A ROCK TOMB OF THE ANCIENT TURKIC PERIOD IN THE ZHARGALANT KHAIRKHAN MOUNTAINS, KHOVD AIMAG, WITH THE OLDEST PRESERVED HORSE-HEAD FIDDLE IN MONGOLIA – A PRELIMINARY REPORT

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Discovery and Archaeological Investigation of the Rock Crevice Tomb[1]

Between 2005 and 2007 the Institute of Archaeology of the Mongolian Academy of Sciences together with the Institute of Mongol Altai Studies carried out a project in Baian-Ölgii, which is entitled "The archaeological monuments in the western part of the Mongolian Altai I" and was aimed at the search for and documentation of monuments. In 2008 the project was continued by a research campaign in Khovd aimag. During the work in Khovd the colleagues were informed by the teacher Ch. Enkhtör about a crevice grave in the Zhargalant Khairkhan Mountains. Thereupon Ts. Törbat, D. Batsükh and T. Batbaiar visited the find spot together with the teacher Enkhtör and with N. Dandar, who discovered the find. At the site, they carried out an excavation on June 26, 2008.

The discovery of the rock tomb

On 25 May 2008, while tending his grazing sheep, Namsrai Dandar by chance discovered a rock tomb in the vicinity of the Ömnökh Valley in the Zhargalant Khairkhan Mountain range. Namely, he had gone up to the rocky summit of the mountain, locally known as Nükhen Khad, in order to chase back the sheep which had strayed uphill. While resting at the summit, he noticed a cave in the immediate vicinity. A hole cut vertically into the middle of the bedrock aroused his curiosity. When he leaned over the edge and peered inside, he saw a wooden object with a round end that protruded from the ground in the centre of the cave and in the southern corner a pair of stirrups, which lay visibly upon the ground.

1 The Mongolian excavation report was translated from the Mongolian into the German language by Mr Pürev Erdenesukh, Bonn. The English translation of the text was made by Nadine Riedl and Emily Schalk.

The cave was almost entirely filled with a mixture of birds' eggshells, mice excrements and earth. Because of the limited space it was only possible to enter the cave head first and up to the thighs. After having pulled out the wooden object with the circular ending from the earth, Dandar recognised that it was a saddle. He went on digging with his hands at the spot where the saddle had been and found the end of a bright yellow wooden object, which at first glance appeared to be a riding crop. When he pulled out this object, he held a bow in his hands. Therefore, he assumed that this had been a place for hiding objects in earlier times and, thus, continued digging intensely. In due course he found a wooden container that sounded hollow when he knocked on it. He removed more earth from the sides of the pit in order to recover the artefact undamaged. In doing so, he found an iron arrowhead on top of the container. When the object was uncovered entirely, Dandar realized that it was a quiver with arrows, with the ends pointing upwards and the heads downwards. When Dandar lifted the quiver from the ground, the bottom came loose and some iron arrowheads fell out. Together with the arrowhead that was found first, there were eleven pieces; only one point that was still attached to an arrow remained in the quiver. Out of curiosity, the man studied the quiver's content and counted altogether 23 wooden arrows: among them one with an arrowhead and 22 without, as if the points had fallen off. In view of the missing iron arrowheads, he dug further with his hands and found human rib bones, vertebrae and pelvic bones. At that point Dandar realized that he had discovered a burial. Therefore, he stopped digging and buried the arrowheads in a small hole in the ground near the eastern wall of the cave wall in order to hide them. He arranged the saddle, the bow and the quiver with the arrows at the western wall in such a way that they could not be seen. Fortunately, he left the remaining finds in their original position.

Dandar's child had often told him that the history teacher, Chimeddorzh Enkhtör, was interested in the different historical and cultural monuments in the region and kept a list of them. As the teacher had additionally instructed his pupils to list the monuments in their native places, if there were any, Dandar decided to report his find to the teacher first. However, three days after the discovery, on 28 May, Dandar moved with his family to summer pasture ground, and, thus, did not return to the site of the discovery.

At the site we were able to observe and document the following: Among the excavated grave goods were the bones of a human skeleton. The quiver with the arrows lay beside the right hip, with the bottom of the quiver orientated towards the feet of the skeleton. Above the quiver and next to the body the bow and above that the saddle was placed.

The place of discovery

The mountain range of Zhargalant Khairkhan is situated – according to the present administrative subdivision – on the border between Mankhan sum and Chandman' sum in Khovd aimag, south-east of the Khar Nuur. The mountains are the habitat of an abundance of animals that have become rare, such as wild sheep, mountain goats and antilopes, and the location of numerous caves. They are far away from settlements and roads and due to natural obstacles difficult to access. With their prominent location in the middle of the steppe, they have a very powerful appearance and have long been venerated by the local population as a sacred place. The entire western part of the massif belongs to the Mankhan sum, where many large and small valleys have formed. The Ömnökh Valley is located in the area of the village of Baiangol in Mankhan



Fig. 1. Nükhen Khad, Zhargalant Khairkhan. View from the site to the north.



Fig. 2. Nükhen Khad, Zhargalant Khairkhan. The cave in the foreground, in the background Khar Nuur.

sum, ca. 35 km east of the centre of the sum. Located on the sunny west flank of the massif Zhargalant Khairkhan are numerous prehistoric monuments dating from different periods, such as stone stelae from the Bronze Age, khirigsuurs and a memorial with an anthropomorphic statue of a later period. About 2 km to the west of the rock tomb of Nükhen Khad on the north terrace of a deep natural gully there is a memorial with a statue from the ancient Turkic period.

The cave in which the rock tomb was found has a small entrance and a narrow, pipe-like, horizontal interior, providing space only for one person in a lying position. The cave is situated in the middle rock in a succession of three rocks up the slope to the summit of the mountain Nükhen Khad (Fig. 1–2). Part of the Zhargalant Khairkhan massif, the small mountain Nükhen Khad is on the sunny western side, south of the Ömnökh Valley. According to GPS measurements, the find spot is located 1,866 m (± 4 m) above sea level.

As the back rock face plunges straight down to a depth of over 10 m, the cave can be reached only by climbing one of the three other sides. The entrance to the cave is hardly visible; even a sharp-sighted observer recognizes it only from a distance of 5–10 steps, while an unobservant person notices it only when standing directly in front. The entrance is almost oval-shaped. At its eastern edge is a middle-sized pile of stones, which at first glance seems to consist of stone slides covered with lichen. However, the pile probably consists of those stones from clearing the naturally formed cavity or collected in the vicinity especially for the funeral rite.

The cave entrance measures 86 x 60 cm. The interior of the cave consists of one cavity orientated south-west to north-east. Between the southern and eastern corner it measures 280 cm; in the southern part its width is 82–100 cm, in the centre 80–130 cm, and in the northern part 35–50 cm. The height from floor to ceiling varies between 75 and 95 cm.

Archaeological investigation

Examination of the find spot showed that the discoverer of the tomb had dug down deep into the layer that covered the ground, heaped the excavated earth in the middle of the room and scattered the objects in the cave. In the following the find context is described as it was encountered during this follow-up excavation. South of the cave's centre is a visible hole with a diameter of 35 cm and a depth of 15 cm, which apparently was dug recently. On both sides of the hole in the south-eastern corner of the cave lay a saddle frame upon a pair of stirrups. Next to that was a fragment of one of the two wooden side parts of the saddle as well as a fragment of cloth, which had probably served as cover for the saddle frame. In the south-western corner were two more fragments of the wooden side part, and in the centre on the pile of earth still another similar small fragment. To its left, at the eastern wall, was an iron knife, while at the west wall – apart from the slightly damaged lower corner of one of the two wooden parts – an almost completely preserved saddle which had been propped sideways and upright against the wall (Fig. 3). Behind the saddle were some objects heaped in a pile against the wall. A long wooden object with a peg, ten willow branches and thin worked but broken sticks, which had probably served as reinforcement for the quiver, lay below. On top was the quiver with arrows, whose bottom part had become detached, and the bow that was broken in two. Behind the saddle were several rolled-up fragments of an object made of tree bark, which had probably served as a bow case, and a leather fragment, probably part of the corresponding cover. As mentioned above, these objects lay scattered about and on top of each other, and were visible along the south, east and west wall. While documenting the finds at the west wall, we discov-



Fig. 3. Nükhen Khad, Zhargalant Khairkhan. Artefacts displaced by N. Dandar.

ered a yellow fragment of silk with Chinese characters written in one line (Fig. 15) and also some scattered human bones, namely four ribs and a cervical. From this it can be concluded that the find context had been modified considerably.

As the cave entrance is very narrow and the interior area like a large pipe, a person can only squeeze himself into the cave headfirst and with arms stretched out, but only as far as the thighs. It is not possible to stand up straight inside the cave; one can only sit or crouch in the southern corner and in the entrance area. The northern part can only be reached on the knees or by crawling. If one would stand upright in the entrance area, the upper body would already be outside the cave.

The grave goods, which had lost their original position, lay about without any recognisable arrangement. They thereby limited the working space for investigating and were in danger of being damaged. Since the objects had already been moved from their original position, that is, not *in situ*, they were removed from the cave after the according written and photographic documentation. Having thus gained more space, an archaeologist examined the hole dug in the middle of the floor and the excavated earth. The following finds could be retrieved from this earth: a small, perforated wooden object, three plates from armour, a cruciform piece of wood, an oval iron ornament, the eleven arrowheads that had been hidden in the earth by the discoverer Dandar, and an additional nine newly discovered arrowheads (altogether 20 iron arrowheads), two iron sticks with a head at each end (nails?), altogether ca. 50 silk fragments that might originate from clothing, most of which were yellow and few green, eight cloth fragments, and three fragments of leather that probably derive from the cover of the bow case or the quiver. In addition, bones of the hands, the feet, the left scapula and a rib were discovered.



Fig. 4. Nükhen Khad, Zhargalant Khairkhan. Skeleton and artefacts *in situ*.

In the course of excavation the objects that had been discovered by Dandar were documented. The other items, which were probably broken during the re-positioning of the finds along the west wall, were left untouched, so as to possibly contribute to a reconstruction of the original arrangement. Among these finds were a rolled-up fragment of the main part of the bow case made of tree bark, a leather fragment, which in view of its shape was probably from the cover of this case, and the remains of thin wooden sticks. They were still half buried in the earth mixed with mice excrement.

After the re-positioned objects were removed, the height of the heap of earth was measured. It was 15 cm. Subsequently, the earth layer that represented a floor was excavated. At a depth of 15 cm it turned out that the grave was covered with earth mixed with small stones. And then the cave floor and the burial were revealed.



Fig. 5. Nükhen Khad, Zhargalant Khairkhan. Skeleton and artefacts *in situ*.

In the rock tomb at Zhargalant Khairkhan the deceased had been placed in an extended supine position, so that the head was orientated to the north-east (with an azimuth of 40°), the arms at the side of the body and the legs together (Fig. 4). Except for the bones of the right shoulder, the left forearm and the shin, which were slightly displaced by Dandar, all of the bones were found in their original position. The skull, however, had been detached from the body and lay in the northern corner of the cave, with the face to the east (Fig. 5; 8). As the floor slopes slightly, the skull presumably had rolled into the corner through the action of predators or birds that had entered the cave at times. Some bones of the left arm, the legs and the ribs had been moved as well and lay separately atop the grave.

The following objects were found *in situ* (Fig. 6; 7): the rotten fragment of the wooden saddle (Fig. 6.1) beside the feet and near the east wall, a buckle made of bone next to the outer side

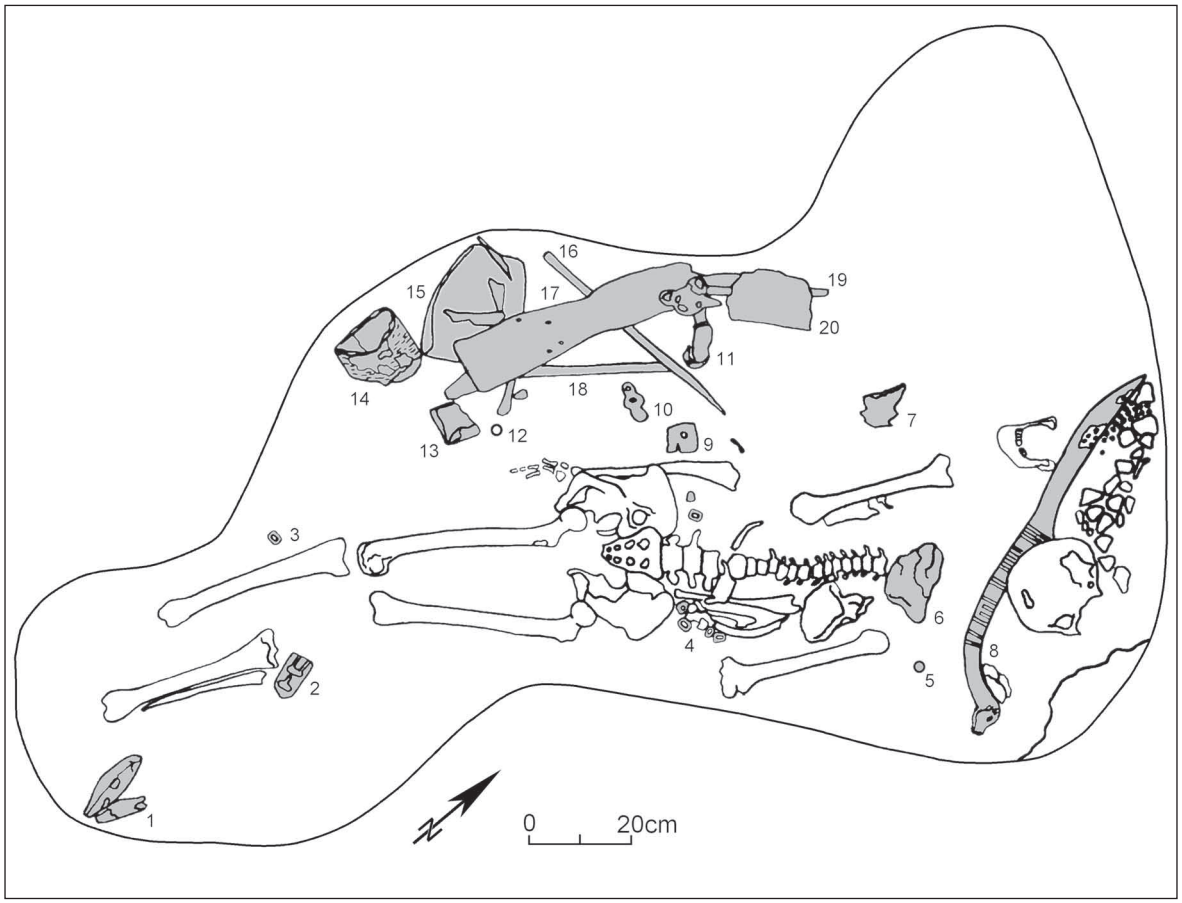


Fig. 6. Nükhen Khad, Zhargalant Khairkhan. Plan of the grave with artefacts *in situ*.



Fig. 7. Nükhen Khad, Zhargalant Khairkhan. Artefacts at the west wall of the grave.



Fig. 8. Nükhen Khad, Zhargalant Khairkhan. The scull and the musical instrument *in situ*.



Fig. 9. Nükhen Khad, Zhargalant Khairkhan. Sound box of the musical instrument.

of the left tibia (Fig. 6.2), a small iron buckle between the right tibia and the wall (Fig. 6.3), a fragment of the right part of the wooden saddle diagonally to the right of the right forearm (Fig. 6.9), a flat bone fitting, an iron object shaped almost like a figure eight (Fig. 6.10), a bronze ring ca. 10 cm west of the right hand (Fig. 6.12), a circular iron object with attached remnants of a leather strap (Fig. 6.11), semicircular and rectangular belt fittings made of iron and bronze on both sides of the backbone (Fig. 6.4), a second bronze ring east of the neck (Fig. 6.5), to the west leather fragments with folds (Fig. 6.6), behind these an oval fragment of leather, and a fragment of yellow silk west of the right shoulder (Fig. 6.7). Behind the head lay a musical instrument made of wood (Fig. 6.8); the upper side lay upwards and the head end pointed to the east (Fig. 8). There was no indication that the instrument had been shifted from its original position. Despite the long time of deposition, it still maintained a very good state of preservation. A Runic inscription was recognisable along the neck and along the edge of

the sound body. In the course of documenting the musical instrument, a carved picture in the style of petroglyph was noted on the entire bottom side of the body, which depicted a person hunting different animals (Fig. 9).

The skull is well preserved and complete[2]. On the left frontal bone are traces of a wound inflicted by a sharp object, which had healed in the course of time. The hole caused by the injury measures 3.6 x 2 cm. There were still remains of the scalp in the area of the calvarium and the forehead. According to the epiphyses of the extremities and abrasion of teeth, the skeleton was estimated to be that of a 20–25-year-old man with a height of 166.7 cm.

The finds from the rock tomb display strong similarities with objects in the tombs of the nomads from the ancient Turkic period. In particular the usual grave goods used in funeral rites of that period, such as oval-shaped stirrups, the wide saddle with round frame, the buckle made of animal bone, the armour plates, the quiver made of tree bark and the arrows, the bow, the bow case made of tree bark, its ornamentation, the iron knife, the rectangular belt fitting and the bronze ring all demonstrate that the inventory dates to the ancient Turkic period. Particularly the Runic inscription and the musical instrument with the carved picture indicate that the finds belong to the sixth to eighth centuries AD.
(Ts. T. / D. B.)

Notes on the Grave Inventory

The belt fittings and the stirrups are of particular significance in the chronological placement on an antiquarian basis. The belt fittings have not yet been restored, but probably they are not decorated. They are rectangular and semi-circular in form with a narrow, rectangular slit on one of the long sides. These forms are characteristic for belts of the Katanda type, which appear from about the middle of the seventh century into the first half of the eighth century AD (Stark 2008, 177 ff.; Kubarev 2005; Pletneva 1981, 122 f.; 128 f.). A very prominent example from Mongolia are the golden fittings in the hoard found at the memorial site of Bilgä Kaghan in Khöshöö Tsaidam (Bayar 2005, 76; 78 no 47; Stark 2008, 203). Bilgä Kaghan died in 735 AD, and since the miniature belt like other objects in the deposit were apparently made specifically for this deposition, the date of death provides a *terminus ad quem* for the belt fittings' time of production. Among the objects belonging to the mutual grave complex of Emperor Gaozong (d. 683 AD) and his wife and later empress Wu Zetian (d. 705 AD) as well as other persons at Qianling, 85 km north-west of today's Xi'an, is a statue with the characteristic Turkic hairdress with plaits, with a kaftan bound by a belt of the Katanda type (Stark 2008, 84, Fig. 11). The statues were erected shortly after the death of Empress Wu Zetian. Golden belts of the Katanda type were found in several burials of members of the Shi family in Guyuan, Ningxia (Luo Feng 2001, 267). These characteristic fittings were discovered in the burials of Shi Shewu (d. 609 AD), Shi Hedan (d. 669 AD) and Shi Daode (d. 678 AD) respectively despite repeated robbery of the graves, thus attesting their existence in the seventh century as well.

2 The anthropological examination was carried out by Mr Ts. Amgalantögs, Institute of Archaeology of the Mongolian Academy of Sciences.



Fig. 10. Nükhen Khad, Zhargalant Khairkhan. Pair of iron stirrups.



Fig. 11. Nükhen Khad, Zhargalant Khairkhan. The musical instrument with horse head and Runic inscription.

Stirrups with a loop and almost oval contour are a frequent appearance in ancient Turkic burials (Fig. 10), for example, in tomb 15 in Kudyrge, which contained a coin that provides a *terminus post quem* of 575 / 577 AD. As stirrups with a web-shaped loop occur frequently in combination with fittings in heraldic style (cp. the cemetery of Kudyrge), it is assumed that they tend to be older than the ones with simple loop. However, both shapes can occur in one and the same tomb (Borovka 1927, Pl. 4; Kenk 1982a, 68 Fig. 24); therefore a more precise dating within the ancient Turkic period can be proposed only with retention.

Four iron plates from armour were found in the grave. The deposition of single armour plates as grave goods is attested in areas of the Central Asian steppe and at the same time in the area of the Avars in the Carpathian Basin (Kubarev 2006, 464; Csállany 1969–1971, 42 et seq.).



Fig. 12. Nükhen Khad, Zhargalant Khairkhan.
Wooden saddle before conservation.

In view of its singularity and the ancient Turkic Runic inscriptions, the musical instrument deserves particular attention (Fig. 11). The neck ends in the figure of a horse's head and can therefore probably be designated as horse-head fiddle or *morin chuur*, the two-string instrument[3], whose strings are made of the hair from a horse's tail and which is so typical in present-day Mongolia. There are only a few horse-head fiddles in the depot of Mongolian Museums that were made before the 19th century (Marsh 2009). Modern horse-head fiddles are made in two parts: a trapezoid sound body, consisting of glued slats, and the attached neck (cp. Ermsheimer 1943, 82 et seq. Pl. 2–3; 7; 8.1; Die Mongolen 1989, 146 et seq. No. 161–163; Tserensodnom 1989; Jisl 1960, Fig. 108–109; Götting 2005, 76). The example from Zhargalant differs through its construction in one single piece and its spoon-like shape[4]. The elongated oval sound body is organically connected with the neck. Thus, it rather resembles the *šanagan chuur* or ladle-fiddle, which is considered to be the predecessor of the horse-head fiddle (Beyer 2005, 956 f.; Marsh 2009, 26). A black ribbon was wrapped around the neck of the instrument. At the place where this wrapping had been chipped off, an ancient Turkic Runic inscription was discovered, for which Peter Zieme presents a first reading for discussion. A second carving, which can probably also be read as a Runic inscription, is incised on the shoulder of the sound body; it has not been deciphered yet. The bottom of the sound body shows the depiction of a stick-figure with a strung reflex bow and a scene with stags, ibexes and dogs, turned

3 On the role of the *morin chuur* in the creation of a Mongolian national identity cp. Marsh 2009.

4 The resonance top and the bridge are worked in one piece from willow, *Salix* sp., the body is made of birch, *Betula* sp. Determined by W. H. Schoch, Langnau a. A., Switzerland.

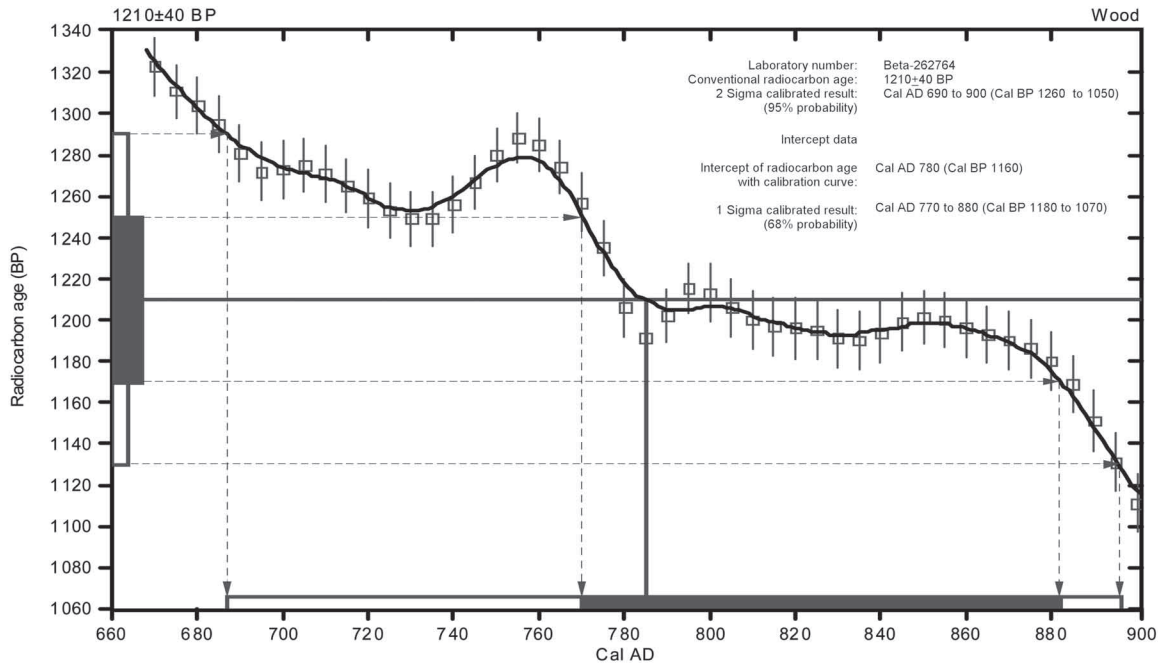


Fig. 13. Nükhen Khad, Zhargalant Khairkhan. Calibration curve with calibrated date for the saddle.

at a 90°-angle to the axis of the archer (Fig. 9). The end of the sound body opposite the bowman is decorated with the stylistically different depiction of a stag with steeply rising antlers, turned at a 180°-angle from the representation of the horned animals. Contrary to the other carvings, this one has almost no patina and, therefore, may have been applied at a different time and by another person.

It is noteworthy that apart from the saddle (Fig. 12) and stirrups, no further horse-gear was deposited as grave good; a sword was absent as well. The burial of a horse along with the deceased is considered as characteristic for ancient Turkic burials. Possibly, this was abandoned for reasons of space in the case of the interred person in Zhargalant.

During prepress of this volume we achieved a first AMS-radiocarbon date of the wooden saddle (Fig. 13). Further radiocarbon datings are projected.
(J. B./Ts. T.)

A first Attempt at Reading the Runic Inscription on the newly excavated *morin chuur*

The inscription of twelve Runic characters on the surface of the wooden neck of the *morin chuur* arouses great interest. The letters were incised in the wood and later covered by dark brown stripes, so that they were hidden from the eyes of the user or player. Why make the inscription invisible? I cannot give a definite answer, but one may suppose that the master who produced the *morin chuur* wanted to inscribe some personal message, either his name or something else, not a message to a wider audience.

Considering the archaeological evidence for dating the instrument to the eighth century, it is no surprise if we view the script as an example of the Runic characters used in the great stelae inscriptions of the Second Turkic Empire during the first half of the 8th century.

Sometimes it is difficult to decipher the letters, because "natural" strokes or stripes in the wood can be observed on the whole surface and they look rather similar to the artificially incised forms of the letters.

In the following three lines I give a sequential number to each character from 1 to 12, a reproduction of the Runic characters and in the 3rd line their values in transliteration (Fig. 14). As the Runic script distinguishes for a number of phonemes between a velar and a palatal variant, V. Thomsen, the decipherer of this script, introduced the index numbers 1 and 2 to indicate the velar vs. palatal forms. I follow this system here. Other characters are "neutral". The fifth letter is transliterated as Ö; it can represent either *ö* or *ü*.

Table of letters and their values

1	2	3	4	5	6	7	8	9	10	11	12
ᛩ	ᛚ	ᛋ	ᛦ	ᛮ	ᛘ	ᛊ	ᛜ	ᚺ	ᚷ	ᛯ	ᛋ
y^2	p	z	č	Ö	r^2	A	nt	t^2	d^2	m	z



Fig. 14. Nükhen Khad, Zhargalant Khairkhan. Runic inscription on the neck of the musical instrument.

Interpretation

The most difficult task is the interpretation of these few characters. What I present here can only be regarded as a very first attempt. On the assumption that not only the script is the Turkic Runic script, but also the language is Turkic, here I shall try to provide some hints at a possible understanding.

In principle, it is almost impossible to give a definite reading of a short inscription like this one. Moreover, the scribes of the larger inscriptions used a special separation marker (:) between words, or rather syntagmas. The fact that this is missing here increases the difficulties. No velar variants occur, but this may be only coincidental. Vowels are often omitted; therefore,

one has to insert them according to proposed readings. Here I indicate such vowels with (.).

A first reading of the short text could be: *y(ä)p(.)z čör ant (ä)td(i)m(i)z*, meaning "*Y(ä)p(.)z* and *čör*" we swore an oath" (lit. we made an oath). I admit that one can immediately raise several objections: The usual expression for "to swear an oath" is *ant ič-* (lit. "to drink an oath"), only seldom *ant (ä)t-* (lit. "to make an oath"). The supposed names *Y(ä)p(.)z* and Čör are not known from other sources etc. On the other hand, the last three letters 10, 11, 12 are clearly d^2, m, z, a sequence which can be read without difficulty as *-d(i)m(i)z* past tense, 1st plural. That is why I also wanted to read two names. One can interpret the sequence 7-8 *a nt* in a different way, too, e. g. as *ant(a)* or "there". If 4-5 č Ö *(čö / čü)* belongs to the preceding group, 6 r^2 could be read as *är* or "man".

I express my thanks to Desmond Durkin-Meisterernst for checking my English. I also hope that other scholars will take a fresh look at the inscription and offer a more reliable interpretation. (P. Z.)



Fig. 15. Nükhen Khad, Zhargalant Khairkhan.
Silk with Chinese inscription.

The Silk Fragment with Chinese Characters

Four Chinese characters are arranged in vertical order on the cloth fragment (Fig. 15). However, it can be assumed that the inscription had originally continued at both frayed ends. As the silk fabric is partly damaged and the ink is already a bit faded, the inscription is very difficult to read. Only the second character can be read with some degree of certainty; today it is pronounced *yi* and generally means "right", "correct" and "appropriate". Chen Ling (Peking University) has read the rest of the inscription in a sense that brings it into agreement with the line of a poem by Han Wei (1017–1098); however, the arguments brought forward in this case are rather weak. Furthermore, it is questionable whether a dating on this basis would be reliable, in the overall context of all finds. But one thing is certain: the characters were drawn by a skilled hand, capable of writing in an elegant style.
(Th. O. H.)

Rock Tombs and ancient Turkic Period Burials in Mongolia

The term "rock tombs" is a designation for single burials in natural cavities in mountains, such as niches, small caves, crevices and the like. This type of burial is archaeologically attested from the 4th / 5th century onwards into the 16th / 17th century.

Due to the consistent dry climate at the height of 1,800 to more than 2,000 m as well as the protected location against wind, sun, snow and rain and the usually difficult access for humans and animals, the preservation conditions, particularly for objects made of wood and textiles, are especially favourable (Erdenebat / Pohl 2005). Like all other rock tombs of earlier times – just over 30 findings of this kind are known in Mongolia so far (Erdenebat / Bayar 2004, 57, 59; Erdenebat / Pohl 2005, 81) – this site of interest here was discovered by a shepherd or hunter and underwent its initial "examination". Examples of this burial type have also been discovered in the neighbouring regions to the north and west: Buriatiia (Khoroshikh 1955, 10), the Yenisei River basin (Khakassia) (Kyzlasov 1986, 100 et seq.) and Gornyi-Altai (Khudiakov et al. 1996). A conclusive diachronic study of this type of burial type is still lacking.

In Mongolia, research on the Old Turkic Period has been hitherto focused mainly on memorial monuments, inscriptions on stones and stone statues. Residues recovered in Mongolia do not allow an independent relative and absolute chronological determination of the grave complexes. This can only be achieved by a comparision with the finds of the Russian Altai and the Yenisei Basin.

As of yet, few ancient Turkic period burials are known or have been studied and published in Mongolia (Ser-Odzhav 1970). Cs. Bálint (1989, 245 map VII) listed merely three sites; two decades later Stark could present twice as many sites. Nevertheless, the study of the sources is still in its initial stages compared to the Russian Altai (Kubarev 2005), the upper Yenisei River (Khudiakov 2004) and Tuva (Kenk 1982b).
(J. B.)

The Project "Restoration of Artefacts from Turkic Period Rock Tombs in Mongolia, Khovd aimag"

Within the framework of a research cooperation between the Institute of Archaeology of the Mongolian Academy of Sciences, the Institute of Pre- and Early Historical Archaeology of the Rheinische Friedrich-Wilhelms-Universität Bonn, the LVR-LandesMuseum Bonn, and the Fachhochschule für Technik und Wirtschaft Berlin, Studiengang Konservierung – Restaurierung, Grabungstechnik (study course in conservation – restoration, excavation technology), the inventory of Zhargalant together with other rock tomb inventories from Khovd aimag will be conserved and analysed until the end of 2011. The restoration of textiles from this tomb will be carried out by Sven Spantikow under the supervision of Matthias Knaut. The conservator Regina Klee, who is employed in the project, will be in charge of the conservation of wood, while Holger Becker will restore the metals. A number of laboratories will be involved in conducting archaeometric analyses.

The exceptionally good state of preservation, in particular of the wood artefacts, enables a great variety of detailed observations to be made with regard to the materials used and techniques in production. It will be possible to completely reconstruct the quiver made of birch tree bark with a leather cover and reinforcing strips, which was broken during its recovery. The leather straps and iron spacers for suspending the quiver were also recovered during the archaeological investigations of the tomb (for comparisons see Kubarev 2005, 92 et seq. Fig. 28–29). The arrows show traces of different kinds of painting on the shaft before the nock, probably for easier identification of the different types of arrowheads. The pigments will be analysed as well as the dyes of the textiles. Further foreseen are analyses of the tanning compounds in the leather, metallurgical examinations (for instance, hardness and forging technique of the armour plates and stirrups), analysis of the binders or adhesives used for the construction of composite artefacts (for instance, the reflex bow), the determination of wood species and of the feathers used for the arrows, analysis by computer tomography of artefacts consisting of several pieces (for instance, the fiddle, the reflex bow with birch bast wrapping, the quiver and the saddle) as well as ^{14}C analyses of several objects from the respective grave inventories for absolute age determination. The Mongolian-German research project is financed by the Gerda Henkel Stiftung.
(J. B./Ts. T.)

REFERENCES

Bálint 1989
C. Bálint, Die Archäologie der Steppe. Steppenvölker zwischen Volga und Donau vom 6. bis zum 10. Jahrhundert (Wien, Köln 1989).

Bayar 2005
D. Bayar, Gedenkstätten und Steinskulpturen der Alttürkischen Zeit. In: Dschingis Khan und seine Erben. Das Weltreich der Mongolen (München 2005) 69–80.

Beyer 2005
N. Beyer, Nur Obertongesang und Pferdekopfgeigen? Mongolische Musik. Mitteilungen aus dem Museum für Völkerkunde Hamburg N. F. 36, 2005, 947–965.

Borovka 1927
G. I. Borovka, Arkheologicheskoe obsledovanie srednego techeniia r. Toly. In: Severnaia Mongoliia II. Predvaritel'nye otchety lingvisticheskoi

i arkheologicheskoi ekspeditsii o rabotakh, proizvedennykh v 1925 godu (Leningrad 1927) 43–88.

Csállany 1969–1971
D. Csállany, Avarkori páncélok a Kárpát-medencén, 1. rész (Die Panzer der Awarenzeit im Karpatenbecken, Teil 1). A Nyíregyházi Jósa András Múzeum Évkönyve 12–14, 1969–1971, 7–44.

Die Mongolen 1989
W. Heissig / Cl. C. Müller (ed.), Die Mongolen (Innsbruck 1989).

Erdenebat / Bayar 2004
U. Erdenebat / D. Bayar, Eine mittelalterliche Felshöhlenbestattung aus der südlichen Mongolei. Beiträge zur Allgemeinen und Vergleichenden Archäologie 24, 2004, 45–66.

Erdenebat / Pohl 2005
U. Erdenebat / E. Pohl, Felsspalten- und Höhlenbestattungen in der Mongolei. In: Dschingis Khan und seine Erben. Das Weltreich der Mongolen (München 2005) 81–89.

Ermsheimer 1943
E. Ermsheimer, Preliminary remarks on Mongolian Music and Instruments. In: The Music of the Mongols. I Eastern Mongolia. The Sino-Swedish Expedition, Publication 21. VIII. Ethnography 4 (Stockholm 1943) 69–100.

Götting 2005
D. Götting (ed.), Bilder aus der Ferne. Historische Fotografien des Mongoleiforschers Hermann Consten (Köln 2005).

Jisl 1960
L. Jisl, Mongolei, Kunst und Tradition (Praha 1960).

Kenk 1982a
R. Kenk, Früh- und hochmittelalterliche Gräber von Kudyrgė im Altai. Materialien zur Allgemeinen und Vergleichenden Archäologie 3 (München 1982).

Kenk 1982b
R. Kenk, Frühmittelalterliche Gräber aus West-Tuva. Materialien zur Allgemeinen und Vergleichenden Archäologie 4 (München 1982).

Khoroshikh 1955
P.P. Koroshikh, Po peshcheram Pribaikalia (Irkutsk 1955).

Khudiakov 2004
Iu. S. Khudiakov, Drevnie Tiurki na Enisee (Novosibirsk 2004).

Khudiakov et al. 1996
Iu. S. Khudiakov / V. A. Kocheev / V. M. Monosov, Baltarganskie nakhodki. Gumanitarnye nauki v sibiri. Seriia: Arkheologiia i etnografiia 3 (Novosibirsk 1996) 46–84.

Kubarev 2005
G. V. Kubarev, Kul'tura drevnikh tiurok Altaia (po materialam pogrebal'nikh pamiatnikov) (Novosibirsk 2005).

Kubarev 2006
G. V. Kubarev, Die Schutzwaffen mit figürlichen Lamellen als Indikator der Nomadenmigration in Eurasiens Steppenzone im 6.-8. Jh. In: M. Mode / J. Tubach (eds.), Arms and Armour as Indicators of Cultural Transfer. The Steppes and the Ancient World from Hellenistic Times to the Early Middle Ages. Nomaden und Sesshafte 4 (Wiesbaden 2006) 453–484.

Kyzlasov 1986
I. L. Kyzlasov, Novyi vid pogrebal'nykh pamiatnikov Iuzhnoi Sibiri. Materialy po Arkheologii Gornogo Altaia (Gorno-Altaisk 1986) 100–129.

Luo Feng 2001
Luo Feng, Sogdians in Nothwest China. In: A. L. Juliano / J. A. Lerner (eds.), Monks and Merchants. Silk Road Treasures from Northwest China, Gansu and Ningxia Provinces, fourth-seventh century (New York 2001) 238–269.

Marsh 2009
P. K. Marsh, The horse-head fiddle and the cosmopolitan reimagination of tradition of Mongolia. Current research in ethnomusicology 12 (New York 2009).

Pletneva 1981
S. A. Pletneva (red.), Stepi Evrazii v epokhu srednevekovia (Moskva 1981).

Ser-Odzhav 1970
N. Ser-Odzhav, Drevnie Tiurki (VII–VIII vv.). Arkheologicheskie issledovaniia (Ulaanbaatar 1970).

Stark 2008
S. Stark, Die Alttürkenzeit in Mittel- und Zentralasien. Archäologische und historische Studien. Nomaden und Sesshafte 6 (Wiesbaden 2008).

Törbat et al.
Ts. Törbat / D. Batsükh / T. Batbaiar / N. Baiarkhüü / T. Iderkhangai, Mongol Altaigaas Ilersen Khadny Orshuulguud (ur'dchilsan ür dün). Arkheologiin Sudlal 26, 2008, 274–292.

Tserensodnom 1989
D. Tserensodnom, Über Epen und Epensänger. In: W. Heissig / C.C. Müller (eds.), Die Mongolen. Vol. 2 (Innsbruck, Frankfurt a. M. 1989) 262–265.