved representations of a human being in profile without the head are characteristic of Western and Central European Paleolithic art (Абрамова 1966, с. 20—27). Still, it should be observed that this figure has a slight

resemblance to Mizyn statuettes in profile. In particular, a common feature is represented by the lack of a distinguished head.

Below the anthropomorphic figure, there is a staff-like object ending with a head with triangulate outlines. It is traced with a not very wide, but rather deep line, its width and depth diminishing downwards. The most clear-cut is the head. Its end comes close to an image in the shape of a lengthwise line ending with leave-like heads. It is traced with a line of approximately the same depth and width as that of the previous image. Slightly visible on its upper part, incised with a deeper line, are nine fine notches situated transversely to the main line. The total length of this image is 17.6 cm. This pattern does not have matches not only in the Paleolithic art of the Dnipro basin, but also in that of other territories of Eurasia.

To the right from the last image, below the staff-like figure, there is one more image which we believe to be an image of a serpent. It is incised with very fine and shallow lines and has a head and two tails. The head was incised first, then the wavy body of the serpent was outlined and, finally, its almost straight body was traced. Probably, the artist intended thus to depict the serpent in motion and in the state of rest. The texture of the serpent's skin is rendered by fine hatchings.

Representations of snakes are not known on the territory of Eastern Europe, although this motive occurs in the sites of Western Europe (Абрамова 1962, с. 64). Images of serpents are known also on a tusk blade from the Malta site (Абрамова 1962, с. 64, табл. L, *2*; LI, *2*). But, generally speaking, images of reptiles are rare for Paleolithic art. On the territory of the Dnipro basin, one can only mention a turtle depicted on the known tusk from the Kyrylivska site (Яковлева 1987, с. 177—186). It cannot be ruled out that the staff-like figure described above is a stylized representation of a snake. If this is true, we can speak about the use of several artistic styles for rendering of one concrete image.

Below the latter figure, two fine shallow lines with notches traced across them are incised, crossing the tail of the serpent. Similar lines with transversal notches are typical of representations on the Kyrylivska tusk (Ibidem).

In the upper part of the tusk, above the main image, along the body of the tusk, several more fine shallow lines are traced. Probably, they demonstrate the initial phase of applying of some symbol.

Since some other tusks of approximately the same size and diameter have been found near the decorated tusk, one can presume that engraving was performed directly at the Obolonnya site. The fact that the decorated tusk has been preserved better than others seems to testify to some special treatment applied on its surface before the engraving was performed. The probability of such a treatment is suggested by the presence of fine shallow longitudinal lines on the surface of another tusk.

Among others, open remains the issue of relationship between the images. We believe that they were performed in different periods and do not constitute a single composition. Each of the figures bore some sense load and was important for ancient humans during a certain period of time.

By the character of its images, the tusk represents the closest analogy of the Kyrylivska find. Kyrylivska and Obolonnya tusks differ from all other engraved tusks known in the Dnipro basin and in adjacent territories, characterized by ornamental compositions consisting of geometrical elements, by the fact that the images depicted on them represent concrete objects. What it has in common with the Kyrylivska tusk is the presence of an image (or images) of reptiles and of lines with transversal hatchings. And the common feature of this tusk with the Mizyn artistic tradition is represented by the image of a woman resembling full face Mizyn statuettes, as well as by the chevrons decorating the figure.

Besides faunistic remains and pieces of art, flint and quartzite finds occurred at the site. They were extracted from the soil dug out of the well. However, the prevailing majority of finds collected in the excavated soil is represented by small fragments of mammoth's bones and tusks, as well as fragments of bone charcoal.

12 flint items have been discovered in total. They were made mostly from local Desna flint of black or dark grey color with characteristic fine light grey specks. An exception is constituted by two proximal fragments of blades. One is light grey and, judging by light grey specks on its surface, was also obtained from local raw material. This fragment of a blade has a lustered surface. Another proximal fragment belongs to a massive blade of a considerable size. This blade is made of dark grey, almost black flint. It still bears fragments of a weathered light grey cortex and a reddish stratum underlying it. This type of flint comes from Kaniv flint dislocations and has been intensely used at Middle Dnipro Paleolithic sites: Mezhyrich, Dobranichivka, Hintsi, Semenivka 2 and 3, Fastiv site (Залізняк 1998, с. 17—18; Шидловський 2005, с. 31—39). Therefore, this blade fragment derives from imported raw material, testifying to the connections of the inhabitants of the site with the Middle Dnipro area.

Most flint items are not patinated. A feeble transparent blue patina is observable only on two of them.

The tools include two dihedral multifaceted burins, one of them is made on a blade, while the other is made on a wide blade or on a flake (Fig. 10). Debitage is represented by one intact blade and two proximal parts of blades described above, as well as by three fragmented flakes, a small flint fragment and flakes derived from shaping/reshaping and adjusting of cores: one small blade taken off a natural rib of a nodule and a proximal part of a secondary crested blade. Interesting is a fragment of a core. Its dorsal surface bears fragments of opposite blades negatives.

Quartzite is represented by four finds: a proximal and a medial fragments of blades and two flakes. They are made from fine-grained quality quartzite typical of this region.

The available stone selection suggests that the inhabitants of the Obolonnya site used mostly local raw material: the Desna flint and quartzite. A fragment of a blade made from typical Kaniv flint, present in the complex, provides good reasons to suppose that the inhabitants of the site maintained contacts with the population of the Middle Dnipro sites that habitually used this flint or that they migrated from that region. This issue appears topical in view of the fact that not far from here, at approximately 12.0 km upstream the Desna, Buzhanka 2, the northmost site containing Mezhyrichian type flint industry, is situated.

The analysis of this small assemblage of stone finds reveals that in chipped stone process a ridged surface was formed. Judging by predominant parallel negatives on the dorsal surfaces of stone remains, one-platform chipped process prevailed. Small striking platforms, the presence of 'lips' and non-conical initial stage of splitting of one of the blades proves that a soft hammer was used. These peculiarities and the morphology of stone remains permit to refer this assemblage to the Epigravettian period.

Thus, the Obolonnya site is sure to belong to the Epigravettian tradition, both by the specific character of images engraved on the tusk and by peculiarities of its flint complex. There is no doubt that this site is very interesting and attractive for further investigations, first of all, because of the tusk with engraved images discovered there, which, by the character of its images, represents, in fact, the first article resembling the tusk from the Kyrylivska site that have been discovered during the almost 140-years-long history of explorations of Dnipro basin Paleolithic.

The Obolonnya site is of interest also due to the fact that its material contains elements that correlate it with various cultural traditions. For instance, it is related to the territory of the Middle Dnipro by the presence in its complex of a blade made from imported Kaniv flint, the use of which is typical of the Middle Dnipro Epigravettian sites of the Mezhyrichian type. The relation to this region is suggested also by the lines with transversal notches on the tusk, which represents a typical element of images on the Kyrylivska tusk. Besides, both Kyrylivska and Obolonnya tusks are the only objects on the territory of the Dnipro basin that bear images of reptiles. The site is related to the Mizyn cultural tradition by the style of the female image depicted on the tusk.

Thus, Epigravettian sites from the south of the Middle Desna area provided very interesting material. Buzhanka 1, being, evidently, 'mammoth's cemetery', was repeatedly visited by various groups of ancient population, probably, belonging to different cultures. Buzhanka 2 site (its upper layer), situated closer territorially to Mizyn and Desna sites, represented, first of all, by the sites of Tymonivka-Yudinovo type (Nyzhnyy 2008, c. 96—134), turned out to be the northmost site of the Mezhyrichian type, the latter being spread in the Middle Dnipro basin, more than 100 km to the south. Features testifying to contacts with the Middle Dnipro region are present also among the material from the Obolonnya site.

Therefore, exploration of sites in the south of the Middle Desna area, situated between the main bulk of Middle Desna and Middle Dnipro Epigravettian sites, seems extremely important and promising for the study of the question of intercultural relations of Epigravettian population of the Dnipro basin.

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N.B. Burdo

ANTHROPOMORPHIC FIGURINES FROM THE TRYPILLIAN SETTLEMENT OF MAYDANETSKE

Presented are results of the analysis of an assemblage of anthropomorphic plastic art objects from the Trypillian giant settlement of Maydanetske belonging to the collection of the Institute of Archaeology of the Ukrainian Academy of Sciences.

Keywords: Trypillian culture, Maydanetske, anthropomorphic plastic art objects, classification, semantics.

The collection of anthropomorphic figurines from Maydanetske counts over 200 items and is one of the most representative assemblages of Trypillia. This settlement near the village of Maydanetske, Talne district, Cherkasy region, belongs to Tomashivka local chronological group of Trypillia C I. The site has been explored by Trypillian expedition of the Institute of Archaeology of the Ukrainian SSR during 18 field seasons from 1971 until 1991. During this period, remains of 35 houses and 20 pits were explored (Шмаглий, Видейко 2001—2002, с. 48—50), and dozens of thousands ceramics fragments, hundreds of heaps of pottery and sculptures pieces were collected. The material is hosted mostly by the collection of the IA of the NASU (Колекції... 2007, с. 74—75, табл. 6—7), as well as in that of the Cherkasy Regional Historical and Ethnographical Museum.

Unlike ceramic vessels, the peculiarities of ornamentation of which have been studied in detail by T.M. Tkachuk (Ткачук 2005, с. 102—140), as well as zoomorphic plastic art objects, partially involved in V.I. Balabina's study (Балабина 1998), anthropomorphic plastic art objects have not been so far investigated thoroughly. In the publications of Maydanetske materials (Шмаглий, Видейко 2001—2002, с. 103—105, рис. 48—50) and in general reviews of anthropomorphic figures, only some figurines have been described (Бурдо 2001, с. 79, рис. 128—130, табл. 4, *5*; 5, *1*).

Intact, almost intact or fully restorable statuettes are only represented by isolated items, no more than 5 per cent from the total number of anthropomorphic figures.

Conditions in Which Figurines Were Discovered

Anthropomorphic plastic art objects originate from different structures explored at the Maydanetske settlement. They were discovered in the cultural layer, among the ruins of burnt buildings, but most frequently they occurred in the pits situated in the buildings, within the remains of houses or nearby. During the excavations of pits, no definite horizons containing plastic art objects could be traced, but often enough the figurines were found in groups consisting of several fragments. Sometimes it is possible to suppose, with a considerable degree of confidence, that the statuettes were broken crosswise in half intentionally, before they were put into the pit. A group of three similar figurines (two male and one female), broken in two in this manner, were found in the pit of house П (Fig. 1, *11—13*). In total, 40 fragments of anthropomorphic figures come from this pit, in particular a head with realistic features, while a fragment of its neck have been found in the pit of the neighboring house У (Fig. 3, *4*). In a large depression near house Е, finds of fragments of anthropomorphic figures constituted a complex of sacral objects together with zoomorphic figurines (mostly intact), ceramic globules and fragments of miniature vessels. All these items were made from similar clay paste and slightly fired. The same pit contained also a head of a realistic figurine (Fig. 3, *1*).

Among the blocks of burnt clay remaining from the roofing of a house С a torso (Fig. 3, *2*) of a large realistic figurine has been found *in situ* (Fig. 3, *5*) (Шмаглий, Видейко 2001—2002, с. 104).

Anthropomorphic statuettes from Maydanetske differ by their loam, color, degree of firing, sizes, morphological and stylistic peculiarities, iconographic types.

Technological Characteristics of Anthropomorphic Plastic Art Objects

By the composition of loam, two technological groups can be distinguished among the Maydanetske statuettes.

Statuettes of the first technological group prevail. They were made from well worked fine-structured paste, mostly without visible admixtures. Sometimes

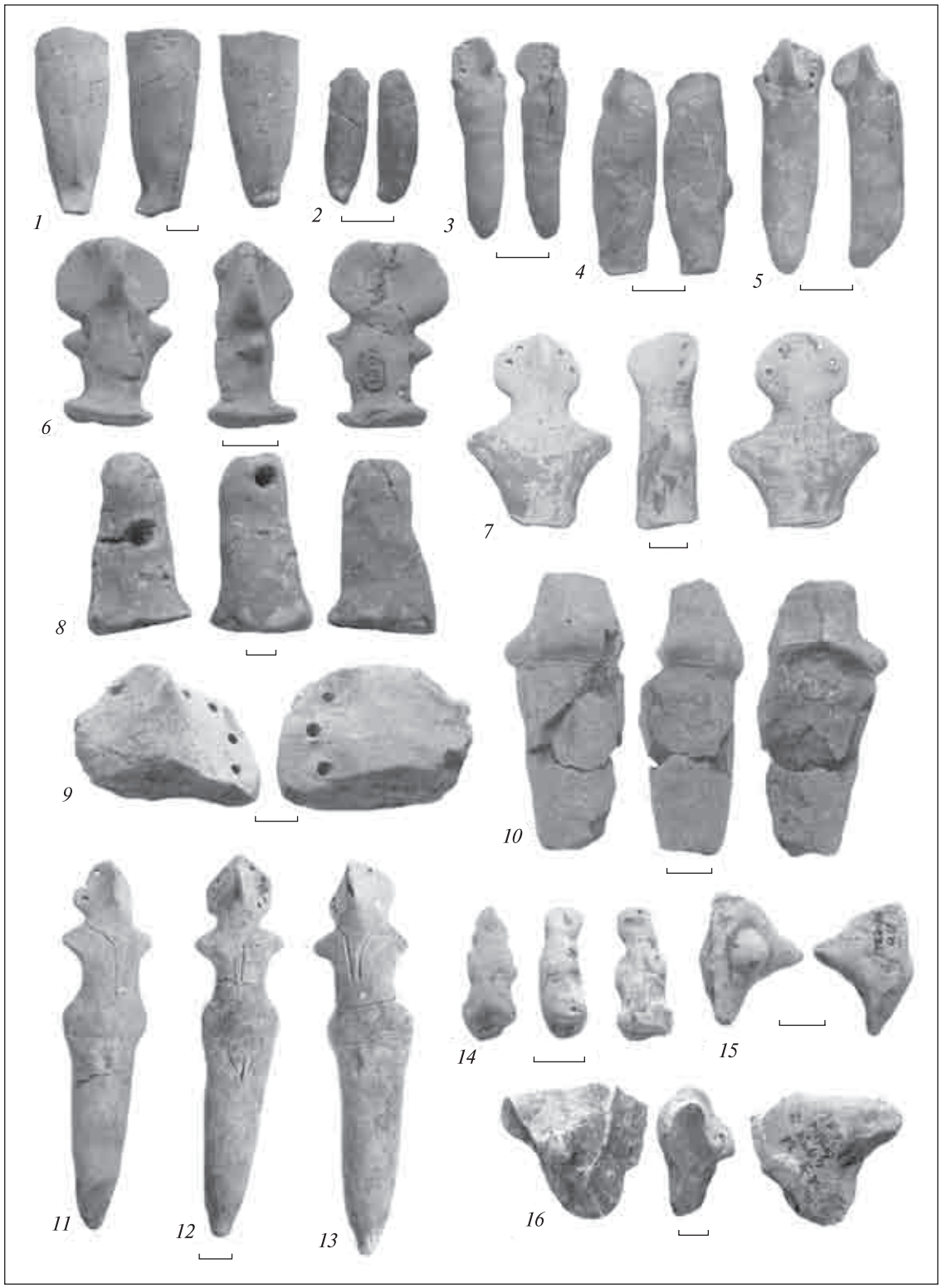


Fig. 1. Anthropomorphic Plastic Art Objects from the Maydanetske Settlement

burnt particles of organic admixtures are observable. The color of figures is mostly light yellow; they are brittle, which testifies to a low temperature of firing. Some figures of this group, very feebly fired, are distinguished by dark gray or black color. Judging by their break, most figures of the first group were made from one piece of clay; however, items made from two linked vertical pieces sometimes occur (Fig. 1, *15*). The surface is covered by a thin layer of fine clay facing and thoroughly smoothed (Fig. 1, *10*). Traces of dark red paint are sometimes visible. Various detail are worked with fine incised lines (Fig. 1, *11—13*; 2, *5*).

Statuettes of this group are schematic and, mostly, of small or medium size. They are from 5.0 to 12.0 cm high. Statuettes of medium size are characterized by better working and stronger firing (Fig. 1, *11—13*; 2, *11*). Plastic art objects of this group occur most frequently in the pits in fragmented state, some fragments being very small, up to 1.0 cm.

Statuettes of the second technological group are made from kaolin clay producing a firm paste of white or light pink color. The loam has no visible admixtures or contains sand, probably, as a natural admixture. Painted vessels from Maydanetske were made from the same clay. Traces of burnt caryopses or their parts (Fig. 3, *2*) and other organic admixtures are sometimes clearly visible on the surface and on the break of figurines. Figurines of this group have been burnt at a high temperature, their paste being very compact and strong.

The second technological group includes mostly large or medium-sized statuettes (Fig. 1, *7*). No intact or almost intact statuettes of this group have been found at Maydanetske, but, judging by their fragments, in particular by a fragment of a discoid head with a diameter of 5.5 cm (Fig. 1, *9*), and by proportions of intact items, the height of the terracottas could have reached 30.0—35.0 cm. Probably, the statuettes of this group were made from two vertical halves, as testified by fragments of their upper (Fig. 1, *16*) and lower parts (Fig. 3, *8*). Thus, the statuettes were endowed with a hidden dichotomy typical of Trypillian plastic art since Trypillia A – Pre-Cucuteni period (Погожева 1983).

The surface of figurines of the second technological group is thoroughly worked, smoothed and covered with orange or red slip. Such details as hairstyle (Fig. 3, *4*), pubes (Fig. 3, *7*), clothes or ornaments (Fig. 2, *12*) are emphasized by dark brown paint. Fragments of statuettes bearing painted ornament are unique for Maydanetske. A 'ladder' ornament has been registered on the breast of one figure (Бурдо 2001, рис. 32, *4*). Unfortunately, slip and paint are not always preserved; more often they are represented only by isolated stains.

Particularly noteworthy are anthropomorphous statuettes that do not correspond to the above-mentioned technological groups. They include a miniature statuette made from fine-structured clay. It is shaped rather carelessly, well fired, the crock being of a red color. The columnar figurine is of squatted proportions, its discoid head being disproportionately large; it has conical prominences instead of arms and a discoid pedestal (Fig. 1, *6*). A leg with a modeled foot, by the nature of its loam, is similar to the articles from the Dnister area (Fig. 1, *1*).

On the whole, the analysis of anthropomorphic plastic art objects from Maydanetske shows the lack of correlation between technological characteristics of figurines and their iconographic types. However, the first technological group is characterized by small schematic statuettes, while all terracottas with realistic features belong to the second technological group.

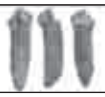
Formal Typology of Plastic Art Objects

Anthropomorphic figures from Maydanetske possess some common features (Table). The great majority of them are made schematically, with only four statuettes having realistic features. Typical of schematic sculptures is a head modeled in the shape of a large disc with a large prominent nose and small holes along the edge. Eyes are not shown. Pairs of vertical holes disposed on both sides were registered in some cases (Fig. 1, *7*). The neck is short; the arms are substituted by short conical prominences, sometimes with holes at their ends. Typical are also prominences on the thighs.

Anthropomorphic figurines, independently from their size, technological peculiarities and sexual characters, fall into **two types:** I – in the standing position, II – in the sitting position. Subtypes are distinguished in each type, depending on characteristic peculiarities of modeling, with variants sometimes distinguished within subtypes.

Subtype I.1 – schematic statuettes. They prevail among anthropomorphic figures from Maydanetske. Their size varies from miniature items (Fig. 1, *14*; 2, *5, 10*) to medium-sized articles (Fig. 1, *12*). They depict a straight slim female or sometimes male (Fig. 1, *11, 13*) figure with accentuated protruding buttocks. The head is discoid, with a large nose and with several very small through holes made along the edge of the disc. Eyes are not shown. The neck is short; the arms are substituted by conical prominences. Breasts are depicted as small humps, sometimes with a prick in their centers. The waist, as a rule, is slender, the thighs being not very wide, mostly with conical prominences, in which small holes are sometimes made. Legs are spindle-shaped and modeled as one whole. The foot, as a rule, is not modeled or shaped as a small prominence. The details are depicted by an incised line. The pubes is depicted as a triangle with a stroke. The neckline of clothes or ornaments are incised from the front, while legs are divided with a line from behind. The shape of the statuettes suggests that they could stand up only driven into the ground. Figurines of this type are the ones that were most often found in the pits broken in two or fragmented.

Table. **Main Types of Anthropomorphic Plastic Art Objects from the Maydanetske Settlement**

Subtype	Illustration	Description	Subtype	Illustration	Description
Standing (I)			Sitting (II)		
I.1		Standing figurines with a spindle-like leg	II.1		Sitting figurines with reclined torso
I.2		Standing figurines with a columnar leg	II.1a		Sitting figurines with bent legs
I.2a		Standing figurines with a cut on the columnar legs	II.1b		Sitting figurines with legs appart
I.3		Standing figurines with separately modeled legs	II.2		Sitting figurines with straight torso
I.4		Standing figurines with separately modeled legs joined by a crosspiece	II.3		Sitting figurines inclined forward
I.5		Very schematic			

Proportions of the figures, evidenced by isolated intact items, were moderately elongated. The head constituted 1/5 of the height of the statuette, its lower part being about 1/2 of its height.

Subtype I.2 – statuettes on a columnar foot. Figures of this subtype are much fewer. They represent a female figure with protruding buttocks and an straight back. No intact items were found at Maidanetske, but, judging by the finds at other sites of the Tomashivka group, in particular by those discovered at Sushkivka (Відейко 2004, 505; 2004a, 533) and Rozkoshivka (Якубенко 2004, с. 444), the head was of a discoid shape. The figures of this subtype are massive and squatted. They have conical prominences instead of arms, their waist being wide and accentuated by a thin line from behind, which in the front passes under the abdomen, sometimes enlarged. The pubes is represented in the same way as that of figures of the I.1 subtype. A thin line divides the buttocks. Wide thighs have prominences with fine holes. The columnar lower part resembles a narrow skirt (Fig. 2, *2*).

Subtype I.2, variant a, is represented only by isolated fragments of statuettes of the second technological group. The variant is distinguished by schematically modeled feet (Fig. 2, *14*).

Subtype I.3, is represented by fragments of figures of the second technological group alone. All of them are represented by lower parts of large statuettes with distinctly modeled and joint legs decorated with painted details. It is possible that upper parts of large statuettes, in particular of those with realistic features, also belong to this subtype (Fig. 3, *2*). A torso of a similar figurine (Fig. 2, *12*) has been found in house E (Шмаглий, Видейко 2001—2002, рис. 49, *1*). The statuette is massive. Instead of arms, it has conical prominences with holes at their ends. Its waist is slim, its thighs are wide. Breasts are represented by small humps. Pregnancy is accentuated through a sharp bulging abdomen. From the front, on the breasts, an ornament in the shape of a ribbon consisting of three lines is executed by dark brown paint. The hair gathered into a knot is put in relief on its back.

Fig. 2. Anthropomorphic Plastic Art Objects from the Maydanetske Settlement

The lower part of a large statuette belonging to this subtype originates from house Ж (Fig. 3, *7*). Although this figurine is massive, it has a slim waist and wide thighs with conical prominences, in which holes are made. A fine prick on its sharp bulging, slightly enlarged abdomen designates the navel bordered by a circle of dark brown paint. A triangle of the same color marks the pubes, while a thin line accentuates the abdomen and the thighs. Legs, modeled separately, are joined closely together. Judging by fragment of other statuettes, this subtype is characterized by modeled feet (Fig. 3, *6*). In house У, a foot of a statuette has been found (Fig. 3, *9*). The turned up toe of the foot might rep-

Fig. 3. Anthropomorphic Plastic Art Objects from the Maydanetske Settlement

resent footwear similar to Ukrainian *postoly* (soleless shoes made from raw leather). Statuettes of subtype I.3 could have been of a considerable size, reaching a height of 30.0 cm. They could hardly stand up without support.

Subtype I.4 is represented by isolated fragments. Its peculiarity is the presence of a crosspiece connecting legs. The found parts (Fig. 2, *4*) originate from massive and not very expressive statuettes. Taking into account an analogous

item found in Chychyrkozivka (Гірник, Відейко 1989, рис. 3, *10*), they are similar to figurines of subtype I.3. Plastic art objects with a similar characteristic feature are known at the sites of Trypillia C I stage in the Middle Dnipro area (Якубенко 2006, рис. 6, *15, 25*), in particular in the Kaniv group (Овчинников 2007, с. 12). A supposition has been advanced that similar figurines found at the settlements of Tomashivka group should be considered as 'imports' (Якубенко 2006, с. 66). Nevertheless, Maidanetske figurines of subtype I.4 are clearly related to plastic art objects of the second technological group, since they are made from the loam typical of ceramic articles of the Tomashivka group. In our opinion, this circumstance excludes the possibility that they could have been brought to Maydanetske by the population of Kaniv group.

Subtype I.5 is represented by four schematic miniature figurines without a detailed anthropomorphic image. They were found in the filing of a pit in house П (Fig. 1, *2—5*). They belong to the first technological group. The figurines are extremely schematic and resemble a rod with a conical end. Two of them have their head damaged, but, most likely, it was of a discoid shape with a large prominent nose and small holes along the edge of the disc. One figure has conical prominences instead of arms (Fig. 1, *3*). The smallest statuette has a transversal incised line from the front, representing a crossbelt (Fig. 1, *2*), while another one bears a cordon behind (Fig. 1, *4*).

Statuettes in the sitting position are much rarer in the assemblage of anthropomorphic figures from Maydanetske. They differ by the representation of legs and by the inclination of torso.

Subtype II.1 is represented by schematic medium-sized figurines with stretched legs and reclined torso (Fig. 2, *11*). Modeled arms, typical of this subtype of figurines, impart them certain naturalistic features. The head is discoid, with pricks along the edge of the disc, the nose is large and the neck is short. Sometimes an incised line from the front represents the neckline of clothes or ornaments. Breasts are represented by cordons. Pubes is represented in the same way as that of figures of the I type. Most fragments of upper parts of statuettes of this subtype represent a female figure with hands folded on the abdomen. In some cases the hands are folded on the breast (Fig. 3, *10*). Stretched legs are modeled together or separated by an incised line and disjoined near the foot. Sometimes the feet are shown as faintly visible prominences. This subtype includes also the lower part of a schematic male figurine (Fig. 2, *8*).

Subtype II.1, variant a, comprises figurines with legs slightly bent in knees. Statuettes of *subtype II.1 б*, instead, have legs modeled separately.

Maydanetske figurines of subtype II.1 have close, although incomplete, matches among anthropomorphic plastic art object of Trypillia C I stage from the Middle Dnipro area (Круц 1977, рис. 23, *2*; 42, *6*).

Subtype II.2 comprises female figurines in the sitting position with an straight torso. Isolated fragmented items of a large size are known, belonging to the second technological group (Fig. 2, *13*). A break near the shoulders suggests that they had arms. Similar statuettes have been found at Trypillian sites of the Middle Dnipro area (Якубенко 2004, с. 443; Pogoševa 1985, Abb. 970). They are also present in the collections of anthropomorphic figures from Koshylivtsi (Cehak 1934, Tab. III, *4*) and Cucuteni B culture (Monah 1997, Fig. 179, *1*).

Subtype II.3 is represented by isolated fragments of statuettes in the sitting position with their torso inclined forward. One of the most expressive items belongs to the second technological group. Arms were modeled, while breasts were not marked. Female figures in the same position are known from Trypillian sites of the Middle Dnipro area – in Zhukivka (Якубенко 2006, табл. IV, *5*) and Sofiyivka (Pogoševa 1985, Abb. 962). A statuette of a similar type belonging to Cucuteni B does not bear sexual characters (Monah 1997, Fig. 180, *1*; 181, *4*).

A unique figurine of 'Maydanetska Madonna' (Fig. 2, *1*) from house Ж should be, probably, also referred to this subtype. The fragment belongs to the upper part, with its head lost. A neckline or a necklace is put in relief on the neck. A necklace on the neck of a figurine of a baby from the Bondarka settlement is represented in the same way (Бурдо 2001, табл. 4, *1*). The statuette is executed schematically. The closest analogy is a figurine from Sushkivka (Бурдо 2004, с. 393). The category of sitting images includes also a 'Madonna' from Krynychky (Бурдо 2001, табл. 4, *3*).

A peculiar type (III) of plastic art objects from Maydanetske is constituted by schematic conical articles (Fig. 1, *8*), isolated items of which have been found together with anthropomorphic and zoomorphic figurines, miniature vessels and three-dimensional clay symbols. Such cones (sometimes they are identified as phallic images) are spread mostly at the sites of Trypillia B I – Cucuteni A (Monah 1997, Fig. 44, *1, 2, 5—8*). Their comparison with more naturalistic items having a schematically modeled face (Sorokin 1997, p. 33) permits to refer conical figurines to a particular, extremely schematized group of anthropomorphic plastic art objects.

A find of a fragment of a terracotta model of a chair seat on legs (Fig. 2, *9*), representing a rare find for the middle Trypillia period, is, probably, related to sitting statuettes. A seat of a similar chair originates from Dobrovody (Круц и др. 2005, рис. 52, *1*).

Statuettes with Realistic Features

Particularly noteworthy among anthropomorphic figures from the Maydanetske settlement are four statuettes with realistic features of their modeled head. Since these articles are heavily fragmented, it is not possible to refer them with confidence to some type, but all of them, undoubtedly, are parts of large-sized terracottas and belong to the second technological group.

Such articles are represented in two cases by fragments of upper parts and in the other two cases – by heads.

1. A bust of a massive statuette originates from the ruins of house C. Only the head has realistic features, while the torso is modeled in the schematic manner, typical of the Trypillian plastic art. The face is high and wide, slightly flat, with a sharp chin. The forehead is low, the nose is large (broken and reconstructed), prominent, with deeply cut nostrils. Closed eyes are represented by thin incised arc-like strokes. The mouth is depicted as a small subrectangular hole. Ears are expressly large, made in the shape of halves of discs with three fine punctures on their edges. This feature draws the modeled heads of realistic figurines closer to disc-shaped heads of schematic statuettes. The hair, modeled in relief, is divided by a parting from the front and gathered into a knot behind. The neck is short and massive. Instead of arms, there are conical prominences with holes at their ends. Larger punctures are made in the hairdo above the shoulders. Breasts are represented by small humps (the left one missing).

Traces of colored slip and paint, as well as distinct imprints of caryopses, are visible on the surface of the statuette (Fig. 3, *2*). Near the bust, a leg of a large statuette, probably a different one, has been found.

Realistic statuettes with a hairstyle similar to that of the one described above are known among the finds from Volodymyrivka (Пассек 1949, рис. 48, *2*; Бурдо 2001, рис. 31, *1*; 2001а), Sushkivtsi (Якубенко 2004, с. 443) and Rizyno (Телєгін 1968).

2. One more head, two fragments of which have been found in two pits of neighboring house П (a head) and У (a half of a neck) belong, probably, to a realistic figure similar to the one described above (Fig. 3, *4*). This is evidenced, in our opinion, by the modeled hairstyle with a parting from the front, typical of female realistic statuettes. The original surface – thoroughly smoothed, burnished, with the hair executed by dark brown paint – was preserved on this statuette. The nose is broken off, but it is evident that it was large and very prominent. The eyes and the mouth are shown as holes. Ears are broken off, but the traces of punctures suggest that they were the same as those of the previous figurine. Peculiar of this statuette is a horizontal opening in the neck made by a chip. A similar opening is observable on the neck of a realistic statuette from Krynychky (Погожева 1983, с. 76; Pogoševa 1985, Abb. 665).

3. A head of a large realistic statuette was found in a pit near house E. It is damaged: its nose, ears and headgear were broken off, and the original surface of the article was lost. The head is round, the face is wide and high, the nose is prominent, but not very large, the eyes and the mouth are shown as rectangular holes. The traces of ears suggest that they were large. A trace of some headgear remained on the head (Fig. 3, *1*).

A realistic figurine with a similar trace is known from V.V. Khvoika's excavations (Якубенко 2004, с. 443). A head of a realistic figurine with a headgear resembling a comb has been found in Koshylivtsi (Pogoševa 1985, Abb. 937). Another realistic figurine in a headgear resembling a pointed cap originates from the Molodetske settlement in Cherkasy region (Якубенко 2004, с. 442). Since the typical hairdo of Trypillian female realistic figurines is represented by parted hair, this head can be identified as belonging to male images.

4. The upper part of a realistic statuette of a slightly smaller size comes from a pit of house Ш. Its torso is painted with orange paint. Its face is round, its forehead is low, its eyes are wide open, its nose is prominent and aquiline. Its ears are modeled like small bulges with large holes. The head is shaven. The neck is short; the arms are substituted by short conical prominences with holes. The breasts are shown as small humps, but the hairdo, traditional for the Trypillian realistic statuettes is missing, therefore, it can be presumed that this is an image of an androgen. A statuette with realistically modeled face, shaven head and both female and male sexual characters is known among anthropomorphic plastic art objects from Cucuteni B (Monah 1997, Fig. 181, *4*). The upper part of a realistic figurine in the sitting position, with shaven head and female breasts comes from Valyava (Телєгін 1968).

All realistic figurines from Maydanetske, despite common modeling features, have clearly visible individual peculiarities.

Sculptures from Maydanetske in the System of Trypillian Anthropomorphic Plastic Art Objects

The analysis of proportions of Maydanetske figurines is possible only for subtypes I.1 and II.1, since it is these statuettes that are represented by intact items. The ratio of upper and lower parts of both female (Fig. 4, *2*) and male (Fig. 4, *3*) figurines in the standing positions of subtype I.1 is approximately 1 : 1. The head is about 1/6 of the height of the statuette, while the maximum width in the thighs also correlates with the height approximately as 1 : 6. Similar proportions are typical also of statuettes in the sitting position of subtype II.1 (Fig. 4, *1*). On the whole, the proportions of figures in the standing position can be defined as slim and elongated, as compared with sculptures of Early Trypillia, although the statuettes from synchronous Dnister and Prut settlements are more elongated than Maydanetske ones, due to their longer legs (Погожева 1983, рис. 24, *4, 10*). Statuettes of subtype I.2 are represented by items with broken-off heads, but proportions of an intact figurine of this subtype from Sushkivka (Fig. 4, *4*) suggest that they were somewhat different. The ratio of their upper and lower parts is approximately 2.4 : 1.7, i.e., their lower part is slightly shorter. The head is 1/4 of their total height.

As far as the proportions of realistic statuettes are concerned, they can be conceived due to a find from Rozkoshivka (Fig. 4, *5*). Their upper and lower parts are approximately of the same height, their head being 1/5 of their total height.

12 statuary and 9 iconographic types can be distinguished within the Maydanetske plastic art objects. It should be noted that Trypillian anthropomorphic sculptures comprise almost twice more iconographic types, namely 17 (Бурдо 2001, с. 85). It is opportune to perform the analysis of Maydanetske sculptures, in the first place, comparing them with those from Trypillia B II and C I settlements, above all with those of the Tomashivka group. In the first case there is a probability to find genetic roots, while in the second case synchronous and ethnographic parallels are likely to be established.

The tradition of realistic sculptures from Maydanetske is closely connected with realistic plas-

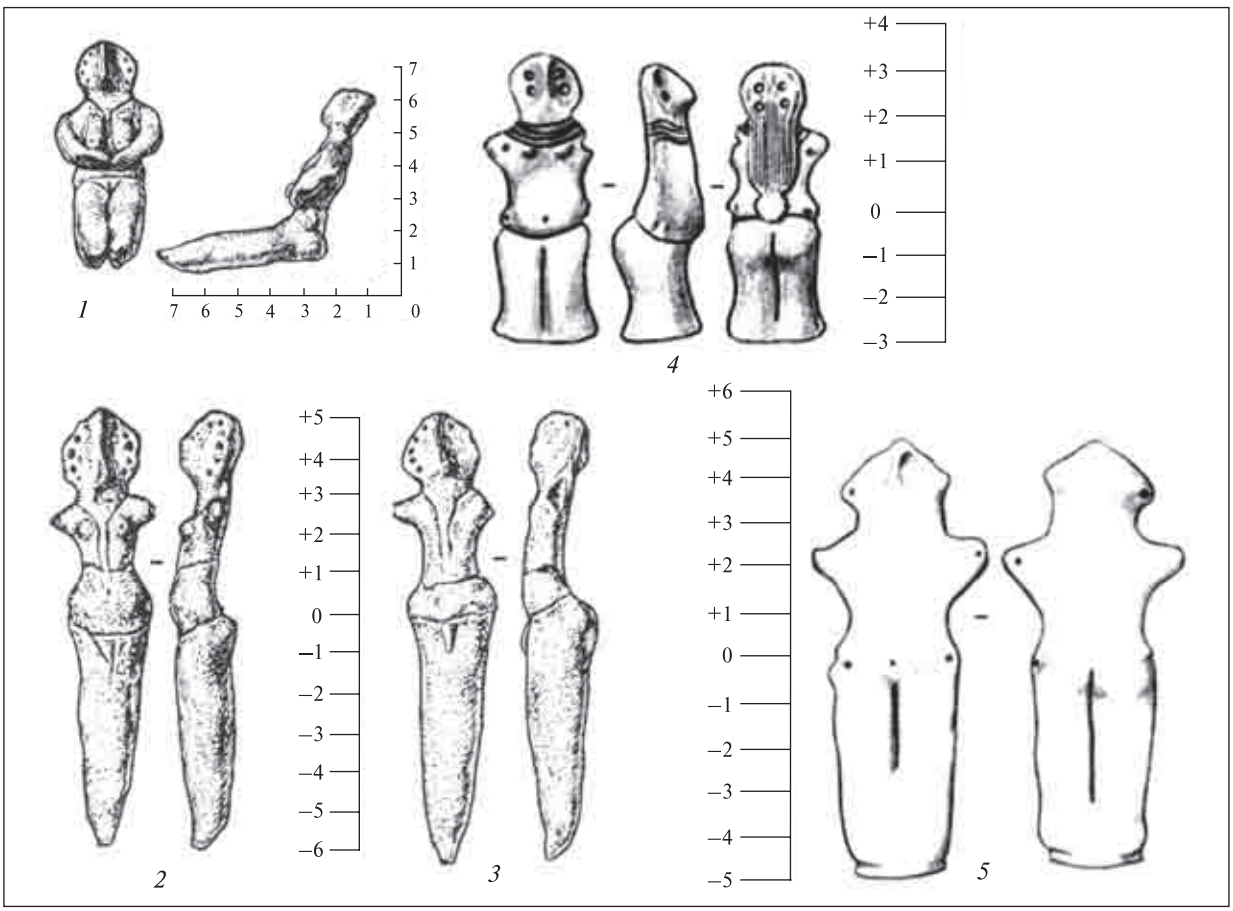


Fig. 4. Proportions of Anthropomorphic Statuettes of the Tomashivka Group

tic art objects from Volodymyrivka and Krynychky, as is obvious from the above-mentioned analogies. The general outline of schematic slender straight figurines with a discoid head, conical prominences instead of arms, bulges on the thighs, spindle-like lower part, marked pubes and symbolized pregnancy is also similar, to a certain extent. Maydanetske statuettes on a columnar leg have close analogies in Krynychky (Pogoševa 1985, Abb. 658).

Maydanetske terracottas, however, have no ornamentation consisting of red or black ribbons typical of Trypillia B II figures, in particular of those originating from the above-mentioned settlements. Maidanetske figurines lack a thickening on their knees or calves, typical of period B II sculptures and of some assemblages of Trypillia C I, for example those from Chechelnyk (Патокова и др. 1989, рис. 16, *6*), Kolomyishchyna and Tomashivka group (Круц и др. 2005, рис. 34, *6*), as well as of material from Northern Moldova (Pogoševa 1985, Abb. 671, 680, 686, 706).

One more unique characteristic feature of Maydanetske sculpture is the lack of eyes, which are represented on discoid heads of schematic figurines from stages B II and C I, as a rule, as through holes. Figurines similar to Maydanetske ones are known in Chychyrkozivka (Гірник, Відейко 1989, рис. 2, *1*; 4, *3, 4*). Eyes represented as large holes are typical of statuettes of Trypillia B II stage in the interfluvial area of the Dnister and the Southern Buh and in the Buh region (Pogoševa 1985, Abb. 564, 571, 575, 583, 629—637, 652, 656, 657). Figurines from Tomashivka group, in particular those from Talianky (Круц и др. 2008, рис. 6, *1, 3*) and Sushkivka (Pogoševa 1985, Abb. 706 a), include items with two pairs of eyes represented by holes. Statuettes having discoid heads with small holes along their edges or without them and without marked eyes are rare occurrences at other settlements of Trypillia C I stage – Cucuteni B phase, in particular they have been found in Talianky (Круц и др. 2008, рис. 10, *1*), Varvarivka VIII (Маркевич 1981, рис. 30, *3*), at the sites of Cucuteni B (Monah 1997, Fig. 144, *6*; 157, *7*; 160, *1, 4, 6, 14*; 161, *4*; 163, *1*) and at the Trypillia C II settlement of Gordineşti II (Маркевич 1981, Fig. 83, *3*). In Iablona (Trypillia VI—II), statuettes with discoid heads without holes and eyes are known (Monah 1997, Fig. 102, *4*; 104, *3*; 105, *3*; 106, *2*; 107, *9*). A lot of figurines with eyes-holes along the edge of a discoid head and without eyes originate from stage C I settlement of Koshylivtsi (Pogoševa 1985, Abb. 803, 805, 810, 908, 919—921).

Collections of plastic art objects from Maydanetske and Chychyrkozivka turned out to be the closest ones among the settlements of Tomashivka group by their technological, morphological and stylistic features and statuary types.

Sacral Images of Anthropomorphic Plastic Art Objects and the Use of Figurines in the Ritual Practice

Anthropomorphic statuettes from Maidanetske are standardized enough by their size and morphologic characteristics. Persistent combinations of stylistic and morphologic features suggest the existence of certain statuary and iconographic types with symbolism corresponding to established canons, typical of Trypillian anthropomorphic sculpture in general. Discovered formal types of sculptures from Maydanetske seem to correspond to certain iconographic types. The variety of iconographic types implies different semantics of the statuettes. They could have represented different sacral images or personages. One can presume that they represented deities. It should be noted that V.M. Masson and V.I. Sarianidi suppose that anthropomorphic images from Central Asia and Near East dating to Copper Age and Bronze Age could have personified various spirits and deities (Массон, Сарианиди 1973, с. 87).

Most Maydanetske figurines belong to schematic sculptures with some naturalistic features, i.e., they render the meaning of the image in an encoded, symbolic form. Therefore, the reconstruction of images represented by various iconographic types can be only hypothetic. Prevailing among Maidanetske sculptures are female images. Statuettes of early agricultural societies are believed to represent the image of a Goddess in her various hypostases or that of several goddesses.

The decoration of Maydanetske plastic allows to suppose that in most cases they represented a naked figure. Emphasized are such details as breasts, buttocks, pubes and abdomen. Various decorations are sometimes observable, such as ornaments and belts, which seem to reproduce ritual clothes and have a symbolic meaning. Schematic discoid heads with an accentuated large nose are characteristic of all statuettes.

Some scholars believe that similar representation depicts symbolically a head of a bird with a large beak. Characteristic of Maydanetske statuettes are small bulges on the thighs, as well as their peculiar posture with protruding buttocks, which is, in our opinion, one more evidence that the female image and that of a bird are related. Figurines combining features of a woman and those of a bird (a duck) are typical of Trypillia A – Precucuteni stage and were also registered earlier, in the cultural circle of

Starčevo-Körös-Criş (Burdo 2007, Fig. 3; Бурдо 2004, с. 407—408). Maydanetske statuettes demonstrate rather reduced bird's features, characteristic of female images. They can be only considered as a certain tribute to a very ancient and persistent tradition reaching the remotest European Neolithic.

There exists a wide-spread opinion that mythological characters of many ancient agricultural civilizations have very deep roots reaching the Neolithic, and the most important deities have their prototypes in the beliefs of ancient farmers (Массон, Сарианиди 1973, с. 98). Similar archetypes of goddesses of the pantheon known from the written tradition registering very archaic myths (Дьяконов 1990) are observable among anthropomorphic plastic art objects from Maydanetske. The most popular among female sculptures is the image of Virgin Goddess, corresponding to slender straight figurines of girls (Fig. 1, *12*). Stylistically consonant with this image are statuettes of pregnant women, which explicitly allude to the symbolism of potential motherhood. It should be emphasized that the features of pregnancy belong to slender figurines with a thin waist and small breasts (Fig. 2, *12*; 3, *7*).

Sitting statuettes depict a woman with flabby breasts; therefore, they might represent the image of Goddess-Progenitress or Goddess-Foremother (Fig. 2, *11*). This interpretation of such figures is confirmed by a find of a statuette holding a baby in its arms. Thus, similar terracottas are related to the symbolism of foremother and motherhood.

The image of the Goddess related to the Moon is reproduced by the statuettes with a hairdo in the shape of hair gathered in a knot on their back, represented by a relief disc, as a rule, painted dark. A disc or a circle on painted figurines symbolizes a full moon. Its images on the terracottas combine the semantics of the woman with that of the Moon (Burdo 2007, p. 240—243).

So, the diversity of iconographic types of female sculptures from Maydanetske seems to point to the existence of a rather considerable number of female deities or different hypostases of the Great Goddess in the Trypillian pantheon, as well as to the importance of sacral female images in the ritual practice.

Male images occur rarely. Noteworthy is the similarity of some Maydanetske male and female figurines (Fig. 1, *11—13*). It permits to assume that the male character represents the correlate of the Virgin Goddess.

Realistic statuettes had a special meaning. Some time ago P.V. Antonova expressed a logical opinion that they might reproduce an image of a concrete sacralized ancestor (Антонова 1990, с. 159). Individual peculiarities in the modeling of the face, an almost 'portrait' quality of each of the Maydanetske realistic figurines confirm this hypothesis. However, it is possible that realistic sculptures from Maydanetske reproduce various sacral images, in particular that of the Moon Goddess (Fig. 3, *2, 4*), of a man, probably, heroized leader or priest in a special headgear (Fig. 3, *1*), as well as that of the androgen (Fig. 3, *3*), which represents a sacral personage combining female and male features, symbolizing the unity of opposites in the human dimension or the integrity inherent to the supreme sacred being, in particular to the deities of fertility (Элиаде 1999, с. 341—345).

It is rather difficult to conceive of the concrete use of Maydanetske anthropomorphic statuettes. The fragmented character of these statuettes (unlike zoomorphic ones) suggests that they were not only intentionally broken in ancient times, but also their parts were sometimes scattered in different places. Maydanetske finds confirm the plausible opinion that anthropomorphic terracottas were used during magical and agricultural rituals (Бибиков 1953, с. 252). Some part of them was, probably, meant for once-only use during magical rites. The context of the finds described above, their fragmented character, as well as different sizes, morphological features and iconographic types testify to different functions of individual figures in various rituals occurring on different occasions both indoors and outdoors. Still, there are no grounds to suppose that anthropomorphic statuettes from Maydanetske were used in domestic sanctuaries as sacred idols worshiped at family altars.

In conclusion, we should note that the most expressive finds of anthropomorphic sculpture from the Maydanetske settlement belong to the best examples of plastic art practiced by ancient farmers in South-Eastern Europe during the Aeneolithic Age.

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A SETTLEMENT OF THE HORODOTSKO-ZDOVBYTSKA CULTURE NEAR OSTROH

This paper deals with the materials of the Horodotsko-Zdovbytska culture. The artifacts were found on the multi-layered settlement of Rozvazh-Koshara.

Keywords: Western Wolyn, Bronze Age, Horodotsko-Zbovbytska culture, settlement, ceramics, chronology.

Numerous archaeological sites of the Horodotsko-Zdovbytska culture (HZC) were found at the Western Volyn. However, only localization and density of these sites are known exactly as of today. Few of them have been explored, and that resulted in different understanding of this culture among the scholars. I.K. Sveshnikov, who was the first to describe HZC, regarded it as a separate and long-lasting phenomenon (Свєшніков 1974, с. 80—118), while J. Machnik, according to his last version, considered it to be a short-term Eastern ramification of the Mierzanowice culture, synchronous only with the early phase and the beginning of the classical phase of the latter (Kadrow, Machnik 1997, s. 50, 139—142; in detail: Бунятян 2008). One should note that I.K. Sveshnikov's position, although not faultless, is more legitimate. Contradicting opinions of two leading specialists regarding the taxonomic and chronologic position of the HZC can be reconciled only with analysis of the new data. To some extent, it can be facilitated by the publication of materials from a settlement explored in the vicinities of Ostroh.

Rozvazh-Koshara is a multi-layered site located on a wide flood plain of the Western bank of the Horyn River, on a scarcely detectable sand outlier of an elongated oval shape. The site was found at 1.0 km to the East from the Rozvazh village (the Koshara tract), Ostroh district, Rivne region. The place was chosen by the Malice population, and later bearers of various cultures settled there since Eneolithic till the 12th—13th cc. inclusive. The site has been known since 1996 from the surveys at the former sheep shed (koshara). This settlement is being excavated, with interruptions, since 2005 by the expedition of State Historical and Cultural Reserve of the town of Ostroh headed by O.L. Pozikhovskyi.

HZC ceramics was found in various areas (see: Позіховський, Охріменко, Охріменко 2007, рис. 8—10; 12; 14)[1], but buildings and more numerous finds have been discovered in the central part of the outlier explored in 2007 (excavated area II) with the assistance of V.O. Samoliuk, the researcher from the Rivne Ethnographical Museum at that time (Позіховський, Самолюк 2009). The cultural layer has been destroyed due to yearly removals of dung from the sheep shed. Subsequently HZC structures, as well as those of other periods, have been registered on the subsoil level (approximately –0.4 m from the contemporary surface), and all measurements are presented here in relation to it. In total, 19 HZC structures were found, and five more structures were referred to this culture hypothetically, due to a similar filling of grayish-brown or dark sandy soil. Numerous artifacts were found outside the buildings.

The structures constitute a compact conglomeration on a ground sized 13.0 × 12.0 m with a small free space in the middle. Some of them were disturbed by the later buildings and pits. A row of several other structures stretched to the North from this conglomeration (Fig. 1). All of them have an aspect of pits, round or oval in plan, usually shallow. We should note that the pits often contained fragments of vessels and flint articles belonging to Eneolithic and sometimes to later periods[2]. Only ceramics and other HZC articles will be considered here, though there are certain difficulties in the cultural attribution of some flint tools, but they are not numerous.

[1] In this paper H.V. Okhrimenko supplemented the materials from Rozvazh-Koshary with the finds from Khoriv, Dubova tract (Ibidem, Fig. 8, *2*; 9, *3*) as well as finds from M.A. Peleshchyshyn's excavations in Khoriv, Pidluzzhia tract (Ibidem, Fig. 11), and interpreted the latter as the materials from Rozvazh-Koshary. Similar disinformation occurs in other works by H.V. Okhrimenko as well. It is not limited to these observations only (see: Бунятян 2008, прим. 8; Позіховський 2010, с. 5—6).

[2] Eneolithic materials are in preparation.

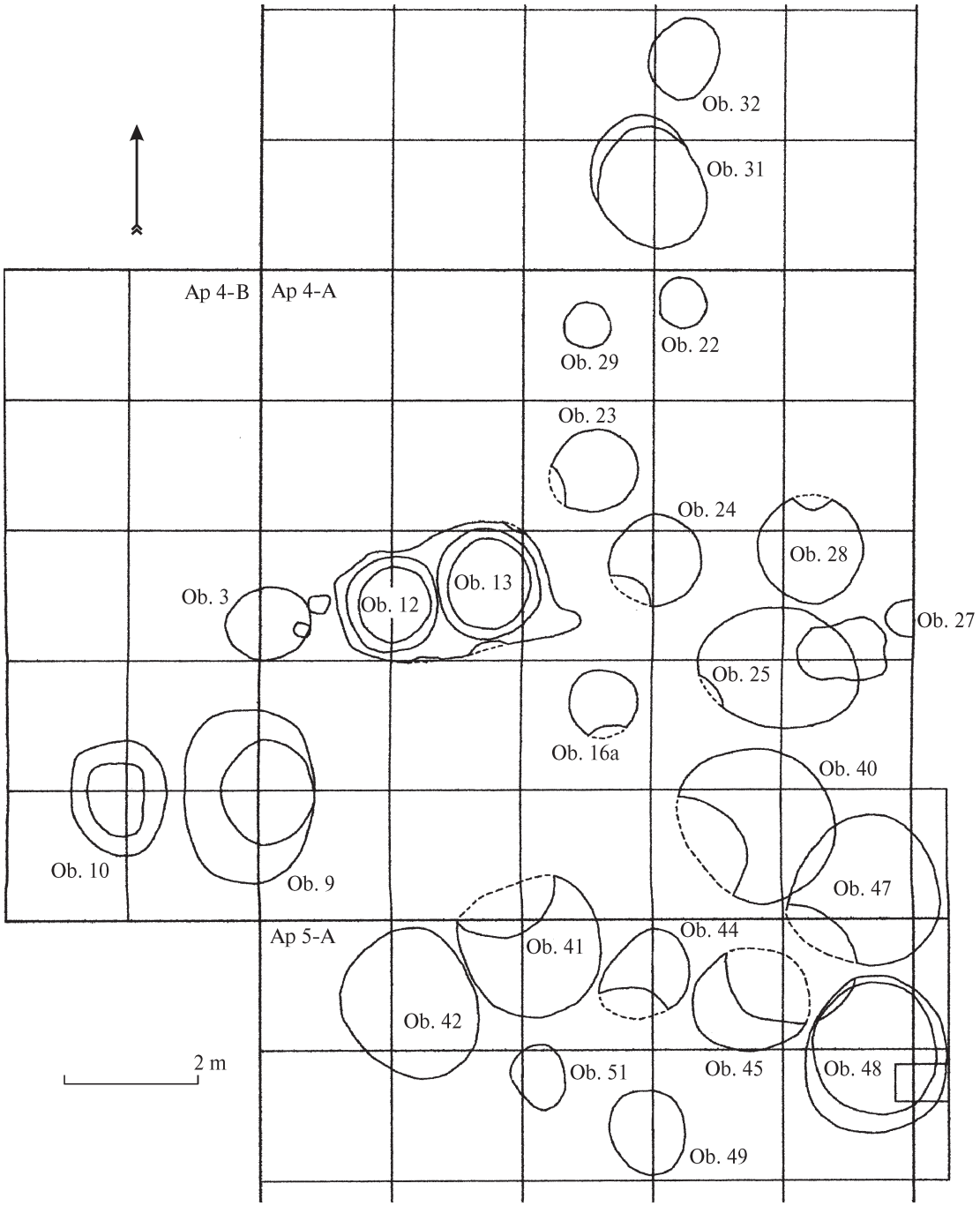

Fig. 1. Rozvazh-Koshara. A ground with singled-out structures of the Horodok-Zdovbytsia culture

Description of structures. The South-Eastern part of the conglomeration was constituted by nine structures at most located in three rows from the North-West to the South-East. The first item from the center in the last southern row was *structure 42* (Fig. 2, *1*) — a pit, oval in plan, sized 2.30 × 2.00 m and 0.65 m deep (from the subsoil). Two pieces of clay finish and 20 fragments of ceramics were found in its filling. These finds are two fragments of an amphora with a cordon ornament (Fig. 2, *2, 3*), fragments of a thin-walled goblet with a rim of diameter of 9.0 cm (Fig. 2, *4*) and of a neck of some vessel with cord ornamentation (Fig. 2, *5*), as well as a chip of some retouched tool.

Further to the South-East, there was *structure 51* (Fig. 2, *6*) — a pit, round in plan, with diameter of 1.70 m and depth of 0.45 m. Its filling contained a piece of clay finish, about two dozens of small pieces of ceramics, a bore peg of the opening of a stone axe and a retouched flake (Fig. 2, *7, 8*).

The last in the row was *structure 49* (Fig. 2, *9*) — a pit, round in plan, with diameter of 1.70 m and depth of 0.25 m. Here only seven fragments of ceramics, in particular fragments of a neck or-

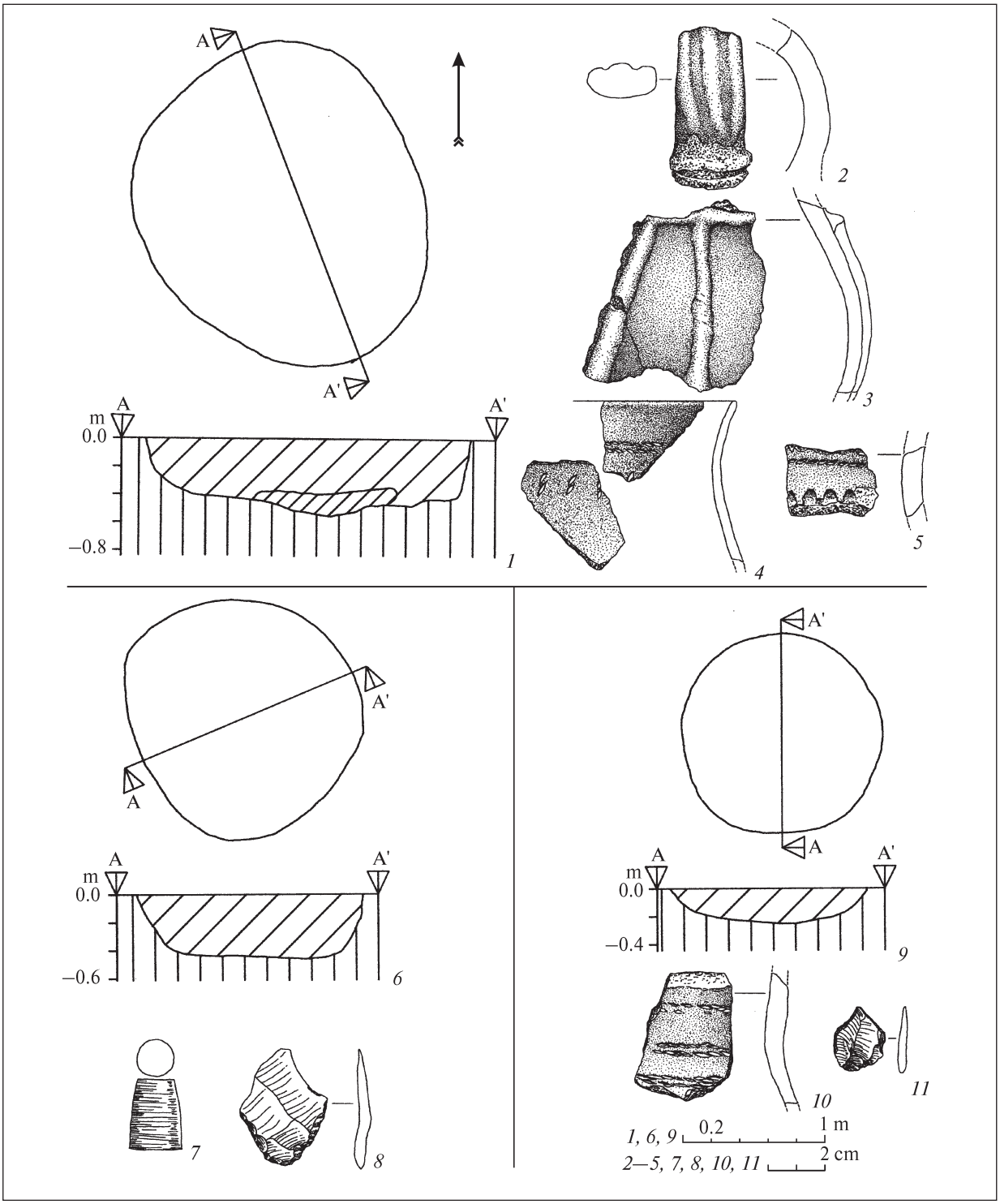

Fig. 2. Rozvazh-Koshara: *1—5* — structure 42; *6—8* — structure 51; *9—11* — structure 49

namented by coupled cord, as well as a borer on a small flake, were discovered (Fig. 2, *10, 11*).

The row to the North from the one described above marked the beginning of *structure 41* (Fig. 3, *1*) in the shape of a pit, round in plan, with diameter of 2.1 m and depth of 0.7 m. Its North-Western part was crossed by structure 37 dated by Early Iron Age. 24 fragments of vessels, including two items ornamented by coupled cord (Fig. 3, *2, 3*), were discovered in its filling.

Further, in the South-Eastern direction, there were *structures 44* (1.60 × 1.20 m, 0.15 m deep) and *45* (the approximate diameter 1.70 m, the depth – 0.18 m) – pits, oval in plan, destroyed by later structures and ascribed to the HZC provisionally (no finds have been registered). The last in this row

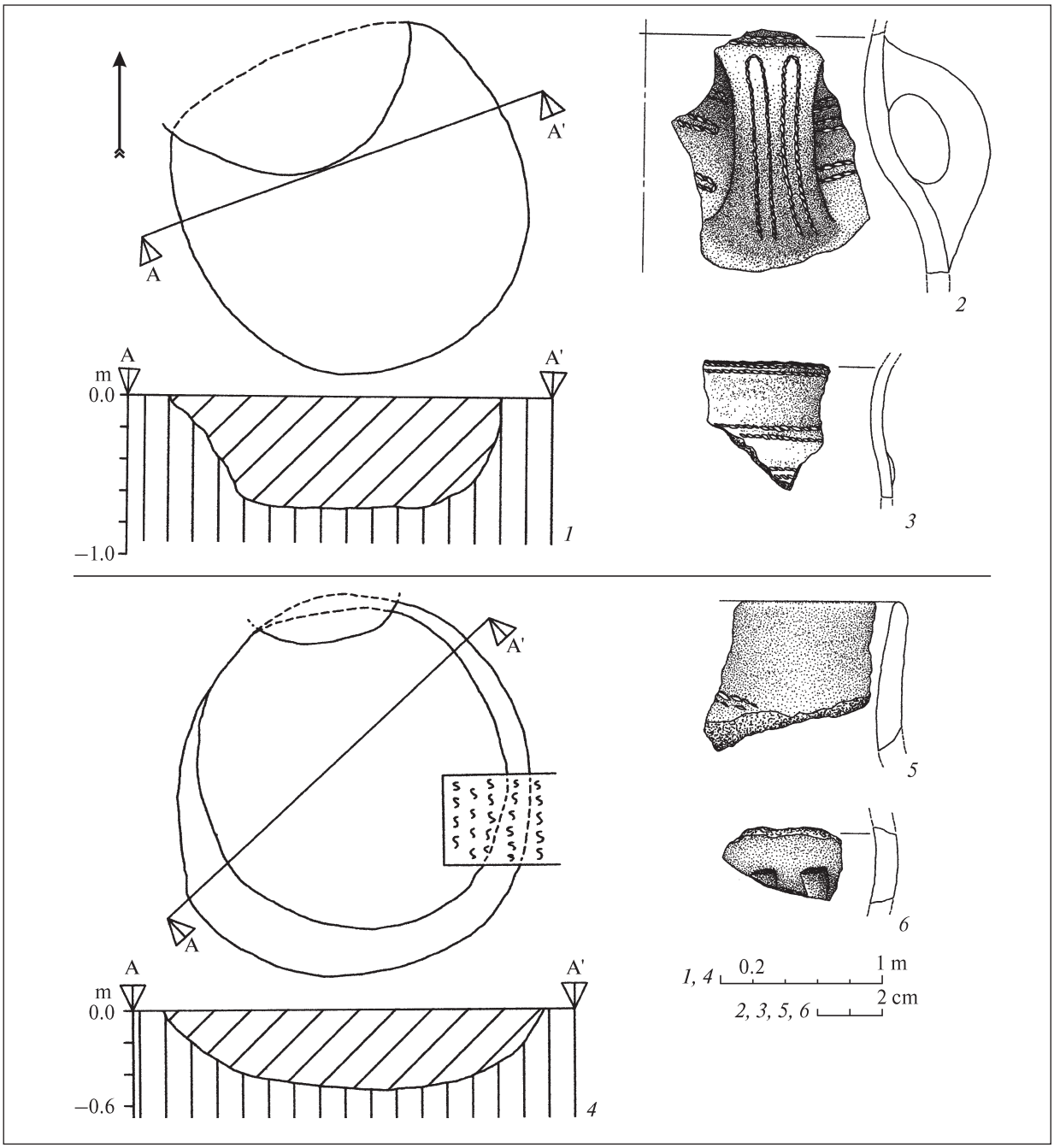

Fig. 3. Rozvazh-Koshara: *1—3* — structure 41; *4—6* — structure 48

was *structure 48* (Fig. 3, *4*): a pit, round in plan, with diameter of 2.3 m and depth of 0.5 m. It was slightly disturbed by structure 46 dated by Early Iron Age from the North and by a contemporary canal from the East. A piece of clay finish and only seven fragments of ceramics occurred in the filling. Two of them are informative: a rim bearing cord ornamentation on the base of the neck and a wall bearing a row of depressions scratched by a fingernail (Fig. 3, *5, 6*).

Still more to the North there were two *structures – 40* and *47* (Fig. 1), partially damaged from the South-West by structures 38 and 46 dated by Early Iron Age. The first one had diameter of 2.30 m and depth of 0.65 m; the other had the same diameter and depth of 0.45 m. Pit 47 partially overlapped pit 40, but it is not so important, since both of them were empty and attributed as HZC pits only conventionally.

The Eastern part of the conglomeration is represented by structures 9 and 10. *Structure 9* (Fig. 4, *1*) was situated closer to the center and appeared as a pit with a ledge. It was sized 3.1 × 2.0 m from the top and had depth of 0.3 m. In its Western part there

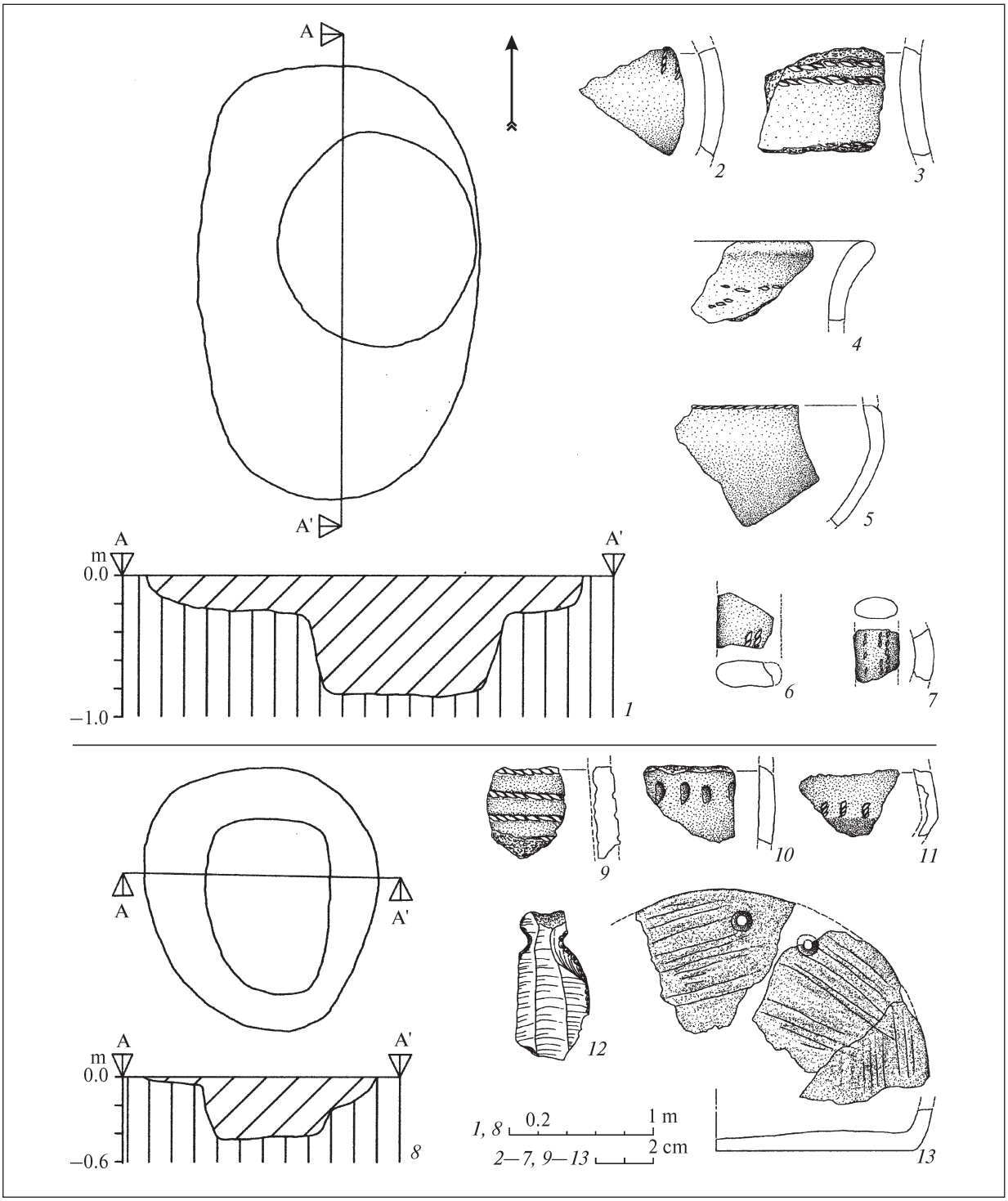

Fig. 4. Rozvazh-Koshara: *1—7* — structure 9; *8—13* — structure 10

was a depression sized 1.50 × 1.40 and 0.55 m deep as measured from the ledges. The filling contained about 50 small fragments of ceramics, in particular handles, only some of them bearing ornamentation (Fig. 4, *2—7*).

Structure 10 (Fig. 4, *8*) had a similar shape, but it was smaller, sized 1.85 × 1.65 m. The lower chamber, sized 1.20 × 0.90 m and 0.45 m deep, was dug in the center, while ledges were situated at different levels, being lower in the Eastern part and higher in the Western part. Among 29 fragments of ceramics there were three ornamented walls and fragments of a bottom with diameter of 14.0 cm, with two bored openings for maintenance (?) (Fig. 4, *9—11, 13*). A two-sided push-plane on a blade might also belong to the HZC (Fig. 5, *12*).

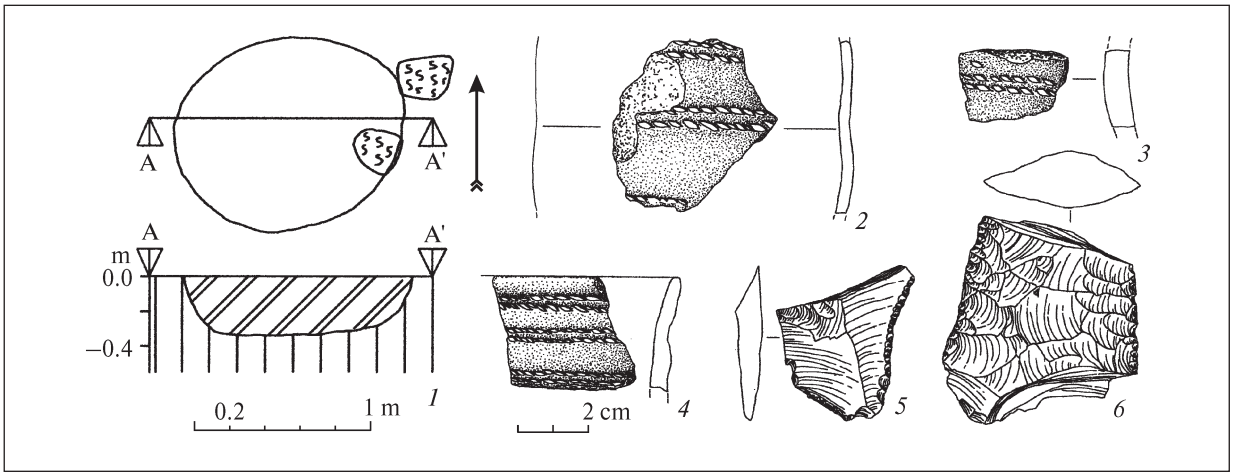

Fig. 5. Rozvazh-Koshara: structure 3

From the North the circle was closed by a group of nine structures. The last from the East was *structure 3* as an oval pit, sized 1.30 × 1.10 m and deep 0.35 m (Fig. 5, *1*), with traces of later holes. 19 fragments of ceramics have been found there. Expressive items include fragments of a goblet with a barely outlined notch in the middle, diameter 9.0 cm (Fig. 5, *2*), a rim with diameter of 10.0 cm (Fig. 5, *4*) and a neck (Fig. 5, *3*), all of them ornamented by horizontal strips of coupled cord. A retouched flake and a fragment of a bifaces – sickle? were found as well (Fig. 5, *5, 6*).

Structures 12 and *13* were located to the East from structure 3 – pits dug in one depressed ground (Fig. 6, *1*). In the first one, with diameter of 1.10 m and depth of 0.55 m, 21 fragments of ceramics were found. Significative are fragments of two amphorae, in particular the item ornamented by coupled cord with rim diameter of 15.0 cm (Fig. 6, *8, 9*), a fragment of a neck with a triple cord imprint (Fig. 6, *7*) and a large fragment of a goblet with straight, slightly dilated walls with diameter of 17.0 cm (Fig. 6, *10*). Among isolated flint articles, noteworthy are a fragment of a blade retouched on one side and a thin retouched flake (Fig. 6, *6, 7*).

Pit 13 – with diameter of 1.3 m and depth of 0.6 m – contained the same number of fragments of ceramics, including four ornamented items (Fig. 6, *2—5*), as well as a fragment of a biface – a sickle? (Fig. 6, *6*).

Still further to the East there was *structure 24,* in the shape of a pit with diameter of 1.45 m and depth of 0.35 m (Fig. 7, *1*). From its South-Western side, it was partially destroyed by a pit 14 belonging to Luka Raikovetska culture. 18 fragments of ceramics were found, in particular three ornamented items, as well as a bilateral burin on a fragment of a blade (Fig. 7, *2—5*).

To the North from it, there was *structure 23* – a pit, round in plan, slightly damaged from its South-Western side by structure 18 of Luka Raikovetska culture. Its diameter was 1.4 m, its depth being 0.4 m. Among more than ten fragments of ceramics, expressive were two unornamented rims – one was dilated upwards with diameter of 12.0 cm (Fig. 7, *7, 9*) – and walls with cord ornamentation (Fig. 7, *8, 10*). A fragment of a biface – a spear tang? —was found as well (Fig. 7, *11*).

To the South from structure 24, *structure 16a* was situated – a pit with diameter of 1.10 m and depth of 0.48 m. Several fragments of vessels were found there (Fig. 7, *12—14*).

The line was further continued eastwards by *structure 28*, with diameter of 1.50 m and depth of 0.25 m. No expressive materials were found there (Fig. 7, *15*).

Structure 25 was located to the South from it – a rather large (2.6 × 1.9 m), but shallow (0.25 m) pit, partially overlapped, from the South-West, by a dwelling of Luka Raikovetska culture, while from the East it was damaged by a contemporary canal (Fig. 8, *1*). In the pit there were 24 fragments of ceramics, which, probably, belonged to a cylindrical goblet ornamented by horizontal strips of triple cord imprints (Fig. 8, *5*), bordered from below by vertical cord lines, a ladle with similar strips (Fig. 8, *2*) and thick walls with openings for maintenance? (Fig. 8, *3, 4*), as well as a fragment of a biface (Fig. 8, *6*).

To the West from structures 25 and 28, there was *structure 27* – a pit with diameter of 1.6 m and depth of 0.4 m. 30 fragments of ceramics include a fragment of a handle, ornamented by strips of triple cord imprints (Fig. 8, *7, 8*).

The center of the Northern ramification was represented by *structure 31* – a rather large oval pit,

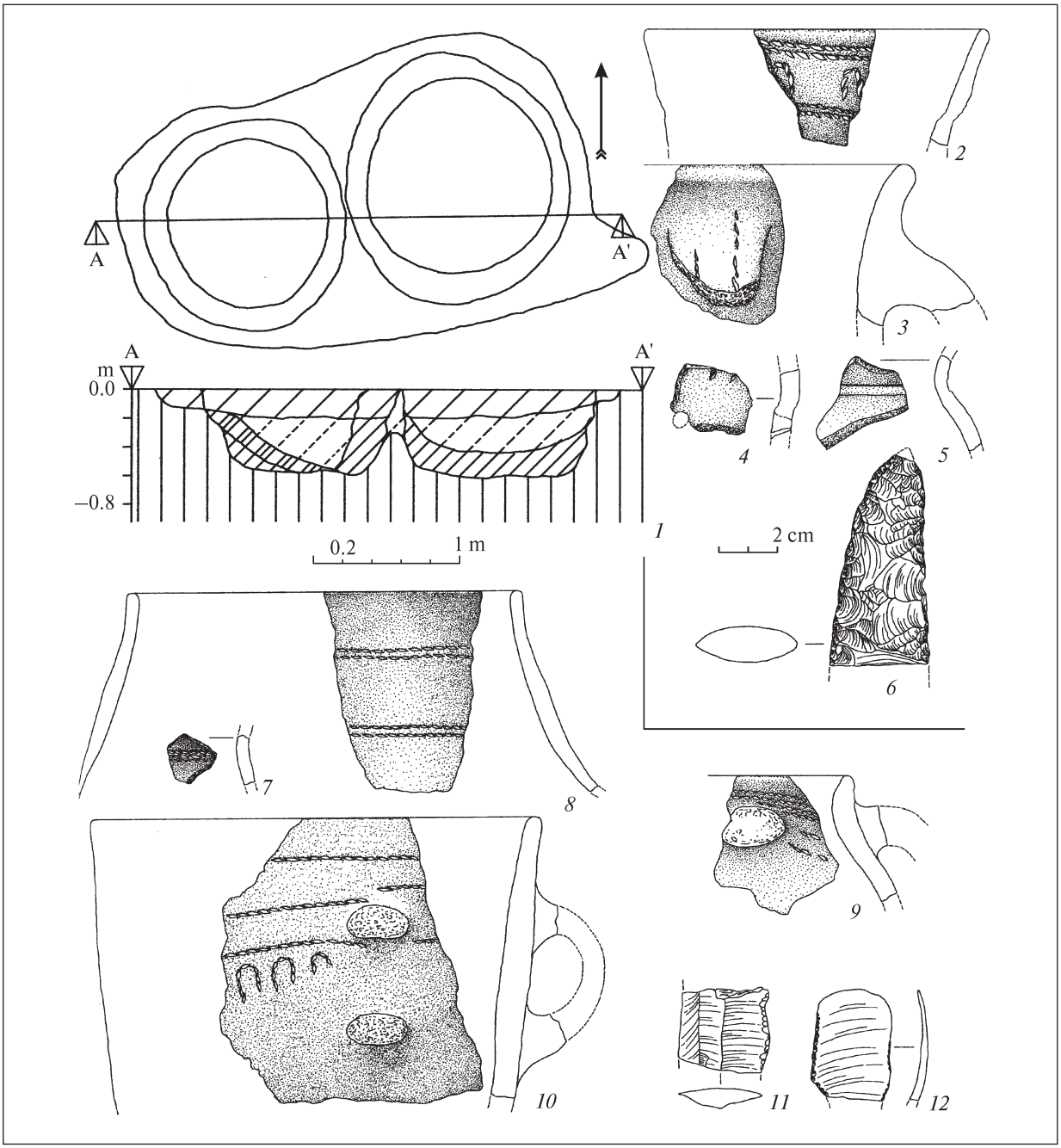

Fig. 6. Rozvazh-Koshara: *1* — structure 12 (to the left) and 13; *2—6* — finds from structure 13; *7—12* — finds from structure 12;

sized 2.10 × 1.65 m and 0.45 m deep (Fig. 9, *1*). Its North-Western wall is slanting, the South-Eastern wall being vertical. The most expressive items out of more than ten fragments of ceramics were represented by fragments of large amphorae with the diameter of the body of 27.0 cm (Fig. 9, *2*) and 30.0 cm (Fig. 9, *8*), as well as those with the diameter of the neck of 12.0 cm and 16.0 cm (Fig. 9, *3, 7*) and smaller fragments, including a piece of a wall bearing a cordon (Fig. 9, *4—6*).

To the South of it there was *structure 22* – a pit with vertical walls sized 0.85 × 0.75 m and 0.60 m deep (Fig. 10, *1*). About 40 fragments of ceramics were found there, in particular those belonging to a cylindrical goblet with diameter of 10.0 cm, ornamented by horizontal strips of triple cord imprints, bordered from below by a row of finger depressions (Fig. 10, *2*), a fragment of a rim with diameter of 16.0 cm, with a cordon in the neck and a cord ornament below, and others (Fig. 10, *3—8*). Besides, a nearly intact rough flint adze-axe, lens-like in section, a scraper retouched along its perimeter and a lamellar flake with retouch were also found (Fig. 11, *9—11*).

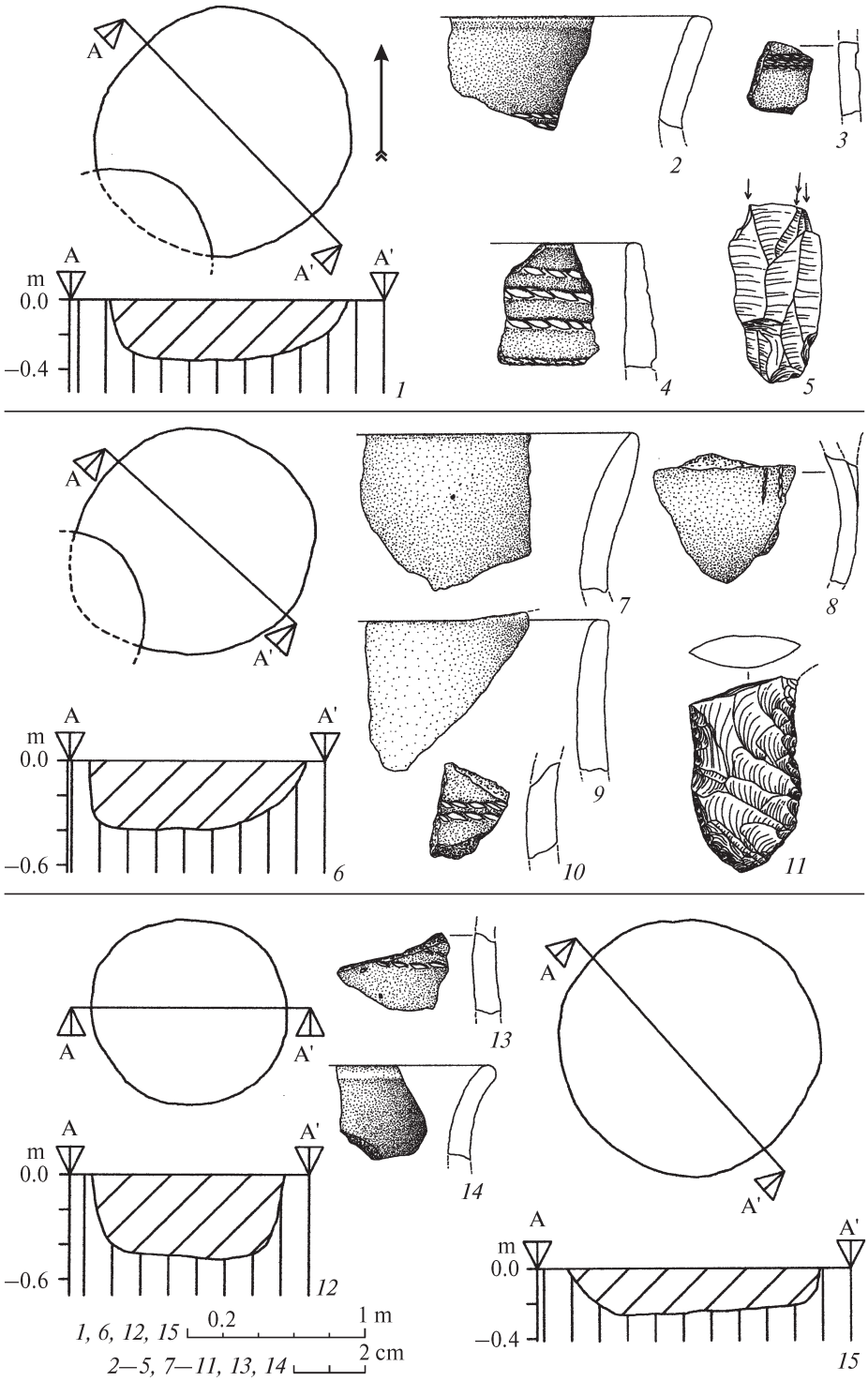

Fig. 7. Rozvazh-Koshara: *1—5* — structure 24; *6—11* — structure *23; 12—14* — structure 16a; *15* — structure 28

Also to the South, but slightly more westwards, *structure 29* (Fig. 8, *9*) was located – a round pit with diameter of 0.7 m and depth of 0.2 m, where only four fragments of unornamented walls and a flint blade were found.

The last *structure 32* was located to the North-East from structure 31 – it was a shallow pit of an oval shape, sized 1.25 × 1.05 m with an uneven bottom (Fig. 11, *1*). The following items were discovered there: 22 fragments of ceramics, in particu-

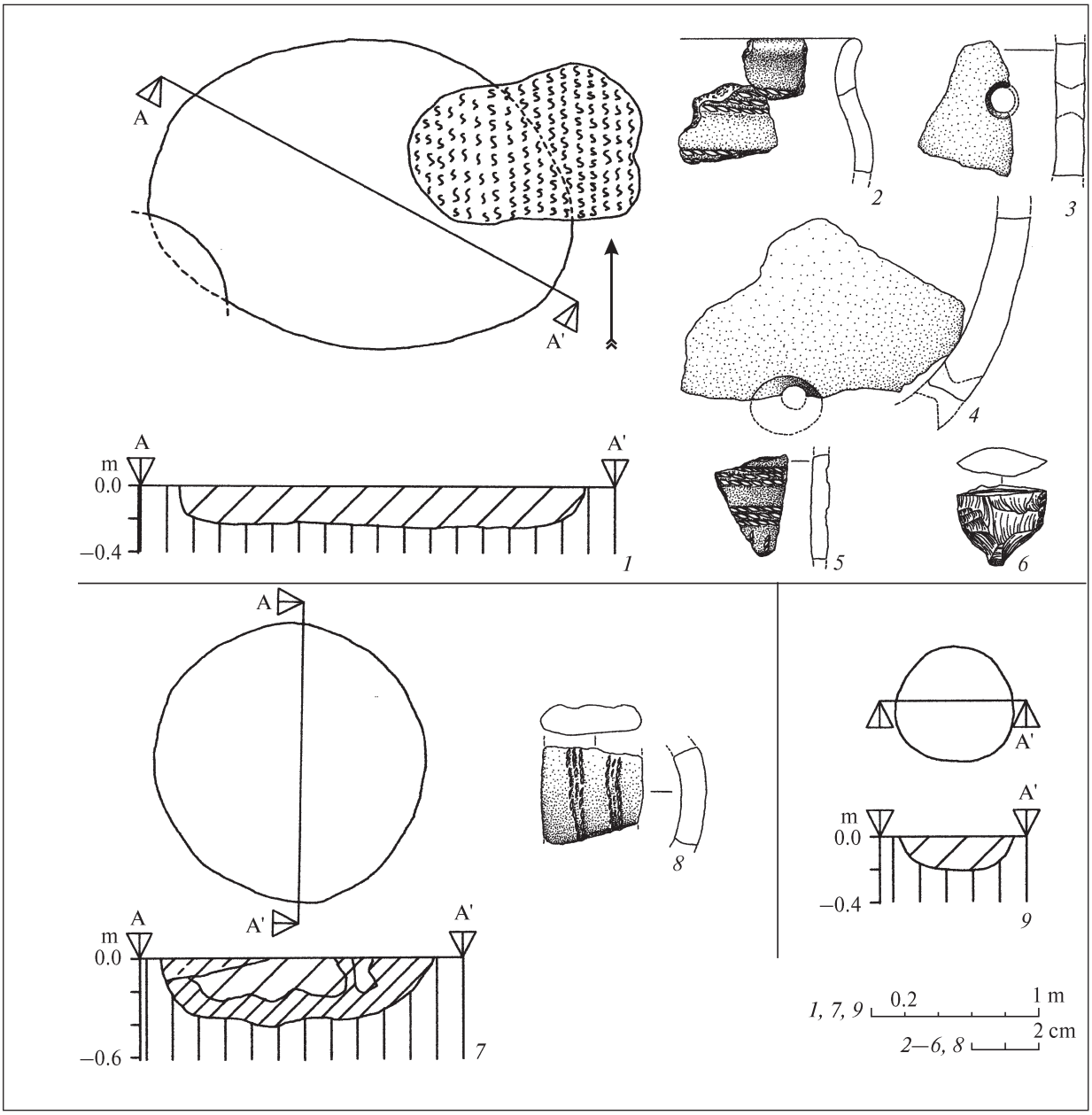

Fig. 8. Rozvazh-Koshara: *1—6* — structure 25; *1—5* — structure 42; *9* — structure 29

lar of an almost intact squatted amphora, 21.1—21.6 cm high, the diameter of the rim being 14.0 cm, that of the body being 23.0 cm and that of the bottom being 10.0 cm, ornamented on its neck with strips of coupled cord, bordered from below by a row of short small loops (Fig. 11, *9*); a fragment of an ornamented amphora with diameter of its body of 22.0 cm (Fig. 11, *5*); fragments of a large vessel with smooth cordons on the neck (D 14.0 cm) and others. (Fig. 12, *2—4, 6*). A retouched flake and a fragment (butt-end) of an adze-axe, lens-like in section, were found as well (Fig. 11, *7, 8*).

Outside the structures about 200 fragments of vessels belonging to the HZC were found. In particular, these were the fragments of large vessels with diameters of the rim being 12.0 cm (Fig. 12, *1*), 10.0 cm (Fig. 12, *2*), 24.0 cm (Fig. 12, *8*), 12.0 cm (Fig. 12, *7*), 16.0 cm (Fig. 12, *14*) and 15.0 cm (Fig. 12, *15*). There are also fragments of goblets with diameters of the rim being 10.0 cm (Fig. 12, *6*), 8.0 cm (Fig. 13, *2*) and 7.0 cm (Fig. 13, *9*), as well as a lot of handles of amphorae and goblets (Fig. 12—14) and other recognizable fragments thereof. They are traditionally ornamented by a cord ornament. At the same time, ceramics bearing a cordon, ornamented in one case with slanting short strips of coupled cord lines, occurred outside the structures, but also inside some of them (Fig. 13, *4*).

Flint articles are few. These are mostly bifaces – fragments of adze-axes, spears, sickles etc.

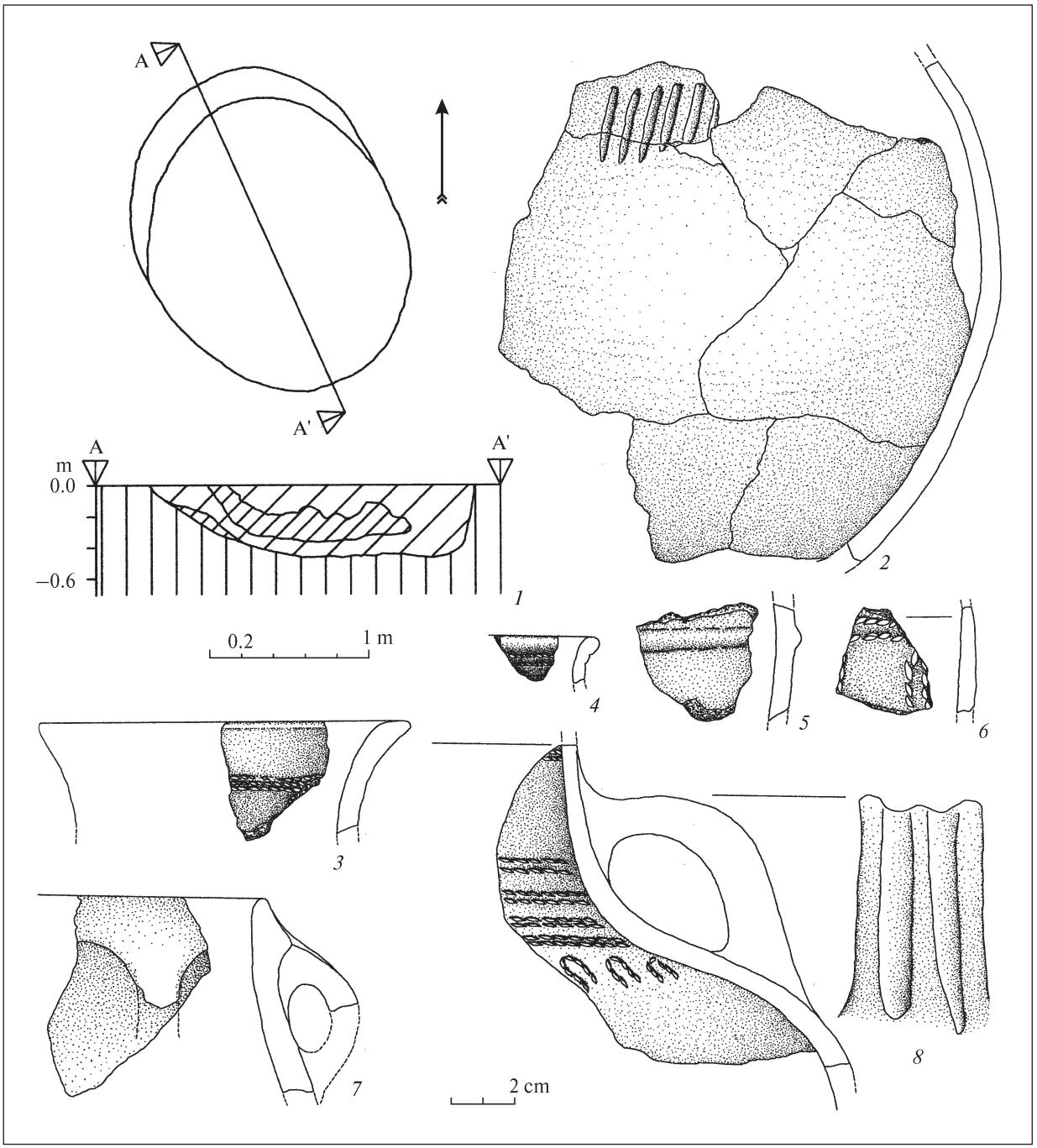

Fig. 9. Rozvazh-Koshara: structure 31

(Fig. 14, *1—7, 9—11*). A rough stone adze-axe (Fig. 14, *8*) and small fragments of battleaxes were found as well.

The material. The most important is considerable density of the HZC structures, most of which were, evidently, utility pits. However, it cannot be excluded that larger structures (9, 25, 31, 40—42 and 47) could be the components of a two-room dwelling that included an above-ground part and a sunk one. Similar dwellings were found by I.K. Sveshnikov at the Zdovbytsia settlement, and they were represented by two variants: a ledged pit (pit-house 1), similar, by its shape and size, to structure 9 at Rozvazh-Koshara, and a large pit (pit-house 2). In both cases the fireplace was near the sunk chamber, probably, at the level of the ancient horizon (Свешников 1961, рис. 21), where a shed or some other structure was located. It is necessary to remark that, although the mentioned scholar ascribed this settlement to standard sites of late (Zdovbytsia) stage of the HZC, this opinion should be taken critically. The mentioned dwellings were found in different excavated areas at a distance of about

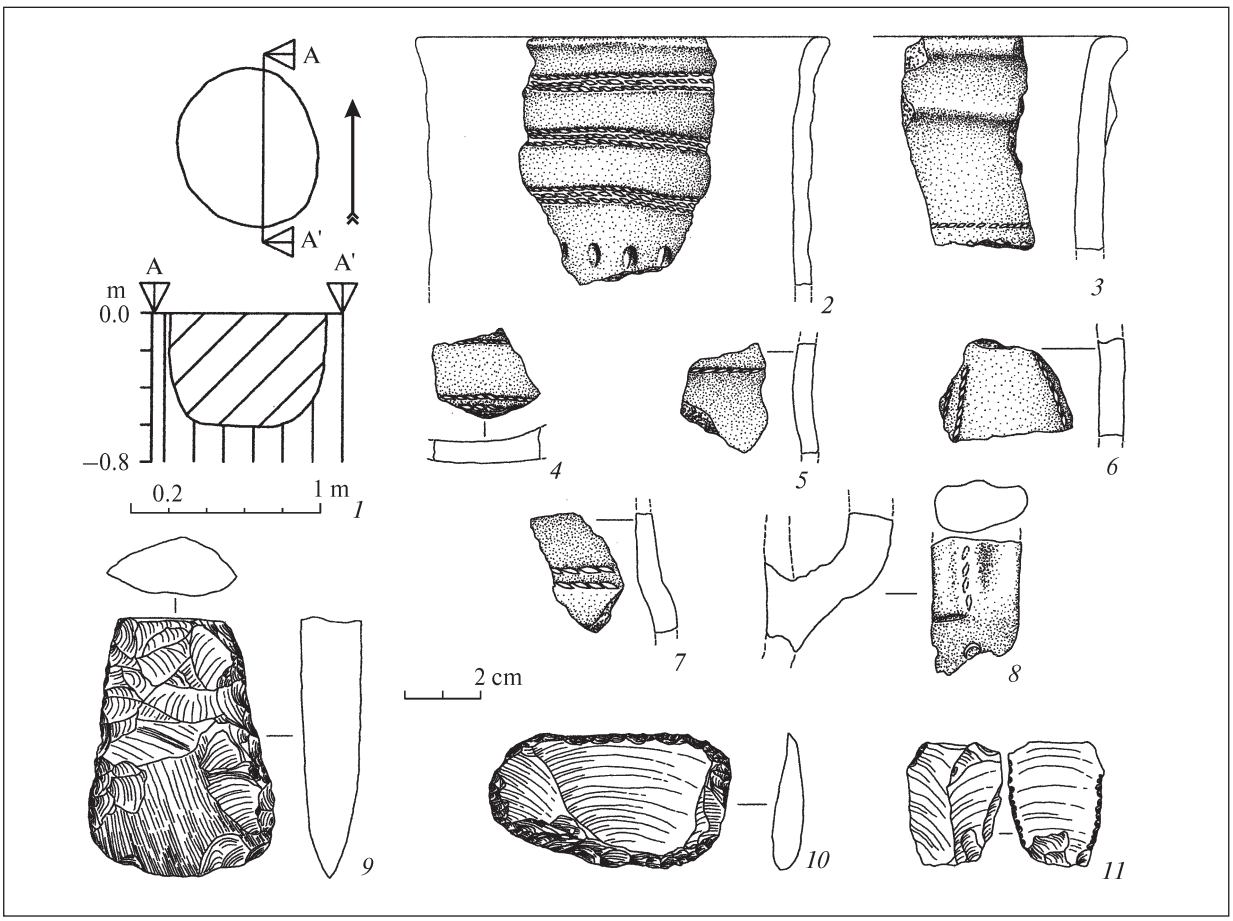

Fig. 10. Rozvazh-Koshara: structure 22

40.0 m one from the other, and they are different in their design and ceramics. If pit-house 1 can be interpreted as a late one, pit-house 2 did not contain diagnostic ceramics, while the excavated area contained two fragments of ceramics bearing strips of triple cord imprints and a wide ladle handle (Свешников 1961, с. 62, рис. 20, *14, 15*).—In our opinion, they were typical of the early stage of the HZC.

The quantity and density of structures may indicate to long-lasting existence of the settlement. This is confirmed by typological diversity of finds as well. Despite the fact that the cultural layer of Rozvazh-Koshara settlement had been destroyed, it provided the most abundant collection of ceramics. It is necessary to remind that very few items have been found at the sites explored by I.K. Sveshnikov. The considerable amount of handles, as well as of other fragments, indicates that traditional HZC pottery prevailed there: amphorae and goblets decorated with a cord ornament. It is possible to identify them only on the basis of rather large profiled fragments and partially handles, since they rarely differ by the thickness of their walls. Both varieties are represented by both thin-walled articles and very rough ones. Upon the whole, their thickness varies from 0.4—0.5 cm to 1.0 cm, but most often (about one half of items) they are 0.6—0.7 cm thick. From the outside the ceramics is light-brown, grey-black or black, smoothed (rarely knobby), its paste containing a touch of fine-grained gruss with spangles of pyrites or mica, ground burnt-out flint and sand.

However, despite the traditional character of the ceramic complex, it displays certain peculiarities as well. First of all, noteworthy are fragments of cylindrical goblets according to their profiles (Fig. 10, *1*; 13, *9*; 14, *1, 3*). It is necessary to remark that, as compared with I.K. Sveshnikov's data, the number of finds of such vessels was considerably increased till now, in particular owing to the burials discovered also in the vicinities of Ostroh (Самолюк 2009). They were found at the other sites near this town as well (Позіховський, Бондарчук, Вертелецький 2011). Cylindrical goblets seem to be typical of the HZC during all the period of its evolution, representing one of peculiar features (Бунятян 2008, с. 16). Worth mentioning is a goblet from structure 3 with a barely outlined notch in the middle (Fig. 5, *2*): this shape, decorated in the style typical of HZC vessels, resembles, to some extent, goblets of the Middle Dnipro cul-

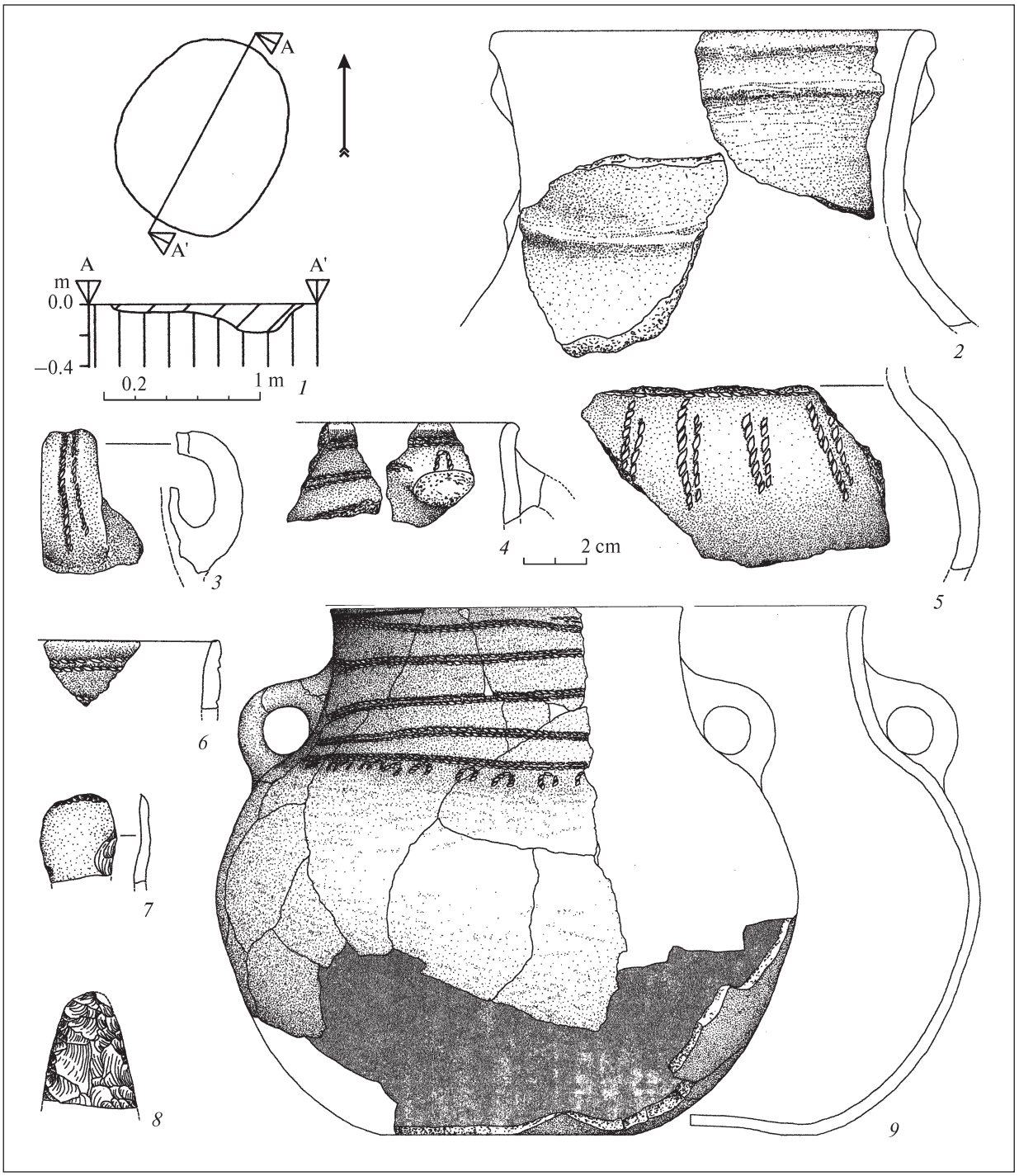

Fig. 11. Rozvazh-Koshara: structure 32

ture. It is not surprising, since examples of pottery of this culture are known in Rozvazh-Koshara (excavated area 1), as well as in Western Volyn in general (Позіховський, Бардецький 2009, с. 238; Bunyatyan, Samolyuk 2009).

As far as ornamentation is concerned, noteworthy is the supplementation of the traditional ornament consisting of horizontal cord lines or strips consisting of such lines by a row of vertical short or elongated loops (a cord folded in two). They border the ornamented zone from below (Fig. 6, *10*; 9, *8*; 11, *5, 9* etc.), while short loops are also sometimes inserted between the strips of linear ornament (Fig. 6, *2*; 12, *6*). Known isolated samples of vessels ornamented in this manner suggest that this ornamentation is uncommon in the HZC. At present, one of the variants of this ornamentation, i.e., in the shape of a row of short loops, can be considered to be one of its characteristic features. Some cylindrical goblets seem to have been ornamented entirely with vertical cord lines (Fig. 12,

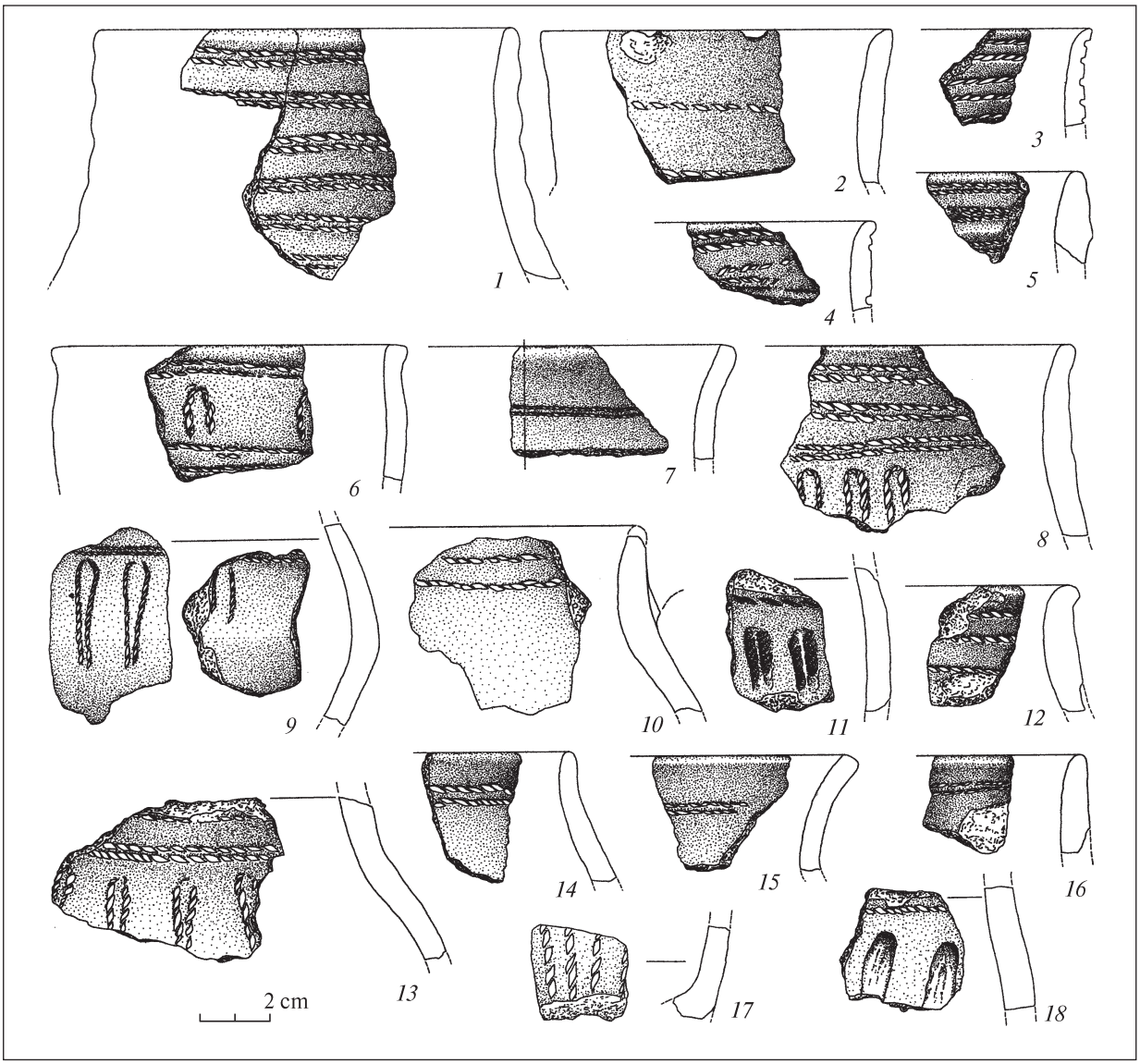

Fig. 12. Rozvazh-Koshara: finds from the territory of the settlement

17). Finally, remarkable is the large quantity of fragments ornamented with horizontal and vertical strips of triple cord imprints (Fig. 14).

Relative chronology. The lack of both stratified structures and material for radiocarbon dating permits only to express some considerations regarding the chronological position of Rozvazh-Koshara settlement. Judging by stylistic peculiarities of its ceramics, it seems that the settlement existed throughout the entire period of the HZC or this locality was repeatedly colonized by its bearers.

The earliest horizon is represented by ceramics ornamented with horizontal strips of triple cord imprints. Rozvazh-Koshara is the first site where such vessels constitute a considerable share. Important is the find of fragments of a ladle ornamented in this manner (Fig. 8, *2*). Since such items are considered to be a characteristic feature of proto-Mierzanowice phase, their lack in Western Volyn provided the basis for a later dating of the beginning of HZC, as well as for its recognition as an Eastern ramification of Mierzanowice culture (Kadrow, Machnik 1997, s. 139—142).

The material from Rozvazh-Koshara suggests that such finds are a matter of time. In 2009, a large fragment of a similar ladle was found at a multi-layered site near the village of Polonka, not far from Lutsk, which was erroneously ascribed to Strzyżów culture (Златогорський, Баюк 2010, с. 149, рис. 2). Since this find was the only one there, it is possible that it comes from a destroyed settlement.

However, it is not a matter of ladles. If one takes ornamentation as a chronological indicator, this style is expressed perceptibly enough in the Western Volyn, but is related to other ceramics shapes. Among recognizable ones, these are mostly ampho-

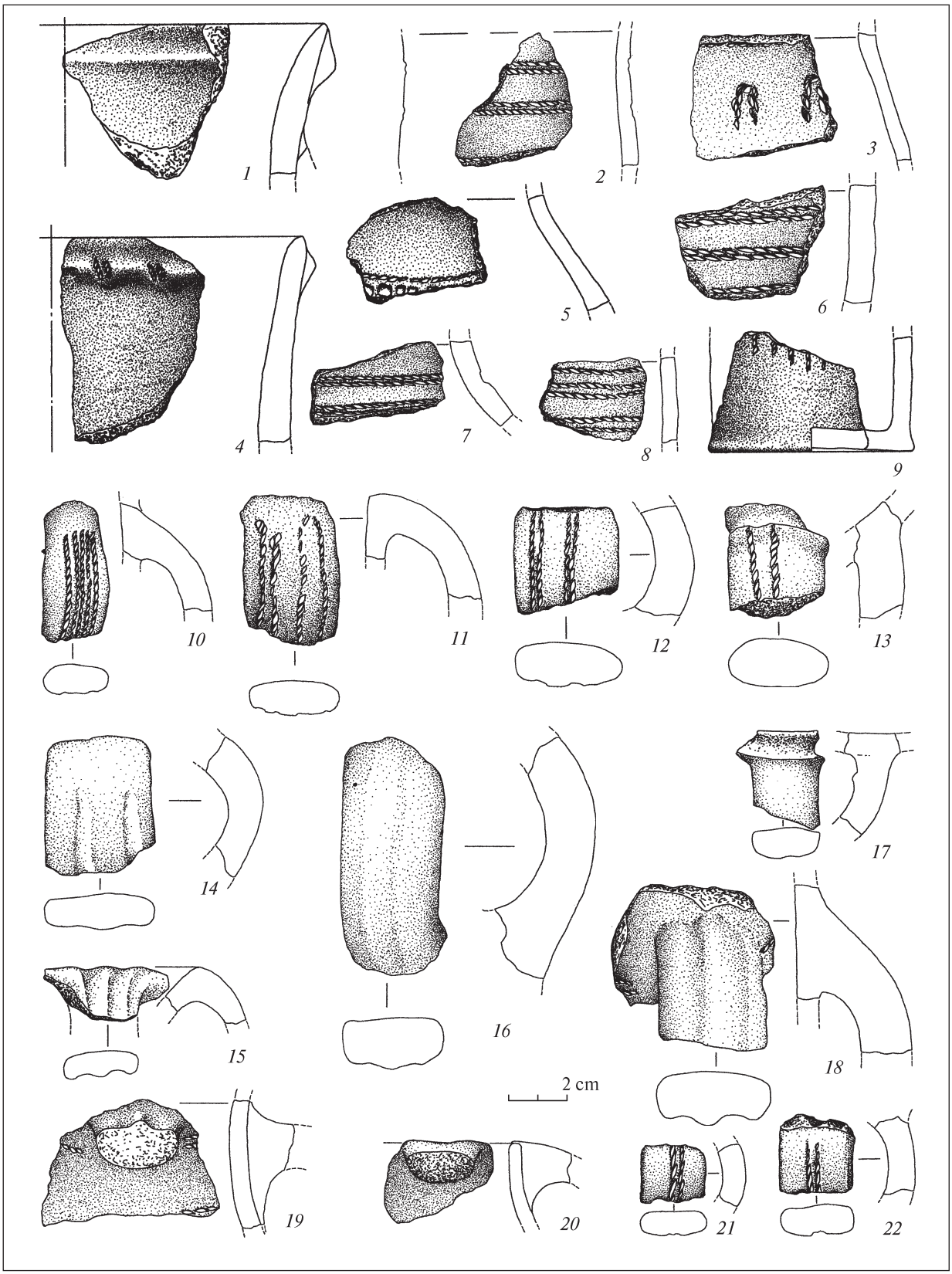

Fig. 13. Rozvazh-Koshara: finds from the territory of the settlement

rae and cylindrical goblets. The Rozvazh-Koshara settlement not only essentially enlarged the collection of such vessels, but also provided certain variations of ornamentation. For instance, strips of triple cord lines are sometimes bordered from below by a row of finger depressions (Fig. 10, *2*) or vertical

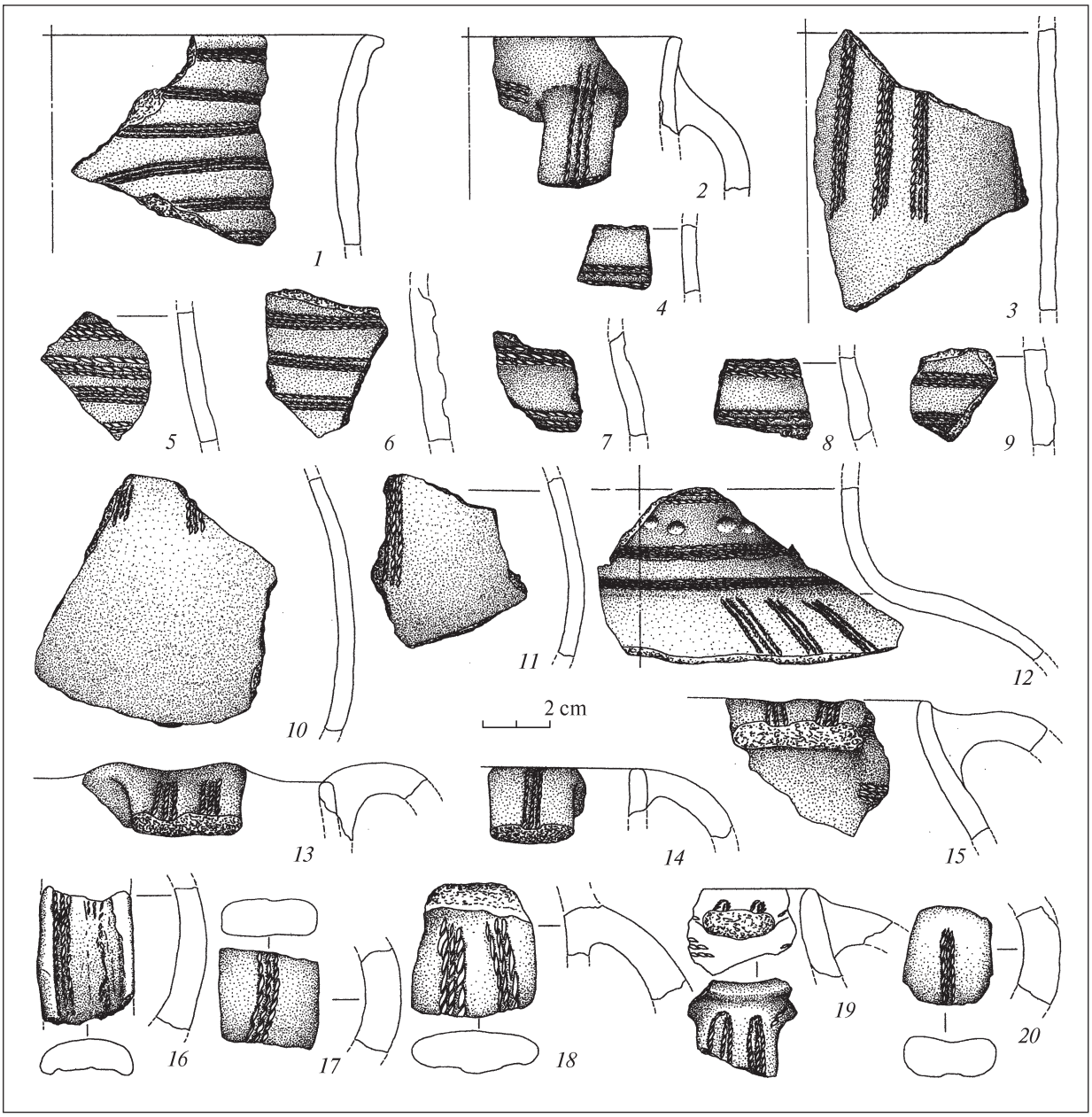

Fig. 14. Rozvazh-Koshara: finds from the territory of the settlement

cord lines (Fig. 8, *5*). One fragment of an amphora bears a row of slender finger depressions between the bands of horizontal stripes on its neck, while groups of three bands, consisting, again, of triple cord lines, come down to the shoulders (Fig. 14, *12*). Similarly, vertical bands are present also on other fragments belonging to amphorae and cylindrical goblets (Fig. 14, *3, 10, 11*). Although some fragments are too small, still some of them, both by their ornamentation and by location of handles, might belong to the amphorae of Horodok type (Fig. 14, *13—15*; cfr.: Свєшніков 1974, рис. 26, *14, 17*).

Most fragments of ceramics decorated by strips of triple cord imprints were found outside the structures. Thus, a question is raised, whether they may come from the earliest destroyed HZC structures – say, above-ground dwellings known in the Horodok settlement. There is a temptation to relate structure 25 to an early stage contemporaneous to proto-Mierzanowice phase: according to its size, it might be the remains of a slightly sunk dwelling. Fragments of two vessels ornamented in this manner (a ladle and, probably, a cylindrical goblet), as well as of some very rough amphora (with 1.0—1.2 cm thick walls), and a fragment of a biface were found there (Fig. 8, *1—6*).

A prominent place in Rozvazh-Koshara is occupied by ceramics ornamented with horizontal strips of double cord imprints. It is worth reminding that the ornamentation style that can be supplemented

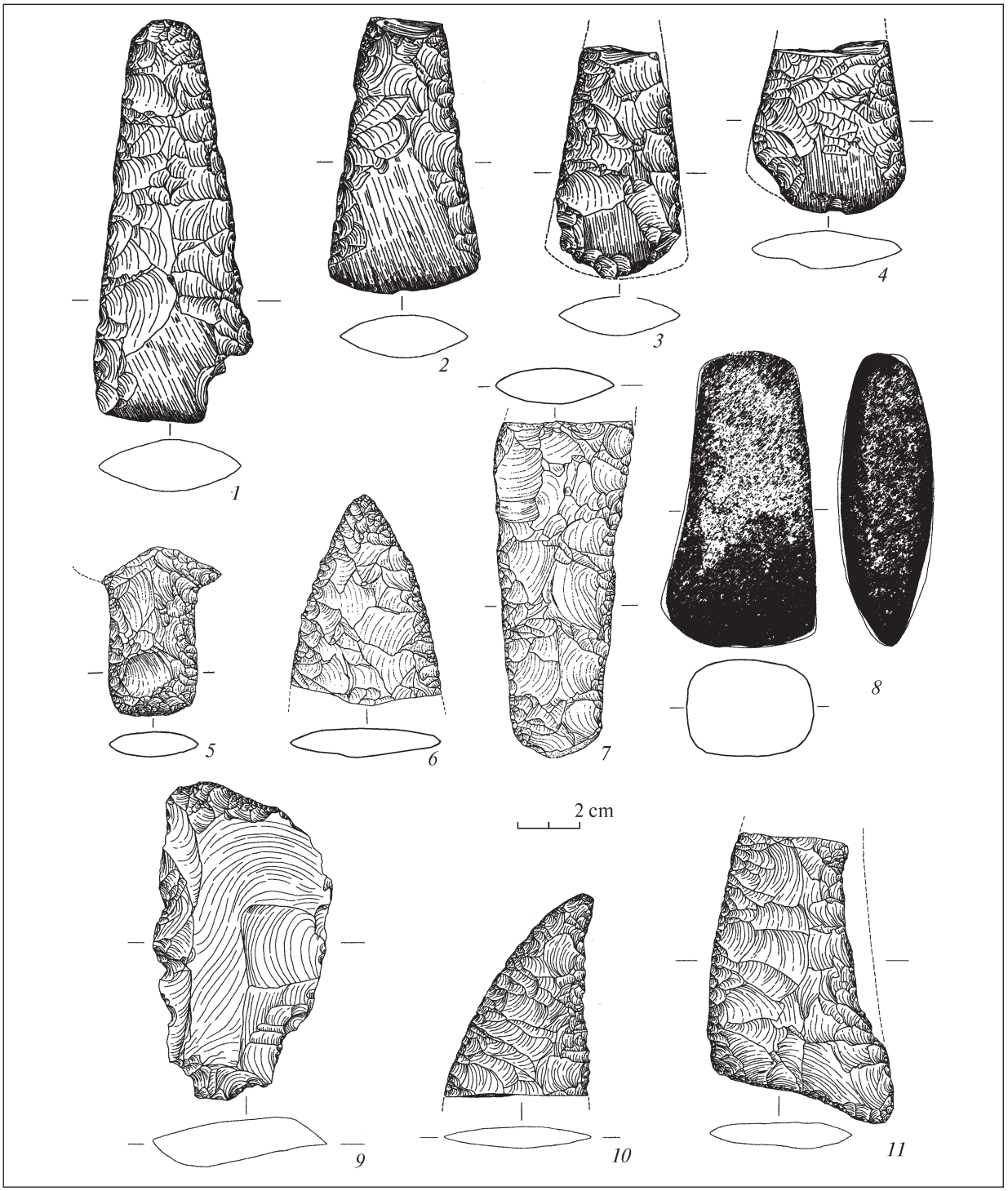

Fig. 15. Rozvazh-Koshara: finds from the territory of the settlement

below (on the body) by identical vertical strips or by strips in the shape of long loops is considered to be a characteristic feature of the early phase of Mierzanowice culture, although, fading during the classical phase, this ornamentation is revived in some local groups of its late phase (Kadrow, Machnik 1997, s. 34—38; rys. 8; 10; 11—13; 41; 42). In our case, the determination of the relative position of thus ornamented vessels, besides stratigraphic data, falls short of the shape. If we focus on such a detail as the position of handles, typical of the early phase of Mierzanowice culture – the only feature that in rare cases survived in Rozvazh-Koshara, i.e., their upper end being fastened to the edge of the rim or somewhat lower (Kadrow, Machnik 1997, s. 38—39), such items originate from structures 12, 13, 32 and from a cultural layer with ornamentation that cannot be always defined clearly. At the same time,

there are also examples of amphorae with handles positioned lower: their upper edge is attached approximately to the middle of the neck, while the lower one – to the shoulders. An almost intact squatted amphora of this type with a wide bottom comes from structure 32 (Fig. 11, *9*), with a fragment thereof originating from structure 31 (Fig. 9, *8*). Both of them bear coupled cord lines bordered from below with a row of short loops.

Taking into account other HZC sites, we should observe that vessels, in particular amphorae and cylindrical goblets with arcuate handles, decorated with strips of coupled cord lines were wide-spread in the HZC, unlike the Mierzanowice culture, during the entire period of its development. Amphorae ornamented in this manner have been discovered in the Strzyżów settlement of Dubno-Volytsia 2 on the Ikva River, with their handles in the above-mentioned position or even lower, on the shoulders (Самолюк 2007, рис. 2, *3*; 5, *5, 9*; 7, *4*; 8, *3, 4*), while one such amphora has been found at the Zdovbytsia settlement, in pit-house 1, alongside with a Strzyżów amphora (Свешников 1961, рис. 20, *20*). The same ornamentation is born also by a cylindrical goblet from the Yasne burial, where Strzyżów elements are also visible (Самолюк 2009, рис. 13).

The above-mentioned not only confirms I.K. Sveshnikov's opinion about the synchronous character of the late stage of HZC with Strzyżów culture (Свєшніков 1974, с. 165), but also proves that the ceramics complex of HZC, being similar to Mierzanowice culture, developed according to its own rules, while amphorae and cylindrical goblets with arcuate handles, in particular those ornamented by strips of double cord imprints, remained popular during the entire period of its existence. Thus, chronological differentiation of the ceramics ornamented by strips of double cord imprints, like also determination of the position of vessels ornamented by single cord lines and in other ways is a matter for the future. In Rozvazh-Koshara, such ceramics survived until the period which can be synchronized at least with the beginning of Strzyżów culture. The features of the latter are visible in the fragments of rims with edges beveled outside, so-called cuff-like (Fig. 9, *7*; 12, *5*), as well as in the fragments of high-necked vessels with cordons (Fig. 10, *3*; 11, *2*; 13, *1*), while by stylistics of ornamentation they are recognizable in a goblet with a horizontal strip of coupled cord lines bordered from below by a row of very short vertical cord lines, discovered in structure 42 alongside with a 'moustached' amphora (Fig. 2, *2—4*). A similar ornamentation consisting of a row of very short vertical lines is observable on a fragment of a body of some small vessel with a ribbed bend (Fig. 4, *11*), while that consisting of similar coupled slanting lines can be seen on a cordon under the rim (Fig. 13, *4*).

It is not easy to determine the chronological position of vessels represented by fragments of straight (non-profiled) walls or rims (Fig. 4, *9*; 7, *4*; 12, *3, 12*), densely ornamented by horizontal lines of single cord imprints. They occur also at other sites of the Western Volyn (Bunyatyan, Samoluk 2009, Fig. 6; 7). A part of them seems to belong to traditional vessels, but they may represent also some hitherto unknown specimens. In the Mierzanowice culture such ornamentation was present, except for the classical phase, in parallel with other types of ornamentation. We should observe in passing that, although ceramics with the so-called bosses, typical of the classical phase of Mierzanowice culture, is known in the Western Volyn, in particular also in the vicinities of Ostroh (Свєшніков 1974, рис. 47, *6, 10, 14*; Ткач 2007, рис. 40, *6*; 58, *6, 7*; 78, *7* і т. д.), no items of this kind were found at Rozvazh-Koshara.

Other late materials are represented by the fragments of asymmetrical bifaces called conventionally sickles (Fig. 6, *6*; 15, *10, 11*). Similar items were considered by J. Libera to be typical of the classical phase of Mierzanowice culture synchronous to the Strzyżów culture (Libera 2001, ryc. 39). It cannot be ruled out that a fragment of a refined adze-axe occupies the same position (Fig. 11, *8*). It is a matter of course that the occurrence of such sickles in the Western Volyn, mentioned by J. Libera and supplemented to some extent by items from Rozvazh-Koshara, extends the age of the HZC, as compared with that defined for it by J. Machnik, and confirms I.K. Sveshnikov's hypothesis about its partially synchronous character with the Strzyżów culture. However, the indicator thereof is so far represented by flint articles. It still remains to establish which ceramics complex of the HZC would correlate with them and how long both cultures coexisted. Radiocarbon dates obtained for Dubno-Volytsia 2 settlement permit to partially clarify this problem.

Absolute chronology. As it was mentioned above, in view of some peculiarities of Rozvazh-Koshara vessels, its ornamentation permits to synchronize the beginning of both the settlement and the HZC with proto-Mierzanowice phase dated by 2400/2300—2200 BC (Kadrow, Machnik 1997, s. 13). This opinion was not contradicted by the dates obtained later either. Kurgan burial 1/1 in Łubcze (stan. 1), accompanied by a ladle of the proto-Mierzanowice phase, given a possible earlier position (Ki-6299 3920 ± 45 BP, 2560—2540, 2500—2350 BC), in

whole is determined as performed approximately in 2350 BC (Machnik, Bagińska, Koman 2009, s. 103, ryc. 75; s. 221, tab. 20; s. 229). At present, given the lack of radiocarbon dates for the HZC, one can only state that such synchronization does not contradict the dating of the Volyn group of Globular Amphorae culture that, according to M. Szmyt, existed until 2400/2350 BC (Szmyt 1999, p. 68—69).

The presence of articles, in particular of flint ones, in Rozvazh-Koshara, which, on the basis of J. Libera's observation, are comparable with the classical phase of Mierzanowice culture, represents a reference point for the determination of the final date of this settlement: approximately 2050—1950/1900 BC, or even 2050—1850/1800 (cfr.: Kadrow, Machnik 1997, s. 54). At the same time, taking into account J. Libera's elaborations again, it appears to be synchronous with the Strzyżów culture, as confirmed also by the above-mentioned samples of ceramics. However, here, most likely, it is possible to postulate only a partial synchronicity of Rozvazh-Koshara settlement with Strzyżów culture, probably with its initial stage, rather than an absolute one. Such a conclusion seems to be fostered by dates obtained for Dubno-Volytsia 2 settlement after their publication (Самолюк 2007).

Animal bones provided the dates for two structures: structure XIII — Ki-13882 3380 ± 80 BP, structure XVI — Ki-13881 3290 ± 70 BP[3]. Therefore, the structures functioned about 1600 BC (with some deviations). It is worth reminding that in both these structures, like in others, ceramics of Strzyżów culture and that of HZC were found, which seems to reflect the conclusion of the epi-Cord horizon in the Western Volyn. Despite the exceptional character of these dates, it is reasonable to consider them as more or less reliable. In particular, the date of structure XIII coincides with end dates of local groups of the late phase of Mierzanowice culture, which are prolonged until 1600 BC (Kadrow, Machnik 1997, s. 100, 110, 118). The position of structure XVI, due to its wide range, is less distinct, but it partially intersects with the previous one. The beginning of the Trzciniec culture in Volyn tends to be dated approximately from 1700 BC, although there are no solid grounds for it (Лысенко 2005, с. 46).

Thus, at present it is possible to tentatively date the HZC by 2400/2350—1600? BC, that is to synchronize it fully with the Mierzanowice culture. The Strzyżów culture developed in parallel with the HZC, beginning roughly from the turn of the 3rd—2nd millennium BC, and they ended more or less simultaneously. Therefore, it does not seem legitimate to limit the age of the Strzyżów culture comparing it chronologically only with the classical phase of Mierzanowice culture on the territory of Lesser Poland (in part.: Bargiel, Libera 2005, с. 201). Although two dates seem to be insufficient for such conclusions, after all, this synchronicity of two Volyn cultures is suggested by the material from settlements and, in particular, from burials. Sometimes it is difficult to attribute the latter culturally, due to the lack of expressive grave goods (a vessel or a biface), in particular also because of varying position of the deceased. Although a curved position is typical of the HZC, it occurs also in reliably Strzyżów settlements (for instance, in the mentioned Zhorniv kurgan, burial 2). However, some reliably HZC burials, according to the slightly curved position of the skeletons, resemble the Strzyżów ones (Самолюк 2009, рис. 4; 13). But this is already a different issue.

To sum up, returning to the Rozvazh-Koshara settlement, we should note: despite the importance of its material for the interpretation of the HZC, no tangible progress in its study is possible until new sources of a higher quality emerge. The same is true for the Strzyżów culture as well.

[3] Dating is performed within the joint Ukrainian-Russian project devoted to the study of Bronze Age, with the Ukrainian side directed by Yu.Ya. Rassamakin.

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V.V. Kotenko

GREY-WARE POTTERY FROM THE MASLYNY SETTLEMENT

The complex of grey-ware pottery from the Maslyny settlement belonging to Chersonesos' chora in the North-Western Taurica is being introduced into the scientific circulation.

Keywords: Ancient Greek period, Tauric Chersonesos, chora, Maslyny, grey-ware pottery

The Maslyny settlement is considered to be the northmost point of Chersonesos' chora in North-Western Crimea. It is known from the history of exploration of this site that in the middle of the 1960s, the Tarkhankut team of archaeologists from the Leningrad branch of the Institute of Archaeology of the AS of the USSR performed a clean-up of a cultural layer at the Volodymyrivka (hereinafter Maslyny) settlement. From 1972 until 1986, systematic explorations were performed by a team of archaeologists from the Kharkiv University as part of the Northern Crimean expedition of the Institute of Archaeology of the AS of the USSR directed by V.O. Latysheva, the results thereof being published in a series of articles in 1976—1999. Thematically, the great majority of these papers contained information about the everyday life of inhabitants of this settlement, as well as about the role of agriculture as the basis of economy of Tauric Chersonesos. Unfortunately, V.O. Latysheva passed away prematurely, and the Maslyny material remained unprocessed. Yet, the study of mass material obtained during excavation of the settlement, taking into account modern notions about its chronology, would permit not only to introduce the collection of finds from Maslyny into the scientific circulation, but also to substantially adjust the existing views on this part of agricultural neighborhood of Chersonesos.

In particular, a considerable quantity of ceramics material represented mostly by storage, kitchen and table vessels has been accumulated. Distinguishable in the collection is a compact group of grey-ware and black-glazed pottery (Латышева 2001). It is this material, alongside with stamps on storage amphorae, that can serve as a precious indicator for the determination of chronological boundaries of the life of the settlement and its main construction periods. Besides, grey clay and grey-ware ceramics from settlements of Chersonesos' chora and from Chersonesos itself recently became an object of quite fundamental discussions regarding its origins. So, the study of a new group of this type of tableware, taking into account existing elaborations, seems to represent an urgent task.

Before the characteristics of grey-ware ceramics is presented, it would be appropriate to describe the location of this type of vessels within the settlement. Maslyny is a fortified homestead coming close to the modern line of sea coast of the Karkinitis bay which includes a non-fortified ground containing semi-pit buildings and pit structures of mostly utility purpose. Grey-ware and black-glazed tableware was found mostly in the Western fortified part of the settlement, during the exploration of towers and neighboring structures. It is often accompanied by uncommon material (ornaments, terracottas), which permitted to V.O. Latysheva to make a quite logical supposition about the welfare of the population that inhabited this place, as well as to refer the pottery itself to the category of gala tableware and to consider it as a token of a certain prosperity (Латышева 2001). The non-fortified part inhabited by ordinary artisans, instead, yielded only isolated fragments of these vessels.

By its purpose, the grey-ware pottery from Maslyny, like also the black-glazed one, comprises fish plates, bowls, small table jugs and individual shapes. The material used for this study included tableware of the above-mentioned shapes which is the most representative group of grey-ware pottery[1]. The selection includes 29 open shapes (25 fish plates and four bowls) and three closed ones – two kitchen jugs and a kantharos. The finds were categorized by their shapes, coating and visual composition of paste with the aim to establish the center of production of the Maslyny pottery, as well as to reveal the living standards of the population.

[1] The material was processed in the Museum of Archaeology and Ethnography of Sloboda Ukraine (Kharkiv) during its museumification and passportization. We would like to express our gratitude to Prof. S.B. Sorochan, T.M. Krupa and other museum employees for their collaboration in the processing of the Maslyny collection.

Grey-ware vessels belong to simple wheel-made pottery (details see in: Крапивина 1987, с. 72; 2007, с. 98). The technology of their production is well known today. The grey color of the surface is determined by the specific character of its firing. The oxygen access was fully blocked, causing oxidation of iron in clay paste that imparted the grey color to the vessel. If oxygen penetrated into the oven, the surface of the article became reddish. Before firing vessels were burnished and covered with dark finish (Буйских 2006, с. 34). This technology was of a fundamental importance, since this dark coating sometimes is called black glaze (Егорова 2009, с. 65). However, black-glazed and grey-ware coatings were obtained by different technological procedures; therefore, it seems erroneous to regard them as the same.

Black-glazed and grey-ware pottery from Maslyny are actually synchronous, but the former is traditionally associated with Attic production, while the latter is the product of North Pontic centers. Grey-ware pottery often occurs in urban complexes of Greek cities of the North Pontic region and in their agricultural settlements. The most debatable remains the issue of production centers of these vessels. V.O. Latysheva supposed that they arrived to Maslyny from Chersonesos (Латышева 1972, л. 8). However, further studies of Chersonesan and Olbian settlements and chora brought about different considerations in this connection.

No specialized reviews exist regarding grey-ware pottery from the North Pontic region. So, it is impossible to give an unequivocal answer to the question of how these vessels arrived to Maslyny. S.B. Buiskykh and V.V. Krapivina, tackling the issue of grey-ware pottery production in Olbia (Буйских 2006; 2007, с. 39; Крапівіна 2007, с. 98—99), remarked that it appears to be a mass ceramic material here, persisting in their opinion about its local origins since as early as the 4th c. BC. The production tradition did not change during the classical and Hellenistic periods, and grey-ware vessels of the 4th—3rd c. BC are represented by a variety of shapes jugs, fish plates and bowls prevailing (Буйских 2006, с. 39, рис. 2). As far as the origins of grey-clay and grey-ware vessels from Chersonesos and settlements of its chora are concerned, two contrasting opinions persist. For instance, T.V. Yehorova insists upon their local make advancing a hypothesis about the importation of these products of Chersonesan workshops to Olbia (Егорова 2009, с. 66). On the other hand, the analysis of the composition of Chersonesan ceramics complex of the 4th—3rd c. BC gave rise to an opinion about the importation of this pottery to Chersonesos from a center that still remains to be identified (Ушаков, Струкова 2007, с. 45).

Grey-ware vessels, instead, in particular fish plates with a peculiar ornamentation of rims in the shape of three relief or burnished flutings, were quite popular also in Chersonesos, although they were not as diffused there as in Olbia. Such pottery could have got to Maslyny both directly from Olbia and indirectly through Chersonesos. However, it is possible to speak about the arrival of grey-ware table ware to Maslyny from Olbia only with some reservations, since final conclusions can be made only on the basis of the results of specific analyses of their ceramic paste. Still, the exportation from Olbia to Maslyny seems to be quite plausible, first of all, due to the total similarity of shapes.

Grey-ware pottery is known also at other settlements of Chersonesos' chora. Publishing grey-ware vessels from the У-6 homestead of Panske I settlement, the researchers remark that its presence at the settlement confirms the hypothesis that some part of Olbian population resettled here and participated in the colonization of this region of North-Western Taurica (Hannestad, Stolba, Blinkenberg Hustrup 2002, p. 131), without taking into account the possibility that grey-ware pottery could have come here also from Kerkinitis, and it is from there that it could have been exported also to Maslyny. The issue of the origins of its inhabitants is not being questioned, since the mass material is represented by Chersonesan production, and the population itself was a part of the Chersonesan state.

So, in view of such contrasting opinions, we consider it necessary to include the series of grey-ware ceramics into the scientific circulation, hoping that it will enrich the described discussion with new information.

Open shapes. Bowls with a central depression (representing a sauce boat or a saltcellar) and with low flanges are traditionally identified as fish plates that served as tableware used for the table layout. This shape is very well represented at Maslyny. Alongside with black-glazed fish plates, grey-ware vessels also occur in the same assemblage at the settlement. Taking into account the vicinity of the settlement to the sea, one can suppose that fish was the main food product in the ration of its inhabitants, and for this reason this shape of tableware was popular among the population.

Finds of 1973 are associated with works in the Western fortified part of the settlement. Represented below is the material from large rooms built from well worked stone blocks. By the finds of stamped amphorae, they are dated to the 3rd—2nd c. BC (Латышева 1974, с. 299). But tableware shapes

are dated to an earlier period. This situation, by the way, reflects the state of chronological elaboration of concrete archaeological materials that requires urgent adjustments.

A fragment of a fish plate (52/II, 2—M-73, Fig. 1, *1*). The floor is 0.5 cm high and has a diameter of 5.0 cm. The saltcellar with 0.7 cm flanges is sunken by 1.5 cm and does not reach the floor. The vessel is made from grey clay; its paste is friable, with visible pyroxene admixtures. The surface is unevenly burnished. A similar shape is dated to the late 4th – early 3rd c. BC (Еторова 2009, с. 178).

A fragment of a fish plate (58/II, 3—M-73, Fig. 1, *2*). The diameter of its floor is 8.0 cm, its height being 1.0 cm. The saltcellar protrudes by 0.3—0.5 cm tending to sink into the floor. The clay is red, while the paste contains a touch of grog. The surface is burnished, grey, coated only from inside. The vessel should be dated to the late 4th – early 3rd c. BC (Егорова 2009, с. 178).

A fragment of a fish plate (198/III, 4—M-73, Fig. 1, *3*). The floor is 0.7 cm high and has a diameter of 8.0 cm. The saltcellar, with a low vertical flange (0.5 cm), is sunken by 1.5 cm and is not introduced into the floor of the vessel. The clay is grey and porous. The surface is burnished, the coating being uneven and applied untidily. This shape was in use from the middle of the 3rd c. BC (Попова, Коваленко 2005, с. 52), while the technology of grey burnishing does not go far back into the 3rd c. BC (Hannestad, Stolba, Blinkenberg Hastrup 2002, p. 131—132). It can be supposed that the vessel may be dated to the turn of the second and third quarters of the 3rd c. BC.

A fragment of a fish plate (69/III, 10—M-74, Fig. 1, *4*) found in the Western fortified part of the Maslyny settlement. The fragment is represented by a part of floor, saltcellar and flange of the vessel. The floor is 1.2 cm high and has a diameter of 6.0 cm; the saltcellar is sunken by 2.0 cm. The vessel is made from grey clay with pyroxene inclusions. The surface is burnished, of a grey color. The floor bears a scratched graffiti interpreted by V.O. Latysheva as ΔΑΡ (Латышева 1983, с. 105). Judging by the height of the leg and that of the

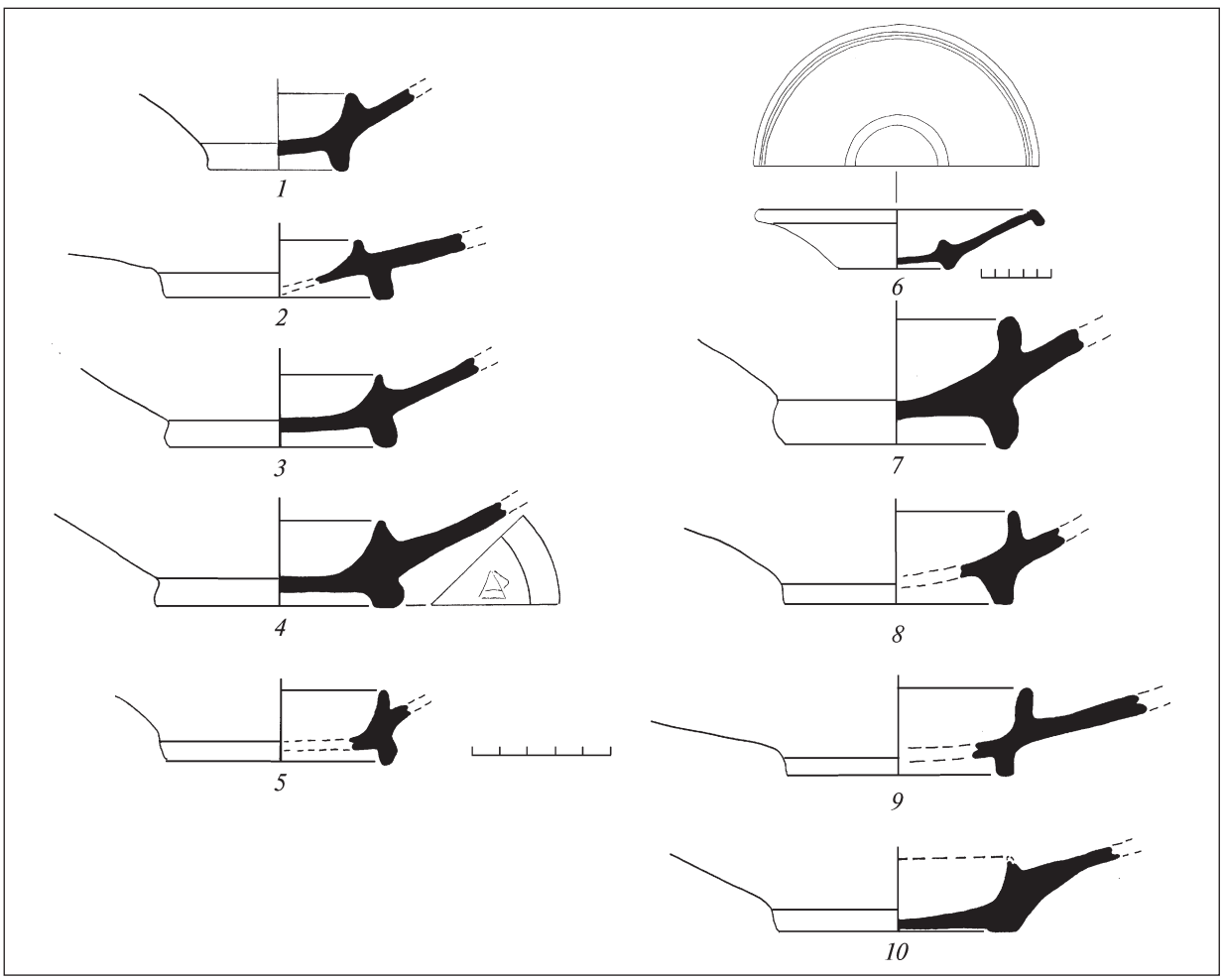

Fig. 1. Maslyny. Fragments of grey-ware fish plates (floor fragments)

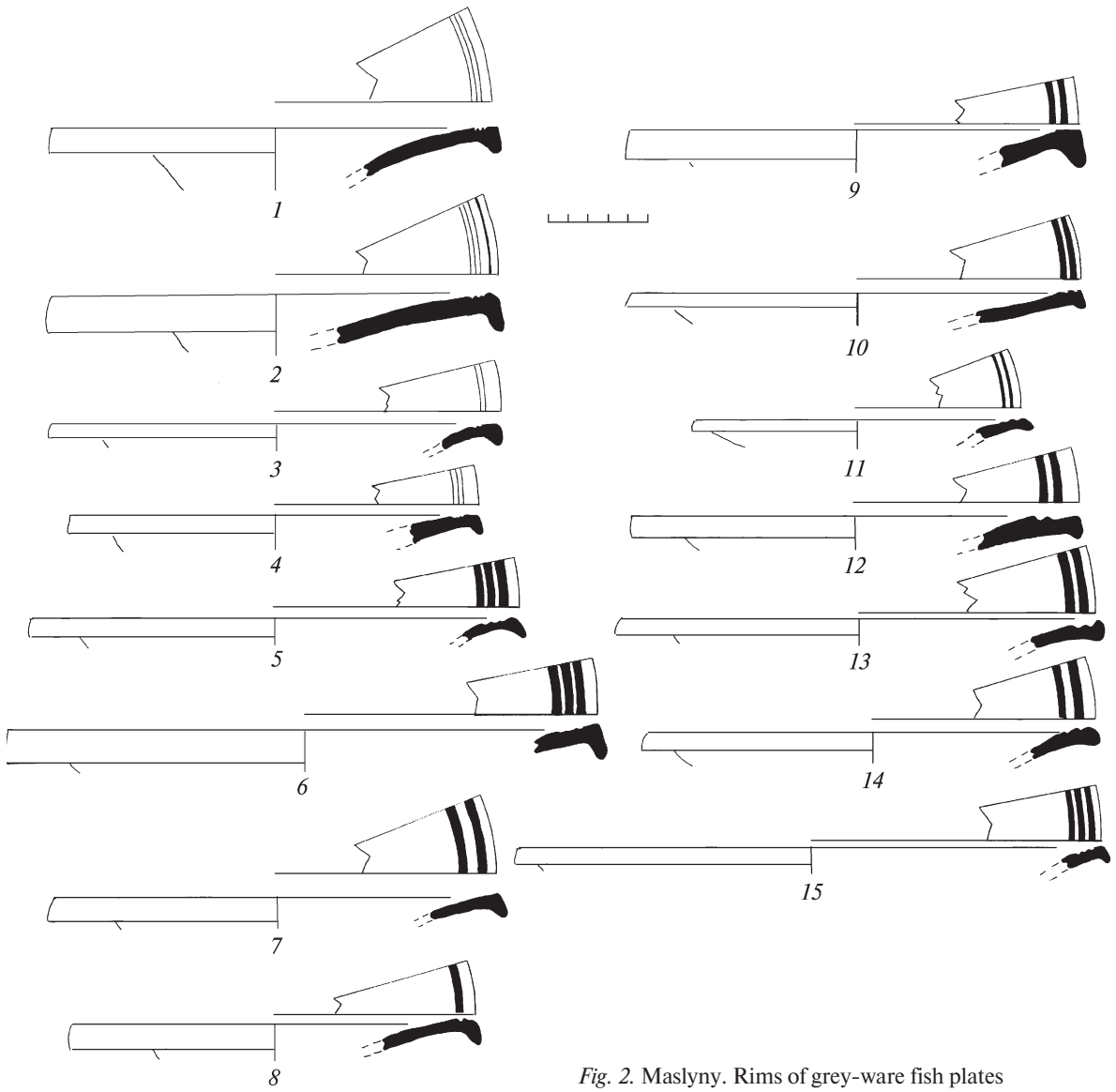

Fig. 2. Maslyny. Rims of grey-ware fish plates

saltcellar, the plate can be dated to the last quarter – middle of the 3rd c. BC (Rotroff 1997, fig. 730).

A fragment of a fish plate – the part near the floor including the saltcellar (215/И' —М-77, Fig. 1, *5*). It originates from the Western fortified part of the settlement. The diameter of the floor is 8.0 cm, the height of the leg being 0.5 cm; the saltcellar with flanges is 0.5 cm high and sunken by 1.7 cm. The vessel is made from red clay, with visible admixtures of poorly ground grog. It is poorly fired. The plate may be dated to the last quarter – middle of the 3rd c. BC (Rotroff 1997, Fig. 51, 730; Hannestad, Stolba, Blinkenberg Hastrup 2002, p. 147).

Fish plate (2.П.О.—М-79, Fig. 1, *6*) from the Western part of the settlement, dwelling O (Латышева 1979, л. 3). The structure is attached to the Western tower as a result of an enlargement of the settlement. The material in the shape of stamped handles of amphorae is dated to not earlier than the second half of the 3rd—2nd c. BC (Латышева 1980, с. 296). The diameter of the plate is 11.0 cm, it has a low leg with a ring tray. The saltcellar is slightly sunken into the floor and protrudes by 0.5 cm over the inner surface of the plate. The clay is grey, without visible coarse admixtures. The plate is burnished on both sides and is of an irregular grey color. The rim is out-turned and ornamented at the bent by three relief strips, the distance between them being about 0.2 cm. We are going to dwell with more details on the similar ornamentation below.

The finds of 1983 are associated with the discovery of a powerful stone wall between the forti-

fied Western part of Maslyny and the unfortified settlement to the East from it, which, probably, was a part of fortification system (Латышева 1984, с. 305—306).

A fragment of a fish plate (1125—М-83, Fig. 1, *7*). The floor with a 1.7 cm ring tray and the saltcellar sunken by 3.5 cm has been preserved. The vessel is made from grey clay with visible admixtures of pyroxene and grog. From outside the plate is burnished and grey. By analogies, in particular by that of a leg from the У-6 homestead of Panske 1 settlement, it may be dated to the last quarter – middle of the 3rd c. BC (Rotroff 1997, Fig. 51730; Hannestad, Stolba, Blinkenberg Hastrup 2002, p. 147).

A fragment (a part of the floor *and the saltcellar) of a fish* plate (/123—М-83, Fig. 1, *8*). The floor is 1.2 cm high and has a diameter of 6.4 cm; the saltcellar is sunken by 2.0 cm. The paste is grey. The surface is burnished, grey, with visible peelings suggesting the low quality of coating. The vessel may be dated to the last quarter – middle of the 3rd c. BC (Rotroff 1997, Fig. 725).

A fragment of a fish plate (/124—М-83, Fig. 1, *9*) — its lower part. The floor is 0.5 cm high and has a diameter of 7.0 cm; the saltcellar is sunken by 1.7 cm and protrudes by 1.0 cm. The paste is grey, with visible admixtures of fine grog. The surface is burnished and grey. This plate can also be dated to the late 4th – middle of the 3rd c. BC (Егорова 2009, с. 247).

A fragment of a fish plate (/127—М-83, Fig. 1, *10*) represented by the saltcellar with floor. The tray, with a diameter of 8.4 cm, protrudes by only 0.2—0.3 cm; the saltcellar is sunken by 2.0 cm, its flanges being narrower than the floor part of the vessel. The clay is grey, with admixtures of mica and pyroxene. The coating is dark grey, almost black. This vessel from Maslyny has no direct analogies, so its dating falls within a rather wide range: middle of the 4th – first third of the 3rd c. BC, i.e., the time of production and exportation of grey-ware pottery from the North-Western Pontic region to Crimea (Hannestad, Stolba, Blinkenberg Hastrub 2002, P. 131—132).

Tableware from the Maslyny settlement was preserved in a very poor state. Intact shapes are very rare. Instead, a lot of rims of fish plates made from clay of different colors survived. They are similar by their decoration. Their surface is grey, burnished, their rim is ornamented by two-three accentuated scratched or burnished strips of different widths (0.1—0.5 cm). Such decoration of the rim is typical of Olbian production (Буйских 2010, с. 47). So, quite plausible seems to be the supposition that fish plates, with only their floor parts surviving, also bore this popular ornament. This is confirmed by the presence of an intact shape of this type (2

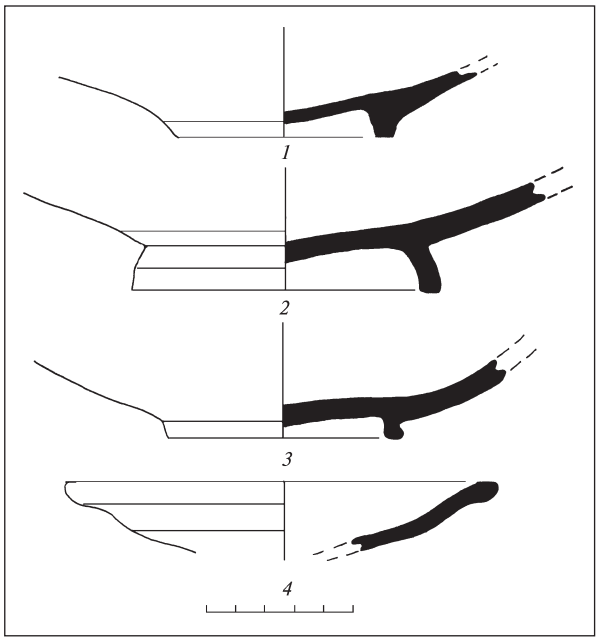

Fig. 3. Maslyny. Fragments of grey-ware bowls

П.О.—М-79) and by similar color and composition of the paste of numerous fragments.

A rim of a fish plate (82/III,21—М-76, Fig. 2, *1*), out-turned by 45°. Its diameter is 25.0—27.0 cm. The clay is red, the paste containing a touch of pyroxene. The coating is grey and irregular. No direct analogies are available, but such shape is known from the end of the 4th until the middle of the 3rd c. BC (Егорова 2009, с. 247). The surface was ornamented by three narrow strips.

A fragment of a fish plate (281/Т'—М-78, Fig. 2, 2) represented by a rim with a diameter of 20.0—24.0 cm, out-turned almost by 90° by 1.5 cm (it might have covered a large part of the plate from outside). The clay is red, poorly fired and contains a touch of pyroxene. The surface is burnished, dark grey, ornamented along the edge with three painted strips. Such shape of pottery of the open type has been known in the West-Northern Pontic region since the second half of the 4th c. BC (Венедиктов и др. 1963, с. 231). Similar rims of black-glazed fish plates from the Chaika fortified settlement are dated to the last quarter of the 4th — 3rd c. BC (Попова, Коваленко 2005, с. 15).

Rims of six fish plates (129 (а); 129 (б); 112/П.4'—М-79; 143/П.У'—М-79; 129/9—М-81; 188/128—М-84; Fig. 2, *3—8*) with a diameter of 10.0—11.0 cm. Flanges are out-turned by 45°. The clay is grey, like their surface, the break often revealing low-quality firing, as well as admixtures of mica and pyroxene. The plates are ornamented along their edges (at a distance of 1.0 cm) by two-three painted or incised strips, 0.2—0.5 cm wide,

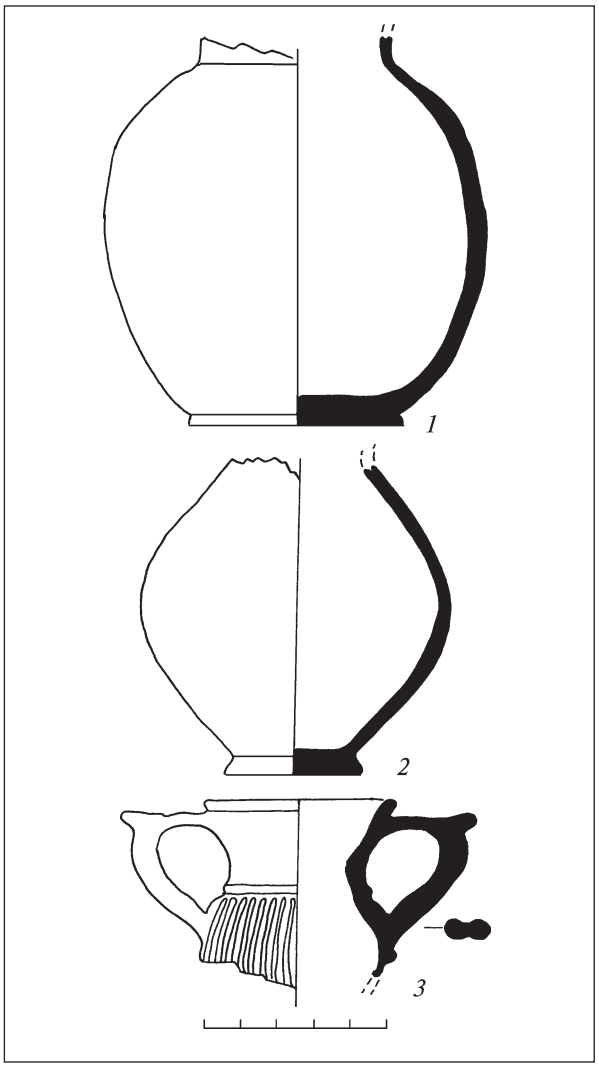

Fig. 4. Maslyny. Closed shapes of grey-ware pottery: *1, 2* —jugs; *3* — a kantharos

with the distance between them varying depending on their width. By their shape, the rims can be dated to the late 4th — middle of the 3rd c. BC (Егорова 2009, с. 247).

A rim of a fish plate (6/III, 7—M-73, Fig. 2, *9*) with a diameter of 11.0—12.0 cm. The flange is massive and out-turned almost by 90°. The clay is grey. The surface is burnished, of a grey color. The plate is ornamented by two painted strips under the rim. Such ornamentation method has no analogies. By its shape, the vessel can be dated to the second half of the 4th—3rd c. BC (Буйских 2007, с. 40, рис. 2, *10*).

Rims of five fish plates (106/III, 1—M-73; 20/III, 15—M-75; 109/III, 12—M-75; 247/III, 32—M-76; 283/Ж—M-78, Fig. 2, *10—14*) with a slightly out-turned flange. As a rule, they have thinner walls as compared with previous ones and are made from clay of various shades, from pink to dark grey. The paste reveals pyroxene inclusions. The surface is often covered with dark finish, and visible are traces of oxygen intake during firing, in the shape of reddish spots on the surface. Along their edges, the plates are ornamented by two-three strips of different widths. It is noticed that the narrower is the strip, the more often it is deeper and incised, instead of being painted. This material can be dated to the second half of the 4th—3rd c. BC (Буйских 2007, с. 40, рис. 2).

A rim of a fish plate (5/III, 8—M-74, Fig. 2, *15*), with a diameter of 13.0—15.0 cm and slightly out-turned. The vessel is made from light orange-pink clay, unevenly fired (judging by a grey strip in the thickness of the paste). The surface is well worked – covered with dense black dull finish and burnished. Along the edge, the vessel is ornamented by three painted 0.3—0.5 cm wide strips. The vessel is dated, like the previous shapes, to the second half of the 4th—3rd c. BC.

Open shapes of grey-ware pottery include bowls as well. They were also used for the table layout in everyday life, and this shape became popular with Greek population. As a rule, the bowls were black-glazed, grey-ware, wheel-made, without coating or molding. The selection contains also four grey-ware vessels originating from the Western part of the Maslyny settlement.

A fragment of a bowl (112/III, 8—M-74, Fig. 3, *1*) — its floor part. The leg is 1.0 cm high, the diameter of the floor being 7.0 cm. The clay is grey, with visible admixtures of pyroxene and grog in the paste. The surface is burnished and covered with dark finish. By its shape, it can be dated to the 3rd c. BC (Rotroff 1997, Fig. 48).

A fragment of a bowl (/125—M-83, Fig. 3, *2*). Its diameter in the lower part is 10.0 cm, its leg being 1.5 cm high. The paste is red, without visible admixtures. The surface is burnished and covered with dense dark finish. The vessel may be dated to the 3rd c. BC.

A fragment of a bowl (195/128—M-84, Fig. 3, *3*) with a low leg (0.5 cm). The diameter of its floor is 6.4 cm. The paste is red, without visible admixtures. The bowl is burnished and covered with dense dark high quality finish. Such shape is typical of bowls in the 3rd c. BC (Rotroff 1997, Fig. 48).

A rim of a bowl (128, Fig. 3, *4*) with a diameter of 7.0 cm. The surface is burnished and grey. The paste is homogeneous, dark grey. Such shapes are typical of the middle — third quarter of the 3rd c. BC (Rotroff 1997, Fig. 52).

Closed shapes are represented in the selection by two grey-ware table jugs and a kantharos. Jugs are a characteristic shape of grey-ware pottery of the Hellenistic time.

A jug (364/III, 3—M-73, Fig. 4, *1*). The diameter of its floor is 5.0 cm, the largest diameter of its shoulder being 1.0 cm. The vessel is thin-walled, with the thickness of its walls not exceeding 0.5 cm. The neck begins at the height of 10.0 cm from the floor, but its shape did not survive. Probably, this pitcher had a loop-like handle in its upper part. The clay is dark grey; the paste is inhomogeneous, with visible admixtures of grog. The outside surface is covered with dark finish. The vessel can be dated to the second half of the 4th—3rd c. BC (Буйских 2007, с. 40, рис. 2).

A jug (27/III, 10—M-74, Fig. 4, 2). The diameter of its floor is 3.5 cm, the largest diameter of its shoulder being 8.0 cm. Like the previous one, this vessel is thin-walled (0.3—0.5 cm) and visually represents its copy. The clay is light grey, without visible admixtures. The surface is covered with dense dark finish and ornamented in its upper part by a thin incised line. The shape of the vessel is similar to the previous one and can be dated to the second half of the 4th—3rd c. BC (Буйских 2007, с. 40, рис. 2).

A kantharos (181/129 Я—M-83, Fig. 4, *3*). This unique find originates from excavations of 1984 in the Western part of the settlement. It is the upper part of the kantharos that survived. The diameter of the neck is 5.0 cm, its middle part (5.0 cm) is ornamented by flutings, the distance between them being 0.2—0.3 cm. Its cup is made from grey clay, without visible admixtures in its paste. The grey surface of the kantharos is covered thoroughly enough with dark finish. No direct matches are known. Such shape was diffused at the end of the 4th – middle of the 3rd c. BC among black-glazed Attic pottery (see, for example: Hannestad, Stolba, Blinkenberg Hustrub 2002, p. 129).

So, grey-ware vessels are represented at Maslyny by a variety of shapes, typical of the Hellenistic period. The time of its production and use does not go beyond the previously established general chronological boundaries of the existence of the settlement: the second half of the 4th – middle of the 2nd c. BC. Open remains the question about the centers of exportation of such grey-ware pottery, not only to Maslyny, but also to the Chersonesan state on the whole. Their mass occurrence and parallel shapes, instead, are registered in the neighboring Olbian polis since as early as the end of the late archaic period. However, the character of their relations and the degree of economic influence of Olbia on remote settlements of Chersonesan chora still await definite determination. At the same time, one should not leave out various data about close relations between these two poleis in the 4th—2nd c. BC (Золотарев 1994).

Despite the problems arising during the study of this group of ceramics and waiting to be resolved, it is obvious that the collected material provided valuable information about living standards of the inhabitants of the Maslyny settlement. Grey-ware vessels were used alongside with black-glazed ones for the table layout and often imitated the shape of the latter, which testifies to their use for solemn occasions. The presented fragments come from the fortified part of the settlement and are associated with rooms of tower structures. This, in its turn, confirms V.O. Latysheva's idea that the Western part of the settlement was inhabited by well-to-do population, the everyday life of which differed from that of the inhabitants of the Eastern part, where people lived in semi-pit dwellings and used mostly hand-made pottery.

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O.V. Gopkalo

MALE AND FEMALE DRESS ACCESSORIES IN THE CHERNYAKHIV CULTURE

The study of dress accessories of different genders in the Chernyakhiv culture and some speculations concerning their garments have been made on the basis of a sampling of graves with available physical anthropological determinations.

Keywords: Chernyakhiv culture, graves, accessories patterns.

Biological factors determined social roles of different genders; these roles were conserved and strengthened in result of general historical and social processes to become stable in the period of class formation (История... 1988, с. 173—174, Формализованно-статистические... 1990, с. 137—138). It was reflected in the material sphere, particularly in costume.

Costume is a complex system of symbols including headwear, clothes, footwear, accessories, ornaments, hairstyle and tattoos (body decorations). It performs various functions: social, biological, sacral and role-playing, and is reconstructed on the basis of archaeological, historical, iconographical and ethnographical sources (Яценко 2006, с. 5—27).

Dress accessories form archaeological equivalent of costume, presented among grave goods as personal artefacts[1]. They materialise the stage of funeral ritual related to dressing of the deceased. Let us try to explore this component of funeral ritual according to the sequence and methods stated in scholarship (Формализованно-статистические... 1990, с. 137—149). Therefore, the most important task is to determine differences in grave goods accompanying different genders within the people of the Chernyakhiv culture.

Historiography has distinguished two aspects of this problem: the first is connected with the identification of grave goods typical of different genders, and the second refers to the notions about their appearance, costume, as well as dress accessories. There is a number of various interpretations, from the idea of a shroud (according to Galina Nikitina, it actually is the same as funeral costume) used by funerals (Никитина 1985, с. 79—80; 1996, с. 21—22; 2008, с. 58) or of the sameness of female and male costume (Никитина 1985, с. 60) to the differences between them as an ethnographic feature of the Goths from the first to the fifth century, like lack of weapons in male burials or traditional female ornaments, two fibulae on shoulders (Бірбрауер 1995, с. 42).

Particularly, in his analysis of grave goods from the Maslovo cemetery, Viktor Petrov has remarked that physical anthropological analysis confirmed the expectation that two fibulae on shoulders should be a feature of female costume. He has determined specific features of grave goods related to woman: beads; combination of fibula, needle and beads; and buckles, particularly pairs of buckles, placed on neck or waist. As for home-made artefacts, the researcher recognized spindle whorls as female features of grave goods, since spinning and sewing were main occupations of women. «*Taking into account that fibulae fastened clothes on one or both shoulders, one should come to the conclusion that they used clothes similar to cloak. The find... of fibulae together with buckles suggests that ancient female inhabitants of Maslovo belted their clothes. Remnants of leather that remained on a fibula from burial 84 suggest that the clothing fastened with fibulae was fur outer garments. In turn, it is quite natural to presume that belted clothing were inner garments*» (Петров 1964, с. 160—162). The researcher has explained the lack of fibulae among the grave goods of the Lokhvytsia cemetery as a local feature of the costume (Березовец, Петров 1960, с. 99). Mariya Tikhanova has also interpreted beads and spindle whorls as features of female burials (Тиханова 1957, с. 175).

Georgiy Fyodorov has made a point that male burials were poor in comparison with female. He believes that among male features of grave goods are weapons, particularly knives, and glass beakers, as a rule placed near the scull. Female burials contained vessels, jewelry and spindle whorls (Федоров 1960, с. 286). Outer garment of the

[1] Henceforth «dress accessories» refer to details of costume (buckles, brooches, beads, etc.) that do not decompose in soil, i. e. are archaeologically traceable. «Accessories pattern» refers to the combination of dress accessories.

Chernyakhiv people was cloak, most probably colored. Besides, leather and fur clothes were worn in winter. Men had linen shirts, trousers, hats, horse skin footwear knotted under knees; women wore gowns (Федоров 1960а, с. 143).

In his description of graves of Ruzhychanka cemetery (Винокур 1979), Yon Vynokur has interpreted burials without grave goods as male (graves no. 6, 10, 43, 49 and 61), while those with grave goods – two fibulae and/or beads, spindle whorls and needles – as female (graves no. 4, 8, 9, 19, 28, 29, 44, 55 and 57).

The analysis of grave goods with the aim to identify features indicating gender of the deceased was made by Erast Symonovych. In the late 1950s, he listed features of male burials including iron knives, oval firesteel with flint, belt and shoe buckles, bronze fibulae, bone combs; female grave features were iron knives, bronze fibulae and bone combs, as well as spindle whorls, needles, beads, pyramidal bone pendants and shell pendants (Сымонович 1959, с. 88). Later on, he has restricted the list of gender features of the deceased to spindle whorls, beads, earrings, temple pendants and some types of pendants for female graves and weapons, gaming tokens, glass and clay beakers for male burials (Сымонович, Кравченко 1983, с. 38—40). It was, probably, due to some misunderstanding that this list does not include one more important feature discussed by the researcher in a special paper, the so-called «hooked pins»[2], described by Symonovych as a feature of female grave goods (Сымонович 1975, с. 214). Symonovych has introduced some adjustments into Petrov's reconstruction of the Chernyakhiv costume. According to them, fibulae fastening the cloak were placed with their springs downwards. Outer garments probably were made of fine wool rather than of fur. The researcher has noticed the rare occurrence of finger-rings and bracelets in the costume of the Chernyakhiv people, the absence of the tradition to embroider cloths with beads, typical of the Scythians and Sarmatians, as well as the rare occurrence of clasped footwear (Сымонович, Кравченко 1983, с. 38—40).

Nikitina has compared goods from intact graves studied by anthropologists and has come to the conclusion that archaeological indicators of gender could not be identified, and there was no difference between male and female costume that consisted of light outer cloak, fastened with fibulae, and trousers (Никитина 1985, с. 60). Besides, the scholar has produced a hypothesis about the use of a shroud in the burial practice of the Chernyakhiv people (Никитина 1985, с. 79—80; 1996, с. 21—22; 2008, с. 58), supported by «*a compact position of feet and shins suggesting their being tied tightly*», as well as by the imprints of linen on the outer surface of metal elements of clothing. According to this hypothesis, fibulae and buckles were used only to fasten the shroud, and their lack is accounted for by the use of cords or straps for this purpose.

Magdalena Tempelmann-Mączyńska has analysed female clothes of the peoples in Central and Eastern European Barbaricum, in particular the Sântana de Mures – Chernyakhiv culture (Tempelmann-Mączyńska 1988; 1989; 1989a). The researcher has proposed the following list of female grave goods: fibulae, special types of female hairpins, details of belt sets, beads, single bead, pendants, neck-rings, bracelets, finger-rings, earrings, combs, fragments of caskets, spindle whorls, knives, needles, fragments of spindles, awls, scissors, pincers, mirrors, imported gold and silver artefacts, and coins. The background of 253 inhumations and 33 cremations from 43 cemeteries allows the researcher to reconstruct Chernyakhiv female costume with one or two fibulae on shoulders, beads, pendants, and, rarely, buckle. In the scholar's opinion, the diffusion of the use of two fibulae is a reflection of the process of formation of a unified model of ethnographic Gothic female costume in the fifth and sixth century, emerged on the territory of Mazovia and Podlachia during the Cecele phase of the Wielbark culture (Tempelmann-Mączyńska 1988, s. 217).

Among ethnographic features of the Goths determined by Volker Birbrauer, there are female clothing with two fibulae, the lack of weapons in male burials and different goods accompanying the deceased of different gender (Бірбрауер 1995, с. 42).

Thus, most scholars identified gender of the deceased only by grave goods. Burials without goods were interpreted as male, while those with goods, with two fibulae and/or beads, spindle whorls and needles as female. Moreover, gender indicators are often determined hypothetically, and their list undergoes continuous modifications.

I have made an attempt to reconstruct the Chernyakhiv costume in a chapter of my *kandidatskaya* dissertation (Бобровська 2000); its main points are published as a brief summary (Бобровська 1999; 2002; Гопкало 2007). Particularly, there is an analysis of a considerable selection of graves by building tables of feature combinations in order to determine gender marks according to grave goods. Such a method is appropriate in case when anthropological attribution is available for a few burials only, so they become a control selection to compare with a considerable data array (Формализованно-статистические... 1990, с. 143—144).

[2] Later these objects were called «crook pins».

Nowadays the selection of graves with available anthropological evaluation has become much larger. A considerable contribution was Octavian Şovan's monograph publishing Mączyńska cemetery in Romanian Moldova. In particular, some of its chapters have analysed burial rite and clothing of the local population (Şovan 2005, p. 203—215). Noteworthy among recent papers is a detailed publication of the burial of a juvenile girl from Velyka Buhayivka cemetery (Петраускас 2004). A catalog of Chernyakhiv burials with two-plate fibulae is presented in Anna Mastykova's paper (Mastykova 2007). Some important information about the costume from Nahirne II cemetery is provided by Erdmute Shultse's paper (Шультце 2010). This recent expansion of the selection of burials with anthropological attributions stimulated my new research of this subject with use of simpler and more efficient method. However, at first we should disprove Nikitina's idea about the use of shroud in the burial practice of the Chernyakhiv people (Никитина 2008, с. 58), since it excludes the existence of costume as such and makes further investigations, particularly those concerning its nature, senseless.

It is known that the Hebrews and Egyptians used shroud in antiquity. The dead body was washed, wrapped in a piece of fine linen or enfolded in sheets, then put into the coffin filled with fragrance and brought to the place of burial (Библейская энциклопедия... 1891, с. 570). Roman burial rite allowed to dress the deceased in parade clothing for which he/she was entitled (Сергеенко 2000, с. 202). The same burial customs spread throughout Roman provinces in Europe. However, the idea of a shroud as a funeral dress originated from Christian traditions and was not known among the peoples of Eastern Europe until the Middle Ages. The compact position of lower extremities bones in Chernyakhiv inhumations mentioned by Nikitina represents an echo of an ancient burial practice that is still used today[3]. In this way, I acknowledge that grave goods included remains of costume; taking the selection of burials with anthropological attributions into account, I will try to: 1) clarify the list of features of grave goods characteristic of male and female burials; 2) identify the combinations of dress accessories, the patterns typical of different genders; 3) reconstruct male and female dress accessories according to the location of their elements in grave; and 4) hypothesize what the clothing of that period would look like.

Let us use Nadezhda Kravchenko's classification of grave goods (Кравченко, 1987). According to it, there are four varieties: А – artefacts that got into the grave as «offerings,» i. e. set of ceramic vessels and glass beakers; Б – artefacts of personal artefacts and clothing; В – artefacts related to production, everyday life, symbolic and cult purposes, indicating occupation, profession and social status; Г – ceramic ware, glass beakers and other categories of artefacts, intentionally damaged, broken and deformed after being in fire – the funeral meal.

To perform my first task, I have used the features of grave goods of varieties Б and В. Variety Б consists of dress accessories and toilet artefacts. The former, in their turn, comprise three groups of artefacts. Fitting[4] includes practical and decorative objects intended for fastening garments, i. e. fibulae and buckles, while ornaments include beads, rings, temple pendants, bracelets and earrings. Finally, a separate group is constituted by amulet pendants. Grave goods of variety В include objects pertaining to occupation and profession; artefacts related to home production; features indicating property status; weapons, horseman's equipment, horse harness; gaming tokens.

Thus, the list of features of grave goods includes:

I. Fitting: 1. One fibula; 2. Two fibulae; 3. Three fibulae; 4. One buckle; 5. Two buckles (or more); 6. Footwear buckles.

II. Ornaments: 1. Beads; 2. Single bead; 3. One finger-ring (or more); 4. One temple pendant (or more); 5. One bracelet; 6. Earrings (one earring).

III. Amulet pendants.

IV. Hygiene items: 1. One horn comb (or its fragments); 2. One mirror.

V. Objects characterizing profession[5]: 1. One bronze or silver knife; 2. Scissors; 3. Pincers.

VI. Artefacts related to home production: 1. One knife (except for the items found among animal bones); 2. One spindle whorl; 3. Two or more spin-

[3] Modern medicine affirms that during two to four hours after death the body muscles become weaker, causing the lower jaw to drop down (Смольянинов, Татиев, Червяков 1961, с. 159—160). Then the so-called rigor mortis occurs, when muscles harden, so manipulations with the members of the body of the deceased (changing the position of the extremities or of the body itself) become actually impossible. According to Nysten's law, rigor mortis ends not earlier than in six days, when the process of decomposition begins (Смирнов 1990, с. 223, прим. 4). Therefore, the position of the body required by the ritual was achieved due to special manipulations that fixed the body muscles (binding lower and upper extremities, tying up the jaw) during the first four hour after the death.

[4] Nikitina uses the term «costume fittings» referring to fibulae, buckles and beads (Никитина 1985, с. 84).

[5] Although this group of artifacts could be aimed at personal hygiene, such finds are relatively rare among the grave goods in the Chernyakhiv burials in comparison with combs, therefore they have specific function of medical or hairdresser's instruments.

dle whorls; 4. One needle; 5. One needle case; 6. One whetstone; 7. One awl; 8. One crook pin (or more).

VII. Features indicating property status: 1. Details of caskets; 2. Keys, locks; 3. Coins.

VIII. Weapons, horse harness and horseman's equipment.

IX. Gaming tokens.

Features of Grave Goods Typical of Male and Female Genders

In total, anthropologists have investigated materials of 55 Chernyakhiv cemeteries (Table 1). Grave goods accompanied 334 adult burials, 134 of them were male and 200 female.

The comparative analysis of selections of male and female burials (Table 2) has been performed according to the chosen method (Формализованно-статистические... 1990, с. 79—91). It consists of the calculation of quantity, frequency (a relative index expressed in percentage), distribution rates and the determination of features trends. The distribution of features of grave goods (Table 3) permits one to determine: peculiar (pure), peculiar (by trend) and general features.

The first group of pure peculiar features that neatly mark the gender of the deceased consists of weapons and gaming tokens for male burials, and three fibulae, one mirror, two (or more) spindle whorls, one crook pin (or more), keys and/or locks for female burials.

The second group of peculiar features by trend comprises the features that are more typical of burials of a certain gender, but occur also in burials of the other. Buckles (for belt, one or two pieces, and for footwear), finger-rings, awls, needles, knives and coins were found mostly in male burials, though two fibulae, beads, amulet pendants, temple pendants, spindle whorls, scissors and pincers[6] mostly in female.

The features of the third group, general ones, are equally frequent in the burials of both genders. These are single fibulae and beads, bracelets, earrings, horn combs, whetstones, needle cases and casket fragments.

Accessories Patterns Typical of Male and Female Genders

To perform my second task, burials containing only dress accessories were taken in consideration, 295 in total: 113 male and 182 female.

The combination of dress accessories determines the pattern. For convenience, accessories patterns are divided into more numerous groups: those containing one, two, three fibulae, those without fibulae, and with ornaments.

Male dress accessories are presented on Table 4: 47 % of burials were accompanied by one or two belt buckles, 30 % contained one fibula supplemented by a belt with a buckle and/or fittings, 9 % included two fibulae with a belt and ornaments, 13 % contained only ornaments.

Female dress accessories present another distribution (Table 5): 43 % of burials were accompanied by two fibulae, a belt and ornaments, 30 % contained one fibula, 2 % three clasps, 6 % one buckle, and 19 % only ornaments.

Dress Accessories of Different Age Groups Split into Men and Women

Besides, this selection allows one to compare dress accessories possessed by different age groups: young (*juvenis*, 12—25 years), adult (*adultus*, 25—35 years), mature (*maturus*, 35—55 years), elderly (*senilis*, 55 years plus) – men and women. However, since the selections were not equivalent, only some preliminary conclusions can be drawn.

Men[7]. Sets of dress accessories with two fibulae are distributed almost equally between the age groups. Sets with one fibula are maximally represented in the group of adult men, and their quantity diminished in the next age groups. On the contrary, sets of dress accessories with one or two buckles more often occur in the burials of elderly men. Taking into account the fact that this group is not numerous, this conclusion can be corrected in the future. Finally, sets of dress accessories with ornaments are in the burials of adult and mature persons. There are some specificities related to the distribution of dress accessories. The number of ornaments (beads and amulet pendants) diminishes with the age, with their maximum with adult men. Finger-rings were worn by representatives of all age groups, while temple pendants by adult men only.

Women. So far, three fibulae have not been recorded only with young women. Sets of dress accessories with two fibulae are among the representatives of all age groups, prevailing among adult women. Sets of dress accessories with one fibula or a single belt are more frequent with young women. Beads more often accompany young women, their number diminishes with age. This regularity is not recorded for the distribution of pendants: the max-

[6] In most cases, pincers were found in burials of elderly women.

[7] A small group of young men is not considered here.

Table 1. **List of Chernyakhov cemeteries with material studied by physical anthropologists**

№, n/n	Cemetery	Anthropologist (publication)	Quantity of attributions
1	Bălţata II	Velikanova (Великанова 1975)	4
2	Bashmachka	Ye. I. Danilova (Смиленко 1992, с. 54, 58, 62)	4
3	Bilenke	P.M. Pokas, not published (Гудим-Левкович, Покас 1990, с. 83)	4
4	Boromlya	S.P. Segeda and P. M. Pokas (Некрасова 2006)	42
5	Budeşti	M.S. Velikanova (Великанова 1975, с. 224)	35
6	Velyka Buhaivka	T.O. Rudich, not published	—
7	Viktorivka	T.S. Konduktorova (Кондукторова 1979)	6
8	Vovchyk	T.I. Alekseyeva (Алексеева 1975)	2
9	Voytenki 1	T.O. Rudich, not published	—
10	Voloske	T.S. Konduktorova (Кондукторова 1979, с.166)	1
11	Havrylivka	T.S. Konduktorova (Кондукторова 1979, с.167)	26
12	Horodok Mykolaivka	A. Schliz (1913)	3
13	Horodok	P.M. Pokas, not published.	—
14	Didivshchyna	G.F. Debets, but materials are lost	?
15	Derev'yana	T.S. Konduktorova (Кондукторова 1979, с.166)	3
16	Zhuravka	T.S. Konduktorova (Кондукторова 1979, с. 168)	81
17	Independenza	M. Cristescu and R. Krüger and E.M. Gramatopol-Roşca (1969)	16
18	Kaborga	P.M. Pokas, not published	17
19	Kamianka-Anchokrak	P.M. Pokas (Магомедов 2004)	1
20	Kaniv	P.M. Pokas (Петраускас 1998)	15
21	Kantemyrivka	T.S. Konduktorova (Кондукторова 1979, с. 167)	1
22	Koblevo	T.S. Konduktorova (Кондукторова 1979, с. 167)	16
23	Kosanovo	G.P. Zinevich (Зиневич 1967, с. 134)	5
24	Krynychky	T.S. Konduktorova (Кондукторова 1979, с. 167)	2
25	Kurnyky	P.M. Pokas (Магомедов 1999)	9
26	Lehedzyne	T.O. Rudich, not published	—
27	Leţcani	S. Antoniu and M. Onofrei (1975)	31
28	Lokhvytsia	T.S. Konduktorova (Кондукторова 1979, с. 167)	1
29	Malynivtsi	Ye.I. Danilova (Пачкова, Яковенко 1983)	4
30	Maslovo	G.F. Debets (Дебец 1948, с. 378—379, прил. 24)	15
31	Mihălăşeni	O. Şovan (2005)	495
32	Mălăeşti	M.S. Velikanova (Великанова 1975, с. 226)	12
33	Nahirne II	T.O. Rudich, not published.	41
34	Nestoita	K.V. Zin'kovskiy (Козлов 1989, с. 88)	1
35	Odaia	T.V. Tomashevich (Никитина 1996)	26
36	Oselivka	M.S. Velikanova and Ye.I. Danilova (Никитина 1988; 1995, с. 119)	23
37	Petrykivtsi	P.M. Pokas, not published.	—
38	Pereyaslav-Khmelnytskyi	T.S. Konduktorova (Кондукторова 1979, с. 166)	1
39	Ranzheve	T.S. Konduktorova (Кондукторова 1979, с. 167)	9
40	Romankivtsi	Ye.I. Danilova (Никитина 1996)	33
41	Romashky	T.S. Konduktorova (Кондукторова 1979, с. 166)	2
42	Ryzhivka	T.I. Alekseyeva (Алексеева 1975)	11
43	Sad	P.M. Pokas (Некрасова 1985)	10
44	Sosnova	P.M. Pokas, not published (Гудим-Левкович, Покас 1990, с. 83)	7
45	Teleshivka	T.S. Konduktorova (Кондукторова 1979, с. 166)	1
46	Uspinka	P.M. Pokas (Некрасова 2006)	10
47	Furmanivka	T.S. Konduktorova (Сымонович 1988)	18
48	Kholmske	S.P. Segeda and V.D. Dyachenko (Гудкова, Фокеев 1984)	28
49	Chervone	T.O. Rudich, not published	—
50	Cherkassy	T.O. Rudich (Рудич 1995; 2003)	9
51	Cherneliv-Ruskyi	T.O. Rudich (Рудич 2004; 2004a)	—
52	Cherniakhiv	G.F. Debets, but materials are lost (Кондукторова 1979, с. 166)	26
53	Chystyliv	T.S. Konduktorova (Кондукторова 1979, с. 167)	3
54	Chubivka	P.M. Pokas (Гребенников, Гребенников, Магомедов 1982)	2
55	Erbiceni	O. Nekrasov and M. Critescu (Necrasov, Cristescu 1961)	1
	Total		1113

Table 2. **Comparative analysis of male and female burials of the Chernyakhiv culture**

Feature	Number of burials	One fibula	Two fibulae	Three fibulae	One buckle	Two buckles	Footwear buckles	Beads	One bead	Finger-ring	Temple pendant	Bracelet	Earrings	Amulet pendants	Horn comb
Indicator															
N. of the feature															
		I.1	I.2	I.3	I.4	I.5	I.6	II.1	II.2	II.3	II.4	II.5	II.6	III	IV.1
Quantity															
Male	134	34	10		56	15	3	18	10	5	2	2	2	9	48
Female	200	56	76	4	43	3	3	111	14	1	6	5	3	38	73
Frequency of features															
Male	100	25	7.4		41	11	2.2	13.4	7.4	3.7	1.5	1.5	1.5	6.7	35.8
Female	100	28	38	2	22	1.5	1.5	55.5	7	0.5	3	2.5	1.5	19	36.5
Distribution rate															
	100	26.5	22.7	1	31.5	6.3	1.9	34.5	7.2	2.1	2.3	2	1.5	12.9	36.2
Features trends															
Male		0.9	0.3		1.3	1.8	1.2	0.4	1.1	1.8	0.7	0.8	1	0.5	1
Female		1.1	1.7	2	0.7	0.2	0.8	1.6	0.9	0.2	1.3	1.2	1	1.5	1

imum number of amulets is found in the burials of young women, the minimum number thereof in mature women's graves, while the middle number in elderly women's graves. Temple pendants were worn by young and adult women only, finger-rings – only by adult women. Leather belts with buckles were more popular in the clothes of mature women; adult graves contained a minimal number of them; their quantity in young and elderly burials is equal.

Male and female types of amulet pendants

Pendants accompanied nine (8 %) male burials. There were metal artefacts[8] (flat rectangular pieces and those made of coins), containers (bucket-shaped, basket-shaped and triangular), bells, as well as pendants made of *Cypraea* shells.

38 (21 %) female graves contained pendants. There are: glass claw-shaped (fang-shaped) pendants, artefacts of alloy of iron and non-ferrous metals (bucket-, basket- and rosette-shaped, as well as triangular pieces), those of *Cypraea* and *Bolinus brandaris* shells, antler pyramidal and animal teeth artefacts. The latter group of ornaments accompanies more than 70 % of burials.

The presented data states that only flat rectangular pendants, coin pendants and bells are indicators of male dress accessories, while rosette-shaped indicate female clothes, and all others are of universal type. However, it is not completely true. The fact that flat rectangular ornaments and coin pendants were worn by men is confirmed by burials, the gender of which is rather securely identified by grave goods (Kosanovo 1961/14, Bârlad Valea Seacă 501 and 507). As it has already been discussed, mollusc shell, pyramidal horn, and animal tooth pendants are purely female ornaments (Бобровська 1999; Bobrovskaia 2001). Judging by their position in the grave – most often between the knees – they were hanged to belt on a cord of a certain length. Items found in male burials raise doubts about the correctness of anthropological determination of gender, in particular in the case of a male burial from Cherkassy 32 with a set of basket-shaped and triangular iron pendants. There is a grounded attribution of them as female ornament (Бобровська, Сиволап 2003); it is confirmed by the combination of these ornaments with shell pendants from female

[8] From now on the terminology is according to: Гопкало 2008.

Indicator																
Mirror	Bronze or silver knife	scissors	Pincers	Knife	Spindle whorl	Two spindle whorls or more	Needle	Needle case	Whetstone	Awl	Crook pin	Casket details	Keys and locks	Coins	Weapons	Gaming tokens
N. of the feature																
IV.2	V.1	V.2	V.3	VI.1	VI.2	VI.3	VI.4	VI.5	VI.6	VI.7	VI.8	VII.1	VII.2	VII.3	VIII	IX
Quantity																
1	3 2	1 4	1 5	41 27	6 55	12	7 7	8 15	1 2	12 5	1	1 2	2	1 1	9	1
Frequency of features																
0.5	2.2 1	0.8 2	0.8 2.5	30.6 13.5	4.5 27.5	6	5.2 3.5	5.9 7.5	0.8 1	9 2.5	0.5	0.8 1	1	0.7 0.5	6.7	0.8
Distribution rate																
0.3	1.6	1.4	1.65	22	16	3	4.4	6.7	0.9	5.8	0.3	0.9	0.5	0.6	3.4	0.4
Features trends																
2	1.4 0.6	0.5 1.6	0.5 1.5	1.4 0.6	0.3 1.7	2	1.2 0.8	0.9 1.1	0.9 1.1	1.6 0.4	2	0.9 1.1	2	1.2 0.8	2	2

burials of Mihălăşeni (bb. 2 and 297). Therefore, the mentioned types of ornaments can be considered as an important gender indicator.

Hence, men preferred flat rectangular metal ornaments and pendants made of coins, while women liked glass claw/fang-shaped pendants, metal basket-shaped, rosette-shaped and triangular artefacts, as well as those made of *Cypraea* and *Bolinus brandaris* shells, horn pyramidal and animal teeth pendants. Metal bucket-shaped pendants belonged to men and women. The finds of bells are still too small in number to allow one to determine their belonging to a specific gender.

Location of Dress Accessories Possessed by Different Genders

Discussion of the purpose of individual dress accessories is only possible when dealing with intact assemblages with accurately registered location of grave goods. There are 220 graves of the type, 80 male and 140 female.

Male dress accessories. Among 80 male burial assemblages, 32 (40 %) were accompanied by one belt buckle, 10 (13 %) by two buckles or one buckle and one belt ring, 28 (35 %) by one fibula, five (6 %) by two fibulae, and five (6 %) more by ornaments. Single buckle was found in 31 cases, mostly (28) on the belt (fig. 1, *1*), and only in three cases at a certain distance from the skeleton (fig. 1, *1c—e*). There are 15 cases with two buckles in a burial. They were found either on pelvic bones (fig. 1, *2a, 2e, 2f, 3e, 3f, 4c, 4d, 7c*), or one near the skull or shoulder and another on the ribs or pelvic bones (fig. 1, *2b—d*). Perhaps, they had different purpose. Buckles from weapon graves probably belonged to sword-belt (fig. 1, *2b, 2e*). Most likely, the same was the purpose of belts with buckles found in other graves (fig. 1, *2a, 2d, 2f, 3e, 6*). However, this hypothesis could hardly be proven due to the prohibition of putting weapons into burials that traditionally existed in Chernyakhiv society. In some cases, buckles could fasten bags containing small objects to the belt (fig. 1, *2c, 3f, 4c, 4d, 7c*). However, at least in some of such cases there was a fibula nearby (fig. 1, *4c, 4d, 7c*), and as Mihălăşeni 2 burial convincingly demonstrates, fibula could be used to clasp a bag.

Sets of dress accessories with one clasp also have several variants of the location of fibula: 1) on right shoulder (fig. 1, *5*); 2) on left shoulder (fig. 1, *3a—e*); 3) on chest (fig. 1, *6*); 4) on lower ribs or on left pelvis (fig. 1, *4a—d*); 5) on right pelvis (fig. 1, *7*); 6) near elbow or left hand (fig. 1, *3f, 4e*). It is

Table 3. **Distribution varieties Б and В features in male and female graves of the Chernyakhiv culture**

No.	Features	Aggregate trend	
		♂	♀
Particular features (pure)			
VIII	Weapons	2.0	
IX	Gaming tokens	2.0	
I.3	Three fibulae		2.0
IV.2	Mirror		2.0
VI.3	Two spindle whorls or more		2.0
VI.8	One (or several) crook pins		2.0
VII.2	Keys and locks		2.0
Particular features (by trend)			
I.5	Two buckles	1.8	0.2
II.2	One (or several) rings	1.8	0.2
VI.7	Awl	1.6	0.4
V.1	Bronze or silver knife	1.4	0.6
VI.1	Knife	1.4	0.6
I.4	Buckle	1.3	0.7
VI.4	Needle	1.2	0.8
I.6	Footwear buckles	1.2	0.8
VII.3	Coins	1.2	0.8
I.2	Two fibulae	0.3	1.7
VI.2	Spindle whorl	0.4	1.7
II.1	Beads	0.4	1.6
V.2	Scissors	0.4	1.6
III	Amulet pendants	0.5	1.5
V.3	Pincers	0.5	1.5
II.4	One (or several) temple pendants	0.7	1.3
General features			
II.2	Bead	1.1	0.9
IV.1	Horn comb	1.0	1.0
II.6	Earrings	1.0	1.0
VI.6	Whetstone	0.9	1.1
I.1	Fibula	0.9	1.1
VII.1	Casket details	0.9	1.1
VI.5	Needle case	0.9	1.1
II.5	Bracelet	0.8	1.2

possible to explain the change of usual location of the fibula on shoulder on the basis of the examination of the set of objects situated near the clasp. In some cases, fibula could clasp a bag (Fig. 3, *4b—d, 7a, 7c*). In one instance, fibula located at a certain distance from the skeleton clasped a cloak put into the grave as an offering (Fig. 1, *4e*).

Five graves contained garments with two fibulae. Two fibulae were registered: 1) on both shoulders symmetrically (Fig. 3, *8a—c*); 2) on one shoulder (Fig. 1, *8d*). Beads were found: 1) on neck (Fig. 1, *3c, 5c, 9a*); 2) near scull (Fig. 1, *4a, 8d, 9b*); 3) close to feet (Fig. 1, *4a*), single beads were only on neck (Fig. 1, *5b*), and amulet pendants on neck (Fig. 1, *3d, 5c, 8c, 9c*). Finger-ring, temple pendant and bracelet were situated, respectively, on right hand finger[9] (Fig. 1, *8d*), on left shoulder (Fig. 1, *3d*) and on elbow (Fig. 1, *9d*).

Female dress accessories. Of 140 female assemblages, 76 (54 %) were accompanied by two fibulae, 43 (30 %) by one fibula, 16 (11 %) by ornaments, three (2 %) by buckles, and four (3 %) by three clasps each.

[9] It seems to have been a rule. The burial in barrow 1 of Kantemyrivka was identified as male by grave goods; there golden finger-ring was also placed onto right hand finger.

Number of burials	Models of clothing *													
	Without fibulae	With one fibula					With two fibulae				With ornament			
Over 10	1 (44)	4 (10)												
3—10	2 (9)	5 (8)	6 (5)	7 (6)			13 (3)	14 (3)			19 (5)	20 (4)		
1—2	3 (1)	8 (1)	9 (1)	10 (1)	11 (1)	12 (1)	15 (1)	16 (1)	17 (1)	18 (1)	21 (1)	22 (1)	23 (1)	24 (1)
	54 (47 %)	34 (30 %)					10 (9 %)				15 (13 %)			

* In the upper right corner the number of model is indicated, the number of burials is given below.
Legend: ⊥ fibula, ϴ buckle, necklace, • bead, ring, temporal ring, bracelet, earring, pendant-amulet.

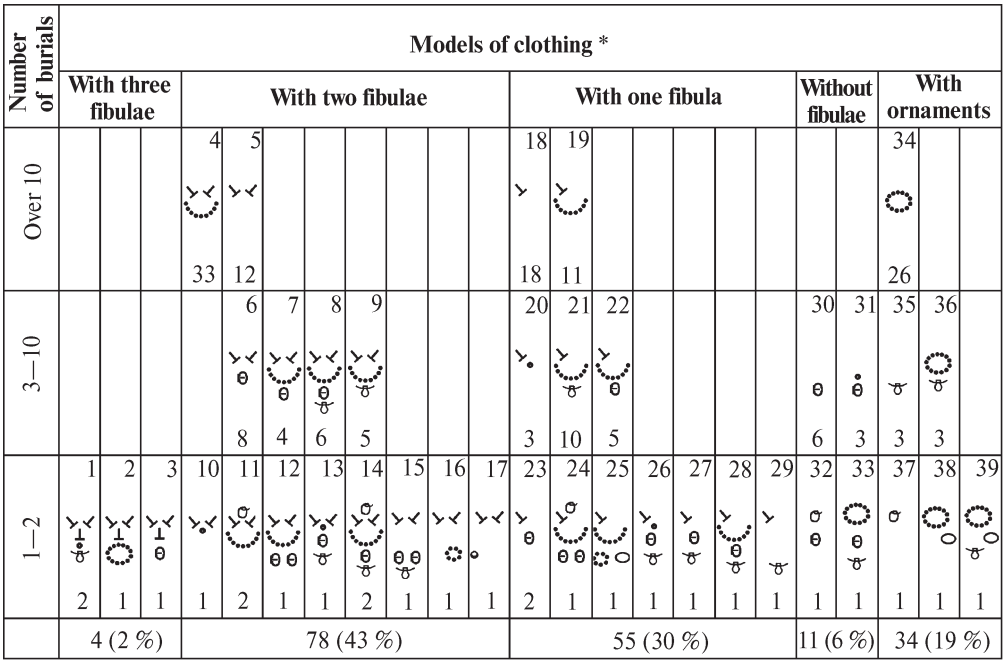
Plate 4. Distribution of male accessories patterns

Sets of dress accessories with three fibulae belonged only to women, in Independenza 13, Kosanovo 1961/22, Mihălăşeni 2, and Nahirne 55 (Fig. 2, *1*). The location of the pair of fibulae was traditional, i. e. on shoulders, but only in one burial all the fibulae were of the same type. The purpose of the third clasp was different in each case. In Kosanovo (Fig. 2, *1b*), the third fibula was situated at a certain distance from the left knee of the deceased woman and could be a part of a cloak offered in donation. In Mihălăşeni (Fig. 2, *1c*), it was found among pendants and small objects between the knees of the deceased and, probably, was used to clasp a bag with amulets. In Nahirne (Fig. 2, *1a*), fibula was recorded near the lower ribs. It matched the fibula found on the right shoulder, while the clasp from the left shoulder belonged to another type. Nearby there was a carnelian bead and an iron bucket-shaped pendant. Since no small everyday objects were found on the belt of the deceased, the idea about the bag's clasp is not correct. There is actually an impression that fibulae from the right shoulder and lower ribs were used to fasten the same garment, but one of them was displaced. Fibula from the left shoulder is probably related to the ornaments found nearby. One more assemblage from Independenza 13 (Fig. 2, *1d*) has two of three clasps uncovered in the filling of the grave, probably being the remains of offering of clothes.

Sets of dress accessories with two fibulae were restricted to these clasps as such (Fig. 2, *2a, 2l*) or combined with a single bead (Fig. 2, *2b*), bracelet of beads (Fig. 2, *2c*), beads (Fig. 2, *2e, 2k, 2m, 2n*), beads and one or few pendant (Fig. 2, *2f, 2o*), beads and finger-ring (Fig. 2, *2g*), footwear buckles (Fig. 2, *2h*), beads used to decorate footwear or hem (Fig. 2, *2i*), temple pendant (Fig. 2, *2j*), buckle (Fig. 2, *2p, 2q, 2r*), buckle and beads (Fig. 2, *2s*), buckle, beads and pendant(s) (Fig. 2, *2t, 2u, 2x, 2y*), buckle, beads and temple pendant (Fig. 2, *2v*), buckle, beads, pendant and temple pendant (Fig. 2, *2w*), or beads and two buckles (Fig. 2, *2z*).

There were the following locations of fibulae: 1) symmetrically on shoulders; 2) on chest, abdomen or one on shoulder and another on abdomen (Fig. 2, *2 k, 2r, 2o*); 3) both on the same shoulder, on left (of different types in Mihălăşeni 263) or right (of the same type in Zhuravka 11[10], Mihălăşeni 167) (Fig. 2, *2n, 2q*); 4) one on shoul-

[10] Zhuravka cemetery was studied by Symonovych; it is still not published. Although excavation reports contain some information, it is not always sufficient to be confident about the location of this or that object in the burial. For instance, grave 11 is said to have one fibula on the left clavicle, another under the scull near the first one, and an iron article fragment, probably of a buckle, on the waist (Сымонович 1959a).



* In the upper right corner the number of model is indicated, the number of burials is given below.
Legend: ⊥ fibula, ϴ buckle, necklace, • bead, ∘ ring, ♂ temporal ring, ○ bracelet, earring, pendant-amulet.

Plate 5. Distribution of female accessories patterns

der, another between knees: Mihălăşeni 58, 305 (Fig. 2, *2l, 2m*).

Assemblages with one fibula on the chest and another on the abdomen, both on the abdomen or one on a shoulder and another on the abdomen seem to reflect the cases when fibulae were displaced during the funeral or due to post-mortem processes. This is probably the explanation of the cases when two fibulae were found on the same shoulder, all the more so because in one of the complexes they are of the same type. Cases when one fibula was found on shoulder and another between knees are disputable. In one instance (Mihălăşeni 58), it is difficult to define the fibula situated between knees, while in the other case the fibulae found along the body are of the same type, indirectly suggesting their usual purpose. However, a comb and a spindle whorl uncovered close to each other could argue that fibula clasped a bag, like in burial 2 of Mihălăşeni cemetery.

Finally, in some cases fibulae were uncovered from the filling of the burial pit, above the skeleton, such as in Boromlya 4 or Independenza 13 (Fig. 2, *1d, 2a, 21*), and this could be an evidence of offering of clothes.

Sets of dress accessories with one fibula consisted of such clasp only (Fig. 2, *3a, 3g, 3h, 4a, 5a*) that could also be supplemented by other details: beads (Fig. 2, *3d, 4b, 4g*), beads and pendant(s) (Fig. 2, *3e, 3f, 4c, 4d, 4i*), pendant (Fig. 2, *3b*) or bead (Fig. 2, *5b*), beads and footwear buckle (Fig. 2, *4e*), beads and set of pendants and deer antler bracelet (Fig. 2, *4f*), beads and ornaments of sleeves or arms (Fig. 2, *4h*), buckle (Fig. 2, *4j, 4k*), buckle and beads (Fig. 2, *4l, 5c*), buckle and pendant (Fig. 2, *3f*), buckle, pendant and bead (Fig. 2, *3j*), two buckles and beads (Fig. 2, *3k*). There were several variants of the position of the clasp: 1) on right shoulder (Fig. 2, *3a—f, 3i—k*); 2) on left shoulder (Fig. 2, *4a—f, 4j, 4l*); 3) below neck (Fig. 2, *5a—c*); 4) on chest (Fig. 2, *4h*); 5) on waist (Fig. 2, *3g, 4g*); 6) on pelvis (Fig. 2, *4i*); 7) near thigh (Fig. 2, *3h*); 8) a bit far from the skeleton (Fig. 2, *4k*). Atypical location of clasp could probably indicate that its original location changed during the funeral or later. Rarely, fibula was probably a clasp of a bag with spindle or spindle and pincers, like in Mihălăşeni 202 and 405 (Fig. 2, *3g, 4g*).

One third of female burials contained buckles. Accessories with one or two fibulae were supplemented by a belt. In a few cases, there are two buckles. Variants of their location: 2) both on waist (Fig. 2, *6b*); 2) one on waist, another on shoulder (Fig. 2, *3k*); 2) a bit far from skeleton (Fig. 2, *2y, 2z*). It is also possible that one of the buckles clasped a belt bag containing objects of everyday use: awls, needle case, and comb (Maslovo 81, Ranzheve 2).

Beads in female burials were: 1) on neck (Fig. 2, *1b, 2 e—k, m—o, s—a1, 3d—f, 3k, 4b—e, 4g—i, 4l,*

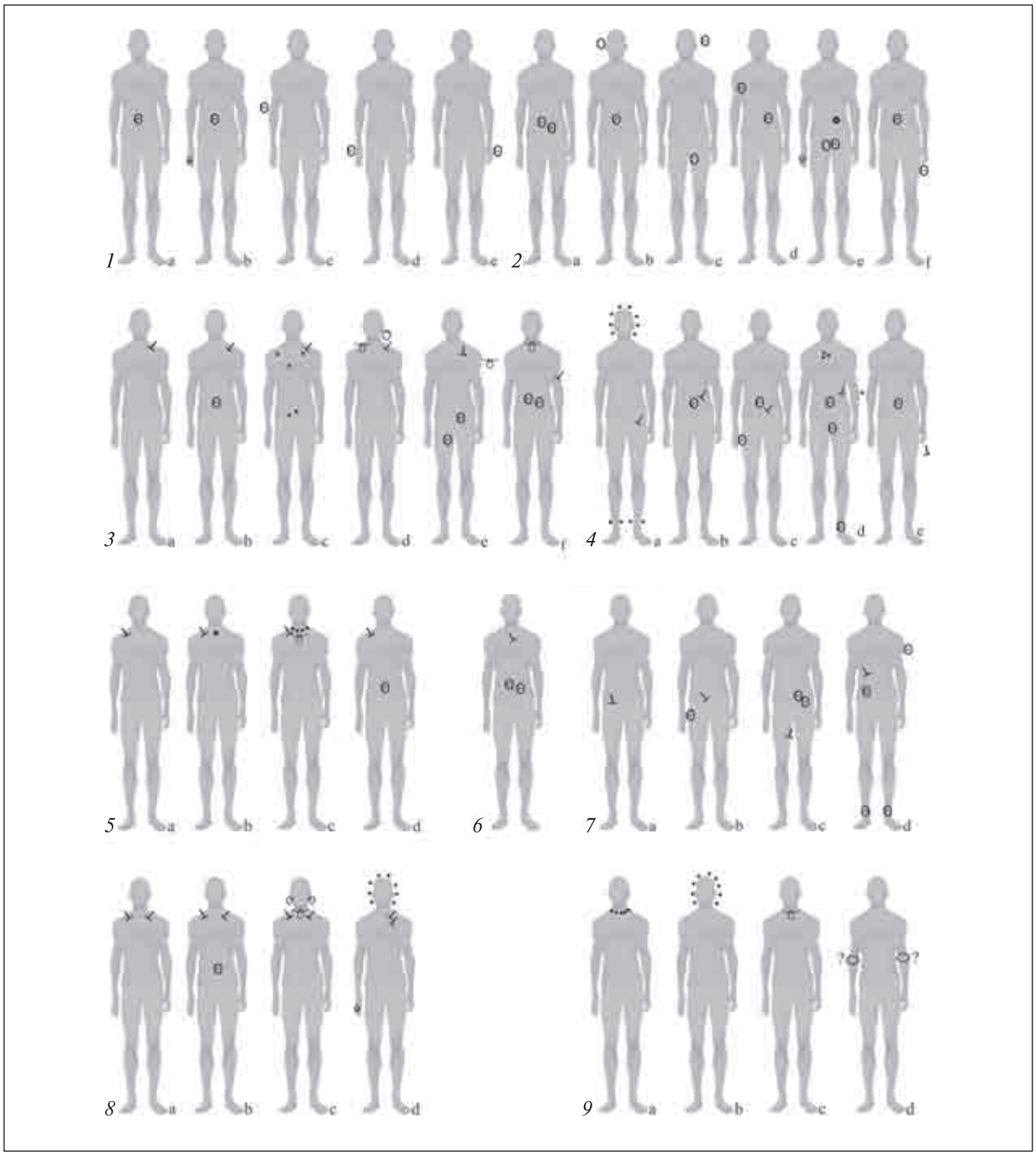


Fig. 1. Chernyakhiv male dress accessories: *1a* — Budeşti 11, 243, Havrylivka 18, 26, Zhuravka 31, 105, 119, Kaniv 17, Leşcani 19, Mihălăşeni 31, 86, 165, 247, 250, 254, 261, 316, 433, 448, 468, 492, 508, Nahirne 43, 59, Furmanivka 2, Kholmske 25, Chernyakhiv 269, Erbiceni; *1b* — Mihălăşeni 65; *1c* — Mihălăşeni 491; *1d* — Mihălăşeni 505; *1e* — Mihălăşeni 176; *2a* — Mihălăşeni 351, 414, 510, Nahirne 40, 62; *2b* — Leşcani 25; *2c* — Kaborga 23; *2d* — Mălăesti 35; *2e* — Mihălăşeni 169; *2f* — Uspenka 1308; *3a* — Maslovo 74, Mihălăşeni 42, 439; *3b* — Nahirne 36; *3c* — Budeşti 267, Mălăesti 23; *3d* — Budeşti 106; *3e* — Mihălăşeni 450; *3f* — Kosanovo 1961/21; *4a* — Budeşti 96; *4b* — Mihălăşeni 175, Furmanivka 8; *4c* — Nahirne 75; *4d* — Nahirne 64; *4e* — Mihălăşeni 376; *5a* — Boromlya 22, 46, Mihălăşeni 92; *5b* — Kosanovo 1961/ 18; *5c* — Boromlya 33, Mălăesti 7; *5d* — Mihălăşeni 375; *6* — Odaia 7; *7a* — Mihălăşeni 231, 380; *7b* — Havrylivka 33; *7c* — Nahirne 80; *7d* — Havrylivka 5; *8a* — Boromlya 11; *8b* — Ranzheve 14, Uspenka 1215; *8c* — Cherkassy 32; *8d* — Kholmske 50; *9a* — Kurnyky 5 i 6; *9b* — Kurnyky 8; *9c* — Leşcani 21; *9d* — Krynychky 1957—1958/5

5c, 6c, 7a, b); 2) near scull (Fig. 2, *2j, 2w, 7f*); 3) near elbow (Fig. 2, 2d, 4h) or hand (Fig. 2, 2c, 7d); 4) on waist (Fig. 2, 4e); 5) near legs (Fig. 2, 2i) and particularly amidst small objects and pendants between thighs (Fig. 2, 3c). Although few cases when beads were near scull could indicate that they ornamented headdresses, more likely they were displaced. As a rule, temple pendants laid near scull or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◀ *Fig. 2.* Chernyakhiv female dress accessories. *1a* — Nahirne 55; *1b* — Kosanovo 1961/22; *1c* — Mihălăşeni 2; *1d* — Independenza 13; *2a* — Boromlya 44, Havrylivka 68, Leşcani 14, Mihălăşeni 74, 137, 242, 334, 449, Nahirne 23, Furmanivka 6; *2b* — Mihălăşeni 427; *2c* — Mihălăşeni 178; *2d* — Independenza 19; *2e* — Boromlya 27, Budeşti 346, Viktorivka 6, Havrylivka 106, Horodok Mykolaivka L, Derev'yana 4 (skeleton 1), Kaborga 21, Maslovo 71, Mihălăşeni 17, 52, 132, 214, 239, 264, 333, 366, 369, 384, 447, 451, 514, Nahirne 34, 45, Odaia 25, Uspenka 137, Chubovka 2; *2f* — Horodok Mykolaivka N?, Mihălăşeni 206, 297, 358; *2g* — Mihălăşeni 198; *2h* — Leşcani 23, 44; *2i* — Sad 8; *2j* — Romankivtsi 107; *2k* — Chernyakhiv 264; *2l* — Mihălăşeni 58; *2m* — Mihălăşeni 305; *2n* — Mihălăşeni 263; *2o* — Chernyakhiv 256; *2p* — Boromlya 45, Mihălăşeni 3, 464, Nahirne 76, Furmanivka 3; *2q* — Zhuravka 11, Mihălăşeni 167; *2r* — Mihălăşeni 181; *2s* — Havrylivka 88, Maslovo 85, Mihălăşeni 114, 196, Nahirne 61; *2t* — Maslovo 84, Mihălăşeni 488, Sad 5; *2u* — Mihălăşeni 300; *2v* — Mihălăşeni 493; *2w* — Nahirne 87; *2x* — Zhuravka 43; *2y* — Mihălăşeni 469; *2z* — Nahirne 58; *2a1* — Boromlya 4; *3a* — Boromlya 15, Maslovo 68, Mihălăşeni 28, 71, 374, 421; *3b* — Mihălăşeni 353; *3c* — Mihălăşeni 319; *3d* — Mihălăşeni 216, 356, Nahirne 49; *3e* — Mihălăşeni 130; *3f* — Mihălăşeni 268; *3g* — Mihălăşeni 202, 455; *3h* — Zhuravka 88; *3i* — Mihălăşeni 352; *3j* — Mihălăşenii 138; *3k* — Maslovo 81; *4a* — Boromlya 19, Mihălăşeni 340, 405; *4b* — Leşcani 24, 36, Mihălăşeni 279, 313, 385, 504; *4c* — Nahirne 46; *4d* — Leşcani 10; *4e* — Mălăesti 11; *4f* — Mihălăşeni 241; *4g* — Mihălăşeni 501; *4h* — Leşcani 5; *4i* — Budeşti 249; *4j* — Mihălăşeni 21; *4k* — Havrylivka 47; *4l* — Mihălăşeni 409; *5a* — Mihălăşeni 53; *5b* — Nahirne 32; *5c* — Odaia 8; *6a* — Mihălăşeni 244; *6b* — Ranzheve 2; *6c* — Mihălăşeni 410; *7a* — Boromlya 10, Budeşti 253, 293, Viktorivka 9, Zhuravka 106, Kaniv 11, Kosanovo 1961/02, Mihălăşeni 110, 240, 400, Furmanivka 12; *7b* — Mihălăşeni 497; *7c* — Mihălăşeni 40; *7d* — Mihălăşeni 99; *7e* — Odaia 12; *7f* — Kholmske 34

on shoulder (Fig. 2, *2j, 2l, 2v, 7c*). One or more pendants were also found in a heap of small everyday objects: 1) on left shoulder (Fig. 2, *1a, 4c, 4i*); 2) on pelvis or femurs (Fig. 2, *2u, 2o, 3j, 4f*); 3) near left hand (Fig. 2, *4d*), in particular as a part of bracelet (Fig. 2, *7d*), or near right hand (Fig. 2, *3i*); 4) between knees (Fig. 2, *1c, 2f, 2t, 2w, 2y, 3b, 3c* (together with beads), *7b, 7c*); 5) near hand and between knees (Fig. 2, *2x*); 2) a bit far from skeleton (Fig. 2, *2d, 3f, 3e*). Single beads were uncovered: 1) on chest (Fig. 2, *5b*); 2) on pelvis (Fig. 2, *2b*); 3) near elbow (Fig. 2, *3j*); 4) on pelvis and near elbow (Fig. 2, *4f*). Finger-ring on right hand finger[11] (Fig. 2, *2g*).

There are few finds of hand and leg bracelets: metal artefact was put on right ankle of deceased woman in Independenza 19 (Fig. 2, *2d*) and deer antler bracelet was registered on left hand of buried woman in Leţcani 5 (Fig. 2, *4h*). An analogous ornament was found together with pendants between thighs in grave 241 of Mihălăşeni (Fig. 2, *4f*). The beads located near elbow (Fig. 2, *2d, 4h*) or hand (Fig. 2, *2c, 7d*) probably belonged to bracelets rather than to embroidery of clothing because similar ornaments were located asymmetrically.

One (Fig. 2, *4e*) or a pair of footwear buckles (Fig. 2, *2h*) were discovered on feet bones. Only in one case they were found near scull of the buried lady (Fig. 2, *6c*), probably in relation to footwear offering.

Some Ideas Regarding the Costume of the Chernyakhiv People

Let us draw some conclusions regarding the costume of the Chernyakhiv people. The location of its details relative to skeleton shows that fibulae fastened shoulder garments, belt with buckle held waist garments and girdled shoulder clothes, while special accessories like straps with buckles were used for footwear.

Male costume. More often men wore clothes that did not require clasps. Most probably, these were narrow trousers with a leather belt and tight shoulder garment. One third of men were buried in their outer clothes, i. e. cloak fastened on shoulder with a fibula; it is possible that the choice of clothing was determined by the season of the funeral. Some men were buried with two belts, one of which held weapons. However, according to the Chernyakhiv tradition, weapons were not put into graves. There often was sheathed knife attached to belt, as well as a bag with small everyday objects (needle cases with needle, awls, flints for flint-and-steel sets, etc.), were fastened to the belt. Ornaments (beads and temple pendants) were more often worn by adult men, and this trend diminishes with age. Finger-rings were popular in all age groups and were worn on right hand finger. Male ornaments are of metal, silver or bronze, flat rectangular, as well as coin pendants, and also fine bucket-shaped pendants.

It is difficult to explain unambiguously male clothing with two fibulae. Firstly, it could have been identical with the female one, especially taking into account Tacitus' evidence about the Germanics having the same male and female clothes, as well as even more detailed account of a priest in «female clothes» from the tribe of the Naganarvali (Tac., Germ., 43). The case with two fibulae on the same shoulder can be explained as the clothes with two brooches was moved, so normal location of clasps changed, or there was an offering of clothes, i. e. of another cloak. However, since fibulae of the same variant were used, the first assump-

[11] This is probably a reflection of a general trend. For instance, burial of Kosanove 4 1961/4, identified as female by grave goods (Petrauskas 2003, S. 309, Abb. 32, *8*), contained finger-ring also put on right hand finger.

tion seems to be more acceptable. Secondly, taking into account the heterogeneity of the Chernyakhiv population, there could be mistakes in gender attributions.

Female costume. Women wore predominantly clothes fastened on shoulder with two fibulae, like Roman *stola* or cloak, mantle or perhaps both put on together. Fibulae belonged to the same type in every second case. Rarely, such clothing was put into the grave as offerings. Besides, women wore outer clothes, i. e. cloak fastened by one clasp.

Belt was an important, but not frequent element of dress accessories. It probably was of leather and without buckles, since numerous burials with amulets hanged to the belt did not contain buckles. Leather belt with buckle was most frequently used in the clothes of mature women. If the clothes had two buckles, one of them could clasp a bag, judging by a heap of small everyday objects uncovered nearby.

Female dress accessories included beads. More often, they were worn by young and adult women, as well as temple pendants plaited into hair. Beads were used probably to embroider sleeves and to make bracelets. Hand bracelets were made of deer antler, while leg bracelets of bronze wire. Finger-rings were worn on right hand finger.

Bags with amulets and objects of everyday use (needle cases, awls, pincers and combs) were hanged to belt on a cord of a certain length and could be fastened with fibula.

Specific female ornaments include glass claw/fang-, basket- and rosette-shaped pendants, metal triangular items, pyramidal amulets of horn, as well as amulets of animal tooth and *Cypraea* or *Bolinus brandaris* shells. Similarly to men, women included metal bucket-shaped pendants into their necklaces.

Judging by the finds of buckles, footwear was all the same, like short boots Hence, the analysis of burials with their gender and age determined by physical anthropologists permits me to draw the following conclusions. Some features of grave goods could be indicators of male (weapons and gaming tokens) or female gender (three fibulae, mirror, two or more spindle whorls, one or more crook pins, keys and/or locks). Male graves more often contained buckles (one or two pieces used in belt, and others for footwear), finger-rings, awls, needles, knives and coins, though female usually include two fibulae, beads, amulet pendants, temple pendants, spindle whorls, scissors and pincers. The above list of features could be enlarged with specific types of pendants. Flat rectangular metal pendants and pendants made of coins are typical of men. Claw/fang-shaped pendants, metal basket-, rosette-shaped, and triangular artefacts, as well as those made of *Cypraea* and *Bolinus brandaris* shells, horn pyramidal pendants and those made of animal teeth are characteristic of women. These conclusions can be used to determine the gender of children and juveniles, which is impossible to find out by anthropological methods.

Moreover, I have discovered clear differences in the costume and accessories of different genders. Most popular male sets of dress accessories were those with one or two buckles, while female sets had two fibulae. Female costume was adorned by strings of beads, temple pendants were plaited into hair and amulets hanged to the belt. As has been stated above, different genders preferred different types of amulet pendants. Cloak fastened on a shoulder was equally popular among men and women. Both genders wore finger-rings on right hand finger. Footwear was identical as well. Small everyday objects (needle cases with needles, awls, pieces of flint for fire-starters, rarely scissors, pincers, so-called toilette knives of bronze, ear-cleaner, and in some cases probably combs) were put to bags to be an accessory of both male and female garments. They were fastened to belts, evidently, in different ways: directly by men or on a long cord down to knees by women. Besides, men had sheathed knife on the belt or behind it. Noteworthy is the phenomenon of offering clothes or footwear recorded in male and female burials.

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Ya.P. Gershkovych

KORKUT'S HERITAGE IN THE CUMAN MILIEU OF THE NORTH PONTIC REGION

The development of musical culture of Turkic-speaking people during the late middle ages, as reflected in the archaeological material, is being discussed.

Keywords: North Pontic Region, late middle ages, Cumans, Korkut, kobyz, gudok

Information about Korkut is contained in the ancient Turkic epos called *Kitabi Dedem Korkut* («The book of my grandfather Korkut»), alongside with other popular stories of the 10th—15th c. (Мелетинский 1985, с. 588). He is known as a foreteller (Basilov 1989, p. 154), who, in particular, foresaw the future mightiness of the Ottoman dynasty, but Korkut was, in the first place, a shaman and a healer, as well as the inventor of the kobyz, a musical instrument which was believed to be endowed with miraculous properties. According to the legend Korkut lived for more than 200 years – as long as his kobyz sounded (Надиров 2004). During all periods, his followers, the kobyz players (kobyzchi), also performed the functions of shamans (baksi), healers and foretellers, preceptors and educators. Instruments similar to kobyz, called 'guitars' by the Flemish traveler William of Rubruck, were spread in the milieu of Mongol-Tatars (Путешествия... 1957, с. 96). Well developed musical culture of nomadic Turkic-language peoples of the late middle ages might have been reflected not only in written historical sources, but also in archaeological ones.

In 1983—1985, a team of the Krasnoznamensk expedition of the Institute of Archaeology of the AS USSR, headed by the author of the present article, performed excavations in the area of construction of the irrigation system on the left bank plateau of the Inhulets River, near the village of Kirove, Beryslav district, Kherson oblast. In the center of kurgan 4, about 3.50 m high, at the depth of 2.60 m from the modern surface, an introduced Cuman burial was found. The outlines of the grave could not be determined; therefore it can be presumed that the burial was made in a niche. Above, near the entrance pit or in its filling, isolated human (?) and animal bones have been found. The niche contained a two-level construction, oriented along the line west-east, with the size of 2.42 × 0.80 m (Fig. 1). Above it there was a layer of reeds, in some places its thickness reaching 2.00 cm (Fig. 1, *1*).

The base of the construction was constituted by two pairs of long beams in its top and as much in its bottom. The upper beams, 2.20 m long, were subrectangular in section, their thickness being about 10.00 cm (Fig. 1, *2*). The beams were linked with each other by joint-pins and at least 5 crosswise planks (two pairs in the center and in its western part, and one pair in its eastern part). The width of the planks was 6.00—10.00 cm, their ends being slightly squared on their sides and narrowed. Six ordinary boards of the same width and rough logs with a diameter of 3.00—6.00 cm in section lay on the same level of the planks. Since there were air gaps between the boards, one can presume that it had been additionally covered with thick fabrics or carpets pressed by these logs. The pair of the bottom beams is longer — 2.42 m (Fig. 1, *3*), their ends are trimmed and in their eastern part incurved upwards by at least 10.00—15.00 cm (Fig. 1, *4*), on their sides there are 12 through openings, with at least 10.00—15.00 cm wide planks inserted into them (Fig. 1, *4*). Between them there were air gaps, like between the upper beams.

Lengthwise beams are also connected between themselves by vertical planks and narrow, 3.00—6.00 cm thick boards, with their ends inserted into the openings. Due to the pressure of soil and natural deformation, a part of vertical boards protruded beyond the beams. Two boards with through elongated vertical openings have been discovered along the northern wall, almost in the center and closer to the eastern end.

The western part between the levels was covered by three boards, up to 10.00 cm thick, set up at an angle of 40—45°. Each of the two extreme ones has three through round openings with a diameter of about 2.00 cm, with pieces of tarred cord preserved inside them. These planks served as the bedhead for the deceased, and it is possible that on it there was a pillow made from organic material, which did not survive. A massive wooden element sized 70.00 × 30.00 cm and about 15.00 cm thick (Fig. 1, *2*; 2, *5*) covers the space between the upper and the

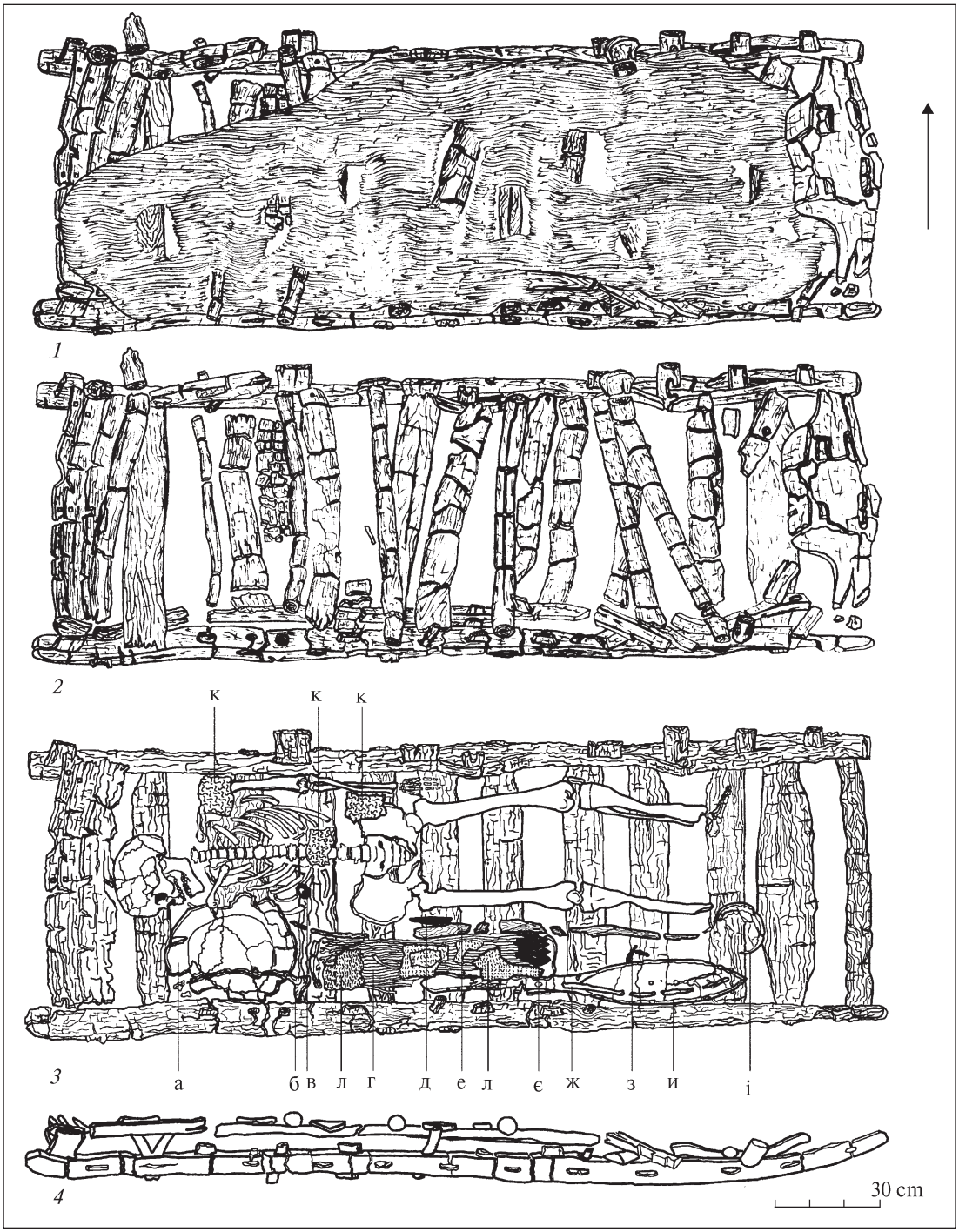

Fig. 1. Kirove. Burial 1 of kurgan 4: *1, 2* — upper level of the wooden structure; *3* — remains of the deceased; *4* — a side view of the southern part of the wooden structure. Legend: а — dish; б — article with a shaft (partially under the dish); в — buckle; г — quiver; д — knife; е — bow; є — arrowheads; ж — fiddlestick; з — iron articles; и — kobyz; і — jar; к — fabrics fragments; л — birch bark

lower beams from the east. From one side it has a sub-trapezoidal prominence, while from the other side it is flat. The prominence has through rectangular openings sized 6.00 × 4.00 cm and grooves on its butt end, in which planks are inserted, entering the openings, but without covering them completely. The outside parts of the planks served, evidently, for fastening some other element in the openings.

A skeleton of an adult human was placed close to the northern wall of the construction, on the crossbars of the lower level, stretched on the back, the head pointing west, the face turned to the south, the arms stretched along the body (Fig. 1, *3*). Nearly all accompanying goods were concentrated to the right of the skeleton, along the southern wall. Near his chest there was a buckle (1); on

his right shoulder – a dish (2), under which there was an article with a long shaft (3); a knife (4) and a fragment of a stick (5) lay near his pelvis; the place from the dish almost to the knee was occupied by a quiver containing arrowheads and remains of arrow shafts (6); between the quiver and the skeleton there lay a bow (7); near the wall, in front of his feet, there was a musical instrument with a fiddlestick inserted into it (8); to the left of the instrument there were fragments of an iron article; near his foot a jar was placed (9). Pieces of fabric survived on his left shoulder, close to his chest and near the radii of his left arm.

1. An iron subrectangular buckle with a broken tongue, sized 2.50 × 2.20 cm (Fig. 2, *3*).

2. A wooden, 19.00 cm long article consisting of two parts (Fig. 2, *4*). One part has a shape of a shaft narrowing downwards and imitating a twisted cord, with a thickening on its top, the diameter of which is 2.20 cm (later, four crosswise cracks emerged on it, due to drying out); the other part is semispherical, 4.00 cm high and with a diameter of 8.00 cm on its top, decorated from outside by a thin cordon with thick hatchings. The parts are connected by a small joint-pin with a diameter of 0.60 cm.

3. A tanged one-blade iron knife (Fig. 2, *1*). Its length is 11.00 cm, its tang is 3.00 cm long, the maximum width of its blade being 1.40 cm.

4. A fragment of a curved wooden stick with a prominence, its length being 2.00 cm, with a diameter of about 0.40 cm (Fig. 2, *2*). In ancient times the prominence might have had a leather socket or wrapping. It might have been a part of a whip.

5. A round dish made from one piece of wood sawn crosswise on a ring foot with a spherical depression (Fig. 3). The dish is 5.00 cm high, its diameter being 37.00 cm, while the height of the ring foot is 4.00 cm, its diameter being 5.00 cm. Parallel strokes survived on its surface, representing traces of turning. It was made from ash-tree[1]. During restoration, fine irregular hatchings have been discovered.

6. A quiver, sized 0.70 × 1.50 m, made from birch bark, covered with leather, the fragments of which are better preserved in its center and on its base. Near the arrow shafts, there was a slightly curved wooden clasp with a through opening, segment-like in section, sized 3.40 × 1.00 × 0.60 cm (Fig. 4, *11*), while beside the arrowheads there was a flat subsegment-like plank, sized 13.00 × 5.00 cm and 0.50 cm thick (Fig. 4, *12*).

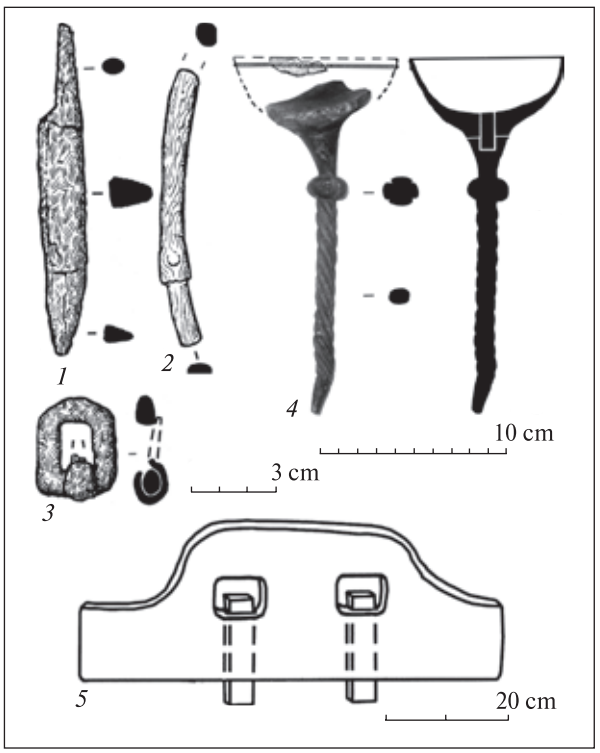

Fig. 2. Grave goods: *1* — knife; *2* — a fragment of a wooden stick; *3* — buckle; *4* — a wooden article; *5* — a reconstruction of an element with a prominence from the roofing of the burial

The quiver contained five iron arrows: a) a socketed triangular arrow with sting-like outgrowths, its socket being 2.60 cm long, the span of the outgrowths being 2.60 cm, the diameter of the socket being 0.50 cm (Fig. 4, *2*); b) a leaf-like tang arrow, 3.50 cm long, with its maximum length, in its base, being 1.10 cm (Fig. 4, *3*); c) a socketed rhombic one with concave lower and slightly convex upper striking sides, with the length of 3.00 cm and maximum width of 1.20 cm (Fig. 4, *1*); d) a transversal point (paddle-shaped or «srezen»), 2.00 cm of its length surviving and the width of its striking facet being 1.00 cm (Fig. 4, *4*); e) a very poorly preserved item, probably a rhombic one with an elongated lower part.

At least ten arrow shafts with the diameter of 0.30—0.50 cm have been found in the quiver, some of them being marked with strips of different colors: red, yellow, green, black (Fig. 4, *6, 7*), and above – with black lines in the form of a slanting net (Fig. 4, *5*). Three of them preserved their lugs (Fig. 4, *8—10*).

7. A wooden bow, 1.20 m long. It is possible that it was put there with its string removed. Its middle part, made from a 3.00 cm wide piece of wood, seg-

[1] The determination was performed with the help of microscopic technique on the basis of anatomic structure features in the Laboratory of restoration of monuments of applied arts made from organic materials of the State Hermitage Museum, Russia, by senior research associate of the chemical laboratory L.S. Havrylenko. The conservation of the dish was also performed in this Laboratory by restorers T.A. Baranova and Ye.A. Chekhova. Now it belongs to the collection of Kherson Local Lore Museum.

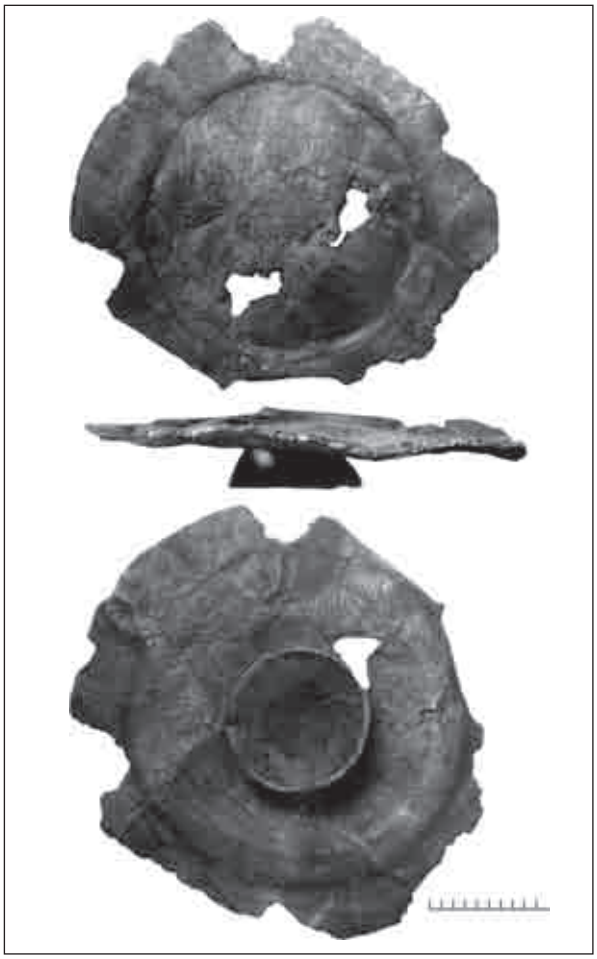

Fig. 3. Grave goods: wooden dish (after restoration)

ment-like in section, has grooved lateral plates and a flat bottom one, 3.30 cm wide, with rounded sides. The lack of any bone details should be mentioned.

8. A wooden bow musical instrument (Fig. 5, *1*; 6, *1*). H.L. Yevdokymov suggested that its most part was made from ash-tree (Євдокимов 1991, с. 281), and recently this hypothesis was confirmed by M.I. Kolosova in the Department of scientific and technological examination of State Hermitage[2]. Its length is 87.00 cm. It consists of a resonating cavity and a fingerboard with a figured head.

The resonator is boat-like, sized 47.00 × 11.00 cm (its width is maximal at about its middle part), the thickness of walls is 0.50 cm, its capacity being 1262 cm^3 (Fig. 5, *1г*). It is possible that it was carved by a chisel used for making spoons, like those used for the production of Ancient Rus gudoks (Поветкин 1982, с. 316), but its traces have been thoroughly removed. The outer depth of the body is 4.50 cm. The base has three resonating wind holes: a large opening in the bottom, with a diameter of 1.30 cm; a medium one at a distance of 4.20 from the previous, with a diameter of 0.50 cm; and in the top a small opening at a distance of 7.00 cm from the previous one, with a diameter of 0.30 cm. On lateral walls, between medium and small opening, there are rectangular cuts, 5.00 cm long and 0.30 cm deep.

From the internal side, in the bottom, there is a trapezoidal bridge, about 1.50 cm long (with one of its ends broken), its lateral sides sizing to 2.20 cm (Fig. 5, *2*; 6, *3*). Above there are three grooves for strings at a distance of 0.30 cm from each other, and in the base there are small tenons for fastening in the openings on walls on the sides of resonating cavity (the diameter of tenons corresponds to the thickness of walls).

The fingerboard is slightly narrowing upwards, with its reverse side (neck) rounded. Each side of the base bears two short incised lines, and above, at 2.00 cm one from another, there are three deep grooves: dividers of frets (Fig. 6, *4*). Immediately after the third fret, there is a 0.40 cm depression, where a flat plank was fastened in the through

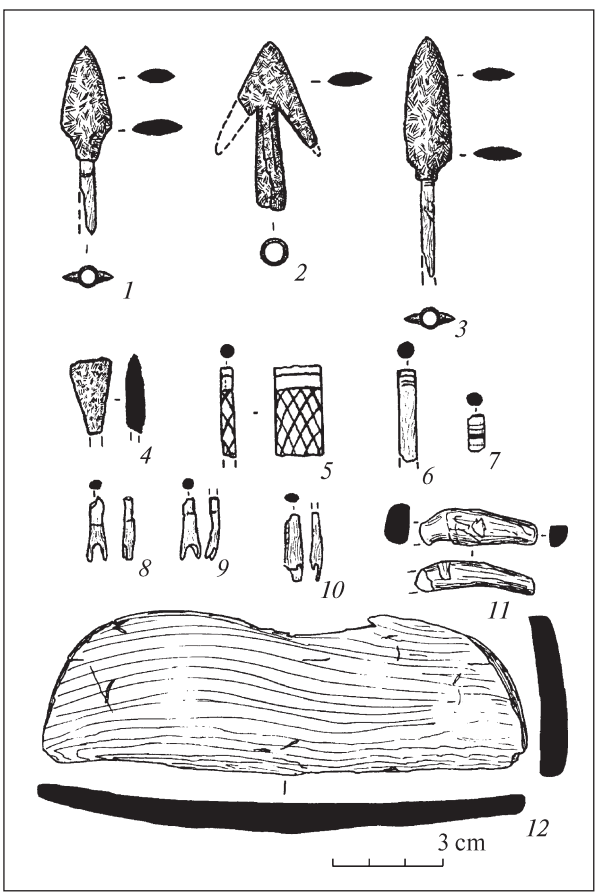

Fig. 4. Grave goods: *1—4* — arrowheads; *5—7* — ornamented arrow shafts; *8—10* — lugged shafts; *11* — quiver clasp; *12* — plank

[2] I express my sincere gratitude M.I. Kolosova and A.M. Mazurkevych, who arranged this examination.

round opening by a joint-pin, connecting the fingerboard with its head. This plank is rectangular in section, with a series of slanting hatchings under it, on a step, suggesting that it was also glued on. Unfortunately, the fingerboard is broken above the joint-pin, and other 6.00 cm of its structure remain unknown.

The head of the fingerboard, serpentine in shape, was fastened to the reverse side of the plank by means of a joint-pin (Fig. 6, *2*). It is slightly concave outside and has bulges on its ends on its reverse side (Fig. 5, *1г, 1в*). In these bulges, at a distance of 2.00 cm one from another, three openings are drilled, where pegs, round in section, are inserted for stretching strings.

The slightly curved fiddlestick is made from a whole piece of wood or from a branch; its length is 48.00 cm, i.e., it is almost equal to the length of the resonating cavity (Fig. 7, *4*). It is round in section, its maximum diameter, in its base, is about 0.70 cm, further on it narrows, but becomes slightly wider at the opposite end.

9. A wooden jar of a semispherical shape, possibly on the small hollow base. Its diameter in its upper part is about 10.00 cm.

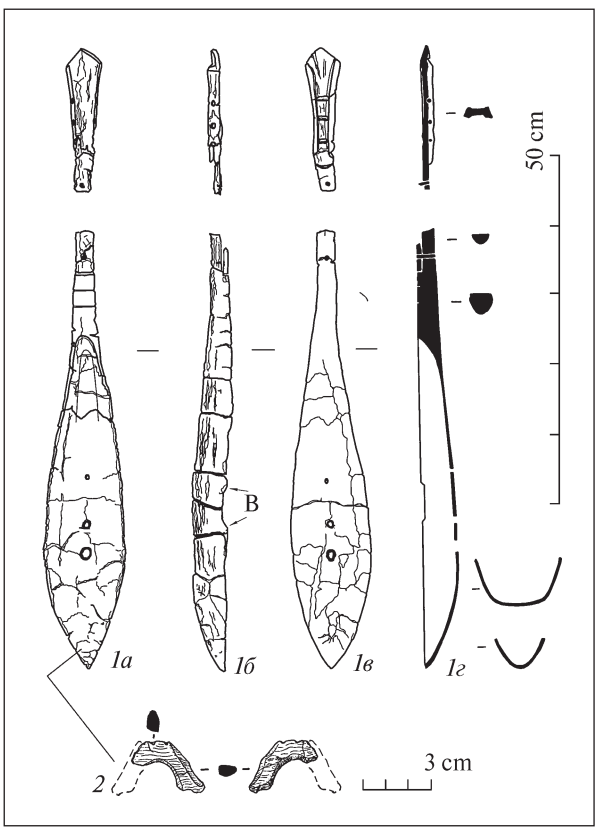

Fig. 5. Grave goods: *1* — kobyz; *2* — an enlarged representation of the bridge (the place where openings were situated are marked with arrows)

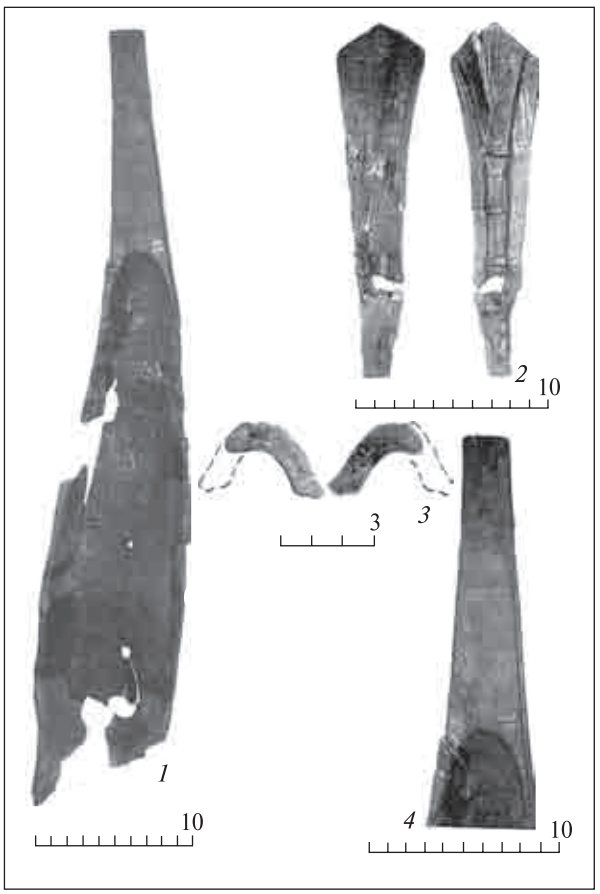

Fig. 6. Kobyz and its elements (photo)

Judging by the grave goods that include a bow, arrows and a quiver, it is quite probable (Федоров-Давыдов 1966, с. 116, табл. 6) that the deceased was a male. Unfortunately, it was not possible to collect material for the anthropological examination, due to poorly preserved bones that had crumbled when touched.

The originality of this burial consists in the diversity of wooden articles and in the surprisingly good state of their conservation, as for the kurgans of the Steppe zone. Very few similar burials are known in the North Pontic region (Рассамакин 2003, с. 216). In our case the good state of conservation is accounted for not only by the fact that the burial has not been robbed but also by the collapse of the niche shortly after the burial was made. It cut short the access of the air to tightly disposed organic articles, so that they got 'conservated'. An additional factor could have been represented by the fact that the burial was made in winter, when the activity of microorganisms was minimal. In any other conditions we would have obtained a rather ordinary set of finds: iron arrowheads, a knife, a buckle and the rot of an obscure wooden burial structure.

When this construction was being cleared, it became immediately obvious that it resembles very

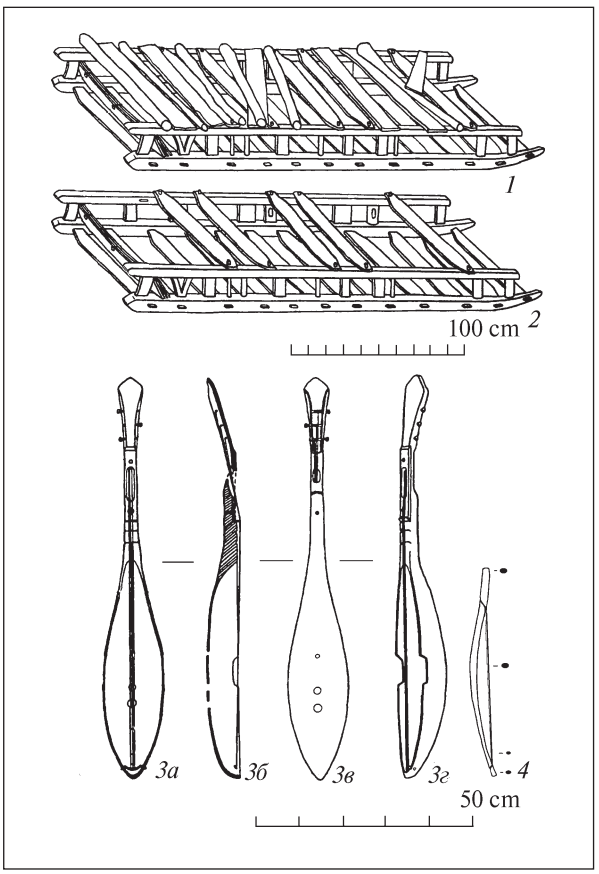

Fig. 7. Reconstruction: *1, 2* — sledge (grave); *3* — kobyz;

much a sledge. It is suggested by the ends of the lower level beams turned up like runners, going beyond the crosswise and lengthwise beams of the upper level, i. e., the bridges of the sledge (Fig. 7, 1, *2*). Initially the runners were, probably, more turned up. It is difficult to identify similar constructions, but they, probably, survived in the shape of the so-called 'latticed coffins' and represented not only bodies or other details of wheeled vehicles, but also those of wheelless ones. The general similarity of wooden sledges and wagons is quite evident (Шалобудов, Лесничий 2003, с. 194, рис. 1; 2, *1*; 5).

The sledge was, probably, specially reconstructed for the burial: otherwise it is difficult to explain, for instance, the presence of a bedhead, that is of a detail devoid of any functionality in a real sledge, in the position between two levels of lengthwise beams, seats and runners. Entirely non-functional appear to be also crosswise planks of the lower level that would impede movement both on the snow and on the earth. One more evidence of reconstruction might be an element with a prominence and openings (Fig. 2, *5*): possibly, it was a detail of a real sledge, representing, maybe, the back of a removable body of the sledge that had been put into the burial due to the belief that the deceased 'travelled' to the other world in the sledge, which, after his expected resurrection, would be used according to its direct purpose. In the layers of Novgorod the Great of the 10th—15th c. survived fragments of backs of seats, some of them representing exactly the backs of sledges (Колчин 1968, рис. 45; 1971, с. 25, рис. 1, *2*; табл. 13, *1*).

In the upper part of two vertical boards going beyond the lengthwise beams of the upper level, there are elongated through openings that, probably, served for fastening a removable sledge body. Such openings were needed to attach the thills to the poppets: the thills of Novgorod sledges had a shape of long perches, round in section (Колчин 1968, с. 53, табл. 43, *1—8*). It is known that the sledge was used not only in winter (Вовк 1995, с. 328), and the items described here have both 'winter' and 'summer' characteristics (the latter include small poppets and only slightly turned up runners: Васильев 2006, с. 118).

The role of sledges in the burial rite have been very much discussed since the end of the 19th c. (Анучин 1890), and we are not going to go into details of this subject now. It should be only mentioned that, for example, transportation of the deceased to the cemetery by sledge is considered to be an archaic peculiarity (Рибаков 1987, с. 112; Вовк 1995, с. 328—329), while the first finds of vehicles – carts or sledges – in the North Pontic region are dated to the Bronze Age. Wheeled vehicles are considered to derive from sledges (Избицер 1990, с. 33—34). Imprints of runners of a wooden sledge, on which the deceased was put, have been discovered in the Steppe Volga area in a burial belonging to the Yamna and Catacomb Cultures period (Юдин, Лопатин 1989, с. 131). A series of clay models of sledges from the end of the 4th millennium BC is present among the material of the Tomashivka group of the Trypillian culture in the Buh-Dnipro interfluvial area (Бурдо 2003).

Quiver, if the plank is considered to be its base (Fig. 4, *12*), was segment-like in section and did not differ by its size from other similar objects from the traditional set of Cuman military equipment (Медведев 1966, с. 19—20). Quivers of a more complex and original design are found in the burials of Cuman 'nobility' (Рассамакин 2003, с. 222, Fig. 4, *4*).

Iron arrowheads (Fig. 1, *1—4*) are of various types and, respectively, of various purposes (Медведев 1966, с. 53). The same number thereof was found in the quivers from the well-known Chingul kurgan, while burial 3 of kurgan 30 near the village of Vynohradne on the Molochna River contained three such items (Отрощенко, Рассамакін 1986, с. 26; Рассамакин 2003, с. 222). The presence of

shafts without heads is accounted for by the fact that it represented a kind of a reserve, since shafts were more often broken, while their production was of a seasonal character (Кищенко 2003, с. 132—133).

The bow, without doubt, is of a complex design. Unlike Novgorod bows that were longer and meant for unmounted archers (Медведєв 1966, с. 11), this item belonged to a mounted warrior.

Both *the dish* and *the jar* have very regular concentric outlines. This suggests that they were produced on a lathe (Колчин 1968, с. 31—32). The dish, by its shape and size, resembles most of all Novgorod articles of the second type that emerged since the 13th с. (Колчин 1968, рис. 24, 20; с. 35). Similar vessels, like also leather ones, were, probably, widely spread both among nomads and among sedentary rural and urban population. On the whole, vessels of various purposes, constituting a kind of a 'burial set', are represented in the burial.

The purpose of *the wooden article with a long shaft* (Fig. 2, *4*) is unknown. Since it was placed under the dish, it can be presumed that it is some kind of vessel as well (the shaft could have been its handle); thus, here we have an original vessel for beverages, alcohol or narcotic ones, judging by the small capacity of its upper container – in total only 100 cm^3. However, we cannot avoid noticing the coincidence of the appearance of some details with the description of a Mongolian headgear called 'bocca' provided by Plano Carpini: «*on their head they wear something round, made from twigs or bark, one cubit long, ending on the top with a tetragon, ... while on the top it has one long and fine rod, golden, silver or wooden ...*» (cit. after Федоров-Давыдов 1966, с. 36—37; here there is also information about a headgear called 'gu-gu' and reference to its representations on drawings in Mongolia etc.).

The iron buckle and the knife (Fig. 2, *1, 3*) are very much diffused categories of finds of the Cuman time. Knives are known also from representations on stone statues, both male and female (Плетнева 1974, с. 49, рис. 20, *17*). Worth noticing is the position of the buckle on the chest, which means that it is, most probably, associated with clothes or a sword-belt, and the position of the knife near the right thigh, i.e., probably, in the pocket of the belt or in a leather sheath appended to it.

The musical instrument is so far the only real artifact of this kind in the circle of Eastern European and, possibly, also Eurasian nomadic antiquities of the late middle ages. There is no doubt that it belongs to the type of kobyz (kemenche, in the use of Azerbaijanians). It seems that the instrument was put into the grave broken, in any case, some of its elements are missing, mostly small ones, but very important for a profound understanding of the structure of this unique musical instrument. H.L. Yevdokymov described it as a three-cord instrument, with seven frets on the fingerboard; the cords are passed to the reverse side through an opening in the base of the head of the fingerboard and fastened to the pegs; on the other hand, they seem to pass to the reverse side of the resonating cavity, where they are wound around a shaft-like prominence; in lateral openings of the resonating cavity a flat plank is shown, with a support for cords on it (Євдокимов 1991, рис. 2, *3*). This reconstruction does not agree with the information recorded in the field documentation, so we propose another variant (Fig. 7, *3*).

The openings do not bear traces of a transversal plank with a support (bridge), but it is obvious that they are situated in the place, where the cords went out on the level of the upper cut of the resonator. So, it is more probable that the openings were made in the places, where the bow was supposed to touch the cords (Fig. 7, *3б*). Due to these openings, it was possible, if necessary, to play alternately on outside, lateral cords.

In fact, the disposition of pegs permits to fasten the cords only on the internal side of the head, passing them here through a special opening. But where it was? There is no doubt that it was not in the head of the fingerboard, as shown on H.L Yevdokymov's drawing, since this small opening is narrow, amorphous, with a fresh (modern) break inside. One large through opening or three small ones – depending on the number of cords – could be situated only on the missing part of the fingerboard. To avoid contact between the cords while tuning the instrument, the head with pegs was, probably, installed with a small inclination to the plane of the fingerboard (Fig. 7, *3г*).

Within the fingerboard there should have been a threshold, absolutely necessary, considering the length of the cords. Most probably, its place was the space between the opening in the fingerboard and the superimposed plank. The upper threshold, if it existed, could have been installed inside the resonating cavity, since its strong fastening to the body with tenons or joint-pins, like on many modern string instruments, is not indispensable.

The presence of frets testifies, possibly, to the existence of some type of musical notation, i.e., writing the scores in the form of a certain sign code. The slots for frets could have contained tendon cords, and the total number of frets was not more than three or four, even if we consider as frets short notches along the edges of the fingerboard base and the space from the edge of the connecting

plank to the beginning of the opening. However, L.M. Cherkaskyi, a specialist in the field of Ukrainian folk string musical instruments, drew our attention to the lack of logics in such a constructional solution, which, in his opinion, would bring about a considerable narrowing of the sound[3]. But even a relatively simple tertian tonality and a small number of frets would be enough to play melodies within a small range. While playing, the hand of the performer could remain in the same position, and the pitch would be achieved by simple moving fingers within its range. The part of the fingerboard between the head and the lower threshold (neck) served for the additional support upon the body of the performer.

The twisted wooden shaft with a cup (Fig. 2, *4*) by no means can be a part of this instrument (Євдокимов 1991, рис. 3). These are functionally different objects. The strings were twisted and tied to the lateral planks of the bridge and then either proceeded into the channel of grooves in its upper part or were tied directly in the grooves: there remained traces of rubbing of strings in the shape of slightly impressed strips on wide planes (Fig. 6, *3*). When the instrument was ready for playing, the bridge, due to stretched strings, occupied an almost horizontal position and, being inserted by its prominences into the openings on the sides, was fastened quite securely.

During our consultations with specialists, a question was often arising regarding the presence of a continuous soundboard of the resonator. I do not believe that it existed. It is also suggested by both the complete lack of any remains thereof and by round upper edges of the resonator, to which it was impossible to attach such a large and massive element. L.M. Cherkaskyi hypothesized the presence of a leather membrane covering the body, since resonator openings would not have sense without it. I believe that this variant should not be ruled out, but the membrane could not be continuous: it would cover the openings in the sides of the resonator, besides, it would not permit to bring strings outside the bridge, slightly sunk inside the resonator. The known statue from the Simferopol Historical and Ethnographical Museum (Плетнева 1974, с. 105, табл. 65, *1156*; с. 33, рис. 10, *45*), as we believe, shows a similar instrument without the soundboard: if it were present, it would not be necessary to show a double outline on it (however, we should not forget that the representation on stone is schematic).

Wind holes are of various diameters, but the real effect produced by them can be established only when operating specimens are manufactured. It is also quite possible that the ancient artist, whose logics we are hardly able to understand, simply did not know what they do and made them in analogy with some other musical instrument of his time. Ancient Rus gudoks and guslis also had upper soundboards with wind holes.

I hope that specialists in the field of musical instruments will express their opinion regarding other possible variants of reconstruction, but some of the raised issues are resolved due to the ethnographic information. In the first half of the 19th c. A.I. Levshin remarked: «*kobyz is similar to the Ancient Rus hudok and has some similarities also with the violin, but it is devoid of upper soundboard and consists of a hollowed hemisphere with a handle in the top and a projection in the bottom for fastening a support. Strings tied on the kobyz are very thick and are twisted from horse's hair. The player plays it with a short fiddlestick, holding it between his knees (like cello). Tones produced by this instrument are extremely coarse and impure, but I have heard it reproducing the songs of various birds, and it sounded very similar to natural songs*» (Левшин 1996, с. 354).

Our find fully confirms V.I. Povetkin's words: «*Historical ways of development of constructional ideas of musical instruments cannot be separated from general historical processes. That is why even apparently insignificant musical instrument devoid of a legendary halo can have its 'counterpart' in the most unexpected place and time. And this fact should be explained and taken into consideration not only by the historians of music*» (Поветкин 1993, с. 145). I consider it quite natural that, being phenomena of the same epoch, very similar to the Cuman article found by us, their 'counterparts' are represented in the layers of the 11th—15th c. of Novgorod the Great and, partially, of Staraya Russa (Колчин 1968, с. 87, табл. 81, *4—6*; 1978, с. 182, Fig. 1—4; Поветкин 2001). Of interest are both constructional similarities and diversities between Novgorod gudoks and Cuman kobyzes.

The biggest similarity consists in its 'boat-like' shape, depth (4.00—5.00 cm) and thickness of the walls (0.50 cm) of the resonating cavity, as well as in the serpent-shaped head of fingerboards, the use of a short fiddlestick (*luchok, pohudalets*) and in the disposition of strings on the same plane. The differences are as follows: two times smaller size of Novgorod instruments (their total length being about 40.00 cm and resonator capacity being 550 cm^3); the lack of a long fingerboard with incised frets; the presence of an upper soundboard; a different, external, system of string fastening and a considerably greater (up to 1.80 cm in Novgorod

[3] I express my sincere gratitude L.M. Cherkaskyi for the consultation offered.

ones) distance between them. The presence of three strings of various diameters has been established in the Novgorod gudok of the 14th c.: a high pitch string (0.60 mm) and two strings of 0.80 mm (Поветкин 1982, c. 312), while kobyz, judging by the width of the groove on the upper plank of the bridge, has a slightly different system: all of them are of the same diameter, so different pitches were ensured only by the degree of stretching of the cords on the pegs. However, if we hypothesize a connection with the diameter of wind holes, all strings were of different thickness.

Central Asia is considered to be the homeland of bow musical instrument, whence, in the 11th c., they found their way to Europe, in particular to Rus (Колчин 1978, с. 180—181). Therefore, it is quite probable that they were wide-spread in the intermediary Steppe zone. It is confirmed by numerous evidences. For instance, the Hypatian Codex (Ipatiev Chronicle) tells us about the Cuman 'gudok player' Ör, who was sent to khan Otrok (Atrak) by khan Sirchan (Sargan). Thus, the find in the Cuman burial is quite natural, even if unexpected. It fits well into the evidence of a developed musical culture of nomadic Turkic-language people of the late middle ages and concerns one of early stage of development of such instruments.

In Western Europe there are bow musical instruments, similar to kobyz and gudok: rebec (from Arab *rebāb* or *rabāb*), vielle or fidula (from Latin *fides* – string). These 'brothers' of the kobyz are considered to be the 'ancestors' of the violin. Later the designation 'kobyz/kobuz' passed to the Ukrainian lute-like string pizzicato instrument, kobza. What a strange whirlpool of ideas, their material embodiments and names!

The described burial does not belong either to the category of 'poor' (it is introduced into the center of the kurgan at a considerable depth, and the remains of 'trellised burials' do not occur so frequently), or to the category of 'rich' (many burials are known containing sets of grave goods that are richer both numerically and qualitatively). In other words, the deceased person, evidently, enjoyed a special social status while having a relatively modest property standing (see: Цимиданов 2004, с. 108). It is possible that he acquired this status thanks to his musical abilities, predicting and curing skills, so much esteemed by his contemporaries. It was not Korkut himself, but one of those singers, shamans, healers, whose features were absorbed into his image. At the same time, the Cuman musician-kobyzchi, whose tomb we have discovered, could have been a contemporary of the 'gudok player' Ör or even – who knows? – he himself.

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ETHNO-CULTURAL RELATIONS OF THE STEPPE HABITANTS OF EASTERN EUROPE IN THE EARLY BRONZE AGE

The economy of the Early Bronze Age population in the Steppe zone of Eastern Europe was based on two main sectors: nomadic pastoralism and metallurgic production. Such forms of husbandry and cultural adaptation presuppose active ethno-cultural relations of the population, exchange, and intensive migration processes.

The initial period of the Bronze Age is represented by Yamna cultural and historic community. Comparison of radiocarbon dates of two main areas of this community, the western (territory of Ukraine) and the eastern (the Volga River and Ural regions), confirms the hypothesis about the eastern origin of Yamna culture. The western area of Yamna cultural and historic community covers the period from 3000 to 2300 BC, while the eastern one covers the period from 3500 to 2900 BC. The eastern origin and the further expansion to the west of the bearers of Yamna culture is also confirmed by the data on funeral customs and inventory. Sites of the oldest Bykiv-Berezhany stage of Yamna culture are situated in the Volga River and Ural regions; here also the ceramics of the early Repyne style prevails. Furthermore, chronological discreteness between sites of the Early Bronze Age and the Copper Age in the east of the Steppe area is established. In the west of the steppes of Eastern Europe these epochs are crossed in time. This chronological paradox should be further studied. To the south from Yamna cultural and historic community was the area of settlement of Maykop-Novosvobodnenska community of Trans-Caucasus region. Dates of these sites testify to their certain chronological priority over the Yamna culture ones. In the inventory of Yamna culture the influence of Maykop is found. It is especially vivid in metallurgy. There are also certain adoptions of ceramic prototypes.

Palaeoanthropological data shows diversity in the midst of bearers of Yamna culture which is revealed both on the regional level and within the regions. In the eastern area, in the regions of the south of the Volga River middle region, in the lower course of the Volga, and in the north-west of the Caspian region hypermorphic craniological mesocephalic and brachycranic complexes dominate. Mesocephalic complexes apparently originate from the preceding population of Volga-Don culture; brachycranic complexes find analogies in certain materials of Khvalynsk Copper Age culture, from Khlopkovskyi burial ground in particular. There are sculls of Yamna culture in the Steppe area of the Volga River and Ural regions which show a tendency to mesomorphism. Their bearers most likely take their genetic roots in the local populations of the Copper Age which represent the main anthropological element of Khvalynsk culture. Expansion of peculiar to this element mesomorphic or moderately hypermorphic type is evidently wider recorded some time later and to the west from the region, namely on the materials of Yamna culture in the Dnipro River region.

Some Eastern European craniological complexes are characterized by dolichocranic and wedgegnathic features of face component, and are close to the South European type. They are found in the early materials of the Bronze Age of the Southern Ural region, and also at the pre-Yamna culture sites of the north-west of the Black Sea region. To a certain extent, such complexes can be related to those characteristic for Maykop-Novosvobodnenska population of Trans-Caucasus. The weight of South European features increases in the same regions, though covering wider geographic zones, in the first half of the Middle Bronze Age. Apparently, ancient Trans-Caucases groups influenced not only genesis of culture of the Eastern European Steppes habitants, but also contributed to the genesis of races at certain stages, especially in the middle period of the Bronze Age.

I.O. Snytko

BURIALS UNDER THE BARROWS IN THE NECROPOLEI AT OLBIAN CHORA OF THE 6th AND THE 5th CENTURIES BC

The article is devoted to certain conclusions of research of necropolei of the rural outskirts of Olbia in the 6th and the 5th centuries BC. Special attention is paid to burials under the barrows near Olbia which were the object of heated discussions for a long time concerning their ethnic belonging. Based on the analysis of materials from excavations of eight sites the author comes to a conclusion that burials under the barrows in the necropolei of Olbian chora of the Archaic and the Early Classic periods, which were mistakenly referred by some scholars to the Scythian ones, actually were left not by the nomads, but by the settled Ancient Greek population of the Buh River lower region. This is evidenced, first of all, by the peculiarities of burial customs and the structure of funeral inventory found besides the chora in the proper Greek necropolei of Olbia, Berezan, and other Ancient centres.

Burials under the barrows found at Olbian chora do not conflict with the Greek funeral customs. According to the recent research, such burials were well known in Ancient world and were particularly used in Anatolia, Lydia, Eastern Greece, in the western and northern coasts of the Black Sea. Construction of barrows over certain tombs in Ancient rural necropolei of the Buh River lower region in the 6th and the the 5th centuries BC against a background of bulk of burials without barrows at sites of chora evidences the beginning of the process of social and proprietary differentiation among the population of Olbian polis and about the formation of prosperous families, which later composed the political and economic elite of the state.

T.O. Rudych

POPULATION OF THE DNIPRO RIVER RIGHT BANK MIDDLE REGION IN THE ANCIENT RUS PERIOD BASED ON ANTHROPOLOGICAL MATERIALS

Craniological material from the Dnipro River middle region is viewed against a wide background of Slavonic series. Based on the results of a trans-group analysis, the population of this territory is one of the most heterogenous within Slavonic world. Mesocephalic middle-faced forms with a tendency toward narrow-faced forms, dominating in the region and

representing mainly rural population, demonstrate most significant statistical and morphologic resemblance, first of all, with groups of Slovakia, part of the population of Poland, separate groups of Czechia and Bulgaria. This resemblance is demonstrated by both male and female population of lands of the Polyans. Groups from Monastyryok hill-fort and male habitants of Vytachiv are also close to the series from Slovakian and Czech territories. Lands of the Polyans should be considered as a place of the most eastern localization of mesocephalic middle-faced complex peculiar for a series of the Slavonic groups of Central Europe.

Today, it appears that natives of lands of the Drevlyans and the Volhynians had not played a significant role in forming the population of the Dnipro River right bank territories, although the Drevlyans were the nearest neighbours of the Polyans. Massive dolichocranic and mesocephalic relatively wide-faced morphological types typical for territories of the Drevlyans and the Volhynians are found in the Dnipro River region, mainly during the intra-group analysis. On the level of average magnitudes of features, presence of the Drevlyans is apparent in the group from Knyazha Hora. Dolichocrania, in conjunction with wide-faceness (in the Slavonic scale) characterises the group from Yahnyatyn. In any case, the presence of wide-faced complex, peculiar for the lands of the Drevlyans, is not significant on the lands of the Polyans. Relations with various Eastern Slavonic lands to the north and east from the lands of the Polyans are marked mainly by the materials of cities, especially of Kyiv. Natives of areas of the Dregovychi, Radymychi, Kryvychi of Smolensk, and the Siveryans settled in the cities by large groups. However, that reflects the situation of the period from the 11th c. to the 13th c. Unfortunately, the population of the time of foundation and the early periods of existence of Kyiv is not represented by anthropological materials.

The Dnipro River region always was under the strong influence of the nomad peoples. Southern borders of Kyiv land were settled by nomad tribes who served Kyiv princes. However, they did not influence significantly the anthropological structure of population in the Ancient Rus period. Among groups representing the nomads from the Sarmatians to the mediaeval nomads when taken into inter-group analysis together with the Slavonic series, only a series from Yuryevo deviates toward the circle of the nomad populations. This series appears to be close to the series of the Alans related with the Northern Caucasus. Presence of originates from other groups of nomads (including the Pechenegs and the Cumans) at Ancient Rus burial grounds is hardly seen, it is only seen at the level of work with individual data. Perhaps, this is because the Alans, more then representatives of other nomad groups, were susceptible to Christianity and were buried at Christian cemeteries.

The tendency to a moderate face profiling at nasomolar level in certain groups of the Dnipro River region was not always related with a nomad element. It has various roots including Finno-Ugric, and can be related with natives of Finno-Ugric or former Finno-Ugric territories.

O.Yu. Zhurukhina

MORPHOLOGIC AND TECHNOLOGICAL CHARACTERISTICS OF BEADS FROM KYIV PODIL

Presented are beads found on the territory of Kyiv Podil during the last 50 years of its research. They are of a large number and variety. First of all, it concerns the beads made of glass which amount for about 93 % of total number of the found beads. Systematization of beads has been made based on their morphologic and technological features. This category of decoration is divided into several groups according to its material: glass (mono-, polychromous beads, and beads with metal foil), gems (cornelian, rock crystal, amethyst, marble, hematite), organic materials (amber, heshire, bone) and ceramics, and also sections («round», «flatted», «ribbed», «polyhedral» etc.), and types (spherical, zonal, lemon-shaped etc.). Characteristic of types is presented according to several descriptive features: shape, size, colour, transparence, and decoration.

Technological overview of the finds includes a description of serial and individual method of manufacturing. Serial method consists of producing the glass tube which was divided into sections with instruments; as a result a separate bead was obtained which could be shaped in certain way. Individual method presupposed turning of glass mass around the base of instrument, i.e. each bead was shaped separately. Most of glass beads from Kyiv Podil were made in this way. Beads of stone and organic materials were produced by several consecutive activities: folding, polishing, and drilling.

Ya.P. Gershkovych

KORKUT'S HERITAGE IN THE CUMAN MILIEU OF THE NORTH PONTIC REGION

Information about Korkut is found in the ancient Turks' epos *Kitabi Dede Qorqud* (*The Book of Dede Korkut*) along with other folk legends of the 10th—15th c. He is known as a shaman and wizard, discoverer of kobyz/kobza, a musical instrument to which magic properties were arrogated. According to the legend, Korkut lived for more than 200 years, while his kobyz played. In all times his followers, kobyz players (kobyzchi) were also shamans, wizards and clairvoyants, preceptors and educators. Advanced musical culture of nomad Turkic-speaking nations of the Late Mediaeval period is reflected not only in written and historical, but also in archaeological sources.

More then 20 years ago in the north coast of the Black Sea in the mound near Kirovo village of Bilozerka Region of Kherson Oblast a burial of the Cumans was found. The buried, perhaps a man, was put on the wooden sleigh, numerous wooden items were put near him, including a three string musical instrument played with a bow. Apparently, the instrument was laid into the tomb broken. It consists of a resonating cavity with a finger-board with a sculptured head. There are three resonating wind holes of various sizes in the base of a trough, and transversal cuts for frets division on the finger-board. Today it is the only real artifact of this kind among the Eastern European and perhaps among the Eurasian antiquities

of the nomads of the Late Mediaeval period. Undoubtedly, it belongs to the kobyz type. Almost (but not fully) analogic instruments are known in the layers of the Great Novgorod and the Old Russa of the 14th c.

Middle Asia is considered to be the homeland of stringed musical instruments, from where they have got to Europe, including Rus. The more probable therefore is their dissemination in this period in the intermediate steppe zone, in the milieu of the Cumans. This is confirmed by numerous evidences: for example, it is mentioned in Ipatiy chronicle about the Cumanian «gudok player» Orh who was sent to khan Otrok (Atrak) by khan Syrchan (Sargan). Thus, this find in the Cumans' tomb though is unexpected, but after all is quite natural.

In Western Europe the stringed musical instruments rebec, fidola and vielle are like kobyz and gudok. These kobyz' «brothers» are considered to be «ancestors» of violin. The late name «kobyz/kobuz» proceeded to kobza, Ukrainian lute-like stringed instrument played by plucking.

According to archaeological features, the Cumans' tomb of the barrow in Kirovo falls into the category neither of «poor», nor of «rich» burials. In other words, the buried clearly had a special social status, while relatively not high material rank. Such status he obtained apparently right owing to his musical talent which was so esteemed by his contemporaries. It was not Korkut himself, but one of those singers, shamans, and wizards, streaks of whom his image absorbed. Moreover, the discovered Cumanian musician-kobyzchi might have been «gudok player» Orh or his contemporary.

D.V. Stupak

EXPLORATIONS OF EPI-GRAVETTIAN SITES IN THE SOUTH OF THE MIDDLE DESNA AREA

The Desna River region is one of the richest in Palaeolithic monuments in Eastern Europe. Most of Palaeolithic sites are situated to the north from Mizyn site. On the territory to the south only isolated finds were known for a long time.

In 1961, on the southern outskirts of the Desna River middle region Yu.H. Kolosov discovered a series of localities of which the most interesting was Buzhanka 1 site. Unfortunately, the site is almost completely destroyed by the Desna River. Considering that near Buzhanka 1 bones of mammoth are numerous, apparently it was «mammoths' cemetery» and perhaps it was repeatedly visited by ancient populations possibly of various cultures.

Works at the south of the Desna River middle region have activated recently. In 2003, a new, at least two-layered, Buzhanka 2 site was discovered. The most fully studied upper layer belongs to Mezhyrich type of industry according to peculiarities of a set of tools. Thus, Buzhanka 2 (the upper layer) is the most northern of the sites of this circle.

In 2010, 12 km to the south from Buzhanka sites the Obolonnya site was discovered. A carved tusk is the most precious piece of the materials obtained. By the peculiarities of the depictions it is the closest analogy to the one from Kyrylivka site. Out of all known carved tusks in the Dnipro River basin and the adjacent territories for which ornamentation by inlays or compositions of geometrical ornaments are typical, the tusks from Kyrylivka and Obolonnya are distinguished by actual images that are depicted on them. They also concur in that they have the depiction (or depictions) of reptiles and lines with inlays carved across them. On the contrary, the find from Obolonnya has in common with Mizyn artistic tradition the depiction of a woman which resembles full face of statuettes from Mizyn, and the ornamentation of a figure by stripes.

Stone set is represented by 12 flint finds and four quarzite ones. Two straight busked flint burins represent tools. A find of a proximilar part of a big blade of Kaniv flint is of a special interest. Such raw material is peculiar for the sites of Mezhyrich type of the Dnipro River middle region. A find of a product made of such flint at the site allows the author to presume that habitants of Obolonnya were in contacts with the residents of the sites of the Dnipro River middle region or came from that area. Judging from the nature of images and peculiarities of the stone finds, the site should be referred to epi-Gravettian period.

Consequently, research of sites of the south of the Desna River middle region, which are situated between the main localities of monuments of Desnyanska and Serednyodniprovska cultures, is very important and perspective for the study of inter-cultural relations of epi-Gravettian population of the Dnipro River basin.

V.V. Kotenko

GREY-WARE POTTERY FROM THE MASLYNY SETTLEMENT

Grey polished ceramics from Maslyny settlement in the north-western Crimea is considered. During the period from 1972 to 1986 a group from the Kharkiv University as a part of the Northern Crimean Expedition of the IA AS USSR under the leadership of V.A. Latysheva conducted the research here. The settlement was referred to chora of Tauric Chersonesos, its agricultural nature was determined, and also a mass ceramic material coming mostly from the western fortified part of the settlement was obtained.

Grey polished ceramics, as well as black-glazed, is not a mass ceramic material at the settlement. It belongs to simple pottery and is presented by open and closed forms, among which fish-plates, dishes, and jugs are found. There is a gray polished cantharos in the set. Grey polished ceramics from settlements of Chersonesan chora originates from the manufacture centres of the north coast of the Black Sea. In the paper, an attempt is made to determine these centres coming from contemporary data. Thus, production of grey polished fish-plates with a peculiar ornaments consisting of two or three lines of various thickness should be referred with a strong possibility to Olbian manufacture. Arrival of this ceramics into Maslyny remains unclear: was it imported directly from Olbia or other centre, or received from Chersonesos.

Chronological frames of usage of grey polished ceramics at Maslyny do not overstep the limits of the period of life of the settlement: from the second half of the 4th c. to the middle of the 2nd c. BC. Taking into account that this type is not a mass pottery at the settlement and its forms imitate black glazed wares it is possible to conclude that grey polished pottery was ceremonial one for habitants of settlements at Chersonesan chora and could have belonged to its wealthy citizens.

O.Ye. Fialko

SCENES OF AMAZONOMACHY AND GRIFFINOMACHY IN ANCIENT GREEK TOREUTICS

Among a large variety of Ancient Greek works of art constituted, the works of toreutists form a relatively small series. Usually, these items are quite original and outstanding. Particular group is comprised by metal specimens with mythological and historic scenes on military themes in their ornamentation. Among the most favourite and popular personages the ancient craftsmen often preferred images of the Amazons.

Scenes of fight with the Amazons are presented in works of toreutics in two variants: griffinomachy and amazonomachy. The former is depicted on the well-known golden kalathos from Velyka Blyznytsya and on the overlay from Zhyrnyi barrow; the latter is depicted on the series of identical decorations of a horse bridle from Velyka Blyznytsya, on sheathes of swords from Chortomlyk, Chayan, and Vosmyi Pyatybratnyi barrows, on the silver pot from Rohozenskyi hoard, and on the ornamental plates and overlays of various purpose found in diverse sites. Items decorated with scenes of amazonomachy and griffinomachy undoubtedly were prestigious, though there are well known instances of secondary usage of relieves with scenes of amazonomachy (because of breakage or for other reasons).

The chronology and the territory of dissemination of works of art with scenes of griffinomachy and amazonomachy are somewhat different. Scenes of griffinomachy are more typical of artworks of the periphery of Ancient Greek world where the Amazons were perceived as priestesses of the Great Goddess and embodied the relations with the other world. Perhaps, these depictions illustrated some local versions of myths about the Amazons which have not preserved in the written sources. Scenes of amazonomachy were common and reflected artistic guidelines and preferences of both the Hellenes and the Romans, and the barbaric population.

V.S. Axyonov

BURIAL 472 AT NETAYLIVSKYI BURIAL GROUND OF SALTIVSKA CULTURE

Materials of burial 472 at Netaylivskyi burial ground of Saltivska culture are presented (Vovchansk Region of Kharkiv Oblast). Funeral inventory of the tomb is represented by silver elements of belt set (a buckle, 13 belt plates, and a belt ending) and by an imitation of golden Byzantine solidus of Leo III minted from 732 to 741. The inventory gives an idea of an initial development of material culture of Saltivska culture population inhabiting the basin of the Siverskyi Donets River. According to the composition of inventory the burial should be dated by the last quarter of the 8th c., apparently by the period from 770 to 790.

K.M. Myronenko, S.A. Horbanenko

«HOARD» OF AGRICULTURAL TOOLS FROM POLTAVA REGION

Represented is a «hoard» of agricultural tools from the outskirts of Staryi Kalkayiv village of Poltava Oblast (the Sula River) accidentally found in spring 2004. It contained a sickle and a damaged ard tip. A haft sickle is of typical form and proportions which ultimately make it close to tools for harvesting of a contemporary type. Sickles with such type of bonding are known since the beginning of the 1st millennium, but similar proportions are more typical since the last quarter of the millennium. According to the classification by Yu.A. Krasnov, the ard tip belongs to I B 2 type. It has an unclosed hub and insignificant asymmetry. Such tip (without a coulter) could be used in an ard with horizontally fixed ploughshare. Its analogies are numerous and known at wide territories since the last quarter of the 1st millennium. Both items are quite peculiar for the period since the 8th c. to the Kyiv Rus period. Taking into consideration a general tendency of settling the region and the form and proportions of an ard-tip (somewhat larger than in the period before Kyiv Rus), the «hoard» can be dated by the Ancient Rus period.

V.A. Romashko

TO THE ISSUE OF THE PURPOSE OF SO-CALLED «CATS»

From the upper stratigraphic horizon of the sanctuary 1 at Bohuslav settlement, comes a bone tool, traditionally called in the literature a four-tooth «cat», which is made of a talus bone of a bull. Analogies of the find from Bohuslav are known exclusively from the sites of Zrubna culture: from Lukyanivka settlement, from the tomb 1 in the barrow 1 at Novoorlivka burial ground, and possibly from the foundation pit 20 at Mozolivka settlement.

In the literature there are three quite hypothetic points of view on the purpose of these tools. They are considered as «cats»: instruments on the endings of lashings for hooking, elements of horses harness, and «rod»-heads, insignia of power. However, argumentation of these theses appears to be not sufficient. At least two presumptions are also possible according to which «cats» could be used for hanging baby cradles or as tools for making cords and ropes.

Uncertainty as to the purpose of tools under the study does not contradict the conclusion that being relatively few they were indispensable instruments used in households by tribes of the Late Bronze Age. It should be noted that sites where «cats» were found are localized on the territory from the Volga River region in the east to the Dnipro River region in the west. Before the find at Bohuslav all the known such items represented the early stages of Zrubna culture. Discovery of a «cat» in the complex of the upper stratigraphic horizon of sanctuary 1 (13th—11th centuries BC) allows the author to state that these tools were used till the end of the second period of Berezhnivsko-Maivska Zrubna culture and its transformation into Zrubna-Bilozerska culture, i.e. into post-Zrubna culture period.

D.P. Nedopako

TECHNOLOGY OF MANUFACTURE OF IRON PRODUCTION FROM BRATSLAV CASTLE

In the article are presented results of technological research of a set of ironmongery obtained during the excavations at the 16th c. Bratslav castle near Bratslav urban type settlement of Nemyriv Region in Vinnytsya Oblast. At the central part of the castle there was identified a fragment of a surface structure of a pillar construction which was coated with clay and had traces of fire. Within the borders of a structure there were found three large stones with smooth surface dug into the floor (apparently anvils) and two small furnaces.

A sword, a sabre, knives, nails, an arrowhead, a flint, etc. were put under metallographic study.

A sword and a sabre were manufactured by similar schemes: blades were welded onto the iron base. Due to heavy corrosion it was not possible to determine the material of welded-on elements; it can only be presumed that it was steel.

A flint was made of packaged work-piece with further cementation of a body and its tempering. Arrowheads were made of bloomery iron of a low quality; one of them is with traces of cold work hardening.

The most interesting is a find of 37 iron half-finished products of cylindrical form. Foliated structure is seen on the ends. On the etched longitudinal section of a work-piece a structure is seen which contains ferrite and ferrite-pearlite stripes. Content of carbon in pearlite fluctuates within a wide interval. Weigh of a work-piece is 350 g. Such products can be considered as commodity suitable for manufacture of diverse products.

I.V. Chernovol

HERITAGE OF FEDIR VOVK IN THE INSTITUTE OF ARCHAEOLOGY OF THE NAS OF UKRAINE

The article deals with the history of arrival to Ukraine of the book collection and archival materials, which are kept in the funds of the Institute of Archaeology of the NAS of Ukraine, of F.K. Vovk (Volkov), an outstanding scholar and a public figure. The process of foundation of the Khv.K. Vovk Museum of Anthropology and Ethnology at the VUAN (FUAS) as the first institution where scientific heritage of this scholar was kept is highlighted.

The author selected books from the private library of F. Vovk, scientifically and bibliographically processed them, conducted the historical and bibliological analysis, and studied bibliological sources. Reconstruction of a part of the book collection allows the author to divide distinctly the book heritage into the areas of professional activity of the scholar; it clearly proves the value and originality of this library in cultural and scientific heritage. Study of a private library allows the author to fathom the world of interests and ardours of the scholar, to draw attention to cultural forms and institutions where the development of scientific interests is being formed, and the process of scientific creation is underway.

In the personal archival fund the main groups of documents are identified: biographical, scientific, and creative; also there are preparatory materials for the scientific works, reviews, documents of public, official, and archaeological activity, correspondence, and so on. They are of a significant value for a source study and should be presented to the scientific circles. This will provide the access to the sources of information on history of development of archaeology, anthropology, and ethnology.

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N.B. Burdo

ANTHROPOMORPHIC FIGURINES FROM THE TRYPILLIAN SETTLEMENT OF MAYDANETSKE

A settlement of Tomashivka group of Trypillya CI near Maydanetske village of Talne Region in Cherkasy Oblast was studied by Trypillian Complex Expedition of the Institute of Archaeology of the NASU during 18 field seasons since 1971 till 1991. Among the materials obtained a special attention should be paid to the collection of anthropomorphous plastic figures consisting of more than 200 items. This is one of the most representative series of anthropomorphous sculpture of Trypillya-Cucuteni culture.

Anthropomorphic plastic figures come from various objects of the settlement: from cultural layer, from remains of cob structures, but most often they were found in pits situated within and outside the borders of dwelling and husbandry complexes. Figurines in pits often were found in groups. They are mostly fragmented. Sometimes it can be said that the figurines were intentionally broken in the upper and lower parts before they were put into pit.

Statuettes from Maydanetske are manifold by their loam, level of firing, size, morphological and stylistic peculiarities, and iconographic types. The plastic figures, by technological features, consist of two main groups. The figurines of the first technological group prevail; they are made of well-elutriated fine-structured clay mostly without visible admixtures. They belong to schematic images of predominantly small or medium size (5.0—12.0 cm high). Figurines of the second technological group are made of white or pinkish compact kaolinite clay without visible dashes or with admixture of fine-grained sand which is close to fabric of painted vessels. Firing is perfect, paste is compact and solid, and various details made with paint are noted. This group is represented mostly by large figures (up to 30.0 cm high), and also by items with realistic traits. Solitary figurines make the exception. Among them a special attention attracts a foot with a modeled footstep, which is close by the nature of fabric to finds from the monuments at the Dnister River region.

All anthropomorphous figurines from Maydanetske, of whatever sizes, technological peculiarities and sex, are divided into two main types: standing (I) and sitting (II). Within the types there are subtypes, and within the latter sometimes there are variants which are presented in the *Table*. Innumerous schematic cone-shaped extremely conventional figurines are referred to the type III. In the collection from Maydanetske terracotta figurines of type I prevail.

Special attention is paid to four fragments of large figurines with realistic traits. The analysis shows that three of them, belonging to the large examples of plastic figures, have such common morphologic features as modeling of large ears with perforations and depiction with pits of forms of eyes and mouth. Probably, female figurines represent the same sacral image. A head with a hat is close to the female figurines, but apparently represents another sacral hero. The fourth realistic figurine is distinguished by both its small size and representation of features, which indicates one more sacral image depicted in anthropomorphous plastic figures. Despite simple modeling techniques, the Trypillian sculptors were able to represent various sacral images having given them portrait traits, because despite a strict observance of a canon, faces are never repeated and look exceptionally individual.

Progenitress, different iconographic types of anthropomorphous plastic figures correspond to certain sacral images and heroes and perhaps depict deities of ancient agricultural pantheon. Some of them can be reconstructed with great likelihood. Among plastic figures from Maydanetske female images prevail. The most common are standing statuettes representing svelte maidenly figure corresponding to an image of Virgin Goddess peculiar for archaic mythology. Figurines of pregnant women, stylistically related to a maidenly image, represent an image of a Goddess, a potential bearer of a new life. Sitting female figurines can be viewed as depictions of mature women of matrimonial age which represent an image of a Goddess-Progenitor, a founder of a family. Image of Madonna is presented by unique examples in Trypillian anthropomorphous plastic figures. An upper part of female inclined figurine with an infant made in schematic style was found in Maydanetske.

Realistic sculpture from Maydanetske represent clearly different sacral images, among which are Lunar Goddess, heroized ancestors chiefs-priests with a peculiar head, as well as a special hero: androgenic deity. An image of androgen is depicted in an upper part of a realistic statuette. Combination of a shaved head (conventually «male» feature) with a female breast allows the author to presume that this fragment belongs to bisexual images.

Innumerous reliably male images are represented by both standing, and sitting statuettes. Stylistic and morphological similarity of male and female figurines found in single pit at Maydanetske is evident. Distinguishing feature of male images, in addition to sex indications, is also a lack of holes on the left side of disc-shaped heads.

The analysis of anthropomorphous plastic figures from Maydanetske allows the author to describe the peculiarities typical of the statuettes of Tomashivka group of Trypillya C I monuments, to trace the roots of forming the sculptural tradition peculiar for this type, and also to describe the features inherent exclusively in figurines from this giant settlement. The most outstanding finds of anthropomorphous sculpture from Maydanetske belong to the best examples of plastic art of ancient farmers of South-Eastern Europe

O.V. Gopkalo

MALE AND FEMALE DRESS ACCESSORIES IN THE CHERNYAKHIV CULTURE

Regarding Chernyakhivska culture, there have been polar points of view expressed on male and female dress and costume. According to one opinion, the bearers of this culture were buried not in clothes, but in shroud, so sepulchral inventory could not serve as the basis for costume reconstruction. Another opinion, on the contrary, acknowledged that the very distinctions in costumes of representatives of different sexes were the ethnographic feature of the Goths of the 1st—5th c. Various features of sepulcral inventory were named, e.g. sex indexes, and their list was changing all the time.

Significant increase in the number of burials, sex and age of which were determined by the anthropologists, stimulated revisiting this topic.

To specify features of sex indexes a comparative analysis of series of male and female burials was conducted and the following was revealed: male (arms and playing counters) and female (three fibulae, a mirror, two spindle whorls, staff-shaped pin, keys and/or locks); features more peculiar to men (belt buckles, one or two, shoes rings, awls, needles, knives, coins) or to women (two fibulae, beads, pendants-amulets, temple rings, spindle whorls, scissors, and pincers), and common features (fibulae, beads, bracelets, earrings, combs, grinders, needle-cases, and caskets details).

Model with a buckle was the most typical of men, while model with two fibulae – of women; dress with a single fibula was equally typical for both sexes.

Men used to wear clothes without fibulae, most likely, narrow fitted trousers with a leather belt and non-pivoted shoulders cloth. One third of males were buried in overcoat, usually a coat that buttoned up on the shoulder, which probably was due to the funeral time. In a number of cases, males were buried with two belts one of which was meant for carrying arms. However, the weapon itself was not placed into the grave. Sheathes with knife and waist bags with small household items (needle-cases with needles, awls, flints and pieces of flint, etc.) were often attached to the belt. More frequently, they were adult males who wore adornments (beads and temple rings) with a tendency towards elder men wearing fewer adornments. Rings were popular within all age groups and were worn on the right hand. Male adornments were made of metal, silver or bronze and shaped as flat rectangles, coin pendants and mini-buckets.

Clothes for women were usually buttoned with two fibulae on the shoulders and were similar to Roman stola, coat, and cloak or, possibly, a mixture of all put on at once. In half cases studied, fibulae were uniform. Sometimes, these clothes were placed in the grave as an «offering». Women also wore overcoats clenched with one clasp. Belt was an important detail of mature women adornments, apparently made of leather and with a buckle. In cases where there were two buckles, one of them served as a buckle for a waist bag. Female set was adorned with necklaces. More often necklaces, as well as wire rings which were entwined with their hair, were worn by young and adult women. Evidently, necklaces were used to do over sleeves and were stringed into bracelets. Hand bracelets were also made of cuts of deers' horn base while foot bracelets were made of bronze wires. Rings were worn on the right hand. Bags with amulets and small household items (needle-cases, awls, pincers and combs) were suspended to the belt with a rope of a certain length and could be fastened with fibulae. Specifically female adornments were the following: pendants made of one-colour glass in a shape of a claw (fang), basket-shaped, rosette-shaped, triangle metal pendants, amulets made of *Cypraea* and *Bolinus brandaris* mollusk shells, pyramidal horn and those made of animal teeth. Just as men, women wore metal «buckets» in their necklaces. Judging from rare finds of buckles on the feet, both males and females wore the same kind of shoes.

Specific features of sepulchral inventory can be used when determining sex of children and adolescents when it is impossible to determine it anthropologically.

Ya.V. Volodarets-Urbanovych, A.V. Skyba

WHEEL-MADE POTTERY OF THE 7th c. AND THE 8th c. IN THE SOUTH OF EASTERN EUROPE

Development of pottery centres at Pastyrske hill-fort and in Kantserka gully sequenced in spreading their production on the vast territory of South-Eastern Europe from the Dnister River to the basin of the Siverskyi Donets River. Data on finds of ceramics of both types are collected, and their territorial, and cultural and chronological peculiarities are analysed.

Data on 21 sites with finds of Pastyrske wheel-made pottery are used. Based on cartography, the territory of use of this pottery is outlined from the South Buh River basin to the Siverskyi Donets River, but absolute majority of the finds is concentrated within the forest-steppe zone. Four regions of concentration of the finds are determined within the area (the South Buh basin, the Dnipro right bank middle region, the Desna region, and the Dnipro left bank middle region). Single finds of Pastyrske type pottery are known in Nadporizzhya region and in the basin of the Siverskyi Donets River. It is interesting that most of finds of Pastyrske type pottery were found quite far from the hill-fort itself. Distances between places of finds in concentration areas are from 11—36 km (basin of the Sula and the Psel Rivers) to 22—145 km (the Dnipro River middle region). Distance between the nearest places of concentration areas is from 95 to 200 km.

Based on cultural and chronological belonging, nine sites with finds of Pastyrske type pottery are related with Penkivska culture, eight settlements have both Penkivska culture layer, and a horizon of the end of the 7th c. and the 8th c., at two sites the Early Mediaeval layer is represented by the materials of the 8th and the 9th centuries.

Data on 21 sites with Kantserka type ceramics was used in this paper. Area of these finds stretches from the territory between the Dnister and the South Buh Rivers to the left bank tributaries of the Dnipro River (the Vorskla and the Psel). Within this territory a series of concentration areas is traced: the South Buh River region, the Dnipro River middle region, Nadporizzhya region, and the Vorskla River basin. The number of sites with finds of wheel-made pottery in this regions is from two (the South Buh) to seven (Nadporizzhya). Maximum radius of distribution of wheel-made Kantserka type ceramics is 440 km (Kantserka-Semenky gully). Distances between places of finds in concentration areas are from 2 km (left bank tributaries of the Dnipro) to 205 km (area between the Dnister and the Buh). Distances between the areas are from 120 to 295 km. For all the mentioned regions finds of Kantserka type ceramics are known both for Penkivska culture settlements, and for the antiquities of the second half of the 7th c. and the 8th c. In addition to the Slavonic sites, Kantserka type pottery is known also at several nomads' sites. These are Kelergei, Yasynove, and also Voznesenka complex (Гринченко 1950, с. 37—63; Приходнюк 2001а, с. 31, 33—34).

Comparing the areas of distribution of Pastyrske and Kantserka type pottery, the coincidence of concentration areas of finds in the Dnipro River middle region and the South Buh River region should be noted. At the north of the Dnipro River forest-steppe region (the Sula and the Psel Rivers basins) sites with Pastyrske type ceramics prevail, while the majority of

Kantserka type pottery finds are situated in the south-eastern region (territory between the Psel and the Vorskla Rivers). Common territorial peculiarity of distribution of Kantserka type pottery is its closeness to the area at the steppe border.

Finds of Pastyrske type pottery at the sites Zhuravlykha and Tselykiv Buhor give grounds to presume that chronological range of its usage was wider then of Kantserka type pottery and came over the boundaries of the 8th c.

A.O. Sushko

ANCIENT RUS PAINTED EGGS

Glazed painted eggs were one of the most vivid manifestations of Ancient Rus ceramic art. Nevertheless, today there are still unsolved problems in study of this category of archaeological material. It concerns typological and technological aspects, as well as purpose of painted eggs.

These articles were made of ordinary pottery loam in a band way. They were formed hollow and contained a small ceramic ball in the inner part. After the moulding they were fired, then covered with transparent glaze, which served as a background. In most cases green and fulvous glaze was used. Then, using a special tubular instrument painting was made with glaze of another colour, usually yellow and green, and an article was heated up again in the kiln to smooth the surface. Paintings were not multifarious. There were three main types of designs: ordinary stripes which gird an article several times, unsystematic stripes put lengthwise and athwart, and also braces which were the most common ornament.

Based on the quality of glaze, two types of products are determined. They come from different craft centres which used their own markets. The first type was produced on the territory of the northern regions of Rus, while the second in the southern regions. In each region their own recipes of glaze and standards of mould-making were used.

Concerning chronological boundaries of usage, painted eggs appear in the 10th c., and in the 11th c. they become the most common, since the middle of the 12th c. they start getting out of use, and in the 12th—13th c. they are found as remnants.

Glazed ceramic Ancient Rus painted eggs were polyfunctional, having ceremonial, playing, and decorative functions. Not only this category of archaeological material became a symbol of Ancient Rus art, but also traditions of painting eggs preserved as a kind of folk art to present day.

Yu.V. Dolzhenko

POPULATION OF CHERNIHIV ANNALISTIC PEREDHORODDYA OF THE 11th—13th CENTURIES BY CRANIOLOGICAL DATA

Anthropological structure of population of Chernihiv Peredhoroddya («Suburb») mentioned in the chronicle of 1152 as one of regions of big Posad (trading quarter) is analyzed by the materials of excavations since 1986 till 2009.

According to the data of intra-group analysis, urban male population of Chernihiv from Peredhoroddya was apparently tightly related to the Siveryans, an Ancient Rus tribe, which is especially well demonstrated by canonical analysis. Chernihiv male groups show more significant similarity then female series; the series under the study is the closest to the materials from the burial grounds in suburbs of Pereyaslav-Khmelnytskyi, and at the same degree is close to urban series representing population of Lyubech and Novohrudka. It is possible to suppose that men from these cities served alternately in each of destination stations and that they were supplemented by recruits living not far from Zelenyi Hai hamlet and neighbouring villages.

Based on the data of intra-group analysis, female population of Peredhoroddya in Chernihiv according to matrix of clasterization of intra-group correlations and canonical analysis is close to the two rural groups: to the combined series from the territory of Chernihiv region and of the Siveryans, and also to Zelenyi Hai hamlet; and when other Slavonic groups of Ancient Rus period are considered they are close to the female population of Pereyaslav-Khmelnytskyi a combined Slavonic series from the burial grounds. It should be noted that both male, and female series of Peredhoroddya are close to a combined series of the Siveryans and to the burial ground near Pereyaslav-Khmelnytskyi. Consequently, they have indeed common component close to the groups mentioned. It also should be noted that other components are different: in female series it is close to the Polyans of Chernihiv, while in male series it is close to Lyubech.

O.M. Kupchenko-Hrynchuk

EQUIPMENT OF ENGLISH ARMY IN TIME OF THE HUNDRED YEARS' WAR (1337—1453)

Based on iconographic materials (knights' gravestones and miniatures), armament and equipment of English forces and their evolution over the conflict are considered.

Knights presented the base of mediaeval armies of any Western European country. England was not an exception. Equipment of an English knight during the whole conflict changed according to various factors. This is, first of all, a general development of defensive and offensive armament in Europe. Furthermore, at the initial stages of the war English chivalry was distinguished by somewhat outmoded equipment which was also mentioned by chroniclers of that time (for instance, by Jean Le Bel). This is seen on knights' gravestones which present the appearance of the noble warrior-Englishman quite in detail from the beginning to the end of the war.

The base of the defensive arms consisted of mail, pot-shaped helmet, and triangular shield. However, with time, after a series of victories (for example in the battle of Crésy in 1346) English warriors' welfare improved, which influenced their

armament in its turn. By the middle of the 14th c., a lamellar defence of arms and legs becomes increasingly popular. Helmet-bascinet comes in use, as well as brigandine, armour made of metal scales on textile or leather warp.

Since the beginning of the 15th c. full or so-called «white» armour gradually prevail, which included metal scales covering the warrior's body in fact entirely.

Horse as a knight's companion also had certain defensive equipment: from ordinary horsecloth to mail and metal scales.

Concerning weapons, they were various. There were spears, swords of different form (sword also came through its evolution), axes, mauls, and poniards.

As for the plain warriors', armament and equipment i.e. bows and spearmen, it should be noted that sources are various, but most of them concern the 15th c.

In general, an image of soldier-infantryman of English army is associated with a big bow. In addition, swords, axes, mauls, spears with halberds were also popular in infantry arms. Defensive armament consisted of gambeson (quilted jacket), mail, helmet, and sometimes brigandine (armour made of metal flat bars attached to textile or leather warp). Emblematic cottas (cloaks) or sewed-on red crosses of St. George's soldiers were used as distinguishing marks.

Finishing the review of equipment of English forces during the Hundred Years' War it should be noted that there were metal pieces of ordnance and gunpowder artillery which were both actively used overland, and started to be used at sea. Various types of devices for defence of besieging soldiers were used: shields-mantlets, artificial obstacles, etc.

It should be noted that there were not any specifics in armament of Englishmen: development of defensive and offensive equipment was approximately identical with continental examples. However, mass use of a large bow is seen, which have not got rooted anywhere else. Consequently, English soldiers and knights in fact did not differentiate from continental warriors, except of certain details.

S.M. Razumov, M.V. Khokhlov, E.A. Kravchenko

FLINT KNIFE-PONIARD OF THE BRONZE AGE FROM THE SOUTH-WESTERN CRIMEA

A very well preserved flint knife was found at the bottom of the Cossack Bay in Sevastopol after the training submergence of divers. Knives of this type are common in the period of transition from the Middle to the Late Bronze Age; however, they are presented by metal finds. This one is probably a reply to such item made of local Crimean raw material. Finds of these knives have not been known in the Crimea by the present day. Taking into account its place of find at the bottom, probably, it is a matter of a flooded coastal site of this period; however, without the further underwater research this can only be an assumption.

L.I. Babenko

BARROWS OF THE SCYTHIAN PERIOD AT THE NORTH-EASTERN OUTSKIRTS OF KHARKIV

Three barrows excavated in 1977 and 1979 by the expedition of the Kharkiv Historical Museum are published in the paper. There was one grave in each barrow: the remains of wooden tombs of pillar structure with small ditches around the grave were found in two graves, the last burial was made in a pit. Graves are latitude oriented which is not common for the sites of the Siverskyi Donets River region whereby the deceased (when it is possible to define) are oriented to the east.

In two barrows, various ways of use of the fire in funeral custom are traced: in barrow 2, the filling of the central pit in a grave consisted of black earth and pieces of burnt wood, and there was a layer of ashes 12.0—15.0 cm thick on the bottom. In barrow 3, fragments of burnt wood are found in the filling of a tomb and in the bottom. A small niche which appeared to be empty was discovered in the north-eastern corner of barrow 3.

Graves are robbed; the remaining inventory is presented by arms and arming elements (sword element, javelin tip and butt-weight, and conical tubes), adornments (iron bracelet, glass, golden, bronze and bone beads, golden plates-buttons), ceramic pottery, and a bone piercer.

Some elements of funeral rite, first of all, latitude orientation of a grave with the most probable eastern orientation of a diseased, existance of a pit-«bofr» with remains of a fireplace, the type of funeral structure, and finally a short term of functioning of a burial ground and its territorial remoteness from the main mass of the Siverskyi Donets River region antiquities of the Scythian period towards the Don River middle region, allow the author to presume the probable belonging of the graves not to the local, but to the Don River region population, which is another evidence of ethnic variety of the Siverskyi Donets River region in the Scythian period.

By the grave goods, complexes can be dated by the 4th c. BC, however, the previous century is not excluded.

H.M. Kazakevych

CELTIC SWORD FROM THE EXCAVATIONS BY O.V. BODYANSKYI

Finds of swards of La Téne type on the territory of Ukraine, particularly of Scythia and Taurica, are considered in the paper. Special attention is paid to the complex with a Celtic sword from Vyshchetarasivka. The sword lost to date can be dated by pictures and drawings to the period LT C, and more precisely to the last decades of the 3rd c. BC. It is unique for the north coast of the Black Sea because other finds of La Téne type sword are dated to considerably later period. Perhaps, appearance of the Middle La Téne period sword in the Dnipro River lower region can be related with the penetration of Celticized military groups from the Eastern Balkan region.

H.L. Yevdokymov, N.M. Danylko, O.D. Mogylov

SCYTHIAN BARROW WITH A HORSE BURIAL IN KHERSON REGION

The horse occupied the most important place in the life of the Scythians of the north coast of the Black Sea, therefore cases of its burial together with its owner are quite explainable. Such complexes in the steppe region belong mainly to the 4th c. BC, while the earlier graves of the Early and the Middle Scythian period are situated mainly in the North Caucasus and in the Dnipro River forest-steppe region. Therefore each new discovery of them in Steppe Scythia draws an unfailing interest of the scholars. Such is the barrow 8 near Mala Lepetykha village in Kherson region in the Dnipro River left bank lower region studied in 1992 by Krasnoznamyanska Expedition of the Institute of Archaeology headed by H.L. Yevdokymov. The barrow, 2.8 m high and 45.0 m in diameter was surrounded by a double revetment and a circular ditch. There was a grave of a Scythian with a horse, and also bridle elements additionally put in the mound. The central warrior's grave in the catacomb was robbed. The tomb of a harnessed horse in a narrow pit to the east from the central grave with its head to this grave survived, as well as a harness set in a revetment. The barrow is referred to the 5th c. BC.

Ya.P. Gershkovych

PSEUDO-ARCHAEOLOGY IN THE POST-SOVIET AREA: UNREALIZED DANGER

False-science and false-scholars are especially active in the periods of change of economic, political, and ideological transformations and, in general, of transformations of world views. «Myth-unmaking» has occured quickly throughout the post-Soviet area, but the process of making the new mythology and creation of new systems of ideals and values is ongoing and perhaps can turn to be endless. A gap appeared which started to be promptly filled by speculations on historical themes. Non-critical use of archaeological data leads to the dangerous politicized interpretation of the past and to nationalistic mysticism.

Archaeologists of the former USSR clearly were not ready to invasion of pseudo-archaeology, which did not arise here, especially its ethnocentric course, out of nowhere. The current situation is objectively close to the one in Germany at the end of 19th c., where after the unification of the state, popular and pseudo-scientific literature, often anti-Semitic and at the same time with neo-pagan, and anti-Christian turn, increased unprecedentedly.

Extremely simplified understanding of ancient cultural and historical processes and the belief in easiness of «reading» of archaeological data used for their reconstructions have always been and in the care of pseudo-archaeology everywhere. There are often many versions of interpretation of archaeological data, and that provide ample opportunities for promotion of the most fantastic and improbable «hypotheses» and «theories». Both in natural sciences, and in archaeology the degree of pseudo-science can be defined as the product of two factors: a degree of ignorance and the level of pretensions.

K.M. Kapustin

HISTORY OF STUDY OF ARCHAEOLOGICAL SITES OF THE RIGHT BANK REGION OF KYIV LAND FROM THE MIDDLE OF THE 13th C. TO THE 15th C.

Study of archaeological sites of Kyiv land from the middle of the 13th c. to the 15th c. has been continuing for more than 150 years. First materials on post-Mongolian period were found in the second half of the 19th c., specifically in Bilohorodka village of Kyiv Oblast (V. Khvoika). However, the positive improvements in study of the 13th—15th centuries antiquities are seen in the period after the war. During the archaeological prospectings along the Ros River by T.S. Passek, along the Rostavytsya River by V.K. Honcharov, along the Teteriv River by R.I. Vyezzhev, and by N.V. Linka within the «Great Kyiv» Expedition, cultural layers of the mentioned period were discovered. Since the end of the 1940s and 1950s archaeological prospecting and excavations have been significantly activated at the sites. Of the most interesting materials one should note the results of research of a hill-fort and a settlement near Polovetskyi hamlet in Kyiv Oblast where the remains of husbandry and dwelling structures were found, numerous household inventory, arms, and military munitions were collected. There was a burial ground not far from the settlement where some of burials can be dated by the 13th—14th centuries.

During the 1950s and 1960s new sites were discovered and also the dates of the sites known before were specified after the archaeological prospecting by I.P. Rusanova, M.P. Kuchera, E.A. Symonovych, O.M. Prykhodnyuk, H.H. Mezentseva, and S.S. Berezanska. Since the middle of the 1960s a qualitatively new stage of Kyiv studies started which was related to the beginning of ample excavation of the Kyiv Expedition directed by P.P. Tolochko. Materials of the Golden Horde and the Lithuanian periods were found at many areas of ancient Kyiv and its suburbs.

In the 1970s and 1980s, M.P. Kuchera discovered a significant number of sites of the post-Mongolian period in Kyiv, Zhytomyr, Cherkasy, Chernihiv, Poltava, and other Oblasts. Studies on the territory of Ancient Rus cities were ongoing. Cultural layers and separate objects from the middle of the 13th c. to the 15th c. were found in Cherkasy, Bila Tserkva, Zhytomyr, Malyn, and of course in Kyiv.

Since the end of the 1980s, rate and quality of research at the Golden Horde and Lithuanian periods sites significantly increased. Entire study of the territories of Kaniv Preserve in Cherkasy Oblast, of Fastiv Region in Kyiv Oblast, and of Ovruch Region in Zhytomyr Oblast allowed the scholars to cartography a great deal of sites.

As a whole, in the last 20 years, a stable tendency towards the activation of the research at the Late Mediaeval sites of the South Rus is seen which is related to the increase of intensiveness of excavations, first of all, at the cities of Kyiv Land and in Kyiv.

177 sites of the period from the middle of the 13th c. to the 15th c. are known on the territory of the left bank region of Kyiv Land today: settlements, hill-forts, cave complexes, hoards, etc. 57 more sites with materials of the post-Mongolian period are discovered on the territory of Kyiv.

Cartography of sites showed their highest concentration in Kyiv Oblast and the lowest one in Zhytomyr Oblast, which is related to the condition of research in separate regions. Absolute majority of sites are known only by the materials of archaeological prospecting and collecting of surface finds. Only the settlement near Sofiyivska Borshchahivka village was studied on the broad area, and several settlements were excavated (Hryhorivka, Polovetske, Bila Tserkva, Cherkasy, etc.).

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O.V. Diachenko

CENTRAL PLACE THEORY IN ARCHAEOLOGY. DETERMINATION OF THE RELATIVE DATES AND SETTLEMENTS SIZE

The particularity of the application of spatial analysis in archaeology is often caused by the insufficient information about expansion systems of the past. The usage of the character expression of M. Beckmann's Central Place theory makes it possible to determine the size and number of settlements which are absent in samplings. Owing to the proposed special supplement of the Central Place theory, it is possible to connect them with specific sites which do not have clear relative dates. This supplement also allows to calculate approximate sizes of the dated settlements and to determine the search radius of sites which are absent in samplings.

V.I. Poltavets

SETTLEMENTS STRUCTURE AND DEMOGRAPHIC SITUATION IN THE TYASMYN RIVER REGION IN THE EARLY IRON AGE

On the example of the best studied sites of the Tyasmyn River region (Right Bank Ukraine) of the initial periods of the Early Iron Age, namely of Chornoliska, Zhabotyn, and of the Early Scythian periods, the spatial structure of settlements and peculiarities of their building are considered, and versions of calculation of their demographic description are suggested.

During the period of Chornoliska culture the most characteristic types of settlements were the riverside and promontory, as well as meadow, small settlements and towns. By the end of this period, fortification II at Chornoliske hill-fort (24 hectares) was founded. At the end of Zhabotyn period, watersheds were developed where large unfortified settlements (under 100 hectares) and Motronynske hill-fort (200 hectares) were established. The settlement structure became more complicated and multilayer in the Scythian period.

For all periods of the Early Iron Age of this area the sparse development of settlements was characteristic. In order to determine the number of settlement's habitants the coefficient of building density, the ratio of a number of synchronous dwellings to the excavated area of the settlement, was used. Also, there were used the parameters of a so called module («branch», country estate), determined for rural Ancient Greek settlements of the Buh River lower region of the 6th c. and the 5th c. BC, which represented the primary element of dwelling and husbandry body containing several dwellings and husbandry constructions united around the central yard. Usage of this module is acceptable for the Tyasmyn River region given the similarities in the traditions of house-building and occupations (agricultural population), and due to stable norms of husbandry zones regimentation which guarantied a certain correlation of the settlement size and the number of its habitants. It should be noted that these correlations remained unchanged through many centuries since the Early Iron Age to Kyiv Rus period. In the numerical terms the module that included an inter-estate area corresponded to the homestead of about 5.0 hectare area with 10—18 inhabitants. The area of an ordinary estate was usually smaller then that (0.1—0.2 hectares) and, as a rule, contained a «core» (the block of residential and husbandry structures) of 0.04—0.05 hectare area and a small inter-estate line of 5.0—10.0 m wide. This module (0.2 hectare) can be used for densely built up settlements.

The population size of small settlements was quite stable irrespective of the period: from twenty or thirty to fifty persons. It was from 80—90 to 120—130 persons for Subotiv 1, and 670—960 persons for fortification II of Chornoliske hill-fort. Usage of the coefficient of building density for large settlement gives the upper range of their population, while usage of a 0.5 hectare module gives the lower one. This quantity varies correspondingly within the limits from 1.0—1.8 to 1.6—2.8 thousands for Zhabotyn settlement, and from 1.5—2.8 to 9.0—12.0 thousand people for Motronynske hill-fort. The lower measures are more prefered.

At the Late Zhabotyn stage (the third quarter of the 7th c. BC), the social structure became more complicated: large (up to 100 hectares and more) unfortified settlements and hill-forts appeared and continued their existence into the Early Scythian period. Concentration of population in large settlements was related to mastering and protection of new lands (in watersheds). The population of Tyasmyn River region was the most numerous particularly during this period. Agricultural settlements without development regulation prevailed. With the functional sophistication of settlements (crafts, trade) their area and density of development increased. However, urbanization processes did not touch the Tyasmyn River region: in the 5th and the 4th centuries population sharply decreased here due to new military and political situation.

I.A. Snytko

THE MIX-HELLENES FROM THE OLBIAN DECREE IN HONOUR OF PROTOGENES (HISTORICAL AND ARCHAEOLOGICAL ASPECT)

The article is devoted to identification of the Mix-Hellenes from the known Olbian Decree in honour of Protogenes (IPE, I2, № 32). Since the Decree has been published two main points of view concerning the Mix-Hellenes were formed which have two main approaches to the resolution of the problem: ethnical and social. The followers of the ethnical theory viewed the Mix-Hellenes as mixed Greek-Barbarian ethnic group, tribe, people neighbouring with Olbia, and they even compared them with the Callipedae of Herod whom he also called the Hellenes-Scythians. The supporters of another approach referred the Mix-Hellenes to a certain social category of Olbian polis population which did not possess full rights, was close to metics, and was used by the Olbians as mercenaries in military detachments; or they considered the Mix-Hellenes as the depending military and agricultural population organized deliberately on the state's initiative. As

one of the variants of their possible settlement they were related to the habitants of collective farmsteads at Olbian chora since the last third of the 4th c. till the first half of the 3rd c. BC, though the number of these farmsteads is not great and the presumable number of their habitants can not agree with the number of the Mix-Hellenes mentioned in the Decree, i.e. 1500. Furthermore, the area of the farmsteads does not correspond to the mentioning of them as of the habitants of the frontier of Olbian polis.

Having analyzed in detail the historiography of this matter, the author comes to a conclusion that this social category was formed long before the possible date the Decree was issued, namely within the period of re-colonization of the rural neighbourhood of Olbia at the turn of the 5th c. and the 4th c. BC. Two presumable areas where the settlements populated by the Mix-Hellenes could have been located in the near frontier, outside the borders of historically established in the Archaic period the territory of Olbian polis, are determined in geographical sense: 1) the Dnipro River lower region in the east, and 2) the coastal area from the mouth of Tiligul estuary to Odesa bay in the west.

Concerning the social position of the Mix-Hellenes, it is presumed that they were the depended military and agricultural population from the community of the new Greek colonizers from Asia Minor of the cleruchs, kataeks and perioeci type, specially organized by the Olbians for working of the vast lands adjacent to the polis and for defence of the borders of the state. Among the prevailing Hellenic population, the author does not exclude the presence of insignificant Barbarian contingent which appeared here in the process of contacts in these regions.

V.V. Kropotov

FIBULAE FROM THE SOUTH-EASTERN AREA OF NECROPOLIS AT SCYTHIAN NEAPOLIS (ON THE MATERIALS OF EXCAVATIONS BY V.P. BABENCHYKOV IN 1947 AND 1948)

In 1947 and 1948, V.P. Babenchykov studied an area of the ground necropolis situated 750 m to the south-east from Scythian Neapolis. 28 burial structures were excavated here: three crypts and 25 undercut graves (23 with one or two rooms), where 27 fibulae were discovered: 22 made of bronze and five made of iron. Analysis of these items allowed the author to specify the dating of the burial ground studied by V.P. Babenchykov and to refer it to the period from the last quarter or the end of the 2nd c. to the first half of the 3rd c., and also to relate its occurrence with the need to occupy new areas for burials because of overflow of two main necropolei of the hill-fort, the Eastern and the Western ones, in this period.

V.S. Tylishchak

ON REPEATED USAGE OF FRAGMENTS OF MAIL BRAIDS IN CENTRAL AND EASTERN EUROPE IN THE 1st MILLENNIUM

Finds of small fragments of mail braids in burials of women and children in Central and Eastern Europe of the 1st millennium are considered. They were used repeatedly as singular amulets or adornments. Early demonstrations of this tradition allow the author to relate its roots with the north-eastern coast of the Black Sea. Apparently, it originated from the Sarmatian milieu. In the Roman times the tradition to use fragments of mail netting in the inventory of women's and children's burials extended within the multiethnic population of Eastern and Central Europe; and this custom was used in various cultures of Central and Eastern Europe till the end of the 1st millennium.

V.S. Zhyhola

MEDIAEVAL HILL-FORTS OF THE DNIPRO RIVER LEFT BANK REGION WITH THE REMAINS OF DRAINAGE STRUCTURES

The peculiar feature of certain hill-forts on the territory of Ukraine, particularly on the left bank of the Dnipro River of the 1st and the beginning of the 2nd millennia, is the existence in the centre of the protected areas of large pits which are determined by the scholars as drain reservoirs or wells. They are given little consideration in historiography because they are hardly studied. In the author's opinion, for the full resolution of this issue it is necessary to determine possible more precise dating of the pits-wells. The assigned task requires creating a catalogue of the left bank hill-forts with the pits-wells taking into account their parameters. Into the catalogue there have been included 16 objects described by M.P. Kuchera, as well as a hill-fort not mentioned by him but studied by Yu.Yu. Morhunov.

Based on the catalogue it is possible to make conclusions about the general features of the sites described which will allow to understand better the raised issue in general. Area of all hill-forts or their dytynets (citadel) with pits-wells is always less then 1.0 hectare. Hill-forts are situated on high headlands or outliers. Another common feature is geometrically rounded or close to that, form of defensive structures or areas of the hill-forts. 11 hill-forts have in their perimeter defensive structures: around the area or around the pit-well. The main common feature of the hill-forts mentioned is the existence of undefended settlements, posads (trading quarters) or other hill-forts: 14 of them have settlements of the area from 1.5 to 25 hectares next to them.

The only pit-well authentically of the Romenska culture period can be considered an object at Zarichne hill-fort which is single-layered and belongs only to Romenska culture. Also, the layer of Romenska culture was identified at six hill-forts and it was covered with the Ancient Rus period layer but the arrangement of objects can be dated by the Siveryans period. Pits-wells at four sites most probably were constructed not by the Siveryans, and they chronologically belong to the Ancient Rus

period. The other six sites contain cultural deposits within the period from the 10th c. to the middle of the 13th c. Defensive structures at some of them appeared in the Ancient Rus period already. Pits-wells of this group can not be dated without the detailed excavations. In other words, all structures were erected both by the population of Romenska culture, and during the times of Kyiv Rus.

The settlements described played an important role both in the community of the Siveryans (centres of proto-agglomeration and of certain groups of population), and in the Ancient Rus state (they already become proto-cities, and are situated in the protected frontier). It should be noted that the further development of the issue requires the detailed research of all objects, of their constructions, function and dating.

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S.M. Mikheev

TO THE PROBLEM OF DATING SAINT SOPHIA'S CATHEDRAL IN KYIV

In the article, arguments that allow establishing the date of the construction of Saint Sophia's Cathedral in Kyiv are considered. Close parallels with Saviour's Cathedral in Chernihiv and with the Saint Sophia Cathedral in Novhorod, as well as two dated graffiti in Saint Sophia's in Kyiv of 6541 (1032—1034) and of 6547 (1038—1039) allow the author to confirm that the cathedral was erected within the period from the middle of the 1020s and the end of the 1030s, and that it could not have been built neither earlier, nor later.

V.S. Dzhos

NEW PETROGLYPH FROM KAMYANA MOHYLA

In 2009, on the surface of a sandstone slab at Kamyana Mohyla a new petroglyphic image of a deer made in incised technique was discovered. It can be interpreted as a symbol of the sun and preliminary dated by the period of the Middle–Late Bronze Age.

A.M. Skorobohatov

NEW MATERIALS ON THE COPPER AGE
OF THE DON RIVER UPPER AND MIDDLE REGIONS

The Copper Age archaeological sites in the Don River upper and middle regions of so-called Mariupol cultural and historic area are described using the new research in Voronezh and Lipetsk Oblasts.

Analysis of materials using the analogies from the neighbouring territories, particularly from Ukraine, and using the radiocarbon dates allowed the author to suggest the chronology of the Copper Age cultures development in the Don River upper and middle regions. In general outline, the Early Copper Age of this region represented by the Nyzhnedonska culture is dated within the period from 6350 to 5250 BP. Serednyostohivska culture was developing here between 5900 and 4900 BP, while Repynska culture existed since the last quarter of the 4th millennium and for the whole the 3rd millennium BC.

S.V. Ivanova, O.K. Saveliev

BARROW NEAR SYCHAVKA VILLAGE OF ODESA OBLAST

Published is a barrow studied in the area between the Southern Buh and the Dnister Rivers with the Copper and the Bronze Ages burials, and also with the 19th c. graves. The initial erecting of the barrow is related with the Late Copper Age burial 22 which was surrounded with a cromlech and probably belonged to Hagider-Cernavodă cultural group. Secondary burials of Yamna culture (9, 10, 13, 15, and 19), Catacomb culture (12), Babynska culture (17, 18, 21, and 23), and Sabatynivska culture (14 and 16?), and also of the 19th c. were made later. Cultural attribution of the burials 1, 8, and 20 was not determined because of their destruction.
C14 dates were obtained using bone remains for the main burial 22 (the Late Copper Age), the burials 15 (Yamna culture), 18 and 21 (Babynska culture), and 6 (Sabatynivska culture).

K.P. Bunyatyan, O.L. Pozikhovskyi

A SETTLEMENT OF THE HORODOTSKO-ZDOVBYTSKA CULTURE NEAR OSTROH

Materials of Horodotsko-Zdovbytska culture from the multi-layer settlement near Rozvazh village and Koshara tract in suburbs of Ostroh are presented. That objects concentrated within the area of 13.0 × 12.0 m and were represented by oval or round in shape pits of various size. Perhaps, the larger of them (9, 25, 31, 40—42, and 47) were the remains of dwellings.

Although the upper layer at the site was taken away during the husbandry works before the excavations down by approximately 0.4 m in depth, rich and numerous materials were obtained. They not only significantly complement the conception of ceramic complex of Horodotsko-Zdovbytska culture, but also are of a fundamental importance for the specification of taxonomic and chronological position of this culture which is considered by Polish researchers, and first of all by J. Machnik, as a short-term eastern local phenomena of Mierzanowice culture, synchronous to its Early and the beginning of its Classical phases.

Richness of Rozvazh-Koshara settlements in finds and especially formal and stylistic peculiarities of ceramics allow the authors to suggest that this settlement had a lengthy continuous life or, otherwise, that this place was many times revisited by Horodotsko-Zdovbytska culture bearers. The initial stage of the site is determined by ceramics (amphorae, cylindrical bowls, and more rare dippers) decorated with stripes of threefold cord lines, which can be synchronized with the proto-Mierzanowice phase. The latest materials are significantly represented by the examples of ceramics having analogies in Stzyżów culture (in particular, vessels with so-called cuff-like rim border and with juts on the neck); they are also represented by bifaces (so-called sickles) which are referred by the Polish researcher E. Libera to the Classical phase of Mierzanowice culture which is synchronized with Stzyżów culture in Western Volyn region.

It is not excluded that there are ceramics in Rozvazh-Koshara reflecting the final period of Horodotsko-Zdovbytska culture development, though it is difficult to identify it because its evolution is hardly outlined. As materials from Dubno-Volytsya 2 settlement where objects with finds of Stzyżów and Horodotsko-Zdovbytska cultures were discovered show, both these cultures not only were synchronous from a certain period of time, but also apparently ceased at the same time.

As a whole, considering analogies, as well as radiocarbon dates for Mierzanowice culture, from the final date of the preceding Volyn group of Globular Amphorae culture, and from two objects in Dubno-Volytsya 2, Horodotsko-Zdovbytska culture can be dated within the period from 2400/2300 to 1600 BC.

S.A. Zadnikov, P.Ya. Havrysh

ANCIENT GREEK CERAMICS FROM THE EXCAVATIONS OF BURNT MOUNT 7 AT THE WESTERN FORTIFICATION OF BILSK HILL-FORT

Published are Ancient Greek ceramics from Burnt Mount 7 at the Western fortification of Bilsk hill-fort (studies of 1997—2003). About six hundred of Greek wares fragments represented mainly by amphorae fragments were found on the area of 1125 m^2. 79 examples were processed among which there were amphorae fragments: 26 rims fragments, five stems, and 22 walls fragments, and also 11 fragments of tableware.

Ancient Greek ceramics specimens are found both in the objects, and in the cultural layer. For instance, in the pit 44 a rim fragment of a Chiot round-neck amphora dated by 510—480 BC was found, and a fragment of a closed-shape table vessel, perhaps of a pitcher or an oinochoe of the North Ionian origin of the first half of the 6th c. BC, comes from pit 42. Single fragments of amphorae walls are also found in other pits (6, 15—17, 22—25, 34, 42, 43, 54—56).

Bulk of ceramics was found in cultural layer of the excavation area. Material was divided by the place of find: from the burnt mound and from outside of it (in the area between burnt mounds and also within the deposition depth of 0.25—0.75 m and 0.75—1.25 m).

In the layer of the burnt mound some Ancient Greek ceramics were discovered. Amphorae finds are rare, and among a few tableware there are fragments of North Ionic production of the first half of the 6th c. BC.

Situation in the layer outside the burnt mound is some different. The range of Greek ceramics is more diverse here. The highest percentage is represented by the proto-Phasos amphorae dated from the end of the 6th c. to the first half of the 5th c. BC, which is 22 % of general amount of processed Ancient Greek material. The remaining specimens are as follows: 13 % are Chiot round-neck amphorae of the late 6th c. and the first quarter of the 5th c. BC (510—470 BC), 7 % are from Klazomenai of the late 6th c. BC and the early 5th c. BC, also 7 % are amphorae of the first half of the 5th c. produced in Phasos, and 5 % are red-clay Lesbosian amphorae. Grey-clay amphorae of Lesbos of the second half from the 6th c. to the early 5th c. BC and vessels produced in Menda and Chios of the second half of the 5th c. make about 2 %. Tableware is represented by imported vessels from Attike and Olbia. Grey-clay ceramics also came from Olbia.

Distribution of Ancient Greek import by depths showed that fragments found in the burnt mound in the 0.75—1.00 m depth belonged to the early 6th c. BC which allowed the authors to determine the period of formation of deposits under the burnt mound within the limits from the late 7th c. to the middle of the 6th c. BC.

The highest number of Ancient Greek wares was found outside the burnt mound. It evidences that the cultural remains were accumulating here within the period from the second half of the 6th c. to the first quarter of the 5th c. BC. The height of the Ancient Greek import occured from the late 6th c. to the first quarter of the 5th c. BC. Among the Greek ceramics there are distinguished Klazomenaian, Chiot, proto-Phasos, Phasos and Lesbos manufacture centres. Tableware came from Ionia

and Attike through the cities of the north coast of the Black Sea. The latest materials evidence that life at this area ceased in the second quarter of the 5th c. BC.

M.S. Shaptsev

BLACK GLOSS CERAMICS FROM BULHANAK, A LATE SCYTHIAN HILL-FORT

Fragments of black gloss ceramics of the 3rd and the 2nd centuries BC from the excavations of Bulhanak hill-fort in the Crimea are presented. By the usage of given analogies it was determined that the earliest fragments were dated by the first quarter of the 3rd c. BC, which allows the author to date the foundation of the hill-fort by this period. Analysis of the materials helps to presume the existence of Greek ethnic component among the Late Scythian population at the early stage of development of Bulhanak hill-fort. Also there are some grounds to assume that Tauric Chersonesos participated in the foundation and life of this fortification.

Eu.G. Karnaukh

THE RED-GLOSS PELIKAI FROM THE SARMATIAN GRAVES

The finds of terra sigillata (red-gloss wares) in the Sarmatian graves are rather rare. Such vessels were discovered in five Sarmatian secondary burials in narrow rectangular graves on the territory from the Volga to the Dnipro Rivers; they are united by certain common features: profiled rim, short neck, rounded body or with an edge on a shoulder, they are decorated by flutes and have round foot.

By morphological features, among which the handle with figured bend is especially characteristic, such pelikai belong to Eastern sigillata b of the Late Hellenistic period (1st c. BC). Such pottery is usually called Asian Minor production, although the centers of its manufacture are not distinguished.

The most reliable date for such vessels is provided by the finds at the Greek and the Late Scythian sites of the north coast of the Black Sea. The analysis of the red-gloss wares from Chaika hill-fort allowed D.V. Zhuravlev to consider the second half of the 1st c. BC the terminus post quem for the appearance of such pelikai in the north coast of the Black Sea, not excluding the use of them also in the early 1st c. AD.

Based on the finds of such vessels at the Late Scythian and Ancient Greek sites of the north coast of the Black Sea and also based on their absence in Greece and Asia Minor it is possible to suppose their local origin (Bosporan sigillata according to D.V. Zhuravlev). D.V. Zhuravlev, S.V. Demydenko and M.Yu. Treister suggest considering the Asian Minor vessels of Gnathia type to be their prototypes. S.Yu. Vnukov and O.V. Shtepa consider the pottery of the West Slope style from Attike as the initial form. The vessels made in this style also could be the models for the imitation in the Bosporan potteries. Such pelikai, in the scholars' opinion, were made by one of the Aegean Anatolian centers from which the fashion on these vessels consequently spread into the north coast of the Black Sea. Handles of a similar form appear on vessels of Hellenistic period in Ephesus.

Pelike of rather «hybrid» form from the grave 43 in the Late Scythian Zolota Balka cemetery should be noted. It is a small grey-clay vessel with faint traces of polishing. It has morphological features both of pelikai (body with flutes and handles fastened to the shoulders), and of kantharoi (wide neck) of the Hellenistic period. M.I. Vyazmitina dated this grave by the 1st c. BC. Undoubtedly, pelike of the type discussed was the pattern for this vessel.

The Sarmatian burials with pelikae are dated to the period from the 1st c. BC to the 1st c. AD. Finds of such pelikai in the Sarmatian graves are concentrated in two areas: the steppes of Tauria and the Volga and the Don Rivers region. In the first area assemblages with pelikai are dated to the 1st c. BC and they belong to Early Sarmatian culture, while in the other area the assemblages with pelikai are dated to a rather broad period since the 1st c. BC till the 1st c. AD. Such situation could be caused by the remoteness of the eastern Sarmatian camps from Ancient Greek and Late Scythian sites. The broad chronological range of the use of such pelikai could be explained by the value of red-gloss wares in Sarmatian milieu. Finds of such pottery in the Sarmatian burials of the 1st c. BC could evidence the economic links with Bosporus.

V.V. Romaniuk

KNIVES WITH STAMPS OF LITHUANIAN PERIOD FROM KYIV REGION

Several samples of knives with stamps of Lithuanian period of Western European production were accidentally discovered in Tarascha district in Kyiv region in 2009. They were compared typologically with a collection of stamps, discovered in excavations of Rus Cities and identified by their chronological affiliation to one of the interesting and little-studied periods of Grand Duchy of Lithuania in the south of Kyiv region.

V.I. Kvitkovskyi, H.O. Pashkevych, S.A. Gorbanenko

MATERIALS ON AGRICULTURE OF THE HABITANTS OF PYATNYTSKE I SETTLEMENT

New material on agriculture of the Saltivska culture population is presented to scientific circles. Analysis of all components evidencing agriculture from Pyatnytske I settlement in Kharkiv Oblast is made. Natural conditions of the settlement functioning, agricultural labour tools and palaeobotanic spectrum are considered.

The settlement is situated in a wide valley and on sand-dunes of the left bank of the Velyka Babka River, the right tributary of the Siverskyi Donets River. There are no sharp height swings on the valley area, and it gently sinks toward the river. Such areas are universal for usage in agricultural needs. There are soils easy for tillage here.

Tools for tillage, presented by tips of I B 2 type and by typical for Saltivska culture haft coulter, could be used on the instrument the most close to the plough.

Palaeobotanic spectrum of the monument is presented by 33 imprints of corn seeds and cultivated plants seeds. Maximum (14) of imprints belongs to corn seeds of hulles barley, then go millet (8) and bread wheat (7). Also discovered (by the imprints) were emmer wheat, rye, oats, and pea. Insignificant amount of emmer wheat and rye is not typical, as well as quite high quantity of bread wheat.

Other evidences on agriculture are typical of the Saltivska culture bearers.

O.P. Motsya

«UKRAINIAN ISSUE» IN WORKS OF VOLODYMYR ANTONOVYCH

The Name of the founder of Kyiv School of the historians and one of the pioneers of Ukrainian science-based archaeology is well-known in academic circles since the second half of the 19th c. One of the directions of his activity was the «Ukrainian issue», a development of the main arguments for individuality of autochthonic population of the south of Eastern Europe during many ages and decades.

Volodymyr Bonifatiyevych pronounced his well-reasoned views in both scientific and journalistic articles, using various terms: «Rus», «Little Rus», «South Rus land», «South-Western Rus», «Zaporizzhya», and «Ukraine». The latter name progressively started prevailing in his works in the process of development of his local patriotism and shift from «Polish» to «Ukrainian» self-consciousness.

All his studies the scholar was building on the development of such theoretical statements, which were progressive for his time, as «nation», «nationality», and «people». However, considering continual control by the then authorities, his propositions were circumspective enough.

Undoubtedly, the next generations of historians, archaeologists, and politicians used the meaning of the works of V.B. Antonovych mostly only in the «Ukrainian» context of enlightening of sore subjects. It is ongoing «ad interim».

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Oleh Mykhailovych Prykhodnyuk, a Researcher of the Early Slavonic Antiquities

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M.V. Lyubychev

CHRONOLOGY OF CHERNYACHIV CULTURE SETTLEMENTS IN THE FOREST-STEPPE ZONE BETWEEN THE DNIPRO AND THE SIVERSKYI DONETS RIVERS

The relative and absolute chronology is based on closed complexes of burials. Issued into chronological systems, they allow «controlling» the chronological indicators from the settlements. Dating finds from Chernyakhiv culture settlemenrs in the forest-steppe area between the Dnipro and the Siverskyi Donets Rivers (35 settlements analyzed) are systematized into the first level chronological indicators with definite and quite narrow dating of the items (fibulae, glass vessels, buckles, and bone combs) and the second level ones (amphorae fragments). There are first level chronological indicators at complexes of the phases 3—5 in Ye.L. Horokhovskyj's chronological system of Chernyakhiv culture burial grounds in Ukrainian forest-steppe zone, while most of them are in the phase 4 (350—400). There are two phases of development at the burial ground adjacent to Voitenky settlement with a considerable number of chronological indicators (phases 4 and 5, by Horokhovskyj, or steps C3/D1 and D1 by Tejrala, or periods 4 and 5 in O.A. Hei and I.A.Bazhan's system). Chronological indicators peculiar for them are also found at the settlement.

Chernyakhiv culture settlements in the region appeared not earlier than the phase 3 (330—380), however, their majority most probably refer to the phases 4 and 5 (370/380—410/420).

A.V. Skyba

FIBULAE FROM THE 7th c. HOARDS IN THE DNIPRO RIVER REGION

Zoomorphic, zoo-anthropomorphic, with an arc of eagles' heads, radiate-headed of the Dnipro type, radiate-headed of the Eastern German group, and fibulae with returned foot, wide-plated fibulae from the 7th c. hoards in the Dnipro River forest-steppe region are analyzed. They are known from 12 hoards today. Fingers-like fasteners were the most popular among them: they belonged to 11 sets. In seven hoards fibulae of various types were found.

Typological analysis of zoo-anthropomorphic fibulae showed that they are represented by the early examples in the hoards. Consequently, it was concluded that zoo-anthropomorphic and zoomorphic fibulae appeared independently. The most expressive in the latter is griffin motive which apparently was original for this type of fibulae.

In most hoards fasteners are combined with heraldic belt sets. Artistic and stylistic comparison of these two categories showed parallels between them which allow the author to view them as indivisible artistic and stylistic course in Early Mediaeval culture.

Ya.V. Volodarets-Urbanovych

WHEEL-TURNED FURNACES AT KANTSERKA GULLY

20 Early Mediaeval furnaces were studied at Kantserka Gully. They were rounded in plan, from 1.50 to 2.25 m in diameter and had two-tiers structure. Furnaces belong to the class with vertical passage of hot air. Three blocks are traced: burning, thermal conduction dividing, and fire-chambering. Each of them had a set of special devices. Furnaces distinguish only with chambers for fuel and thermal energy distributors. This fact allowed the author to refer the furnaces to the sub-class 2 (furnaces 3, 4, 6, 8, 10, 12—14 and 18) and 3 (furnaces 2 and 5). According to peculiarities of the structure of the room situated under thermal conduction dividing block, most of furnaces from Kantserka belong to the type 2, and only the furnace 18 belongs to the type 6b.

Furnaces belong to those having formal thermal protection. Moreover, deepening the furnace into the ground contributed to its wind protection. Combining of these two protection classes form the forth class, of thermal and wind protection, which indicates the seasonal character of summer and autumn works. This fact, in its turn, presupposes that market of products was not permanent and could not provide potters for agricultural production, and it also testifies of absence of long stable conditions for economical development. However, constant seasonal production usually is relied on local consumer and appears at constant settlements.

When the furnace walls are preserved enough it is possible to count bulk of burning chamber. Maximum volume for Kantserka gully furnaces is 3.5 m^3. Such volume is caused by the height of jugs produced here.

Coming from the height and maximum diameter of the products, and also of furnaces absolute parameters, the quantity of products made in Kantserka gully is counted. Each furnace run up to 10 production cycles, and consequently, was used for maximum a season. It indicates for a possibility of existence of this centre for about 20 years. Potters could had produced for this period 2400 three-handled 64.0 cm high pitchers or 5800 one-handled 48.0 cm high jugs, or 11600 one-handled 38.0 cm high jugs. Rejects fragments of which are found at the settlement are counted here. This centre products contribution is a separate problem which requires to be discussed individually.

V.H. Putsko

BYZANTINE PLASTIC ART OF THE MEDIAEVAL CRIMEA

Materials accumulated during the long period of archaeological research of the Crimean mediaeval cities allow the author to interpret the finds more differentially in the context of Byzantine applied art. It concerns, first of all, the pieces of art made

of bone, steatite, bronze, and also painted ceramics. Among them there are items imported from the metropolis, products of local craftsmen, and examples of craftsmanship of Byzantines working in Kyiv at the beginning of the 13th c. The Eastern Christian tradition and also Islamic East influenced this art.

I.B. Teslenko

THE CHRONOLOGY OF A GROUP OF KITCHENWARE FROM THE 15th CENTURY SITES IN THE CRIMEA

Presented in the article are the issues of chronology of a group of kitchenware vividly represented by pots with «rail-shaped» profile of rim and significant quantity of bright black acute sand (pyroxene?) in the clay (PRR group).

This group of ceramics was not considered as a separate classification unit till recently. Its chronology, origin, and genesis were not investigated separately. These problems were observed for the first time by the author of the publication based on the materials of her own excavations at the sites on the south coast of the Crimea: Aluston fortress (1998), temples with necropolei on Ayu-Dag Mountain (1999), and in Malyi Mayak village (2003). At these sites, fragments of PRR group ceramics were carefully sorted and separately recorded when artifacts were processed. Owing to this fact, it allowed the author to trace some regulations in the process of their archeologization and certain peculiarities of the chronology.

According to observations, kitchenware of PRR group appeared in the Crimea not earlier the middle of 15th c. It is that period when its first examples, one-handled pots and perhaps jugs are recorded. Based on them new types of vessels appear in the future (16th—18th c.), and the evolution of rail-shaped rim towards the lengthening and simplifying of profile is traced.

Place of production of PRR group ceramics is not determined yet. It is also hard to define definitely the region of wares circulation because unlike synchronous glazed vessels, the 15th—18th c. kitchenware received a very little attention. Today, along with Taurica, finds of PRR group items are known from Adigean settlements in Kuban. Moreover, a significant number of pits and jugs come from excavations of the 16th and the 17th c. layers on the place of widely known Roman baths in Istanbul. On opinion of Nursen Ozkul Findik, a Turkish researcher excavating Iznik, such kitchenware was widely spread in Anatolia in fact in all periods of mediaeval history. It is likely that its origin should be related with this region. Judging from the data presented in A.N. Maslovskyj's works, and also from information of Turkish written sources analyzed by A. Halenko, kitchenware long distance transportations were not at any rate extraordinary cases.

It should be noted that PRR group comes into circulation on the territory of Crimea practically at the same time as tableware of Miletus Ware group of so-called Iznik production. The period of its usage in Taurica is synchronous with the period of Turkish domination above the straits and the Black Sea region, and it comes to the end together with collapse of Porte. The PRR group ceramics as well as Miletus Ware can be used as chronological indicators which allow the dating of archaeological complexes by the period not earlier than the middle and the second half of the 15th c. Fragments PRR group kitchenware are found in various cultural deposits more frequently and plentifully than Miletus Ware. This condition makes PRR group more valuable for archaeological complexes chronology.

K.V. Myzgin

CERTAIN RESULTS OF RESEARCH AT CHERNYAKHIV CULTURE SETTLEMENT NEAR NOVOBERETSKE VILLAGE

Described are the results of research of the Chernyakhiv culture settlement near Novoberetske Village of Pervomaysk Region in Kharkiv Oblast in 2008—2010. The site is situated on the western, northern, and southern slopes of a gully, in the bottom of which a river of the fourth order of the Don system flowed. The settlement is the most south Chernyakhiv culture site in the region today. Its territory (16—18 hectares) is conventionally divided into two areas: A and B. Only the area A was studied. Due to the site's stratigraphic conditions its cultural layer is well preserved. The remains of two overland structures and two husbandry pits were studied at the area of excavation trench I.

Finds on the surface of settlement and in its layer are represented by fragments of wheel-turned, or more rarely of hand-made, pottery, fragments of Shelov F type amphorae, earthenware (fragments of sinkers, a spindle whorl, a bead), stoneware (fragments of grindstones), glassware (beads), ironware (a knife, awls fragments, etc.), and silverware (temporal ring).

Objects studied are the remains of two overland structures with cob walls. Research of their plastering allowed the author to define three groups of imprints of wooden elements: twigs, poles, and slabs. While poles are the main part of imprints in the object 1, poles are such in the object 2. The comparative analysis of plastering imprints from the two objects shows a significant closeness of the buildings' structures.

Defining the settlement chronology is complicated because of the absence of chronological indications with «narrow» dates. Amphorae material and beads found at the site make it possible to date the settlement by the 4th c. and the beginning of the 5th c.

N. Profantova, M. Kuna

THE 6th—7th c. EARLY SLAVONIC SETTLEMENT ROZTOKY NEAR PRAGUE, CZECH REPUBLIC

There are known about 145 settlements of Prague-Korčak culture (the 6th—7th c.) on the territory of Czech Republic. The most fully studied are a settlement in Březno (8 houses and 18 pits) and a settlement in Roztoky near Prague. The houses (9—10 m^2) prevail in the southern part of this settlement and husbandry pits are only in the northern part of the site.

Roztoky settlement is situated on the left bank of the Vltava River, on the narrow and clearly naturally separated belt from the surrounding relief of 25 hectares area and 1500 m length. After excavations in 2006 estimated number of dwellings is from 600 to 700.

Such Prague-Korčak culture settlements with a great number of dwellings are known in Ukraine: Rashkiv 1 (80 houses) and Rashkiv 2 (97 houses) of the end of the 8th c.

A.I. Aibabin

ANTHROPOMORPHIC PLATE FROM THE EXCAVATIONS IN ESKI KERMEN FORTRESS

Anthropomorphic cast plated pendant found in Eski Kermen hill-fort is published. It enriches the series of items known from the treasure from Martynivka and other finds, and it is apparently dated by the first half of the 7th c.

V.V. Koloda

DWELLING WITH CACHE AT MOKHNACH HILL-FORT

Published are the materials of the dwelling 33 of Saltivska culture studied at Mokhnach hill-fort in 2010. Coming from the structural peculiarities and the interior, a yurt-like permanent dwelling belonged to the former nomad. Within its borders a cache was discovered containing a large number of items (arms, rider munitions, everyday life goods and goods for personal usage, for decoration and for cults). There are items made of precious metals or with the use of them in each group of objects. Among them a unique silver cosmetic plate with a chain for attaching to a belt should be noted due to its artistic design. Stratigraphy of the site, traditions of house-building and interior, as well as the whole set of finds undoubtedly evidence that this complex belongs to Saltivska culture which represents the antiquities of Khazar Kaghanate.

The peculiarity of the dwelling 33, as well as of the whole estate, is that there are no pits-granaries which are common for this part of the hill-fort. This fact, and also a great number of tare pithoi, evidence that, unlike their near neighbours, habitants of this estate were not involved in agricultural grain production, but most likely they were the settled nomads.

There is noticeable one of the stone spindle whorl with inscribed four symbols-tamgas. Three of the symbols are modifications of «two-sided bident», one of the most popular heraldic symbols of the south of Eastern Europe, the fourth one is quite original. Based on patterns of development of heraldic symbols, it can be presumed that the composition of the cache was gathered within a single family (kin) during several generations. Taking into account this thesis, as well as the analogies to the items, the cache was replenished within the period from the first half to the middle of the 9th c. Finds of items made of precious metals in the set testify about quite high (prosperous) economic level of a master of the dwelling.

M.S. Serheyeva

WOODWORK OF EVERYDAY USAGE FROM KOLODYAZHYN

Woodwork found from 1948 to 1953 at Ancient Rus hill-fort near Kolodyazhne Village in Zhytomyr Oblast (Ancient Rus Kolodyazhyn city) is described in the article. Artifacts are divided into two groups: small remains of inner structures or, perhaps, equipments and everyday goods.

Ware and tare containers form the majority of the preserved domestic items. They are divided into cooper's, hollowed out, carved, and turned items according to the production technique. There are also containers made of bark and phloem. Wood determination showed that pine was the material for cooper's wares, maple, ash, and alder in one case were used for turned wares production. There are remains of three carved wares made of oak.

Fragmented spoons, a part of a churn, and a spindle were also found among the everyday usage inventory.

Analysis of items and of woodworking inventory allow the author to conclude that besides handicraft industry, specialists related with woodwork, coopers, carvers and turners, could had lived in the city. Combination in some complexes of narrow specialized instruments with agricultural tools, and sometimes with arms, testifies that woodwork was not the only activity for their owners. However, despite the fact that everyday life items production did not refer to narrow specialized crafts, it is possible to state that there was a circle of people who supplied with their products not only themselves, but also a certain number of customers.

M.M. Iyevlev, A.A. Kozlovskyj

CELLARS OF ANCIENT KYIV FROM THE END OF THE 10th c. TO THE FIRST HALF OF THE 13th c.

One of the little studied types of husbandry buildings for provisions storage is discussed. Various types of such husbandry buildings made on the territory of Kyiv Rus are well known by this time. However, it should be noted that such husbandry structures as cellars almost have not preserved on the territory of Kyiv.

There are records in Ancient Rus written sources of cellars and frames on the territory of large estates (princes', boyars', merchants' and in monasteries). Judging from chronicles and archaeological data, the surface part of cellar was erected over the underground one. Various provisions which did not require low temperatures were stored in the overland part. These

parts together formed a separate husbandry structure which in chronicles bore the name «a frame». Comparing descriptions of these husbandry structures in the chronicles, it should be noted that before the 11th c. both names, «cellar» and «frame», were used, while since the 12th c. only «frame» was used.

Several structures of such type were discovered on the territory of Upper Kyiv city in recent years. Their main feature is the fact that they are holed in subsoil and almost did not have bonding. In one case a cellar was overlapped with wood, which was covered with soil. Four such cellars are discovered on the territory of Upper Kyiv by this time: one at 2a Velyka Zhytomyrska Street, two at 12 Artema Street, and one at 3 Desyatynnyi Lane. A cellar at 2a Velyka Zhytomyrska Street is the best preserved. Three cellars were quite large: 15—20 m². They situated on the territories of estates: two were boyars' and one was apparently at the monastery. These were buildings confirm evidence from the chronicles and bylynas concerning cellars' structure and size. Overland structures (frames) apparently existed over the two of them.

K.M. Kapustin

ARCHAEOLOGICAL MONUMENTS OF THE DNIPRO RIVER MIDDLE REGION FROM THE MID OF THE 13th c. TO THE 15th C. (Based on the Materials of Archaeological Prospecting Since the 1940s Till the Beginning of the 1980s)

Collections accumulated by several generations of Ukrainian scholars are kept in the scientific funds of the Institute of Archaeology of NASU. Materials of archaeological prospecting since the end of the 1940s till the beginning of the 1980s, which were almost never used in scientific developments, are of special interest for the modern researchers. Recurring attribution and dating of the finds collected in the middle and the second half of the 20th c. significantly widen the source study base.

Materials obtained during the archaeological prospecting on the territory of Kyiv, Zhytomyr, Cherkasy, and Chernihiv Oblasts are analyzed here. Finds of the Golden Horde and Lithuanian periods were found within 14 collections which allowed the author to present to scientific circulation the data on 22 sites not known before, mainly unfortified settlements, dated from the middle of the 13th to the 15th c.

Materials of post-Mongolian period are presented mostly by the finds of ceramics which was dated based on works of S.O. Bilyayeva, L.I. Vynohorodska, and O.V. Onohda.

L.R. Grygorieva

KYIV ARCHAEOLOGICAL CENTRE IN THE END OF THE 19th c. AND THE BEGINNING OF THE 20th c.

Scientific and organizational activity of Kyiv archaeologists at the edge of the 19th and the 20th c. is discussed, namely the preparation and holding of the III and XI Archaeological Congresses in Kyiv, compiling of archaeological maps, publishing of numerous articles and publications on various aspects of archaeology and history of ancient population of Ukraine.

Particular attention is paid to the role of V.B. Antonovych who can be considered to be a founder of Ukrainian archaeology. This scholar's domain is known for a great number of courses: Ukrainian history research, archaeological sites study, organization of Archaeological Congresses in Kyiv, work in Museum of Antiquities at St. Volodymyr University, and also research on numismatics and anthropology.

It also should be noted that the scholar was a founder of so-called Kyiv documentation school of historians with such members as M.S. Hrushevskyj, D.I. Bahalei, I.A. Lynnychenko. O.S. Hrushevskyi, D.M. Shcherbakivskyj, V.M. Shcherbakivskyj, M.V. Dovnar-Zapolskyj, V.Yu. Danylevych, V.M. Bazylevych, N.D. Polonska-Vasylenko, and others. Many of V.B. Antonovych's followers worked on problems of archaeology and history in Kyiv, others continued their own studies working in other universities; for instance, D.I. Bahalei and for some time V.Yu. Danylevych worked in Kharkiv University, I.A. Lynnychenko — in Odesa University, M.S. Hrushevskyj — in Lviv University, as a result at the beginning of the 20th c. new centres of study the history and archaeology of Ukrainian lands were founded.

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ABBREVIATIONS

АВУ	—	Археологічні відкриття в Україні
АДУ	—	Археологічні дослідження в Україні
АО	—	Археологические открытия
БИ	—	Боспорские исследования
ВДИ	—	Вестник древней истории
ВХУ	—	Вестник Харьковского университета
КСИА	—	Краткие сообщения Института археологии АН СССР
МАЭСУ	—	Музей археологии и этнографии Слободской Украины
МИА	—	Материалы и исследования по археологии СССР
МЧК	—	Могильники черняховской культуры
НА ІА НАНУ	—	Науковий архів Інституту археології НАН України
СА	—	Советская археология
САИ	—	Свод археологических источников СССР
СГЭ	—	Сообщения Государственного Эрмитажа
Тр. МАО	—	Труды Московского археологического общества
AAMT	—	Advances in Archeological Method and Theory
AM	—	Arheologia Moldovei, Jaşi
ARA	—	Annual Review of Anthropology
KW	—	Kultura Wielbarska w młodszym okresie rzymskim, Lublin
PA	—	Památky archeologické
BPS	—	Baltic-Pontic Studies. Poznań

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   Петров В.В. Новый памятник древнего зодчества // Памятники древнего зодчества. — М.; Л., 1985. — С. 45—56.

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