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## Ancestors of the Oriental Horse in Eurasia: Origin and Distribution

*This study discusses the origin and dispersal of the Oriental agile horse, using a range of data—historical, faunal, genetic, and iconographic. It focuses on the Akhal-Teke horses as the model breed of the Oriental horse. Their unambiguous ancestors were horses ridden by the Pazyryk chieftains (400–200 BC). Findings about the Oriental horses, based on the analysis of the Akhal-Teke and Pazyryk breeds, are compared with osteological and iconographic data relating to horses from adjacent territories. This paper looks at horse breeding in Iran and at the Nisaeen breed—the earliest one mentioned in written sources. Using the criteria outlined by the prominent Russian horse expert W.O. Witt, the exterior of the Oriental horse is described, and its homeland and dispersal across the neighboring areas are reconstructed. The likely homeland was Central Asia from the Caspian coast to Fergana, and the time of origin is between the beginning of horse riding and military campaigns. The Oriental horse was possibly an outcome of a cross between the domesticated horse from the Middle Volga and the tarpan of the Eurasian or Asian steppes.*

**Keywords:** *Oriental horse, Akhal-Teke, Nisaeen horse, origin, distribution, Eurasia, Middle East, 1000 BC–1000 AD.*

### Introduction

This article considers the appearance of the agile horse breed referred to as “Oriental” early in Greco-Roman sources, which undoubtedly suggests its oriental origin with respect to Europe and the Middle East, in the Old World. An excellent description of the exterior of ancient, Oriental, agile, noble horses based on iconographic materials is given by professor W.O. Witt: “We can see a rather large, slender, lean horse with a high-set neck, a well-bred head, and well-developed withers. An artist tries to express the horse’s vivid temperament and depicts it as striving forward, light-legged, standing on somewhat thin, lean legs” (1937: 12). However, as concerns the historiography of the Oriental horse (*Equus orientalis*), we shall start from the 5th century BC, from the works of Herodotus, the father of history. He was the first to talk about fast, large horses of the Median Niseya

breed, without calling them “Oriental”, but emphasizing the eastern location of these horses. In the opinion of outstanding Cambridge hippologist M. Levin, “Oriental horses, obviously, from Southwestern Asia, judging by the available data (meaning genetic data – V.K.), were primarily imported to Egypt about the 16th century BC” (Levine, 2006: 199). Consequently, before that, at least in the 2nd millennium BC, or even earlier, Oriental horses had already existed in Southwestern Asia. Thus, we obtain genetic confirmation of the fact that the agile horses so vividly described in the Rig-Veda and Avesta, which were called “heavenly”, “supernatural”, Nisaeen, “blood-sweating” horses by ancient authors, were used in chariots and for horseback riding even by Indo-Europeans during their migrations from the Eurasian steppes to the south and southeast up to the Middle East and India.

Within the 5th–4th centuries BC, Xenophon, an unrivaled expert on horse breeding, mentioned in

“Cyropaedia” that, being the heir to the Persian throne, Cyrus, while visiting his grandfather in Media during the days of his youth, devoted himself to achieving success in horse riding; Xenophon justly considered the Median cavalry to be “the best in the world” (1976: 16, 27).

Many ancient authors talked about the advantages of Oriental horses, which is emphasized by E. Houël in his book summarizing the history of horses in the middle of the 19th century: “Persian horses were most famous throughout the entire period of antiquity for the beauty of their form, gracefulness, energy, and all of those rare qualities, for which Oriental horses are renowned in the highest degree. Ancient historians describe them as being superior to all others in their proud and graceful posture and softness of movements. They semi-squatted on their hind legs, having a light front. Their swan-like necks bear an elegant head, gracefully curved in the air or coiled up against the breast. Their movements were rhythmical and their pace was tremendous” (Houël, 1848: 178). Strabo (several centuries after Herodotus) mentions famous Nisaeen Oriental horses “that were used by kings as the best and largest ones” (Strabo, 1964: 495), while it is important to bear in mind that not only Media, but also Armenia was their formative hotbed; consequently, the area of the Nisaeen breed, as well as the role of Oriental horses in the global horse breeding, considerably increased over the course of nearly five centuries. Subsequent to Nisaeen horses, Bactrian and Parthian, and after them Alanian (the favorite saddle horses of Roman emperors), became equally famous.

In the domestic historiography, works of our great encyclopedist and hippologist Witt became the starting point for posing and solving the issues surrounding the role of the Oriental horse in the horse-breeding cultures around the world. It is precisely his studies that are foundational for considering the problem specifically addressed in this article. Among the horses of antiquity, we distinguish agile horses like the racers of Akhal-Teke breed. Only after the publication of Witt’s 1937 paper was the myth of the Arabian as the most ancient breed dispelled. The author has proven that the Akhal-Teke breed “contains the last drops of the pure blood that generated all of the riding-horse breedings in the world” (Witt, 1937: 12). In his next paper, Witt (1952) substantiated a hypothesis that Pazyryk horses had been bred in the Altai by introducing the blood of true-bred Central Asian Oriental racers. It was not accepted by all paleo-zoologists (see (Tsalkin, 1952)); however, new materials from Pazyryk kurgans reinforced this hypothesis (Grebnev, Vasiliev, 1994; Vasiliev, 2000).

In order to consider the origin of Akhal-Teke horses in a professional manner, tracing their history back to remote ages, it is necessary to evaluate the specifics of the materials we handle. We have the characteristics of the modern Akhal-Teke horse as a representative of the breed: exterior, height, basic body measurements, coat colors. We know

its features such as pace, activity, endurance, attachment to the owner (humanity), long and short racing records. Also, we have osteological data analyzed by experts in the Akhal-Teke breed and measurements of modern Akhal-Teke horses, as well as their genetic makeup for today.

## Research methods

So, against what should we compare data on the Akhal-Teke horses, going far back in the ancient history? First of all, these are osteological collections from archaeological excavations, where the starting point of comparison will involve the head size and profile, the degree of thin-limbedness, the height at the withers, and the relative length of legs and body. Analysis of statistical characteristics of the body composition type allows getting an idea of the horse use and establishing its connection with earlier and contemporaneous horses. Studying the osteological data, paleo-zoologists can assess the exterior, height, and the degree of ride-ability. Our possibilities can be considerably expanded by referring to extensive iconographic materials starting from the Paleolithic cave paintings to the pictures of recent past: these include the monumental sculptures and figurines, petroglyphs and paintings in palaces, terracotta artifacts and images on ceramics, etc. They also allow the exterior, coat color, height, gait, and degree of ride-ability to be characterized. Written artifacts deepen our understanding by introducing the necessary temporal and spatial confinedness. All the above groups of sources require a professional approach. This is a subject of special examination and comparison, while our purpose is to reveal all milestones in the prolonged prehistory of horses belonging precisely to the Akhal-Teke breed in steppes, table-lands, and plains of Eurasia. Like an archaeologist who, when setting out to reach the most ancient layers, should study all later strata at first, the researchers of the Akhal-Teke breed goes further and further to the ancient times, starting from consideration of Turkmen horses of today and yesterday. Before comparing horses of various epochs to find the features suggesting that they are ancestors of the Akhal-Teke horses, let us characterize the modern Akhal-Teke horse.

## The Akhal-Teke horses

The Akhal-Teke horse’s head is small, chiseled, light, lean, with a straight profile or, rarely, arched face; the eyes are big, speaking, severe and burning, bluish-black, or, sometimes, sandy-yellow; the neck is long, thin, with a good swan-like bend, sometimes “deer” with an Adam’s apple (Fig. 1, 2\*). The distinctive features are a vertical

\*Fig. 1–3 – photos by Y. Kuznetsova.

*Fig. 1.* Tykma-Serdar, a brown bay stallion of the Akhal-Teke breed, born in 2006 (Stavropol stud, Russia). World champion in 2009.

neck-carriage, especially at clipping gaits, and a set of the head at an acute angle, which are absent in other breeds and create an unparalleled beauty and a proud posture. Ears are small, perfectly-shaped, very mobile. The whole appearance is dominated by long lines, by which the Akhal-Teke horses are reminiscent of ancient engravings depicting first pure-bred horses in England, ascending to them. The extremities are lean, strong, with well-defined tendons, correct pasterns, very strong and tidy hooves. The Akhal-Teke horses are distinguished by a variety of coat colors, including those rare for other breeds: these are golden or purple-bay, pink-palomino (the sunrise color), gray, bluish-black and chestnut. Another special feature of the Akhal-Teke horses (which can be also seen in ancient images) is their surprisingly natural movements: a low, light and flying wide trot, a smooth floating gallop, flat and powerful jumps along with a high agility and vigor. Always being efficient, they know only one owner and always protect him against people and animals. We can see this incomparable racer in Nisaeen horses of ancient Iran, “blood-sweating” Central Asian horses in China, “Oriental” horses in Greece, “Alanian horses”



*Fig. 2.* Khalal-Khon, a cream stallion of the Akhal-Teke breed, born in 2013 (“Uzbegin” stud, Uzbekistan). Uzbekistan champion in 2016.





*Fig. 3. Gokkhan, a modern representative of the Iomud breed, a successful participant of long-distance endurance riding in Turkmenistan.*

in Rome and West Europe, Central Asian Argamaks of those peoples that made efforts to breed and train the “supernatural heavenly fast horse” (Fig. 3).

### Genetic data

Currently, genetic data obtained from the horse bones found at archaeological sites can be used to analyze the role of ancestors of the Akhal-Teke horses. This requires major preparatory work to select diachronous osteological materials stored in the museum holdings, university and institute centers. For nearly half a century, studies of the gene pool of Akhal-Teke horses have been conducted in the All-Russia Research and Development Institute of Horse Breeding under the supervision of T.N. Ryabova. During this time, the DNA microsatellites of 2024 Akhal-Teke horses from all over the world have been analyzed. It has been established that the Akhal-Teke breed is notable for a wide range of alleles and a great genetic diversity (Khrabrova, Ryabova, Ustyantseva, 2012). Genetic proof of the old age of this breed has been obtained. Successful future comparison of diachronous ancient horses with modern specimens of Akhal-Teke is ensured by the fact that the latter have certain genetic markers

inherent in them alone. The resemblance between this breed to the Tuvian and Khakassian horses can be traced according to some rare alleles, and to the Bashkirian and Transbaikalian horses according to others, which is indicative of either their common ancestor in ancient times or, rather, their genetic relations. A more accurate definition will become possible based on the results of studying genomes of ancient horses taking into account spatial and temporal characteristics of fossil materials (whether they belonged to mountain or steppe areas).

### Akhal-Teke horses and horses of the Pazyryk chieftains

What may be said about the ancestors of Akhal-Teke horses? The archaeologists were lucky twice. First, in the 1920s and later, S.I. Rudenko and M.P. Gryaznov discovered the frozen graves of Pazyryk chieftains from the 4th–3rd centuries BC in the Altai Mountains. Second, foremost Russian hippologist, (practitioner and theoretician of horse breeding), one of twentieth-century Russia’s last encyclopedists, W.O. Witt, participated in these pre-war field works. Witt was given the possibility to prosecute an Altai chieftain’s horse buried in a grave,

so it would be relevant to quote a large extract from his first article on this subject: “The grave was in the grip of permafrost... and the corpses of horses and all the details of their caparison, as well as the trappings that accompanied them to the grave... were frozen in centuries-old ice blocks. Our interest, as hippologists, in the caparison items, saddles, and bridles gave way to the great interest aroused by the horses themselves, which look at us from out of remote ages and millennia past as witnesses to long-gone historical epochs. <...> A chestnut horse from an Altai Scythian’s grave is a noble riding horse of antiquity, a war-horse of Central Asia, immortalized in the images created by great artists of Assyria, Egypt, and Hellas. Particularly striking is the fact that the Scythian horse had the cultural appearance of a horse that was looked after, fed with grain, cleaned, and groomed, and that was taken care of to a old age, since the chestnut horse is older than 20 years. <...> The horse’s hair has still not tarnished; the coat color, though autumnal, has a warm tone with a slight golden tint. <...> The chieftain’s chestnut horse is at least 150 cm tall. Its head, though rather big and somewhat arched, is lean and nice; the neck is long and high-set, the main hair is cut and gripped on both sides with a special main holder; the withers are high, as befits a riding horse; the back is rather short; its legs are lean; perfect in terms of bones and rather long with respect to the body, its fetlocks are extremely small, almost absent, while the hooves are strong and small; the tails are bobbed originally... in a manner we can see in a number of ancient images. <...> In what way did these large, thoroughbred, fast horses come from Central Asia to distant Altai? Most probably, the Scythian nomads of Altai could obtain such horses by way of exception, as the highly valued spoils of war taken from southern neighbors. Possibly, horses of such a breed were also bred in remote northern areas, in a small number of stud farms belonging to chieftains. <...> Still, the most probable explanation of the penetration of these horses into remote northern areas is by way of war and spoils” (Witt, 1937: 22–23). The descriptions made by Witt and, what is more, the conclusions he made based on this paper, which launched an entire body of literature about the Pazyryk horses, are invaluable for us. Suffice it to say that two very important articles were issued in 1952: one of them was written by Witt, and another one by a prominent paleo-zoologist engaged in publishing osteological collections of the Institute for the History of Material Culture (the Institute of Archaeology) of the USSR Academy of Sciences, V.I. Tsalkin. The latter was devoted to studying osteological materials obtained as a result of excavations of Altai kurgans by S.V. Kiselev. We are most interested in the views of Tsalkin on the Pazyryk horses, among which he, subsequent to Witt, distinguished a local breed of the Kazakhstan

and Siberia northern steppes, as well as taller horses having “a common constitution and exterior features of a riding horse. They had relatively small heads, long necks, short withers; their tail, as distinct from the horses of northern type and working breeds, is high-set and not long. Tubular bones are thinner and more elongate than in steppe horses... pasterns are longer. A number of common craniological features make them similar to the modern representatives of riding breeds having southern origin—Turkmenian and Thoroughbred horses” (Tsalkin, 1952: 147).

A large summarizing article by Witt was devoted to the interpretation of osteological material from all Pazyryk burials known by that time. In this article, the author revised his point of view on the Pazyryk horses: based on the statistical analysis of the osteological material he came to the conclusion about a single breed, for Altai, of the Pazyryk period, including horses of a different height at the withers (Witt, 1952).

Summing up Witt’s studies of Pazyryk horses, V.P. Alekseev emphasized that the latter differentiated “two combinations of features in them: 1) a scrubby horse, with a rather rough exterior and resembling modern Altai, Buryat, and Mongolian horses; 2) a large horse, with an obvious riding form, and a ceremonial golden-red coat color... they were bred at the location, by crossbreeding with the local horse, and facilitated its improvement. Though, in general, he does not deny the Central Asian origin of tall true-bred horses from the zone of developed civilizations of the Middle East, which is most important and turns out to have a basis in fact” (1990: 162). Developing this thought, the author pointed out that “the representatives of aristocratic tribal elite used horses looking much like modern Akhal-Teke and Arabian horses for horseback riding in the mountain areas of Altai” in the Early Iron Age (Ibid.: 163). It is highly significant for us that Alekseev recognized the great role of the Central Asian Argamak, which had provided the basis and remained a breed improver, in formation of the Pazyryk horse. That is why the Altai nobles had more well-bred and tall horses. These horses were kept in good conditions and were derived from more well-bred parents within a single breed of Pazyryk horses from the 4th–3rd centuries BC.

The role of horses in the life of Altai population was also described by N.V. Polosmak: “Excavations of average-size mounds in Ak-Alakha I (1990) and Kuturguntas (1990) have shown that horses were the main wealth of people buried there... Among the horses that accompanied the people buried in the middle kurgans near the Ak-Alakha River, some exceeded in size the tallest horses from the Pazyryk kurgans. The presence of well-bred horses in the “royal” and middle kurgans of noble warriors suggests that they were not such a “black swan” for the Pazyryk people” (1994: 80). In the annex to the above-cited

monograph, I.E. Grebnev and S.K. Vasiliev use new, statistically processed, major material to show that “all horses found in the burials of the Pazyryk culture-bearers belong to the same breed” (1994:109), thus confirming the concepts of Witt, put forward in 1952. This is considered in more detail in an article by Vasiliev who “makes an attempt to establish a systematic position for the Scythian horse and its phenotypic features at a new level, and to trace the transformation of the Altai horses over time to find out whether horses from the burials of nobles and common Pazyryk people were different” (2000: 237). Graph plotting the average proportions of horse metatarsal bones proved to be new. They have shown the maximum resemblance of Altai horses to the *Equus* ex.gr. *gallicus*, with a greater gracileness in the structure of the metapodium bones of the first ones. As the author supposes, “the Holocene descendants of these horses (*Equus* ex. gr. *Gallicus* – V.K.) served, most probably, as a breed for domestication, which presumably took place for the first time in the Northern Black Sea Region in the 4th millennium BC” (Ibid.: 241). It should be clarified that earlier Vasiliev called this probable descendant the “Western Siberian tarpan”. The proposed hypothesis on the origin of Pazyryk horses adds further credence to the Oriental (with respect to Europe) origin of the large, well-bred, and agile horse that we can see in the Pazyryk horses being similar in many characteristics to the modern Akhal-Teke breed.

### Ways to study Pazyryk horses

It is a very complicate task to trace the ancestors of Oriental horses, knowing only the end point of the process in the form of Akhal-Teke horses of Turkmenistan, as well as an intermediate one in the form of Pazyryk elite horses of Altai of the 4th–3rd centuries BC, substantiated both paleozoologically and archaeologically. The task began in the middle of the 20th century by Witt, who relied upon the materials that were available at that time. The results of research on these materials have increased since Witt’s era. The research path, proposed on the basis of historical and iconographic parallels, is subjective and, possibly, non-optimal; besides, it requires that a team of specialists expend their efforts. First, we need to know the starting point in time and space. As for the location, there is a good chance that this point might be found in Central Asia, obviously the Pre-Caspian area, and Western Siberia. The latter is confirmed by the name “Oriental horse” (*Equus orientalis*) known to the Greco-Roman sources, as this animal was an Oriental phenomenon relative to the ancient metropolitan territory.

Now, with respect to the period when agile horses became necessary for people: the horse was first domesticated in the Middle Volga area in the 5th–

4th millennia BC as a meat-producing animal. Its agility was rather a hindrance, because it is easier to keep a relatively more phlegmatic horse, such as the “Kazakh,” to which A.G. Petrenko compares the domesticated Middle Volga horses (2007: 29). Consequently, the need for fast, large, and persistent riding horses was an incentive for breeding an agile racer. Such a horse should have appeared when people started hunting wild horses, i.e. as early as the first stage of their domestication. However, these are just the logical prerequisites, and there are no indisputable facts confirming that horseback riding in the steppes preceded the use of horses in chariots at our disposal. Nevertheless, from our point of view, the necessity of hunting wild horses for obtaining meat in the Eurasian steppes engendered a need for horseback riding and, as swift-footed tarpans inhabited the steppe area, fast horses were required (Kovalevskaya, 1977: 12–13).

The historical period when the nomads, warriors, and hunters needed agile horses coincides with the domestication of horses as riding (and not chariot-pulling) stock. Since such innovations spread with lightning speed, this took place everywhere, though sporadically, in the last quarter of the 2nd millennium BC, and in a massive way as early as in the 1st millennium BC. Huge droves of tarpans grazed in the Eurasian steppes. While hunting, it was possible to separate a wild colt, tame it, and subsequently mate it with a domestic horse already able to serve people. By that time, horse-bridling methods had been improved, and taming horses, as we have written earlier, had achieved astonishing success. Having outlined the space-time framework for the necessity of using agile horses, let us consider the available facts based on specific materials. And, as it is subordinate to the geographical principle, let us start with the territories that are the most closely adjacent to Central Asia.

### The horses of Iran

The famous Nisaeen horses, notable for their outstanding qualities, are known precisely in the Iran territory. “These horses are called ‘Nisaeen’ for the following reason: there is a vast plain called ‘Nisay’ in Media. It is exactly on this plain that such large horses are bred” (Herodotus, 1972: 326–327). It is interesting that in his first-rate study “The Horses of Turkestan” (1910), recently reissued, V.P. Kolosovsky (2016) repeatedly calls the Akhal-Teke breed the “Nisaeen horses”, without regard to whether this provision was correct. It is possible to agree with him on this point. There is a striking resemblance in their exterior, pedigree, and growth, despite a time period of more than 25 centuries that separates them, which confirms this fact.

We have a lot of information to allow us to have a sufficiently complete picture of the Iranian horses.



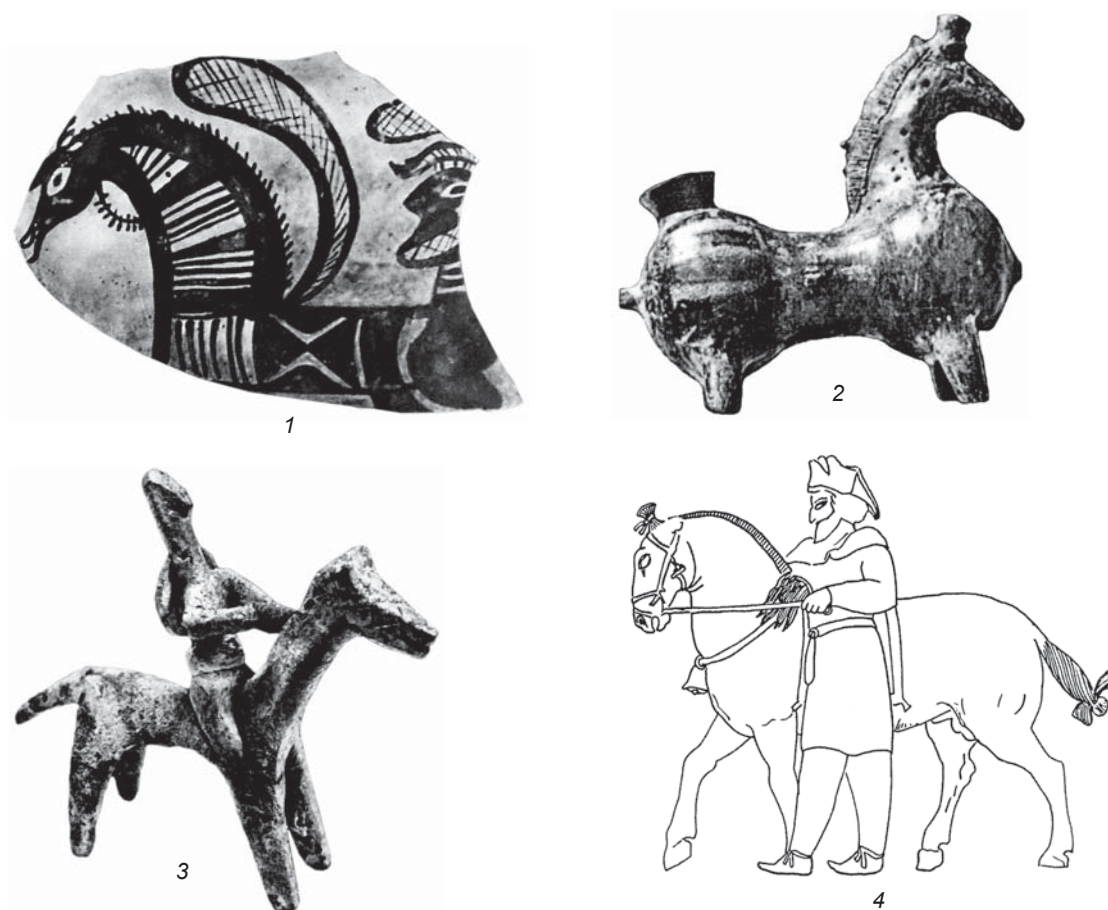


Fig. 4. Representations of Iranian horses of the 10th–8th centuries BC from Sialk (1), Amlash (2, 3), and Persepolis (4).

This involves both extensive osteological data from the Qazvin valley introduced into scientific use by paleozoologist M. Mashkour (2003), and a numerous variety of images (Fig. 4). The earliest drawings were schematic, but as early as the last third of the 2nd millennium BC they reveal the exterior features inherent in the Oriental horses, as noted by hippologists. The decorated vessels from Sialk of the 10th–9th centuries BC show thin-limbed horses with long, thin, and taut bodies, high-set tails, powerful chests, curved long necks, small heads with a somewhat convex front and large eyes. The clay painted vessels in the form of a horse (water-bearers of that, or a somewhat later time) reflect the same exterior features of the Oriental horse, where a nicely curved neck with a hog mane, and a graceful head with a straight profile and cocked ears, as emphasized by the craftsman, are especially important.

A great number of images pertain to the glory days of the Persian Empire, where the role of horses was greater than ever. As estimated by contemporaries, the Persians were unrivaled horsemen. Presumably, it is exactly Nisaeen horses that are depicted on the walls of Persepolis: large muscular horses harnessed to royal

chariots with long bodies, massive croups and chests, with short, fleshy (though beautiful) necks, decorated by hog manes, and with ram-profile heads, as well as with convex expressive eyes. They are much more massive than the graceful horses of Egypt and Assyria, and taller (obviously reaching 140–150 cm at the withers), though scrubby horses were also depicted at the same time. Notably, riding horses of the same exterior type and height as the horses pulling the royal chariot but taller than those harnessed to conventional chariots are depicted in Persepolis reliefs of the 5th–4th centuries BC.

An even greater portrait gallery of Nisaeen horses is presented by ancient gemmae studied by S.Y. Berzina, especially from this point of view (2002). Earlier specimens of the 13th–8th centuries BC depict either mythic winged horses or those harnessed to chariots. They are graceful, agile, and thin-limbed, with taut bodies, nicely curved top lines, vertically set thin necks, and small heads. Three Achaemenian seals pertain to the 6th–5th centuries BC. Sacred horses devoted to Ahura-Mazda, which were described by Herodotus, are represented on two of them. Interestingly, they are externally different. Depicted in one case is a light, long-line horse with a

strong chest, a nicely arched neck, a tidy head with high-set ears, standing on thin legs in the first stage of a gallop (a light type of agile racer). An Achaemenian cylinder seal found in Greece shows a powerful horse with a large head on a short fleshy neck in the ceremonial step posture, with a rein thrown on its neck, under a soft, richly decorated saddle-cloth. Two types of well-bred horses of the Ancient East, extreme with respect to their exterior features, are presented here—light, agile, and massive stepping equines. They have the features of the horses represented in the Persepolis reliefs, which manifest most clearly in the images of the 5th–4th centuries BC (Fig. 4, 4). In all likelihood, the typical image of the Persian horse—a well-set, strong, long-legged and arched face one that was the glory of Persian, Bactrian, and Parthian horses—was established exactly in the 5th century BC. Obviously, these horses became known to the Greeks as Nisaeen, the first ancient breed famous for its exterior and excellent racing capacities.

Such detailed descriptions are caused by the desire to emphasize the existence of both a certain compositional type of horse, as well as different variants within this framework. Using this beneficial material, it is sometimes possible to detect changes in the type of breed; for example, by comparing three seals belonging to the times of Persian king Cyrus (7th–6th centuries BC), which are separated by half a century. Notably, the Southwest Asian campaigns of the Cimmerians and Scythians, who introduced a new horseback-riding technique, as well as new tactics, and, what is more, agile horses from the Eurasian steppes, which could not but reflect on the exterior of horses in Western Asia, pertain just to this period. When comparing the images on seals (Ibid.: Fig. 5, 8, 9), a gradual increase in height, elongation of neck, and changes in the saddle can be noted. The latest of these seals is Neo-Babylonian. It depicts the spearman, Ninurta-Ah-Iddana, seated on a large horse, excellently muscled, on long strong legs, with a high-set graceful neck, strong chest, and a small head with a somewhat protruding front. A high-set and not long tail (possibly, in a sheath) supplements the resemblance to a typical Akhal-Teke horse.

A great variety of ancient Oriental horse types is noted by such a great expert of the Akhal-Teke breed as T.N. Ryabova: “Here, in drawings and petroglyphs, we can see light, thin-legged, slab-sided horses, with elongate light heads on long, high-set necks and with insignificant fringe. The modern Akhal-Teke type is clearly discernible in this type of horse. Such horses were used both for horseback riding, and in harness. These swift-footed, light, maneuverable, fearless animals had the reputation of being the best war horses of all time” (2016: 153).

We began our description with the Nisaeen horses pertaining to the middle of the 1st millennium BC, and added their images on gemmae starting from the

13th century BC. As can be seen, the Nisaeen horses are the first breed distinguished by ancient authors. This breed’s features, for which Oriental horses owned by the Iranian-speaking population of Eurasia were notable, such as a large height and excellent racing capacities, were emphasized. Herodotus indicated the area where these horses were bred (the Nisaeen plain in Media), and five centuries later Strabo raised the issue of their origin: “...the meadow... bears the name of ‘Horse-breeding’; through it, they pass... from Persida and Babylon to the Caspian Gates, and in the Persian times, as it is said, more than 50,000 mares were grazed on this meadow. These were royal herds. As for the Nisaeen horses that were used by kings as the best and largest ones, some argue that their breed originates from here, while others are native to Armenia” (1964: 495). Strabo’s information about breeding the Nisaeen horses in Armenia is important (Ibid.: 499). Consequently, the breed was distinguished not by its geographical confinedness, but by the specific exterior and working capacity features intrinsic to it, exactly as it is considered nowadays. While the Nisaeen horses were related to a certain valley in Media in the times of Herodotus, five centuries later they were bred both in the earlier designated territory and in Armenia.

As already mentioned, the Persians were unrivaled riders. Xenophon describes innumerable horseback hunts introduced by Persian king Cyrus, an outstanding equestrian, as a military exercise for horsemen and horses, and emphasizes that the Persians paid great attention to the breeding and training of horses (1976: 14–16, 215–217). Therefore, the Persian horses, namely the Nisaeen ones, had no equals among other horse breeds for a long time. During his campaign in Greece, Persian king Xerxes “in Thessaly... arranged horse races between his and Thessalian horses (he heard that the Thessalian cavalry is the best one in Hellas). Sure, the Hellenic horses lagged far behind” (Herodotus, 1972: 366). During competitions, short- and long-distance (more than 10 km) races were conducted in hippodromes. The Achaemenid Empire created a postal service with post houses located at a day’s run distance from each other; royal messengers on changeable horses traveled a distance of 2500 km in one or two weeks (Edwards, 1987: 67).

Also, the famous Parthian cavalry should not go unmentioned, since, according to Strabo, it was the fastest and strongest at that time; the Parthian horses were even superior to the Persian ones. Roman emperors strove to have them as steeds, since it was known that these horses could go a distance of 150 km daily for 8–10 days; contemporaries greatly appreciated their fearlessness. It is essential that even by the time of Strabo, Nisaeen horses remained the best riding steeds “that were used by kings... Like the Parthian horses, they are notable for their peculiar points as compared to Hellenic and other



horses...” (Strabo, 1964: 495). This is a sufficiently solid confirmation of the fact that the Nisaeen horses were rightfully called the “Nisaeen breed”, which is similar to the Parthian horses in their qualities but, judging by the Strabo’s text, non-identical.

After one triumphant entry of Sulla, famed Parthian steeds appeared in the horseracing venues of Rome. Parthian *cataphracts* and *clibanarii*—men-at-arms who were “impossible to escape”; their remarkable arrows invisible in flight; heavy spears with iron points; armored horsemen that “emerged... like flames—wearing helmets and armors made of Margianian dazzling steel, while their horses were covered by copper and iron armors” are especially colorfully described by Plutarch (1994: 69). Tacitus also describes the Parthian cavalry: “...the Parthian, accustomed to attack and turn back with equal dexterity, disperses its cavalry units to hit enemies with his arrows without hindrance...” (2003: 219).

Having appeared in Europe and in the Caucasus in the 1st century AD, the Alans, whose Oriental (Massaget) origin was emphasized by ancient authors, brought to Europe (first Eastern, and then Western) their famous “Alanian horses” renowned as the Nisaeen during the times of Herodotus and Strabo, and being representatives of the “Oriental horse” to the same extent. They had the same superior qualities, among which were pace, tirelessness, fearlessness, and capacity for performing prolonged marches, and were especially highly esteemed in the epoch of the Xiongnu invasion and Great Barbarian Migration. The Sarmatians and “brave and multi-horse” Alans (Dionysius, the 2nd century AD) were renowned for their light cavalry, and their “ringing-legged” (Sidonius, the 5th century) horses, “suitable for passages of any length” (Ovid, the 1st century AD) were notable for their pace and unpretentiousness. Using ancient images of well-bred, taut, thin-legged, agile racers with proudly raised graceful heads (paintings in Kerch crypts, gravestones, etc.) we can appreciate the exterior and working qualities of these horses being similar to the modern Akhal-Teke Argamak. Borysthenes, the name of the emperor Hadrian’s horse, is indicative of its Oriental origin, while a bitter epitaph devoted by Hadrian to the death of Borysthenes points to its outstanding qualities. Both descriptions and images depict a typical Oriental horse, maybe, just having more exquisite shapes than the horses of the first millennium BC.

In the 2nd century AD, emperor Marcus Aurelius transferred the 55th cavalry ala from Pannonia to the Hadrian’s Wall in northern Britannia, and in the time following, the Sarmatians and Alans are mentioned as soldiers of the first Pannonian and Sarmatian cavalry alas (Edwards, 1987: 87). Based on the osteological materials from Roman settlements pertaining to the Hadrian’s Wall, paleo-zoologists distinguished six types of horses (Ibid.: 87, 88). Among them, there were

small local ponies (110–120 cm high), common Roman chargers (120–130 cm), and large horses (140–150 cm), in which the horses brought by the Sarmatians from the Northern Black Sea Region can be seen. A horse of exactly this type is represented on a stone of the York fortress wall located somewhat to the south of the Hadrian’s Wall, which I managed to see during an academic trip to Great Britain in 1988. Representations of such large slender horses with beautiful graceful small heads on arched and high-raised necks are known on medieval Pictish gravestones found in Scotland and stored in the exhibition of the Edinburgh museum. It must be emphasized that this type of horse was not encountered in the depictive materials of earlier time in Britannia and Gallia. It appeared here after arrival of Sarmatian-Alanian military units that familiarized the local population with high half-bred Oriental horses.

Since the 2nd century BC, the Chinese have also been familiar with the Oriental type of fast, tireless horses; though, of course, as with an achievement of the world that was considered western to them. Interestingly, the Chinese distinguished two types of outstanding horses at that time. They obtained one of this type from the Wusuns and sent embassies with rich gifts for horses of another type, even more valuable, to Davan (Ferghana). Chinese connoisseurs of horses gave special names to the well-bred Central Asian racers. According to Sīmǎ Qiān, a famous Chinese historian, the Wusun horses were called “horses from the western borderlands”, and the Davan ones “heavenly horses” (see (Samoshin, 2012: 153–154)). It was thought that the latter had a divine origin, as we can read in a song made up by emperor Wu Di:

Spirit of the Polar Star has granted  
Me a Heavenly Horse.  
It will sweep ten thousand li,  
Harnessed to a chariot.  
Only a River Dragon  
Can be a match for it.

(Ibid.: 154).

## Conclusion

This paper demonstrates that, throughout the millennia, people have needed different qualities of horses since their domestication. At first, when horses were domesticated in the Middle Volga area in the 5th–4th millennia BC as meat-producing animals, the possibilities of their bridling, pinfolding, water bearing, and husbandry in grazing meadows were valued. There was no need for agility and height, not to mention that animals always become smaller during domestication. Their facile nature and ability to bend to the human will were the qualities expected from horses. Probably, since the domestication of horses, they have been used not only to drag loads,

or carry them in packs, but also for horseback riding, at least for journeys, the protection of herds, and horseback hunting.

Judging by the images on the horse-headed scepters of the 4th–3rd millennia BC, the apparent muzzles with a slackened noseband and bridles with a tawed mouthpiece made it possible to handle the riding horses successfully. The demand for persistent, fast, and maneuverable horses arose when it became necessary to use horses in war chariots, which took place in the Eurasian steppes and in the Middle East in the 3rd–2nd millennia BC. However, as has been demonstrated by experimental studies in the recent past, chariots required small horses of 120–130 cm at the withers (Spruytte, 1977: 40), though this is still not the “Oriental horse”. The demand for large swift-footed horses appeared owing to their use for horseback riding and war, i.e. during the final centuries of the second millennium to the initial centuries of the first millennium BC and, possibly, somewhat earlier in the Eurasian steppes. The ancient written sources emphasize the advantages of the Oriental horses (Persian, Parthian, and Scytho-Sakian) for the first millennium BC. This study shows those Oriental horses that became known to the Greeks in the epoch of opposition between the East and the West, when their possession was a key to success. The Roman authors considered the Alanian horses as unrivaled racers suitable for going under the emperor’s saddle. Possession of excellent Oriental horses was also important for the Chinese emperors, who aspired to have Central Asian Argamaks (“heavenly horses”) in the final centuries of the first millennium BC, and beyond.

Oriental horses probably appeared in Central Asia as a result of crossing the domesticated horse from the Middle Volga with the tarpan, most probably in the second millennium, or even in the third millennium BC. From this area, they spread to the Middle East, Egypt, and Hellas. Both the Nisaeen horses of Media and the Pazyryk horses of Altai in the 4th–3rd centuries BC pertained to the Oriental horses. They came to Europe at the time of the Scythians, and then later, owing to Sarmatian-Alanian movements of the first centuries AD.

Finally, it is worth dwelling on the possibilities provided by the genetic analysis of paleozoological materials from the burial grounds of the Urals, Siberia, and Central Asia. Of special interest are the burials of tribal chieftains, who sought victories at the battlefields, which depended on the strength, speed, and tirelessness of the steeds embodied most impressively in the Oriental horse. As can be expected, genetic indicators typical for the Akhal-Teke breed will be seen. These can be horses such as those owned by the Pazyryk chieftain from kurgan 5. Possibly, the role of Oriental horses in improving a breed will be revealed, but undoubtedly the genetic analysis of horses will help in discovering new aspects in the life of the local Siberian population known

from archaeological studies. The Oriental horse can be a status marker and a social level indicator that will turn out to be an important characteristic of the ancient society studied by us. Possibly, these expectations are too bold, but the purposeful and systematic collection of genetic materials of ancient horses and their analysis will surely make it possible to take a new look at the history of the population of Siberia and the Altai Mountains from the first millennium BC to the first millennium AD.

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