

# La page de la Recherche

## A Han-dated 'hydra'-type nephrite scabbard slide found in Chatalka (Bulgaria): the earliest and most distant example of Chinese nephrite distribution in Europe

Gonthier Érik\* ([gonthier@mnhn.fr](mailto:gonthier@mnhn.fr)),

Kostov Ruslan I.\*\* ([rikostov@yahoo.com](mailto:rikostov@yahoo.com)) and Strack Elisabeth\*\*\* ([info@strack-gjh.de](mailto:info@strack-gjh.de))

A complete heavy ornamental set of an equestrian warrior (cataphractarius) was found during archaeological excavations from the rich Thracian necropolis at Chatalka, Stara Zagora region (Bulgaria) (Nikolov, Bujukliev, 1967; Bujukliev, 1986; 1991; 1995).

The burial site is included in the 'Roshava Dragana' mound, one of the largest mounds in Bulgaria (height 21m and diameter 90m) and has been dated from the end of the 1st century AD to the beginning of the 2nd century AD. The body of the man has been burned and placed in a lead urn, enclosed in a stone sarcophagus with a golden wreath on top.

The warrior's ornaments include: 2 iron swords, 6 iron spearheads and 55 iron arrowheads, as well as a 1 bronze mask-helmet, iron chain-armor and iron armor-trousers, 2 bronze umbos from shields and parts of armor-plates. Of special interest is one of the iron swords (fig. 1), interpreted as Sarmatian type, which is richly decorated with a massive silver sword guard adorned with gold incrustations.

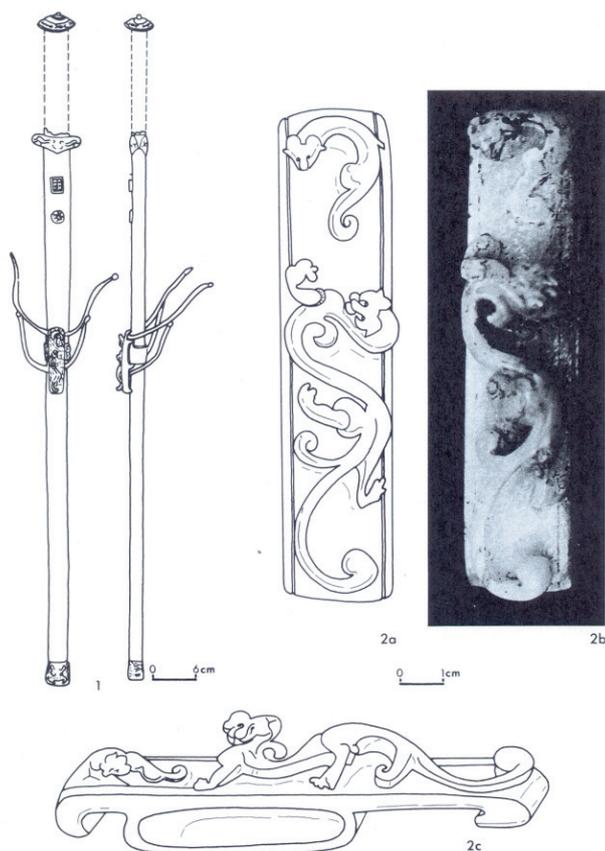


Fig. 1. Scabbard iron sword and its sheath (reconstruction) with one of the different "appliqués" from Chatalka (Werner, 1994, after Bujukliev, 1986).

*The right-handed, double-edged sword (shuangmian jian or kien) was reserved for noblemen, imperial dignitaries and high-ranking officers.*

*The size of the sword, the ornaments of the handle or of the sheath, the colour of the linking artefact and the height of the belt indicate the function of the warrior's rank.*

\* Département de Préhistoire, Musée de l'Homme, UMR 7194, 17 place du Trocadéro, 75116 Paris, France.

\*\* University of Mining and Geology "St. Ivan Rilski", 1700 Sofia, Bulgaria.

\*\*\* Gemmologisches Institut Hamburg, Gerhofstraße 19, 20354 Hamburg, Germany.

*Acknowledgement.* The authors wish to thank the Chief Curator at the Regional Historical Museum at Stara Zagora, Mr. Dimitar Yankov, for giving them access to the items discussed above and other museum artefacts as part of the temporary exhibition *The Stara Zagora Ambassadors of the Past*. This access was granted during one of the scientific excursions which was organized after the International Conference "Geoarchaeology and Archaeomineralogy" held in October 2008 in Sofia.



Fig. 2. Pommel-disk with "tamga" signs. Gold, glass paste, sea shell (Photo: E. Gonthier).

### Warrior's sword from the Thracian necropolis at Chatalka

From the handle to the extremity, this sword is composed of: a pommel-disk, decorated hilt, scabbard slide and tip of the sheath. The gold pommel-disk is divided into 3 parts (but we will study only two of the three parts): a central conic part with a little ring on the top and fixed on a large round disc carved in a shell (or operculum of a giant seashell); the whole item is embedded in a circular gold band with geometric motifs. Two filigrees turn around the large pommel diameter and include geometric signs in 3D - so-called 'tamga' signs. Inside these geometrical motifs, turquoise blue glass paste has been melted into 6 round symbols, and in 3 heart motifs. The presence of typical bubble inclusions (fig. 2) in the glass paste comes from casting at too high a temperature.

### Belt loop in nephrite (at the middle of the sheath)

In the middle side of the scabbard, there is a nephrite item which is homogeneously translucent; a yellowish-greenish stone, carved (dimensions 0.11 x 0.025 x 0.03m) with two dragons sculpted in the round (fig. 1-2; Nikolov, Bujukliev, 1967, p. 23, fig. 4; Bujukliev, 1986, p. 72, 112, pl. 10; 1991, p. 12-13, fig. 2-9; 1995, p. 40-41, fig. 2, 3-1; Werner, 1994, S. 275, 277, Abb. 4, 6-7) (fig. 3). One animal is small and flat in low relief, the other one is bigger and longer in high relief (fig. 4 & 5). Their length proportions are 1/3 to 2/3 long.

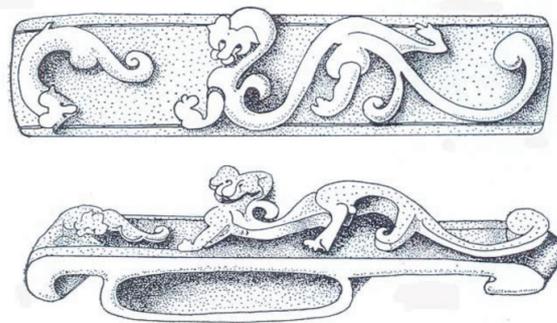


Fig. 3. Nephrite scabbard slide from Chatalka (after Bujukliev, 1986).

On the surface of the loop belt, there are remains of calcifications which are the consequence of chemical process (calcareous deposits). These deposits make the nephrite opaque and of ivory-to-white colour.

The motif side is made of a pale nephrite, common material for scabbard slides in China (Smith & al., 2003), and considered there as the most precious jade they have (Gonthier, 1999). The so called "white jade" (*bai yu*) (Gonthier & al., 2002) comes from the high altitude of the Kun-Lun range (*Kun-Lun chan*), located near the town of Khotan. This raw material is called "mountain jade". This kind of nephrite could be extracted all along the Tarim bed river valley in the Xinjiang province. In this mineralogical secondary deposit (nowadays extracted), the white nephrite appears in alluvial deposits from the Kun-Lun. The raw material withdrawn in round pebbles (from a few grammes to a few hundred kilogrammes) is traditionally called "river-jade".

A reexamination is necessary to define the distribution and chronology of this type and class of nephrite. Among archaeological excavations of the Central Asia region, the nephrite-jade artefacts are rare (Keene, 2005; Kostov, 2006, p. 104-108). The dragon with its dynamic and lively form, is the symbol of imperial power. In China, the dragon is associated with clouds and rain. For this reason, it is venerated during harvests. It is also associated with immortal beings staying in celestial residences.



Fig. 4 & 5. High dragon (chi) with multiple tails, seems to walk along the upper side of the scabbard (Zhi).

*It has a long neck and a sinuous and filiform body. Another animal with one tail appears in low relief in front of it. Homogeneous, translucent, pale yellowish-greenish nephrite with superficial brown spots of iron oxidation. Ornamental loop belt appears on an iron sword of great value. Han Dynasty. Khotan area. Kun-Lun Shan, Xinjiang, West-China (Photos: E. Strack).*

The use and number of these nephrite-jade ornaments found in Chinese burials explain that iron swords were considered precious gifts very attached to which their owner would be very attached. Nephrite scabbard slides are very rare in Central Asia and Europe, where they are usually imitated and substituted by wood, bone, ivory, other minerals (agate or chalcedony), bronze and even gold, decorated with precious stones. Only in a few instances are there proper X-ray determinations of the material as jade-nephrite (c. catalogue in Trousdale, 1975). In most cases, the term "jade" in a broader sense has been used for the material in the publications, likely related to true jade-nephrite (Gonthier & al., 2002, 2005a-b).

The jade-nephrite scabbard slide does not fit stylistically and materially with the rest of the ornaments. Materially, the iron blade, reconstituted archaeologically thanks to the proportion known by Werner and Bujuklić (see fig. 1.), comes from a different age and/or region. The ethnic attribution of the burial (Sarmatian artefacts in a Thracian mound in Roman times) is under discussion, emphasizing the connections between Sarmatians and Thracians in the Balkans during the first centuries AD. The gold wreath on the urn points to the status of a high-ranking military officer or even ruler, but not to an ordinary warrior.

We know that following Scythian migrations, Sarmatian tribes moved into the area during the 4th century BC from the north of the Caspian Sea into the Caucasus area and Europe. Sarmatian animal-style art could be recognized by complex compositions in which stylized animals are depicted. They are twisted, curled upon themselves or fighting with other animals. Plaques, clasps, and weapons were frequently made from precious metals and embellished with polychrome inlays of stone and glass, many of which find stylistic parallels in the East (Jacobson & al., 2001).

In Trousdale's fundamental monograph (1975) about the long sword and scabbard slides, a list (catalog) and classification of the typology of these artifacts world-wide has been made with a lot of historical information and comparable material (for Russia c. Kusheva-Grozevskaya, 1929; Khazanov, 1971). The author's idea is that the scabbard slide was used first by the tribes in the Southern Ural region in the 7th to the 6th centuries BC and a century later – in China, and later on with the Yuehchi it was distributed during the 2nd century BC in Central Asia. Two main forms of the scabbard slide were introduced, which were later subdivided into six categories or classes on the basis of typology and decoration of this period.

The first form (Type I), on which the upper plate is extended, lies above and below the aperture on the base. The second form (Type II) consists only of an enclosed aperture. In both cases the six classes are: CP (unornamented), CV (geometric), CR (ridge), CG (grain), CH (hydra type) and CZ (atypical); in the second option, the classes are XCP (unornamented), XCV (geometric), XCR (ridge), XCG (grain type), XCH (hydra), and XCZ (atypical). The jade-nephrite scabbard slide is known as "shih" (Khazanov, 1971, p. 27; Trousdale, 1975, p. 270) or "suei" (Laufer, 1912, p. 256) in the Chinese language. In older Chinese sources these artefacts are called "wei" and the colloquial name in Si-gnan is "chao wen tai", of unknown old origin (Laufer, 1912, p. 256, 258-259).

On top of the scabbard slide from Chataalka, in high relief, are engraved stylized animals which are described as possibly a lion and a fox (Bujukliev, 1986, p. 72), or a gryphon and a fox (Bujukliev, 1991, p. 13) or as fable animals like panthers (Werner, 1994, S. 274). The Chataalka jade-nephrite scabbard slide can be classified as Type I – 'hydra' class according to Trousdale (1975). Among a total of 440 samples in the catalogue, 87 examples of this type and class from all over the world have been identified (or 20%; below 4% for 'hydra' class of Type II). Identification of this animal as a fable 'hydra' has been objected to by several researchers, who suggest the term 'feline-like animal', or identify it as a lizard or a lion (for China a better interpretation is the tiger). Usually they were presented by Trousdale as fantastic animals like 'hydras' when emerging from clouds or waves in high relief. These symbols are common in Chinese jade-nephrite carvings and on artefacts made from other materials, and another option can be the dragon. In Type II 'hydra' class samples, usually only a single animal is carved, whereas in Type I 'hydra' class, there are two animals as presented here. In most cases the larger animal is in the lower part and the smaller in the upper part of the scabbard slide.

It is in the 6th century BC that the sword was included in Chinese armaments. From the beginning of the period of War-Kingdoms (475 - 221 BC) the jade-nephrite ornaments decorated numerous weapons, as could be seen in the discoveries in Hubei, an old *Chu* state. The Western Han (206 BC – 9 AC), which would later adopt this accessory to adorn their weapons (fig. 6). This traditional sword, made out of jade-nephrite, iron or bronze, is composed of four pieces of jade-nephrite which are from top to bottom: the pommel (*Shou*), the hilt (*Ben, Ge*), the sheath loop and the tip of the sheath (bouterolle) (*Wei*).

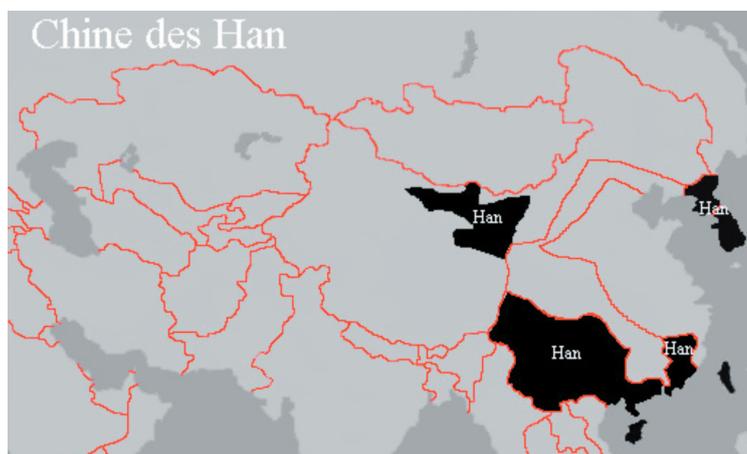


Fig. 6. The "occidental territories" West of Dunhuang in the Guansu province, actual China, were constituted by a headquarters and 17 districts.

The Han ruled over China from 206 BC to 220 AC. It was founded by Liu Bang, a war lord of peasant origin, who revolted against the Qin dynasty. The long first imperial dynasty was divided into the occidental Han (西漢) or former Han (前漢) (206 BC – 9 AC), and the eastern Han (東漢) or posterior Han (後漢), (25 – 220 AC), separated by a short period of the Xin dynasty founded by Wang Mang.

### Bouterolle

A quadrangular gold artefact is fixed on the scabbard end, with a zoomorphic motif between half circles and heart motifs hot-welded against a square filigree band (fig. 7). This square filigree band is attached on three sides of the quadrangular motif by eight claws which keep the gold box protected from sword point. The high relief motif from Chataalka is a stag at rest, lying in profile on the ground, sitting back with its legs tucked under it, its head face-on with a pair of white horns and blue ears.

Fig. 7. The bouterolle. Xiongnu type, 3rd to 2nd century BC.

Mongolia or southern Siberia.. A few gold motifs display turquoise blue glass paste (16 elements) and white glass paste (6 elements; 1 is lost) as the gold pommel-disk. The glass paste indicates the presence of typical round bubble inclusions. The bent legs have blue pear-form motifs. The reclined head rests on the middle of the back. The front face of the animal has 2 white horns and 2 hemi-spherical eyes (mixed white and black glass paste), and 2 blue ears (Photo: E. Gonthier).

This is a representation of a Near Eastern and Iranian style. This zoomorphic motif supports the thesis of a Near Eastern origin, developed in Iran (deer representations in Louristania and Kurdistan). It has been most likely passed on to the Scythes through the Transcaucasia, ending up in the Balkans.



### Xiongnu and the Silk Road

The western trade route started as a vehicle for cross-cultural exchanges in the 2nd century BC. It was first travelled by Zhang Qian to the Far West for political contact with the Yuezhi, a nomadic tribe, in 138 BC. In the 1870s, the geographer Ferdinand von Richthofen gave it the name by which we now know it - the Silk Road.

Chinese sources since 1200 BC refer to a people called *Xiongnu* (*Hsiung-nu*), an allusion to the Huns' ancestors. This ancient tribe of central Asia was already blossoming from the Bronze Age during the second millennium, after the decline of the Scythes. They established their first empire in the north areas of Mongolia (near Baikal Lake and in the Selenga Valley that correspond to the present Bouriatria, between 209 BC and 93 AD) to then migrate into central Europe, where they blended with the French-Germanic people.

The Xiongnu people harassed the Han Chinese empire, which started the first building of the Great Wall. These nomads, shepherds and warriors didn't write. Their territory went beyond the present Mongolia region (fig. 8). They left very little trace behind. General Zhang Qian was sent by Emperor Wudi of Han Dynasty (206 BC – 220 AD) to recruit the Yuezhi, who were the Xiongnu's enemies in the 2nd century BC. As a Yuezhi tribe, the Xiongnu were also a nomadic group who attempted to invade the Kansu Province of the Han Dynasty. Because the Xiongnu could not be restrained with any lasting effect, Emperor Wudi decided to look for an alliance with the Yuezhi people who had been defeated by their enemies Xiongnu and driven into the Ili valley, at the western fringes of the Taklamakan desert. As a result, General Zhang Qian set out with a caravan of 100 men from Chang'an, the capital of Han Dynasty, to the Far West of the area beyond the Great Wall.



Fig. 8. Xiongnu Empire.

*For the Xiongnu people, some animals with horns seemed to act as mediators, allowing dead souls to cross over into the Underworld (Savinov, 1994). At the same time, hunting those animals, was not only a predatory activity but was also used to identify the best warriors and assimilate the hunting of animals as a sacrificial rite.*

However, in order to reach Yuezhi, Zhang Qian and his caravan had to go across the territory of Xiongnu. Unfortunately, soon after Zhang Qian left China, Xiongnu captured his group. Zhang Qian and the rest of survivors stayed in prison for ten years, during which he married a nomad wife who gave him a son. Due to his will to finish his original mission, one day Zhang Qian seized a chance and escaped with other survivors. He continued his journey westward toward the northern Silk Road to Kashgar and Ferghana. Finally, in 128 BC, Zhang Qian reached his final destination: Yuezhi. He was surprised by the Yuezhi people, who were living in peace, well settled in the various oases of Central Asia and no longer interested in taking their revenge on the Xiongnu. The trip to the Xiongnu territory resulted in a route that favoured transportation of precious goods and movement of the military. Precious goods made of gold, glass paste, and sometimes precious stones were spread all along the ancient Silk Road. In Europe, the Silk Road was known as Transoxiana, where the towns of Boukhara and Samarkand were located; the old name of the Central Asia region was demarcated north by the Kazakhstan steppes and the Altai massif, east by Mongolia and China, south by India, Pakistan, Afghanistan and Iran, and finally by the Caspian Sea on the west. Transoxiana and Turkistan were almost unknown by Europe until the 19th century.

During the Han epoch, Chinese people sold silk, tea, porcelain china and satin to Central Asian peoples in exchange for jade-nephrite, precious stones, steppe horses and furs (Zarcone, 2001). As this trade followed the High-Asiatics roads, it has been known as "jade roads" (Niyaz, 1989). Turkestanian jade-nephrite was the stake of an important economical and political relationship between China and Eastern Turkestan long before the Christian Era and until the 18th century (Gülzäpär, 1989). Originally, around the 2nd century BC, this road bypassed the Taklamakan desert in the south, via Lop Noor to Yarkand and Khotan.

Later, it was partly deserted around the 4th century AD because alternate routes were used in the center and the north along the Tarim River, entering China by the Kan-sou corridor, using the northern route through the Gobi Desert and Mongolia (Sun Bing, 1995). These roads facilitated exchanges to the west. As a result, rare examples of manufactured jade-nephrite made their way into European graves and collections, without any doubt as princely gifts.

### Origins of the precious stones in the East

In the ancient Balkhara (Bactrian) region, trade in lazurite (lapis-lazuli) to the west, Mesopotamia and even predynastic Egypt (Sarianidi, 1971) during the first millennia BC was substituted in the first centuries BC and later by the trade and use of the more abundant turquoise. Fine examples of turquoise inlay are the golden treasures from the Tillya Tepe sites. The dark-blue colour of the rare lazurite with a single area of distribution in the past, high in the Hindu-Kush mountains, was replaced by the sky-blue turquoise from copper deposits in a large region. Jade-nephrite as a gemological material has not been popular west of the Pamir Mountain, nor has lazurite to the East (Kostov, 2006, p. 201).

The earliest method of hanging a long sword was with the scabbard slide, which may have originated in the 7th or 6th century BC in the region of the Southern Ural mountains steppe zone, probably by the equestrian Sauromatae, who employed long iron swords for a considerable span of time before the appearance of such a sword in China (Trousdale, 1975, p. 116-118). Chronologically, the scabbard slides in this period in China are related to the Late Chou (4th to 3rd century BC) and Han (2nd century BC to 2nd century AD) dynasties. Among 33 cases of the jade-nephrite 'hydra' I type there are only a few examples of excavated samples which can be precisely dated: 3 pieces for the Late Eastern Chou period from 2 locations – Lo-Yang and Ch'ang-Sha (Trousdale, 1975, p. 13); 4 pieces for the Western Han (including the Korean site Lo-Lang; Trousdale, 1975, p. 19); and 2 pieces for the Eastern Han (Trousdale, 1975, p. 29). All the scabbard slide samples described are from Central or Eastern China and Korea. All the finds are quite far from the suggested Kunlun jade-nephrite sources. The jade-nephrite artefacts dated from the Chou period (5 samples) and Han period (11 samples from Western Han; 5 samples from Eastern Han; the rest attributed only as Han in age; 23 samples in total) are 28 in total (~6 %). While the ornamentation of Late Eastern Chou 'hydra' class slides seems to consist of a single 'hydra' only, carved in moderately high relief, most of the Western Han slides are ornamented with the figures of a larger and smaller 'hydra', carved in high, rounded relief, and in a single case at least, undercut in places so that the figures are in nearly full round (Trousdale, 1975, p. 26).

Berthold Laufer, in his monograph of the history of jade-nephrite carvings in China, stated about the examples with scabbard slides (fig. 9): "The specimens in my collection are all of the Han period, judging from material, technique and ornamentation. So I am inclined to believe that the type itself is not older than this epoch, and that its formation may be credited to the Han." (Laufer, 1912, p. 258-261). A jade-nephrite artefact with the 'hydra' pattern, from a similar in age, (fig. 10 & 11) from the collection of the Fogg Art Museum, Harvard University, Cambridge, Massachusetts (Trousdale, 1975, p. 192, pl. 9d).

On the territory of the Russian Federation, a jade-nephrite scabbard plate of the geometric type was found in the Kuban area in 1894 (Andrási, 2008, Inv. No.1923, 7-16, 88; pl. 57-58, cat. No.116; Khazanov, 1971, p. 27; Trousdale, 1975, 25, 102-103, 237-238, 254, table 2, pl. 19c). The size is 94.5x26.5 mm and the weight 59.79 g. It is suggested that this artefact was carved in China in the 2nd to the 1st century BC, but found in a Sarmatian grave of the 3rd to the 4th century AD. Analogous jade-nephrite artefacts were found at Kerch (second half of the third century or first half of the 4th century AD), Pokrovsk-Voshod (5th century AD), and Alt-Weimar mound (Lower Volga region), as well as in the region of Perm (Russia). A scabbard plate from a Late Sarmatian burial (last half of the 2nd century – first half of the 3rd century AD) is known from the N19 mound at the Sladovskii necropolis of the Rostov region (Maximenko, Bezuglov, 1987). In the latter case both the scabbard slide and the sword shield are made of jade-nephrite. According to Trousdale (1975, p. 102) the scabbard slides (made of chalcedony, jade-nephrite, and gold incrustated with decorative stones) known from the regions of South Russia, are all similar, or may be related to the Chinese Type I slides.



Fig. 9. Different patterns (classes) of Chinese jade-nephrite scabbard plates from the Han period: 1 – 'grain' class; 2 and 3 – 'hydra' class; 4, 5 and 6 – 'geometric' class (Laufer, 1912).

Two of the slides are, in fact, Chinese, but a third one that had been published as being Chinese, is not considered as Chinese. In a single case, with a Chinese slide of the 'hydra' class, belonging most likely to Early Eastern Han, it is suggested that it was probably carved in China during the 1st century AD, but not buried in South Russia until the 3rd century AD, or possibly even later. Among these examples one can hardly find the 'hydra' type.

It must be noted that there is a strict analogy between the Volga and Perm slides and the non-Chinese stone examples from South Russia, suggesting contacts between these areas since at least the first century

BC. Moreover, the long iron sword of the Prikuban and Bosphorus areas appeared with the Sarmatian peoples coming from the East during the same time (probably all of the scabbard slides were carved in South Russia where there were Chinese models) (Trousdale, 1975, p. 112).

The scabbard slide was also used in ancient Bactria as demonstrated on one of the unique gold finds (clasps with representation of warriors, in grave N3 from Tillya Tepe) in Afghanistan (Sarianidi, 1985, p. 140, N81-84, p. 236; Werner, 1994, S. 279, Abb. 7, 8a-8b). On the gold sheath with the gold-handled dagger from grave N4, there are scenes of the mauling of dragon-type animals (Sarianidi, 1985, p. 215-220, N160-163, p. 247-248), which also corresponds to the importance of dragons in mythology and sword ornamentation as already mentioned. In addition, panthers and a dragon are represented on the elongated gold plaques (Sarianidi, 1985, p. 155, N98). Only a few scabbard plates are known from the next period of the Kushan Empire (Trousdale, 1988).

According to Sarianidi (1987), a lot of the Sarmatian jewellery artefacts originate from the south and most probably can be related to the Bactrian goldsmith center. One of the rare cases of jade-nephrite finds in the Central Asia region is a small jade-nephrite plate with depictions of a Bactrian ruler and a bull-man (gopatshah) dating from the 2nd century BC (Rtveladze, 1997; Kostov, 2006, p. 106-107), which is consistent with the idea of an independent glyptic and goldsmith Bactrian centre (Sarianidi, 1985, p. 54; Keene, 2005, p. 200).

In 2006, the jade-nephrite artefact from Chatalka was on display as an additional object at the exhibition *Xi'an. Imperial Power in the Afterlife. Burial Goods and Temple Treasures from China's Ancient Capital* in the Kunst und Anstellungshalle in Bonn (Germany) as an unique example of early European connections with China. Only an imitation of the previously mentioned scabbard slide made from bone has been found at Novae (Roman town and camp near the town of Svishtov) in Bulgaria, dating from the 3rd century AD (Trousdale, 1975, p. 229, pl. 17b).

## Conclusion

In conclusion, the jade-nephrite scabbard slide described from the mound at Chatalka near Stara Zagora (Bulgaria) is declared to be among the earliest known Chinese jade-nephrite artefacts found in such a distant western site. The 'hydra' type engraving in high relief of the jade-nephrite plate is an extremely rare and unique pattern for Eastern Europe and the whole of Europe.

The ethnic origin of its owner cannot be definitively determined as Sarmatian or Thracian or Roman, as the sword with corresponding ornaments can be also part of a trophy or a gift. Nevertheless, the gold wreath on the urn and the rich burial artefacts point to a high-ranking military official or a ruler, and not to an ordinary warrior. The Bactrian center (connection) has also to be considered in Central Asia as an important crossroads in the manufacture, trade and distribution of prestigious goods including gemological materials.



Fig. 10. Chinese drawing of a white jade-nephrite scabbard plate of the 'hydra' class ('girdle-clasp' after Laufer, 1912, p. 258, fig. 162; Trousdale, W. 1975, p. 195-196, pl. 9c).



Fig. 11. Early Western Han (I-II c. AD) jade-nephrite scabbard slide (Fogg Art Museum, Harvard University, Cambridge, Massachusetts; Trousdale, 1975, p. 317, pl. 9d)

### References

- Andrási, J., (2008). The Berthier-Delagarde Collection of Crimean Jewellery in the British Museum and Related Material. Appendix 1. *British Museum Research Publication* 166, p. 115-140.
- Bujukliev, Chr.,  
 (1986). *La nécropole tumulaire thrace près de Čatalka, région de Stara Zagora. Fouilles et Recherches XVI*, Sciences Bulgarian Academy, Sofia (in Bulgarian).  
 (1991). On the question about the Thracian-Sarmatian relations in the I – beginning of the II c. (according to archaeological data). *Arheologiya* 2, p. 11-20 (in Bulgarian).  
 (1995). On the question about the Thracian-Sarmatian relations in the I – beginning of the II c. *Rossiyskaya Arheologiya* 1, p. 37-46 (in Russian).
- Gonthier, E., (1999). Réflexions sur l'esthétique des objets de jade traditionnels chinois avant le XVIIIème siècle. *Revue de l'Association Française de Gemmologie* 136, Paris.
- Gonthier, E., Schroeder, L.,  
 (2005a). Le jade de Chine, entre l'authenticité, la copie et l'artifice. *Archéologia* 425, p. 44-50, Dijon.  
 (2005b). Le jade de Chine, entre l'authenticité, la copie et l'artifice. *Archéologia* 426, p. 62-70, Dijon.
- Gonthier, E., Lepolard, M., Reinhardt, A., (2002). Le jade, valeur symbolique et terminologie en Occident et en Chine. *Revue de l'Association Française de Gemmologie* 147, Paris.
- Gülzäpär, M., (1989). Un regard sur le développement du commerce au Sinkiang aux époques anciennes. *Études des Sciences Sociales du Sinkiang* 3, p. 63 (in turc ouïgour).
- Jacobson, E., Kubarev, V., Tseveendorj, D., (2001). Répertoire des pétroglyphes d'Asie Centrale, Mongolie du Nord-Ouest Tsagaan Salaa/Baga Oigor. – *Mémoires de la Mission archéologique française en Asie Centrale* 6, De Boccard, Paris.
- Keene, M., (2005). Old world jades outside China, from ancient times to the fifteenth century: section one. *Muqarnas* 21, p. 193-214.
- Khazanov, A. M., (1971). *Essays on the Military Knowledge of the Sarmatians*. Nauka, Moscow. (in Russian).
- Kostov, R. I., (2006). *Precious Minerals and Metals in the Life of the Ancient Bulgarians*. TANGRA TanNakRa, Sofia (in Bulgarian).
- Kusheva-Grozevska, A. N., (1929). Odin iz tipov sarmatskogo mecha (One of the types of Sarmatian swords). *Izvestiya nizhne-volzhskogo instituta kraevedeniya* 3, p.157-167. Saratov (in Russian).
- Laufer, B., (1912). *Jade: A Study in Chinese Archeology and Religion*. Publication of Field Museum of Natural History 154, Anthropological Series X, Chicago. Repr. 1989. *Jade: Its History and Symbolism in China*. Dover Publications Inc., New York.
- Maximenko, V. E., Bezuglov, S. I., (1987). Late-Sarmatian burials in the kurgans at the River Bistraya. *Sovetskaya Arheologiya* 1, p. 183-192, Moscow (in Russian).
- Nikolov, D., Bujukliev, H., (1967). Thracian mound burials from Chatalka, Stara Zagora Region. *Arheologiya* 3, p. 10-25 (in Bulgarian).
- Niyaz, K., (1989). Les anciennes routes caravanières du Sinkiang. *Études de Sciences Sociales du Sinkiang* (in turc ouïgour).
- Rtveladze, E. V., (1997). Gopatshah of Bactria (A nephrite plate with depictions of a Bactrian ruler and a bull-man). *Ancient Civilizations from Scythia to Siberia* 4, p. 294-305.
- Savinov, D. G., (1994). *Olennie kamni v kulture kochevnikov Evrasii (Les pierres à cerf dans la culture des nomades d'Eurasie)*. Izdatelstvo S.-Peterburgskogo Universiteta, S.-Peterburg.
- Sarianidi, V. I.,  
 (1971). The Lapis Lazuli Route in the Ancient East. *Archaeology* 24, p. 12-15.  
 (1985). *The Golden Hoard of Bactria*. Harry N. Abrams, New York.  
 (1987). A centre of goldworking in Bactria. *Sovetskaya Arheologiya* 1, p. 72-83 (in Russian).
- Smith, D.-C., Gonthier, E., Reinhardt, A., (2003). Raman microscopy of Chinese nephrite jades, both ancient cultural artefacts and geological sources in China. *International Congress "Applications of Raman Spectroscopy in Art and Archaeology"*. Gand, Belgique.
- Sun Bing, (1995). Le jade de Khotan, célèbre dans le monde. *Göhär Zemin Khotän, Shinjang Sän'ät Näshriyati* (in turc ouïgour).
- Trousdale, W.,  
 (1975). *The Long Sword and Scabbard Slide in Asia*. Smithsonian Contribution to Anthropology 17, Washington  
 (1988). A Kushan scabbard slide from Afghanistan. *Bulletin of the Asia Institute New Series* 2, p. 25-30.
- Werner, J., (1994). Chinesischer Schwertraggügel der Han-Zeit aus einem thrakischem Häuptlingsgrab von Čatalka (Bulgarien). *Germania* 72/1, p. 269-282.
- Zarcone, T., (2001). *La route du jade, un voyage de vingt siècles*, Mémoires 72, Autrement, Paris.