

DOI: 10.17746/1563-0110.2017.45.2.107-112

A.P. Borodovsky

*Institute of Archaeology and Ethnography, Siberian Branch, Russian Academy of Sciences,
Pr. Akademika Lavrentieva 17, Novosibirsk, 630090, Russia
E-mail: altaicenter2011@gmail.com*

A Golden Plaque of the Hellenistic Period from Zeravshan, Uzbekistan*

A rare Sogdian golden plaque from Zeravshan, Uzbekistan, dating to the Hellenistic period, is described. Results of science-based analysis are relevant to the assessment of the sources of gold and the technology used. Stylistic analysis helps to establish cultural ties and contacts between various manufacturing centers of the Hellenistic era in Central Asia. In terms of decoration, the Zeravshan plaque is indirectly paralleled by several Early Iron Age toreutic items from southern Siberia and Central Asia, specifically those from the Peter the Great Siberian Collection, Oxus and Kargaly treasure hoards, and Tillya Tepe. The central part of the Zeravshan specimen is reminiscent of Near Eastern and Scythian toreutic art and of Hun bronzes. Similarly rendered heads of animals are found on late first millennium BC carved bone artifacts from the southwestern Siberian forest-steppe (Novotroitskoye, Ust-Ishtovka). This similarity may be due to close contacts between various manufacturing centers in the Early Iron Age. The distinctive feature of the Zeravshan plate is its small size. The artifact evidently belongs to the Yuezhi-Kushan cultural complex (200 BC–100 AD). The high content of gold in the plaque may be due to its having been manufactured from native gold, which is a rather archaic technique.

Keywords: *Toreutics, Central Asia, Hellenistic period, alloy composition, manufacturing centers, cultural ties.*

Introduction

Great historical events in Central Asia of Antiquity have time and again led to redistribution of accumulated golden objects (Marfunin, 1987: 22), which resulted in their extreme rarity (*Drevneishiye gosudarstva...*, 1985: 283, 291). Such objects have survived only in exceptional cases as parts of buried treasures, temple treasures (Zeimal, 1979), or as single finds. One of such finds is a small, golden cast sub-rectangular plate with zoomorphic representations, which was accidentally found in the autumn of 1988 by O.B. Kasparov in the vicinity of a quarry near the Zeravshan River not far

from the Samarkand airport in Uzbekistan (Fig. 1). The object was located 2 km northwest of the excavations of Afrasiab in a layer of sand and river mud, fragments of which survived on the front and back sides of the plate. In the 1990s, the owner of the plate sent a request for its attribution to the British Museum. In 2015, the object was given to me for a detailed study.

Materials and methods

For examining the golden object from Zeravshan, we followed a comprehensive approach combining

*Supported by the Russian Science Foundation (Project No. 14-50-00036).



Fig. 1. Golden object from Zeravshan.

traditional archaeological and natural scientific methods such as scientific description, search for parallels, analysis of representation style and execution technique, material energy-dispersive analysis of the surface, and trace analysis.

The size of the golden plate with the zoomorphic decoration is 3.4×2.5 cm, the thickness is up to 4 mm, and the weight is 10.43 g. The object has four holes drilled with a knife on the reverse side. The traces of this method include the asymmetric edges of the holes, cut marks on internal surfaces, and welts on the front face of the object, where soft and pliable gold was extruded. The holes were intended for fastening the plate to a textile or leather base. Corner holes on rectangular frames appear on a number of larger golden plaques from the Siberian Collection of Peter the Great (Kochevnik..., 2012: 86, cat. No. 191). Some of them preserved golden nails. The diameter of the holes is much smaller on the object from Zeravshan, which implied sewing as the fastening method. Given the weight of the object, it must have been sewn to a relatively rigid base. Judging by its size, the object most likely belonged to the category of belt fittings or decoration on the edges of garments that fastened over the shoulders. The experts from the British Museum preliminarily interpreted the golden plate from Zeravshan as a detail of a prestigious military belt fitting made of bronze with surface gilding.

Multi-element analysis of the metal composition, which was conducted using a Hitachi TM-3000 electron microscope with a Bruker Quantax-70 unit for energy-dispersive analysis (operator M.M. Ignatov) made it possible to establish the main qualitative features of the object's alloy. The sample from the front face of the plate (taken in the area of the shoulder of the right zoomorphic representation) contained 93.4 % gold, 5.1 % silver, and 1.6 % copper; the sample from the back of the plate contained 93.7 % gold, 4.9 % silver, and 1.3 % copper.

Findings

The sufficiently high concentration of precious metal in the alloy of the object from Zeravshan and the uniqueness of the known antique golden objects of jewelry originating from the Sughd region pose a certain problem for the attribution of the raw materials of the object. According to ancient authors, gold was produced in the mountains of Fergana and Sughd (Shefer, 1981: 459). The earliest evidence of such extraction is associated with ancient Sogdiana of the 6th century BC (Marfunin, 1987: 165). Traces of panning for placers' gold have been found along the upper reaches of the Zeravshan River (the Polytimetos of Antiquity) (Ibid.: 164). A gold deposit was discovered downstream in that river in the late 1950s (Ibid.: 18). According to the written sources, Sogdian gold was in great demand and was exported (Shefer, 1981: 459). However, the absence of a detailed description of its composition necessitates the use of data for comparison from the adjacent territories of southern Siberia (the Altai Mountains) and Mongolia, where such studies have been conducted (Malakhov et al., 2000; Shcherbakov, Roslyakova, 2000; Dashkovsky, Yuminov, 2012; Shatskaya, Derevyagina, Glazyrina, 2011). Thus, the composition of golden objects of the Early Iron Age from the Ukok Plateau (Ak-Alakha-2, Verkh-Kaldzhin II, VI) in the south of the Russian Altai is distinguished by a significant variety of fineness, which makes it possible to divide these objects into several groups (Malakhov et al., 2000: 170; Shcherbakov, Roslyakova, 2000: 185). According to the analysis of the alloy quality of golden objects discovered during the study of the barrow burial grounds of Khankarinsky Dol and Inskoy Dol of the Pazyryk culture, the objects from Northwestern Altai typically show a significant presence of copper and silver, as well as the presence of platinum group minerals in ancient

jewelry (Dashkovsky, Yuminov, 2012; Zaykov et al., 2016: 98), which most likely was caused by the natural qualities of the raw materials.

A specific type of late Sogdian gold was the so-called purple gold. The Chinese authors of the Tang time described it as being of “*tsi* color”. In fact, in the color palette, this tint was close to crimson-red, since the alloy consisted of copper and gold (Shefer, 1981: 459). The quality and color of the metal plate from Zeravshan are completely different. The alloy composition of this object is most similar to the first group of golden objects from Ukok (horse tail fitting from Ak-Alakha-2) (Shcherbakov, Roslyakova, 2000: 185), which was probably caused by the natural origin of gold. A similar feature of the gold was noted in the atomic-absorption analysis of a plate with the representation of a dragon from burial mound No. 20 in Noin-Ula in Mongolia (Shatskaya, Derevyagina, Glazyrina, 2011: 153).

According to the experts from the British Museum, the representation on the golden plate from Zeravshan is associated with the Central Asian pictorial tradition of the Eurasian nomads with a possible Chinese artistic influence. From my point of view, the decoration of this object shows a number of indirect parallels to various complexes of toreutics of the Early Iron Age in southern Siberia and Central Asia, including the Siberian Collection of Peter the Great (Rudenko, 1962; Kochevnik..., 2012), the Oxus (Zeimal, 1979) and the Kargaly (Tasmagambetov, 2003) treasure hoards, as well as individual golden objects from Tillya Tepe (Bactrian Gold..., 1985). The presence of the outer three-dimensional frame on the plate from Zeravshan is similar to a rare variety of toreutics objects made in the Scytho-Siberian animal style. For example, a series of massive gold plates with representations of feline predators and pouncing of prey have similar smooth frames (Kochevnik..., 2012: 85, 86, cat. No. 189, 193). This decorative element is typical of the Scytho-Siberian toreutics of the mid first millennium B.C. In turn, the compositional arrangement of the decoration on the Zeravshan plate in the form of two animals fighting against each other is generally typical of the Hunno-Sarmatian toreutics (Borodovsky, Larichev, 2013: 41, 47). The main difference between those objects and the object from Zeravshan is their size and much less precise treatment of the details (wool, mane, tail end) in the zoomorphic representations. A distant similarity with such treatment of the details can be found on a massive golden diadem from the Kargaly Treasure in Kazakhstan dated to the 2nd–1st centuries BC (Tasmagambetov, 2003: 206, 209), and the golden pommel of a dagger from Tillya Tepe in Afghanistan (Bactrian Gold..., 1985: 213). Nevertheless, the object from Zeravshan belongs to a small circle of miniature golden objects decorated in animal style of the Early Iron Age from southern Siberia and Central Asia (Fig. 2).

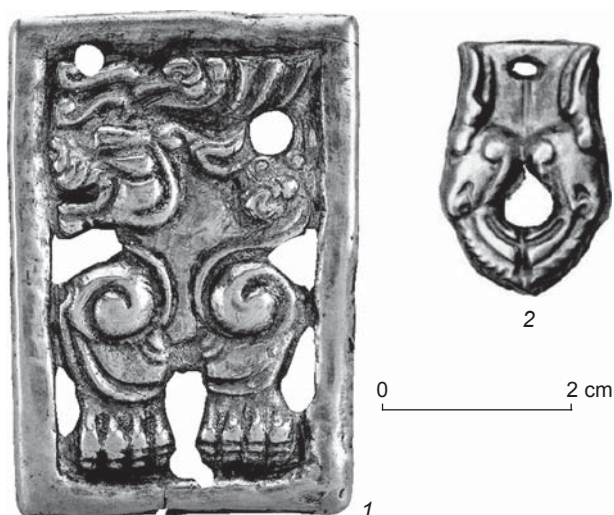


Fig. 2. Miniature golden items of the Early Iron Age made in animal style from the Siberian Collection of Peter the Great (1) and from the Tulkhar burial ground in Tajikistan (2).

In terms of parallels, representation of the noses of the predators with bared teeth on the golden object from Zeravshan is of special interest (Fig. 3, 1–3). This detail was rendered as a curl, which to a certain extent resembles the representation of the noses of fantastic wolves known from the Siberian Collection and clearly associated with the representation of predators in the Early Iron Age in Western and Central Asia (Rudenko, 1962: 32, Fig. 35). The central part of the composition on the golden plate from Zeravshan in the form of two joined muzzles of felines with bared teeth, depicted opposite each other, also has some interesting parallels (Fig. 3, 2). In Middle Eastern toreutics, such representations are known beginning with the Luristan bronzes (early 1st millennium BC). In the middle of the 1st millennium BC, they were occasionally found in the Scythian metalwork in the area of the Northern Black Sea region; in the second half of the 1st millennium BC, such motifs occur on the objects of carved bone in the forest-steppe region in the south of western Siberia (Borodovsky, 2007: 123, fig. 105). It is worth noting one more artistic device typical of the Early Iron Age in southern Siberia and Central Asia. The heads of feline predators were sometimes depicted face forward (Shulga, Umansky, Mogilnikov, 2009: 317, fig. 117, 11), and sometimes sideways (Kochevnik..., 2012: 86, cat. No. 193; Korolkova, 2015: 234, ill. 4) (see Fig. 2, 1; 4, 1). So-called double side-face representations with two animal heads with open mouths forming a single outline have also been found. In some cases such a compositional feature could have been reflected in stylized representations on the objects of carved bone (Frolov, 2001). One of the examples is a zoomorphic decoration on a horn sheath from Ust-Ishtovka in the



0 5 mm

Fig. 3. Details of the golden object from Zeravshan.



Fig. 4. Specific features of rendering the heads of feline predators in the animal style on the objects of carved bone of the Early Iron Age in the south of Western Siberia.

1 – Novotroitskoye cemetery; 2 – Ust-Ishtovka.

Upper Ob region (Fig. 4, 2). These parallels are quite important not only for analyzing the artistic and stylistic features of the image on the plate from Zeravshan, but also for its dating. Objects of carved bone and specific features of their decoration could both precede similar metal objects, be subsequently copied from them, or reflect the influence of metalwork (Borodovsky, 2008: 71). From a traditional point of view, if we attempt to archaeologically date the objects of carved bone showing certain similarities with metal objects, it is not entirely correct to date the objects of bone to a later time. Most likely, it is more correct to use the average date for objects with similar form and decoration, which were made of different raw materials (organic and mineral). Given the earlier dates of the objects of carved horn from southern Siberia with similar decorative elements, the golden plate from Zeravshan can be dated to the end of the 1st millennium BC or to the turn of the 1st millennium AD. It should be emphasized that parallels between the golden

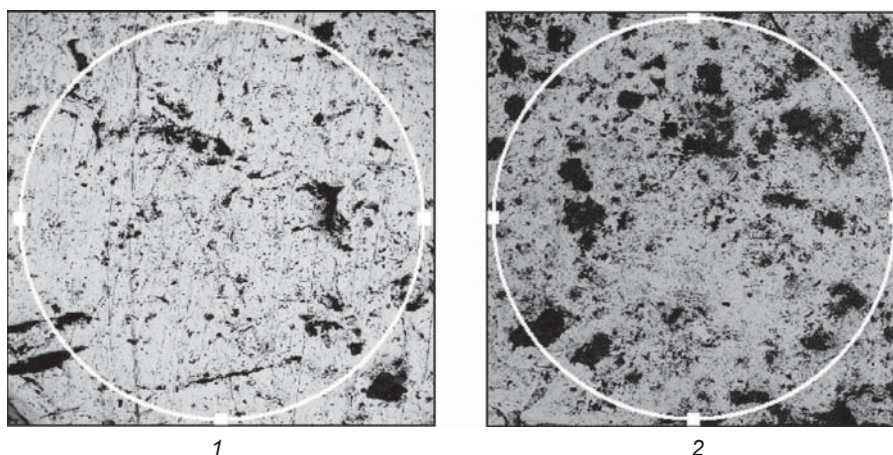


Fig. 5. Traces of wear on the surface of the golden object from Zeravshan.
1 – front; 2 – back.

objects from Central Asia and carved objects from southern Siberia are not rare. One more example is the golden buckle of the late 2nd century BC–1st century AD with the representation of a pair of saiga heads from the Tulkhar burial ground (see Fig. 2, 2), similar to a horn saddle pendant from a burial mound on the Aley River in the Altai Territory (see: (Kochevniki..., 2012: 165, cat. No. 416, p. 166; Barkova, 2003: 16, 17, fig. G)).

Conclusions

Trace analysis of the surface of the golden plate from Zeravshan made it possible to establish its strong wear on the front side in contrast to its back surface (Fig. 5). This indicates the intensive use of the object, which was fastened to some base through the holes. Long scratches on the front side of the golden object are similar to the signs of wear typical of the elements of belt fittings (Borodovsky, 1991).

The high content of gold in the antique object from Zeravshan is probably associated with the use of native metal for its production. Judging by the analysis of the extensive collection of silver objects from the south of Western Siberia, the use of fine native metal was the most typical technological feature of the earlier periods of metalworking with precious materials (Borodovsky et al., 2005: 74).

Compositional and stylistic features of the zoomorphic imagery on the golden object from Zeravshan make it possible to attribute the object to the circle of Central Asian toreutics of the Hellenistic period. This circle was distinguished by eclecticism and wide territorial ties, which reflect not only the Central Asian pictorial tradition of the Eurasian nomads with a possible Chinese artistic influence, but also the “replication” of specific

details appearing on the objects of carved horn of the Early Iron Age from the south of Western Siberia. It should be emphasized that bone-carving in this region had sophisticated and many-sided connections, including the distribution of imagery of the Hellenistic period (Borodovsky, 2008: 71, fig. 22, 9–12, 72). The golden object from Zeravshan should be attributed to the Yuezhi-Kushan historical and cultural complex of the 2nd century BC–1st century AD (Botalov, 2007: 64, fig. 1), which had stable connections with the Upper Ob region.

References

- Bactrian Gold: From the Excavations of the Tillya-Tepe Necropolis in Northern Afghanistan. 1985**
Leningrad: Aurora.
- Barkova L.L. 2003**
Predmety zverinogo stilya iz kollektsii P.K. Frolova. In *Stepi Evrazii v drevnosti i srednevekovye: Materialy Mezhdunar. nauch. konf., posvyashchennoi 100-letiyu so dnya rozhdeniya M.P. Gryaznova*, bk. 2. St. Petersburg: pp. 14–19.
- Borodovsky A.P. 1991**
Interpretatsiya naznacheniya dlinnykh rogovykh nakladok epokhi rannego zheleza i tekhnologiya ikh izgotovleniya. In *Problemy arkheologii i etnografii Sibiri i Dalnego Vostoka: Posvyashchaetsya 100-letiyu N.K. Auerbakha: Kratkoye sodержaniye dokladov XXXI RASK*, vol. 3. Krasnoyarsk: pp. 22–24.
- Borodovsky A.P. 2007**
Drevniy reznoui rog Yuzhnoi Sibiri. Novosibirsk: Izd. IAE SO RAN.
- Borodovsky A.P. 2008**
Metodika issledovaniya drevnego kostoreznogo proizvodstva. Novosibirsk: Izd. Novosib. Gos. Univ.
- Borodovsky A.P., Larichev V.E. 2013**
Iyusskiy klad: Katalog kollektsii. Novosibirsk: Izd. IAE SO RAN.

Borodovsky A.P., Obolensky A.A., Babich V.V., Borisenko A.S., Mortsev N.K. 2005

Drevneye serebro Sibiri. Novosibirsk: Izd. IAE SO RAN.

Botalov S.G. 2007

Turkestan kak edinoye geopoliticheskoye prostranstvo v epokhu rannego zheleza. In *Altaye-Sayanskaya gornaya strana i sosedniye territorii v drevnosti*. Novosibirsk: Izd. IAE SO RAN, pp. 61–83.

Dashkovsky P.K., Yuminov A.M. 2012

Vklyucheniya mineralov platinovoi gruppy v zolotykh izdeliyakh iz mogilnika Khankarinskiy dol (Altai). *Vestnik NGU*. Ser.: Istoriya, filologiya, vol. 11, iss. 7: 50–55.

Drevneishiye gosudarstva Kavkaza i Srednei Azii. 1985

Moscow: Nauka. (Arkheologiya SSSR).

Frolov Y.V. 2001

Interpretatsiya izobrazheniy na dvukh kostyanykh plastinakh iz pogrebeniy rannego zheleznogo veka Verkhnego Priobya. In *Problemy izucheniya drevnei i srednevekovoi istorii*. Barnaul: Izd. Alt. Gos. Univ., pp. 98–102.

Kochevniki Evrazii na puti k imperii:

Iz sobraniya Gosudarstvennogo Ermitazha:

Katalog vystavki. 2012

St. Petersburg: Slavia.

Korolkova K.F. 2015

O nekotorykh fantasticheskikh obrazakh zverinogo stilya v Sibirskoi kollektzii Petra I: Rabota nad oshibkami. In *Arkheologiya bez granits: Kollektzii, problemy, issledovaniya, gipotezy*. St. Petersburg: Izd. Gos. Ermitazha, pp. 234–239. (Trudy Gosudarstvennogo Ermitazha; vol. LXXVII).

Malakhov V.V., Vlasov A.A., Ovsyannikova I.A.,

Plyasova L.M., Kraevskaya I.L., Tsybulya S.V.,

Stepanov V.G. 2000

Veshchestvennyi sostav nakhodok iz “zamerzshikh” zakhoroneniya pazyrykskoi kultury. In *Fenomen altaiskikh mumiy*. Novosibirsk: Izd. IAE SO RAN, pp. 162–175.

Marfunin A.S. 1987

Istoriya zolota. Moscow: Nauka.

Rudenko S.I. 1962

Sibirskaya kollektziya Petra I. Moscow, Leningrad: Izd. AN SSSR. (SAI; iss. D3-9).

Shatskaya S.S., Derevyagina I.A., Glazyrina N.F. 2011

Rezultaty issledovaniy metallicheskih izdeliy 20-go i 31-go kurganov. In *Polosmak N.V., Bogdanov E.S., Tseveendorj D. Dvadsatyi Noin-Ulinskiy kurgan*. Novosibirsk: INFOLIO, pp. 150–163.

Shcherbakov Y.G., Roslyakova N.V. 2000

Sostav zolotykh i bronzovykh izdeliy, istochniki metallov i sposoby ikh obrabotki. In *Fenomen altaiskikh mumiy*. Novosibirsk: Izd. IAE SO RAN, pp. 179–187.

Shefer E. 1981

Zoloty persiki Samarkanda. Moscow: Nauka.

Shulga P.I., Umansky A.P., Mogilnikov V.A. 2009

Novotroitskiy nekropol. Barnaul: Izd. Alt. Gos. Univ.

Tasmagambetov I. 2003

Kentavry velikoi stepi: Khudozhestvennaya kultura drevnikh kochevnikov. Almaty: Berel.

Zaykov V.V., Yablonsky L.T., Dashkovsky P.K.,

Kotlyarov V.A., Zaykova E.V., Yuminov A.M. 2016

Platinoid microinclusions of a native osmium group in ancient gold artifacts from Siberia and the Urals as a source of geoarchaeological information. *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 44 (1): 93–103.

Zeimal E.V. 1979

Amudaryinskiy klad: Katalog vystavki. Leningrad: Iskusstvo.

Received May 24, 2016.

Received in revised form August 16, 2016.