

The Singim Cemetery in Turfan City

Academia Turfanica

Abstract

In 2007 through 2008, Academia Turfanica of Xinjiang excavated 30 burials at the Singim Cemetery. These burials can be classified into three types: rectangular shaft pit burials with ledges, rectangular shaft pit burials without ledges, and rectangular shaft burials with side rooms. Their grave goods consist of wooden wares, pottery wares, metal artifacts, leather and wool goods, silk garments; well-preserved mummified corpses and wheat seeds are also unearthed. The burial types, unearthed grave goods, and ¹⁴C data indicate that these burials date to between 2050 and 2200 BP, which overlapped with the Western Han Dynasty.

Keywords: Prosthesis–history; Singim Cemetery (Turfan City, Xinjiang); Western Han Dynasty

The cemetery and burials

The Singim Cemetery located to the south of Singim Village in the Singim Town is 40km to the east of the Turfan City, Xinjiang. Discovered during an archaeological survey, it was first excavated in 2005 by the Xinjiang Institute of Cultural Relics and Archaeology; the excavation materials of which has not been published to date. In 2007 and 2008, more burials were exposed in the process of road construction; hence the Academia Turfanica investigated and excavated the cemetery. In the beginning the campaign exposed 25 burials (2007TSM1–M20 and M22–M260) and later five burials (2008TSM27–M31). Altogether it uncovered 30 burials and a number of valuable artifacts (Figure 1).

The cemetery is located on the northern foothill of the Flaming Mountains facing the Singim Reservoir. Flanked by a gully to the west and grape-airing houses of villagers to the east, it is cut through by the old route of National Highway line 312. The continuous flooding in history has buried the cemetery under silt of 0.5–0.9m thick leaving no trace on the ground surface and protecting them well. The cemetery is roughly oval in layout, 42m from north to south and 23m from east to west. The burials are orderly aligned at the intervals of 3–8m without any trace of intrusion or superimposition; a few adult burials are accompanied by child burials.

The burials consist of three types, which represent the entire gamut of the varieties of prehistoric burials in the Turfan Basin. Burials of Type A, two in total, are furnished with shaft pits and ledges, which are placed

along the longitudinal sides. Upon the ledges are rested logs or planks, further felts or reed mats, and lastly plant stalks that seal the graves and are secured by lumps of clay (Figure 2). Type B burials, altogether 21, are shaft pits that are likewise covered with the same materials (Figure 3). Type C burials, altogether seven, are comprised of shaft pits and side rooms. The entrances to the side rooms are sealed also with logs, felts or mats, and plant stalks. The openings of the shaft pits of most burials are also sealed in this way, and finally secured by lumps of straw mixed with clay (Figures 4 and 5).

The furniture of the burials is mainly rectangular wooden beds, which comprise a rectangular frame resting upon four legs that are secured with mortise-and-tenon method. Upon the bed are laid with twigs that are bound to the frames with leather tapes. A few beds are further covered with wooden frames of arc-like bed canopies that are bound with leather tapes and covered with felts (Figure 6). The bottoms of most burials are paved only with fine sands and plant stalks.

The burials are mostly single and double burials, the latter of which consists primarily of a male and a female, with a few examples of same-sex occupants. A few human bodies are in disorder, which may have resulted from flooding. There are also a few cases of fragmentary bones that are wrapped within leather clothing. In a number of burials, there are primary burials and secondary burials, which result in double layers of human bones. The human bodies are mostly laid in supine position, with either extended or flexed legs, the latter of which are propped

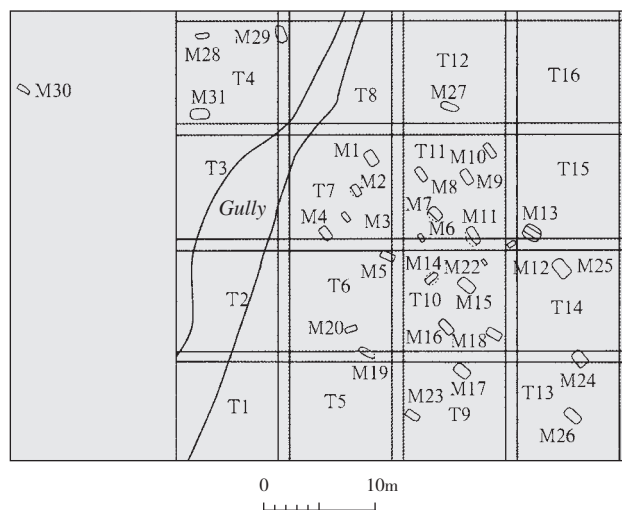


Figure 1 The excavated area and the distribution of the burials in Singim Cemetery.

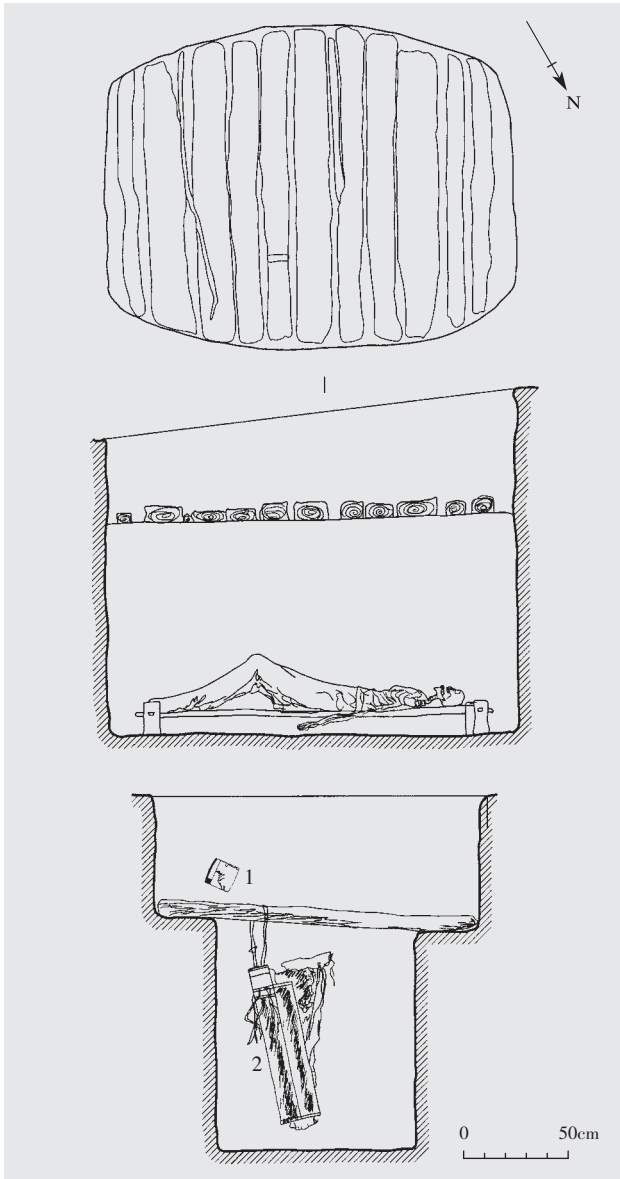


Figure 2 The plan and sections of burial M13.
1. Leather pail (drum); 2. Leather bow case and quivers.



Figure 3 Burial M29 (top is south).



Figure 4 Burial M20 (top is west).

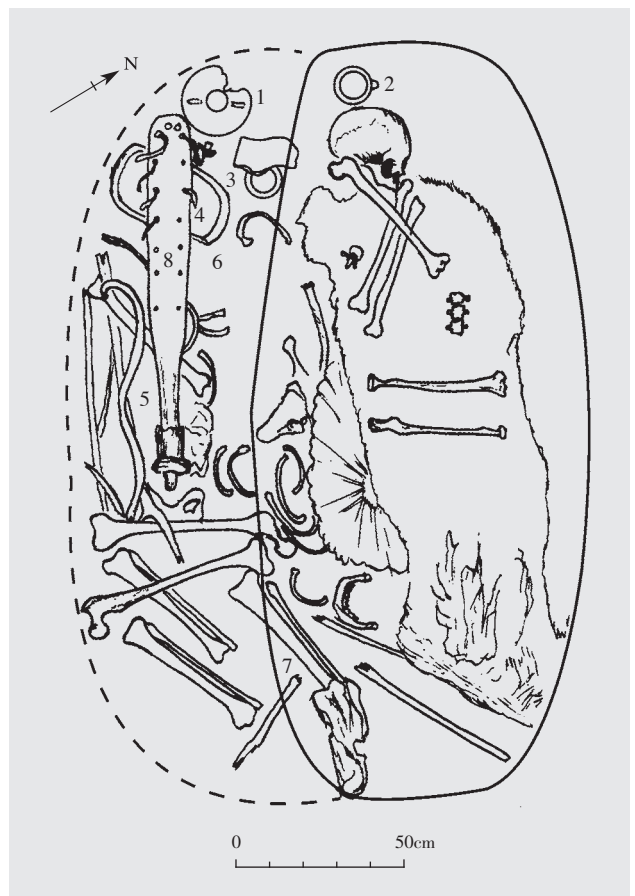


Figure 5 The plan and section of burial M2.
1. Pottery double-eared jar; 2 and 3. Pottery single-handled cups; 4. Wooden plate; 5 and 6. Wooden bows; 7. Wooden stub; 8. Wooden prosthetic leg.

with thick reed stalks or other materials.

The pottery and wooden artifacts are mostly placed at the head side; the long wooden artifacts such as bows and arrows are at the right side of the burial occupants. The other artifacts are placed where they have been during the lifetimes of the occupants.



Figure 6 Burial M9 (top is west).

Grave goods

Pottery wares from the cemetery are mostly plain; only a few are painted. Some are well made, with their surface coated with red slip, burnished, and well modeled. Ware types are comprised of cup, bowl, bottle, basin and double-eared jar. Wooden artifacts are comprised of bowl, cup, basin, *dou*-stemmed bowl, pail, scabbard, hairpin, awl, button, spindle, spinning spool, bow, arrow shaft, sickle handle, crutch, headgear ornament, and a prosthetic leg. The wooden headgear ornaments are formally diversified. That of M13, which is made from thin wooden plates that are glued together, takes the form of rectangular barrel that is hollowed inside. It has double perforations at the bottom for accepting wooden pins that fix the slips inside the barrel. The slips, elongated, have a long rectangular slot for securing the hair and the headgear of the occupant. Such headgear is reserved for adult males (Figure 7:1). Those for adult females occur in two types. The one of the occupant of M32, similar to the one of adult male, is made from an entire piece of ox hide, which is propped up with two tamarisk twigs from bottom to top. The ox hide is rendered into a cone around the twigs; it is placed atop the head of the occupant at the time of discovery. The other type comprises a round barrel made from thin wooden plate at the bottom and two out-bending tails of 40cm long and 3cm around, which are wrapped with lamb hide (Figures 7:2 and 8). Both types of headgear occur multiple times, but with the same form, function and usage.

Metal artifacts included iron knives, iron belt hooks, bronze knives, bronze earrings, gold earrings, and gold foils with reliefs of animals. Leather artifacts comprise of boots, buckles, archer's thumb rings, scabbards, and bow cases and quivers (Figures 9–11). A hide painting from M13, rectangular, has its borders painted with two nested frames in black and the zone between which with a consecutive motif in red and black colors (Figure 12). The female occupants have their faces covered with brocade silk, whereas the male occupants have their hide trousers decorated with cutout motifs. A fragmentary

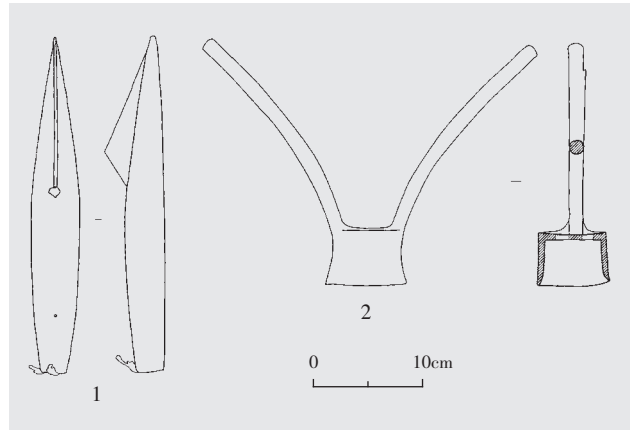


Figure 7 Wooden headgear ornaments unearthed from burial M13.
1. M13:11; 2. M13:13.



Figure 8 Wooden headgear ornament (M13:13).



Figure 9 Leather bow case and quivers (M13:2).



Figure 10 Leather bag (M13:10).



Figure 11 Leather boots (M20:5).



Figure 12 Leather painting (M13:4).



Figure 13 Bronze mirror (M13:9).

bronze mirror is found inserted into a wooden disc with a handle and a leather tape (Figure 13). A wooden pail, which is entirely wrapped with hide and painted black at the bottom, seems to have been a drum. A leather eared cup is wholly painted. A leather belt is inlaid with bits of red silk, and equipped with a rounded rectangular horn buckle.

The sets of bow and arrows are another remarkable discovery of the cemetery. The set from M24 is hanged from the planks upon the grave opening; exquisitely manufactured, it is made from leather tapes and inlaid with tiny ox horn buckles, and can be hung upon the waist belt. The trapezoidal bow case is made of antelope hide; the bow, a compound recurve one, is large and strong, and made with sophisticated workmanship. The quivers, one long and one short, contain arrows, which are easy to pull out.

In the top covering of M7 there is a surprisingly amount of wheat stalks. The layer of the wheat stalks is 10cm thick; some of the stalks bear intact ears, which are

freshly golden in color. Beneath the wheat stalks there is a layer of camel thorns (*Alhagi sparsifolia*) 15-20cm thick sealing the grave opening. The wheat stalks are used to fill the graves; in combination with a stone quern and a wooden sickle, it attests to the large-scale cultivation of wheat in the Turfan Basin and represents the transition from pastoralism to agriculture of the Singim population.

A prosthetic leg, in the shape of peddler, is found in M2 (Figure 5). At first sight its function was unknown. But the excavators soon came to find that the left leg of the male occupant is deformed, with the patella, femur, and tibia are fused together and fixed at 80°, and realized that it is a prosthetic leg. Made of poplar wood, it has seven holes along the two sides with leather tapes for attaching it to the deformed leg. The severe wear of the top implies that it has been in use for a long time. The lower part of the prosthetic leg is rendered into a cylindrical shape, wrapped with a scrapped ox horn and tipped with a horse hoof, which is meant to augment its adhesion and abrasion. As such it is the earliest prosthetic



Figure 14 Wooden prosthetic leg (M2:8).

leg ever known in the world (Figures 14 and 15).

Among the wooden bed canopy frames found at the Singim Cemetery, two are well preserved. They are rectangular frames which are formed out of four wooden bars and perforated with five holes along each of the longitudinal sides. Into the holes are inserted five willow twigs to form five arches, which are fixed crosswise with other four longitudinal twigs in equal intervals to form a lattice and then covered with felt. Because the leather tape and willow twigs were wet when the bed frames were manufactured, they bent after drying. The arched corpse bed canopies as such represent the form of the tent houses, in which the occupants live during their lifetimes. While different from the usual dome-shaped tents, they may have been the origin of coffin. They are the first discovery in the Turfan Basin, Xinjiang, and even Central Asia.

Wooden artifacts constitute a significant part of the grave goods of the cemetery; in some burials they are all of them. The woodworking technology is rather sophisticated; the ancient artisans have mastered burnishing, drilling, sculpting, mortise-and-tenon, and assembling techniques to produce daily utensils, production tools, and hunting weapons (Figures 16-18). It

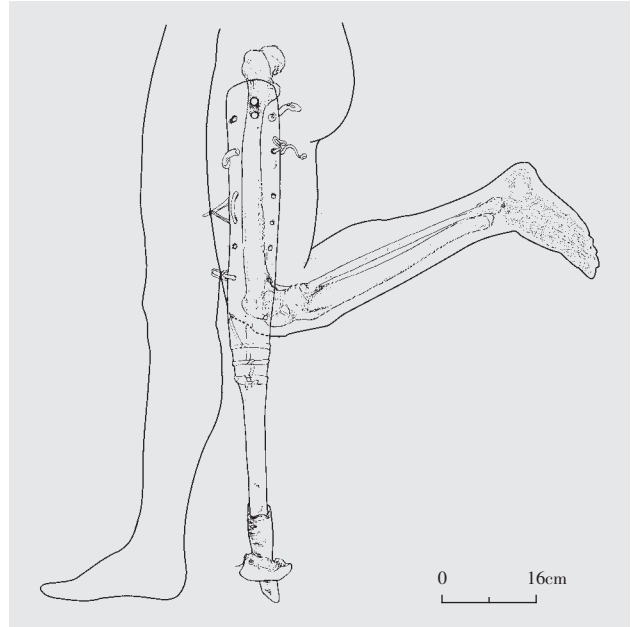


Figure 15 The wearing method of the wooden prosthetic leg (M2:8).



Figure 16 Wooden bowl (M20:1).



Figure 17 Wooden bowl (M20:13).



Figure 18 Wooden box (M29:6).

appears that a good number of artisans are specialized in woodworking and production.

There are a number of types of textiles, including silk and brocade in yellow, green, and blue colors. These are the earliest silk ever found in the Turfan Basin. But because of the dampness of the burials, they are poorly preserved; the original delicate silk has been rotten into fragments.

Conclusions

The burial structure and grave goods indicate that the Singim cemetery is akin to the already known Subeixi (Subeshi) Culture, which has been widely discovered in the Turfan Basin, at the cemeteries of Aydingkol in Turfan City, Khaghqakh and Yengyaylaq in Toksun, Sangeqiao and Yanghai in Shanshan (Piqan) County. They date to as early as the Bronze Age and as late as the Western Han. As recorded in the *Xiyu zhuan* (the Account of the

Western Regions) of the *Hanshu* (Book of Han, by Ban Gu), during the middle of the Western Han, there lived in the Turfan Basin the Gushi population, who constitutes one of the “Thirty-six States of the Western Regions” of the Qin and Han Dynasties. During the reign of Emperor Wu, General Zhao Ponu 赵破奴 conquered the Gushi, and “split between the two kings of Nearer and Further Jushi and six other states north of the (Tianshan) Mountains”. The radiocarbon dates assign the Singim Cemetery to 2050-2200 BP, or equivalent to the Western Han Dynasty. The occupants of the cemetery might have belonged to the Gushi population. Given that the study of the Gushi culture is yet at its nascent stage, the Singim Cemetery provides valuable new materials.

The wooden and leather headgears, well preserved and formally diverse, are found nearby the heads of the occupants. Similar artifacts have been discovered at the cemeteries of Yanghai, Subeixi (Subeshi), Alagou (Alwighul) and Sangeqiao. The discovery of them at Singim is significant for judging the age and sex of the occupants of the other cemeteries.

Woodworking has a long history in the Turfan Basin. At the cemeteries of Yanghai and Subeixi, which are not far away from Singim, the number of wooden artifacts far surpasses that of artifacts made of other materials. The grave goods of the early burials in particular are almost all wooden. The prosthetic leg made of multiple materials, albeit devoid of any technical difficulty in manufacturing at that time, is not only the singular find in the Turfan Basin, but also a rare thing over the world.

Postscript

The original report published in *Kaogu* 考古 (Archaeology) 2013.2:29–55 with 55 illustrations and one table was authored by Yongbing Zhang 张永兵, Xiao Li 李肖, Lanlan Ding 丁兰兰, and Chunchang Li 李春长. This abridged version is revised by Yongbing Zhang and translated into English by Liangren Zhang 张良仁.