

A Brief Report on the Excavation of Burial Pit K0007 at the Mausoleum of the First Emperor of the Qin Dynasty

Shaanxi Provincial Institute of Archaeology
and
The Museum of the Qin First Emperor's Terracotta Warriors and Horses

Key words: the Mausoleum of the First Emperor of the Qing Dynasty burial pit

Burial Pit K0007 is located some 900 m from the north-east corner of the outer wall, east of the animal pit excavated in 1996. The two pits are about 500 m apart (Fig. 1).

From August 2001 to March 2003, a joint archaeo-

logical team from the Shaanxi Provincial Institute of Archaeology and the Museum of the Qin First Emperor's Terracotta Warriors and Horses excavated Burial Pit K0007 in an effort to salvage its remains.

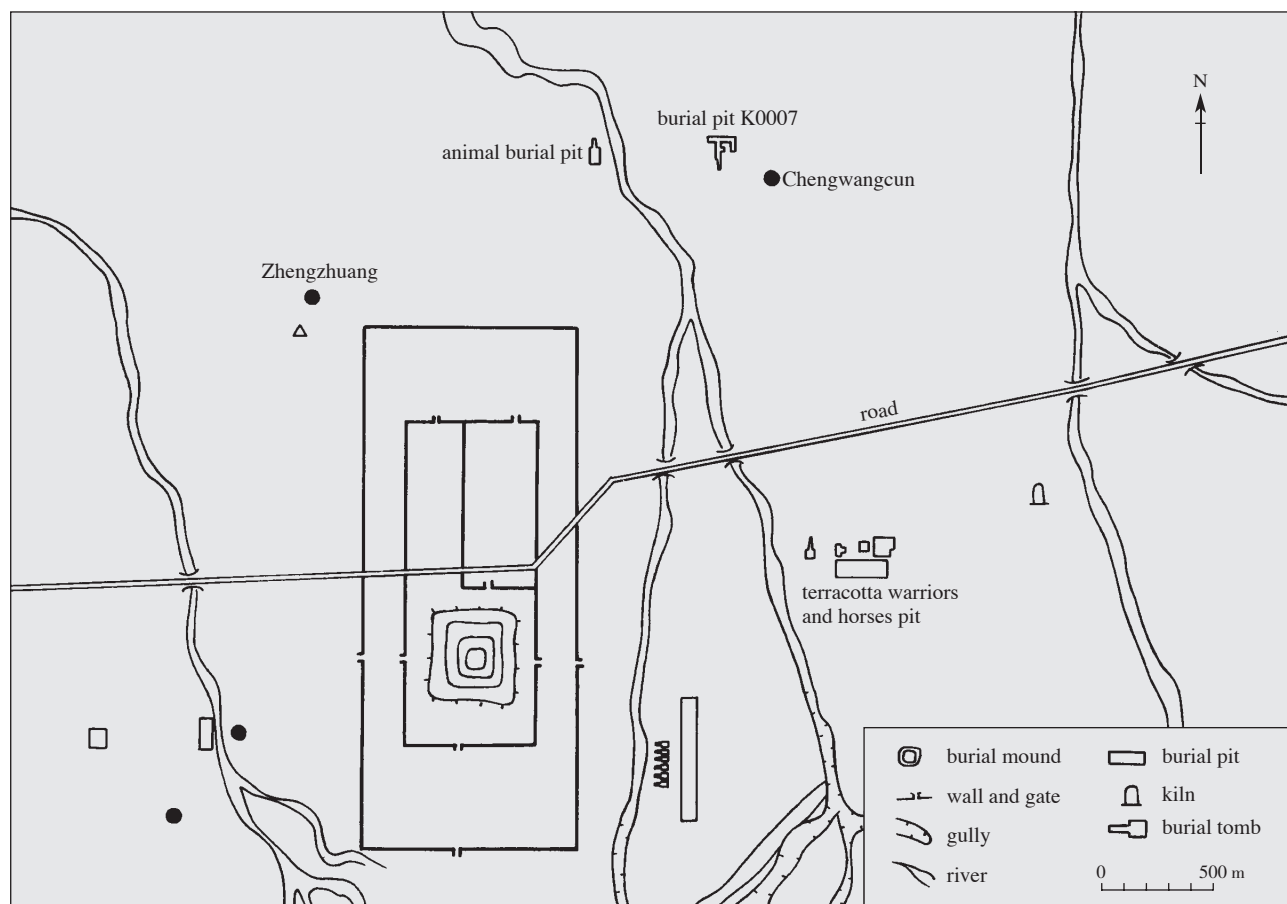


Fig. 1 Location of Burial Pit K0007 at the Mausoleum of the First Emperor of the Qin Dynasty

I. Stratigraphic Deposit and the Shape of the Burial Pit

The original topography is a gentle slope from south to north, and the pit was dug through two levels of natural terraces. The site strata are explained here by a side wall in Area II, where there are seven layers, as follows, from top to bottom: surface soil, disturbed soil, alluvial soil, mixed soil, remains of collapsed earthen structures, charcoal, and finally a layer of rammed earth. The entrance of the pit is through the layer of mixed soil.

The total area of the pit is approximately 978 sq m, with a surface area of approximately 298 sq m. Structurally, the F-shaped pit is divided into three components: Area I, an east-west corridor, links two other corridors. It joins Area III, a north-south corridor, to form the outer right angle of the pit. Area II, the inner north-south corridor, comprises the sloping entrance at the south end, the corridor (the walls of which are inset with niches) and a side room extending from the east wall of the corridor at the southern end (Fig. 2).

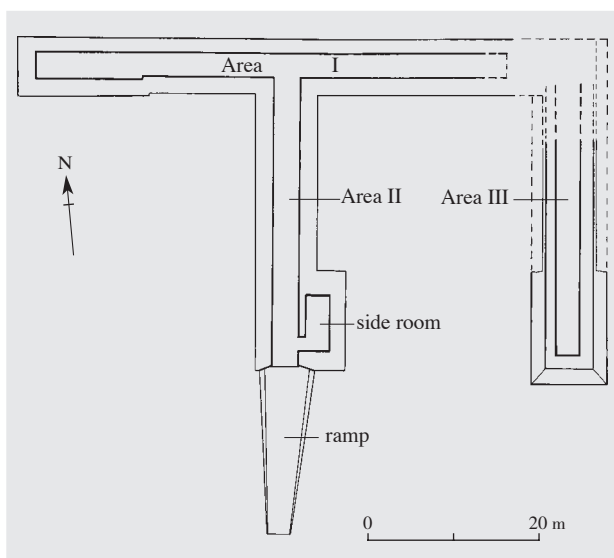


Fig. 2 Plan of Burial Pit K0007

II. Structural Components

K0007 is an underground structure of rammed earth and timber much like the other pits of the mausoleum previously excavated. The three corridors of the pit, however, differ slightly from each other.

1. Area I, the east-west corridor, is located on the north side of the burial pit. It is 60.2 m long, 6–6.4 m wide, and 2.9 m below the present surface. Floods have damaged the east end of the tunnel, so that the area actually excavated is only 38.8 m long with an area of 240.56 sq m.

The tunnel walls were constructed on virgin soil of rammed earth on two levels or steps to form a corridor that is 55.52 m long and 2.36–2.76 m wide (only 36.26 m were excavated). At a point 12.08 m from the west end of the corridor, the two inner walls narrow, thus shrinking the width of the corridor. (Corresponding to this narrower space, the bronze waterfowl found in this area and discussed below were smaller in size than others found elsewhere in the pit.) At a point about 5.76 m from the west end of the corridor, the excavators found an irregular-shaped, disturbed pit about 1.28 m deep and only one-third of a meter from the bronze waterfowl.

The floor of the corridor is partially filled on three sides of the long walls with rammed earth covered with branches of wood. These platforms extend from the base of the walls; each measures 0.68 m deep and 0.12 to 0.22 m high. The channel thus created in the floor space between them suggests a watercourse or river. On the bottom of the channel, the excavators found many footprints, some of them showing the hemp-fiber marks from the soles of shoes. The side walls of both platforms and the channel were covered by a thin layer of mud, 4–6 cm thick (Figs. 3–5).

2. Area II is located in the middle of the burial pit perpendicular to the corridor of Area I. It is 46.6 m long, 2.8–10.6 m wide. Its long, sloping entrance mea-

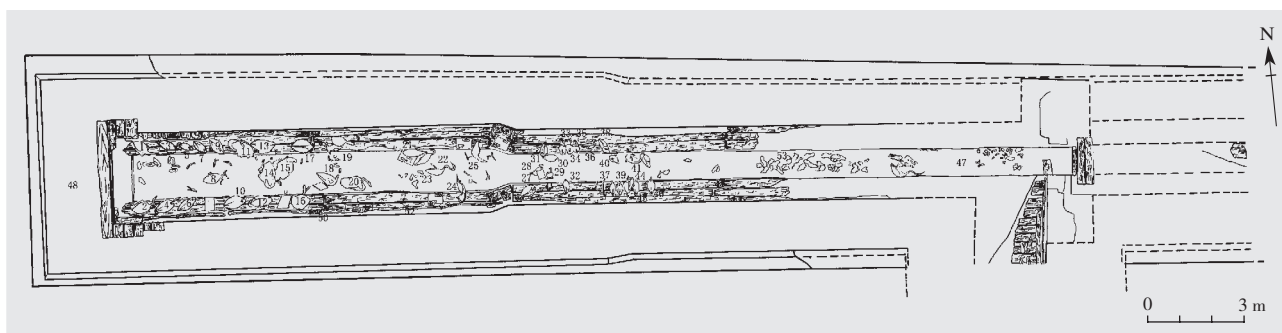


Fig. 3 Distribution of vestiges and artifacts at Area I

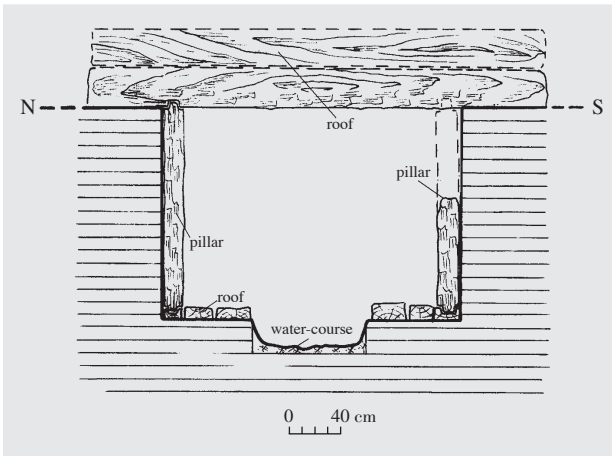


Fig. 4 Sketch of pillars, floor woods and the water-course at Area I

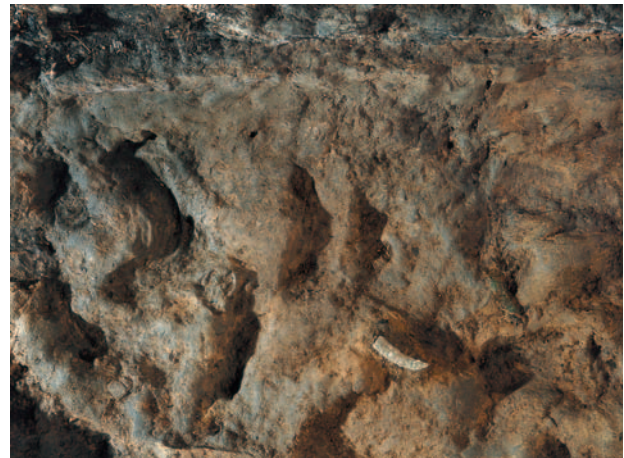


Fig. 5 Foot prints in the water-course at Area I

tures 17.2 m; the straight corridor onto which it opens is 29.4 m long, 7.04 m wide. Two-stepped platforms of rammed earth line the long walls. The space between them is 2.24 m. A robber's hole was found near the bottom of the site where the entrance meets the corridor (Fig. 6).

The side room lies at the south end of the corridor, approximately 0.8 m from the entrance. It is accessed by an opening in the east wall 1.36 m wide and measures 4.72 m wide east-west and 11 m long north-south.

Eleven niches line the long walls of the corridor (see Fig. 6). Approximately 1.52 m from the floor and above the steps the niches are carved out on the two walls at alternating intervals of 2.9 m (*i.e.*, a niche on the west wall faces the east wall and vice-versa). They are 2 to 2.4 m deep, 1.7–1.94 m wide. One niche was destroyed

by flood, and only ten now remain. Four better-preserved niches at the southern end of the corridor measured 0.8 to 1.05 m high.

No remains were found inside the niches. Based on their numbers, their locations, and the restored terracotta figures that were found in broken pieces on the corridor floor, the niches were built to hold the terracotta figures, one in each niche. The figures were removed from the niches and destroyed by human beings.

3. Area III, located at the east end of the burial pit and perpendicular to Area I, is 30.24 m long and 6.4–8 m wide, with an area of 269.48 sq m. Rammed earth platforms or steps were found along the east, west, and south walls. The platforms are 1.68–1.92 m wide with a remaining height of 1.8 m. The corridor between the platforms is 28.48 m long, 2.8 m wide, with an area of

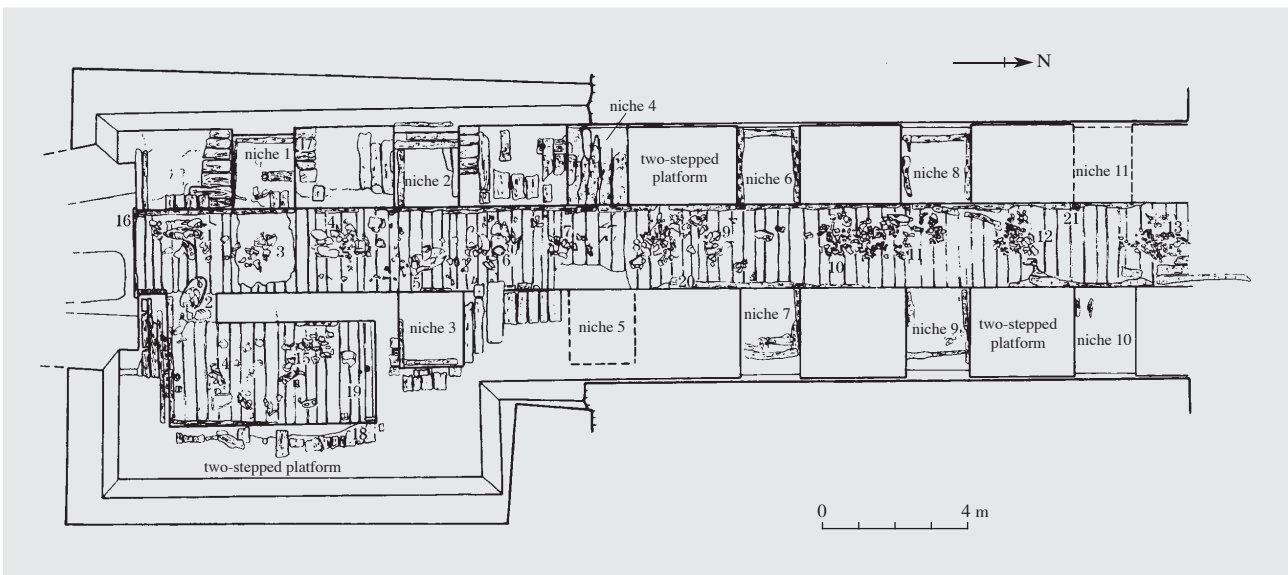


Fig. 6 Distribution of vestiges and artifacts at Area II

79.74 sq m (Fig. 7). The structures of Area III are similar to those of Area I and include the channel or watercourse created by the side constructions of rammed earth platforms covered with branches. The two watercourses link to form a right angle.

On top of the walls in all three areas, where timber roofs were once positioned, the excavators found three types of mats woven in the herringbone pattern. These mats functioned as a second roof for the structure.

4. Remains of timber structures

Timbers were used for floors, floor joists, wall paneling, vertical posts, and roofing, thus making the underground pit a wooden structure (Fig. 8). Inside the better preserved Area I, tongues and grooves were found on various timber parts, indicate that pole and wall panel, the wall panels, pole and roof, and floor joists were all joined by tongue-and-groove construction (Figs. 9–12).

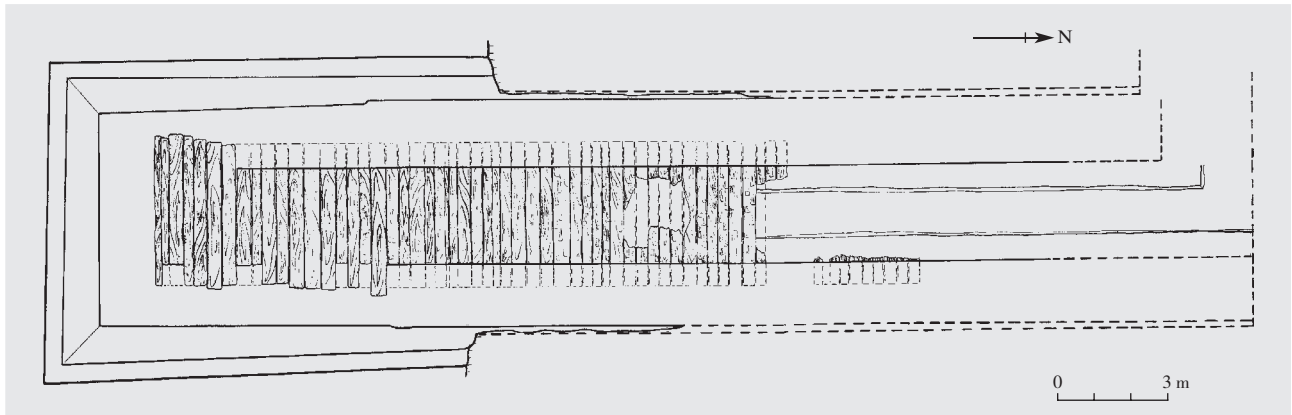


Fig. 7 Plan of Area III



Fig. 8 Timbers used for roofing at Area III

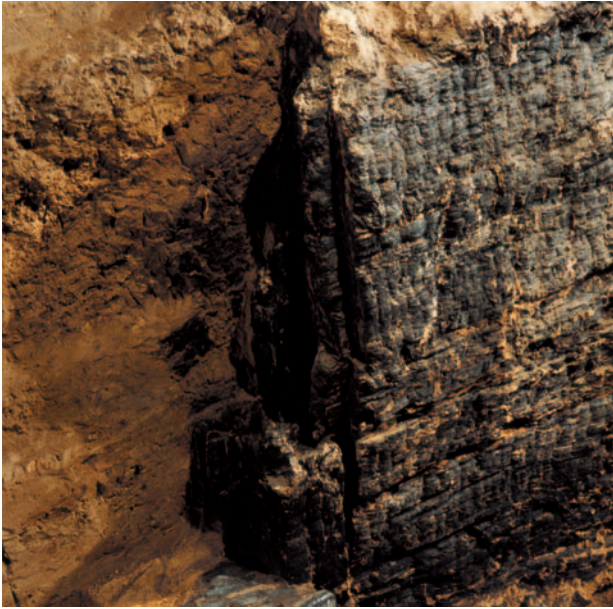


Fig. 9 Timbers used for wall paneling at Area III

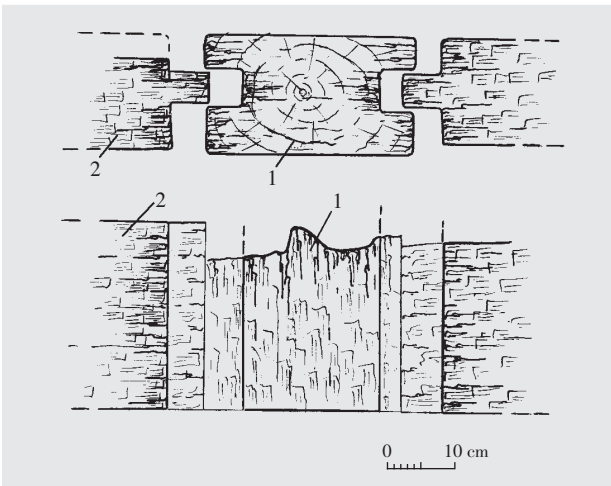


Fig. 10 Structure of vertical posts and timber joists
1. vertical posts 2. wall paneling

III. Artifacts

Different artifacts were found in different areas. Various types of bronze waterfowl were found, for example, on the rammed-earth platform in the western end of Area I, all facing the “river” channel (Fig. 13). Because of earlier flooding, it is not clear what objects were placed at the eastern end of Area I. In Area II a great many broken pieces from the terracotta figures together with small objects of bone, bronze, and silver were found (Fig. 14). In Area III only a single crane’s leg and a few pieces of animal bone survive.

1. Bronze waterfowls

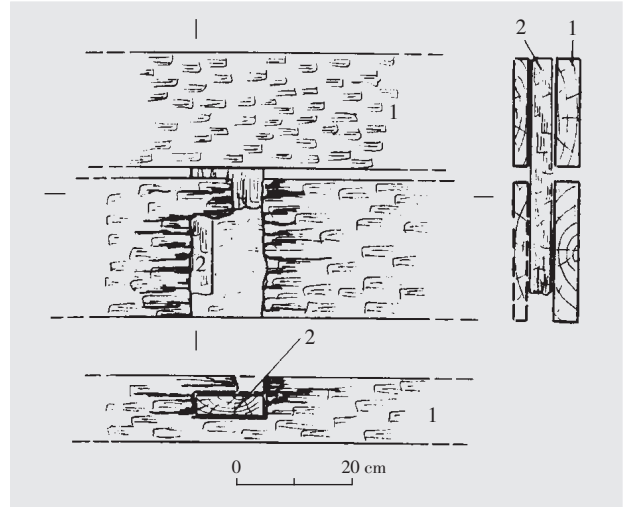


Fig. 11 Connecting structure of the floor timber in the underground passage at Area I
1. floor timber 2. connecting timber

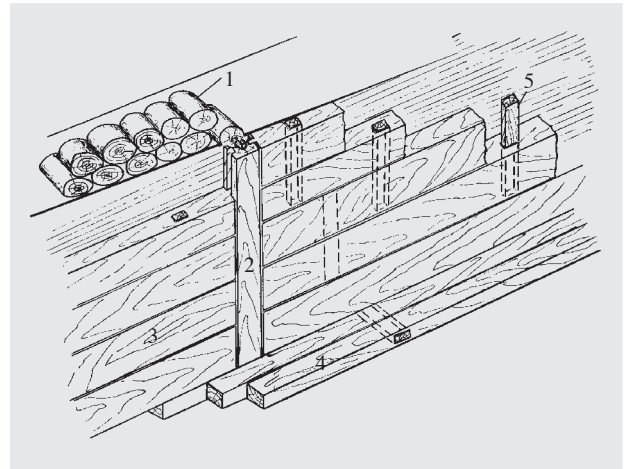


Fig. 12 Sketch of timber joints of roofing, vertical posts, wall paneling, and floor
1. roofing 2. vertical post 3. wall paneling 4. floor 5. connecting timber of wall paneling

The 46 bronze waterfowls found in Area I are of three types: swans, cranes, and wild geese. The cranes are all in standing position, while the swans and geese stand or recline. The standing swans and geese are mounted on a rectangular base, the standing cranes on a rectangular base with coiling perforations.

Swans: among the 20 bronze swans, three are in standing position. One (K0007 I:2) curves its long neck as if looking for food in the water. It is 57.5 cm tall and 90 cm long (Fig. 15:1). One of the 17 reclining swans (K0007 I:4) has an S-curved neck, protruding eyes, and flat beak. It is 39.5 cm tall and 91.5 cm long (Figs. 15: 2; 16).

Cranes: the six cranes are all in standing position. The most vividly depicted is K0007 I:26 with its long down-curving neck, folded and drooping wings, long slender legs, and tall body. The sculpture captures the moment when the bird has just caught a worm in its beak. Traces of white paint remain on the body. The crane is 77.5 cm tall, 126 cm long. Its legs measure 55 cm tall and 1.8 to 2.5 cm in diameter. Its beak is 17.5 cm long. The base is 47.5 cm long, 32.5 cm wide, and 1 cm thick (Fig. 17).

Wild geese: four wild geese are in standing position. One of them (K0007 I:30) has a S-shaped neck and a stout body. It has folded wings, strong legs, and big feet. It is 40 cm tall and 48 cm long (Fig. 18). In addition to these, sixteen geese are reclining. Although their appearances vary, all have curved necks, folded wings, and partially-displayed feet. One of them (K0007 I:39) measures 26 cm tall, 53 cm long. It weighs 19,000 grams.

2. Terracotta figures

The fifteen terracotta images were found in Area II. Two were



Fig. 13 Bronze waterfowl from the underground passage at Area I



Fig. 14 Terra cotta figurines from Area II

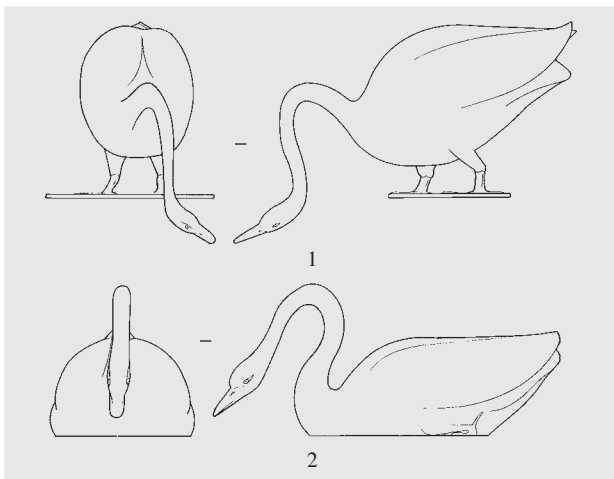


Fig. 15 Bronze swans from the underground passage at Area I
1. stand swan (K0007 I:2) 2. crouch swan (K0007 I:4)
(scale: 1/15)



Fig. 16 Bronze swan from the underground passage at Area I
(K0007 I:4)



Fig. 17 Bronze crane from the underground passage at Area I (K0007 I:26)



Fig. 18 Bronze wild goose from the underground passage at Area I (K0007 I:30)

found in the side chamber; the remainders were found in the corridor. Based on their poses, there are two types.

Seated figures: eight figures are depicted in seated position. Their legs stretch straight in front of their

slightly bent upper torsos; the lower arms rest on the knees. The left hand faces up, the right down. The half-clenched hands suggest they were holding something. The figures wear caps resembling soft fabric; their long robes fold from left to right and are fastened by simulated-leather belts. Trousers are worn under the robe. A replica of a small, rectangular bag hangs under the belt on the right side of the body. The figures wear only foot-socks without shoes. They have moustaches. One of them, K0007 II:2, is 86 cm tall; the width from shoulder to shoulder is 38.5 cm (Figs. 19:1; 20; 21).



Fig. 19 Terracotta figurines from Area II

1. sitting figurine (K0007 II:2) 2. kneeling figurine (K0007 II:14) (scale: 1/20)

Kneeling figures: the seven kneeling figures, their hair-buns wrapped under their caps, are dressed like their seated counterparts. The left arm of one, K0007 II:14, extends down along the side of the body. The hand is open, away from the body. The slightly bent right arm extends forward and up. The half-clenched right hand suggests that the male figure

Chinese Archaeology



Fig. 20 Terracotta seated figurine (K0007 II:2)

once held something in his hand. The figure K0007 II: 14 is 112 cm tall; at the shoulders it is 35 cm wide. Their toes resting on the ground, they wear only foot-socks (Figs. 19:2; 22).

3. Small objects

In Area II, near the Nos. 7 and 9 terracotta figures more than 260 small objects were found. Among them was a silver piece shaped like a fingernail and over two hundred bronze objects shaped like an awl. There were also nine pieces of variously shaped bone objects.



Fig. 21 Part of terracotta seated figurine (K0007 II:2)



Fig. 22 Terracotta kneeling figurine (K0007 II:14) (left: front; right: side)

IV. Conclusion

K0007 is located on the southern bank of an ancient fish pond. Its position, structure, and unearthed artifacts indicate its intimate relationship with the environment.

About 500 m west of the pit, south of Wuxi 吴西 Village, a burial pit of animals was found in 1996. The two burial pits share many similarities: both are located on the southern bank of an ancient fish pond, and waterfowls were found in both burial pits. The major difference is that the birds in K0007 were made of bronze, while those found in the animal pits were birds buried alive. The designers must have had specific ideas in mind when they put the two burial pits near the fish pond, and it is likely that they tried to create a divine environment that included waterfowl of both life and bereavement.

The structure of Burial Pit K0007 is similar to those found in other pits in the Mausoleum. All of them were constructed underground of rammed earth and timber construction to support the pits. The differences among the various pits presumably reside in their differing functions in the afterworld.

The most fundamental problem is to design a space that will serve the functions of the structure. Pit K0007 differs from the other excavated pits in the Mausoleum in several unique ways: the symbolic river channel, the platforms for exhibition of the bronze water birds, the wall panels, the double roofs, and the wall niches all together create a special space that the authors of the report suggest filled an artistic need.

It is difficult to speculate about the precise functions of K0007 based only on the partial remains of the burial pit. Nonetheless, from the remaining structure and artifacts found therein, it is quite clear that the terracotta figures are portrayed as living indoors while all the birds are waterfowl. Thus, humans and birds had different living spaces.

Except for the acrobat figures found elsewhere in the

Mausoleum, all (civilian) terracotta figures in relatively similar postures are dressed much alike. All seated or kneeling figures, for example, wear the same shape of cap simulating soft materials and foot-socks. These details of clothing indicate that they work indoors. If we compare the K0007 figures to similar kneeling figures found in Shangjiao 上焦 Village nearby, the differences emerge in the hand gestures. The figures from Shangjiao either hold their hands in front of them with their hands covered by the sleeves or resting on their knees, and they appear to be much less mature than the newly-excavated figures, which, for example, have wrinkles etched into their foreheads. The kneeling figures of K0007 present gestures less formal than those found in Shangjiao Village, and these previously unseen seated figures do appear to be less formal.

Another observation is that the soft cap seen here is also found on figures from the horse and chariot from the No. 1 pit. However, the hairdos here are different.

Small artifacts found with the figures are either ornaments for other objects or objects originally held by the figures. They may well be musical implements used for hitting drums or plucking stringed instruments.

The authors of the report speculate that the relationship between the terracotta figures and the bronze waterfowl was more than that of mere caretaker. The similar layout of Areas I and III and the display of the waterfowl, in which the birds are assembled by size, suggest that the relationship of the latter with the terracotta figures is one of intimacy and harmony. Perhaps the figures were meant to be the birds' trainers, who may have used music in the training process.

Examination of external traces leads to the conclusion that the burial pit was deliberately destroyed. We believe that K0007 was burned together with many other burial pits in the Mausoleum. The fire occurred at the end of the Qin Dynasty; it is likely that it was set by soldiers from General Xiang Yu's 项羽 army.

Note: The original report, published in *Wenwu* 文物 2005.6: 16–38, with 39 illustrations including 17 photographs, is written by a group Duan Qingbo 段清波, Sun Weigang 孙伟刚, Jiang Wenxiao 蒋文孝, and Shang Aihong 尚爱红. This summary is prepared by Duan Qingbo and Sun Weigang and English-translated by Audrey Spiro and Ye Wa 叶娃.