
Xiongnu Elite Tomb Complexes in the Mongolian Altai

Results of the Mongol-American Hovd Archaeology Project, 2007

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The Altai mountains have served as an area of intensive traffic and interaction within Central Asia, and the critical passes through these mountains were certainly areas of contention over which varying tribes and polities throughout history and prehistory fought to gain control. Due to the unique nature of this section of Mongolia's western frontier, the Mongol-American Hovd Archaeology Project was established to explore the remains of early polities within this area and work toward an understanding of how they both controlled and exploited the region. While the vast majority of archaeological sites attributed to the Xiongnu empire (3rd century BCE – 2nd century CE) lie within

central Mongolia and the southern Baikal area, remains of cemeteries in the Altai evidence the expansion of this nomadic conquest state into the key peripheral region which gave them access to the oasis states and trade routes of the Silk Roads. Monumental tombs of the Xiongnu elite have been documented numerous times at several sites in the core area of Xiongnu sites throughout Mongolia and South Siberia (Rudenko 1969; Konovalov 1976; Navaan 1999; Mission 2003; Miller et al. 2006; Miniaev and Sakharovskaia 2006, 2007), but the existence of a similar royal cemetery at Tahiltin-hotgor signifies a strong imperial presence within the Altai. In summer of 2007, the Mongol-

American Hovd Archaeology Project began excavations at this site in order to explore imperial monuments at the periphery and further clarify the dynamic character of these elite cemeteries.

Tahiltin-hotgor cemetery is located in Manhan sum of Hovd aimag and was first discovered and documented through trial excavations of two small graves in 1961 (Volkov and Dorjsuren 1963). Further excavations were conducted in 1987-1990 (Navaan 1999) on two mounded ramped tombs, and in September of 2006 the cemetery was mapped in preparation for further excavations. The cemetery stretches

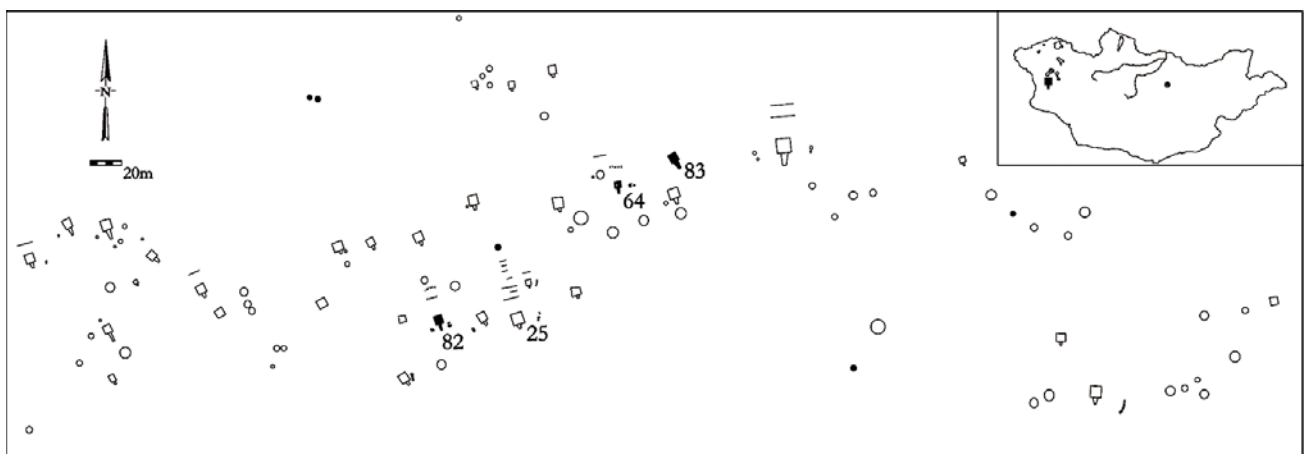


Fig. 1. Tahiltin-hotgor cemetery (excavated tombs noted). Inset map indicates location in western Mongolia. Unless otherwise noted, all images are copyright © 2008 Hovd Archaeology Project.

east to west between two small mountains and sits at the mouth of one of the major mountain passes through the Altai to the Djungar Basin of Xinjiang, northwest China [Fig. 1]. Three tomb complexes were investigated in 2007 with the aim of understanding not only the mounded tombs, which have received most of the attention of previous excavations, but also the accompanying features of the elite interments. We define a *tomb complex* as a collection of features associated with the interment of a single deceased that together are arranged as one group. In the case of the Xiongnu elite tomb complexes, three main features have been thus far documented, all of which are found at Tahiltin-hotgor.

The first feature, and the most prominent, is the *square ramped tomb mound*. This earthen mound is oriented approximately north-south and is held together by stone walls. A ramp or “funerary path” (Mission 2003) leading up to the top of the mound extends out from the southern wall. The tomb mounds often have stone lines that run north-south and east-west across the surface, the most recurring instance being a north-south line running through the center of the ramp and the mound. Beneath these tomb mounds and under numerous layers of stone, earth, and/or wood, lies a burial chamber with a decorated wooden coffin inside. As mentioned before, these monumental tombs have received great attention thus far, but recent studies have begun to draw attention to the features surrounding the main tomb and the details of the pit and mound above the chamber the chamber. Small graves adjacent to the

larger tombs have been excavated at several of the elite cemeteries in Mongolia and Buriatia, and recent studies have begun to address them directly as a particular phenomenon (Miniaev and Sakharovskaia 2002; Miller et al. 2006). These *satellite burials* average about three per tomb complex and are usually arranged in a north-south line to the east, west, or both sides of the main tomb. A few instances of significantly large lines of accompanying burials exist at Gol Mod 2 cemetery in Arhangai (Miller et al. 2006) and confirm the arch-shape of these arrangements of burials which flank the tomb mounds. The satellite burials bear surface demarcations of stone rings, and the deceased are interred in wooden coffins between one to two meters beneath. These resemble standard Xiongnu burials (Torbat 2004). The third feature of tomb complexes – *stone lines* – was discovered recently at Gol Mod 2 cemetery (Allard et al. 2002) and subsequently at Tahiltin-hotgor in 2006. Parallel east-west lines of

stone pairs are arranged north of some of the tomb mounds at both cemeteries. These lines were excavated for the first time in 2007 at Tahiltin-hotgor.

Square ramped tombs¹

The two square tombs excavated in 1987-1990 (Navaan 1999) are located in the middle of the cemetery, and each were assigned a number during the 2006 survey. A comparison of the drawings and measurements in the original report with the tomb remains visible now at the cemetery showed great inaccuracies, but the general descriptions appear more or less correct. The first tomb (THL-83) was completely excavated to expose the entire grave pit and the area beneath the ramp. At the bottom of the pit was a log chamber, inside of which had been placed a wood plank coffin with golden flower decoration [Fig. 2]. The grave furnishings and the remaining grave goods, including a large pot in the log chamber and pieces of a chariot atop the chamber, appear to indicate mortuary tradition similar to that

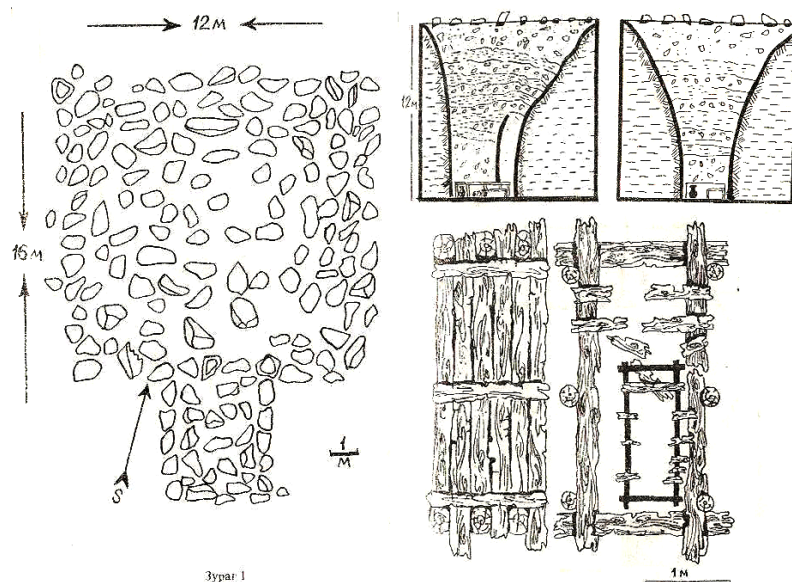


Fig. 2. Tomb 83. After Navaan 1999.

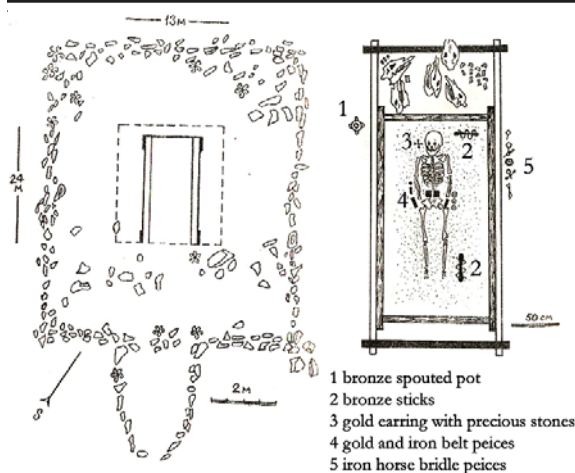


Fig. 3. Tomb 82. After Navaan 1999.

documented in royal Xiongnu tombs of central Mongolia. The second tomb excavated (THL-82) contained an unlooted double nested coffin with the complete remains of a woman, thus earning it the name "the Princess Tomb" [Fig. 3]. The excavations cored a single pit into the center of this tomb to access the chamber; so no excavations were done to reveal the entire structure of this grave. A bronze spouted pot and two bronze sticks² found in the

tomb are now on display at the National Museum in Mongolia, though the jewelry found by her head and on her waist do not reside in locatable collections.

Tomb 64

In order to document properly the structure of the square tombs at this

structure and the "door" closing off the ramp closely resembled those in elite tombs elsewhere. Near the ground level and in the center of the mound, at the exact place where the two lines cross, was found a dense deposit of burnt earth and charcoal. The stones at this intersection do not appear disturbed, and it is likely that this deposit relates to the original interment ceremony and not the occurrence of looting. Unlike most other tombs, the ramp only descends to the first step ledge of

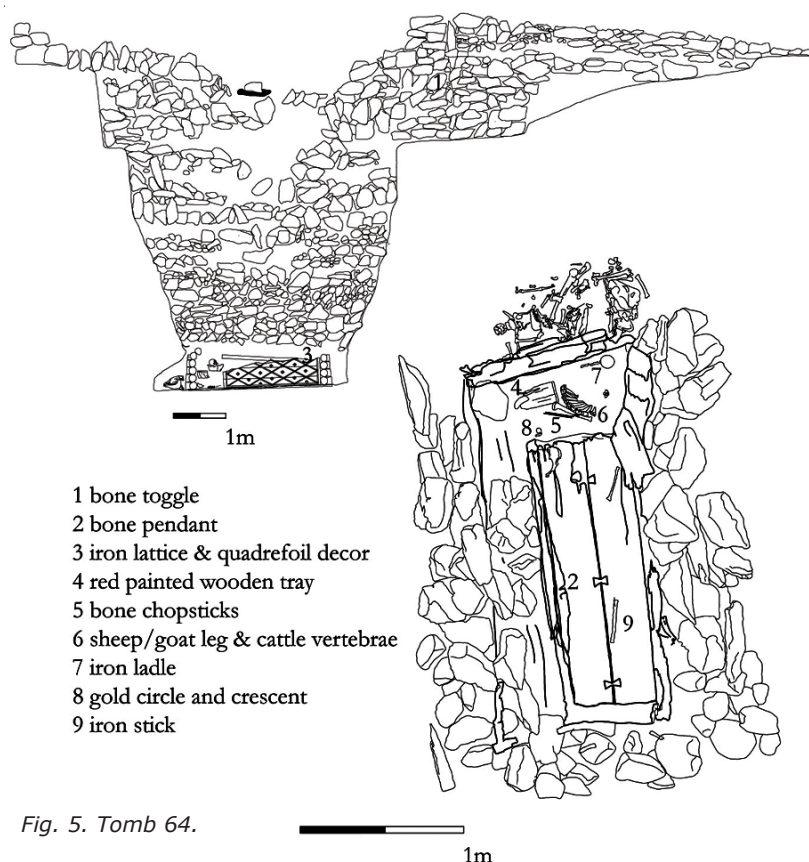


Fig. 5. Tomb 64.



Fig. 4. Tomb 64 complex

particular site and compare them to sites in central Mongolia, we chose one large tomb, THL-64, and its associated features [Figs. 4, 5]. The stone cross lines within the tomb

the pit, 1.6 m below the surface and 4.4 m above the bottom of the chamber. Therefore the ramp likely did not serve as a practical means for rolling the coffin into its final resting place, but rather took on more of a ritually symbolic function related to "funerary paths." The outer chamber at the

bottom was surrounded by stones and built from notched, interlocking logs. Inside the log structure lay a wood plank coffin nested in the southeast corner of the chamber, much like the inner coffin of Tomb 83 which had been nested in the southwest corner. A lattice and flower iron decoration covered the outside of the coffin, and scant remnants of silk confirm that the coffin would have been wrapped entirely before the iron



Fig. 6. Lattice and quadrefoil iron coffin decoration.

decoration was mounted [Fig. 6]. The wood of the coffin was fitted together with bow-tie shaped tenons across the planks and mortise holes with plugs inside the edges of the wood planks [Fig. 7].



Fig. 7. Coffin tenon construction.

A thin gold circle and thin gold crescent were found lying next to each other, and from the impressed marks and small rusted pin holes on both of these, they appear to have been previously mounted on a flat surface – very likely the surface of the coffin lid [Fig. 8] which was tossed aside during looting. This circle and crescent pair echo other such pairs found in numerous Xiongnu graves (Mission 2003; Torbat 2004) and are equated with Xiongnu rituals of the sun and moon. "And the *chanyu* [emperor] at dawn leaves camp and makes obeisance to the sun's beginning, and at dusk makes obeisance to the moon" (Shiji 1959, 110: 2892).



Fig. 8. Gold sun and moon.

ladle, a painted red wooden tray, a pair of chopsticks, cattle vertebrae and a sheep/goat leg bone, and a large handmade grain storage pot [Fig. 9]. Several turquoise tear-shaped insets, five green stone insets carved in the



Fig. 9. Iron ladle and bone chopsticks.



Remains of food containment and serving were placed inside the log chamber just north of the coffin which held the deceased: an iron

shape of scallop shells, and a bone pendant which probably adorned the deceased were found tossed out of the coffin from looting [Fig. 10, facing page]. Lastly, to the north of the log chamber is a semicircular niche cut into the wall



Fig. 10. Turquoise inlay, scallop-shaped green stone, and bone pendant.

of the tomb pit where the skulls, cervical vertebrae and legs of one horse and three horned-sheep/goats were deposited. Two sheep ribs were found above the log chamber, one of which has a deep cut mark from the process of eating the meat on it.

While only the skull, half a pelvis and several other bones of the deceased were found from this looted tomb, this represents a greater yield than most royal Xiongnu tombs and thus allows us to gain more knowledge about the tomb occupant than usual. The deceased was a woman 35-40 years old and has evidence on the pelvis bone indicating she gave birth at least once. The low tooth wear for her age probably related to access to better processed food, and the gracile marks of muscle attachments show that she did not do much manual labor. Nevertheless, wear on the lower spine may indicate continued horseback riding, a pattern found in many of the individuals

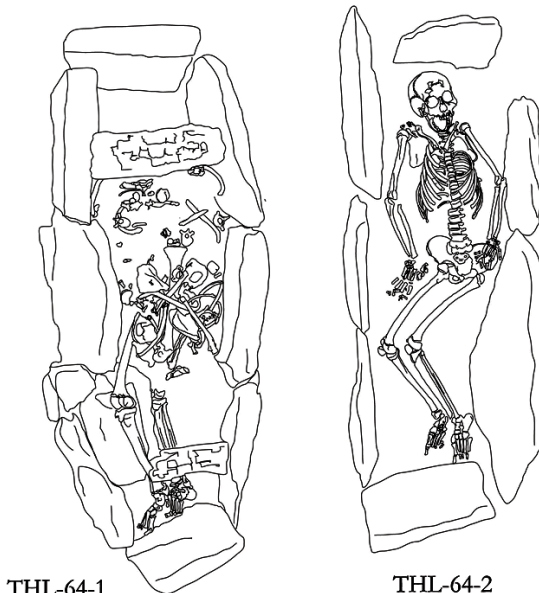


Fig. 11. Satellite graves THL-64-1 & -2.

bent. The lack of wooden coffins and bending at the knees sets these burials apart from the standard Xiongnu burial of fully stretched supine bodies inside a wooden coffin (Torbat 2004).

Satellites of Tomb 64

The two satellite burials excavated to the east of tomb 64 at

excavated here as well as other graves in Mongolia. Though this tomb was looted, enough remains that we may confidently say it is equitable in both structure and burial goods to the larger elite Xiongnu tombs in central Mongolia and southern Siberia.

Satellite burials

Dorjsuren describes each of the two small burials he excavated at Tahiltin-hotgor in 1961 as lying directly to the east of square tombs (Volkov and Dorjsuren 1963). From this we may deduce that they were probably satellite burials. Both graves were marked with some stones on the surface, maximum 3 m diameter scatter, and about 1.3 m below the surface lay stone cysts with human remains. No wooden coffins were found. In both graves the bodies lay stretched with the head oriented north. In one case the torso and head were greatly disturbed and only the legs articulated, but in the other the left arm lay stretched to the side, the right arm apparently bent at the elbow and lying across the chest, and the legs were slightly

Tahiltin-hotgor [Fig. 11] were very similar to those excavated by Dorjsuren, and thus quite different from the standard Xiongnu grave. Both individuals were interred in stone cysts, not wooden coffins, and both were laid with their legs slightly bent. The second noteworthy variance from standard Xiongnu graves is the surface demarcation. Instead of the typical thick stone circle overtop the burial pit, these, and all the other satellite graves excavated in 2007 were marked by a small stone cluster (which at times had been scattered) directly over and approximately the same size as the burial pit. Unlooted satellite burials, such as THL-64-2, have allowed us to view the original clustered position of the surface stone demarcations. Both of the individuals buried next to Tomb 64 were oriented just west of north, as was the main tomb of complex 64. The accompanying deceased were teenagers, and THL-64-2 was possibly a female. If this is true, then it would be the first confirmed discovery of a female in a satellite burial of elite Xiongnu tomb complexes. One of

the main reasons for choosing an entire tomb complex to excavate was to see the relationship between those in the satellite graves and the deceased in the main tomb. In this case, the teenagers are oriented to almost exactly the same degree as the central barrow, and the traits seen in the human remains show them to also be very closely related to other Xiongnu peoples in Mongolia, and thus closely affiliated to the woman in the main tomb who also appears closely affiliated to other remains within the group attributed to the Xiongnu (Lee 2007).

Satellites of Tomb 82

Next we chose the two accompanying graves on either side of tomb 82, previously excavated by Navaan (1999), so that we could finish the full investigation of this tomb complex [Fig. 12]. Again, both of the accompanying graves have the same orientation as the main tomb. Both burials were marked

on the surface with scattered stones, disturbed from their original position, and the deceased were interred about a meter below the surface in small pits with neither wood coffin nor stone cyst. The deceased in burial THL-82-1 was found lying stretched, his body oriented just west of north, with both arms at his side, but face down. This man had robust muscle attachments for his lower arms, hands, thighs, and right foot and is the most muscular individual at Takhiltin-hotgor, meaning he performed more labor than the other individuals. On either side of the body, probably in their original position, were found bone belt clasps with small holes [Fig. 13]. In burial THL-82-2, a small bone pin was found beneath the skull

which had been tossed aside, and thus may have been a hairpin. A sheep/goat astragalus was also found to the left of the waist. This man, like the first, also had robust muscle attachments on the lower arms, lower legs, and right foot. Both of the men buried in these satellite burials were Asian, and the second burial had enough of the skull to show that he was closely affiliated to other Xiongnu. The woman buried in the



Fig. 13. Bone belt pieces from THL-82-1.

main tomb (THL-82) excavated by Navaan in 1990 also shows a close biological affinity to the Xiongnu group. Again, the individuals in the satellite burials are closely affiliated to the main individual, and all of them related to the Xiongnu biological group (Lee 2007).

Satellites of Tomb 25

Lastly, we opened the three burials flanking the east side of tomb THL-25, even though the main tomb was not excavated, in order further to understand the nature of accompanying burials in this peripheral royal cemetery [Fig. 14, facing page]. None of these burials showed any significant evidence of disturbance of the surface demarcation, and all three had tight clusters of stones only slightly larger than the grave pit. The burials were arranged more or less in a north-south arc line, though the third grave (THL-25-3), when the exact positions of the burial pits and bodies were viewed, did not appear to be in line with the previous two graves. Burial THL-25-1 contained the body of a child about 8 years old

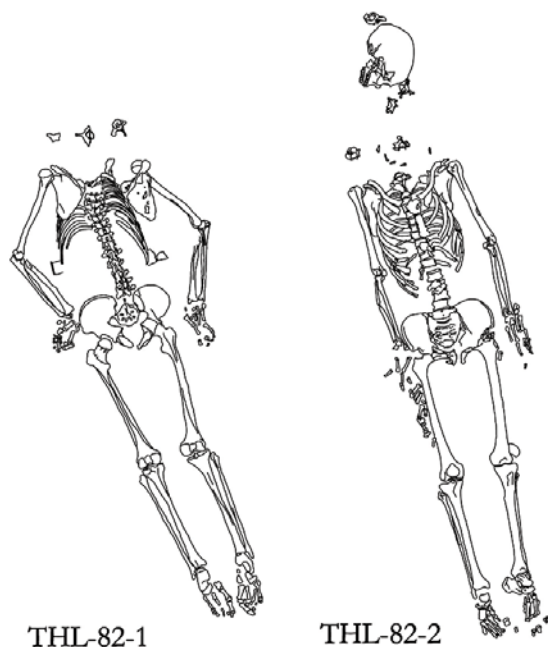


Fig. 12. Satellite graves THL-82-1 & -2.

oriented slightly east of north and laid supine and stretched, with only the legs slightly bent. The deceased in burial THL-25-2 was in a stretched supine position, and oriented almost exactly north. He was 30-35 years old, and had robust muscular attachments. The condition of his teeth is consistent with a nomadic diet high in meat, and low in carbohydrates. Additional detail about THL-25-2 is in the article below by Jessica Jones and Veronica Joseph. While

the surface stones of burial THL-25-3 appeared not to be disturbed, many of the deceased's bones, including the skull cap, were found amongst the stones in the pit. The rest of the bones were laid at the bottom of the pit, articulated in a stretched supine position. The man in this grave was 40-45 years old. A few iron platelets were found with small holes in the corners which may relate to their use as armor pieces. The child can be determined as Asian and related to the Xiongnu, while the two adult men, also Asian, appear more closely related to individuals in Manchuria or Siberia.

The recurrence of robust muscle attachments on the men interred in the satellite burials seems to indicate intense labor. These muscle markers may also relate to certain kinds of damage and arthritis that recurs in almost all the individuals. The patterns of trauma, especially the severe trauma seen in THL-64-1, come

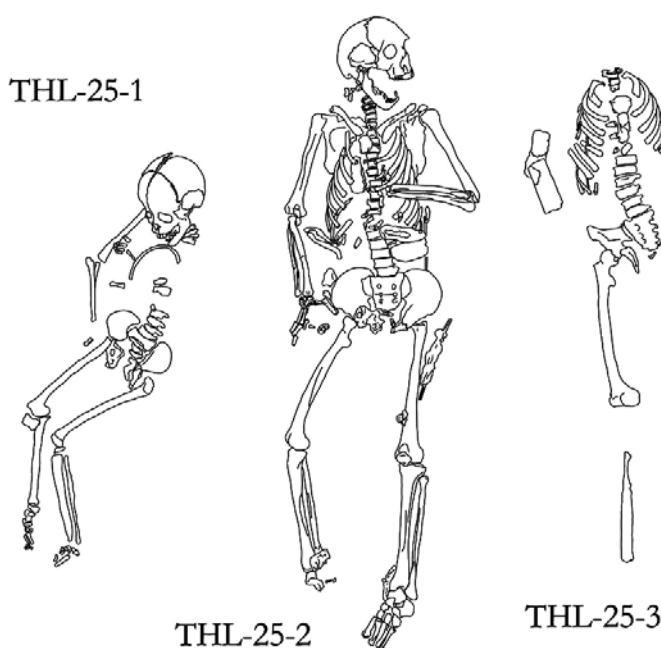


Fig. 14. Satellite graves THL-25-1, -2, -3.

from extreme impact and most likely relate to injuries incurred from falling off or being thrown from a horse. The arthritic pattern in these individuals also speaks to repeated horseback riding. The combined pattern of arthritis, musculature, and trauma seen in the individuals here is consistent with prolonged horseback riding.

Stone lines

One or two stone lines were found to the north of eight square tombs, the exception being seven parallel lines north of Tomb 25. The lines are at least fifteen meters away from the tomb mounds and only a few meters apart from each other. They are often oriented slightly off of an east-west axis so that they are parallel to the north wall of the tomb mound, which in most cases is oriented west of north. The line of stone pairs north of tomb 64 is aligned so that the axis of the stone line which cuts north-south through the center of the square mound and southern ramp then runs directly through the middle

of the northern line, directly between the center two pairs. The two stone lines to the north of tomb 82 were also excavated, and the ramp of tomb 82 was cleared so as to test the relationship between the stone lines and the axis of the central tomb. The central north-south axis of tomb 82, measured according to the center of the tomb ramp, also runs directly through the middle of the two parallel stone lines to the north. In both cases, the stone lines were clearly aligned in

sync with the greater mortuary complexes. The results of excavation between the stone pairs have begun to shed light on their function and use patterns.

The stone pairs in each line lie approximately two meters apart, though their original position seems to have been altered in some cases, probably due to stones falling or being knocked over. Between some of the stone pairs, and at times beneath fallen stones, lie deposits of burnt, crushed animal bone. The bone fragments are high fired, resulting in completely black or white bones with a thin blue/black layer inside. There is also black ash and/or charcoal deposited with the burnt bones, but there is no evidence of burnt earth between the stones, or burning against the closely set stones. In some cases the burnt bones are found with no ash at all. This suggests that the activity of burning the animal bones was not done between the stones. The burning was probably done in a different place, after which the

offerings were put between the stones. The two easternmost stone pairs of the line in complex 64 contain such deposits, but none of the other four pairs do. In the tomb 82 complex, the first, southernmost line contains burnt animal bones between or beneath every pair of stones, while only two pairs of stones in the second line contain such deposits. As the stone pairs seem to “fill up” in order from nearest stone line outward, this may indicate a pattern of use over time rather than only at the time of interment of the deceased in the main grave.

This custom of burning animal bones in a place outside of the final deposition area and then setting the remains between stones, finds an exact parallel in Bronze Age *khirigsuur* complexes (Allard and Erdenebaatar 2005, pp. 3-5) and sheds light on the rituals of the Xiongnu which may connect with such earlier practices. In these Bronze Age complexes deposits of high-fired crushed animal bones were placed along with the ash from the fires inside small rings of single stones. These stone rings were aligned in concentric rows around an array of stone mounds containing horse heads, which were arranged in rows around a stone fence that enclosed a large central stone mound. Just like the separation between central mound, horse head mounds and stone circles of the *khirigsuurs*, there is separation in the Xiongnu elite tomb complexes between animals placed above the chamber, to the north of the coffin and inside the chamber, and the burnt animal remains in the exterior stone lines.

Brief discussion

The arrangement and components of tomb complexes at Tahiltin-

hotgor, as well as the contents of the main tombs, closely resemble elite Xiongnu cemeteries found elsewhere. The elite graves here are undoubtedly associated with the elite imperial culture of the Xiongnu polity and thus may be considered within the limits of the empire. Analysis of human remains in these graves seems to corroborate this association to the Xiongnu nomadic polity. The presence of Xiongnu peoples in these elite tomb complexes correlates easily to the spread of the Xiongnu state into this western frontier seen also in the material culture. The possible presence of people from Manchuria, seen in THL-25-2 and -3, suggests a great degree of mobility of different people within the empire and wide connections across the varied regions under Xiongnu control. Despite the consistencies in mortuary remains for the elite, evidence arises in the satellite burials of differentiation from standard Xiongnu customs. Interments in stone cysts such as THL-64-1 and THL-64-2 are seldom found in other Xiongnu cemeteries, and the flexed legs of these two graves and THL-25-1 deviate from the prevailing custom of fully stretched supine burials in Xiongnu graves (Torbart 2004). The most significant difference is the surface demarcations. The small tight cluster of stones over the grave pit differs greatly from the tradition of stone rings. It is not clear what these variations indicate, but it may relate to either local variations of the Altai or perhaps a social group not yet delineated within the greater corpus of Xiongnu remains.

Further excavations of Xiongnu graves outside this monumental elite cemetery will be conducted in the upcoming 2008 field season.

By investigating burial grounds in the open valleys and in the high mountain passes we aim further to contextualize the burial ground at Tahiltin-hotgor of the imperial Xiongnu elite in the peripheral region of the Altai mountains.

Acknowledgements

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Notes

1. A detailed description of a square tomb and its components is given in Miniaev and Sakharovskaia 2006, 2007.
2. A comparison of these bronze sticks with others found in Xiongnu royal tombs exhibits intriguing similarities, though their exact function is still under debate (André and Yeruul-Erdene 2004).



Carved stone erected after our excavations marking the completion of the reconstructed Tomb 64.

Excavation of a Xiongnu Satellite Burial

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During the 2007 field season, the Hovd Archaeology Project excavated several burials at the Tahiltin-hotgor cemetery in Hovd aimag, Mongolia, at the foot of the Altai Mountains. A full report of the Tahiltin-hotgor excavation is included in this issue of *The Silk Road* (Miller et al. 2008).¹

An earlier survey of the site in September 2006 indicated that there are 132 graves which make up the many complexes in this cemetery (Miller 2006). The number of satellite burials ranges from one to five per burial complex at Tahiltin-hotgor. The purpose of this report is to describe the excavation of one of these satellite burials and the artifacts found within it. Burial THL-25-2 is one of the three satellite burials associated with the unexcavated tomb complex THL-25 [Fig. 1]. The three satellite burials, of which THL-25-2 was the middle one, were oriented in a generally north-south line to the east of the large, square-ramped tomb mound. We have chosen to report on burial THL-25-2 because the skeletal remains were com-

pletely undisturbed and well preserved and thus the artifacts could be viewed in their original context.

Grave excavation

After the vegetation, consisting of scrubby desert bushes, surrounding the cluster of stones was removed, the loose sandy sediment surrounding the stones was cleared to define the extent of the feature. When the surface was completely visible, a rectangular grid was created around the stone cluster using string and iron pegs. This grid was tied to a reference datum point at the large square tomb (THL-25) in order to allow us to record the location of the burial features in

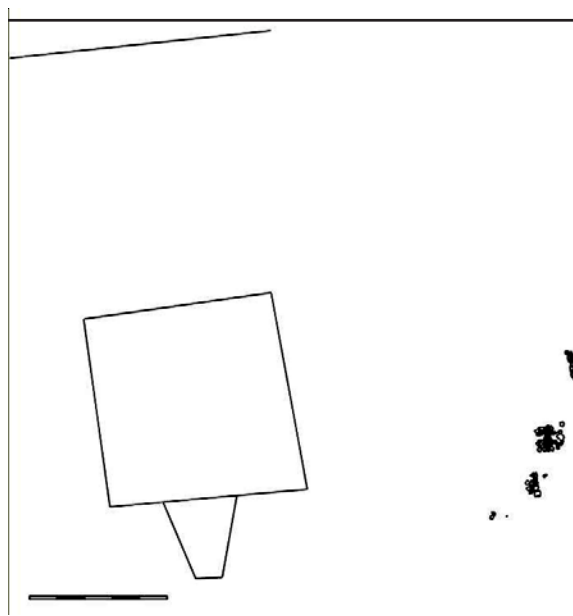


Fig. 1. Drawing of THL-25 grave complex. All images are copyright © 2008 Hovd Archaeology Project.