

2006 Excavation of a Sacrificial Site in Dapuzishan Mountain Region in Lixian County, Gansu Province

Collaborative Archaeological Team of the Early Qin Culture

Key words: Sacrifices – Archaeological Sites – Lixian (Gansu Province) Bronzes – Chimes (bells) Chime Stones (Musical Instrument)

I. Brief Introduction to the Excavation

Dapuzishan 大堡子山 Site, which is located about 13km to the east of seat of Lixian 礼县 County, Gansu Province and on the north bank of West Han River, is a large-scale site of early Qin Culture including city remains and burials. In 1990s, Gansu Provincial Institute of Cultural Relics and Archaeology excavated two Φ -shaped large tombs and two chariot and horse pits (one of which was not cleared up). To get a deeper and more comprehensive understanding to this site, the Archaeological Team of the Early Qin Culture, whose members were mainly the undergraduate students of Grade 2004 of the School of Archaeology and Museology, Peking University, conducted an excavation to Dapuzishan Site in September through December 2006. The sacrificial site uncovered in this excavation was located about 20m to the southwest of the robbed Tomb No. 2.

The sacrificial site was in Zone A1 of Quadrant IV of Dapuzishan Site. The cultural deposits here could be divided into six strata: the top three strata were modern deposits, the fourth stratum was the loess layer in and after the Tang and Song periods, the fifth stratum was the grayish-black colored deposit of the Han to Tang periods and the sixth, the grayish-black colored deposit of the Qin to Han periods and the War-

ring-States Period, beneath which is the sacrificial pits opening.

II. Remains and Relics

The remains discovered in this excavation include one musical instrument pit and four human victim pits (Figure 1).

1. Four Human Victim Pits (numbered K1 to K4).

K1 was located to the north of the middle of the “Musical Instrument Pit (K5)”. It was in an irregular oval plan, the major axis of which was 196cm and the minor, 156cm, and the depth was 66cm. The wall of this human victim pit was slanting and the bottom was flat,

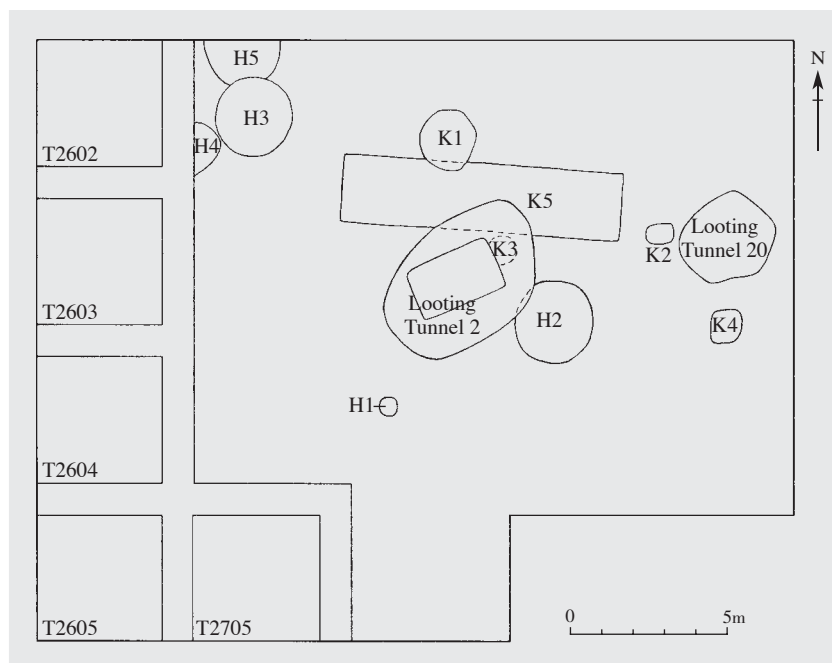


Figure 1. The Plan of the Sacrificial Site

on which two human skeletons were found, both preserved in good condition. The skeleton in the west was that of an adult heading north and in flexed prone pose; the one in the east was that of an infant heading north and facing east, lying on side and covering face with both hands. The pit was filled with loose mottled dark-brown earth mixed with some cord-patterned potsherds.

K2 was located to the east of K5. It is in a rectangular plan with curved corners, the length of which was 100cm, the width was 64cm and the depth, 60cm. The wall of this pit was slanting and the bottom was flat, in which two infant skeletons were buried, both preserved in good condition. The skeleton in the west was in squatting pose at the northwestern corner, and the one in the east was heading north and in flexed prone pose. The pit was filled with rather firm mottled earth bearing traces of ramming and cord-patterned sandy potsherds whose original shape could not be identified (Figures 2 and 3).

K3 was located to the southeast of K5. It was in a roughly oval plan and round bottom, the size at the opening was 88–102cm and the remaining depth was 70cm. An incomplete skeleton was found in this pit, which had only the part below the pelvis remaining but also damaged, and was set upside down. This pit was filled

with loose grayish-brown earth and no artifacts and potsherds yielded.

K4 was located to the southeast of K5. Its plan was irregular round, 100–110cm in diameter and 45cm in depth. Its walls were straight and bottom was flat. An infant skeleton was found in this pit, which was preserved in good condition, heading north and in flexed prone pose. The pit was filled with rather firm mottled yellowish-brown earth; two pieces of grey fine clay pottery *Dou*-stemmed bowl shards were unearthed from this pit.

2. One Musical Instrument Pits (numbered K5). A rectangular pit stretching in east-west direction, the orientation of which was 95°, the length was 880cm, width 210cm and the remaining depth was 110–160cm; the mouth was 192–206cm beneath present ground. The pit was filled with slightly firm mottled yellowish-brown earth mixed with charcoal debris and fine potsherds. The musical instruments buried in this pit were arranged into two arrays: the bronze chime composed of *yong* 甬-bells and *bo* 搏-bells and frame for them to hang on were on the south side and the stone *qing* 磬-chime stones and frame for them to hang on were on the north side. The eleven bronze bells were aligned in a single line along the southern wall of the pit; the three in the west were *bo*-bells and the eight to the east were *yong*-bells. The *bo*-bells were arrayed by size in descending order from west to east and each of them was accessorized by a bronze tiger atop or beside. The *yong*-bells were also arrayed by size, but not precisely in order. Every bell, *bo*- or *yong*-, was accessorized by a bronze hook atop or beside. Textile traces were found on all of the bells, which implied that they had been wrapped in textiles

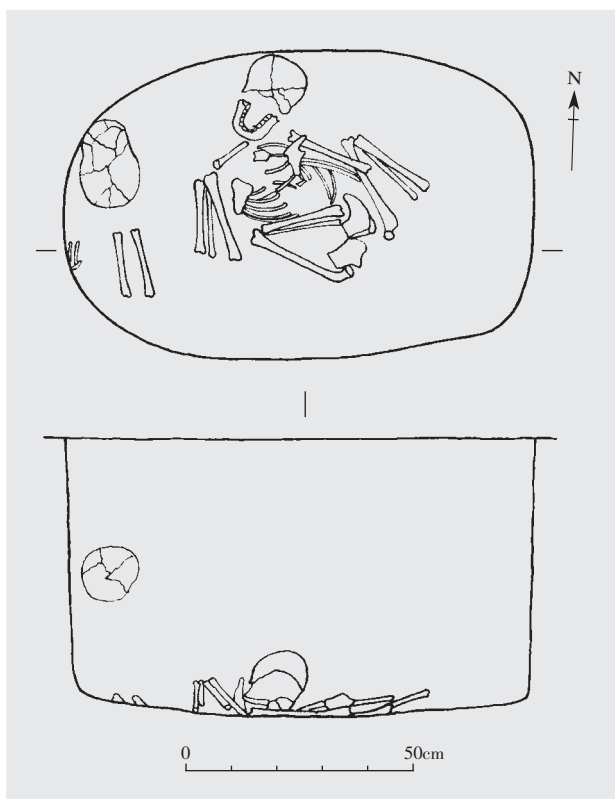


Figure 2. The Plan and Cutaway Section of Human Victim Pit K2



Figure 3. Human Victim Pit K2

when being buried. Cinnabar traces were remained in the designs of the bronze bells and tigers.

To the north of the bells was the bell frame made of one long square timber lying in east-west way and two short square timbers in north-south way, which had only decayed wood traces left. The original size would have been 880cm in length and 197cm in width (height when it was erected), and the width and thickness of the square timbers might have been 13cm. The remnant of lacquer peels showed that the bell frame had been lacquered and painted, but the patterns could no longer be restored. No bronze fittings were found; from the height of the bell frame and the locations of the bells, which were not below the bell frame but beside it, we inferred that the bell frame might not have been in practical use. Similar in the structure of the bell frame, the chime stone frame was 250cm in length, 80cm in width and the square timber of which it was made was about 11cm in width and thickness. Different from the bells, the chime stones were found directly below the chime stone frame, which implied that they might have been directly hung on it. Every five chime stones comprised a sequence, and all of them in each sequence were arrayed from east to west by size in ascending order. In the middle of K5, between the arrays of chime bells and chime stones, 15 pieces of small screw-shaped bone objects were found, to which cinnabars were stuck; they might have been parts of some kind of plucked string instrument. Some traces of lacquer peels were found in the northeast of this pit, but the original shape could not be identified (Figures 4–6).

Bo-bell: Three pieces (K5:1, 3 and 5, detailed data in the Table 1).

K5:1-1: The bell body was separated by four ridges decorated with dragon designs in openwork into four zones bearing identical patterns: for example, the patterns of Zone 1 was arranged into three registers, the top and bottom ones of which were both narrow registers composed of alternate rhombus and cicada motifs; the middle register was the thematic pattern divided into upper and lower rows, the upper one of which comprised of interlaced double-headed dragon designs, the left part was simplified and the right part was more elaborate, and the lower of which consisted of two separated dragons in different forms. The crown was in shape of a bridge composed of two dragon motifs in openwork which linked to the two ridges on the body leading to the ends of the major axis of the mouth. The dragon and cicada motifs were decorated with intaglio lines. The two dragon motifs composing of the bell crown were separately cast and welded together, and the casting fins between the crown and the ridges and that between the ridges and the body were clearly visible. Traces of clay struts to keep the space between the internal and external molds were evenly arranged on the inner surface of the bell body. At the *gu* 鼓 (striking area near the mouth) of one of the broader faces, an inscription consisting of 26 characters was cast: “The Viscount of Qin casts the precious and harmonious bells; three of them are *bo*, which sound sonorous and booming. The Viscount of Qin is solemnly and cautiously (?) on his post, and is

Table 1. The Statistic Table of *Bo*-bells

| Number | Full Height (cm) | Body Height (cm) | Major Diameter of Head (cm) | Minor Diameter of Head (cm) | Major Diameter of Mouth (cm) | Minor Diameter of Mouth (cm) | Notes |
|-----------------------|------------------|------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|---|
| K5:1-1 (Figure 7) | 66 | 48.5 | 29.4 | 23.7 | 37.2 | 31.3 | Accessorized by a bronze hook (K5:1-2, 14.5cm in length) and a bronze tiger (k5:2, 22.6cm in length, 8cm in width and 11.1cm in height, see Figure 9). |
| K5:3-1 (Figure 10) | 53.2 | 37.55 | 21.8 | 16.5 | 28 | 22.9 | Accessorized by a bronze hook (K5:3-2, 14.5cm in length) and a bronze tiger (k5:4, 22.4cm in length, 11.1cm in width and 8cm in height, see Figure 11). |
| K5:5-1 (Figure 12) | 54.5 | 38.5 | 21.9 | 17.1 | 27.7 | 23 | Accessorized by a bronze hook (K5:5-2, 14.5cm in length) and a bronze tiger (k5:7, 21.7cm in length, 7.9cm in width and 11.3cm in height, see Figure 13). |

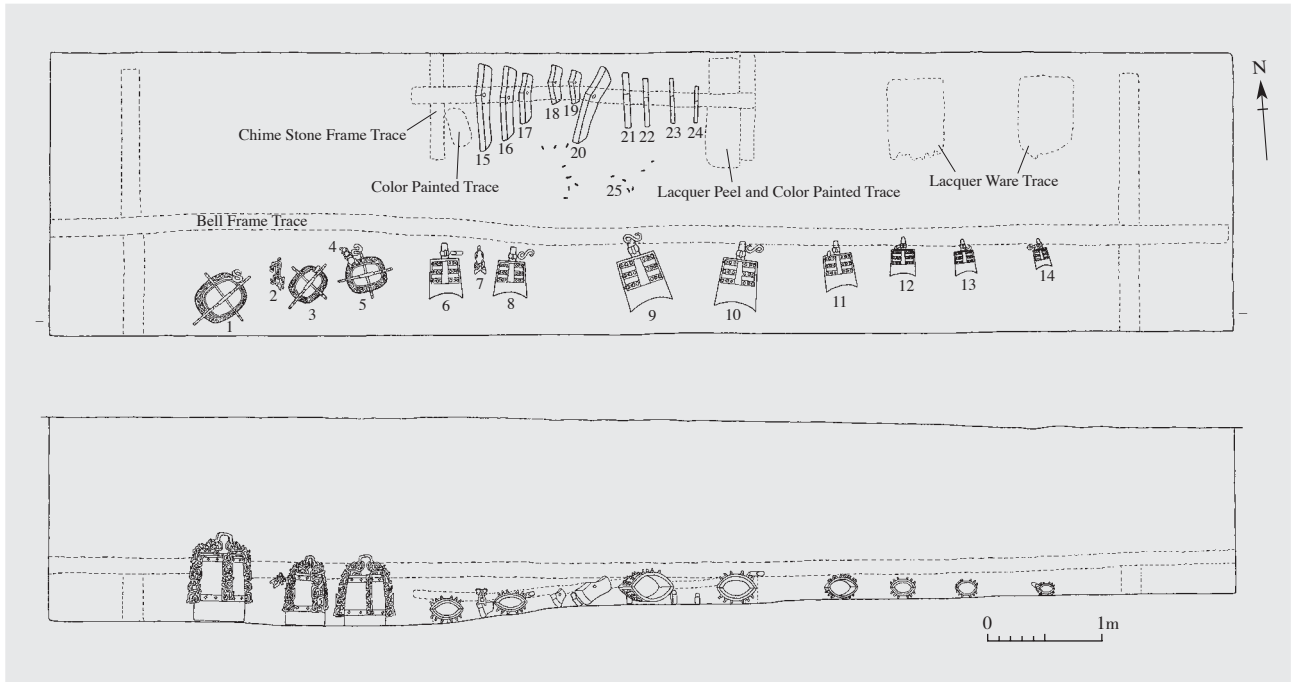


Figure 4. The Plan and Cutaway Section of Music Instrument Pit 06LDIVA1K5



Figure 5. Full-view of Music Instrument Pit 06LDIVA1K5



Figure 6. The Bronze Yong-Bells and Bo-bells in Pit 06LDIVA1K5

enjoying boundless longevity [秦子作宝𨮒钟, 以其三铸, 乃音𨮒𨮒𨮒𨮒. 秦子峻𨮒在位, 眉寿万年无疆. See Figure 8].”

K5:3-1: The patterns of this *bo*-bell were similar to that of K5:1-1 in motifs and arrangements with some varying details; cinnabar traces were seen in the intaglio lines decorating the dragon and cicada motifs. The casting fins and clay strut traces of this bell were also in similar situation to that of K5:1-1, and trace of amendment was seen at the striking area near the mouth.

K5:5-1: This *bo*-bell has similar pattern motifs and arrangements to the former two.

Yong-bell: Eight pieces (K5:6 and 8–14), all of which



Figure 7. Bronze Bo-bell (K5:1-1)



Figure 8. Inscription on Bronze Bo-bell (K5:1-1)

Table 2. Statistic Table of Yong-bells

| Number | Full Height (cm) | Body Height (cm) | Length of Yong-shank (cm) | Major Diameter of Head (cm) | Minor Diameter of Head (cm) | Major Diameter of Mouth (cm) | Minor Diameter of Mouth (cm) | Notes |
|--------------------------|------------------|------------------|---------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|--|
| K5:6-1 (Figure 14–15) | 43.7 | 31.5 | 12.2 | 20.8 | 15.5 | 23.4 | 17.2 | A bell hook (K5:6-2) attached, 14.4cm in length |
| K5:8-1 (Figure 16) | 41.2 | 29.25 | 11.95 | 19.6 | 15.3 | 22.2 | 16.8 | A bell hook (K5:8-2) attached, 14.1cm in length |
| K5:9-1 (Figure 17) | 53.71 | 39.3 | 14.41 | 14.41 | 20.8 | 33.2 | 22.1 | A bell hook (K5:9-2) attached, 14.1cm in length |
| K5:10-1 (Figure 18) | 48.4 | 34.2 | 14.2 | 24.7 | 16.7 | 29.6 | 19.6 | A bell hook (K5:10-2) attached, 14.1cm in length |
| K5:11-1 (Figure 19) | 39.2 | 28.1 | 12.1 | 18.7 | 13.3 | 22.7 | 15.2 | A bell hook (K5:11-2) attached, 14.7cm in length |
| K5:12-1 (Figure 20) | 34.1 | 24.1 | 10 | 15.65 | 11 | 18.6 | 12.3 | A bell hook (K5:12-2) attached, 14cm in length |
| K5:13-1 (Figure 21) | 26.9 | 18.1 | 8.8 | 12.8 | 9.4 | 14.9 | 10.6 | A bell hook (K5:13-2) attached, 11cm in length |
| K5:14-1 (Figure 22) | 23.4 | 14.5 | 8.9 | 10 | 7 | 11.7 | 7.9 | A bell hook (K5:14-2) attached, 11cm in length |

were in similar shapes but varying sizes. All of the *yong*-bells were bearing almost identical decorative patterns: generally, the patterns at the *xuan* 旋 (the protruding ring around the *yong* 甬-shank) were divided into four sections, all of which were interlaced animal eye patterns; patterns at the *wu* 舞 (the top surface of the bell head) were divided into four parts, all of which were scrolling

cloud pattern in intaglio; each of the *zhuan* 篆 (decorated zone of the bell body) flanking the *zheng* 钲 (the spine of the broader face of the bell body) was divided into five rows, the first, third and fifth ones of which were bearing three *mei* 枚 (bosses or nipples) each, while the second and fourth ones were decorated with embossed triangular *Kui* 夔 -dragon pattern. The middle part of



Figure 9. Bronze Tiger (K5:2)



Figure 11. Bronze Tiger (K5:4)



Figure 13. Bronze Tiger (K5:7)



Figure 10. Bronze Bo-bell (K5:3-1)



Figure 12. Bronze Bo-bell (K5:5-1)



Figure 14. Bronze Yong-bell (Bell with cylindrical Crown, K5:6)

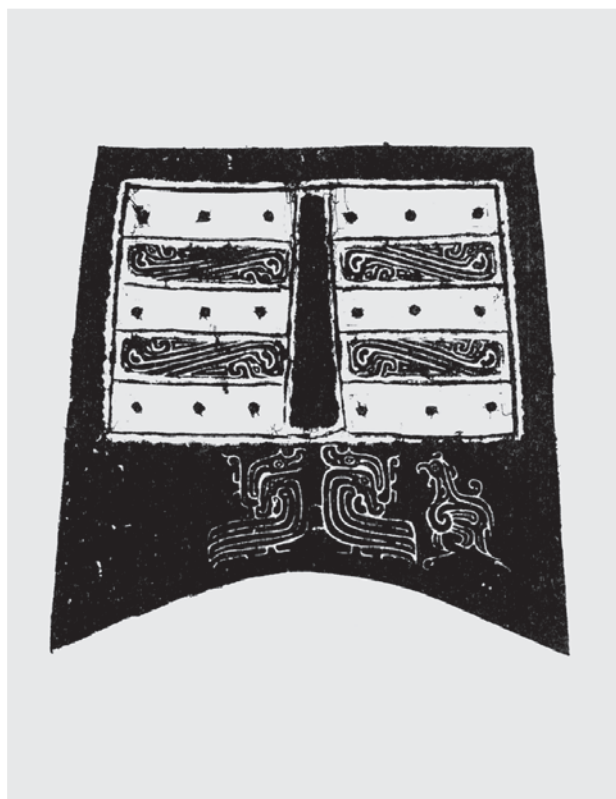


Figure 15. Rubbing of the Designs on Bronze Yong-bell (K5:6-1)



Figure 16. Bronze Yong-bell (K5:8)



Figure 17. Bronze Yong-bell (K5:9)



Figure 18. Bronze Yong-bell (K5:10)



Figure 19. Bronze Yong-bell (K5:11)



Figure 20. Bronze Yong-bell (K5:12)



Figure 21. Bronze Yong-bell (K5:13)



Figure 22. Bronze Yong-bell (K5:14)

Gu 鼓 was decorated with symmetrical *Kui*-dragon patterns with heads turning backward and in some cases bird design was found at the right part of *Gu*.

The data of the *yong*-bells are listed in the table below.

Chime Stones: Ten pieces, set into two sequences (K5:15–19 and K5:20–24) each of which contained five. All were made into the same shape but varying sizes (see Figure 23 and Table 3).



Figure 23. Chime Stones (K5:15-19)

Table 3. Statistic Table of Chime Stones

| Number | Full Length | Full Height | Shin Length | Shin Thickness | Foot Length | Thigh Length | Thigh Thickness | Butt Length | Bottom Curve Height | Hanging Hole Diameter | Foot Top Angle | Foot Bottom Angle | Knee Angle | Butt Top Angle | Butt Bottom Angle |
|--------|-------------|-------------|-------------|----------------|-------------|--------------|-----------------|-------------|---------------------|-----------------------|----------------|-------------------|------------|----------------|-------------------|
| K5:15 | 64.2 | 20.9 | 40.7 | 3.7 | 12.3 | 25.8 | 3.9 | 14.5 | 2.9 | 2.5 | 85 | 107 | 142 | 86 | 109 |
| K5:16 | 51.3 | 17.6 | 32.2 | 4.1 | 11.3 | 20.5 | 4.1 | 13.6 | 2.5 | 2.2 | 80 | 103 | 142 | 84 | 100 |
| K5:17 | 38.3 | 14.3 | 24.5 | 3.1 | 8.8 | 15.7 | 3.2 | 11.3 | 2.3 | 2 | 76 | 104 | 139 | 80 | 99 |
| K5:18 | 30.8 | 12 | 21.1 | 2.6 | 7.3 | 11.5 | 3.1 | 9.4 | 1.8 | 2 | 78 | 105 | 138 | 83 | 110 |
| K5:23 | 33.2 | 12.2 | 21.7 | 2.6 | 8.2 | 12.7 | 2.9 | 9.3 | 1.8 | 2.2 | 78 | 101 | 140 | 80 | 108 |
| K5:19 | 25.74 | 10.22 | 17.01 | 2.33 | 6.29 | 9.88 | 2.64 | 7.28 | 1.18 | 1.88–1.45 | 78 | 106 | 146 | 84 | 106 |
| K5:20 | 58.6 | 20.35 | 37.7 | 3.74 | 11.41 | 23.47 | 4.44 | 15.07 | 3.38 | 3.18–2.49 | 77 | 103 | 135 | 71 | 105 |
| K5:21 | 45.6 | 16.7 | 28.82 | 3.22 | 9.95 | 18.77 | 3.36 | 11.79 | 3.09 | 2.15–2.37 | 82 | 107 | 143 | 88 | 102 |
| K5:22 | 37 | 13.51 | 23.3 | 3.26 | 8.85 | 14.92 | 3.18 | 11.28 | 1.77 | 2.35–1.74 | 77 | 118 | 147 | 77 | 105 |
| K5:24 | 27.28 | 10.89 | 17.57 | 2.39 | 7.24 | 10.47 | 2.75 | 8.84 | 1.37 | 1.68–1.33 | 82 | 104 | 144 | 82 | 100 |
| | cm | | | | | | | | | | Degrees | | | | |

Shin: The Longer Side of the Apex Angle

Thigh: The Shorter Side of the Apex Angle

Knee: The Apex Angle

Foot: The Side between the end of the Shin and the Bottom Curve

Butt: The Side between the end of the Thigh and the Bottom Curve

III. Preliminary Understandings

1. In 1977, three *bo*-bells and seven *yong*-bells were unearthed at Taigongmiao 太公庙, Baoji City; the *bo*-bells and *yong*-bells all bore long inscriptions. The bronze *yong*-bells and *bo*-bells found at Dapuzishan Site had similar styles with them, so they ought to be at similar dates, which was the early Spring-and-Autumn Period.

2. The “Musical Instrument Pit” was located very close to the robbed large tomb, which was supposed to be that of Duke of Qin, and in the same orientation with it and the chariot and horse pits, which implies that this pit might be related to this large tomb. As for the conductors and the object worshipped in the sacrificial ceremony, further researches are still going to do.

3. Both at home and abroad, many cases of bronzes with inscription of the title “*Qin Zi* 秦子 (Viscount of Qin)” have been found, some of which were attributed to the robbed large tomb. The scientific excavation of the “Musical Instrument Pit” and the unearthing of the bronzes bearing inscription of “Viscount of Qin” is significant for the exploration to the occupant of the robbed large tomb at Dapuzishan Site and the history of the early period of the Qin State.

4. The complete sets of bronze chime bells and chime music stones unearthed from the “Musical Instrument Pit” are preserved in good condition and decorated with exquisite patterns, which is greatly meaningful for the researches on the early bronze civilization of the Qin State.

Postscript: The original report was published in *Wenwu* 文物 (Cultural Relics) 2008.11: 14–29, with 32 illustrations (including four line drawings and four rubbings, the rest are photographs) and one table, written by Wei Zheng 韦正 and Wang Hui 王辉 and the abridged version prepared by Wei Zheng and English translated by Ding Xiaolei 丁晓雷.