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N.N. Seregin[1], V.V. Tishin[1, 2], and N.F. Stepanova[3]

[1]Altai State University,
Pr. Lenina 61, Barnaul, 656049, Russia
E-mail: nikolay-seregin@mail.ru
[2]Institute for Mongolian, Buddhist and Tibetan Studies,
Siberian Branch, Russian Academy of Sciences,
Sakhyanovoy 6, Ulan-Ude, 670047, Russia
E-mail: tihij-511@mail.ru
[3]Institute of Archaeology and Ethnography,
Siberian Branch, Russian Academy of Sciences,
Pr. Akademika Lavrentieva 17, Novosibirsk, 630090, Russia
E-mail: nstepanova10@mail.ru

Hephthalite Coin from an Early Medieval Burial at Gorny-10, Northern Altai

We describe a silver coin found in one of the burials at Gorny-10 cemetery in northern Altai, excavated by expeditions from the Altai State University in 2000–2003. The coin was discovered in a destroyed burial of children (No. 46) along with other informative artifacts, which are rather uncommon in such burials. Judging by horse harness and ornaments, the assemblage falls in the interval from the late 6th to early 8th century AD. The coin is an imitation of the drachm of the Sasanian shah Pērōz I to classify as type or emission 287, according to R. Göbl, that is one of the most common types of Hephthalite coins. The elemental concentration of the specimen has a high content of silver and no gold. The specimen has no analogs in North or Central Asia. It could have been brought to the forest-steppe Altai by Türks, who conquered the Hephthalite Empire in the first decades of the late 6th century AD.

Keywords: *Coins, imitation, Hephthalites, northern Altai, Early Middle Ages, chronology.*

Introduction

Samples of Central Asian coins occur extremely rare in the archaeological sites of North and Central Asia of the Early Middle Ages. Such finds are evidence of a variety of direct and indirect contacts between the populations of these regions in the west, which is reflected somewhat fragmentarily in the material culture of the nomads of the study period. In addition, coins (like many other items of import) are used as important chronological markers, and are often reasonably regarded as a "prestigious" element in the set of artifacts, demonstrating the status of the owner. Therefore, each new such find of Central Asian origin attracts much attention from specialists, both archaeologists and historians, who reconstruct the ethnocultural and social processes, as well as from numismatists, who study the specifics of distribution of these types of artifacts and the peculiarities of their use by the local population.

This article introduces a Central Asian coin, unique to North and Central Asia, found during excavations at Gorny-10 necropolis from the period of Türkic Qaghanates. Taking into account the great importance of the context of the discovery of the item, we present a general cultural and chronological interpretation of the entire complex, in which this find was discovered.

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A detailed analysis of the coin, including numismatic characteristics, elemental composition, and a clarification of the range of analogs, became the basis for preliminary reconstruction of the history of the periphery of the nomadic empire in the period of the Türkic Qaghanates.

Excavation results

Gorny-10 cemetery is located on the promontory of the right bank of the Isha River, 1.3 km west-northwest of the mouth of the Karaguzh River, 0.6 km north-west of the village Gorny of Krasnogorsky District, Altai Territory (Fig. 1, 2). In 2000–2003, expeditions of the Altai State University and the Research and Production Center "Naslediye", under the leadership of M.T. Abdulganeev and N.F. Stepanova, excavated 75 burials in the area of the cemetery. For various reasons, the results of the studies of the site have so far been published only in part (Abdulganeev, 2001; Stepanova, Abdulganeev, 2003; Seregin, Abdulganeev, Stepanova, 2019; Seregin, Stepanova, 2020; and others). Meanwhile, the striking materials of the Gorny-10 necropolis are important for studying both particular aspects of the history of the population that left this evidence, and the processes that took place in the southwestern Siberia at the beginning of the Early Middle Ages. Of particular importance in this regard are individual exemplary objects, to which the burial belongs.

Grave 46, investigated in 2001, is located in the northeastern part of excavation No. 3, where the southern group of objects of the Gorny-10 necropolis is situated. The burial was traced from a depth of 0.5 m. The southeastern part of the grave was destroyed by a modern pit. The dimensions of the preserved part are 0.7 × 0.85 m. The grave had an oval-elongated shape and was oriented with its long axis along the ESE-WNW line. The bottom was registered at a depth of 0.65 m from the modern surface. In the filling of the grave, at different levels and without a certain order, there were two child's teeth, a fragment of a tubular bone, an iron stirrup and a bit, two paste beads, three bronze pendants (including an openwork style pendant), two bronze and one silver coins (Fig. 3).

Fig. 1. Location of the Gorny-10 site.

Thus, the published archaeological complex appears to be a destroyed children's burial with accompanying

Fig. 2. View of Gorny-10 (*photo by M.T. Abdulganeev*).

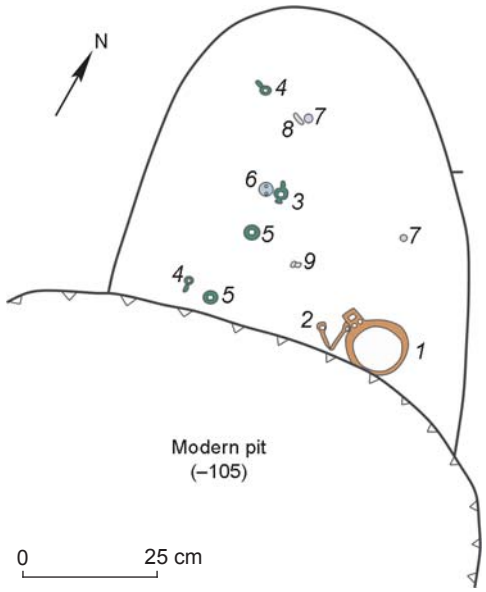

Fig. 3. Plan of grave 46 of the Gorny-10 cemetery.
1 – iron stirrup; *2* – iron bits; *3*, *4* – bronze pendants; *5* – bronze coin; *6* – silver coin; *7* – bead; *8* – a fragment of a human bone; *9* – human teeth.

grave goods, which are quite rare for burials of this age group and informative both in terms of dating the whole object and in terms of analysis and interpretation of individual finds.

Analysis of grave goods

The accompanying goods of the children's burial include items of horse harness and ornaments (the coins, apparently, can be classified as the latter). Despite the absence of an animal, iron stirrups and bits were found in grave 46. The tradition of placing individual elements of horse equipment in single burials is quite rarely recorded in the Odintsovo complexes of the forest-steppe Altai. Somewhat more often, this practice is observed in the monuments of the early medieval Türks of the Altai-Sayan region (Seregin, 2013: 104). In particular, it is known from the materials of the Kudyrge complex, which demonstrates general similarity with the burials of the Gorny-10 necropolis (Gavrilova, 1965: 22–23, pl. VIII, IX).

The iron stirrup (Fig. 4, *1*) is identified as a flat plate stirrup. The characteristic features of this specimen, which determine the time of its production, are a narrow (2.0 cm) flat footboard and a broad unarticulated plate without a neck. The opening formed by the arches has a rounded shape. Rare features of the stirrup include the presence of two additional holes in the plate, in addition to the rectangular opening for the stirrup strap. Similar variants of the plate design were observed in two items: that from mound 1 of the Kurai VI complex in Altai (Evtyukhova, Kiselev, 1941: Fig. 26), dating back to the 7th century AD, and that from the burial of the Shahidon cemetery in Tajikistan (Solovyev, 2018: Fig. 4, *4*), which is tentatively dated to the late 7th to early 8th century AD. Judging by the morphological characteristics of the stirrup from grave 46 at Gorny-10, it could have been manufactured in the late 6th to 7th centuries AD.

Iron bits have smooth shafts of links, a hook connection, and single-ring ends (Fig. 4, *2*). According to S.V. Neverov (1992: 150–151), who carried out a detailed analysis of a significant amount of materials, hook bits existed on the territory of Southern Siberia throughout the entire 1st millennium AD; and similar finds from the early medieval assemblages of the region demonstrate the continuation of the development of local forms of artifacts of the Xiongnu-Xianbei period. In general, such bits were widespread, and are not indicative in terms of dating.

The outfit ornaments include two bronze pendants (Fig. 4, *4*, *5*). Similar items, showing some variability of design, were found both in the complexes of the Odintsovo culture of the forest-steppe Altai (Abdulganeev, 2001: Fig. 1, *11*, *12*; Savinov, Novikov, Roslyakov, 2008: Pl. XI, 6), and in the sites of adjacent territories—in the Altai Mountains, Tomsk and Novosibirsk regions of the Ob valley, Kemerovo Region, etc. (Gavrilova, 1965: Pl. XX, 18–26; Chindina, 1977: Fig. 11, *6*; Belikova, Pletneva, 1983: Fig. 79, *12*; Troitskaya, Novikov, 1998: Fig. 16, *48*, *52–53*; Ilyushin, 1999: Fig. 16, *15*, *18*; 25, *13*, *14*; 27, *20*). These finds have been discovered in the sites

Fig. 4. Items of horse harness and outfit ornaments from grave 46 (*1*, *2* – iron; *3–5* – bronze).

dating from the late 6th to early 8th century AD. Unique is the bronze heart-shaped flat pendant (Fig. 4, *3*), the analogs of which are not known to us.

The most striking element of the goods from grave 46 of Gorny-10 are coins. Judging by the available materials, these items served as ornaments of the outfits of population of the forest-steppe Altai and adjacent territories. There are two Chinese coins (fig. 5) of the *wŭ zhū* 五銖 type. Such finds are already known in a number of early medieval complexes of North Asia (Masumoto, 2001; Kuznetsov, 2007; and others). According to their distinctive typological characteristics, the specimens from the burial under consideration date from the period of the Sui Dynasty (581–618) (Peng Xinwei, 1994: 194–196, 201, fig. 6). To the analysis of an extensive collection of Chinese coins from the Gorny-10 necropolis a special publication will be devoted. In this article, we will dwell in detail on the silver coin, which is unique not only for the sites of the southwestern Siberia, but also for the complexes of North and Central Asia as a whole.

Fig. 5. Chinese bronze coins from grave 46.

Fig. 6. Silver coin from the grave 46.

Integrated characteristics of the coin

The coin from grave 46 (Fig. 6) has a diameter of 22.5–24.0 mm and a mass of 3.18 g. The obverse and reverse dies rotation is 3 h. On the opposite margins of the specimen, there are two holes, obviously intended for hanging the item.

The coin can be identified as a type (or emission) 287 according to the classification by R. Göbl (1967: Bd. I, S. 197, 198–199; Bd. II, S. 90–91, 149; Bd. III, Taf. 78, 79). This is one of the most common groups of coins associate with of the so-called "Iranian Huns", the beginning of the production of which was associated with the Hephthalite state. Such items are imitations of the drachms of the Sasanian shah Pērōz I (457–484), with the "third crown" or with "the third crown type" (according to R. Göbl). There are four "pellets" in the obverse margin; to the right of the winged crown, there is a Bactrian inscription *ηβ* [ēb] (some specimens show *ηβο* [ēbo] and even presumably *ηβοδ* [ēbod]), which is considered as abbreviation of *ηβοδαλο* [ēbodalo], i.e. the name of the Hephthalites; sometimes it is also found to the left of the winged crown, a *tamgha* of the type S 2 (according to R. Göbl). On the reverse, to the left of the image of the fire altar, there is a sign resembling Pahl. /m/ (*mēm*) 𐭬, which is interpreted differently: the ligature of /m/ and /p/, initially denoting *MLK 'pylwcy* (although this suggestion is problematic syntactically), or as an equivalent of the ideogram *MLK'*, i.e. Aramaic *malkā*, reflected the Middle Persian *šāh* 'ruler, king' (Curtis, 1999: 305; Schindel, 2004: 294; Alram, 2008: 255–256; Alram, Pfisterer, 2010: 28; Heidemann, 2015: 332; Rezakhani, 2017: 138, notes 29, 30). To the right of the altar, there is the Bactrian inscription βαχλο [bahlo], i.e. Balkh are place of coinage.

The issue of the original drachms, which became the prototype for the imitation under consideration, refers to the period of the reign of Pērōz I after his defeat by the Hephthalites and his return from captivity, which happened, according to the revision of the date, in 474 (Schindel, 2004: 390–392, 395–399; Alram, 2008: 255; Alram, Pfisterer, 2010: 22–23). Apparently, it was these drachms that used to be paid as a tribute to the Hephthalites (Alram, Pfisterer, 2010: 27, 31; Heidemann, 2015: 331–332; Rezakhani, 2017: 137–138). Pērōz I was killed in the next campaign in 484. The circulation of his original drachms outside the Sasanian Empire continued also in the subsequent period. The creation of the imitative coins of type 287 started in that period; it is only debated whether the coinage began after 474 or after the death of Pērōz I (Heidemann, 2015: 333–334). The later date of the imitative coinage may be limited by the decline of the Hephthalite Empire (the 560s AD); however, the circulation of such imitative coins in Central Asia and adjacent regions continued for quite a

long time. Coins of type 287 were found in Afghanistan (Kabul and Ghazni), southern regions of Uzbekistan and Tajikistan, as well as in the Chinese province Shanxi (Vainberg, 1972: 138–139; Alram, 2008: 253–258, 265–266, pl. 2–30; Alram, Pfisterer, 2010: 27–32; Baratowa, Schindel, 2012: 43–45; Heidemann, 2015: 331, 332, 337). As far as we know, in the closed archaeological sites studied in Central and North Asia, such items have not previously been found.

Coins of type 287 are distinguished into several variants (types or subtypes) (Alram, 2008: 255; Alram, Pfisterer, 2010: 27–33; Baratowa, Schindel, 2012: 43–44; Heidemann, 2015: 331, 340). Unfortunately, the specimen of imitative coin from Gorny-10 is deformed, so the preservation of the images necessary for identifying its typological features is insufficient (especially on the obverse). Remains of inscriptions are visible in the appropriate places, but their paleographic features are unclear. It can be assumed that there are three dots on the obverse between the winged crown and the rim of the coin, but at the same time it can be supposed that this is part of the image. Thus, it is impossible to determine exactly to which variant the specimen under consideration should be attributed. There are no traces of countermarks on the coin.

In the R. Göbl's catalog, along with a such imitative coin of 4.21 g, there are samples weighing from 2.77–2.78 to 3.39 g, i.e. 2.96 g on average (1967: Vol. II, p. 42). In present time, they are known the numerous specimens having a weight from 3.84 to 4.24 g that are close to the Sasanian protoypes. It is likely that the its earliest series differs from the subsequent ones in clearly engraved images and inscriptions, and also in a slightly higher average weight (Alram, 2008: 256; Heidemann, 2015: 334)*. However, there is no reliable correlation between the paleographic features of the coin legends and iconographic characteristics, on the one hand, and the data on the weight of the coins attributed to any distinguished variants, on the other. Silver coins of type 287 attested in the catalog published by L.S. Baratova and N. Schindel, have a mass from 2.76 to 3.10 g (2012: No. 446–448)**. All of them refer to variant 2 (according to M. Alram). Billon coins of type 287 have a lower weight, that is mostly from 2.05 to 2.50 g, excluding the heaviest sample of 2.90 g (Ibid.: No. 450, 532–541)***. Since these specimens are corrupted, their typological attribution is difficult.

Taking into account the importance of studying the alloy composition for the full description of the coin, an X-ray fluorescence analysis of the specimen from Gorny-10 was carried out, using an INNOV-X SYSTEMS ALPHA series ™ spectrometer (model Alpha-2000, USA), complete with a portable laptop and a test bench. The following results were obtained (%):

	Ag	Cu	Pb	Fe
Obverse	97.20	1.90	0.74	0.16
Reverse	97.01	2.18	0.69	0.12

The analysis result shows that the coin is silver, with rather insignificant impurities of other elements (copper, lead, iron). The silver content of 97 % brings the specimen analyzed closer to the Sasanian prototypes, elemental composition of which, however, differs in the presence of gold.

Unfortunately, the known data on the composition of the alloys of other imitative coins of type 287 are rather fragmentary. Analysis of the metal of two such coins from Panjikent and two ones from Afrasiyab showed that they were made of silver (about 80 %), with the impurity of copper (Smirnova, 1963: 37, 51, 168–170, tab. 1)*. In another work of O.I. Smirnova it was noted: "The analysis of the composition of metal from which the Sogdian coins of early issues of the Warahran type** and the Hephthalite coins of the Peroz type were made, found that both types were minted from an alloy of silver with copper, with a silver content in an alloy of about 80 %, which brings the coins of both groups closer in time" (1970: 158). The elemental composition of the coins of type 287 contained lead and iron (sometimes in very small amounts), bismuth and gold (obviously, as trace elements), as well as zinc and tin, the addition of which may be due to the desire to improve the properties of the metal (Smirnova, 1963: 168). The data obtained during the study of a specimen from Gorny-10 seriously differ from the results of the analysis of the samples studied by Smirnova: with a comparable mass, they differ not only in the percentage of silver, but also in the elemental composition in general.

According to the available data, the silver content in the Sasanian drachm was at the level of 85–90 %, during Khūsrō II period approx. 95 %, and being still less with his successors (Bacharach, Gordus, 1972: 282–283). According to E.V. Rtveladze, two original Sasanian coins of Pērōz I, with a diameter of 1.8 to

*This is more than the weight of regular Pērōz coins according to M. Alram, based on the data on modal weight of such drachms of Pērōz in 4.10–4.14 g. (see (Schindel, 2004: 106, pl. 35, p. 112–113)).

**Coin No. 445 should to be identified as of type 287a (according to B.I. Vainberg).

***Coins No. 449, 451 should be classified as type 287a (Heidemann, 2015: 335, note 31), therefore we did not take them into account.

*It should be noted that the results by O.I. Smirnova were criticized E.A. Davidovich (1979: 108, 116, note 19).

**These are the so-called *Bukhār Khudāh* silver coins, which copied the drachms of the Sasanian shah Bahrām V (420–438).

2.0 cm (cut off?), weighing 2.8–2.9 g, found on the territory of Chaghanian (Budrach site), "were minted from an alloy of silver and copper with an addition of lead and gold, with a significant silver content" (1987a: 121). According to A.N. Aleshin, one of such drachms, with a mass of 3.82 g, contained 94.37 % silver, 0.50 % gold, and 5.13 % copper (2016: 12–13, 14). According to the results obtained by a group of Iranian scholars, the absence of sulfur in the elemental composition of the coins allows us to conclude that they were minted from silver obtained not from sulfide, but from cerussite ores. In some drachms, gold was present as a trace element. The coins of Pērōz I (analyzed were the drachms with a crown of the "first" and "second" types) were made from metals mined in two different mines, one of which also gave material for the drachms of Kawādh I during his first reign (488–496), the other for coins of Khūsrō I Anūshirvān (531–579). The presence of iron in Sasanian coins is irregular; therefore, it should probably be considered as a surface contaminations (Sodaei, Masjedi Khak, Khazaie, 2013).

As a comparative material, it is advisable to draw on the results of the analysis of imitations of Pērōz I drachms from Central Asia, belonging to other types (or emissions, according to R. Göbl). They can be obtained from a few publications (Rtveladze, 1987a: 122, 124–127; 1987b: 305, 308; Baratowa, Schindel, 2012: 50; Aleshin, 2016). Coins of type 289 (which is a further degradation of type 287) from Guftan (and, probably, Termez), Kobadian, show the same alloy composition (silver and copper in different proportions, zinc and lead), which is also observed in coins of type 295 from Chaghanian, which are imitations of the drachms of Khūsrō I. For all of them, there is a general tendency towards a reduction of the percentage of silver (which is reflected in the practice of cutting off the original drachms of Khūsrō I and, probably, making of imitations of them, also of a lesser mass (Rtveladze, 1987a: 122, 127; 1987b: 305)). At the same time, coins of type 295 from Chaghanian are characterized by the variability of the alloy composition, which consists in the presence/absence of gold, which negatively correlates with the presence/absence of lead. In this case, the elemental concentration in both cases can be determined by the material used for remelting of coins, i.e. the composition of the alloys of the original Sasanian drachms being a raw material.

The outstanding feature of the coin from the Gorny-10 cemetery is also the absence of gold in it. In this case, they can be offered are two explanations. If the imitation was created with the use of material of the Sasanian drachm, then the latter should not contain gold. Another explanation assumes some other source of raw material for the production of the imitative coin.

The presence of an insignificant admixture of gold in Sasanian drachms, as well as in other items made of silver (Bacharach, Gordus, 1972: 282; Gordus, 1995: 615), is traditionally considered necessary. In this case, gold is attributed as a trace element, the content of which depends on the source of the raw material (Meyers, Van Zelst, Sayre, 1973; Sodaei, Masjedi Khak, Khazaie, 2013: 214)*. This source is supposed to have been cerussite ores. Subsequently, they were also used by the 'Umayyads, as evidenced by the results of the analysis of silver dirhams issued in Iran (Jozi, Khak, Nosrati, 2019: 70–74). At the same time, there is evidence of the existence of Sasanian drachms without any admixture of gold. As an example, one can point to the coins of Hormozd IV (578–590), which demonstrate a very high fineness of silver and contain small amounts of copper, lead, and sometimes iron and zinc (Akbarzadegh, Schindel, 2017: 16, tab. VII, No. 286, 295, 298). Owing to the insufficient amount of data, we shall limit ourselves only to raising the question of using in the making of the imitative coin of type 287 analyzed the raw materials from silver-polymetallic deposits characterized by the absence of gold.

The weight of the coin from Gorny-10 can be considered an indirect chronological feature. This characteristic, which noticeably distinguishes it from the known heavier analogs, indicates that the analyzed specimen belonged to the series of such imitations that were not the earliest.

Conclusions

Despite the fact that the considered children's burial at the Gorny-10 cemetery was destroyed, the surviving materials are very informative. First of all, attention should be paid to the social aspect. The alleged status of the deceased, apparently due to a rather high position of his family, was reflected in the presence of items of horse harness and ornaments, including rare coins. It is possible that the latter were a kind of amulets. A similar composition of grave goods is recorded in several "rich" early medieval children's burials that were investigated in adjacent territories (Troitskaya, 1989: 65–67; Troitskaya, Borodovsky, 1990; Borodovsky, 2018).

Analysis of the grave goods makes it possible to date the burial under consideration within the period from the late 6th to early 8th century AD, possibly to the 7th century. The cultural attribution of both this burial and the entire Gorny-10 cemetery is less unambiguous. In the literature, despite the fragmentary nature of the published materials on the site, various points of view are presented. V.V. Gorbunov believes that the Gorny-10

*It was suggested that the technology of separating gold from silver was not known to the artisans of that time (Gordus, 1972).

necropolis should be considered among the monuments of the Odintsovo culture (2003: 40). According to A.A. Kazakov, this complex refers either to the final stage of the Odintsovo, or to the initial period of the Basandaika culture (Kazakov, Kazakova, 2016: 241). A special point of view was introduced by G.V. Kubarev, who considers this necropolis among the monuments of the Kudyrge type (Zubova, Kubarev, 2015: 86).

In our opinion, the amount of available information about the sites of the Early Middle Ages on the territory of the forest-steppe Altai is still insufficient to make definite conclusions. Preliminarily, it seems feasible to consider contemporaneous archaeological sites of the late 6th to early 8th century AD (Savinov, Novikov, Roslyakov, 2008: 30–32; Gorbunov, Tishkin, Frolov, 2017; Fribus et al., 2018: 44–47, fig. 1) as the evidence of the existence of a special group of the population with complex historical destinies, reflecting the turbulent processes of the end of the Migration Period and the period of Türkic Qaghanates. Judging by the availability of coins of various origins, this population had direct or indirect contacts in various directions. The silver coin found in grave 46 at Gorny-10 is an imitation of the drachms of the Sasanian shah Pērōz I. This find refers to one of the most common types of coins issued in the territory under rule of Hephthalites. The specimen is characterized by a high silver content (97 %) and the absence of gold in the alloy, which distinguishes it from other imitations of Sasanian coins, associated with the "Iranian Huns".

The high purity of silver in this case, it seems, does not allow us to explain the reduced mass of the coin by any crisis in the economy of the society where it functioned. The fact, rather, makes it possible to assume, already by the time of the invasion of the Türks on the territory of the Hephthalites, the existence, among the coins of type 287, along with the "heavy" samples, of another group of coins, differing in weight parameters from the Sasanian prototypes. This conclusion is supported by the absence of any countermarks on the coin.

Considering the uniqueness of the find, which has no parallels in the archaeological complexes of North and Central Asia, it is difficult to explain the fact that this coin appeared in the territory of the forest-steppe Altai. It cannot be ruled out that this was due to the conquest of the Hephthalite territories by Türks in 558–568 AD (for detailed discussion of the chronology, see (Felföldi, 2002, 2005)) and subsequent contacts with Türks of the population that left the Gorny-10 necropolis and other contemporaneous sites. Further expansion of information about the monuments of the period of Türkic Qaghanates in the southwestern Siberia will make it possible to more accurately reconstruct complex processes on the periphery of nomadic empires during this time.

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