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The Vengerovo-2A Neolithic Cemetery, Southwestern Siberia: Results of a Multidisciplinary Study*

The article addresses Neolithic burials at Vengerovo-2A in the Baraba forest-steppe. Funerary and ritual complexes include a centrally located grave with an enclosing ditch separated into segments, which are oriented according to cardinal points. The funerary rites and the orientation of bodies are variable. A peculiar feature of this cemetery is that burials are of two kinds: (1) collective under mounds, arranged in special constructions with ditches, and (2) single without mounds. Reconstructed stages in the arrangement of burials were as follows: first, a cup-like hollow and a ditch delimiting the funerary space were dug. Next, the body was placed in the grave, and possibly covered with earth. Then, the remaining bodies were placed on top in several layers. The construction may have included a wooden roof. Finally, a low earthen mound was made above the grave. The Vengerovo-2A burials resemble those at Protoka, in the Baraba Plain. Funerary goods found at Vengerovo-2A were made of clay, bone, horn, stone, and shells. Intact vessels are described. Those from the graves and ditches and those remaining from the funeral feast differ in terms of fabric and decoration. On the basis of the petrographic analysis of stone tools from Vengerovo-2A and coeval sites in Western Siberia, pebbles were taken from the Irtysh alluvium. The absolute chronology of the burials is compared with that of the Protoka burial ground and of the Avtodrom-2 and Serebryanka-1 settlements in Baraba. Vengerovo-2A dates to the Late Neolithic (6th–5th millennia BC). Its burial rite and pottery evidence a blend of several traditions, and the same applies to other Neolithic sites in northern Eurasia. Finds from Vengerovo-2A are paralleled by those from the taiga zone of Western Siberia and the Eastern Urals, as well as from the Baltic and Karelia. Cranially, Vengerovo people display the Northern Eurasian trait combination. This fact along, with skeletal and paleogenetic findings, places them within what can be described as the Uralian and Western Siberian Neolithic community.

Keywords: *Neolithic, ritual, funerary rite, multidisciplinary studies in archaeology, Baraba.*

Introduction

The Neolithic in the southern region of the West Siberian Plain has been poorly studied so far; thus information about the detection of a new settlement and funerary complexes is of interest to specialists. The importance of the discovery in 2011 of the Vengerovo-2A funerary and

ritual complexes in the Baraba forest-steppe, which reflect unique sacral practices and contain a rich set of artifacts, can hardly be overestimated. The obtained materials were subjected to multidisciplinary studies that allow a move to a fundamentally new level of interpretation. The authors assume that the complexes under consideration are just a part of a group of burials to be searched further. However, even the materials already found and studied allow the understanding of the Neolithic epoch in Western Siberia to be extended.

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The site was discovered in the course of investigation of a Krotovo culture settlement that overlay stratigraphically some Neolithic burials (Molodin, Mylnikova, Nesterova et al., 2011). In 2012–2015, two funerary and ritual complexes and a single flat-grave burial were studied (Molodin, 2012; Molodin, Mylnikova, Nesterova et al., 2012, 2013). During the excavation of dwellings No. 7 and No. 8, attributed to the Krotovo culture, stone tools and pottery fragments, obviously belonging to another destroyed complex, were found in the south-eastern part of the site. In ancient times, the burials were covered by earthen mounds; however, nowadays their visual determination is hampered by repeated destruction of the terrace's edge. In the course of a search for Neolithic objects within the promising areas, extensive geophysical, geochemical and petromagnetic studies were conducted (Molodin, Bortnikova, Matasova et al., 2012).

Characteristics of the funerary complexes

The Vengerovo-2A cemetery is located at the edge of the second terrace above the flood-plain on the left bank of the Tartas River (Vengerovsky District of the Novosibirsk Region), at the location of the Bronze Age Vengerovo-2A settlement (Fig. 1). The Neolithic funerary and ritual complexes are spaced 30 meters apart (Fig. 2), and present complicated structures composed of a centrally located burial-pit with an enclosing ditch (Fig. 3–5). The reconstructed total area of each complex is at least 100 m². The stratigraphic sequences of both complexes are distinguished by a thick lens of mottled black-gray sandy loam, with small yellow and black inclusions of various intensity, that overlies the burial-pit and ditches. This circumstance substantiates the assumption that earthen structures, whose shapes and sizes cannot be determined at present, were arranged over them in the past.

The ditches (1–2.5 m wide) enclosing the burial-pits are separated into segments, the gaps between which are oriented according to cardinal points. The ends of some segments have hollows up to 0.8 m in depth, the filling of which contained carbonaceous and calcined lenses. This suggests that the ditches were not immediately backfilled. There are five pits arranged along the southern area of the ditch in complex No. 1.

A burial-place of an individual laid on his/her back in the extended position was discovered at the bottom of the south-eastern ditch segment of complex No. 2. Another burial (secondary) was made in the pit between the north-western area of the ditch and the central burial hollow. Four pole-pits were recorded on the south-eastern side of the central grave. A “hiding-place”, in the form of a small recess containing tarpan's bones and an unusual item made of elk horn, was discovered in the wall of one of the ditch segments (Fig. 5).



Fig. 1. Neolithic burial grounds in the Baraba forest-steppe.

The central part of the complexes under study has a cup-like hollow, rounded or subrectangular in plan (up to 1 m). The diameter of the burial-pit of complex No. 1 does not exceed 3 m, while the dimensions of complex No. 2 are 4 × 5 m. The minimum number of buried people is 8 in the central pit of complex No. 1 (Fig. 6, 7), and 19 in complex No. 2. (Fig. 8–12), respectively. The central hollow comprises one more pit—intended, probably, for the main burial. Various burial methods (inhumation, cremation, secondary and partial burials) as well as different positions of the buried (bodies extended on the back with the facial part of the skull turned towards the south-east; with the raised upper part of the body and head and the legs bent at knees; or semi-sitting positions with strongly bent legs so that the feet bones were under the pelvic bones, with half-bent legs leaning against the wall of the burial-pit) are recorded. Hands were located on the pelvic bones, or under them. Feet are strongly extended with the toes turned outwards. Judging by the characteristic positions of the bones of legs and the upper parts of skeletons, some buried were tied tightly when being placed in burials (complex No. 2, grave 1, skeleton 6). The buried people are mainly oriented in the NE direction, with a deviation to the N or NNE. Many burials are placed on top of each other (up to six layers) (see Fig. 6–12). The grave goods are extremely varied (Fig. 13, 14). Isolated items were found in the structure above the graves, and in the filling of the burial-pits and ditches.

Flat-grave burial No. 1 was discovered 4 m to the south of complex No. 2, close to the terrace's edge (Fig. 15). A subrectangular pit with dimensions of 1.6 × 0.3 m and a depth up to 0.7 m above the layer of virgin soil was oriented along the NE–SW line. The skeleton of a child (5.0 ± 1.5 years old) buried on his back, in the extended position, was found at the bottom of it. The grave goods are represented by two vessels, a shell, and a flake.

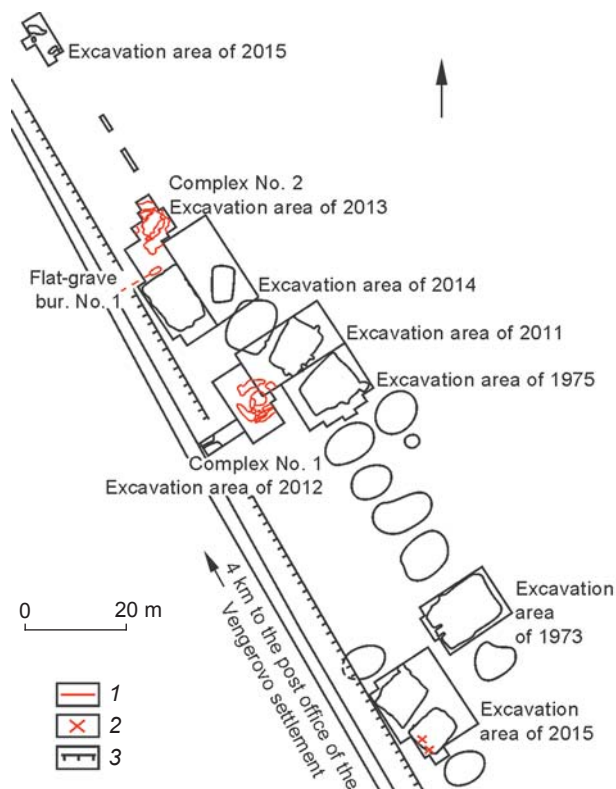


Fig. 2. General plan of the Vengerovo-2A site.
1 – boundaries of the Neolithic objects; 2 – location of certain Neolithic artifacts; 3 – edge of the terrace.

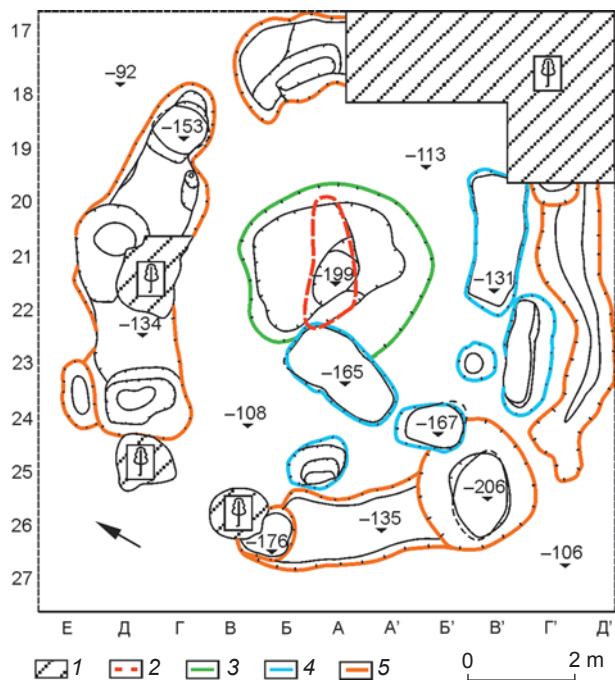


Fig. 3. Plan of funerary and ritual complex No. 1.
1 – areas overgrown with trees; 2 – boundary of the location of skeletons; 3 – burial-pit boundary; 4 – boundaries of pits; 5 – boundaries of ditch segments.



Fig. 4. Funerary and ritual complex No. 1. The photograph was taken after excavation of the filling and removal of the skeletons.

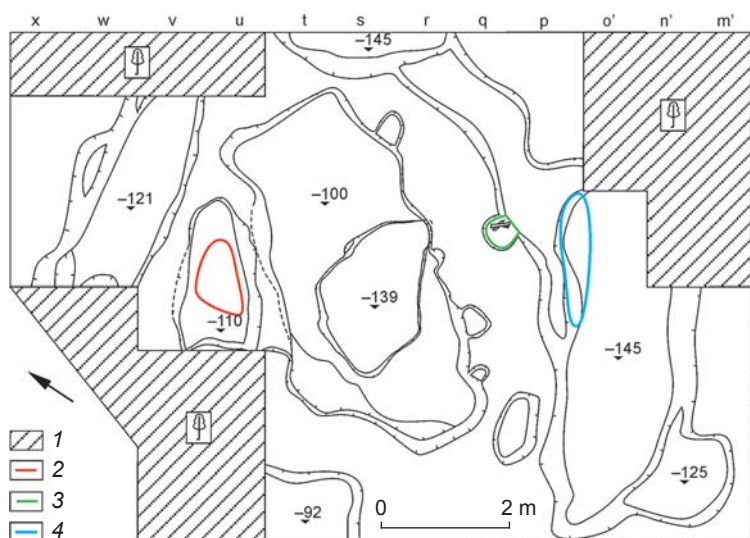


Fig. 5. Plan of funerary and ritual complex No. 2.
1 – areas overgrown with trees; 2 – grave 3; 3 – “hiding place”; 4 – grave 2.

Fig. 6. Location-plan of skeletons in funerary and ritual complex No. 1.
1 – bur. No. 1, horizon 1; 2 – bur. No. 1, horizon 2; 3 – bur. No. 1, burnt bones' distribution zone; 4 – bur. No. 1, horizon 3; 5 – bur. No. 3; 6 – bur. No. 2; 7 – bur. No. 4; 8 – boundary of the central hollow of burial-pit; 9 – stone side-scraper; 10 – stone blade.



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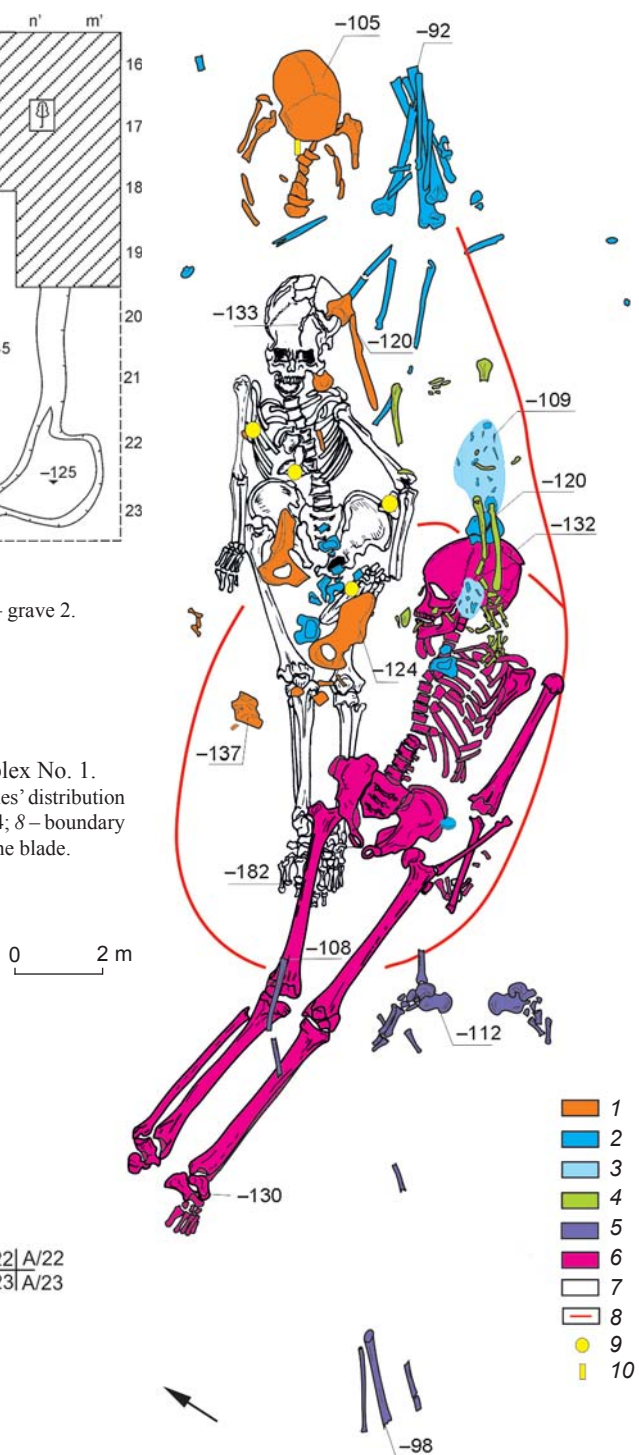


Fig. 7. Fragment of skeleton 4 from funerary and ritual complex No. 1.

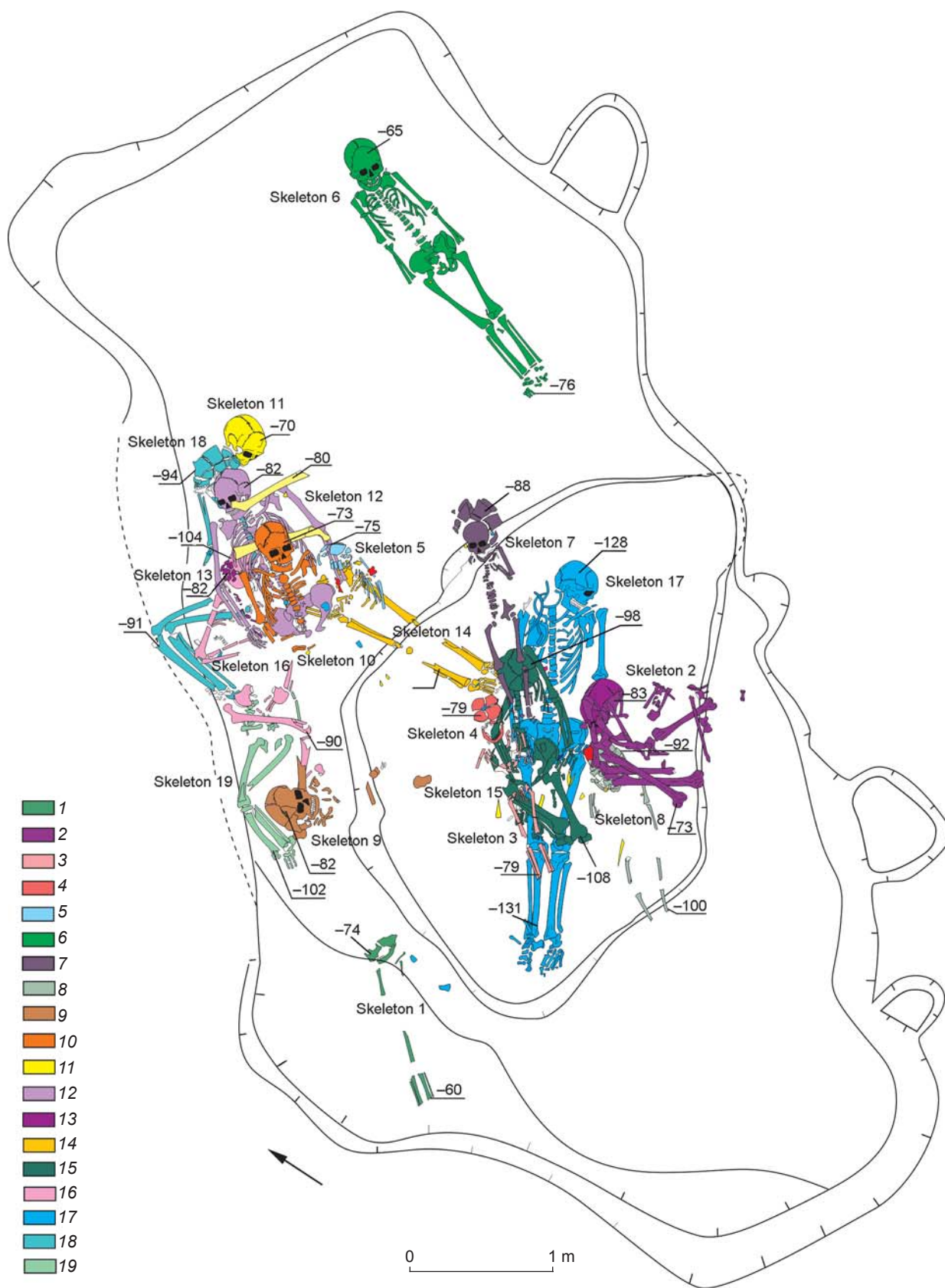


Fig. 8. Location-plan of skeletons in the central burial-pit of funerary and ritual complex No. 2. The numbers of skeletons correspond to the legend-numbers.



Fig. 9. Site of the funerary and ritual complex No. 2 in the process of cleaning the horizon 3.



1



Fig. 10. Site of the funerary and ritual complex No. 2 in the process of cleaning the horizon 4.
1 – skeleton 8; 2 – stone blade found under the skull of skeleton 8.



Fig. 11. Site of the funerary and ritual complex No. 2 in the process of cleaning the horizon 5.



Fig. 12. Skeleton in grave 2 of funerary and ritual complex No. 2.

Reconstruction of funerary practices

The remains of 29 persons have been discovered in the burial ground so far. Age and sex definitions were made for 26 individuals: 11 men (including a 14–15-year-old teenager), 8 women, and 7 children up to 12 years old.

Stratigraphic and planigraphic observations reveal certain special features of the complexes' construction and function. At first, the main cup-like hollow and a ditch delimiting the sacral space were prepared. Then, the main burial was performed by placing a body into the burial-pit. In the territory of complex No. 1, the main burial is bur. No. 4; a deceased adult woman (skeleton 4) was placed there in a semi-sitting position with highly raised upper part of the body and extended legs (see Fig. 6, 7). After this, the central part of the burial-pit was covered up with soil to the level of the head. The remaining bodies buried in this grave, which are represented in the secondary burials, were placed

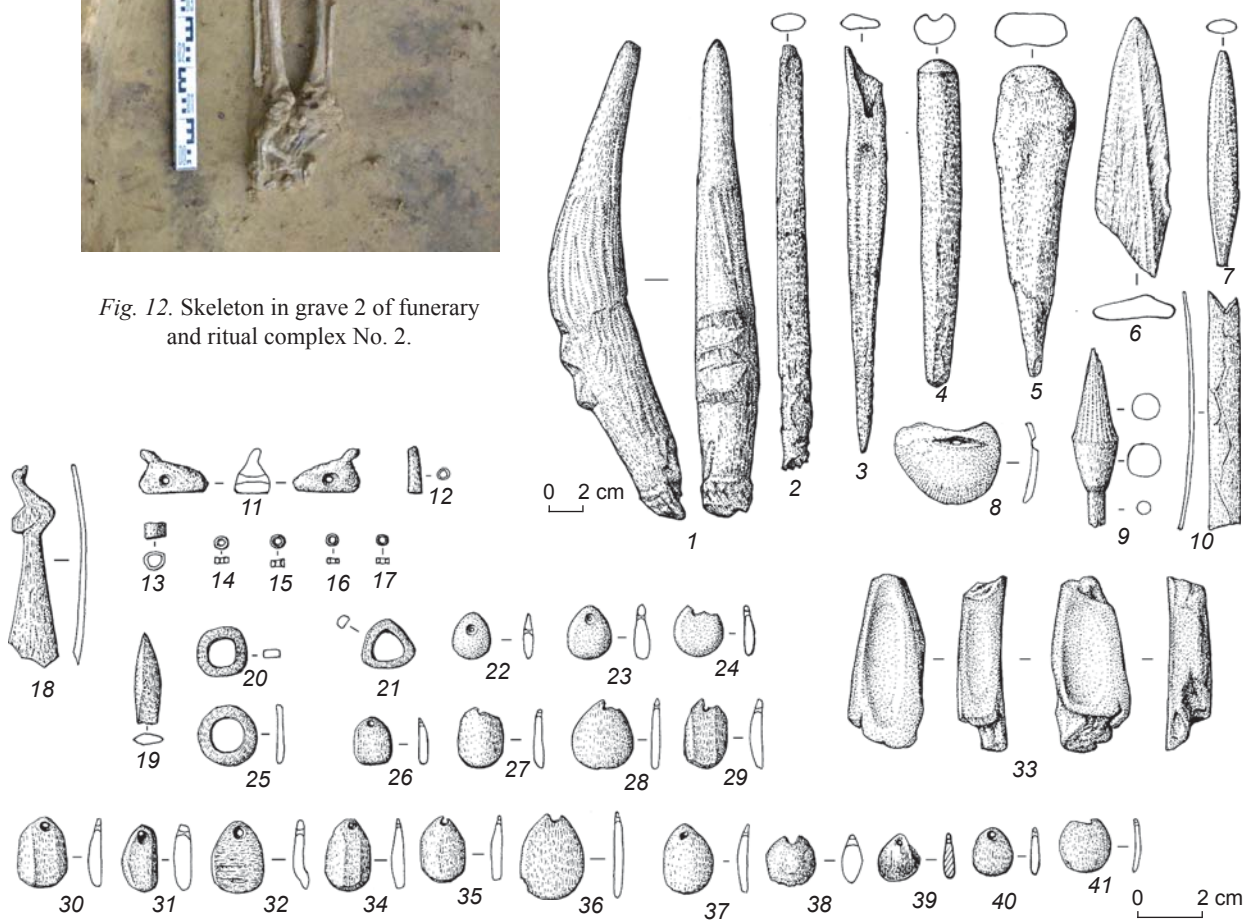


Fig. 13. Grave goods from the Vengerovo-2A burial ground.

1 – horn item; 2–5 – bone borers; 6 – bone point of a side-bladed tool (?); 7, 9, 19 – bone arrowheads; 8 – shell pendant; 10 – bone blade; 11 – bone figurine; 12–17 – tubular beads made of shells and bones; 18 – bone pommel of a dagger; 20, 21, 25 – bone rings; 22–24 – stone pendants; 26–32, 34–41 – bone pendants; 33 – ceramic abradar. 1–5, 7–41 – complex No. 2; 6 – complex No. 1.

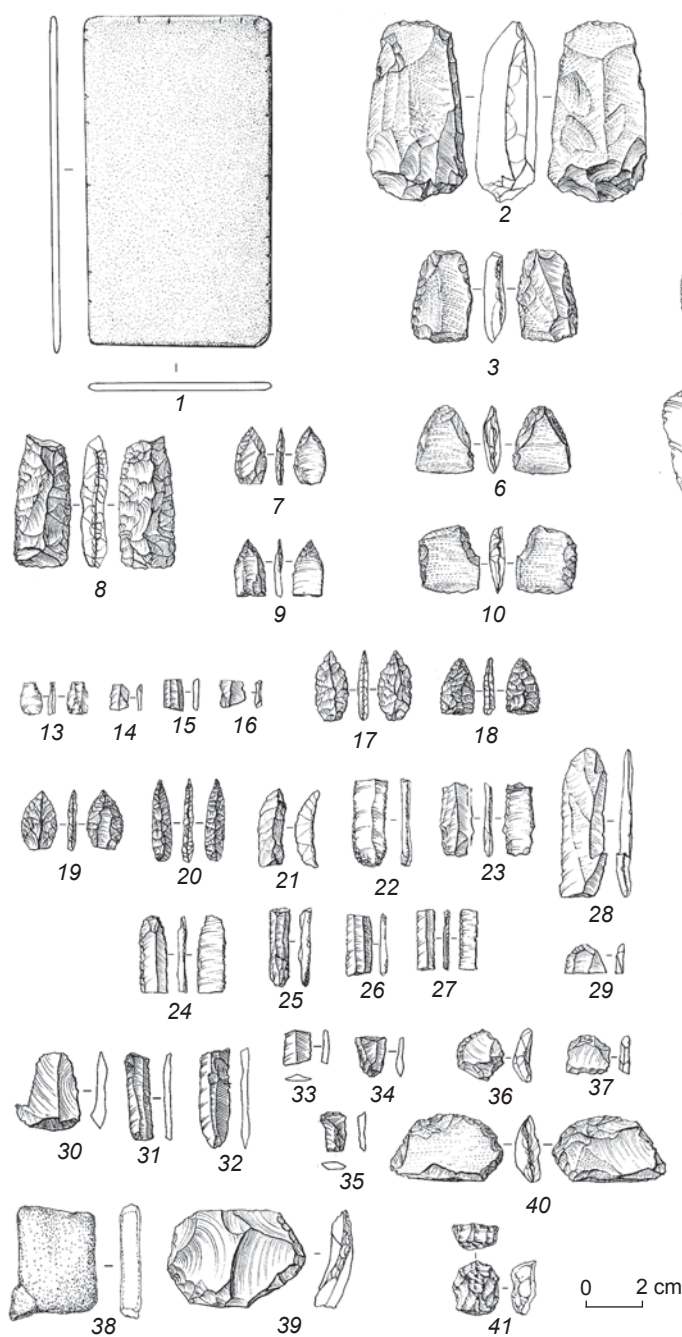


Fig. 14. Stone tools from the grave goods of the Vengerovo-2A burial ground. 1 – polished tile; 2, 3, 6, 10 – polished adzes; 4, 5, 11, 12 – side-scrapers; 7–9, 17–20 – arrowheads; 13–16, 21–28, 31–34 – blades; 29, 35–37, 39–41 – end-scrapers; 30 – flake; 38 – abrader. 1–3, 6–10, 14–21, 23–37, 39, 40 – complex No. 2; 4, 5, 11–13, 22, 38, 41 – complex No. 1.

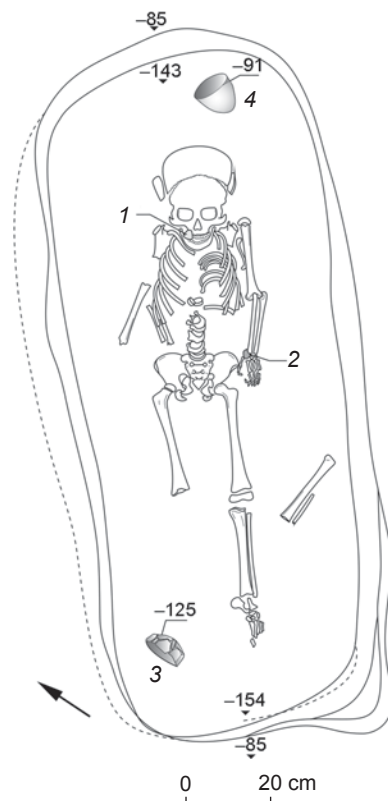


Fig. 15. Layout of flat-grave bur. No. 1. 1 – stone flake; 2 – shell; 3 – vessel 1; 4 – vessel 2.

in three layers on top of the main burial (see Fig. 6). The dead bodies were probably stored somewhere before their commitment to the earth, and some parts were lost during that period. The remains of the corpse were placed in the grave in the anatomical order, and in accordance with the rules of orientation accepted

in mortuary rituals. In complex No. 2, the burial of a man (skeleton 17) extended on his back (see Fig. 8) can be considered the main one. Special features of the grave's structure and the positions of the buried suggest successive expansion of the pit's space for secondary burials of the deceased.

Most likely, the complexes remained open for some time; this is indicated by the various degrees of preservation of the skeletons, and by the partial character of their burial (e.g. in complex No. 2: separate skulls in skeletons 4, 9, 11; the upper parts of bodies in skeletons 5, 10, or the lower parts of postcrania in skeletons 14, 19), and also by the presence of pole-pits on the south-eastern side of the grave. These pits could have been related to the construction of a roof over the burial-pit, on which the deceased's body was initially placed. As the light roof disintegrated, human remains either fell into the uncovered burial-pit, or were placed there intentionally. Such a method of burial (possibly engendered by certain difficulties related to committing the deceased to the earth during winter) would explain why the complex contained only parts of skeletons. A similar method of so-called air burials, performed on special platforms, is known among a number of Siberian and Far Eastern peoples: for example, among the Amur Jurchen people, as proven by the studies of V.E. Medvedev (1977: 118–119). The same author has published a collection of data on similar methods of burial among various Asian peoples (Ibid.: 119–121).

Along with the central communal grave, where secondary burials are tiered, complex No. 2 comprises burials in the ditches (see Fig. 12). They are similar to the main burial in terms of orientation and the positions of skeletons. These are either graves of people having a different social status, or burials performed at the end of the functional cycle of this complex.

Probably, fire-related rituals (of which traces have been recorded in the form of charred sediments) and funeral feasts (during which ceramic vessels and separate items were placed in the upper portion of the structure over the central grave) were carried out during this stage of the complexes' functioning. Only after this was the entire complex covered with soil to form a low earthen mound.

The burial rite involved the use of ochre: large fragments of this coloring-mineral have been found among the bones.

The greatest similarity with the complexes under consideration is demonstrated by the materials found in the Neolithic Protoka burial ground, located in the North-Western Baraba (Polosmak, Chikisheva, Baluyeva, 1989). It was precisely at Protoka that an earthen structure, and a ditch interrupted along the N–S axis and intended to limit the burial space, were first discovered in this territory. Absolutely equivalent funerary practices were embodied at the Avtodrom-1 complex, situated within the visual range of the objects studied by our team, which was recently investigated under the supervision of Dr. V.V. Bobrov (Bobrov, Marochkin, Yurakova, 2015).

Certain semantic parallels, with respect to the arrangement of the sacral space, can be drawn between our

complexes and the Bystraya-type Neolithic settlements discovered in the taiga zone of the Surgut region of the Ob, such as: Bystryi Kulyogan-66, where dwellings No. 2 and 2a are enclosed by small intermittent ditches (Kosinskaya, Dubovtseva, Yudina, 2006: 59); Bolshaya Umytya-9 (dwelling 1); and Mikishkino-5, where single dwellings were located at the center of fenced area (Borzunov, 2013: 27, fig. 5). One more earth-mounded dwelling with a small ditch was found at Ust-Tara XXVIII settlement in the Irtysh basin; the authors of this study have assigned it to the range of Artyn culture sites (Gorbunova, Tolpeko, 2002: 406).

Characteristics of the grave goods

The goods found in the flat-grave burial and funerary and ritual complexes can be divided conventionally into two groups. The first group includes artifacts from the upper part of the filling of an earth mound or a ditch; related, most probably, to the funeral feasts (pieces of ceramic vessels, flakes, blades, bone tools). The second group is composed of individual grave goods found in single burials, and near skeletons or on them in collective graves. 147 items have been discovered in the complexes.

Analysis of the distribution of goods according to age and sex definitions of the buried has revealed the following special features. The children's (except for infant skeleton 13) and female burials are accompanied by the greatest number of items. Objects of art (bone and stone drop-shaped pendants, beads, tubular beads) and polished tools are encountered only in children's burials. A great number of artifacts, including tools (side-scrapers, end-scrapers, borers, abraders, retouched tools), are discovered in the burials of women who were placed in their graves in a semi-sitting position (complex No. 1, bur. No. 4; complex No. 2, skeleton 15).

These items were arranged in different ways with respect to the buried. They are recorded near humeri, under hands, in the pelvic area, under skulls or near them; and in one case a tool was in the left hand of a buried woman (see Fig. 7).

Clay items. It is well known that ceramic vessels (or their fragments) most frequently play a pivotal role in determining the cultural and chronological attribution of an archaeological complex. Placement of vessels as grave goods is not typical of the representatives of this cultural formation: two items were found in flat-grave bur. No. 1, and one item in each of complexes No. 1 and 2. A similar situation was noted in other contemporaneous burial grounds of North-Western Baraba: one vessel was discovered in the Protoka mound (Polosmak, Chikisheva, Baluyeva, 1989), and no intact vessels were revealed in the Autodrom-1 mound (Bobrov, Marochkin, Yurakova,

2015). At all the above-mentioned sites, fragments of vessels were found in ditches.

Since the number of intact items is small, while ceramic material is an important source for studying

all Neolithic sites of the region, we shall consider the individual features of the found vessels (Fig. 16, 17).

Vessel 1 (flat-grave bur. No. 1) is a closed jar with a pointed base. The rim's diameter is 7.1 cm, the maximum

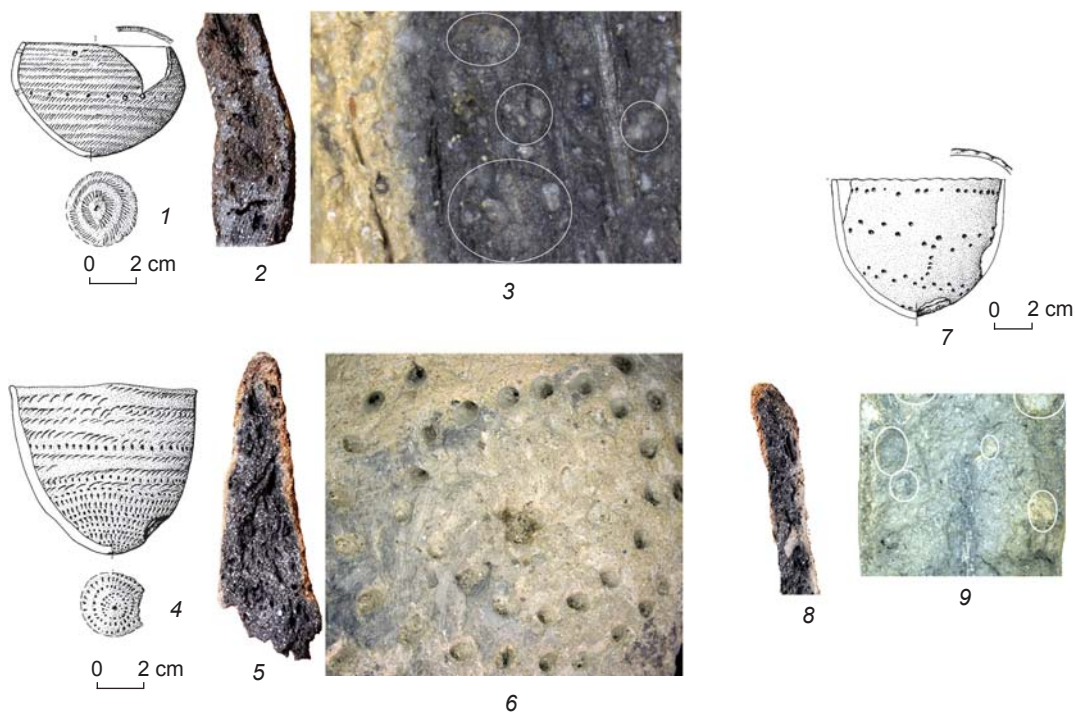


Fig. 16. Pottery from the Vengerovo-2A site.

1 – vessel 1 (flat-grave bur. No. 1); 2 – finish-ground rim-wall of vessel 1 ($\times 3.25$); 3 – enlarged microphotography of fracture of vessel 1 with grains of grog and traces of organic matter; 4 – vessel 2 (flat-grave bur. No. 1); 5 – finish-ground rim-wall of vessel 2 ($\times 4.53$); 6 – microphotography of a base-fragment of vessel 2; 7 – vessel 3 (filling of funerary and ritual complex No. 2); 8 – finish-ground rim-wall of vessel 3 ($\times 3.30$); 9 – enlarged microphotography of fracture with grains of grog and traces of organic matter.

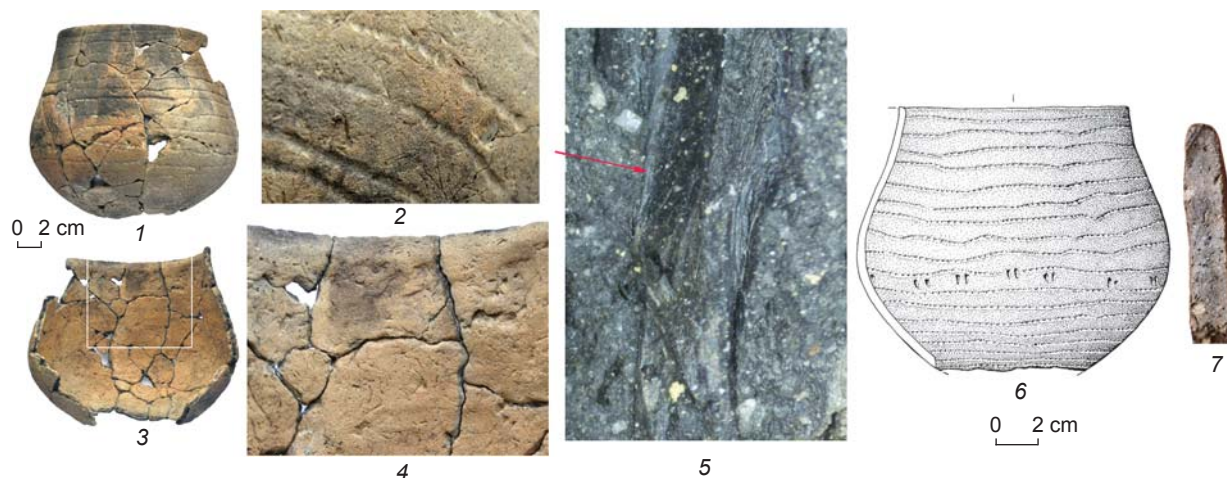


Fig. 17. Pottery from the Vengerovo-2A site.

1 – outer surface of vessel 4; 2 – enlarged portion of outer surface of vessel 4; 3 – internal surface of vessel; 4 – enlarged portion of internal surface; 5 – enlarged microphotography of vertical fracture with grains of grog and traces of organic matter; 6 – vessel 4; 7 – finish-ground rim-wall ($\times 3.03$).

diameter of the body 8.2 cm, and the height 5.4 cm. The vessel is ornamented over its entire surface by horizontal rows of imprints made by the edge of an oval-shaped spatula (see Fig. 16, 1). The same imprints are applied along the edge of the rim.

The item is made of oversanded clay, which contains mica and brown iron-ore, following the recipe: C (clay) + O (organic matter) + G (grog). Dry chopped grass was used as an admixture (see Fig. 16, 2, 3).

A body-shaping method based on coiling appliqué has been recorded. The walls are smooth and very thin (up to 4 mm). The use of engraving is possible.

Vessel 2 (flat-grave bur. No. 1) is an open jar with a slightly pointed base, and a rim ornamented by oval impressions. The rim diameter is 8.9 cm, the height 8.1 cm. The entire surface of the item is covered by ornament showing horizontal rows arranged in three zones. In the upper portion, there are rows of imprints made by the side of spatula. The lower portion is decorated by rows of rounded and oval impressions. In the middle of the body, there are several alternating rows of spatula-imprints and impressions (see Fig. 16, 4).

The fabric is made following the recipe C + O + G. The clay is severely oversanded. The sand contains a large amount of mica; brown iron ore grains are also encountered. The grog is fine, and organic matter is in the processed form (manure?) (see Fig. 16, 5, 6).

The vessel was manufactured by sculpture-modeling on the basis of a body-shaping method with the use of coil technique. The surface of both vessels is leveled up and smoothed.

Vessel 3 (complex No. 2) is an open jar with a slightly pointed base. The rim diameter is 9.5 cm, the height 7.6 cm (see Fig. 16, 7). The rim's edge is wavy, and decorated by imprints from the side of a stick. The surface of the vessel is ornamented with pits made by a hard ornamenting-tool with a rounded tip (up to 3 mm in diameter) and grouped into rows extending from the base to the rim.

The vessel is made of soft clay with low sand-content, which contains brown iron-ore grains, following the

C + G + O recipe. Large-sized grog predominates. The amount of organic matter is less than that in the first two vessels (see Fig. 16, 8, 9).

Vessel 3, like the previous one, was made by sculpture-modeling on the basis of a body-shaping method with the use of coil technique. Its surface is leveled-up and smoothed.

Vessel 4 (complex No. 1) is a pot-shaped item with a slightly pointed base. The diameter of the rim is 12 cm, the maximum diameter of the body 16.2 cm, the height approximately 14.9 cm (see Fig. 17). The rim's edge is flattened, and ornamented by oval impressions. The entire surface of the vessel is covered with wavy lines. During ornamenting, the tool was often lifted from the surface and was sometimes dragged along. In the widest portion of the body, a horizontal row of paired imprints of a spatula's corner is located. The special feature of shaping of two zones, upper and lower, is specific to three (1, 2, 4) out of four analyzed vessels.

The vessel is made of clay with medium sand-content, following the C + O + G recipe. The grog is not graded. A rather large number of traces of organic matter, in the form of wide short beds, are noted in the sample. Also, imprints of down have been recorded.

The coil technique of molding with a body-shaping method was used. The use of an inner mold is possible: hair-traces remaining from the spacer between the inner mold and the vessel have been recorded.

In terms of morphological characteristics, a certain resemblance has been traced between the vessels from flat-grave bur. No. 1 and complex No. 2 (2 and 3). Vessels 1 and 2, belonging to the same burial, are different from each other (see Fig. 16, 18). The differences are displayed in relations between the basic parameters of items, drawings of their “skeletons” and semi-profiles reduced to a height of 10 cm (preserving the proportions). The vessel remaining from the funeral feast in complex No. 1 is especially distinguished by its complex shape and size.

The use of different raw materials, including plastic ones and some having high and medium sand-content,

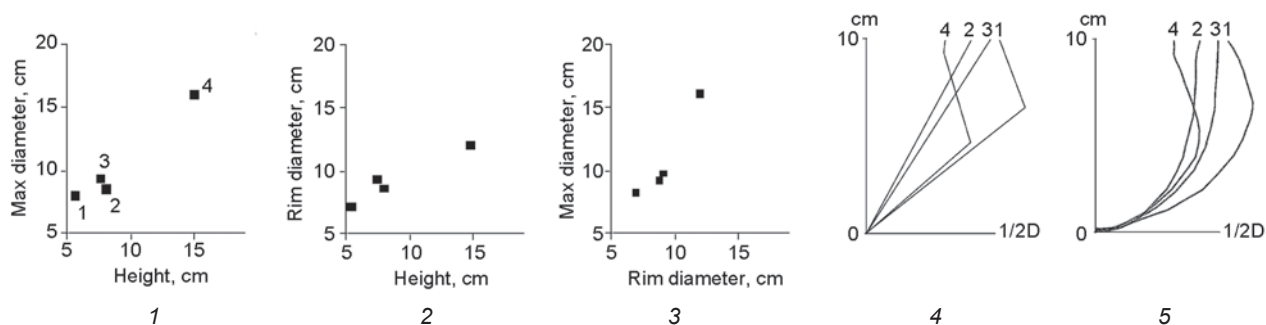


Fig. 18. Graphs showing relations between the proportions (1–3), “semi-skeletons” (4), and semi-profiles (5) of vessels, the height of which is reduced to 10 cm.

is noted. Grog with different degrees of preparation was used, as well as various organic raw materials (both dry and processed).

All items are combined by the manufacturing-technique based on coiling with a body-shaping method; the ornamentation on three vessels allows the conclusion that it was applied starting from a special recess at the base, by horizontal turns in a spiral over the entire surface, irrespective of the ornamenting-tool's shape.

Separate fragments of Neolithic ceramics are encountered in the filling of pits and ditches. The binocular microscopic analysis has made it possible to compose a collection of fragments ornamented using the pit-comb technique; they were made from fabric prepared following the C + O recipe, which is different from the C + O + G recipe typical of the rest of the complex.

Thus, the ceramic assemblages from the burials, “funeral feast”, and ditches differ from one another. The first assemblage is represented by items made according to the same manufacturing-scheme of shaping and ornamentation: namely, by using the retreating-stroke-incised technique with uneven pressure. Such decoration-technique is typical of the Artyn culture's ceramicware (Yurakova, 2013: 92); it was also employed for making Bystraya-type items in the taiga zone of the Middle Ob basin (Kosinskaya, Dubovtseva, Yudina, 2006). Analogs of certain vessels have been encountered among the finds from burials of the Neolithic Sopka-2/1 cemetery (Baraba) (Molodin, 2001) and complexes of the Middle Irtysh basin: Tatarskiy Uval (Matyushchenko, Polevodov, 1994: Fig. 3, 3; 5, 1, 2; 7, 1, 2) and Khutor-Bor (Petrov, 2014: Fig. 48, 1, 3).

The pottery from the ditches and the earthen mound is attributed to different traditions. It is essential to emphasize that such differences are also demonstrated by the materials of the Protoka burial ground (Polosmak, Chikisheva, Baluyeva, 1989).

Distinguishing the types of Neolithic pottery from Western Siberia poses certain problems for the researchers. Owing to the complexity of pottery traditions, and in the absence of stylistic variety, similar motifs were used; thus, originality of ornamentation could be only achieved by using different tools and work-practices (Chairkina, Dubovtseva, 2014: 10). This is typical of the ceramicware from Vengerovo-2A as well.

The pottery items include an abrader made of ceramic (see Fig. 13, 33), found together with skeleton 17 (complex No. 2). It represents a fragment of a clay vessel that has flutes grooved at three sides, while the fourth (convex) side was probably used for burnishing.

Bone tools. They involve borers made of elk- (see Fig. 13, 2–4) and tarpan-bones (see Fig. 13, 5) with lengths from 11 to 14 cm; arrowheads (see Fig. 13, 7, 9, 19); a fragment of a bone point (a dagger?) (see Fig. 13, 6); and also a tanged biconical point with a

faceted head of the so-called Shigir type (see Fig. 13, 9). The closest analogs are known in the materials from the Neolithic Sopka-2/1 burial ground (Molodin, 2001: 21). Such artifacts are common in the Neolithic complexes of the Trans-Urals (Chairkina et al., 2001; Savchenko, 2007) and the Eurasian taiga zone (Zhilin, 1996). In Western Siberia, such points are rather rare. They are found, for example, in the well-known Vaskovo Neolithic burial ground (Borodkin, 1967). Recently, a Shigir-type point was found in the Neolithic grave near the Zhigalovo settlement on the upper Lena (Eastern Siberia) (Berdnikova, 2013), which is currently the easternmost point on the map of sites with the said type of implements.

A massive tool (32.0 × 5.2 cm) made from an elk-antler was discovered in complex No. 2 (see Fig. 13, 1). A handle (?) is shaped in its lower portion: there are three notches on the one side, while the other side is burnished. The surface bears traces of red ochre and organic matter in the form of black dots and spots, which is indicative of the long-term service of the tool—though it is not yet quite clear for what purposes it was used.

Ornaments. The collection is rather representative: bone (see Fig. 13, 26–32, 34–41) and stone (see Fig. 13, 22–24) drop-shaped pendants having numerous analogs in the Neolithic burial grounds of Eurasia and Western Siberia (Molodin, Novikov, Chikisheva, 1999: 77; Polosmak, Chikisheva, Baluyeva, 1989: 24); bone rings made of tubular bones (see Fig. 13, 13–17, 20, 21, 25); beaver's incisors; a boar's tusk; shells with holes; and tubular beads made of shells (see Fig. 13, 8, 12).

Items of plastic arts. A small bone figurine (presumably representing a duck) on a flat base with a hole (see Fig. 13, 11). Its analogs are known among the grave goods of the Korchugan burial ground (Western Siberia) (Molodin, Novikov, Chikisheva, 1999: 77); a similar stone item has been discovered among the Baltic Neolithic materials (at the site of Zvidze) (Loze, 1988). The blade, made from an animal's rib and ornamented with zigzag motif (see Fig. 13, 10), has distant analogs in the Neolithic of the European North: sculptural representations of snakes with geometric ornament have been found in graves of the Oleniy Ostrov burial ground (Gurina, 1956), and at some Baltic Neolithic sites (see the summary report: (Utkin, Kostyleva, 2000)). A special place in this collection is held by a fragment of bone knife (?) with a sculptured pommel in the form of a courting bird (wood grouse? black cock?) (see Fig. 13, 18). Very similar objects are known from the Neolithic materials of Eastern Baltics (Lake Lubanskoye (Gurina, 1996: Fig. 46, 11) and Leymanishki (Formozov, 1970)).

Stone tools. The tools are represented by the following categories (100 specimens in total): bifacial, side- and end-scrapers on flakes (see Fig. 14, 29, 35–37, 39, 40); small polished adzes, and naturally-backed

blanks for them with side-faces worked by large spalls (see Fig. 14, 2, 3, 6, 10); leaf-shaped and needle-shaped arrowheads on blades and flakes with flat haft elements and bifacial covering retouch (see Fig. 14, 7–9, 17–20); flakes with retouch and without secondary working traces (see Fig. 14, 30); blades represented mainly by medial and proximal fragments with triangular and trapezoidal cross-sections and a width of 5–10 mm, while distal ends of blades are less frequent; and almost at all items, fine retouch is recorded—over one or two lateral faces on the dorsal or, sometimes, ventral side (see Fig. 14, 13–16, 21–28, 31–34); a core and an edge-faceted core spall, both prismatic, single-platform, with circular flaking-surface (see Fig. 14, 41); spalls from the surface of polished tools, primary spalls of pebbles, abraders with traces of use almost on all surfaces (see Fig. 14, 38). Four massive side-scrappers on large blanks (see Fig. 14, 4, 5, 11, 12), which differ in size from all artifacts discovered at the site, were found in bur. No. 4 of complex No. 1. They bear no use-wear traces; so, probably, these tools were specially manufactured for the use as grave goods.

In general, the composition of the stone implements in the grave goods of the complex under consideration is typical of the Neolithic sites of Baraba (Molodin, 2001: 21) and adjacent territories (see, e.g., (Marochkin, 2014: 17–23)). The proportions of the items made on blades and flakes, plus the special shaping features of end-scrappers and arrowheads, place the studied complex on a par with the Artyn materials (Bobrov, Marochkin, 2011: 106).

Noteworthy is the presence of polished tools and abraders. A great number of such artifacts is typical of sites of the Tomsk Ob region (Matyushchenko, 1973: 101), the Middle Irtysh basin (Petrov, 1987: 8), and for Bystraya sites; though stone inventory of the last-named culture is distinguished by a pronounced flake-industry and by the presence of polished points, knives, and heavy-duty tools (Kosinskaya, Dubovtseva, Yudina, 2006: 63).

Also remarkable is the presence of polished small axes and adzes, which are typical of Neolithic complexes, though their purpose is not quite clear. It is important that they were still employed in the funerary practices of the Ob basin's inhabitants in the subsequent Early Metal Age (bearers of the Ust-Tartas culture) (Molodin, 2001).

A thin slate tile, $13.2 \times 7.6 \times 0.4$ cm in size (see Fig. 14, 1), has been found under a child's skull (skeleton 8, complex No. 2). One of its surfaces is intensely colored with ochre, and decorated with small notches arranged in groups by two elements along the entire perimeter. On the other side of the item, narrow flutes were noted: traces, possibly, of its use as an abrasion-tool. Objects of similar shape are encountered at the Bystryi Kulyogan-66 settlement attributed to the Bystraya

culture (Kosinskaya, Dubovtseva, Yudina, 2006). Such artifacts (quadrangular sandstone blades sharpened at the corners (with a similar shape) in a characteristic manner) have become one of the diagnostic features of Krotovo culture of the Early and Middle Bronze Age (Molodin, Durakov, 2013).

The petrographic determination of some lithic artifacts was made by N.A. Kulik. Fine- and medium-grained quartz sandstones and sandy siltstones, silicified and quartzous (up to formation of quartzitic varieties), served as raw materials for 73.3 % of stone implements, including blades, end-scrappers, side-scrappers, and flakes. Owing to their high quality, these highly-siliceous raw materials were used by the population of Western Siberia from the Paleolithic to the Middle Ages. Researchers of many regional sites of the said period refer to these raw materials as siliceous, massive, and quartzitic sandstones of the cretaceous-paleogenous weathering crust (Kiryushin, Maloletko, 1979, 1983; Zakh, 1981; Zenin, Leshchinsky, 1998; Zakh, Skochina, 2010; Kulik, Mylnikova, Nokhrina, 2010; Bobrov, Marochkin, Yurakova, 2012). The site also contains items made of highly-siliceous rocks (6.7 % of the studied artifacts).

Items made of fine- and medium-grained oligomictic sandstones (3 spec.), sandy siltstones unaffected by silification (1 spec.), and quartz-feldspar fine-grained rock with kaolinized feldspar (2 spec.), come to 20 %. Judging by their worn and polished surfaces, they were used as abraders. Taking into account the rock's hardness (approximately 5.5 on the Mohs scale), it can be assumed that they were used as "hard" abraders. Raw materials for polished tools and their spalls pertain to acid volcanic rocks replaced by micaceous aggregate. Because of its low hardness (≈ 3 on the Mohs scale), a fragment of hydromicaceous shale was, obviously, a "soft" abrader.

Comparison by their petrographic characteristics of the Vengerovo-2A industry with collections of synchronous Western Siberian localities allows the Irtysh alluvium to be considered the most reliable source of lithic material. Thus, raw material was delivered to the region from westward—possibly down the Om River (Molodin, Mylnikova, Nesterova et al., 2015)—which allows reconsideration of the cultural relations between the Neolithic population of the Baraba forest-steppe and their western "neighbors".

Dates of the complexes

On the basis of samples from two burials of complex No. 1, radiocarbon dates were obtained; according to which, the functioning of the site pertains to the end of the 6th millennium BC (Molodin, Mylnikova, Nesterova et al., 2012: 121). This conclusion is also supported by the

dates for the Protoka burial ground (Marchenko, 2009: 14). The majority of dates for the Bystraya complexes fit in the range from the middle of the 6th millennium BC to the second half of the 5th millennium BC (Kosinskaya, Dubovtseva, Yudina, 2006: 61). However, the authors of that study, relying on the homogeneity and technological and typological stability of the ceramic tradition, are skeptical about such a prolonged existence of this culture. Several dates established by the samples from the Avtodrom-2 and Serebryanka-1 settlements allow the existence of the Artyn culture to be assigned to the period from second half of the 5th millennium BC to the first half of the 4th millennium BC (Bobrov, Marochkin, 2011: 108; Mosin, 2015: 112). In the context of studying the Neolithic in Western Siberia, it is essential that the above formations co-existed during a certain chronological stage. The upper boundary of the Artyn culture corresponds, probably, to the stage of smooth evolution of this culture from the Neolithic to the Early Metal Age, characterized by complexes where ceramic ware is virtually indistinguishable in terms of technology and morphology. We are talking about the Bairyk, Karasevo, Yekaterinskaya, and other cultural formations; which, taking into account their proximity, one of the authors of this work proposed to refer to as “the Early Metal Age sites belonging to the comb-pit historical and cultural tradition” (Molodin, 2001: 38). Thus, the complexes considered in this article can be dated to the Late Neolithic (6th–5th millennia BC).

Anthropological and paleogenetic data

Studying the anthropological materials has revealed the resemblance between the Vengerovo-2A series and other representatives of the Neolithic population of Baraba (Chikisheva, Zubova, Pozdnyakov, 2011). It has been determined that the Neolithic craniological material of this region pertains to the second-level typological structure of racial differentiation: namely, to the North Eurasian anthropological formation, while the Baraba forest-steppe is the south-eastern periphery of this area. Also, at least two components have been distinguished that had become the basis for the paleopopulation of Vengerovo-2A. One of them is of local origin, and brings the series under study closer to populations which had created the Protoka and Sopka-2/1 sites. Another component that has been determined on the basis of dental data (Zubova, Chikisheva, 2015: 106) has its origins in the Volga-Urals interfluvium. The anthropological component ascending to population of the Volga-Urals interfluvium had affected the male element of the Vengerovo-2A paleopopulation to a greater degree than the female one, which had preserved a certain local originality (Chikisheva, Pozdnyakov, Zubova, 2015).

Analysis of the distinctive dental features of the series under consideration proves its intermediate position between the western and eastern dental stems. This is explained by the preservation of special features of ancient undifferentiated complexes, rather than by interbreeding processes of racially contrasting groups (Zubova, Pozdnyakov, Chikisheva, 2013).

On the basis of the preliminary results of paleogenetic research on several individuals buried in the Vengerovo-2A, Western Eurasian and Eastern Eurasian clusters have been revealed in their mtDNA structure (Molodin et al., 2014: 303). The paleogenetic data point to the similarity between the Neolithic populations of the Vengerovo-2A and Sopka-2/1 sites and the bearers of the Ust-Tartas Early Metal Age culture (Sopka-2/3, -3a). The burials of the Neolithic complexes under consideration are genetically associated with people belonging to the Northern Eurasian anthropological formation.

Discussion of results

The results of the analysis of the grave goods, features of funerary practices, and anthropological and paleogenetic data point to the specific nature of the Vengerovo-2A burial ground. It is expressed in the mixed character of the ceramic assemblage (at least two ornamental traditions—retreating-stroke-incised and comb-pit—are represented) and in the variability of funerary rite (inhumation/cremation; communal/single graves; different positions of the buried).

The ceramic materials of this burial ground, and also of other Neolithic sites in Northern Eurasia, are multi-component. The collection is dominated by items made using mixed technologies. Ornamentation of vessels directly related to the funerary rite shows only elements of the retreating-stroke-incised tradition that bears a resemblance to that of the Bystraya culture (Kosinskaya, Dubovtseva, Yudina, 2006), and has a leading position among the Artyn complexes (Yurakova, 2013). For the pottery items, recovered from the earthen mound and ditches and made in the comb-pit ornamentation tradition, a recipe of fabrics has been recorded, whose composition differs from the fabric recipe of the basic ceramic assemblage by the absence of grog.

The grave goods have analogs with the materials from north-western regions of Eurasia. All finds, apart from artifacts occurring in the extremely wide territory and chronological framework (polished small axes, adzes, bone and stone drop-shaped pendants, tubular beads, items made of animals' incisors and tusks, shells), are associated with the Neolithic materials from the taiga zone of Western Siberia (polished tiles and abraders), forest Trans-Urals (Shigir-type points) and also from the Baltics and Karelia (items of plastic arts).

The anthropological and genetic data allow assignment of the population, which created the burial ground under consideration, to representatives of a huge south-eastern community referred to as the Northern anthropological formation (Chikisheva, 2012); or, according to the definition given by L.L. Kosinskaya, to the “Ural-Western-Siberian cultural community of the Neolithic” (Kosinskaya, Dubovtseva, Yudina, 2006: 64) prevailing in the northern area of Eurasia from the Baltic to the taiga Trans-Urals and Western Siberia.

The study the Neolithic in the Western Siberian forest-steppe depends to a large extent on the solution of several key problems, including a disproportion of sources that hampers correlation between settlement- and burial-sites (Bobrov, Marochkin, 2012: 64); the mixed character of complexes (Zakh, 2009; Marochkin, 2014); special features of cultural interaction between indigenous (Artyn) and comb-pit traditions, where the latter was presented by migrants from western and north-western regions (Molodin, 1977: 33; 2001: 26–27); and coincidence between the dates of Late Neolithic sites and Ust-Tartas and comb-pit complexes of the Early Metal Age, which is indicative of their possible co-existence.

All of the aforesaid point to the mosaic character of ethnogenesis in this region at the end of the 6th–5th millennia BC: interaction between several cultural traditions, the synthesis of which is demonstrably reflected by the Vengerovo-2A site, which does not allow of unambiguous cultural attribution at the present time.

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