

# Recent Investigations of the Ulski Kurgans

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The area of the Ulski kurgans is a key site of the Scythian epoch in southern Russia. Their chronological position is very important: the earlier kurgans border the Kelermes kurgans, the later ones the Semibratnee kurgans.

Investigation of this site began in 1898, when Professor Nikolai Veselovsky of the St Petersburg University excavated two of the Ulski kurgans.<sup>1</sup> He returned to the site in 1908 and 1909. Veselovsky excavated a total of nine Ulski kurgans.<sup>2</sup> Only one of the kurgans, occupied at the time by a Čerkassian cemetery, was excavated over 70 years later by Alexander Leskov.<sup>3</sup> Another small mound (kurgan 11) was destroyed during road construction in those same years.

At present, the material from the Ulski kurgans is located in three museums in Russia. The finds from Veselovsky's excavations were divided between two museums: the State Historical Museum in Moscow and the State Hermitage in St Petersburg. The finds from Leskov's excavations are kept in the State Museum of Oriental Art in Moscow. Currently, the collections from the Ulski kurgans are being prepared for publication and these will hopefully appear soon.

Of course, the work of the collective authors, one of them myself, does not mark the scientific conclusion of this incredible site, but rather serves as a stimulus for further study by future generations of specialists. In this contribution, I will only be touching upon three key questions related to this monument: its chronology, its function and the question of metallurgical workshops of the early Achaemenid period.

## *The chronology of the site*

The Ulski group belongs to a complex of archaeological monuments of the Scythian period situated in and around Aul Ulyap in the Republic of Adygea (Fig. 1). One kilometre to the west of this group, at the western edge of Ulyap, stands a group of kurgans, one of which was excavated by N.I. Veselovsky in 1910 and revealed material contemporaneous with the oldest group of Kelermes kurgans (the third quarter of the seventh century BC).<sup>4</sup> A kilometre east of the Ulski kurgans stands the no-less-famous Ulyap kurgan shrines of the first half of the fourth century BC, together with flat grave burials of the Scythian period.<sup>5</sup> Thus, it is possible to suggest that the raised left terrace of the Laba river was assimilated by the local population moving from west to east.



Fig. 1. Sites of the Scythian period around Aul Ulyap.

The collections from the Ul'ski kurgans, located in three museums as outlined above, can be divided into four chronological periods.

1. The oldest of the Ul'ski kurgans is kurgan 1/1908 (Fig. 3). Its collection includes Archaic iron triple-looped cheekpieces and bronze bits with stirrup-shaped ends. These items find parallels in the cast ornaments from the Younger Kelermes group (excavated by D.G. Schults). This horizon shows a series of similarities with finds from kurgan 16 of the Novozavedennoe burial complex in the Stavropol region. This kurgan produced two northern Ionian vessels – an oinochoe and a stemmed cup, which dates from the end of the seventh to the beginning of the sixth century BC.<sup>6</sup> Kurgan 1/1908 can therefore be dated to around the first half of the sixth century BC.

2. The second chronological horizon includes kurgans 2 and 3/1908, 1 and 2/1909 (Figs. 4, 5), as well as the kurgan excavated by Leskov in 1982 (Fig. 6). These kurgans already show another horse-bridle system – here we find double-perforated cheekpieces, the transition to which, in our opinion, takes place in the middle of the sixth century BC. A fragment from a triple-looped cheekpiece was found only in one kurgan (10/1982) (Fig. 6.7), and double-perforated ones are prevalent here. The kurgans are quite closely related to each other, with close similarities not only in the bridle gear but also amongst a number of gold ornaments – separator beads, zoomorphic and geometric plaques. Bronze finial pairs shaped like the heads of birds of prey come from kurgan 2/1909 (Fig. 5.10) and kurgan 10/1982 (Fig. 6.11-12), the latter apparently having originated first.



Fig. 2. Plan of the Ul'ski kurgans.

Even though we find a large number of precious metal items in these plundered kurgans, Greek imports are non-existent in this chronological group. The only eastern Greek import in the Ulyap area is a Rhodian-Ionian kylix, with a stick-like ornament, of this period, found in an Ulyap flat grave burial of the same date as these kurgans.<sup>7</sup>

3. The third chronological horizon includes kurgans 1/1898 (the Great Ul'ski kurgan) and 2/1898, which brought forth Attic imports from the end of the sixth to the beginning of the fifth century BC – fragments of kylikes (Fig. 7.2), a siphon (Fig. 7.14) and a fragment of a closed vessel (a hydria or an amphora). According to Irina Ksenofontova, who studied the Greek imports from the Ul'ski kurgans, these items penetrated the deepest regions of the Kuban interior as a result of the second phase of Athenian colonization at the end of the sixth to the first third of the fifth century BC.<sup>8</sup>

4. Kurgan 11 of the Ul'ski group, the small mound of which was demolished during construction work, would seem to be somewhat later (Fig. 8). The bridle types found here can be dated with certainty within the fifth century BC.<sup>9</sup> A cheekpiece plaque from this complex (Fig. 8.10) finds its parallel in a plaque from the fourth Semibratnee kurgan and burial 16 of kurgan 5 in Kriviya Luka VIII in the Volga region.<sup>10</sup>

Thus, the chronology of the Ul'ski kurgans is such that a large part of the complex relates to the rise and peak of Achaemenid rule. I will discuss the possible appearance of Achaemenid influence at the end of this paper.

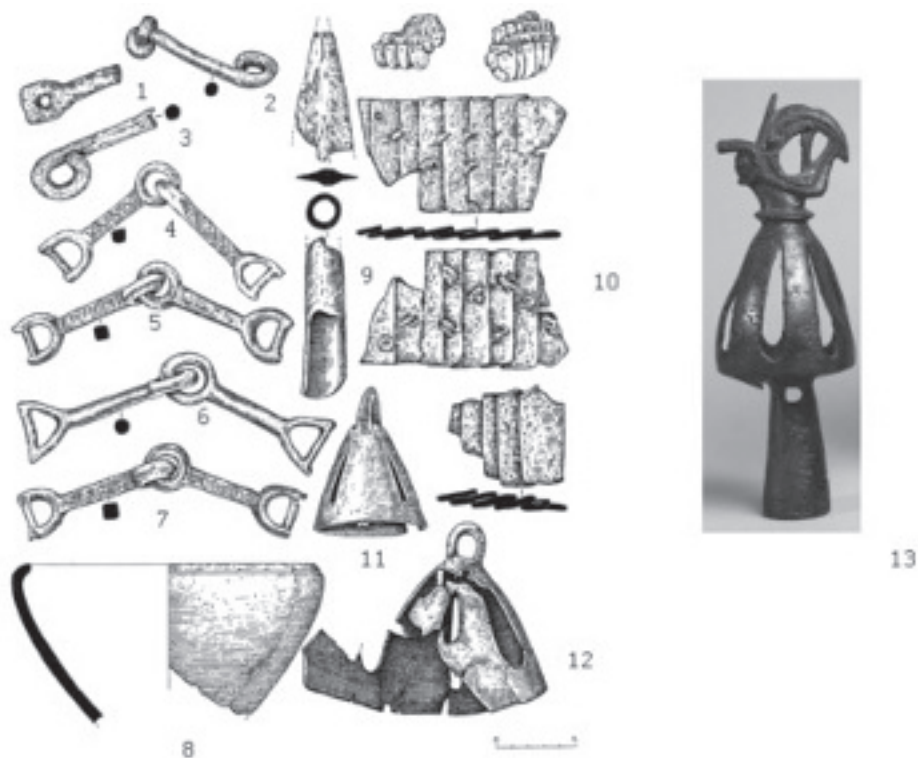


Fig. 3. Items from kurgan 1/1908. First chronological horizon.

### *The function of the kurgans*

Another equally important question regards the function and topography of the kurgan group. For a long time, the Ulski kurgans were considered classic burial monuments of the Scythian culture of the northern Caucasus territory. Even now, most experts consider these kurgans to be burial complexes that continue the Kelermes tradition and date them to the sixth to fifth century BC.<sup>11</sup>

A.M. Leskov challenged this point of view in 1982, when he excavated the only kurgan left untouched by Professor Veselovsky – kurgan 10. The kurgan turned out to be a shrine and not a burial complex after all.<sup>12</sup> An approximately 1m high earthen platform was uncovered below the kurgan fill. Its flat surface had a diameter of 20m, and a levelled ramp led up to it from the south.

In the centre of the structure, a wooden framework was uncovered (Fig. 6.1), inside which the ritual platform had been erected. A large bronze cauldron

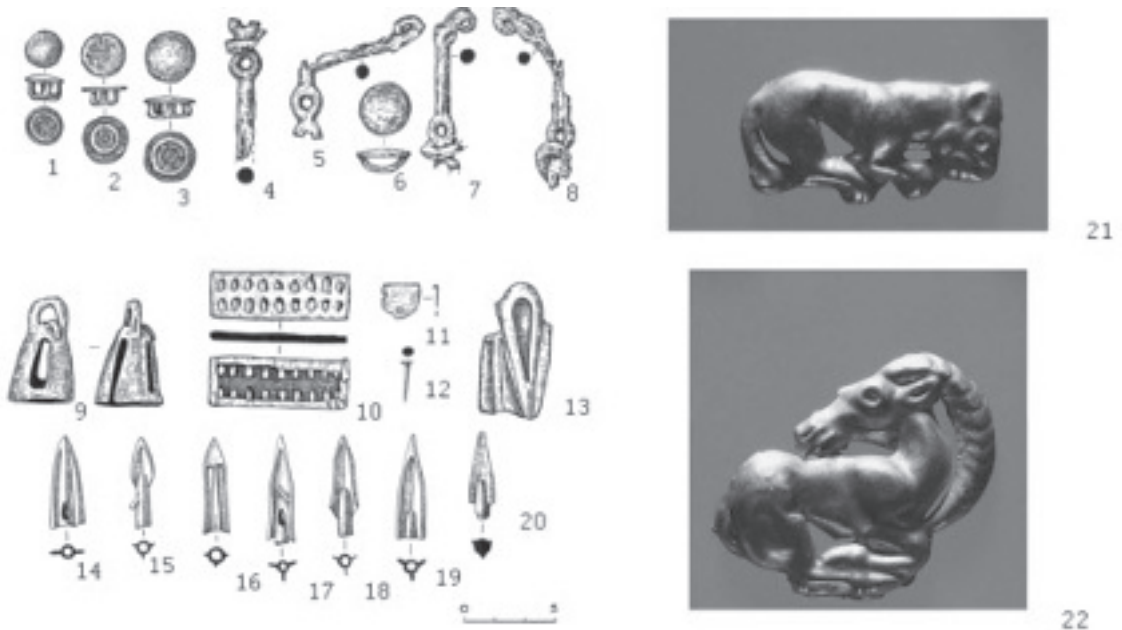


Fig. 4. Items from kurgan 1/1909. Second chronological horizon.

(Fig. 6.16), two piles of little bronze bells and details from bridle headpieces were found on the platform, most of which had already been plundered. The remains of 29 horse sacrifices were found lying around the ritual platform and covered with a wooden roof.

The entrance to the structure was from the south, where there was a breach in the wall. Here, two flat bronze finials (Fig. 6.11-12) were also found. Judging by the bridle gear from this kurgan, it can be dated to the second half of the sixth century BC. Following the excavation of this kurgan, and also that of the Great Ul'ski kurgan 1/1898, experts began to interpret it as a shrine.<sup>13</sup> It should be noted that Veselovsky did not mention the remains of human bones or burial pits or graves anywhere in his reports on the Ul'ski kurgans.

At the same time, ritual complexes and complex shrines, originating as early as the Protomeotian period,<sup>14</sup> are typical of Meotian archaeological culture.<sup>15</sup> At present, we know of approximately 40 such sites. The closest ones to the Ul'ski kurgans, in geographical terms, are the kurgan shrines of the Ulyap necropolis of the first half of the fourth century BC<sup>16</sup> and the shrines in the Tenginskaya II necropolis 10km north of Ulyap (second half of the fourth century BC).<sup>17</sup>



Fig. 5. Items from kurgan 2/1909. Second chronological horizon.



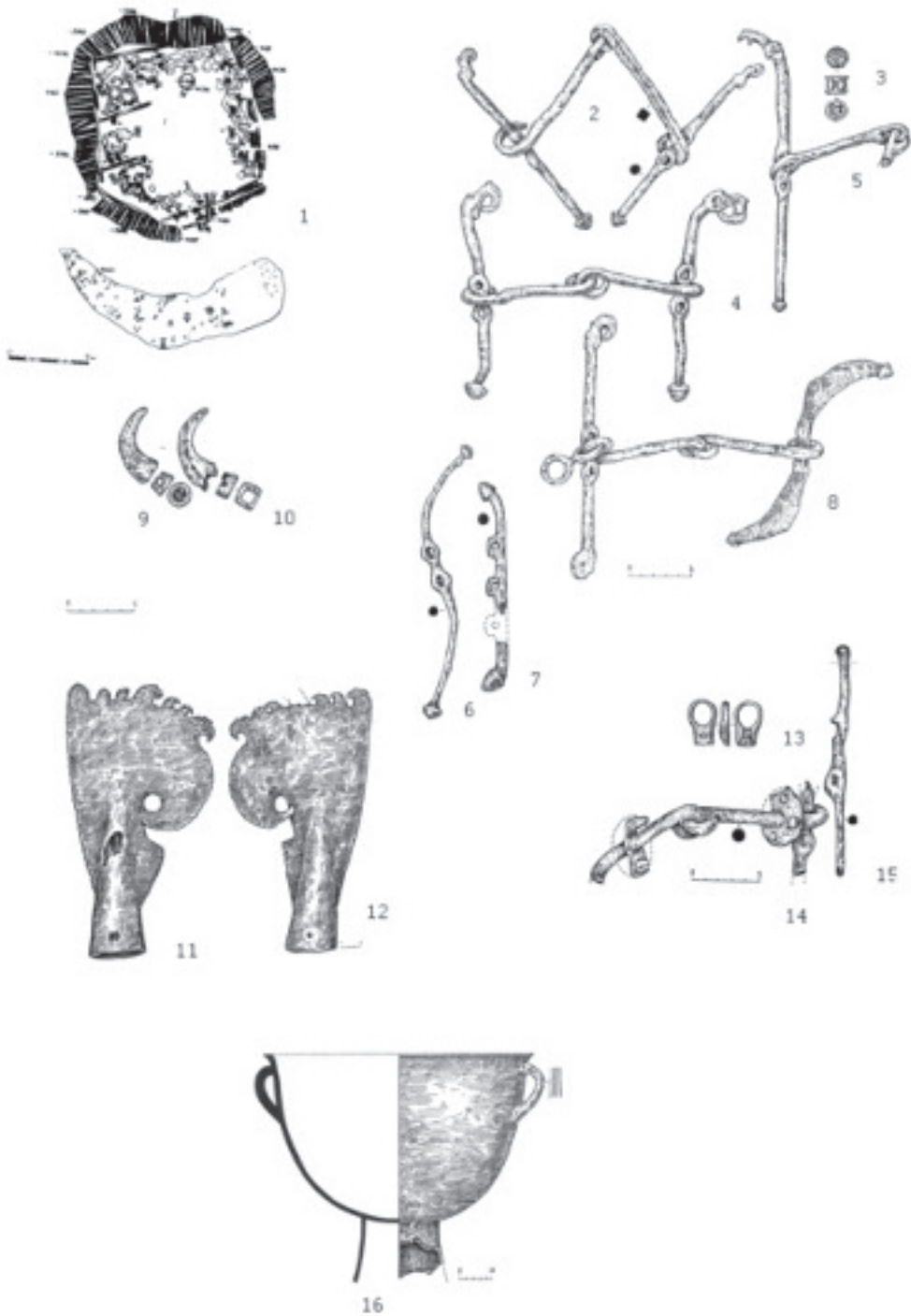
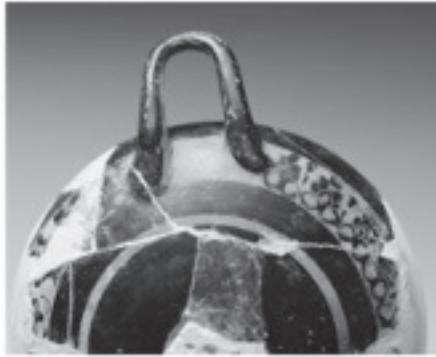


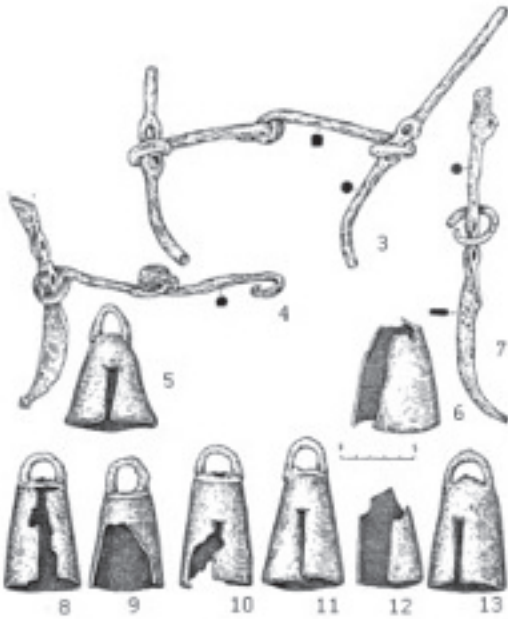
Fig. 6. Items from kurgan 10/1982. Second chronological horizon.



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Fig. 7. Items from kurgan 1 (1-2) and 2 (3-14) 1898. Third chronological horizon.





Fig. 8. Items from kurgan 11/1983. Fourth chronological horizon.

In their 1996 abstracts, A.M. Leskov and L.K. Galanina suggested that the Ulski kurgan group had a dual character. In the central and western parts shrines were constructed – kurgan 10 and the Great Ulski kurgan (1/1898). Relying on Veselovsky's sporadic and rather unclear observations, Leskov and Galanina suggested that the kurgans were constructed starting from the east and that the earlier kurgans were built as burial complexes and situated in the eastern part of the kurgan group. The easternmost kurgan – kurgan 1/1908 – the finds from which are located in the depots of the State Hermitage Museum – is contemporaneous with the materials from the Schults kurgans of the Kelermes burial ground.<sup>18</sup>

In the summer of 2007, investigation of the remains of the kurgan mound with its “deep trench from the south” – the result of Veselovsky's excavation – was undertaken by the Caucasus Archaeological Expedition of the State Museum of Oriental Art, funded by the Russian Foundation for the Humanities. Leskov considered this easternmost Ulski kurgan to be kurgan 1/1908.

Our investigation revealed the remains of a tent-like structure supported by beams in the mound (Fig. 9). The “tent” had been constructed above a wooden canopy erected at the level of the ancient horizon. The remains of four horses were found in the western part of the canopy, where Veselovsky's trenches had not cut through. They were lying in a circle around a unique “halter”, which was covered with wood and reeds.



Fig. 9. Plan of kurgan 1/2007.

Two of the horses had iron looped bits (Fig. 10.2-3). A bone looped strap-separator was found along with the horse-bits of one of these horses (Fig. 10.1). It is an imitation of the bronze “Sialk”-type separators and is the first such find of its kind in the Kuban region. Parallels are known from the Novozavadennoe II kurgans 8 and 9, which V.G. Petrenko attributes to the early group from this cemetery and dates to the first half of the seventh century BC.<sup>19</sup> Additionally, similar bone strap-separators have been found in Archaic complexes of the Ukrainian forest steppes – in zolnik (ash mound) 12 of the Belskoe settlement,<sup>20</sup> as well as in the Zhurovka 448, Raigorod 1 and Aksyutintsi 2 kurgans.<sup>21</sup>

In the northern part of the kurgan, also left untouched by the trench, a heap of pottery sherds was found (including a large clay “korchaga” (Fig. 10.4) and also animal bones). These finds show the typological unity of this kurgan with kurgan 10/1982. No remains of a burial pit or human bones were found in our kurgan. Therefore, kurgan 1/2007 is also a ritual complex, similar to kurgan 10/1982.

A few golden application plaques and one separator plaque were found in Veselovsky’s trench (Fig. 10.5-16). In shape and size they fully correspond to the golden ornaments found in kurgan 2/1909 and now in the State Hermitage Museum (Fig. 10.17-23). This is especially true of the two golden plaques each shaped like a mountain goat with legs folded beneath and the head turned to the back (Fig. 10.6, 10.16, 10.22). Both these plaques (the one in the Hermitage and the one discovered in 2007) were made using the same stamp.

In addition, the clip plaque from the 2007 kurgan (Fig. 10.11) is completely identical to the two clips from the 1909 kurgan 2 which are now in the State

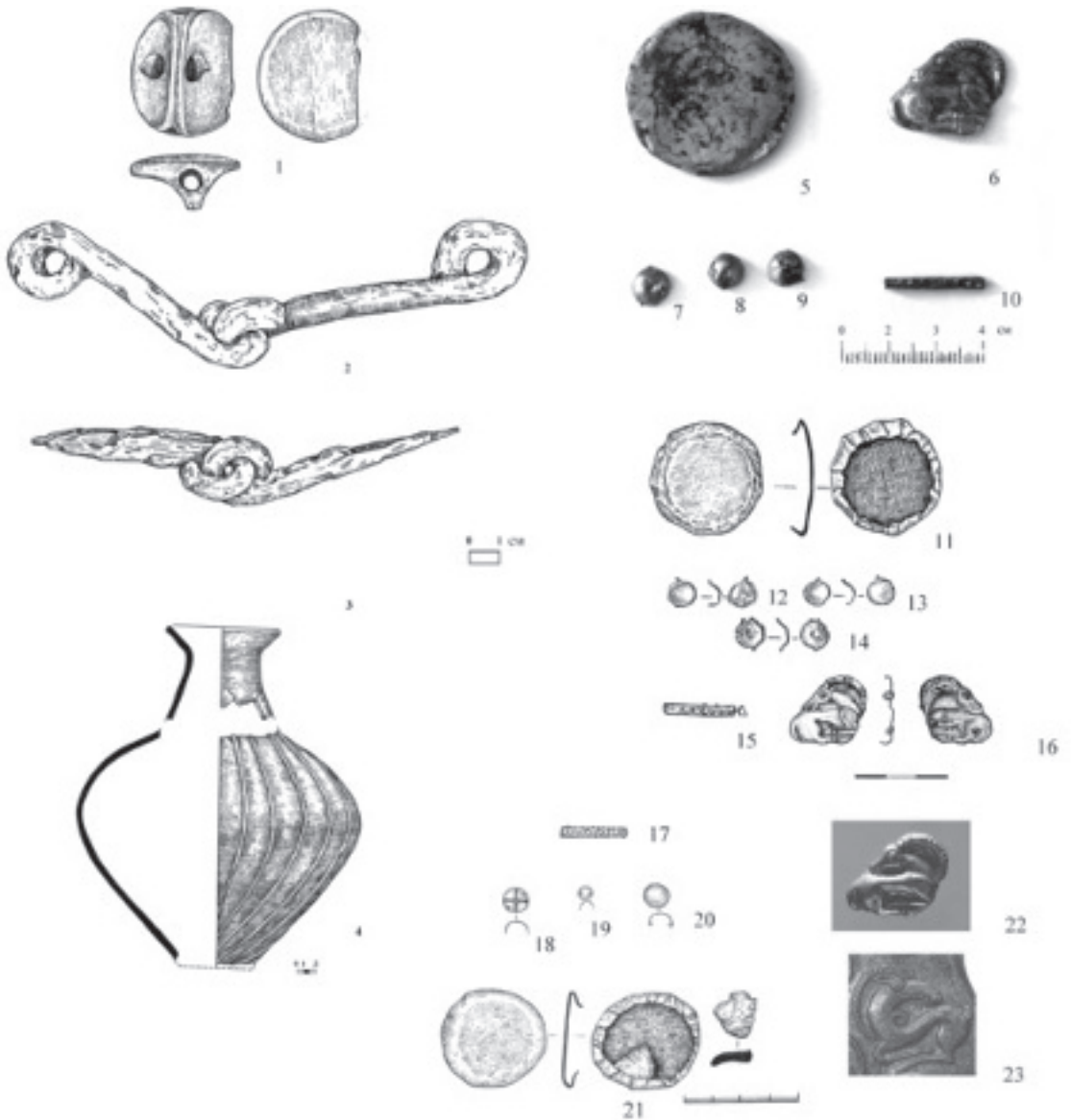


Fig. 10. Items from kurgan 1/2007 and Hermitage collection (kurgan 2/1909). 1-16 – kurgan 1/2007; 17-23 – kurgan 2/1909 (State Hermitage Museum).

Hermitage Museum (Fig. 10.21), on one of which the bone insertion was preserved.<sup>22</sup> Similar clips from the Ul'ski group have only been found in this kurgan. A close analogy to both clips comes from the Novozavedennoe II kurgan 6, belonging to the bridle gear of horse no. 1. The authors date this kurgan

to the sixth century BC.<sup>23</sup> The Ulski clips may have also served as bridle-gear ornaments.

The 2007 kurgan is therefore definitely connected to the finds from kurgan 2/1909. It is from this very kurgan that we have the famous Ulski finial shaped like the head of a bird of prey with a corresponding relief depiction of a mountain goat with its head turned back (Fig. 10.23), as well as the unique silver phalerae and cheekpieces, which will be discussed later on.

Judging by Veselovsky's fragmentary reports, he was excavating in the vicinity of the Great Ulski kurgan in 1909, in other words, in the central or western part of the kurgan group.<sup>24</sup> This means that either Veselovsky's reports are not quite correct, or that a mistake was made when the finds were taken to the Hermitage. Based on the most recent results, it can be suggested that ritual complexes were set up in both the western and eastern parts of the Ulski kurgan group. It is quite probable that the entire kurgan group was not meant for burials.

Leskov's suggestion that the kurgans were constructed starting in the east and moving westwards could not be confirmed. The earliest Ulski find group comes from kurgan 1/1908, which dates to the beginning of the sixth century BC and was not found beneath the easternmost mound.

### *The Ulski kurgans and early Achaemenids*

In later times, we find Achaemenid items and items born of Achaemenid prototypes in the Ulyap kurgan shrines of the first half of the fourth century BC, located 1km away from the Ulski kurgans. This influence can be seen as having occurred in parallel with the entry of Greek imports into this area. The Ulski kurgans, based on their chronology, are related to the pre-Achaemenid and early Achaemenid periods. Nonetheless, there is reason to question the possible ancient Iranian influences at this site.

First we should consider the "Sialk"-type strap-separators. In her time, I.N. Medvedskaya used these separators for crossed-reign straps with a round plaque for dating burial 15 of Sialk site B (Fig. 11.1).<sup>25</sup> She presented central European parallels dating to the HAB3-C period and thus dated the complex to the middle of the eighth century BC.<sup>26</sup> Similar separator plaques are typical for central Europe (the Füzeshabony type according to J. Chochorowski).

Chochorowski lists ten sites where similar strap-separators have been found.<sup>27</sup> In the Black Sea region, strap-separators are found in Protomeotian and Chernogorovka complexes, for example in Pshish I burial 51 (Fig. 11.2).<sup>28</sup> Such strap-separators are not found in early Scythian monuments of the Kelermes period. Therefore, we can speak of a break in this tradition. Such strap-separators are also unknown in central Europe at this time.

However, the Ulski kurgans, specifically the find complexes from kurgan 2/1898, 1/1909 and 10/1982, contain bronze strap-separators with five perforations and a flat or slightly swollen plaque of silver, bronze and iron

(Fig. 11.6-9).<sup>29</sup> The appearance of such separator plaques for bridle gear in the second half of the sixth century BC can be considered as the "renaissance" of the "Sialk"-type strap-separator tradition.

We suggest that this tradition continued in Iran and spread again together with pre-Achaemenid and early Achaemenid influence. The golden bridle strap-separators from the Amu-Darya hoard, brought to attention by Peter Calmeyer, could serve as evidence of this (Fig. 11.5).<sup>30</sup> Strap-separators of a similar form were founded in Pasargadae (Fig. 11.3-4).<sup>31</sup>

A similar "renaissance" can be seen in another type of bridle strap-separator: the "Kammenomostskaja"-type beak-shaped separator. Ancient bronze beak-shaped strap-separators are found in complexes as early as the first half of the seventh century BC. These have a slightly bent beak and a perforation, which simultaneously serves as the bird's eye. Such strap-separators were found in the Kamennomoskaja complex of 1921 (Fig. 11.12).

We have already looked at the stylistic closeness of the Kamennomoskaja strap-separators and earlier examples from Kelermes, Nartan and Krasnoznamen'ski kurgan I (Fig. 11.12-15) to the pre-Scythian sceptres shaped as birds' heads (Fig. 11.11), well known from finds from central Europe and the central Caucasus. Based on this, we suggest an eastern European origin of this Scythian animal-style motif. It marks the early Kelermes phase and is no longer found in complexes dated from the end of the seventh to the first half of the sixth century BC.

At the same time, horse bridles using beak-shaped strap-separators are well known in Achaemenid Iran, on the Persepolis reliefs and rhyta from Erebuni. However, these are dated to the end of the sixth to the fifth century BC based on their distant prototypes, which are undoubtedly early Scythian. Judging by the Persepolis Apadana reliefs, where beak-shaped separator plaques are shown on the bridle gear of the horses of the tribute-paying delegations, and by rhyta from Erebuni, the standard bridle with four such strap-separators was known in Achaemenid Iran.<sup>32</sup>

In Persepolis itself, several stone "beak-shaped" strap-separators have been found, which are more reminiscent of talons (Fig. 11.16-18).<sup>33</sup>

The iron strap-separators from the tenth Ul'ski kurgan are of the same shape (Fig. 11.19-21). They are unique in chronological terms and as items in their own standing. The resulting question is as follows: could Iran have been having a "reflexive" influence on the Black Sea region?

The reclining mountain goat depiction from Ul'ski kurgans 1/1909 and 2/1909 (Figs. 4.22, 5.7, 10.6, 16, 22), as well as the similar plaques from the Vitova mogila kurgan near Kharkov, may not originate from the parallel Kelermes tradition, but rather the tradition of Iran and Asia Minor, where reclining mountain goats with heads turned back were often depicted. P. Amandri was the first scholar to suggest that this theme was not necessarily Scythian.<sup>34</sup>

The 14 fine silver phalarae, or forehead straps, from kurgan 2/1909 (Fig. 5.6) (the kurgan we re-excavated in 2007) pose a certain mystery. L.K. Galanina

compared these with the fine phalarae from the Milski kurgan in Azerbaijan<sup>35</sup> suggesting Near Eastern or Transcaucasian manufacture.

However, it should be noted that the chronological breach between the Milski and Ulski phalarae/forehead straps is more than 100 years. Urartian workshops had already ceased to exist in Transcaucasia when the Ulski kurgans were being created. The question remains: in which Transcaucasian or Near Eastern workshops were these phalarae being produced in the second half of the sixth century BC?

No close contemporary parallels have been found for the S-shaped cheek-pieces,<sup>36</sup> with engraved depictions, from this kurgan (Fig. 5.1-2). In the completed publication on the Ulski kurgans, E.V. Perevodchikova attributes them to a mixed Near Eastern/Scythian style.

At the same time, she pays attention to the similarity between the depictions on the cheekpiece ends and those on the massive Achaemenid period "buterolle", where a beast of prey, with the same huge swollen eyes engraved in very concentric relief, as well as a "lotos-shaped" snout with tendril-shaped nostrils, is shown.<sup>37</sup> Near Eastern parallels are found for the predator with its head facing back, short snout and triangular ear. The style allows its attribution to the beasts of prey on the Achaemenid vessel from Ulyap kurgan shrine 1.<sup>38</sup>

The golden end-piece shaped like a horse head with zoomorphic depictions and incrustations (Fig. 5.8), found in the same kurgan (2/1909),<sup>39</sup> also belongs to the "mixed" style influenced by Asia Minor. The rabbit figures denoting the animals' nostrils are typical of Scythian animal-style "zoomorphic transformations", and their details (oversized ears, eyes, paw endings, remains of flattened mouldings for the face and ears) are completely "Scythian".

The signs of Near Eastern artistry are just as clear: a ribbed ornament frames the pupils and triangular spots the forehead and cheeks. These triangles are similar to the nests for incrustations on some of the Kelermes items. Such characteristics are traditionally considered to be Near Eastern.

Finally, items that could be of Median or Achaemenid manufacture were found in kurgans 1 and 2 of 1909.

Kurgan 2/1909 brought forth a silver handle from a vessel – probably an amphora or a burner shaped like a deer (Fig. 5.9). Vessels made of precious metals with similar zoomorphic handles are typical of the art of Iran or the Near East.<sup>40</sup>

G.I. Borovka's argumentation raises some doubts as to the attribution of this piece to a "Greek" master from a school in close standing with the school of the so-called Milesian or Rhodesian vases. This conclusion was based on the faint resemblance with animals depicted on eastern Greek pottery.<sup>41</sup> However, we know of no other similar Greek moulded metal pieces from this workshop. The animal-shaped handles of metal vessels from Asia Minor or Iran bear a much closer resemblance – for example, the handle of a metal vessel, perhaps an amphora, similar to those carried by the tribute bearers from Lydia and





Fig. 11. Strap-separators from Iran and Northern Caucasus. 1-10 – “Sialk”-type strap-separators: 1 – Sialk B, bur. 15; 2 – Pshish-I, bur. 51; 3, 4 – Pasargadae (Stronach 1978); 5 – Oxus Treasure; 6-8 – Ul'ski kurgan 2/1909; 9 – Ul'ski kurgan 10/1982; 10 – Ul'ski kurgan 1/2007. 11 – bird's-head-shaped sceptre from cemetery Fars, bur. 35. 12-21 strap-separators of the “Kamennomostskij” type: 12 – Kamennomostskij, gr.1921; 13 – “Klady” – kurgan 41; 14 – Kelermesskaja, kurgan 24; 15 – first Krasnoznameskij kurgan; 16-18 – Persepolis; 19-21 – Ul'ski kurgan 10/1982.

Armenia on the Persepolis Apadana reliefs.<sup>42</sup> Metal handles of amphoras or burners, close in style and occurring from Iran and Lydia, are known in museum collections.<sup>43</sup>

A fragment from a silver cup *phiale* with a leaf ornament was found in kurgan 1/1909 (Fig. 4.13).<sup>44</sup> A similar ornament is found on a number of Near Eastern vessels, including Urartian ones. However, the closest parallel to this fragment is a silver *phiale* from the Ulyap ritual complex 4, which belongs to a group of items of Achaemenid manufacture.<sup>45</sup>

All the given examples lead to the following question: which workshops – Near Eastern or Transcaucasian – were producing items for the Meotian elite in the third and fourth quarters of the sixth century BC, during the active expansion of Achaemenid power?

Hopefully, the complete publication of the Ulski kurgans will serve as a foundation for future investigations which will bring us closer to an answer.

## Notes

- 1 OAK 1898, 30-32.
- 2 OAK 1908, 118; OAK 1909-1910, 147-152.
- 3 Leskov 1985, 26-28; Leskov 1990.
- 4 Galanina 1999, 58-67.
- 5 Leskov et al. 2005.
- 6 Petrenko et al. 2000, 238 ff. [avoid ff. Add full page reference]
- 7 Leskov et al. 2005, 176, fig. 203.1.
- 8 Ksenofontova 2000, 81-82.
- 9 Gabuev & Erlikh 2001, 116, 117, fig.4. [add to bibliography]
- 10 Artamonov 1966, 35, pl. 64; Očir-Gorjaeva 2005, 66, Abb. 58.2a-2b; Kantorovich & Erlikh 2006, 122, cat. 61.
- 11 See Rostovtzev 1925, 310; Ilinskaja & Terenojkin 1983, 68-69; Petrenko 1989, 221-223; Mahortyh 1991.
- 12 Leskov 1985, 26-28.
- 13 Balonov 1987, 22; Galanina & Leskov 1996, 14; Erlikh 2001, 118; Kantorovich & Erlikh 2006, 20, 21.
- 14 Erlikh 2007, 69-71.
- 15 Erlikh 2001, 115-119; Kantorovich & Erlikh 2006, 20-26.
- 16 Leskov 1990, 28-44.
- 17 Erlikh 2006, 37-49. [add to bibliography]
- 18 Galanina & Leskov 1996, 13-15.
- 19 Petrenko 1994, 374, fig. 1.8; Chlenova 1997, fig. 50.9. I am grateful to V.E. Maslov for pointing out these complexes to me, which have yet to be fully published.
- 20 Shramko 1987, 47, fig. 15.
- 21 Mogilov 2006, fig. 134, 10-14. I am obliged to A.D. Mogilov, with whom I consulted on this matter.
- 22 Ulskie kurgans forthcoming, cat. 119. L.K. Galanina calls these insertions *phalarae*.
- 23 Petrenko et al. 2006, 408, fig. 4.5.
- 24 OAK 1909-1910.
- 25 Ghirshman 1939, pl. LVI; Medvedskaja 1983, 74, fig. 3.22.

- 26 Medvedskaja 1983, 64-77.
- 27 Chochorowski 1983, 101.
- 28 Sazonov 1995, 106, fig. 9.3; Erlikh 2007, fig. 202, 17, 18.
- 29 Ul'skie kurgans forthcoming, cat. 19, 94, 96, 292.
- 30 Dalton 1964, cat. 146, fig. 69; Calmeyer 1985, 132.
- 31 Stronach 1978, 216, fig. 93.1-2.
- 32 Calmeyer 1985, 127-130.
- 33 Schmidt 1939, 45, fig. 27; Schmidt 1957, pl. 29.3-6; Calmeyer 1985, 128, Abb. 3.
- 34 Amandry 1965, 149-160.
- 35 Galanina 1983, 45.
- 36 OAK 1909-1910, 150, figs. 213, 214.
- 37 Lukonin 1977b, fig. on p. 50.
- 38 Katalog Moscow 1987, figs. XIX, XX, cat. 104.
- 39 OAK 1909-1910, 149, fig. 211.a-b
- 40 OAK 1909-1910, 150, fig. 212; Ul'skie kurgans forthcoming, cat. 118.
- 41 Borovka 1922, 193-203.
- 42 Calmeyer 1993, 152, 153, Taf. 43, 44.
- 43 Lukonin 1977, figs. on pp. 83, 92; Özgen, Öztürk 1996, 118, 119, cat. 73.
- 44 Ul'skie kurgans forthcoming, cat. 79.
- 45 Katalog Moscow 1987, cat. 102.

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### Abbreviations

ASGE = *Arkheologičeskij sbornik Gosudarsvennogo Ermitaja*. St Petersburg (Leningrad).

IRAIMK = *Isvestija Rossijskoi Akademii Istorii Material'noi Kul'tury*. St Petersburg (Leningrad).

SGE = *Soobšhenija Gosudarstvennogo Ermitaja*. St Petersburg (Leningrad).

