

The excavation at Liujiazhuang Locus North at Yinxu Site in Anyang City, Henan in 2010–2011

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Abstract

From March 2010 to December 2011, the Anyang Archaeological Team of Institute of Archaeology, Chinese Academy of Social Sciences conducted the third season of excavation at Liujiazhuang Locus North. In the uncovered area, the roads of the Yinxu Period formed a framework for the distribution of vestiges: pottery kilns, house foundations, wells, ash pits, sacrificial pits and burials of various periods were revealed flanking the roads. Of them the Yinxu Period remains may have been left over from a pottery-making workshop area. Moreover, the excavation of the rammed-earth house foundation F79 is the first case of this type on the Yinxu Site, and the discovery of a round bronze *zun*-vessel with ridges and an inscription from the hoard in its eastern courtyard is also the first record on the Yinxu Site. The sacrificial pit H77 yielding a legend-bearing bronze seal and the cemetery represented

by tomb M70 must have been related to the “*紂*” clan. The excavation at this locus provided important materials for researches on the layout and production of the handicraft workshops in the Yinxu Period.

Keywords: Handicraft workshops—Shang Dynasty; Liujiazhuang Locus North; Yinxu Site (Anyang City, Henan)

Brief introduction of the site

In March 2010 to December 2011, the Anyang Archaeological Team, Institute of Archaeology, CASS carried out the third season of excavation at Liujiazhuang Locus North on the Yinxu Site in Anyang. The work uncovered an area of approximately 3ha in total and brought to light roads, ditches, pottery kilns, rammed-earth building foundations, sacrificial pits, wells, cellars, large-sized ash pits and medium- and small-sized burials (Figure 1), as well as various objects, which constitute important achievements.

Stratigraphy of the site is relatively simple. In the excavated area, beneath the cultivated soil, cultural



Figure 1 A full view of the excavated area on the site at Liujiazhuang Locus North (top is south).

remains of the Ming to Qing, Tang to Song and Han to Three-Kingdoms periods emerged successively; and below them, vestiges of the Yinxu Period spread everywhere. Bordered by a Yinxu Period road stretching from the east to the west, the early Yinxu Period remains are largely distributed on the northern side of the road, while the late remains of those times spread all over the excavated area, with vestiges and objects forming rich and thick cultural accumulations.

Important remains

1. Roads.

In 2008, roads were discovered in the west and north of the excavated area. The traffic network consists of three parts: the western main road, the east-to-west linking road and the eastern main road. The present excavation cleared the remaining eastern part of the east-to-west linking road (renumbered L16) and the most part of the eastern trunk L17's section within the excavation area.

In all cases the surface of the excavated roads is lower than the ground of those times, lying on the bottom of the road ditches. It should be dated as the late stage of the Phase IV of Yinxu Period because the lowest part of the road surface is 1.5m lower than the remains flanking the road (considering that the height of the vestiges flanking the road were damaged by later strata, there may have been even a greater difference between the then road surface and these vestiges on the two sides).

L16 is narrower than the two main roads; its surface measures 5-6.7m in width. It is built of a mixture of gravel, crushed potsherds and animal bones and bears traces of ruts. No large-scale sacrificial remains were found on the two sides. As regards L17, its northern section yielded no traces of large-sized gravel and other pavement material, but judged by the results of selective digging, the road surface is about 15cm thick and is superimposed on a hard-packed layer. The southern section is made gradually eastward-turned from the T-shaped intersection and extends beyond the excavated area. The road surface is well paved and measures 8.3-11.7m in width.

With the stratigraphical data obtained from the two previous excavations taken into account, the function of the roads can be inferred to have begun at the latest in the Phase II of Yinxu Period and continued to the late stage of the Phase IV.

The stratum superimposed on the road surface is black silt formed by lacustrine deposition; it contains few artificial remains except for some potsherds of the Shang and Zhou periods (Figure 2).

2. Pottery workshop area.

One of the most important achievements of the excavation of Liujiazhuang Locus North is the discovery of various vestiges and artifacts related to pottery making. The previous excavations brought to light remains concerned with pottery making; the present work linked up by and large all the excavated pottery-making workshops into a large-scale workshop complex. The workshop area at Liujiazhuang Locus North centers on this locus and measures 300m in length from north to south and 200m in width from east to west, occupying an area of about 6ha.

The present excavation brought to light seven pottery kilns, numbers of defective and damaged products and some pottery-making tools. The other vestiges recorded in quantities are also very possibly parts of the pottery-making workshops. These include refuse pits for defective and damaged products, long narrow rammed-earth house foundations, large-sized quadrangle-style rammed-earth buildings, densely distributed wells, various sacrificial remains and over 1,000 medium- and small-sized tombs. Obviously most of the remains in the excavated area are directly or indirectly related to pottery production.

3. Building foundations.

Rammed-earth house foundations are widely spread in the excavated area and cover the time from the late stage of Phase I to that of the Phase IV of Yinxu Period, but most of them have been seriously damaged, and

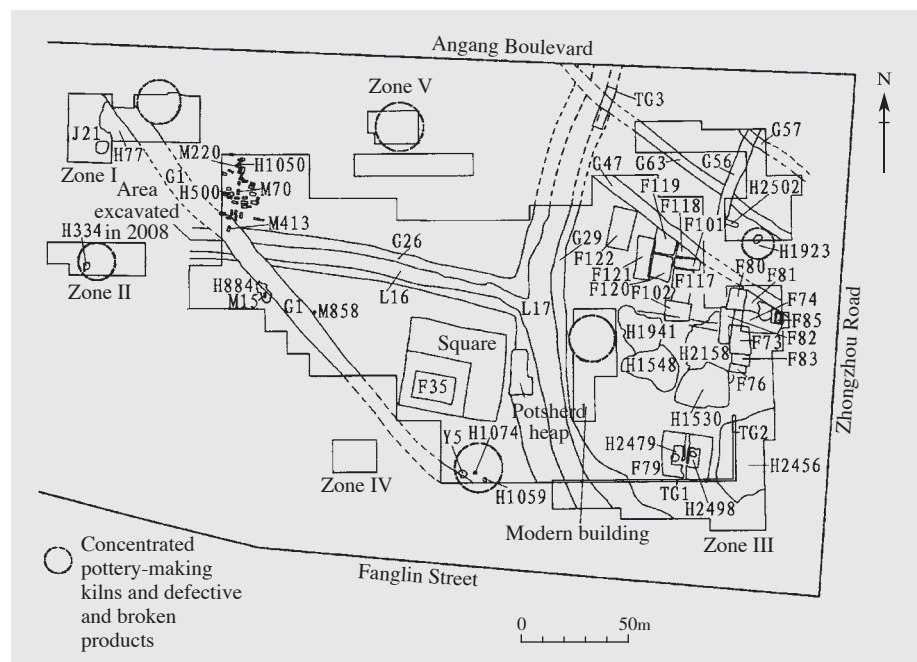


Figure 2 Distribution of the major vestiges revealed in the third season of excavation at Liujiazhuang Locus North.

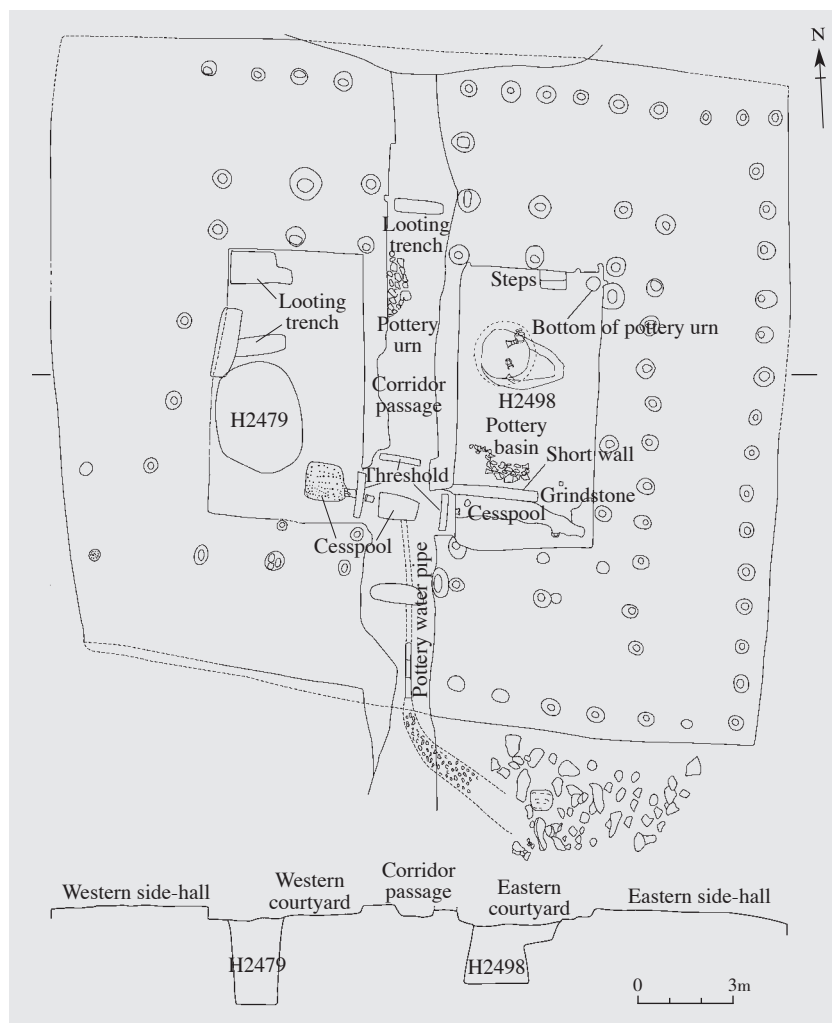


Figure 3 The plan and section of house foundation F79.



Figure 4 House foundation F79 (top is south).

no earlier intact remains occurred among them. The better preserved several findings, such as F35 and F79, unexceptionally belong to the late stage of Phase IV. In distribution, with Road L16 as a border, the early house foundations are distributed mainly in the north, while the late ones largely in the south. Simultaneous large-sized water cisterns were revealed around the houses in the course of the present excavation. In some cases, the drainage of house foundations were discovered to have been linked up with water cisterns, the earth resources for ramming the house foundations were successfully traced, the drainage of domestic sewage and the way of refuse processing were clarified. Two units of long narrow rammed-earth foundations were discovered to be rather close to each other; such cases were seldom encountered in other areas of the Yinxu Site and must have been related to pottery production.

House foundation F79 is located to the east of the southern section of road L17. Its northern and eastern parts and the courtyards remain in a good condition. This is a quadrangle facing to the south at an orientation of 4° and measures approximately 450sq m (including the courtyards) with a length of 22.5m and 20.75m for the northern and southern sides respectively and a width of 20.6m for the eastern side and 19m for the western side. The whole building consists of a main hall in the north, two side halls on the eastern and western flanks, a corridor on the southern side, an eastern courtyard and a western one, a south-to-north central corridor-passage, and drainage system (Figures 3 and 4).

The two courtyards measure 11.5m in the total length from the east to the west, 8.5m in width from the north to the south, and about 0.4m lower than the rammed-earth house foundation surface. In the north of the eastern courtyard are two steps for ascending the main hall in the north. The ground of the courtyard is flat and smooth. Some charcoal was discovered there, which would be the traces of the burnt wooden pillars left when the houses were burnt down. Slightly to the north

of the center there remains a cellar (H2498) in irregular shape. It measures 2.6m in length from the east to the west, 1.65m in width from the north to the south and 2m in depth, with the lower part larger than the top and a flat bottom, from which two bronze *zun*-vessels, a bronze *jia*-tripod and a pottery *lei*-wine jar were yielded along with quantities of plant seeds, which have been identified to be remains of millet (Figure 5).

The western courtyard has been severely damaged. A little to the south of the center is a cellar (H2479) in irregular circular plan, which measures 3.3m in mouth diameter and 2.64m in bottom diameter. It contains a human skeleton heading north and close to a stone block bearing red lacquer remnants, a pottery jar decorated with cord marks was put nearby his feet.

The waste water in the courtyards was drained through the pottery pipes under the thresholds into the cesspool furnished in the middle of the corridor-passage and then through the southern pottery sewer down to the large-sized ash pit (H2456) located to the southeast of house foundation F79.

The artifacts unearthed from ash pit H2498 are as follows:

Bronze *zun*-vessels, two pieces. Each of them has a wide-opened mouth, a slightly swollen deep belly and a ring foot. Some carbonized plant stems adhered to the surface. H2498:1 is decorated with *taotie* animal mask designs all over the belly and ring foot. The inner wall of the foot bears the inscription “Yayang Fu Ding [亚敕父丁]”. The height measures 30.7cm (Figure 6). H2498:3 is adorned with bird designs on the upper and lower bellies and with horizontal ridges between the two parts. In the inner wall of the ring foot is the inscription “Yaji Fu Gui. Xian [亚戠父癸 . 戠]”. The whole vessel is 24.1cm in height (Figure 7).

Bronze *jia*-tripod, one piece (H2498:2), bearing charred plant stems and millet on the outer surface. It has a flared mouth, a straight neck, three swollen pocket-shaped legs, and an animal head-shaped handle attached onto one of the legs. The inscription below the handle



Figure 5 The ash pit H2498 (top is east).



Figure 6 Bronze *zun*-vessel (H2498:1).



Figure 7 Bronze *zun*-vessel (H2498:3).



Figure 8 Bronze *jia*-tripod (H2498:2).



Figure 9 Pottery *lei*-wine jar imitative of bronze (H2498:4).

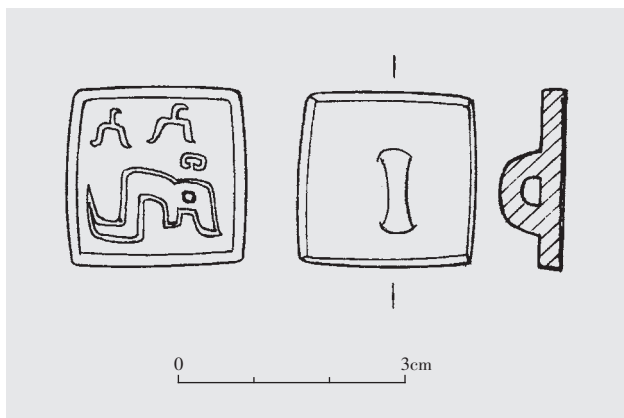


Figure 10 Bronze seal (H77:1).

reads “X Fu Wu[𠄎父戊]”. The height measures 31cm (Figure 8).

Pottery *lei*-wine jar imitative of bronze, one piece (H2498:4). It has a small mouth, a short neck, broad shoulder, a slanting belly and a short ring foot. On the shoulder are ox head-shaped lugs. The upper belly is decorated with incised triangular patterns and vertical cord marks. The overall height is 36.3cm (Figure 9).

Based on the pottery from the courtyard area of F79 and the bronzes from H2498, house foundation F79 can be dated as the late stage of Phase IV of the Yinxu Period.

4. Sacrificial pits.

This type of vestige includes mainly seven sacrificial pits, i.e. three containing human victims and four keeping human and ox victims. The other pits yielded ox horns, pig skeletons, etc.

The largest one, H77, is a human victim pit. It has an irregular round opening and measures 15m in excavated length from north to south, 14.75m in excavated width from east to west, and 1.8m in depth. The earth fill consists of three layers. The second layer contains four human skeletons arranged roughly into a circle. The third layer yielded two skeletons, of which some limb bones are missing. The unearthed artifacts embrace numerous potsherds (including broken proto-porcelain and hard pottery wares), a bronze seal and pottery human-faced statuettes as well as animal bones.

One bronze seal was unearthed (2010ALNH77:1). It is in square shape, each side of which measures 2.2cm in length. The obverse bears two “𠄎” characters side by side in the upper part and a *kui*-dragon design in the lower



Figure 11 Owl-bodied human-faced pottery statuette (H77:12).

part (Figure 10).

Two pottery owl-bodied human-faced statuettes were discovered. H77:12 has a flat, even slightly concave face, erect hair and a bird-shaped body, and measures 18.6cm in height (Figure 11). H77:76 left over an intact face, but the part below the shoulders is missing. The remaining height measures 11.6cm (Figure 12).

H77 belongs to Phase II of the Yinxu Period.

H1050 is a human and ox victim sacrificial pit. It is in a circular plan and measures 1.5m in mouth diameter, 1.7m in bottom diameter and 1.74m in depth. On the bottom two human skulls, a headless human skeleton's limb bones and an ox skeleton are found. Obviously the last was entombed after being slaughtered and set in order. Chronologically this pit belongs to Phase II of the Yinxu Period.

Burials

Totally more than 1,000 burials are excavated, most of which belong to the Yinxu Period. There are no high-ranking burials; ritual bronzes were recorded only in 23 tombs; and in each tomb furnished with ritual bronzes, usually only one *gu*-goblet and one *jue*-cup are discovered. The cemeteries are spread widely but sparsely; generally only three to five tombs are gathered together, and groups with more than 10 burials were seldom encountered. The burials were located not far away from simultaneous living and production remains. The grave goods are largely pottery *gu*-goblets and *jue*-

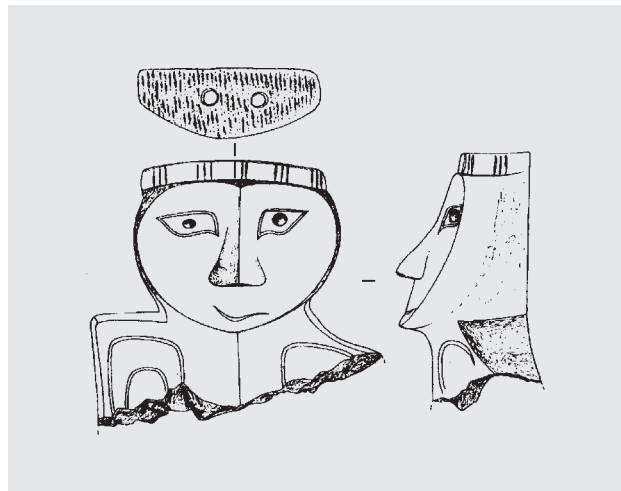


Figure 12 Owl-bodied human-faced pottery statuette (H77:76).

cups, followed by pottery *dou*-stemmed bowls and *gui*-tureens, and *li*-cauldrons account for a small proportion. In date only a few burials belong to Phase I of the Yinxu Period; from Phase II, the number of the burials was increasing; and the largest growth happened in Phase IV, when the custom of using intentionally smashed vessels as grave goods represented by tomb M70 became a noteworthy practice.

M70 is located in Excavation Grid T2022, at an orientation of 5°. The grave opening is sub-rectangular, with the northern side measuring 0.93m and the southern side 0.84m; the length is 2.2m and the depth about 3.7m. The grave bottom is furnished with an artificial ledge 0.2–0.34m wide and 0.2m high built of mottled earth. In the center of the grave bottom is a waist pit, which measures 0.9m in length and 0.45m in width for the opening and about 0.2m in depth, and contains a dog skeleton heading south, which was seriously damaged. The tomb occupant is buried in a red-lacquered double coffin, head pointing to the north, but the skeleton has only some broken pieces of the skull left. Eight pieces of grave goods are unearthed from this tomb, which are found in the earth fill, on the artificial ledge and in the coffin (Figures 13 and 14).

Bronze *ding*-tripod, one piece (M70:7). It is broken and the remaining fragments are spread on the bottom of the coffin. The whole vessel can be restored to have a round plan, vertical ears, a vertical belly and a round bottom with three pillar-shaped feet. The neck is decorated with stylized cicada design. The height measures 18.6cm (Figures 15:4 and 16).

Bronze *pou*-liquid container, one piece (M70:2). It is yielded from the middle of the eastern ledge. The belly was hammered on the two sides before entombment, so the whole vessel has been seriously deformed. Still it can be identified to have a wide-opened mouth, a curvy belly, a round bottom, a ring foot and a plain surface. At the center of the inner bottom is the inscription “𠂔”. The

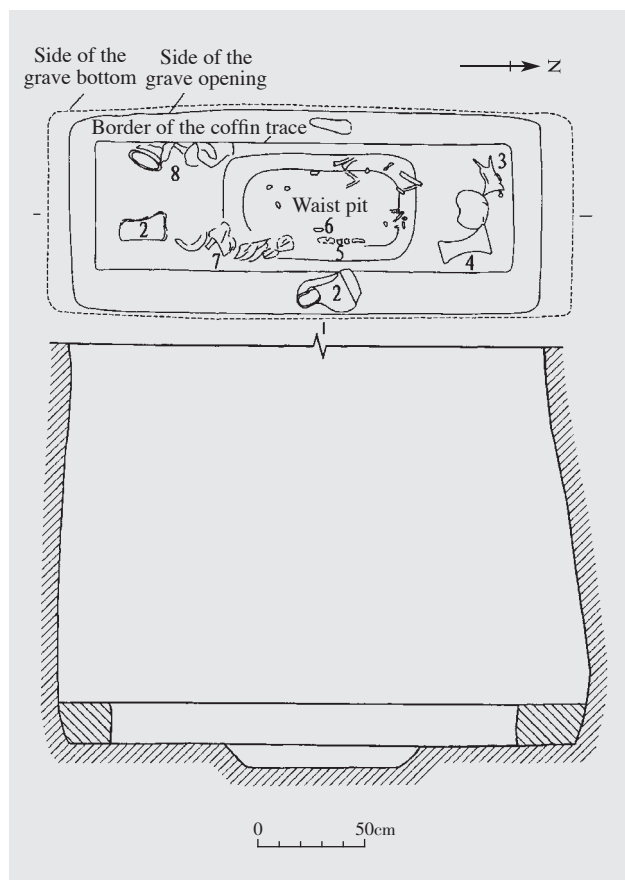


Figure 13 The plan and section of tomb M70.

2. Bronze *pou*-liquid container; 3. Bronze *jue*-cup; 4. Bronze *gu*-goblet; 5. Bronze knife; 6. Jade *ge*-dagger ax; 7. Bronze *ding*-tripod; 8. Bronze *gui*-tureen (1. oracle bone from the earth fill).

whole vessel measures 21.4cm in height (Figures 15:7 and 17).

Bronze *gui*-tureen, one piece (M70:8). It is fragmented and spread in the south of the coffin bottom (on the eastern and western sides). It has an out-bent rim, a vertical belly and a ring foot. The decorations are formed of a cloud-and-thunder pattern and embossed small animal heads on the upper belly, lozenge cloud-and-thunder and nipple patterns on the middle belly and taotie animal mask designs on the ring foot. At the center of the inner bottom is the inscription “ 𠄎 ”. The height measures 16.5cm (Figures 15:6 and 18).

Bronze *jue*-cup, one piece (M70:3). It is found on the right side of the tomb occupant's skull. It has a narrow spout, a wide tail and an egg-shaped deep belly. Under the handle is the inscription “ 𠄎 ”. The belly is decorated with three rings of bowstring patterns in the upper part. The height is 18.6cm (Figures 15:5 and 19).

Bronze *gu*-goblet, one piece (M70:4). It is unearthed from the left side of the tomb occupant's skull. The mouth is flared; the stem is thick and bears animal mask design.



Figure 14 Tomb M70 (top is north).

The whole vessel measures 25.6cm in height (Figures 15:3 and 20).

Bronze knife, one piece (M70:5). It has been fragmented. The back is narrow. The remaining length is 6.9cm (Figure 15:1).

Jade *ge*-dagger ax (M70:6). It is yielded from the bottom of the coffin, a little to the east of the center. The body is greenish-white in color and has been badly eroded. The tang has a hole drilled from one side. The length is 4.6cm (Figures 15:2 and 21).

Oracle bone, one piece (M70:1). It is unearthed from the earth fill. Only the joint of the bone remains but the joint angle has been cut off. On the body are two traces of burning and chiseling. The remaining length is 4.9cm.

The stratigraphical evidence and grave goods showed that tomb M70 can be attributed to Phase II of the Yinxu Period.

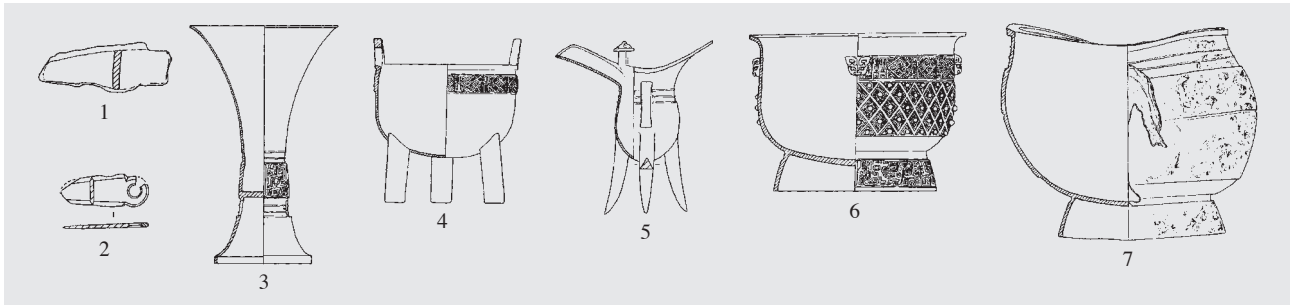


Figure 15 Grave goods from tomb M70.

1. Bronze knife (M70:5); 2. Jade *ge*-dagger ax (M70:6); 3. Bronze *gu*-goblet (M70:4); 4. Bronze *ding*-tripod (M70:7); 5. Bronze *jue*-cup (M70:3); 6. Bronze *gui*-tureen (M70:8); 7. Bronze *pou*-liquid container (M70:2). (1 and 2. about 1/2; 4. about 1/5; the rest. about 1/4).



Figure 16 Bronze *ding*-tripod (M70:7).



Figure 17 Bronze *pou*-liquid container (M70:2).



Figure 18 Bronze *gui*-tureen (M70:8).



Figure 19 Bronze *jue*-cup (M70:3).



Figure 20 Bronze *gu*-goblet (M70:4).



Figure 21 Jade *ge*-dagger ax (M70:6).

Conclusions

1. The discovered roads were not only the main roads for approaching the palace area of Yinxu Site, but also played a planning and framing role for the layout of the pottery workshops and related installations.

2. The pottery-making workshop area, together with the bronze-casting workshop at Miaopu Locus North and the bone-processing workshop at Tiesan Road, constituted the “Handicraft Zone” located to the south of the Yinxu Palace and Ancestral Temple Area. It brought about a great advance to the handicraft production of the Yinxu Site and much helps the present-day study on the layout of various handicraft departments at that time.

3. The bronze *zun*-vessel (H2498:1, see Figure 6) yielded from the hoard H2498 on house foundation F79 is so far the only discovery of this kind of artifacts unearthed in the Yinxu Site. F79 was destroyed by fire. Judged by the massive burnt clay in the storing pit, the period of the bronzes being stored in the hoard must have roughly coincided with the time of the house’s destruction

in the fire. In date F79 belongs to the latest stage of the Yinxu Period, so its destruction may have been related to the downfall of the Shang Dynasty.

4. The clan must have been the lowest basic-level managing unit of the Yinxu Site handicraft production. The distributions of the approximately 1,000 tombs of the Yinxu Period discovered in the present excavation also show the tendency of being arranged by clan. The discovery of the “𠂇” bronze seal in ash pit H77, the “𠂇” clan’s cemetery represented by tomb M70 (in addition to this tomb, M413 and M448 also yielded “𠂇”-bearing bronzes, i.e. the *jue*-cup from M413 and the *ding*-tripod from M448) located not far away from the place where the seal was unearthed and the “𠂇”-bearing bronzes unearthed in other areas of the Yinxu Site indicate that the “𠂇” clan was related to handicraft and might have been a clan specially engaged in handicraft production.

5. This bronze seal is the third one of this type archaeologically unearthed in the Yinxu Site. Its legend is composed of a character and a design, which differs from the previously discovered ones presented only by a character or a design. Such composition was never seen among the previous finds of the Yinxu Period.

Postscript

The original report authored by Yuling He 何毓灵, Jigen Tang 唐际根, Zhanwei Yue 岳占伟 and Shishan Niu 牛世山 was published in *Kaogu* 考古 (Archaeology) 2012. 12: 26–42 with 18 illustrations and six plates. This abridged version is prepared by Yuling He and translated into English by Runxian Mo 莫润先.