

The “Black Dragon Gate” site and Architectural Foundation No. 4 of Zuling Mausoleum precinct of the Liao Dynasty

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Abstract

In 2010, the Gate No. 1 and Architectural Foundation No. 4 of the Zuling Mausoleum precinct of the Liao Dynasty in Bairin Left Banner, Inner Mongolia are excavated. The excavation revealed that Gate No. 1 was composed of gateways, precinct walls, ramps, culverts and the lofty gate tower; it would be the “Heilong Men (Black Dragon Gate)” in the historic literature. Architectural Foundation No. 4 is in a roughly square plan and facing east; six column bases are found on each side, which means that the main body of the original architecture was composed of five bays both longitudinally and transversely. The porcelains, bronzes and iron wares unearthed from a pit (K1) to the east of this architectural foundation proved that it was an offering hall. This is the first excavation to the gates of the imperial mausoleums of the Liao Dynasty and has important academic meanings.

Keywords: Architecture–archaeology; royal tombs; Zuling Mausoleum of the Liao Dynasty (Bairin Left Banner, Inner Mongolia)

General introduction

Zuling Mausoleum, which is the graveyard of Yelu Abaoji, the first emperor of the Liao Dynasty, was started to be built in the second year of Tianxian Era (927 CE) and destroyed in the tenth year of Tianqing Era (1120) when the troops of the Jin Dynasty captured the Zuling Mausoleum precinct. The Zuling Mausoleum is located to the northwest of Shifangzi Village, Qagaan Qada Süm (Township), Bairin Left Banner, Inner Mongolia. To its southeast is the site of Zuzhou Prefecture, the attendant town of the Zuling Mausoleum set by the Liao court. Since 2007, to coordinate with the designing of the large site protection plan of Liao Zuling Mausoleum, the Second Inner Mongolian Archaeological Team of the Institute of Archaeology, Chinese Academy of Social Sciences and Inner Mongolian Institute of Cultural Relics and Archaeology have been conducting archaeological excavations to the Zuling Mausoleum site under the powerful support of the State Administration of Cultural Heritage, and published the preliminary report on the results of the excavations to some remains,

such as the Attendant Tomb No. 1 (PM1), Architectural Complex A within the Zuling Mausoleum precinct and the architectural foundation on Guifu Hill to the east of the precinct (Second Inner Mongolian Archaeological Team, IA, CASS 2010). In July through October 2010, the remains of the Heilong Men (Black Dragon Gate) and Architectural Foundation No. 4 were excavated and important discoveries were made.

The Black Dragon Gate (Gate No. 1)

The Zuling Mausoleum precinct is surrounded by mountains, which only have a narrow passage on the southeast side facing the Zuzhou Prefecture. An artificial gate was built on this passage, the remains of which we called as Gate No. 1 at present. It is recorded in *Dili zhi* 地理志 (Treatise on Geography) of *Liao shi* 辽史 (The History of Liao) that “for the mausoleum of Emperor Taizu, a hall was hewn out of the mountain, and named ‘Ming Dian (Hall of Brightness)’. To the south of the hall, on the ridge, there was a Dining Hall preparing for sacrifice offering ceremonies. The gate was named ‘Heilong (Black Dragon)’ [太祖陵凿山为殿, 曰明殿. 殿南岭有膳堂, 以备时祭. 门曰黑龙].”

The mountains flanking the Black Dragon Gate are as steep as walls, the gap between which is about 80m wide and the magnificent mausoleum precinct gate complex was built across it. The Black Dragon Gate consisted of the gateways, gate body, precinct walls, ramps, draining culverts and the high gate tower (Figure 1).

The main body of the Black Dragon Gate is well preserved; it originally had three gateways, and the two sides of the gate body were linked to the rammed-earth precinct walls lined with stone blocks. On the inner (north) side of the wall to the east of the gate body, there was the mounting ramp leading to the top of the wall; on the top of the gate body and the walls, wooden architectures were built. The outer (south) edges of the Black Dragon Gate and the walls on its two sides are almost on the same line, but the north edge of the Black Dragon Gate is indented to the south and makes the inner edge of the general plan of the gate and the walls on its two sides into an 凹-shape, because the thickness of the gate body is smaller than that of the precinct walls: the thickness of the precinct wall to the west of the Black Dragon Gate is 24m but the thickness of the gate body itself is only 18.3m.

Originally, the Black Dragon Gate would have had the east, middle and the west gateways, but so far only the east and middle gateways are preserved. Both of the gateways were built with timber frame technique: on the east and west sides of the gateways, stone ground sills

were laid, over which wooden ground sills were laid again; atop the wooden ground sills, mortises were opened to receive the supporting pillars, and on each side of each gateway, 13 or 14 supporting pillars were erected. This base processing technique used for building gateways is not seen in the Central Plains and considered as the invention of the Liao Dynasty. The "general stone (door leaf stopper)" on the central axis of the gateway and the door bearing stones in the middle of the two sides of the gateway all completely preserved, showing that double-leaf doors have been set in the gateways. The middle part of each gateway is higher than the two ends. On the gateway ground, fragments of the burnt wooden parts, iron door nails and doorknockers with animal mask-shaped bases are found. The east gateway (Gateway 1) is 18.75m long (calculated between the south and north ends of the stone ground sills) and 4.68m wide (calculated between the inner faces of the stone ground sills); the ground in the gateway was paved with bricks but most of them have been lost. To the south of the door bearing stones of the Gateway 1, three rows of narrow stone slabs are preserved; to the north, wheel ruts are found. The highest place of the ground in Gateway 1 is 5.7m lower than the top of the gate body. To the south of the gateway, there is a brick-paved ramp with triangular revetments on two sides. The slope of the ramp is about 17° ; together with the triangular revetments on its two sides, the plan of the entire ramp at the south entrance of Gateway 1 is a hexagon with five slopes. The ramp is 7.5m long from north to south and 4.68m wide from east to west; most of

the ramp was paved with bricks lying on side into upward serrations but some parts were paved with bricks lying on face, and all of the revetments were paved with bricks lying on face (Figure 2). The middle gateway (Gateway 2), which is roughly located in the due middle of the gap between the mountains, is 18.3m long (calculated between the south and north edges of the lining bricks of the gate body), 5m wide in the middle, 5.2m wide at the south end; the width at the north end is not clear because the west part has been damaged by a gully. The ground in Gateway 2 is paved with rectangular bricks with grooves, and lined with stone slabs on the two sides. The ramp to the



Figure 1 The Black Dragon Gate (top is west).

south of Gateway 2 is built in the same style as that to the south of Gateway 1; it is 7.8m long from north to south and 5.14m wide from east to west (Figure 3). The west gateway has been completely destroyed by the modern gully, only the ditch of the draining culvert below which is still preserved. The draining culvert ditch is about 3m wide; because it is waterlogged, its depth is not clear.

The partitions between the gateways of the Black Dragon Gate are built with rammed-earth and lined with stone slabs in the lower part and bricks in the upper part, the spaces between the rammed-earth and lining walls are filled with soil and gravels. The partition between



Figure 2 The eastern gateway of the Black Dragon Gate (S-N).



Figure 3 The detail of the middle gateway of the Black Dragon Gate (N-S).



Figure 4 The architectural remains on the mausoleum precinct wall to the east of Black Dragon Gate (E-W).

Gateways 1 and 2 is better preserved: it is in a rectangular plan, which is 18.3m long from north to south and 13.1m (at the south end) to 14.1m (at the north end) wide, and 7.58m high at the south end, where a stone column base is still preserved in situ, showing the exact height of the gate body and the gate tower ever built above the gateways. The partition to the west of Gateway 2 is badly damaged, the remaining height of which is 4.26m.

The precinct walls on both sides of the Black Dragon Gate are also built of rammed-earth and lined with stone blocks. The base of the wall to the west of the gate is about 24m thick; its top has been damaged and the exact height is no longer known. The north side of the wall to the east of the gate is attached to the mountain cliff; tightly to the north of the east wall of Gateway 1 is the starting point of the ramp mounting the precinct wall; paved with bricks, the ramp is leading to the top of the wall along the mountain cliff. House remains are still preserved on the top of the wall to the east of the Black Dragon Gate, the stone column bases, paving bricks and brick walls of which are found (Figure 4). The column arrangement shows that this was a house with three bays both longitudinally and transversely and the bays had various widths. Remains of wooden ground beams are found along the east wall, which implies that this house might have had wooden floor. To the northeast of this house, an adobe wall 1m in thickness is built to seal the gap between it and the mountain cliff.

The south and north sides of the Black Dragon Gate and the walls to its east and west are all lined with regularly trimmed stone blocks, the highest parts preserved today are as high as more than 2m. The stone column bases and brick and tile fragments found on the tops of the east partition of the gate and the wall show that there have been wooden structured gate tower and other architectures on them, and the burnt debris and large amount of ashes show that these wooden architectures were destroyed by fire.

Architectural Foundation No. 4

Architectural Foundation No. 4 is located to the southeast of Attendant Tomb No. 1 (PM1). It might be the shrine or offering hall of PM1. The west and middle parts of the foundation are the bedrock of the natural mountain ridge, and the southeast and northeast parts are built with stone, rammed-earth and bricks. It is lined with bricks on the north, east and south sides. Facing the east, the plan of the foundation is roughly square, the depth (longitudinal length) from east to west of which is 24.7m and the width from north to south, 23m. On each side, six stone column bases are found (20 in total), and the original architecture was a house with five bays on each façade, the internal floor of which is paved with square bricks (Figure 5).

In the center of the house, there is a rectangular inner room facing the east (F1), which is 7.1m deep (calculated between the center of the column bases) from east to west and 6.6m wide from north to south. The floor in the room paved with square bricks decorated by mat pattern is not level but sloping down from the southeast to the northwest; the difference is about 0.24m. The inner room (F1) is surrounded by brick walls coated with lime stucco, and the entrance is on the east side. Engaged posts (only postholes with stone bases at the bottom left) were found in the walls, four of which are found in the south and north walls

and five are found in the east and west walls, respectively (14 in total). Behind (to the west of) F1 is a small room enclosed by walls (F4). Between the third stone column bases counted from the northwest and southwest corners of the peripheral columns and the north and south walls of F1, there was a partitioning wall in north-south orientation respectively, forming the spaces to the west of these two partitioning walls into two 2-bay deep units (F3 and F5). The rest space in Architectural Foundation No. 4 to the east of these two walls and F1 formed a front hall in a Π-shaped plan (F2). This is a very unique internal plan.

The part of the Architectural Foundation No. 4 not covered by the house is 4.5m wide on the north and east sides and 3.25m wide on the south side. A flight of steps is built in the middle slightly to the south of the east side of the platform; the flight of steps is 8.8m long from west to east and 1.34m wide from north to south, of which three steps are preserved, each of which is about 1.45m long. The east end of the flight of steps is a hexagonal base lined with bricks and filled with brownish-yellow soil, the top of which has been lost. At the two sides of the steps attached to the east edge of the platform, a small rectangular terrace is built respectively. On the edge of the southern terrace, a small pit (K1) is discovered, from which a set of well preserved sacrificial utensils are unearthed, including two porcelains, two bronzes and three iron implements (Figure 6).



Figure 5 The Architectural Foundation No. 4 (top is east).



Figure 6 The artifacts unearthed from K1 in the Architectural Foundation No. 4.

Preliminary conclusion

The excavations to the Black Dragon Gate and Architectural Foundation No. 4 make some breakthroughs in the archaeology of the Liao Dynasty.

The first time of excavation to the gate remains of the imperial mausoleum precinct of the Liao Dynasty has significant academic values. Before this, no gates of the capital cities and imperial mausoleums have been excavated, so this excavation filled up the blank in this aspect.

Second, the completeness of the Black Dragon Gate of the Zuling Mausoleum precinct of the Liao Dynasty is rare in China. In the Central Plains, the gates of the capital cities and imperial mausoleums of the same period usually have only the rammed-earth foundations left; however, the Black Dragon Gate has two well preserved gateways, in which the "general stones" and door bearing stones are preserved in situ, as well as the stone and wooden ground sills and supporting pillars; the gate body and precinct wall with the original height (over 7m) preserved and the stone column bases and original floors atop them all provided valuable primary data for the research and restoration of the wooden structures on them.

Third, the foundation processing method of the gateways of the Black Dragon Gate is very special, which is setting wooden ground sills on stone ground sills and then erecting supporting pillars into the mortises on the top of the wooden ground sills. This method has similarities to that of the gateways of the city gates of the Han and Tang Dynasties (Cf. Fu 1977) but also has differences, and starts the architectural rules of the Liao Dynasty. This discovery provided not only new cases for the imperial mausoleum gates of ancient China

but also important materials for the archaeological researches on the ancient city gates and imperial mausoleum gates and restorations of ancient architectures.

Fourth, the brick-paved ramps with triangular revetments on two sides to the gateways of the Black Dragon Gate are rarely seen; the similar construction has been found in the middle gate of the south wall of Duling Mausoleum precinct of the Han Dynasty (IA, CASS 1993). This method might be related to the *wu-ban chanchi mandao* 五瓣蝉翅慢道 (five-petal cicada wing ramp)" recorded in *Yingzao fashi* 营造法式 (Treatise on architectural methods) and is a rather important archaeological discovery.

Fifth, the well preserved Architectural Foundation No. 4 has a very special internal layout, which provides a rare case for the research on the sacrificial architectures of the Liao Dynasty. The set of sacrificial utensil assemblage unearthed from the K1 to its east provided supplementary evidence for the nature of Architectural Foundation No. 4. We can say that the results of this excavation are important achievements of the archaeology of the Liao Dynasty.

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Postscript

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