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I–V CENTURY MIDDLE KAMA TARASOVO BURIAL GROUND – A UNIQUE MONUMENT OF ANCIENT UDMURTS

The Tarasovo burial ground (Russia, Udmurtia) is the largest among researched Finno-Ugric monuments of the I–V c. in Eurasia. It was excavated in 1980–1997 by the Kama-Vyatka archaeological expedition of the Udmurt State University (Izhevsk) under the guidance of Professor R. D. Goldina. 1,880 graves containing 2,096 burials and over 37,000 artefacts were excavated on the area of more than 16,000 sq. m. The cemetery is dated to the end of the Early Iron Age and the Great Migration period (in the Middle Kama Region – the Cheganda archaeological culture of the Pyanoborye culture-historical community – ancient Udmurts). The monument is located on the territory of the IV–III c. BC sanctuary the remains of which were also studied. Materials of the monument are under study of the group of archaeologists at the Udmurt State University. The paper gives a brief review of the following studies: burial ritual, chronological account of the materials from the I to V centuries, numerous categories of goods such as metal decorations, belt set, fibulas, earthenware, weapons: bladed weapons, helmets, armour, heads of spears and arrows, fighting scythes, axes, scabbard, horse tack, etc.

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Introduction

At present, the Tarasovo burial ground is the largest among all known and researched Finno-Ugric burial monuments in Eurasia. The burial ground belongs to the Cheganda culture of the Pyanoborye culture-historical community and covers a most interesting period – the end of the Early Iron Age and the Great Migration period. The article is aimed at acquainting English-speaking archaeologists with the research results of the monument.

The Tarasovo cemetery was found in autumn 1979 while workers were making a trench to an oil-and-gas well. They gathered human bones and informed the

staff at the Museum of History and Culture of the Middle Kama Peoples (Sarapul) of their find. When inspecting the trench walls, the Museum staff found remains of 10–15 burials with fragments of coffins; in the banks and on the surface they found such artifacts as fragments of an iron sword and bridle-bit, ceramic debris, 2 bone arrowheads, a bronze buckle and 6 bronze plates (Reshetnikov 1980, 2 f.).

The monument is located in the middle part of the Kama River, 240 km to the south-west from Perm, 87 km to the south-east from Izhevsk and 310 km to the east from Kazan (Fig. 1). The cemetery is situated on a headland of 20 m high rock terrace on the right bank of the Kama River. The headland was originally laid down by a brook flowing into the Kama and is located 1 km to the south-east from the Tarasovo village, Sarapul district of the Udmurt Republic, and 2 km to the south-west from the Kama existing river course (Fig. 2). The object under study lies on the site of the Ananyino-time sanctuary and together with Ananyino and Cheganda ancient settlements forms a complex of archaeological monuments.

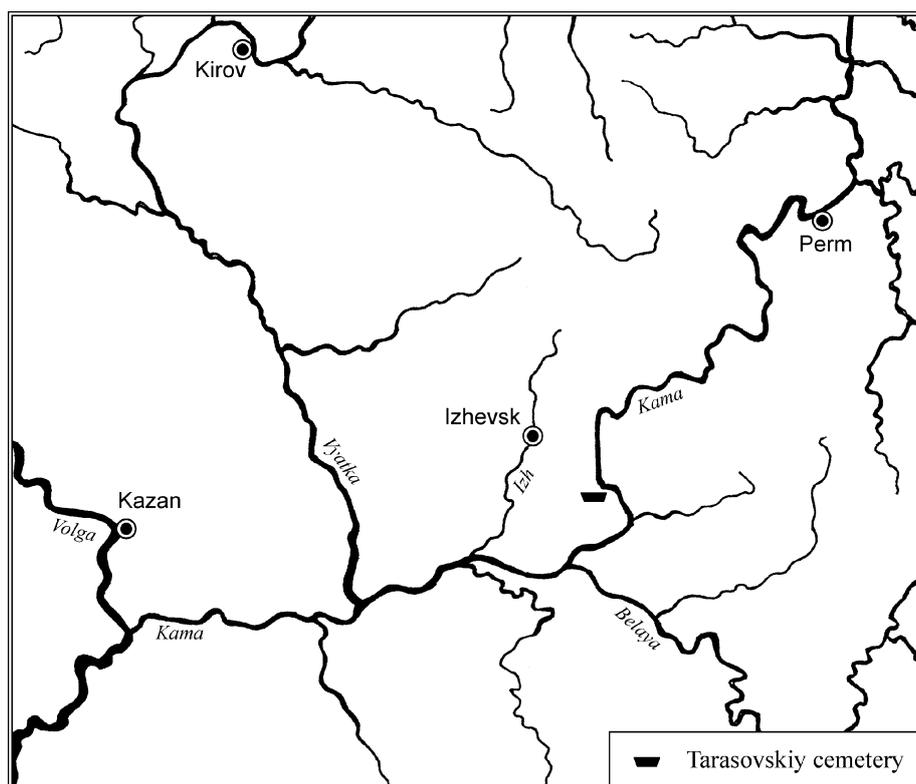


Fig. 1. Tarasovo burial ground. Location.

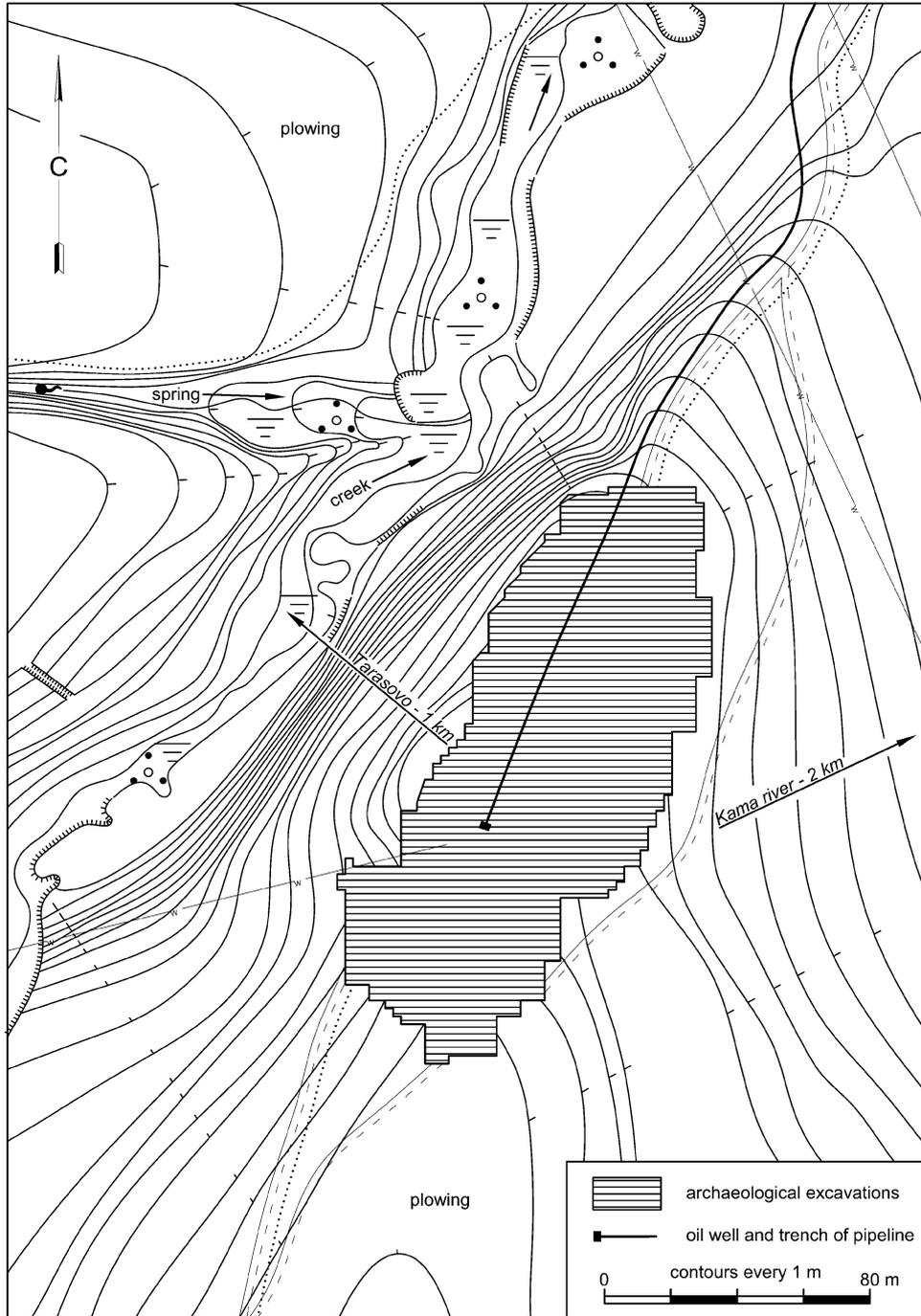


Fig. 2. Tarasovo burial ground. Topographic map.

History of the monument's studies

The Tarasovo cemetery was studied during 18 years (1980–1997) by the Kama-Vyatka archaeological expedition of the Udmurt State University under the guidance of R. D. Goldina. Besides the Udmurt State University, the project was also financed by Udmurtneft JSC and the Museum of History and Culture of the Middle Kama Peoples from Sarapul. Stationary works on the cemetery site resulted in 16,091.5 square metres of exposed surface and 1,880 researched graves with 2,096 buried people, an enormous collection of artifacts amounting over 37 thousand items in the inventory, and 21 volumes of reports about the excavations of the Tarasovo burial ground (they are deposited in the Institute of Archaeology of the RAS (Moscow) and in the Archives of the Institute of the History and Culture of the Cisuralian peoples at the Udmurt State University (Izhevsk) and in the Museum of the History and Culture of the Middle Kama Peoples (Sarapul)).

The period of the field studies became an epoch when a good many specialists of the Izhevsk school of archaeologists were nurtured and educated. For over 30 years, the results obtained during the excavations of the Tarasovo burial ground have been in the focus of interest of students from the Department of Archaeology, postgraduates, lecturers and professors. At present, 17 persons out of students and lecturers excavating and summarizing artifacts of the Tarasovo cemetery have got post-graduate degrees in archaeology; their theses were composed either under the guidance or in consultation with Professor R. D. Goldina. In the course of the Tarasovo excavations a procedure of the field studies on the Kama burial monuments was worked out. Nowadays it is well-developed and successfully applied to excavate many more monuments of the Iron Age: Turaevsky I, Zaboryinsky, Boyarksy (“Aray”), Dubrovsky and others.

In 1987 over 100 participants of the International Finno-Ugric conference that took part in Izhevsk visited the Tarasovo site. It was also attended by academics from different countries, such as: I. Fodor, Director of the Hungarian National Museum; C. Balint, Director of the Institute of Archaeology of the Hungarian Academy of Sciences (Hungary); F. Daim, Professor at the Department of Pre-historic and Historical Archaeology, University of Vienna (Austria); B. Kurti – researcher at the Szeged Museum (Hungary).

The field study resulted in the publication of the two-volume monograph which contained a catalogue of the graves (vol. II) and drawings of artifacts (vol. I) (Goldina 2003; 2004).

Excavation procedure

The monument was discovered when an oilfield workers were drilling a hole and making a trench. The oil-and-gas well was sunk at the most elevated part of the headland. Meanwhile, a lot of graves were destroyed (Fig. 3). First excavations started from the trench made by the oilfield workers and the next

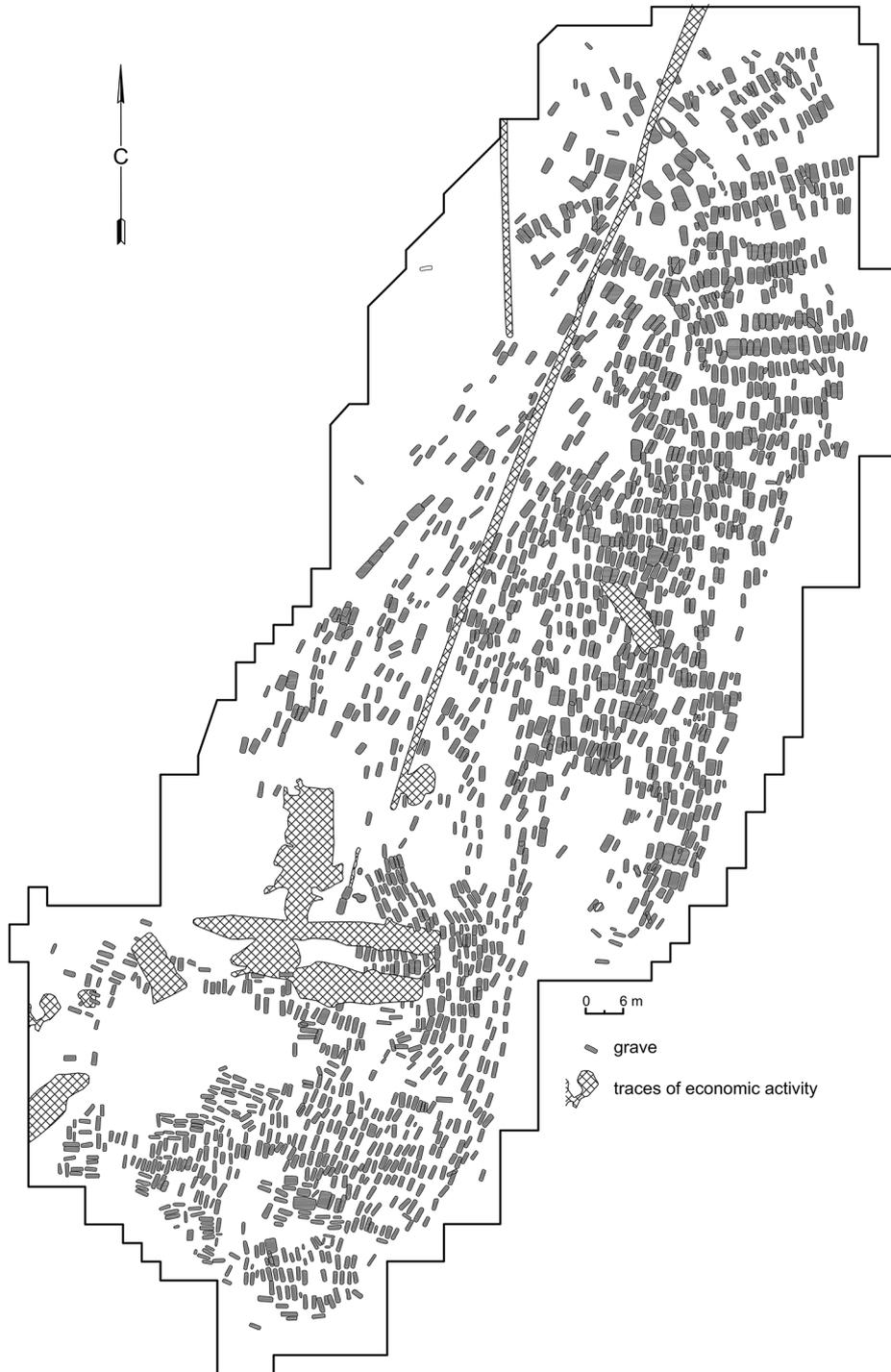


Fig. 3. Tarasovo burial ground. Excavation plan.

excavations adjoined the previous ones. The area was studied by dividing it into 3×3 m sectors. The sectors had a consecutive numbering: from the east to the west they were marked with letters, and from the north to the south – with Arabic numerals. Outlines of graves were found 25–30 cm deep. They were filled with loam having stony and coal inclusions. The graves were disintegrated by quarters until bones and artifacts were seen; then, the pit layers were registered and followed by clearing. After clearing, remains were painted at a scale of 1:10, sometimes 1:1, then described and photographed by specialists. Anthropological definitions were done by G. V. Rykushina, Cand. Sc. (Biology), senior research associate at the RAS Ethnography Institute (Moscow). The research of the graves was followed by studying the remains of a sanctuary.

A sanctuary

A group of authors – R. D. Goldina, T. A. Kolobova, A. E. Mitryakov and V. A. Shatalov – published a monograph of a considerably damaged sanctuary dated to the end of V–III c. BC (2013) and located on the site of the Tarasovo cemetery. The study gives a detailed description of the sanctuary remains: calcined spots, earthenware, spindle whorls, crucibles, arrowheads and various bone items. T. A. Kolobova paid special attention to numerous clayware pieces (77 pieces) which are clear illustrations of the uncommon sacrificial character of the Tarasovo sanctuary. A separate section is devoted to the pottery of the population which used the Tarasovo sanctuary. The monument was a sacrificial site of the population which inhabited the Kama River bank 15–20 km long at the end of the Ananyino culture of the Early Iron Age to perform cult ceremonies.

Burial ritual

The 3rd volume devoted to the analysis of the Tarasovo burial ritual and co-authored by R. D. Goldina, T. R. Sabirov and T. M. Sabirova was published in 2015. The paper is based on the research of 130 attributes of the burial ritual involving math tools and planigraphy. At the same time the authors studied specifics of the early (I–II c.) and late (III–V c.) parts of the monument and found out their distinctive and common features which let them assert with confidence that the monument had been left by the populace of one and the same culture. The paper is illustrated with 281 drawings, graphs, charts and statistical tables.

The analysis of the Tarasovo burial ritual fully demonstrated the uniformity of the massive under study and an evolutionary development or decay of some of their attributes. The graves were located by rows and groups, most of them were oriented in the meridian direction but there were clusters with a different orientation. Having considered common elements registered in equal measure during the whole period of the monument functioning, we can single out a certain set of

features to describe a typical Tarasovo grave. It is a single subsurface inhumation with no preserved tombstones (Fig. 4). Dimensions and shape of the grave pit depended on the age of the deceased. They were buried in coffins or logs (Fig. 4: 3). The body of the buried person was usually laid on the back with arms stretched along the body or elbow-bent. Planigraphy distribution of male and female graves confirms the idea of the family principle in burying the deceased when graves of close relatives were located in one row regardless of their gender and age.

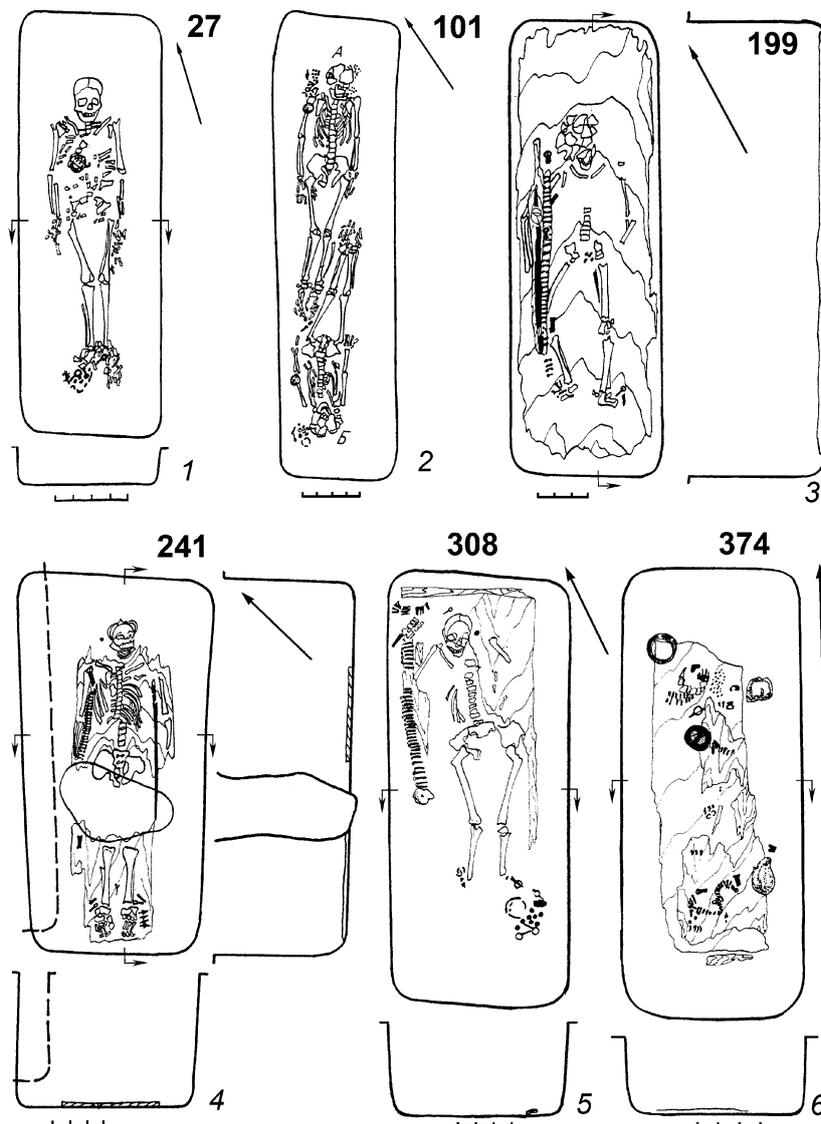


Fig. 4. Tarasovo burial ground. Plans of graves. 1 grave 27, 2 grave 101, 3 grave 199, 4 grave 241, 5 grave 308, 6 grave 374.

Putting accompanying goods into the grave was a key component of the burial ritual (74.7% of all graves). Statistically, we managed to trace two dominant tendencies. Some goods were a part of the burial dress; thus, the goods were found in those places how they were probably used in the lifetime (Fig. 4: 6). But there is another variant: some goods (belts in the late stage and torcs in the early stage) were found unfolded/open along the body (Fig. 4: 3, 5). Here we may also include a tradition to put gift sets near the head or feet; such gift sets consisted of two or more categories of the burial goods: more frequently, beads and temple pendants, and less frequently other goods (Fig. 4: 2, 6). The number of categories in one grave varies from 1 to 17, most frequently from 4 to 6. Female graves feature temple pendants, beads, fibulas, bracelets, torcs, etc., male graves – swords, spear- and arrowheads, fighting scythes, quiver hooks, scabbard, and fasteners.

Having compared burial ritual materials of the early (I–II centuries) and late (III–V centuries) parts of the cemetery together with numerous planigraphy charts of how different categories of the goods were located, we could find out common and specific features of the both stages. It is obvious that the cemetery site was filled with graves from the south to the north. About one third of the total massive of dated graves is referred to the early graves and two thirds of the sample – to the late graves. The number of graves with gift sets grows from the early to the late graves and the number of no-goods graves decreases. The uniformity and evolutionary character of the cemetery development is proved by universal categories of the goods found both in the early and late graves, such as: knives, temple pendants, hollow pendants, finger-rings, bit and spindle whorls. As the burial ritual is not static, their quantitative and typological representation varies in the early and late graves by increasing, decreasing or disappearing in time. In the I–II centuries, judging by the Tarasovo artifacts, they mostly used fasteners with a fixed hook, syulgamas and pendants. In the III–V centuries there were belt sets with metal decorations, cover plates made of shells, fibulas, different weapons, fighting scythes, pincers, grindstones and semi-finished metallurgical products. Gift sets had a universal character: beads and temple pendants; less frequently – cover plates, hollow pendants, pendants and bracelets; later on – knives, torcs, awls and fibulas. Changes in the material culture during the period of the monument functioning reflect the evolution of the economy, social order, art of war and trade.

The late Mazunino stage is marked with a significant growth of population. There is a new type of graves: deep rich graves of horsemen with a lot of various weapons and other high-status goods. Besides the Tarasovo burial ground, such tendency is found out in a number of other synchronous monuments, that means the Tarasovo population was fully involved into the historical processes of the whole Kama Region.

Mathematical analysis of the connections of the Tarasovo burial ground including materials of 17 other Middle Kama monuments showed a high level of similarity of almost all monuments in regards to chosen attributes (77.4–80.2%). Differences in the level of interconnections are stipulated by territorial and chronological specifics.

Material culture

Due to their plenty, all the materials were divided into several categories. They were studied by different researchers. V. A. Bernts examined cover plates made of *Turbo marmaratus* shells (Turbinidae molluscs inhabiting the Indian ocean). S. A. Perevozchikova who studied temple pendants from the Tarasovo cemetery worked out their typology. Their chronology and evolution dynamics was developed on the basis of analogies, study of mutually found artifacts and planigraphy. O. A. Kazantseva chose to study earthenware. She defined the following specifics: morphology, admixtures, methods of manufacture, ornament, chronology, and the place of the Tarasovo earthenware among synchronous monuments of the Middle Kama Region.

T. A. Lapteva (1994; 1996) and N. A. Leshchinskaya (2010) were the first who began studying a very interesting category of Tarasovo artifacts – fibulas. They got monographic interpretation by T. M. Sabirova. She summarized information on 452 fibulas found in 25 Middle Kama monuments, 147 out of them originated from the Tarasovo cemetery. Sabirova developed an interactive recurrent catalogue of fibulas and their main features. After revising creatively previous achievements, she worked out her own typology of the Middle Kama fibulas. On the basis of analogies, accompanying goods and planigraphy she dated singled out types and their time evolution. Sabirova also studied technological processes and techniques applied to produce fibulas; thanks to the X-ray fluorescence analysis, she managed to determine chemical composition of the Urals' fibulas and therefore detected seven types of alloys for the fibulas' production. Sabirova succeeded in specifying main directions and delivery ways of import fibulas to the Kama region and variants and evolution of local types as well as in proving that the Middle Kama region was a largest metal-working centre of Eastern Europe during the first half of the I millennium AD (Sabirova 2015).

N. V. Kuz'minykh (2001) began and E. V. Goldina (2015a, 2015b) accomplished studying a great massive of beads from the Tarasovo cemetery (18,512 pieces from 611 (32.5%) graves). They analysed all of them in the light of the shape, dimensions, colour, transparency, design and manufacturing technology. Goldina investigated the specifics of the beads' location in the graves, their usage in costumes and decorations, and their chronology. Together with L. I. Lipina, she studied how large-size chalcedony and glass beads were fit into the warrior's equipment (2015). In cooperation with A. N. Egorkov (LBIA), there were analysed beads from the synchronous monuments: 20 pieces from the Tarasovo cemetery, 13 – from the Dybrovsky, 11 – from Zaborynsky, and 15 – from the Boyarsky cemetery. It was found out that the beads from the mentioned monuments most probably originated from the circum-Pontic area and were made of soda and ash glass. It is generally accepted that the soda and ash kinds of glass were made in different centres and workshops and were likely of different origin. The Middle Kama beads were manufactured from the both kinds. In some cases one and the same bead type was made of the ash as well as the soda glass. And sometimes,

both kinds were present within one bead (Goldina & Egor'kov 2016). Thus, the glass-manufacturing conception of that period, though accepted, needs revising.

The Tarasovo artifacts were used by A. A. Krasnoperov to study a challenging issue “Costume of the Cheganda Culture in the Kama Region (II Century BC – V Century AD)” (2006). In spite of the fragmentary character of sources and reconstruction complexity, he managed to restore the general outlook of male and female costumes and to mark their characteristic features. A. A. Krasnoperov singled out several kinds of female plait decorations, two variants of breastplates, and some belt types. He was the first who described the presence of high head-dresses at that period; besides he offered possible fits of headdresses, outer and underwear and shoes and specified some methodological problems. Nowadays, the study of the issue is successfully continued by L. I. Lipina.

Dating and chronological division of the burial ground

Applying typological division of the materials together with the method of cultural stratigraphy, we managed to work out chronological order of Tarasovo burial complexes (Goldina & Bernts 2016a, 41–89; 2016b, 17–58; 2017a, 172–204; 2017b). The method of cultural stratigraphy and its results are given in the above-mentioned works. We have performed analysis for male and female graves separately and concerning two stages: the early one – Nyrgynda of the I–II c. and the late one – Mazunino of the III–V centuries. The correlation of the early stage includes 37 male and 102 female graves (Goldina & Bernts 2016a, 41–89). Among male complexes there are chronological groups of the I century (Fig. 5), II century (Fig. 7) and I–II centuries. Female graves had far more numerous and representative artifacts, that is why, besides group of the I century (Fig. 6), II century (Fig. 8: 1, 6) and I–II centuries, there are also groups of the 1st half of the II century (Fig. 8: 4, 7, 8, 11, 13) and the 2nd half of the II century (Fig. 8: 2, 3, 5, 9, 10, 12, 14–18).

Male graves of the III–V centuries (88 included into the correlation table) were divided into 12 groups (Goldina & Bernts 2016b, 17–58; 2017b) as follows: 1st half of the III century (Fig. 9), 2nd half of the III century (Fig. 10), III century (Fig. 11: 1), 1st half of the IV century (Fig. 11: 2–20), 2nd half of the III–IV centuries, 3rd quarter of the IV century (Fig. 12), 4th quarter of the IV century (Fig. 14: 1–11, 13, 14), and the 2nd half of the IV century (Fig. 13). Many artifacts of the longer chronological existence – 2nd half of the III–V centuries, 2nd half of the IV–V centuries, and IV–V centuries from male and female graves – are close.

Female graves of the III–V centuries (160 burials) were divided in 12 groups too: 1st half of the III century (Fig. 15: 1–10, 17–19), 2nd half of the III century (Figs 15: 11–16, 20; 16), III century, 2nd half of the III–IV centuries (Fig. 17), IV century, III–IV centuries, 1st half of the V century, 2nd half of the V century (Fig. 18), V century, 2nd half of the IV–V centuries, 2nd half of the III–V centuries, and III–V centuries. Our datings are the first experience in chronological dividing such voluminous massive of the Middle Kama graves and they should be regarded as reference points for further observations and detailing.



Fig. 5. Tarasovo burial ground. Artifacts from male graves. I c. 1-4, 6-8 fasteners with a fixed hook, 5, 9 hooks, 10-15 scabbard. 1-10, 13 bronze, 11, 12, 14 bronze, iron, 15 bronze, leather, iron.

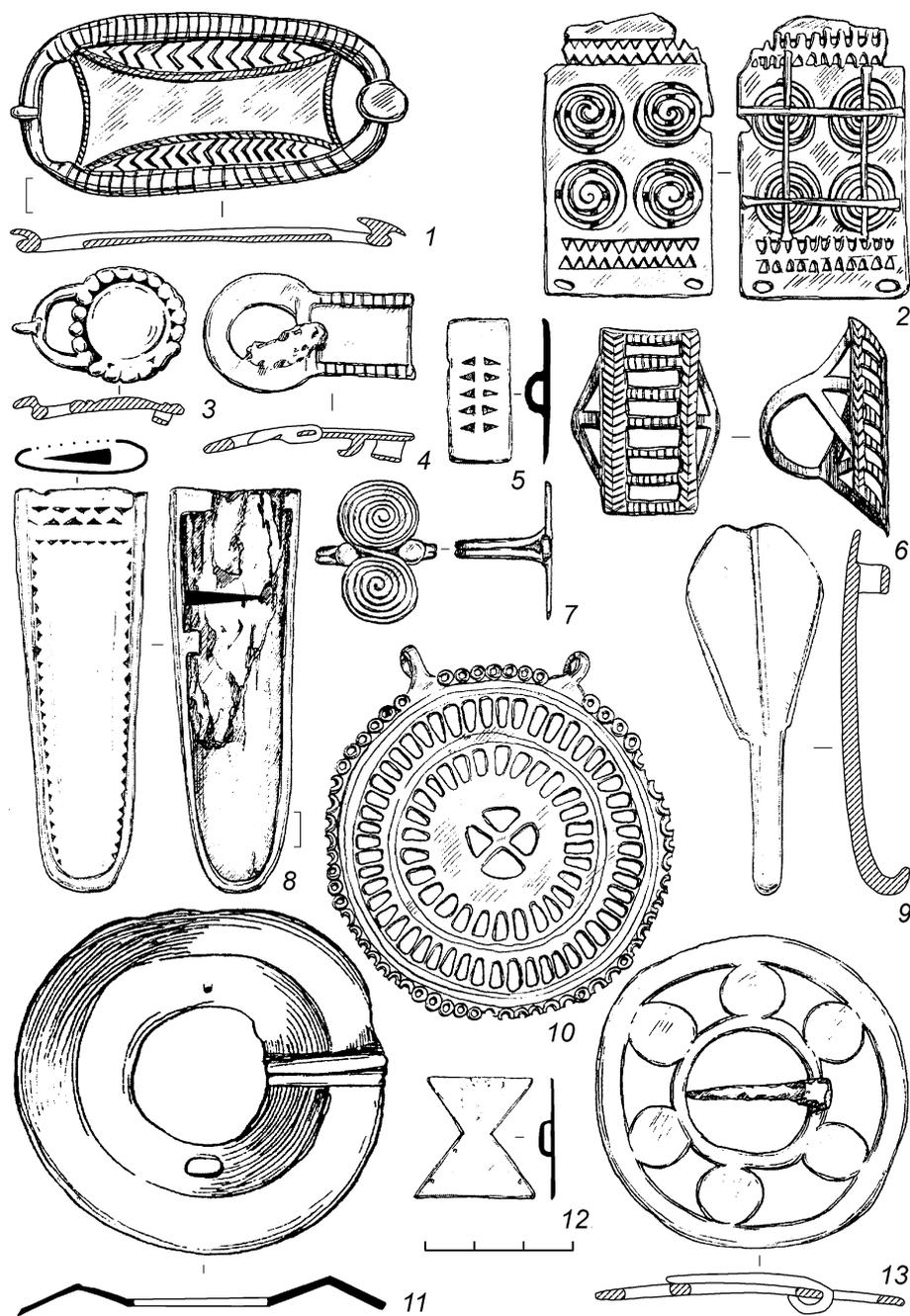


Fig. 6. Tarasovo burial ground. Artifacts from female graves. I c. 1, 3 fasteners with a fixed hook, 2, 5, 12 cover plates, 4 buckle, 6, 7 finger-rings, 8 knife scabbard, 9 hook, 10 pendant, 11 syulgama, 13 fastener. 1-3, 5-7, 9-12 bronze, 4, 8, 13 bronze, iron.

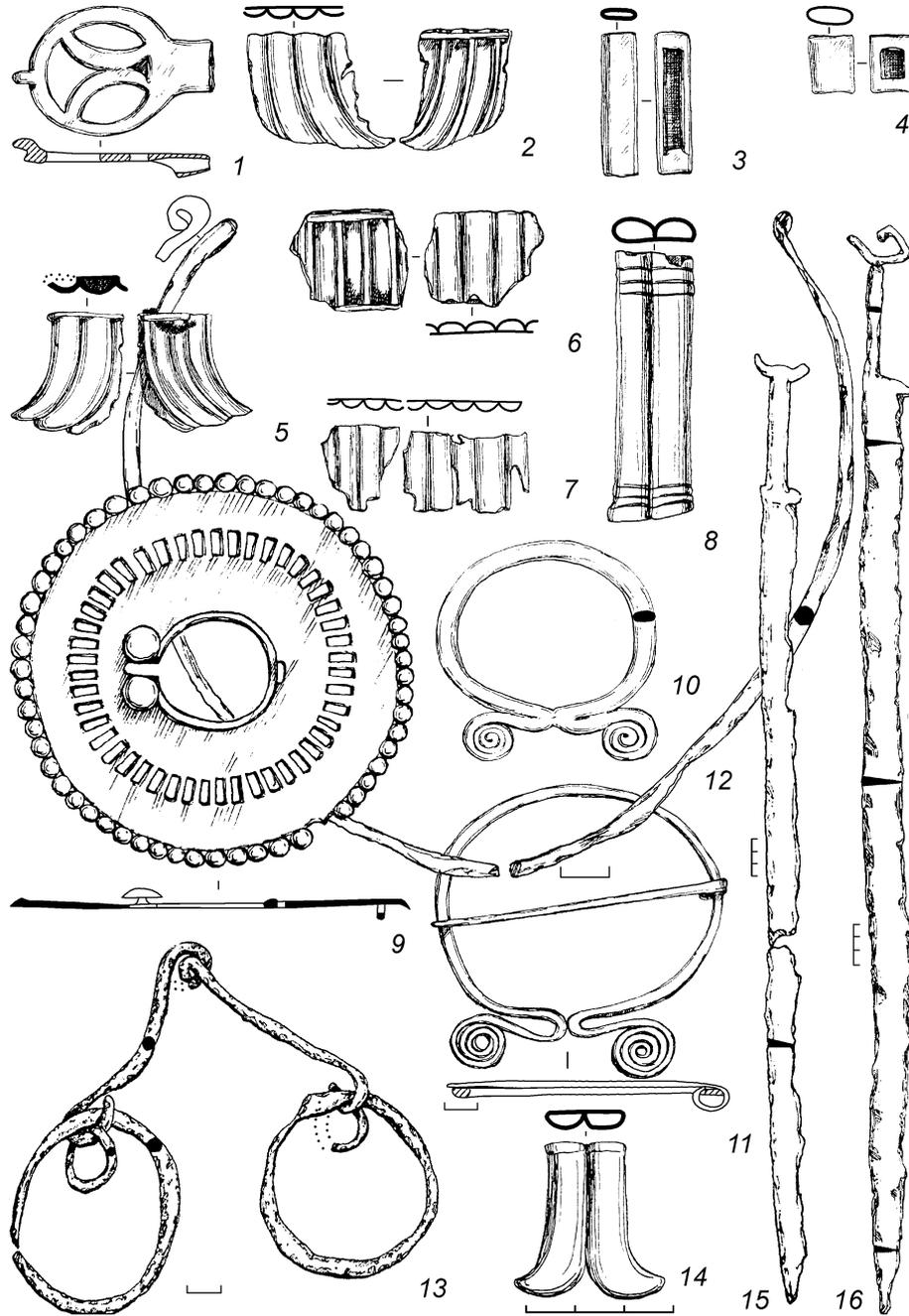


Fig. 7. Tarasovo burial ground. Artifacts from male graves. II c. 1 fastener with a fixed hook, 2–8, 14 hollow pendants, 9–11 syulgamas, 12 torc, 13 horse bit, 15, 16 backswords. 1–11, 14 bronze, 12, 13, 15, 16 iron.

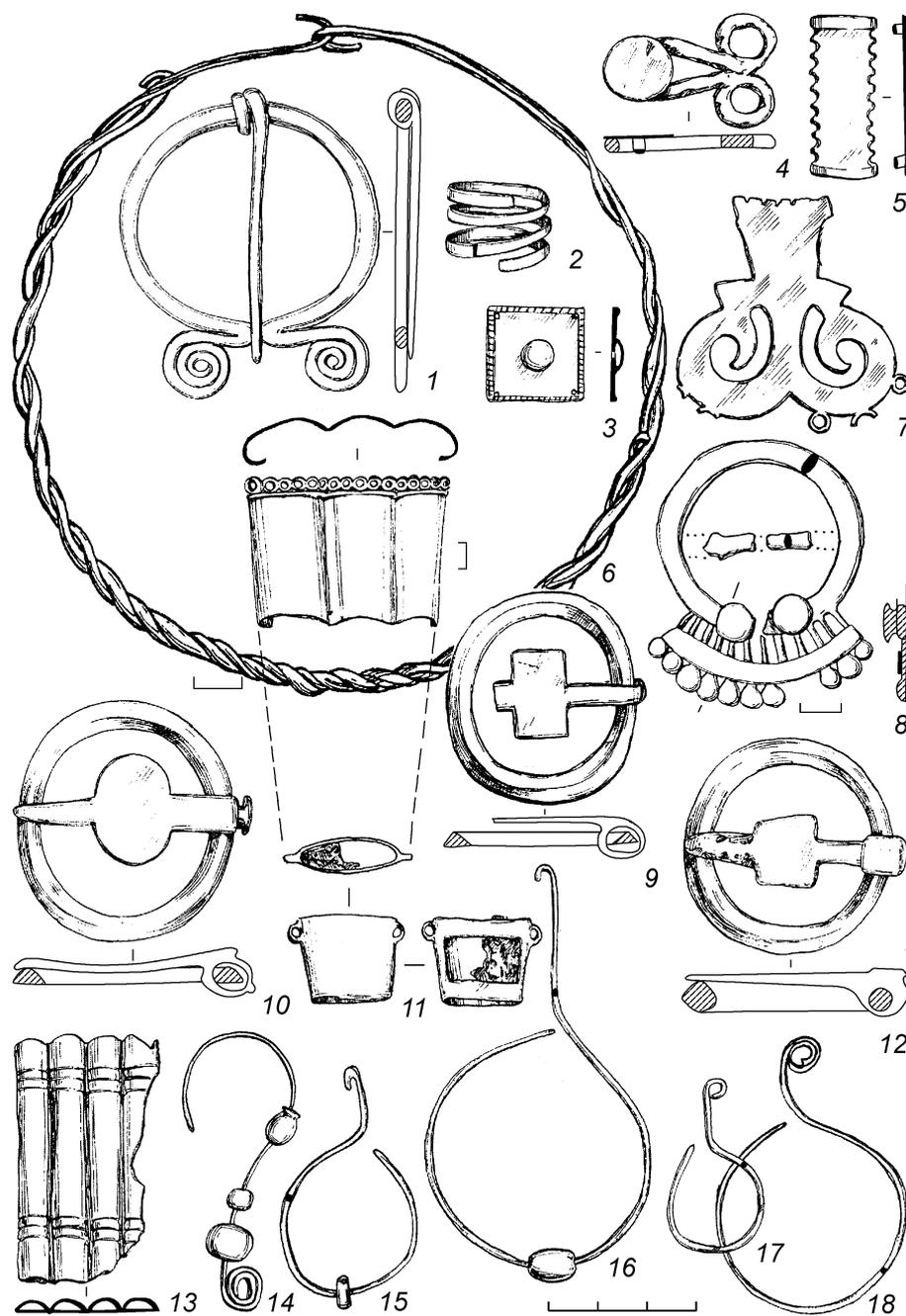


Fig. 8. Tarasovo burial ground. Artifacts from female graves. 1, 6 II c., 4, 7, 8, 11, 13 first half of II c., 2, 3, 5, 9, 10, 12, 14–18 second half of II c., 1, 8 syulgamas, 2 finger-ring, 3, 5, 7 cover plates, 4 fastener, 6 torc, 9, 10, 12 buckles, 11 scabbard, 13 hollow pendants, 14–18 temple pendants. 1–3, 5–7, 9, 10, 12, 13, 17, 18 bronze, 4, 8, 11 bronze, iron, 14–16 bronze, glass.

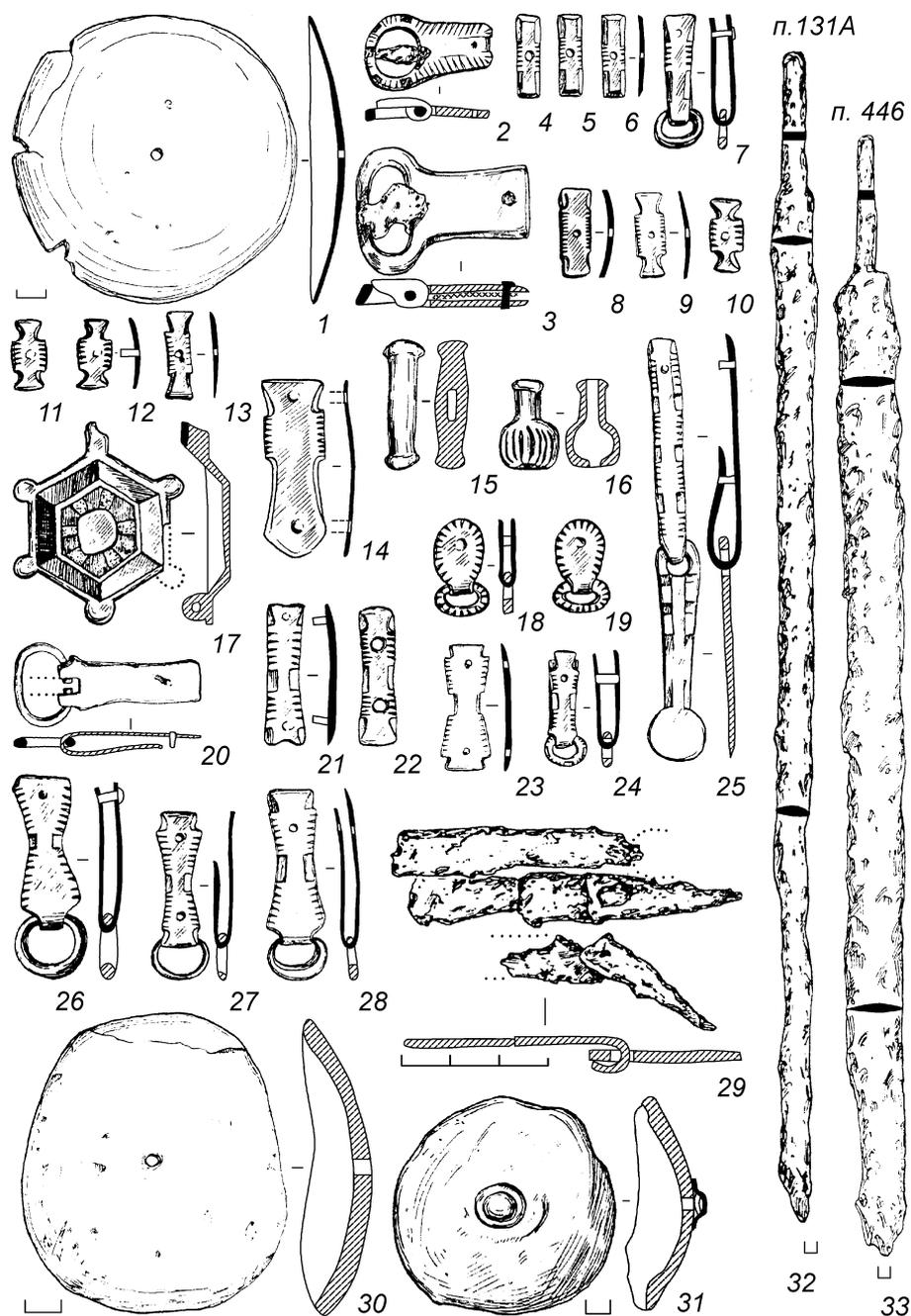


Fig. 9. Tarasovo burial ground. Artifacts from male graves. First half of III c. 1, 30, 31 badges, 2, 3, 20 buckles, 4–14, 18, 19, 21–28 cover plates, 15, 16 hollow pendants, 17 fibula, 29 belt tip (belt pendant), 32, 33 swords. 1, 4–16, 18–28 bronze, 2, 3 bronze, iron, 17 bronze, enamel, 29, 32, 33 iron, 30 shell, 31 shell, bronze.

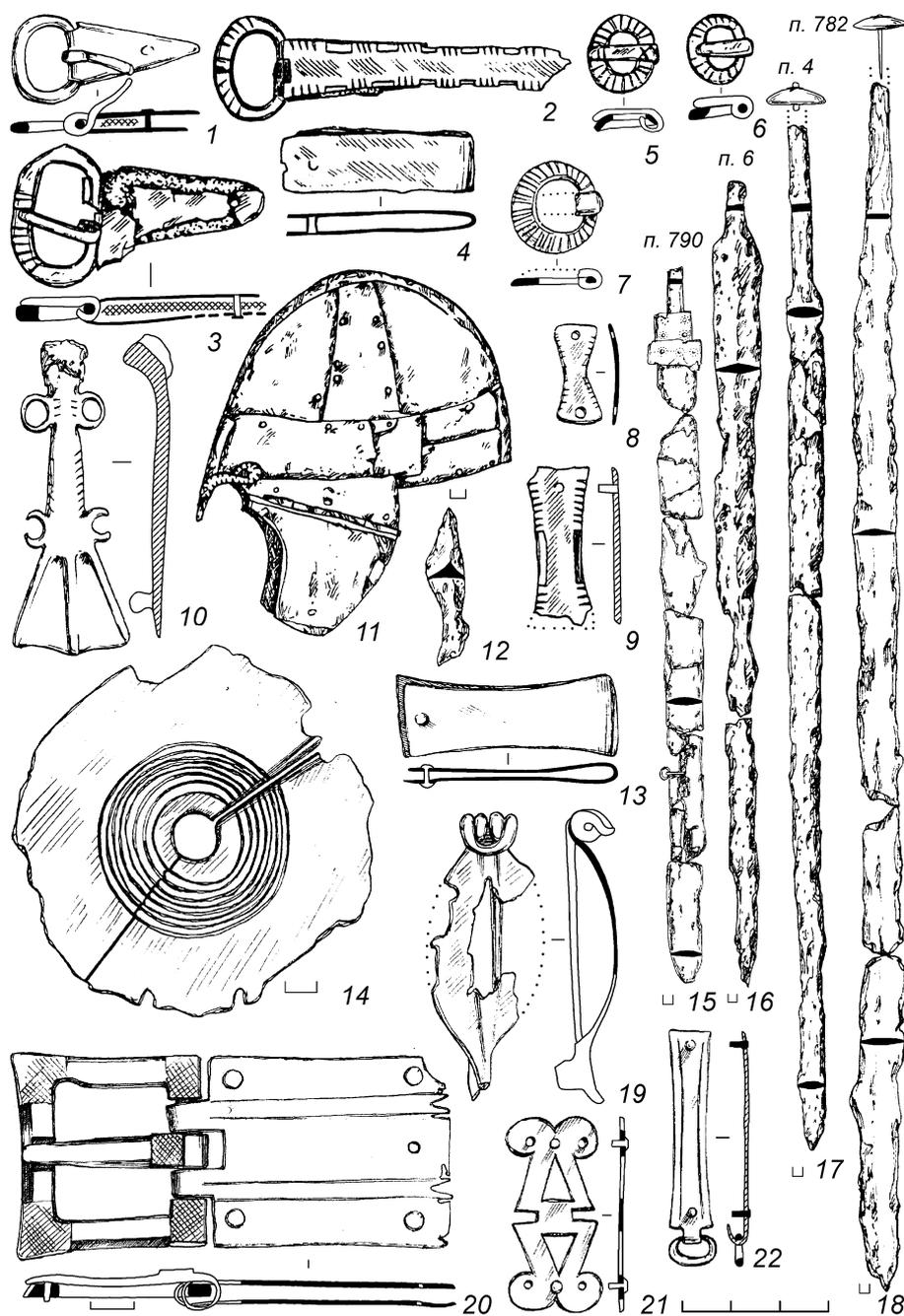


Fig. 10. Tarasovo burial ground. Artifacts from male graves. Second half of III c. 1–3, 5–7, 20 buckles, 4, 13 belt tips, 8, 9, 21, 22 cover plates, 10 hook, 11 reconstructed helmet, 12 arrowhead, 14 syulgama, 15–18 swords, 19 fibula. 1, 3 bronze, leather, 2, 4–9, 13, 14, 19–22 bronze, 10, 11, 15 iron, bronze, 12, 16 iron, 17, 18 iron, chalcedony.

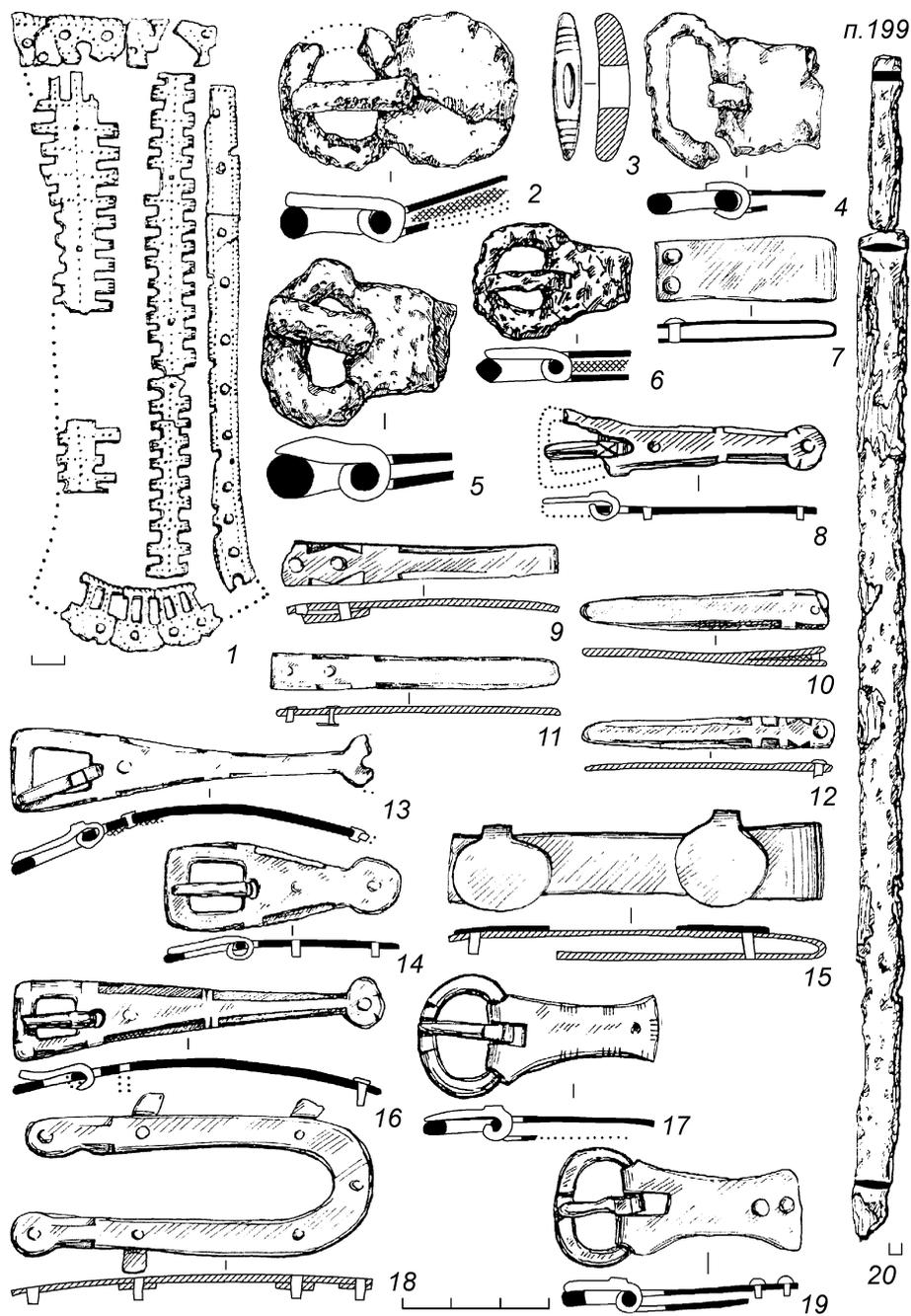


Fig. 11. Tarasovo burial ground. Artifacts from male graves. 1 III c., 2–20 first half of IV c. 1 scabbard, 2, 4–6, 8, 13, 14, 16, 17, 19 buckles, 3 hollow pendant, 7, 9–12, 15, 18 belt tips, 20 sword. 1, 3, 7–19 bronze, 2, 4, 5, 20 iron, 6 iron, leather.

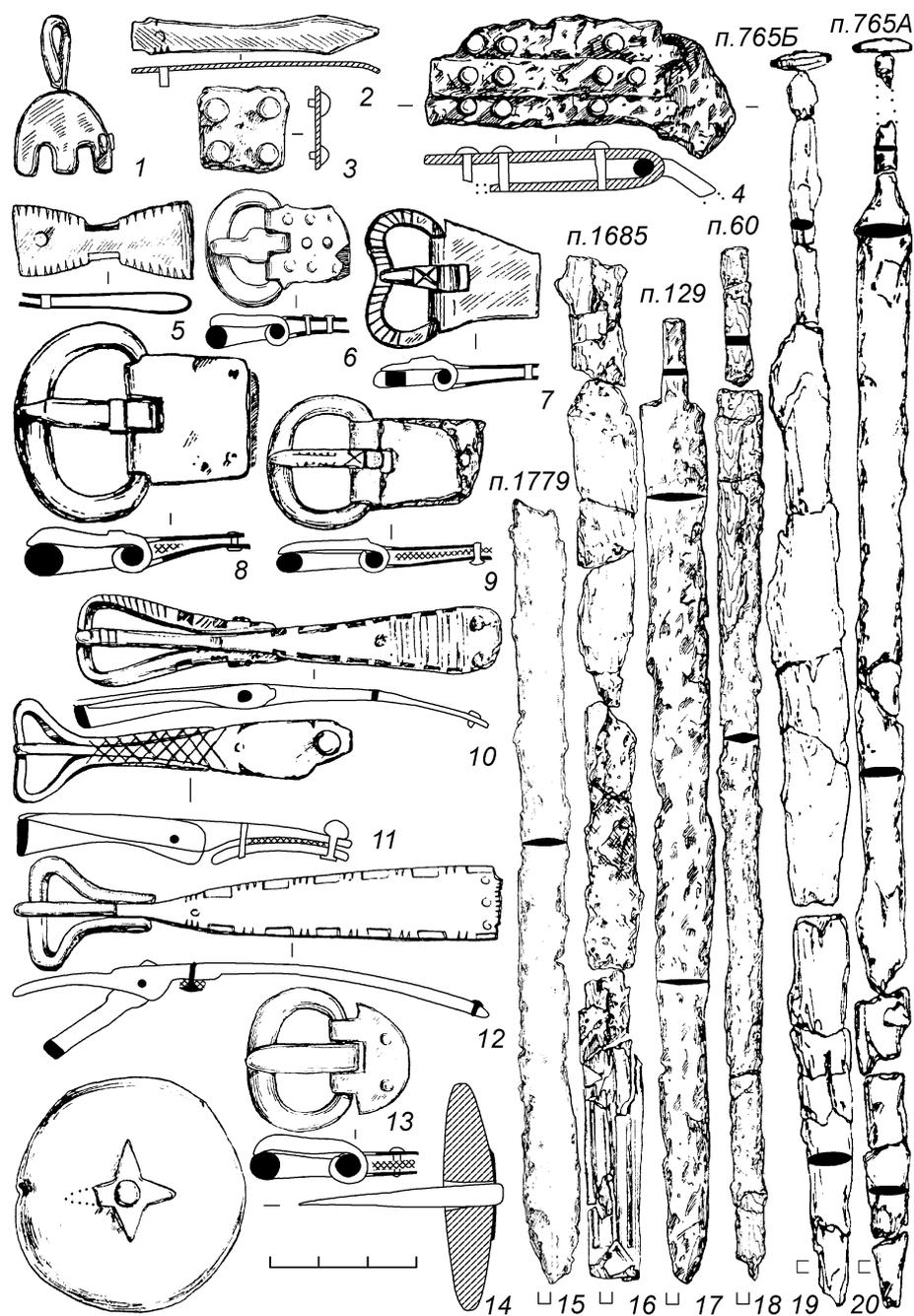


Fig. 12. Tarasovo burial ground. Artifacts from male graves. Third quarter of IV c. 1 pendant, 2, 5 belt tips, 3 cover plate, 4 belt tip (belt pendant), 6–13 buckles, 14 disk (sword pommel), 15–20 swords. 1, 2, 5–7, 10–12 bronze, 3, 4, 16 iron, bronze, 8, 9, 13 bronze, leather, 14 chalcedony, bronze, 15, 17, 18 iron, 19, 20 iron, chalcedony.

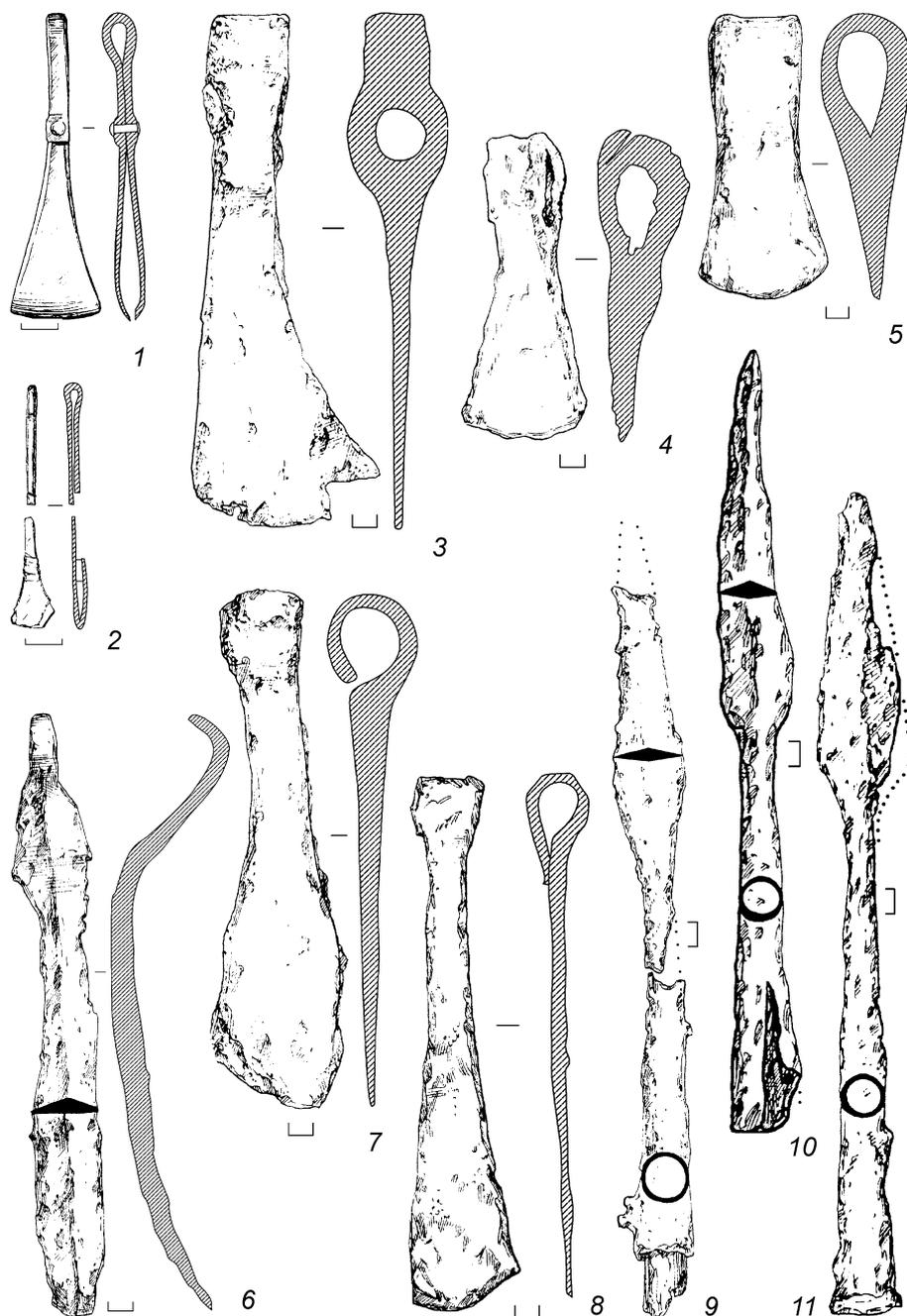


Fig. 13. Tarasovo burial ground. Artifacts from male graves. Second half of IV c. 1, 2 pincers, 3–5 axes, 6 fighting scythe, 7, 8 pole-ax items, 9–11 spear heads. 1, 2 bronze, 3–8, 10, 11 iron, 9 iron, wood.

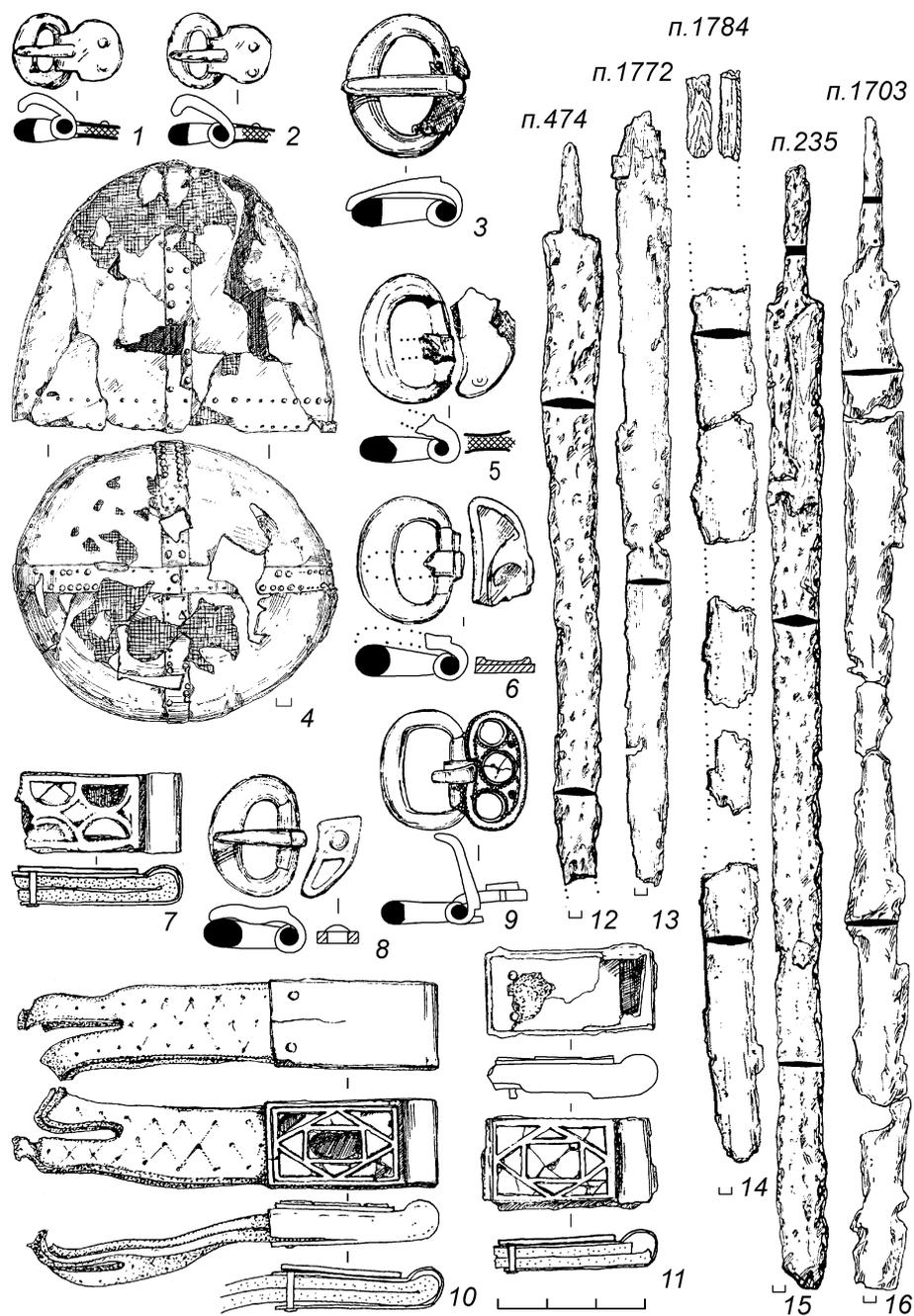


Fig. 14. Tarasovo burial ground. Artifacts from male graves. 1–11, 13, 14 fourth quarter of IV c., 12, 15, 16 V c. 1–3, 5, 6, 8, 9 buckles, 4 reconstructed helmet, 7, 10, 11 belt tips, 12–16 swords. 1–3, 5, 6, 8 bronze, leather, 4 iron, bronze, silver, gold, fabric, 7, 10, 11 bronze, gold, cornelian, glass, 9 bronze, gold, cornelian, 12–16 iron.

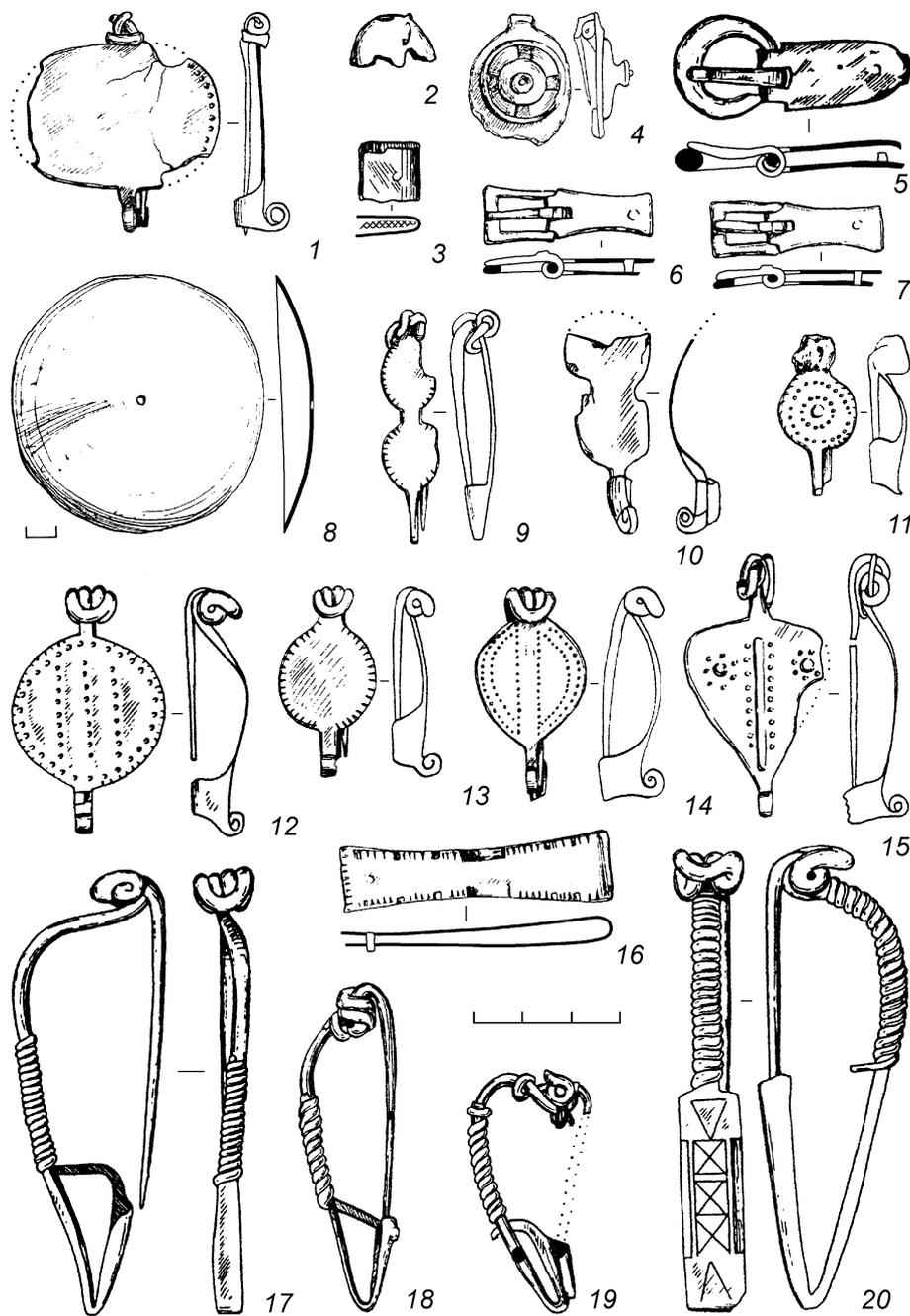


Fig. 15. Tarasovo burial ground. Artifacts from female graves. 1–10, 17–19 first half of III c., 11–16, 20 second half of III c. 1, 4, 9–15, 17–20 fibulas, 2 hollow pendant, 3, 16 belt tips, 5–7 buckles, 8 badge. 1–3, 5–20 bronze, 4 bronze, enamel.

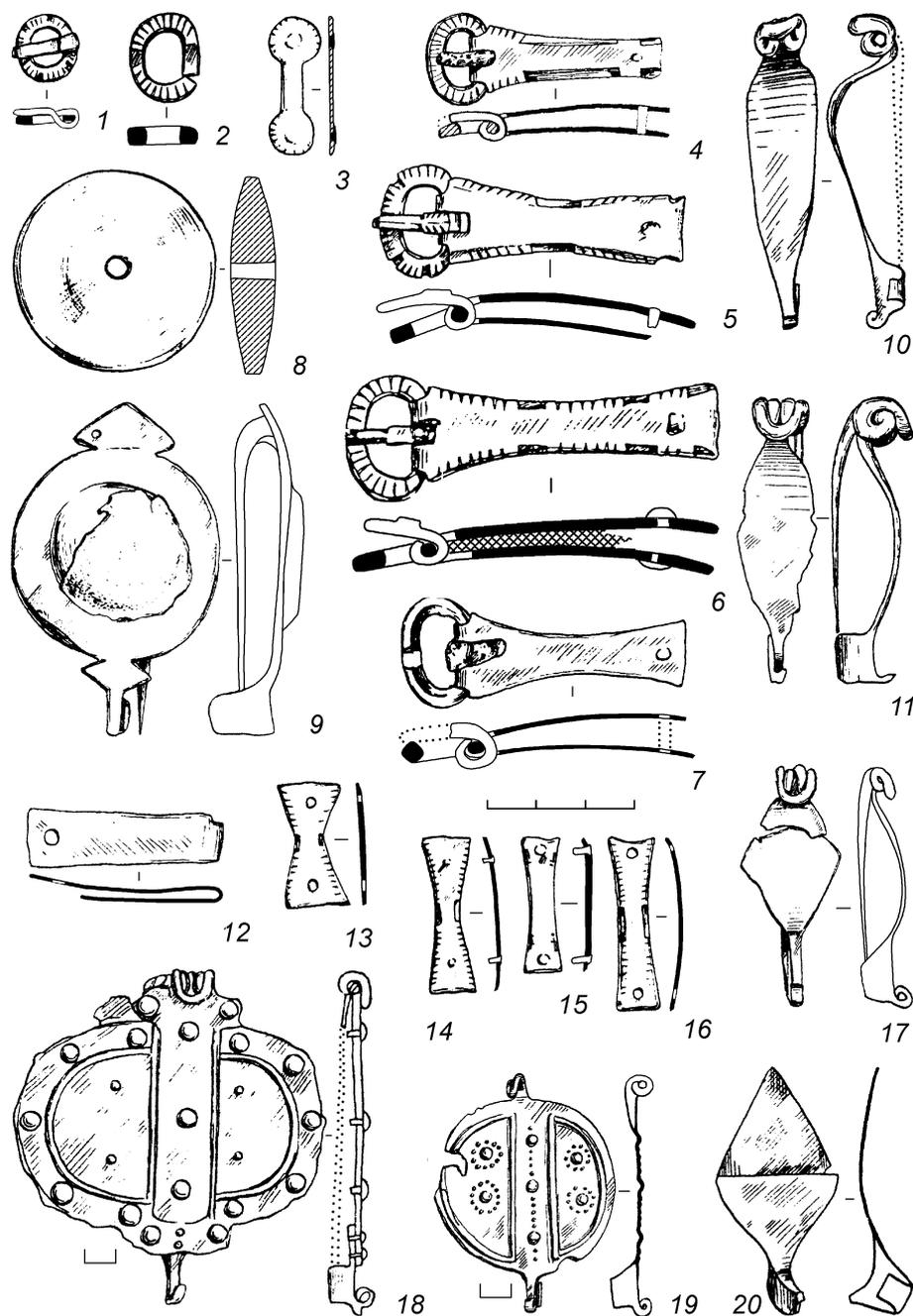


Fig. 16. Tarasovo burial ground. Artifacts from female graves. Second half of III c. 1, 2, 4-7 buckles, 3, 13-16 cover plates, 8 disk, 9-11, 17-20 fibulas, 12 belt tip. 1-5, 10-20 bronze, 6 bronze, leather, 7 bronze, iron, 8 chalcedony, 9 bronze, enamel.

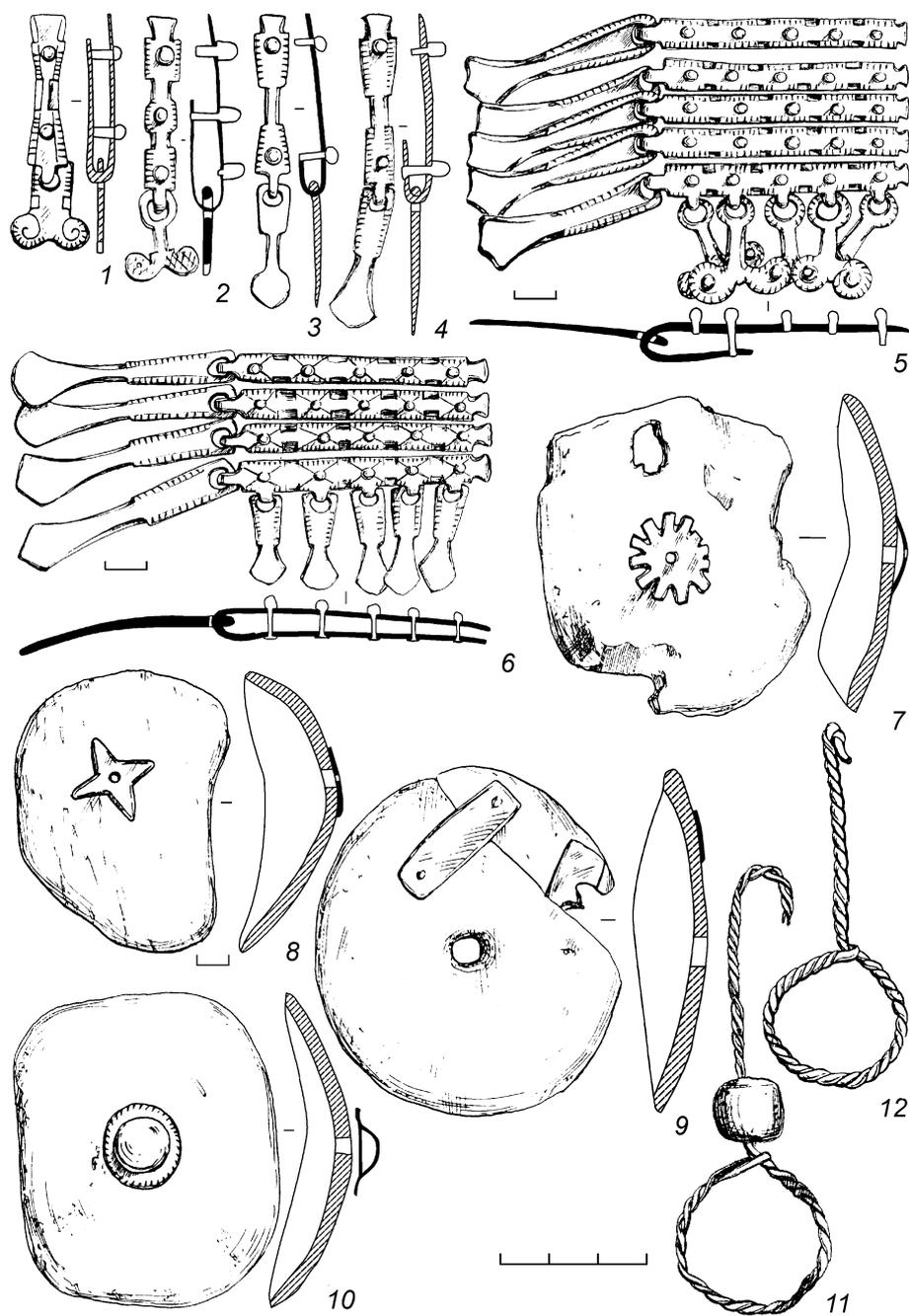


Fig. 17. Tarasovo burial ground. Artifacts from female graves. Second half of III–IV c. 1–4 cover plates, 5, 6 belt tips (belt pendants), 7–10 badges, 11, 12 temple pendants. 1–6, 12 bronze, 7–10 shell, bronze, 11 bronze, glass.

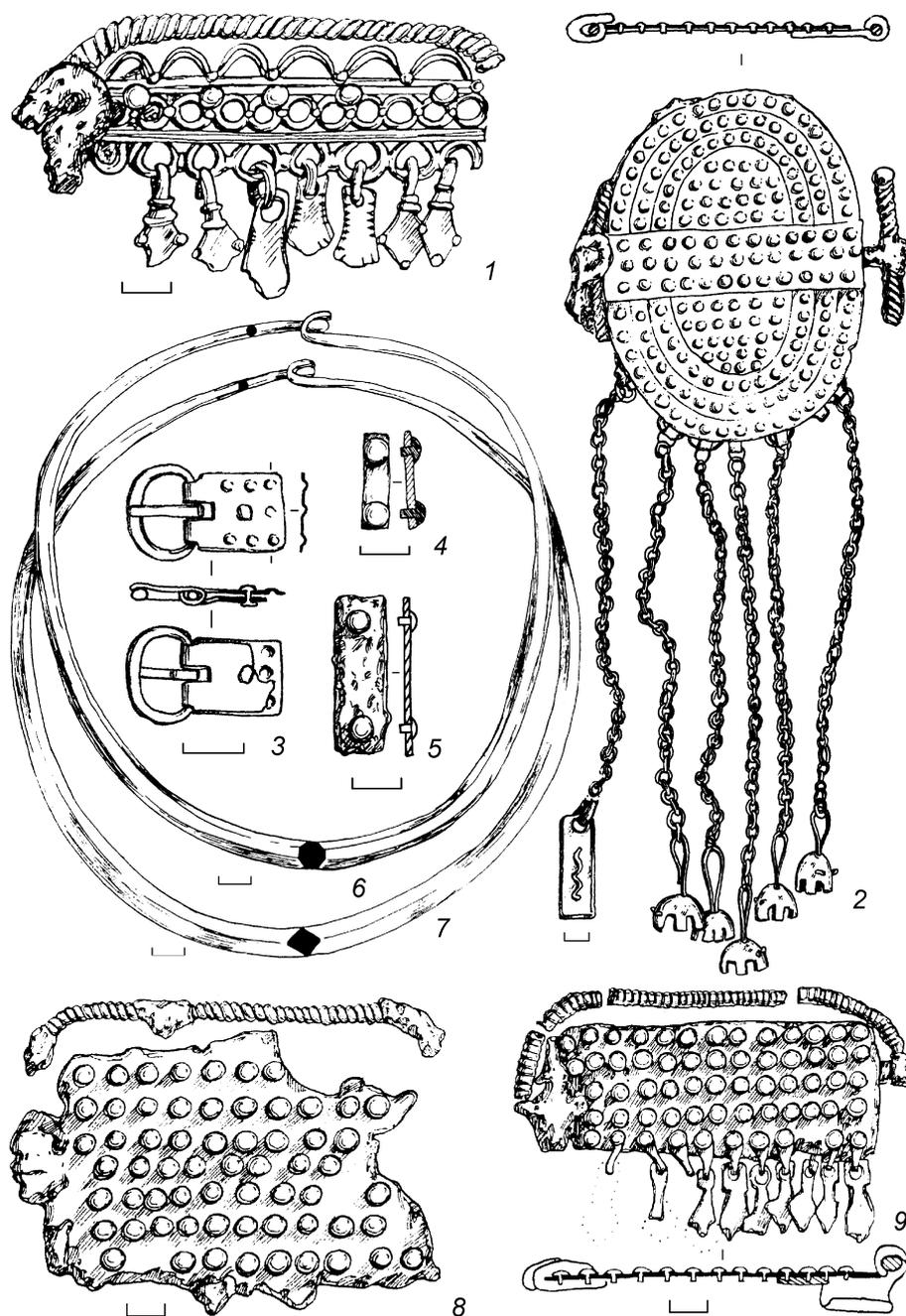


Fig. 18. Tarasovo burial ground. Artifacts from female graves. Second half of V c. 1, 2, 8, 9 fibulas, 3 buckle, 4, 5 cover plates, 6, 7 torcs. 1, 2, 4, 5, 8, 9 bronze, iron, 3, 6, 7 bronze.

Iron artifacts

Iron artifacts were mostly researched by S. E. Perevoschikov as well as V. V. Kondrashin and Y. A. Semykin. There are 99 items which went through the metallographic analysis: 44 knives, 11 spearheads, 3 axes, 1 adze, 3 arrowheads, 5 quiver hooks, 5 bits, 3 rings, 2 collars, 1 awl, 5 fighting scythes, 3 iron balls, and 13 swords. The iron goods are clearly divided into two groups: locally-produced and import. The local group consists mainly of the above-mentioned items, i.e. knives, adze, awl, spearheads, quiver hooks and others. They were made of ball iron and low-carbon steel and processed afterwards by forging, forge welding, selective carburizing, hardening with sudden cooling, quenching, and tempering. On the whole, the metal-working level of the local population was adequate with other east-European regions of that period.

Imported iron artifacts include mostly equipment for warriors: swords (28 pcs), fighting scythes (12 pcs, Fig. 3: 6), shaft-hole axes (both short – 5 pcs, Fig. 13: 4, 5 and long – 14 pcs, Fig. 13: 3), helmets (4 pcs), armors (3 pcs) and iron balls. The metallographic study of the swords showed unexpected results. It turned out that most of the swords were manufactured according to non-local technologies. Backswords (I–II centuries, Fig. 7: 15, 16) were high-quality welded from multi-layered steel blanks; double-edged swords (I–V centuries) were forged from multi-layered iron blank, from iron ball by carburizing, from three-layered steel blank by high-quality welding, from homogeneous carburized steel of high-quality, from hypereutectoid crucible steel, and from Damascus steel. Almost all of the swords were imported. This fact drastically changes the conception on the local character of the Urals' swords (S. I. Bezuglov).

The metallography of the short axe with shaft-hole from grave 1772 (Fig. 13: 4) showed that it had been made by longitudinal welding of steel and iron multilayered bars with the steel bar as the blade surface. The long shaft-hole axes are also of interest and provoke discussion: some researchers believe them to be axes (P. N. Starostin, L. S. Khomutova, V. I. Zavyalov, S. E. Perevoschikov, L. A. Vyazov), others – pole-axe semi-finished products (L. S. Rozanova, N. N. Terekhova, V. F. Ghening, Y. A. Semykin, R. D. Goldina). The most of the Tarasovo artifacts are pole-axe items (Fig. 17: 7, 8).

Those graves also contained rather peculiar artifacts – fighting scythes. S. E. Perevoschikov and I. Y. Pastushenko (2006) launched a discussion on them being a long- and short-range lethal weapon. The metallographic research confirms their idea. To produce the scythes, workshops used well-forged ball iron and raw and prepared steel, and often applied welding of iron and steel with the raw material of higher quality as the blade surface; several scythes were quenched. Horse tack and armament from the Tarasovo graves were studied by R. D. Goldina and S. R. Volkov (2000), and recently by A. P. Zыkov (Ekaterinburg).

Demographics and the general issues

The study of the Tarasovo materials showed that the burial ground had been left by one of the south Udmurt groups. Since the burial ground was excavated in full measure and the 1,574 burials were anthropologically determined, it became possible to make a demographic description of this population (Zhuravleva 2015). The following specifics were figured out: correlation of male (39.8%) and female (60.2%) graves, age groups, average life span of men – 31.3 years and women – 28.2 years, community size – 79–84 persons, composed of 40 adults (age 17 to 45 years), 13 infants (age up to 8), 22 teenagers, 9–10 aged persons, about 20 married couples.

Nowadays, issues of social stratification and economy are under development. As a result of the Tarasovo monument being divided chronologically, it turned out that the Prikamye population had close contacts with the Germanic world during the 2nd half of the II century and faced two waves of the Gothic-Slavic intrusion during the 3rd and 4th quarters of the IV century. The male graves dated to the 3rd quarter of the IV century include unique kinds of defense weapons (neck hoop, helmet, armor, more swords than in any other period (6 pieces, Fig. 12: 15–20)), original two-part buckles (Fig. 12: 10–12) unknown in the Kama region, unusual parts of the horse tack. It suggests that some alien military contingent penetrated the Kama environment. Due to this inflow, male graves of the 3rd quarter of the IV century contain both short (Fig. 13: 4, 5) and long (Fig. 13: 3) shaft-hole axes as well as pole-ax items (Fig. 13: 7, 8), fighting scythes (Fig. 13: 6) and toilet pincers (Fig. 13: 1, 2). It should be noted that warrior graves of the 2nd half of the IV century with shaft-hole axes, pole-ax items and fighting scythes form a specific group of graves in the northern part of the cemetery. Male graves with swords (Fig. 14: 12–16), a helmet (Fig. 14: 4) and polychrome belt decorations (Fig. 14: 6–11) are connected with the second wave of the migrants-warriors.

The studies of the materials from the Tarasovo burial ground will certainly last for more than a decade. Now we are at the beginning of this road but the results obtained have not only made our vision of life in the Middle Kama region at the first half of the I millennium. AD more reasoned, clear and realistic but exceeded our expectations and have given confidence to go on with the further research of the materials of this really unique monument.

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Rimma Goldina

TARASOVO I–V SAJANDI KALMISTU KAMA KESKJOOKSUL – MUISTSETE UDMURTIDE AINULAADNE MÄLESTUSMÄRK

Resümee

Tarasovo kalmistu on kõikidest teadaolevatest ja uuritud Euraasia soome-ugri I–V sajandi kalmistutest suurim. Muistis kuulub Pjanobori kultuuri Tšeganda rühma. See paikneb Kama jõe keskjooksul, Permist 240 km edelas, Iževskist 87 km kagus ja Kaasanist 310 km idas. Administratiivse kuuluvuse järgi on koht Udmurdi Vabariigi Sarapuli rajoonis. Kalmistu asukohaks on valitud 20 m kõrgune neemik Kama paremkaldal Tarasovo külast 1 km kagu pool, 2 km Kama olemasolevast voolusängist edelas.

Tarasovo kalmistut uuriti autori juhitud Udmurdi Riikliku Ülikooli Kama-Vjatka arheoloogilise ekspeditsiooni poolt 18 aastat (1980–1997). Ühtekokku kaevati läbi ala suurusega 16 091,5 m², kus avastati 1880 hauda 2096 matusega ja üle 37 000 hauapanuse. Kaevamiste kohta on koostatud 21-köiteline aruanne, mida säilitatakse Venemaa Teaduste Akadeemia arheoloogia instituudis Moskvast, Udmurdi Riikliku Ülikooli Kama rahvaste ajaloo ja kultuuri instituudis Iževskis ning Kesk-Kama Rahvaste Ajaloo ja Kultuuri Muuseumis Sarapulis.

Välitööde periood kujunes väga paljudele Iževski arheoloogiakooli kasvandikele küpsemise ja hariduse omandamise ajaks. Praeguseks on kaevamistest osa võtnud üliõpilastest ja õppejõududest kaitsnud oma teaduskraadi 17. Tarasovo ekspeditsioonis töötati ühtlasi välja ka Kama kalmistute kaevamise reeglistik, mida nüüd kasutatakse edukalt teiste analoogiliste muististe uurimisel.

Kaevamiste tulemuste kohta on avaldatud kaheköiteline monograafia koos haudade kataloogi ja esemete joonistega (Goldina 2003; 2004). Kolmas, kalme matmiskombestiku analüüsi hõlmav köide ilmus 2015. aastal autori koostöös T. R. Sabirovi ja T. M. Sabirovaga (Goldina *et al.* 2015). Töö põhineb matmiskombestiku 130 atribuudi uurimisel, kaasates muuhulgas planimeetrilisi ja matemaatilisi meetodeid.

Keskendudes kalmistu varasema (I–II sajand) ja hilisema (III–V sajand) osa võrdlevale analüüsile, tuvastati, et kultuuriliselt kuulusid mõlemad osad samale

rahvale. Hauad paiknesid ridades ja moodustasid rühmi, kusjuures enamik neist oli orienteeritud põhja–lõuna suunas. Tüüpiliseks Tarasovo hauaks oli lihtne maalune laibamatus, kus puudusid hauakivid. Haua kuju ja suurus sõltusid sinna maetu vanusest. Surnud olid maetud laudadest tehtud või ühest puust õõnestatud kirstus. Surnukeha on tavaliselt asetatud selili, käed sirgelt küljel või küünarnukist kõverdatud. Mehe- ja naisematuste paiknemise võrdlus viis mõttele, et hauakoha valikul järgiti perekondlikku printsiipi: lähisugulaste hauad paigutati ühte ritta, hoolimata nende soost või vanusest. Oluliseks peeti hauapanuste kaasamist (74,7% matustest on panustega). Andmete statistilise töötusega tuli välja kaks peamist tendentsi: osa esemeid olid matmisrõiva osadeks (paiknedes hauas selliselt, nagu neid eluajal kanti), kuid teine osa esemeid (varasemalt kaelavõrud, hiljem vööd) leiti avatuna või lahtivõetult matuse kõrvalt. Viimasega liitub ka komme asetada panused kas haua päitsisse (eriti helmed ja oimuehted) või jalgade juurde. Erinevate esemetüüpide arv ühes hauas võib ulatuda ühest seitsmeteistkümmeni, olles tavaliselt neljast kuueni. Naistele pandi teispoosusesse kaasa oimuehteid, helmeid, sõlgi, käe- ja kaelavõrusid jm, meeste tavalisemad panused olid mõõgad, oda- ning nooleotsad, võitlusvikatid, kinnitushaagid, tuped jms.

Kuna kalmistu kaevati täielikult läbi ja säilinud luuainest analüüsis põhjalikult G. V. Rõkušina (Moskva), sai G. N. Žuravleva (2015) uurida kalmistule matnud kogukonda paleodemograafilisest aspektist. Selgitati välja mehe- ja naisematuste osakaal (vastavalt 39,8 ja 60,2%), keskmine vanus (meestel 31,3 ja naistel 28,2 aastat) ning kogukonna suurus (79–84 indiviidi, kellest 40 olid täiskasvanud vanuses 17–45 aastat, 13 olid kuni 8-aastased lapsed, 22 olid teismelised ja 9–10 olid vanurid; abielupaare oli kokku 20).

Tarasovo kalmistule on eelnenud kultuskoht või pühamu, mis välitööde käigus samuti läbi uuriti ja dateeriti V–III sajandiga eKr. Muistisele pühendatud monograafias (Goldina *et al.* 2013) on põhjalikult analüüsitud kõiki ehitusjäänuseid (suured lohud ja postiaugud, kaltsineerunud luid sisaldavad kultuurikihi laigud jms) ja leiuainest: keraamika, värtnakedrad, tiiglid, nooleotsad ja erinevad luu- ning saviesemed.

Värvilistest metallidest ehteid analüüsisid autor ja V. A. Bernts. Koostati nende tüpologia ja kronoloogia, kasutades eraldi mehe- ning naisematuste stratigraafiat ja jälgides kaht ajalist etappi: varane ehk Nõrgõnda (I–II sajand) ja hiline ehk Mazunino (III–V sajand). I etappi õnnestus rühmitada 37 mehe- ja 102 naisematust. Mehematuste hulgas oli võimalik rühmitada eraldi I, II ja I–II sajandi matused. Kuna naisematuste hulk oli suurem ja nende panuste sortiment rikkalikum, osutus võimalikuks neid detailsemalt rühmitada: lisaks I, II ja I–II sajandi rühmadele leidub seal ka komplekse, mida võib dateerida näiteks üksnes II sajandi esimese poole või II sajandi teise poolega.

III–V sajandisse kuuluva 88 mehematuse hulgas võis eristada 12 rühma: III sajandi esimene pool, III sajandi teine pool, III sajand, IV sajandi esimene pool, III sajandi teine pool kuni IV sajand, IV sajandi kolmas veerand, IV sajandi neljas veerand ja IV sajandi teine pool. Palju pikema kasutusajaga esemed on

samalaadsed meeste ja naiste haudades (näiteks III sajandi teine pool kuni V sajand, IV sajandi teine pool kuni V sajand, IV–V sajand). III–V sajandi 160 naisematuse hulgas eristusid järgmised rühmad: III sajandi esimene pool, III sajandi teine pool, III sajand, III sajandi teine pool kuni IV sajand, IV sajand, V sajandi esimene pool ja V sajandi teine pool. Kirjeldatud kronoloogilised rühmad on üksikasjalikult põhjendatud analoogiatega mujalt, olles tänapäeval Kama keskjooksu muististe uurimisel võtmetähtsusega alusmaterjal.

Samuti on läbi viidud teiste esemeliikide ulatuslikke uurimisi. V. A. Bernts analüüsis ainulaadseid kilbikujulisi naaste, S. A. Perevoštšikova töötas välja oimuripatsite tüpoloogiat ja vaatles nende arengut ning dateeringut ja O. A. Kazantseva käsitles keraamika morfoloogiat, savikoostist, valmistamistehnikat, ornamenti ning kronoloogiat. Peale selle avaldas T. M. Sabirova monograafilise uurimuse Tarasovost ja teistest Kesk-Kama muististest leitud sõlgede (kokku 452) kohta. N. V. Kuzminõhh ja autor analüüsisid Tarasovost leitud suurt hulka helmeid (kokku 18 512), käsitledes nende kuju, suurust, värvust, läbipaistvust, kujundust ning valmistamistehnikat. Tarasovo kalmistu hauapanuseid kasutas oma Kama piirkonna vanema rauaaja rõivastuse rekonstruktsioonides ka A. A. Krasnoperov.

Raudesemeid uurisid S. E. Perevoštšikov, V. V. Kondrašin ja J. A. Semõkin. Metallograafiline analüüs tehti 99 esemest. Rauast tooted jagunevad selgelt kahte rühma: kohapeal valmistatud ja sisetoodud esemed. Kohalik rühm koosneb peamiselt nugadest, kirvestest, naasklitest, odaotstest ja kinnitushaakidest. Need esemed valmistati rauast ja madala süsinikusisaldusega terasest ning töödeldi seejärel sepistamise, sepakeevituste, tsementiitumise, karastamise ja noolutamise teel. Kohaliku elanikkonna metallitöö tase oli üldjoontes samasugune nagu teistel Ida-Euroopa rahvastel sel ajal. Imporditud raudesemed kuulusid enamasti sõdalase varustusse: mõõgad, võitlusvikatid, sõjakirved, raudkerad. Metallograafiline uurimine näitas, et enamik mõõku oli valmistatud piirkonnale võõra tehnoloogiaga. Üheteralised mõõgad (I–II sajand) olid tehtud kõrge kvaliteediga mitmekihilistest terastoorikutest, kaheteralised mõõgad (I–V sajand) olid sepistatud mitmekihilistest rauast toorikutest, tsementiitud rauast, kolmekihilistest terastoorikutest kõrge kvaliteediga keevitustega, kvaliteetsest ühtlase süsinikusisaldusega terasest, hüpereutektoidsest tiigliterasest ja Damaskuse terasest. Peaaegu kõik mõõgad olid mujalt sisse toodud.

Sõdalaste hauapanuste hulka kuulus ka üks väga omapärane relvaliik: võitlusvikat. Seesuguste vikatite valmistamiseks kasutati hästi sepistatud rauda ja terast, neid kokku keevitades ning karastades.

Tarasovo kalmistu materjalide uurimine kestab tõenäoliselt veel kaua, praegu ollakse alles selle alguses. Aga juba senisedki tulemused võimaldavad ettekujutust elust Kama keskjooksu piirkonnas märksa avaramaks, põhjendatumaks ja realistlikumaks muuta.