

The Kangjiatun City-site in Beipiao City, Liaoning

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The Kangjiatun city-site is located on the second terrace on the southern bank of the Daling River 大凌河, about 0.5 km north of the Xiaobotai Gully 小波太沟 at Kangjiatun 康家屯 village. This village is under the administration of Daban 大板 township in Beipiao 北票 city, Liaoning 辽宁 province. The geographical coordinates of the site is $41^{\circ}44'08''\text{N}$ and $120^{\circ}57'05''\text{E}$.

The Kangjiatun city-site, a large-scaled city site with stone walls belonging to the Lower Xiajiadian culture, was discovered in an archaeological survey conducted in 1992. Its north part was washed away

by the Daling River and the remaining part still keeps a clear outline. The city-site, whose azimuth is 220 degrees, is in rectangular shape and covers an area of 15,000 sq m. It was re-examined and surveyed in 1995 and a series of excavations have been carrying out to it since 1997 through 2001. The main task of these excavations is to uncover the remains in the layers 1–4 inside the walled city. The sum of the uncovered areas until now is 8,500 sq m (Figs. 1 and 2). We have brought to light the layout and structure of the buildings belonging to the middle and late phases inside the city and report the

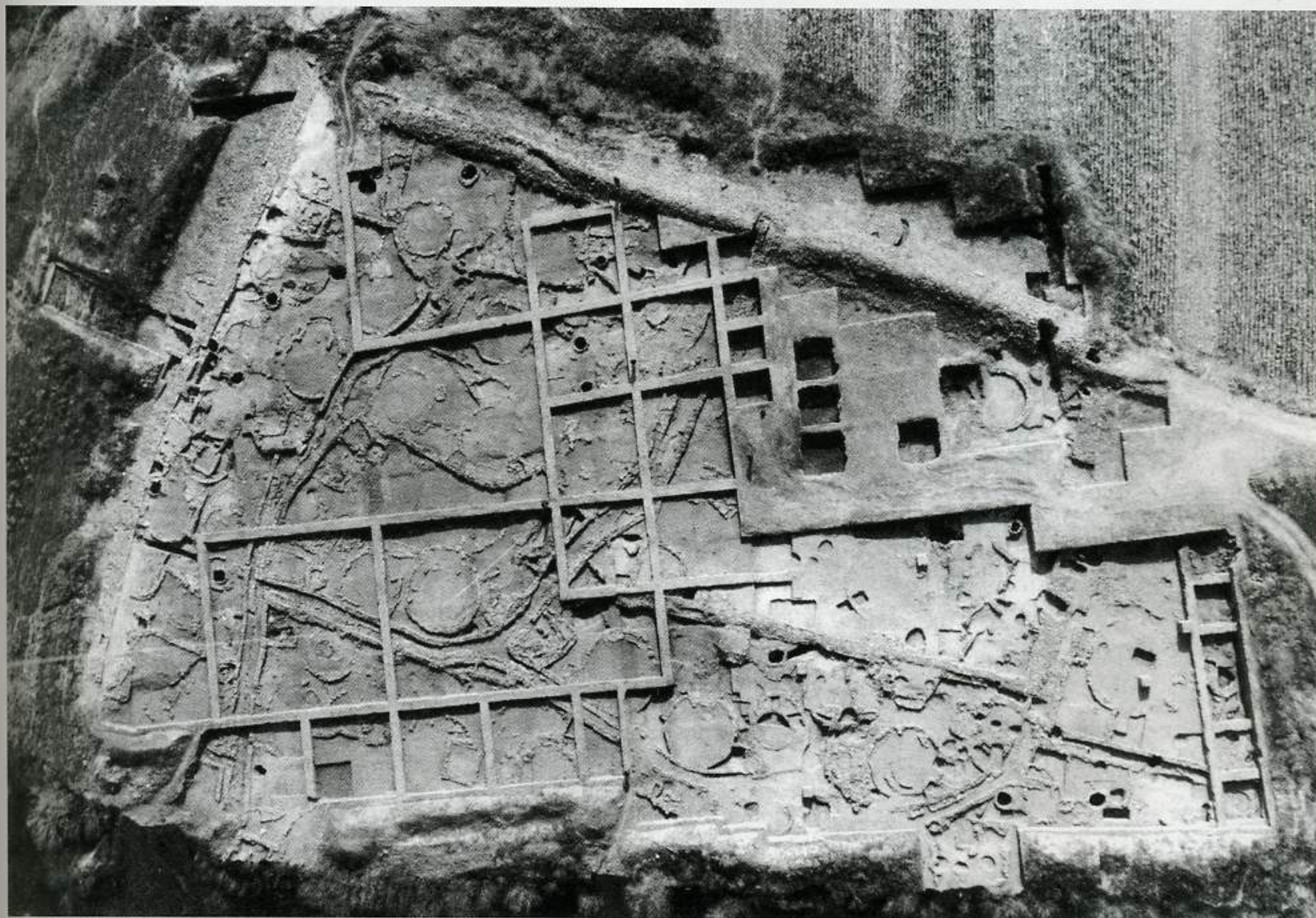


Fig. 1 Scene of the excavation in the Kangjiatun city-site (taken from balloon)

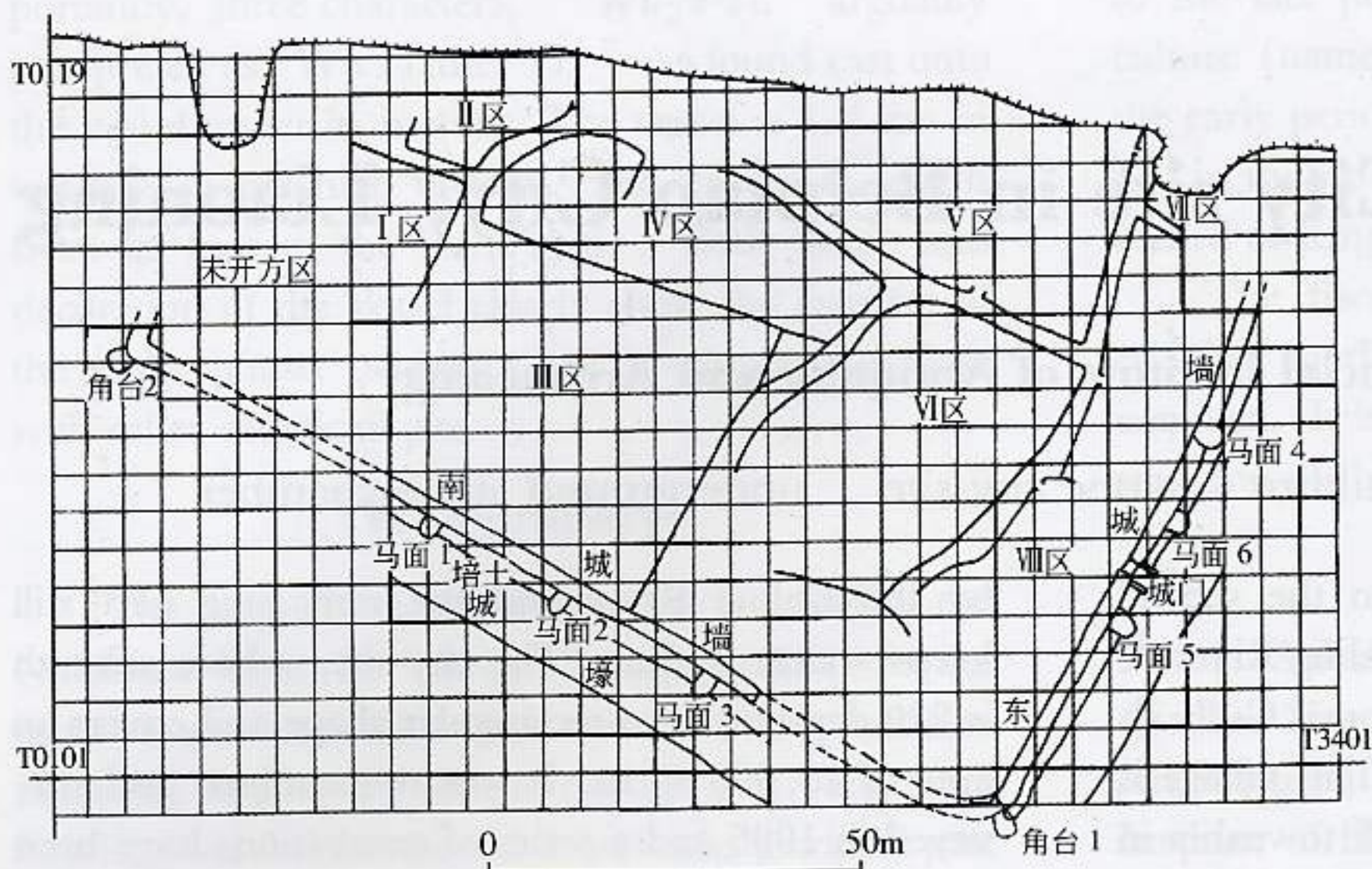


Fig. 2 Distribution of the square units in the Kangjiatun city-site

results in the following text.

I. Deposit of Cultural Layers

Layer 1: the farm soil and the uncultivated soil, 0.15–1.2 m in thickness.

Layer 2: grayish-black soil, 0.15–0.2 m in thickness.

Layer 3: light brown soil, 0.1–0.2 m in thickness. Beneath this layer, some building remains in bad condition and few artifacts are found.

Layer 4: black soil, 0.1–0.45 m in thickness. Most of the building remains of the middle and late phases are found beneath this layer; these remains were preserved well with intact layouts; abundant artifacts are also found in them. These remains are widely superimposed on the remains of the earlier building, or intruded into them.

Layer 5: dark brown soil, 0.1–0.25 m in thickness. The remains of the building belonging to the early phase are found beneath this layer.

Layer 6: mottled earth, 0.25–0.8 m in thickness, containing few artifacts.

Based on the relationships of superimposition and intrusion among the cultural layers and remains, the Kangjiatun city-site can be dated into three phases, all of which belonged to the Lower Xiajiadian culture.

II. Remains

1. The shape of the city. The plan of the city

in the early phase was somewhat square with the south wall 92 m in length, east wall, 85 m in remaining length and west wall, 58 m in remaining length. In the middle and late phases, the city was re-designed and reconstructed, and extended to the west. The reconstructed city was in a rectangular plan, with the new south wall 135 m in length and the new west wall 45 m in length.

2. The construction of the wall. The wall was faced on both sides with dark gray stone slabs laid in sections and pointed with mud, and stone blocks in different sizes and earth filled the space between the stone faces. The cross section of the wall was in the shape of trapezoid; generally, the remaining height of the wall was 1–1.5 m, the thickness at the base was 2.7 m and at the “top (at present),” 2–2.2 m. Attaching to the outside of the wall, there were 6 *mamian* (bastions of the city walls in the Medieval Europe) and four corner towers. The plan of the *mamian* and the corner tower are in the shape of horseshoe 3 m long, 2.3 m wide and 0.2–1.3 m (remaining) high (Fig. 3). Only one city gate belonging to the early phase was found near the south end of the east wall. The gateway was 1.7 m wide with symmetric stone gate towers. In the middle phase this gate was blocked with stone slabs and changed into a part of the wall (Fig. 4).

3. The moat surrounding the city. 2.2 m to the outside of the city wall, there was a ditch might be used as moat. The cross section of the ditch was in the shape of a capsized trapezoid 7.5–9 m wide on top and 3 m deep. The bottom of the ditch was in half-cylinder shape. Between the inner side of the ditch and the outside of the wall, there was an earth protection 0.72 m thick. The deposit in the ditch could be divided into 3 layers. From the large amount of stone blocks in the layers 1 and 3 we infer that there might be two times of large-scale collapses of the city wall.

4. The buildings in the city. The categories of

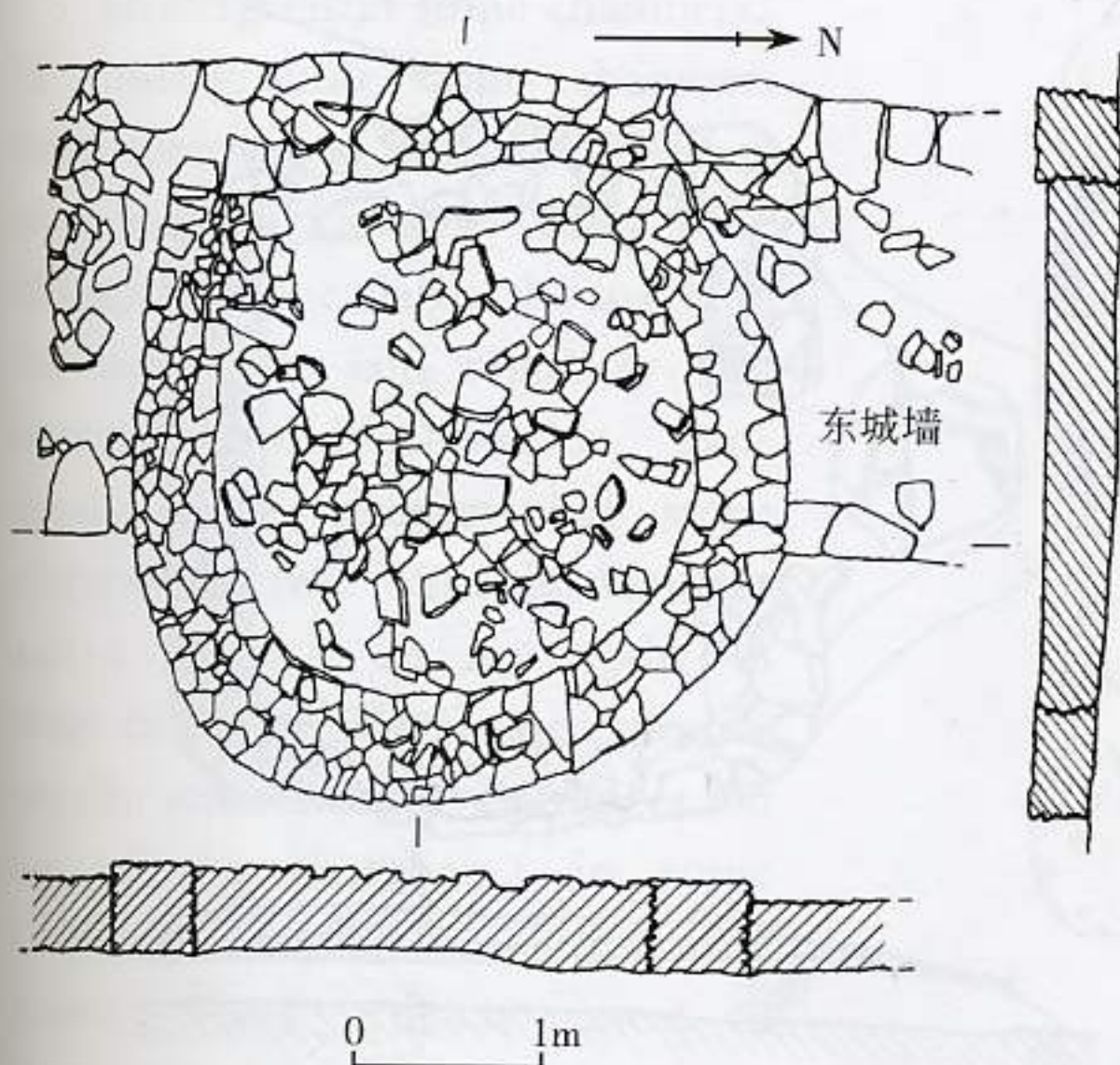


Fig. 3 Plan and side section of mamian No. 4



Fig. 5 Drainage hole Q34 (west-east)

buildings are yard wall, partition, lane, house, underground stone chamber and stone case.

The yard walls and the partitions were all built with stone slabs and pointed with mud. The thickness of the yard walls was about 0.5–0.6 m and that of the partitions, 0.3–0.4 m. Gates and drainage holes were opened on the yard walls. The gates were about 0.7–0.8 m wide and the drainage holes, 0.25–0.4 m. Some drainage holes were built in an “A”-shaped form flared outside (Fig. 5).

Lanes were built between the yard walls and linking each other along the walls. The lanes were 1.7 m wide with the part near the wall paved with stone slabs. The pavements were 1m wide and 0.5 m high. The other part was the ditch about 0.7 m wide (Figs. 6 and 7).

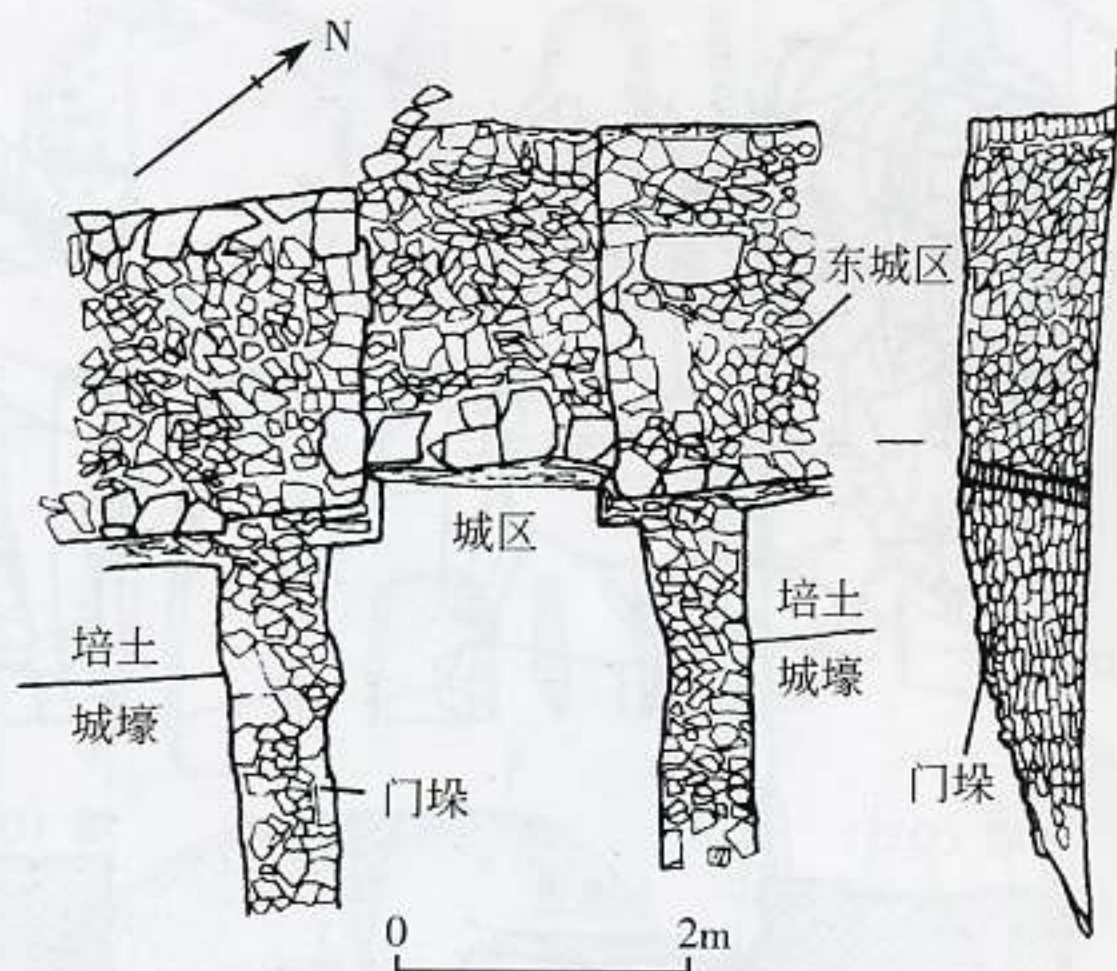


Fig. 4 Plan and elevation of the east gate



Fig. 6 Intersection of the streets in the city-site (taken from balloon)

Altogether 49 houses were excavated. The houses were in three sizes: large, medium and small. The large and medium-sized houses have stone aprons built with earth and edged with stone slabs. From the plan of the houses with the aprons we can classify them into three types: round house with round apron, square house with square apron and square house with round apron. The walls of the houses were built with stone slabs or adobe and earth. The large round houses were 5–6.5 m in diameter and their aprons, 8–10 m. The medium-sized houses were generally 3.5 m in diameter and their aprons, 6.4 m. The small houses usually had no aprons and the diameter of them were about 2.5 m. The aprons were usually edged with one or two rows of stone slabs. The surface of the apron

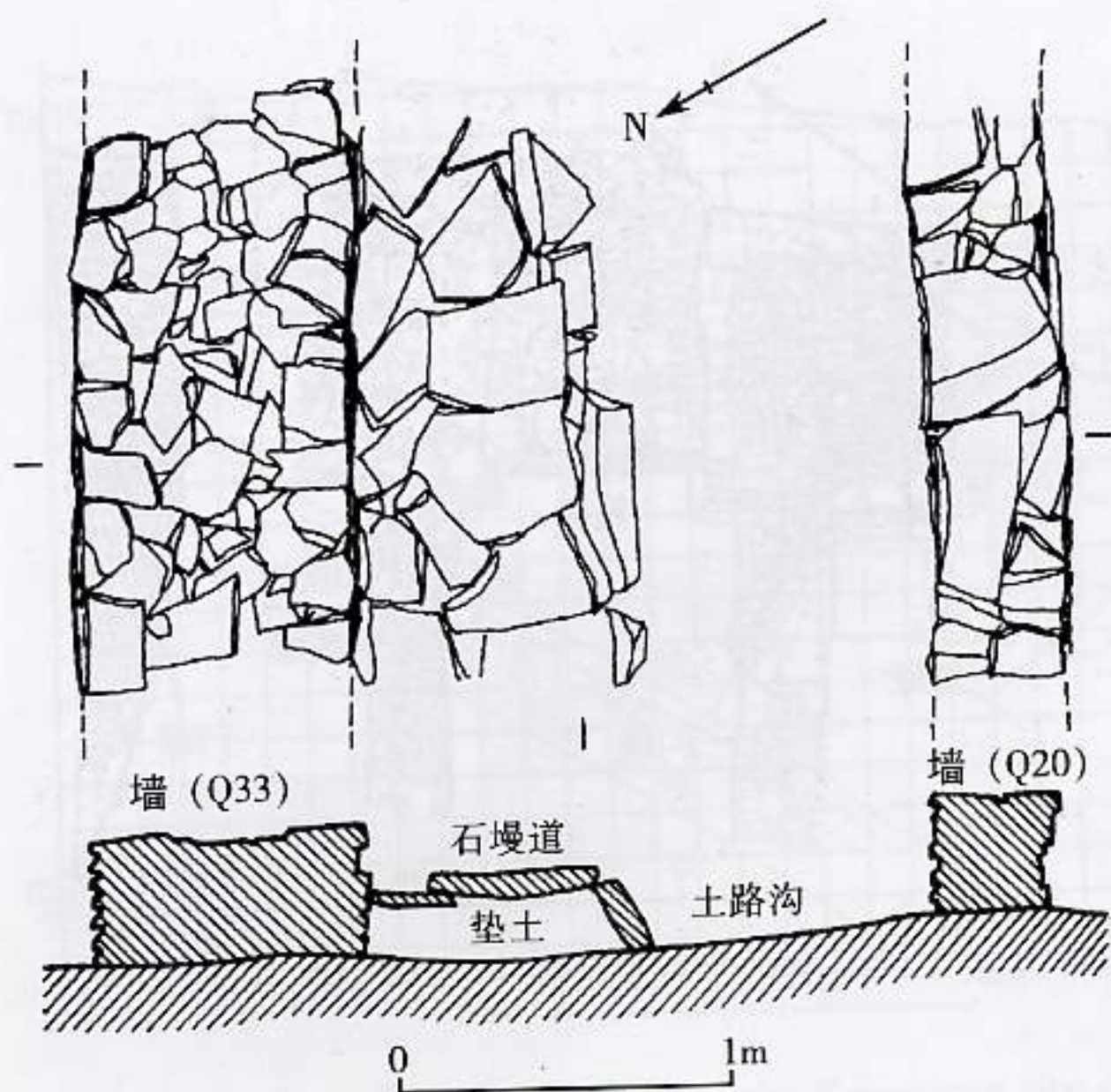


Fig. 7 Plan and side section of the yard wall and pavement under Layer 4 in T2912

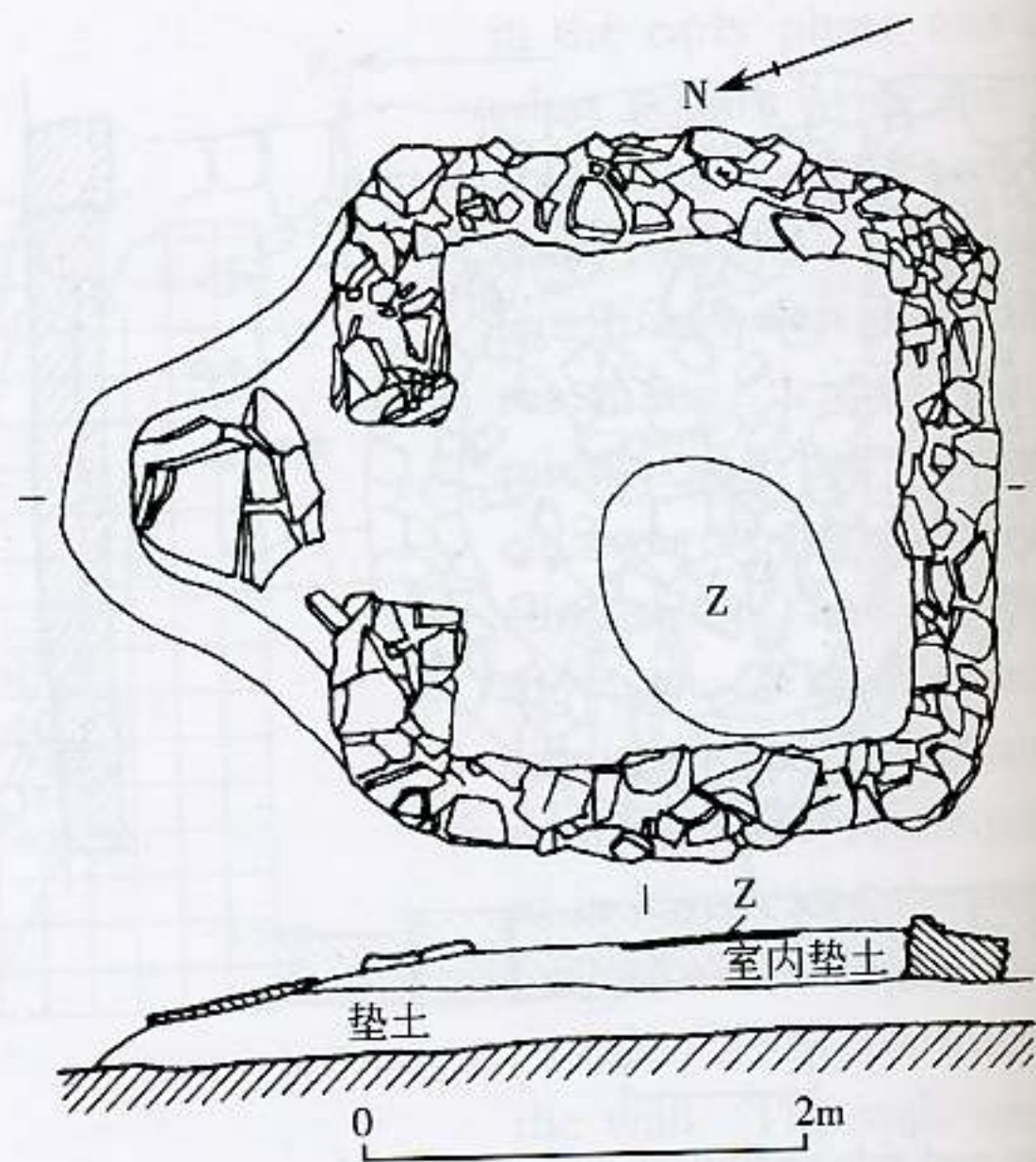


Fig. 8 Plan and side section of House F18

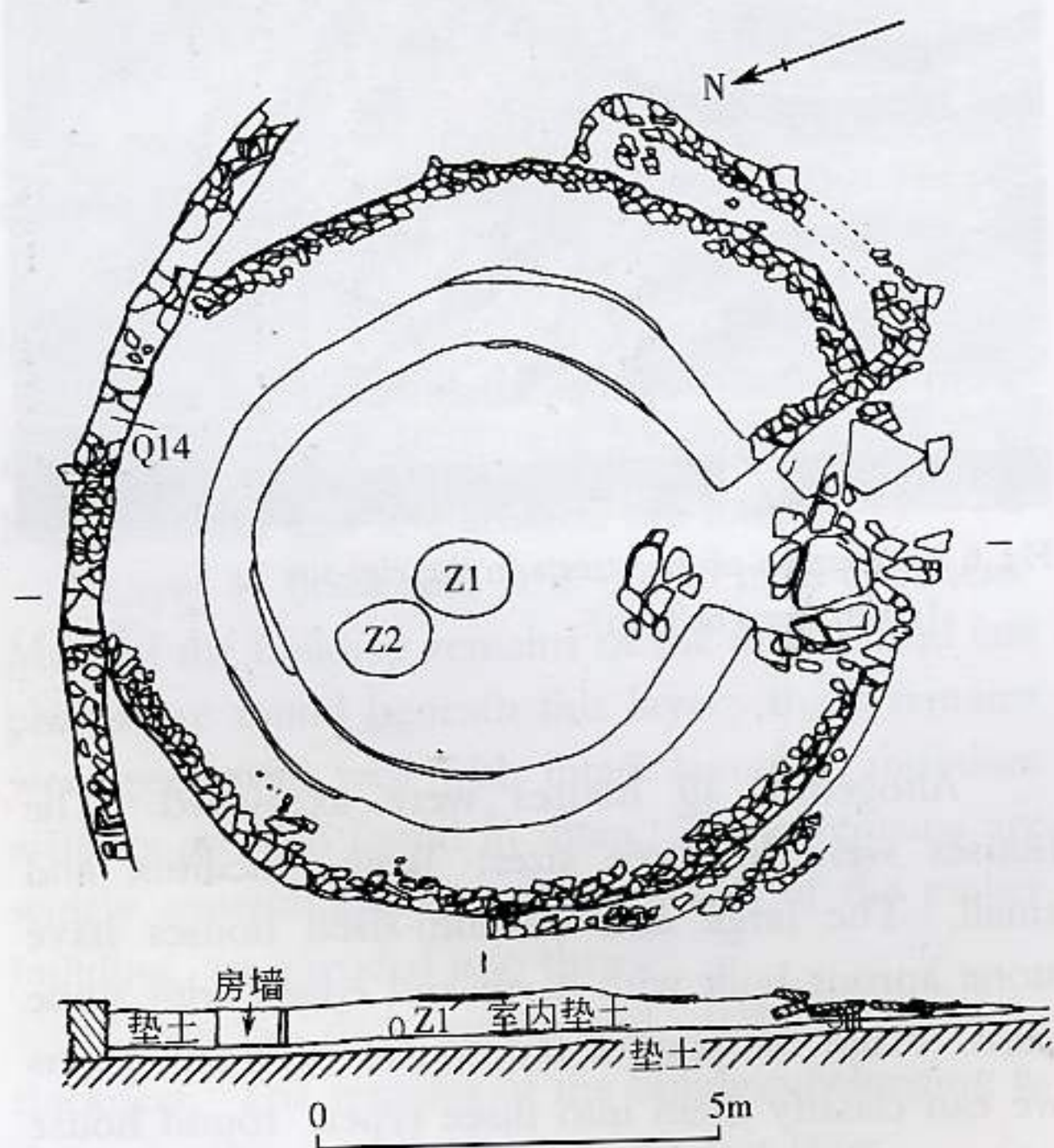


Fig. 9 Plan and side section of House F19

and the floor of the houses were covered with a layer of loess and the in-and outsides of the walls of some houses were daubed with thin mud. The ovens were commonly set at the corner of the house. Most of the earlier houses were round ones with round aprons and their doors were facing south with slope passages paved by stone slabs and protecting walls

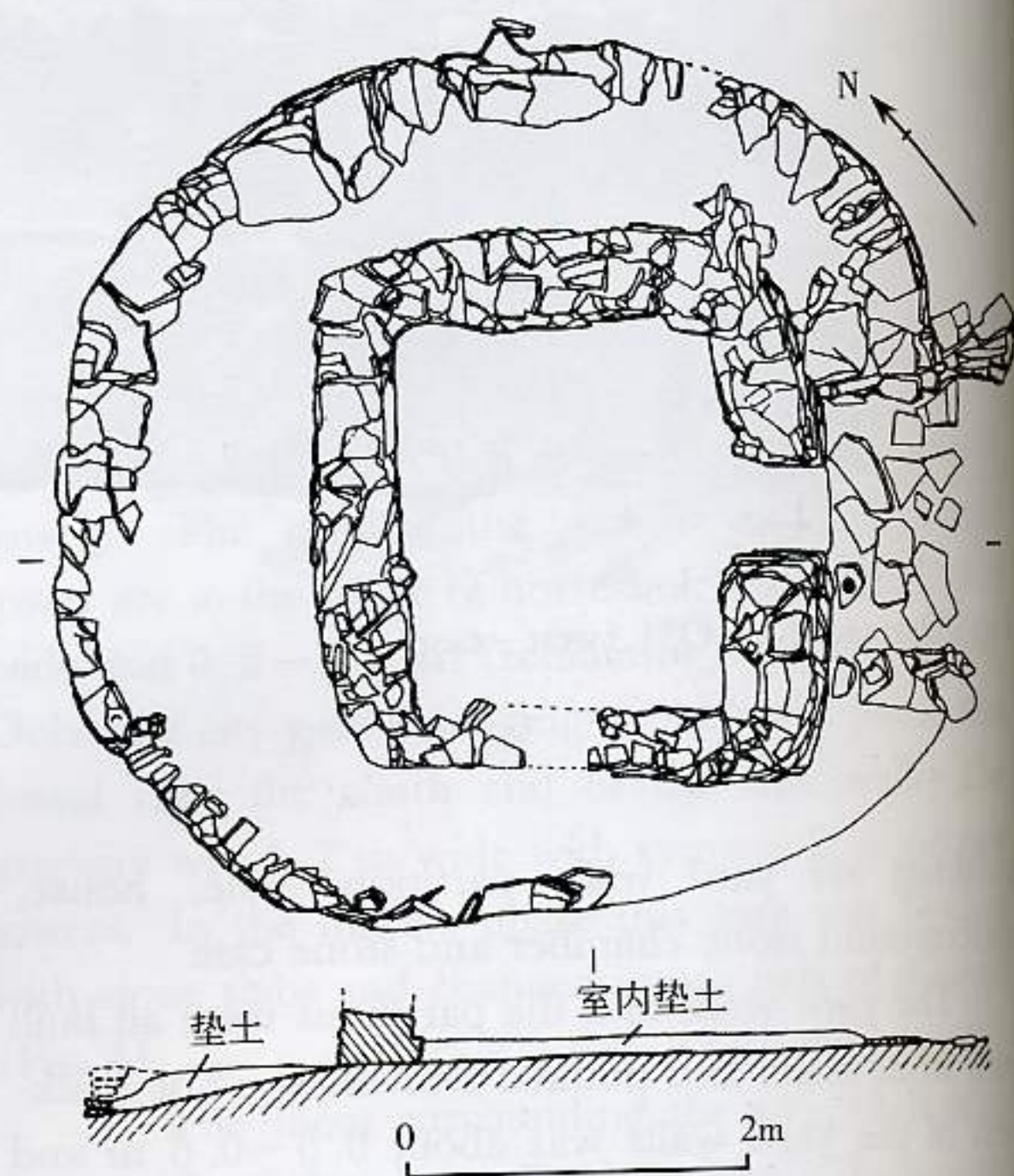


Fig. 10 Plan and side section of House F23

on both or one side. The houses in the middle and late phases were usually square or rectangular in plan, the aprons of whom were also square or rectangular. Some houses had no aprons. The doors of the houses in the middle and late phases were facing east or north. Artifacts were seldom seen in these houses (Figs. 8-10).

Underground stone chambers. 16 underground stone chambers were discovered and all of them were beneath Layer 4. They were all built of stone slabs; the inside of the walls was laid regularly and smoothly but the outside, randomly. The underground stone chambers were 1–2 m in diameter and 1.15–1.9 m in depth. A stone circle larger than the entrance usually encircled the entrances on top of the chambers. In some chambers, human skeletons were found. Many artifacts, most of them were daily utensils, were unearthed from these underground stone chambers. For example, the deposit in X12 could be divided into 3 layers: Layer 1, black earth mixed with stone blocks, 0.45–0.5 m thick, might be the collapsed deposit. Layer 2, yellow earth mixed with backed clay, 0.85 m thick. Three skeletons were found in this layer. Skeleton I, in the upper part, was of a supine adult female, heading east with bending legs and left arm laid on the chest and right arm stretching. Skeleton II, found under the legs of Skeleton I, was of a supine infant, heading east and facing south. Skeleton III, was also of a supine infant, heading south with stretching limbs and legs under the skull of skeleton I. Around and under the three skeletons, 5 pottery *guan*-jugs, 2 *yan*-steamers, 1 *li*-tripod, 1 *zun*-vessel and 1 *hu*-kettle were unearthed. All of the pottery wares were broken on purpose. Besides pottery wares, stone tools such as dish-shaped tool, knife, hoe, spade and ax, were also found. Layer 3, 0.2–0.25 m thick, was baked earth mixed with pieces of charcoal and ash.

Stone cases. 14 stone cases were discovered, all of which were built on Layer 5. Stone case was constructed with four stone slabs joined together into a square or rectangular case. Most of the stone cases were built on a larger stone slab; some stone slabs

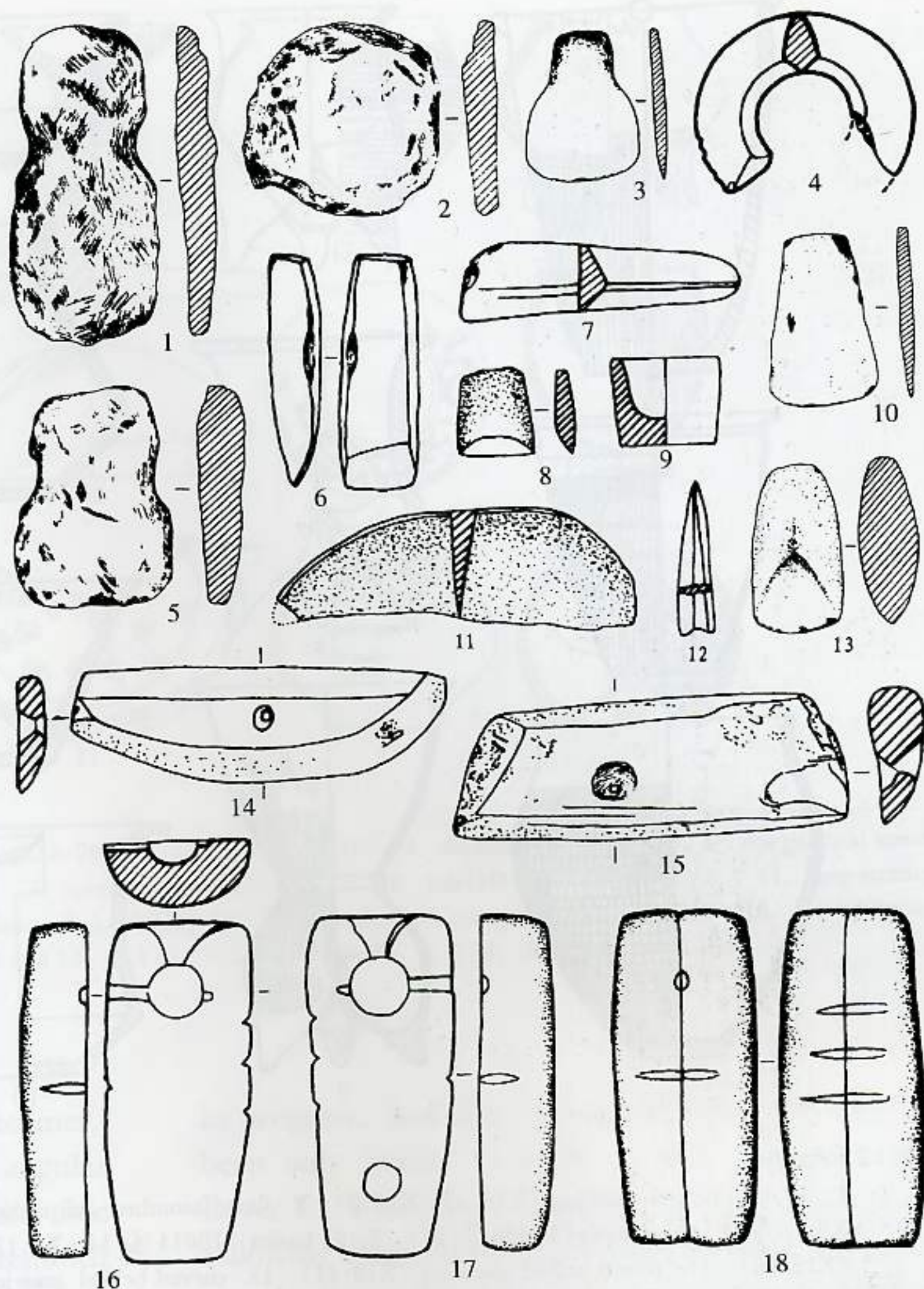


Fig. 11 Stone tools and ornaments

1. hoe (X9:28) 2. dish-shaped tool (F20:1) 3, 5, 10. spades (T2716 ④:6; T0918 ③:5; T2916 ④:14) 4. *jue*-earring (T2306 ④:36) 6. chisel (T2008 ④:10) 7, 14, 15. knife T1314 ③:8; X1:18; T2918 ②:3) 8. adz (T1906 ⑤:18) 9. mortar (X13:27) 11. sickle (T1905 ④:11) 12. arrowheads (T1314 ⑤:2) 13. ax (X12:9) 16–18. mold (T2404 ④:8, 16, 17 Separating; 18. Composed) (Scales: 4, 6, 16–18. 4/5; 7, 8, 11, 12, 14, 15. 2/5; the others 1/5)

were polished.

III. Artifacts

Most of the artifacts were unearthed in the cultural layers, underground stone chambers and ash pits, and seldom seen in the sites of houses. The main categories were pottery wares, stone and bone tools and bronzes.

1. Stone tools. Usually made of gray shale, brown sandstone or white limestone. Chipped stone tools were more than polished ones in number, and the polished stone tools were more than chipped

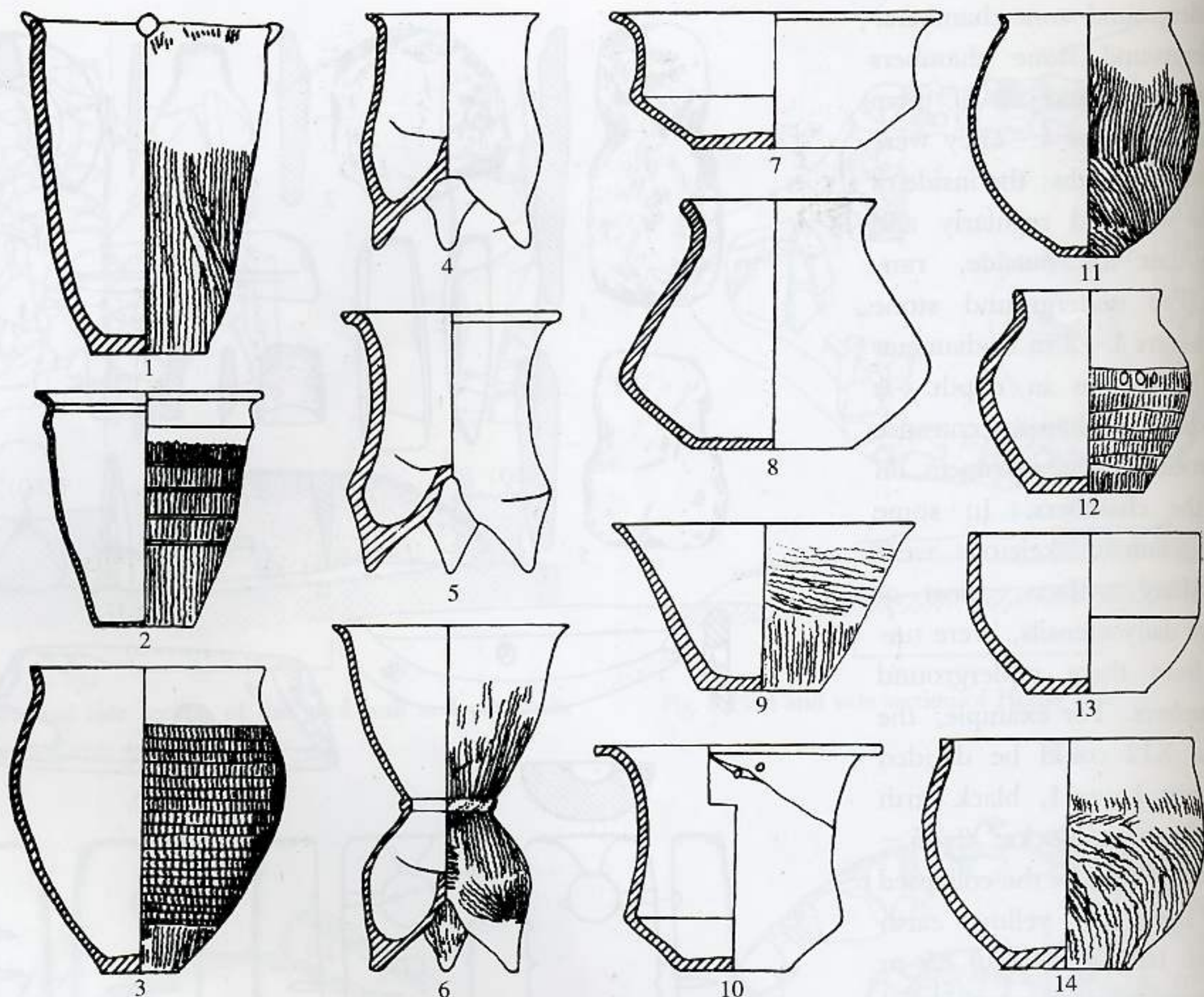


Fig. 12 Pottery

1, 3. deep bellied *guan*-jugs (X18:27, X13:5) 2. flared-mouthed *zun*-pitcher (T3113 ④:18) 4, 5. upright-bellied *li*-tripod (X20:11, X9:15) 6. *yan*-steamer (T2908 ⑤:27) 7, 9. basins (T3014 ④:14, X9:17) 8. angular bellied *guan*-jug (X12:21) 10. *zun*-pitcher (X12:26) 11. round bellied *guan*-jug (X18:41) 12. curved bellied *guan*-jug (X1:46) 13, 14. *bo*-bowls (H19:2, X18:43) (Scales: 3, 4, 13, 14. c. 1/3; 2, 6, 11. c. 1/12; others. c. 1/6)

ones in type. The main types of chipped stone tools were spade, hoe, ax and dish-shaped tool. The polished ones, usually entirely polished, were three-edged knife with double blade, straight-back-and-bladed knife with a hole, straight-back-and-curved-bladed knife with a hole, curved-edged ax, shouldered spade, straight-edged chisel with the blade sharpened from one side, straight-edged adz with the blade sharpened from one side, flat arrowhead with notch, curved-back-and-edged sickle, cylindrical mold for casting bronzes, mortar with upright mouth, angular rim and flat bottom, broken *jue*-earring (Fig. 11).

2. Pottery wares. Most of them were sandy wares. The reddish-brown wares made up the majority, followed by gray wares, red wares and polished black pottery. The pottery wares were usually decorated with cord marking pattern or cord mark-

ing pattern interlocked with raised stripes or intersected by bowstring patterns. The pottery wares were made with clay-strip forming or section-joining techniques, the wheel making were rarely seen. The main types of the pottery wares were sandy reddish-brown round-bellied *guan*-jug decorated with cord marking pattern, plain sandy reddish-brown angular-bellied *guan*-jug, ring footed sandy reddish-brown *guan*-jug decorated with cord marking pattern, fine gray *weng*-urn decorated with cord marking pattern, fine black upright-bodied *li*-tripod and *li*-tripod with flower petal-shaped rim and decorated with snake pattern. The other types were round-bellied sandy reddish-brown *yan*-steamer, plain sandy gray basin, flared-mouthed sandy gray *zun*-vessel decorated with cord marking pattern, angular bellied fine reddish-brown *zun*-vessel, plain high-necked sandy reddish-brown *hu*-kettle, remain-

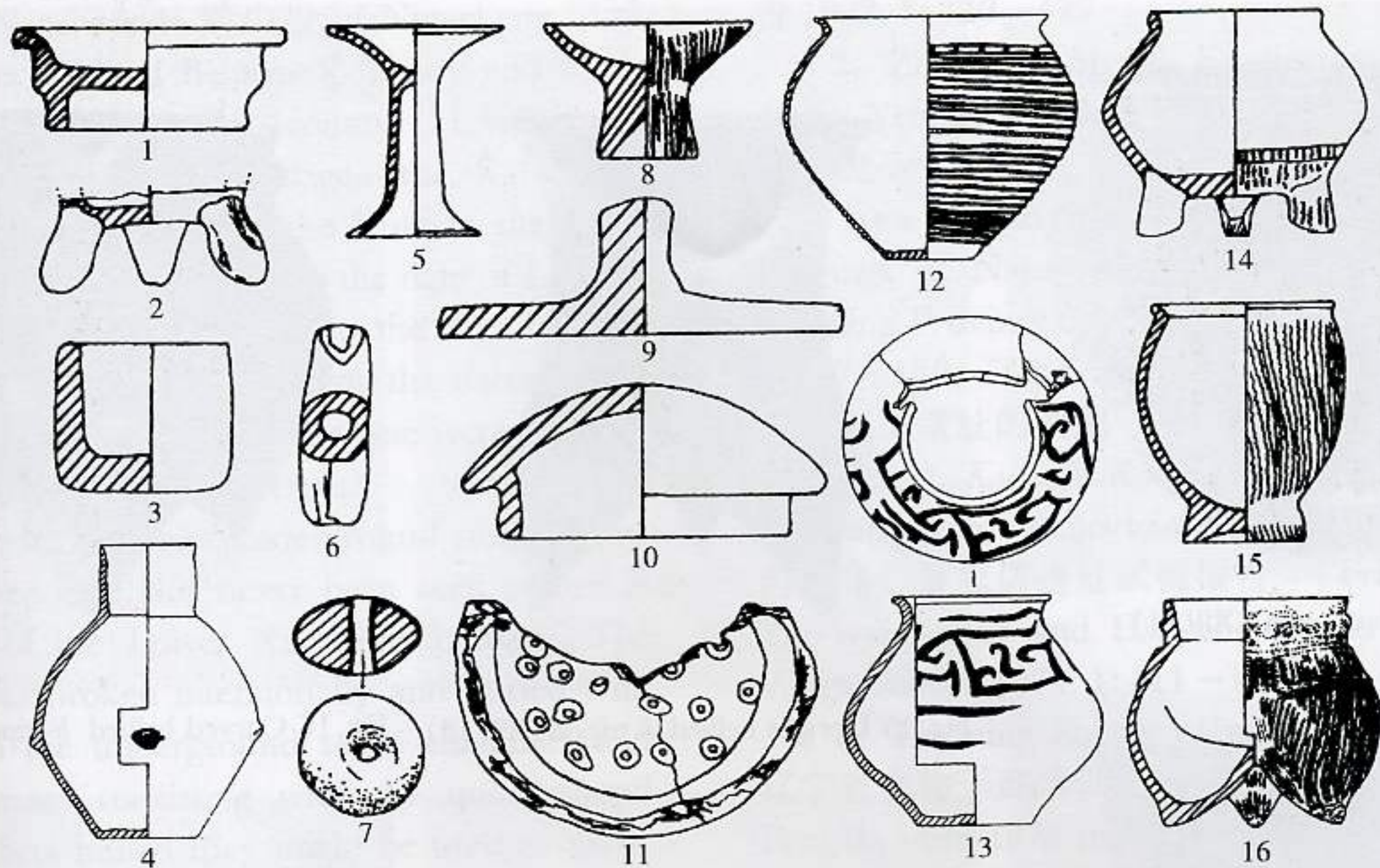


Fig. 13 Pottery

1. dish (X1:61) 2, 14. *ding*-tripods (T2816 ④:8, X18:20) 3. cup (T0818 ④:10) 4. *hu*-kettle (X12:25) 5, 8. *dou*-pedestal stands (F30:2, X18:10) 6. net weight (T1314 ⑤:7) 7. spindle whorl (X5:22) 9, 10. lids (H19:3, T2204 ④:9) 11. *zeng*-steamer (T2310 ④:25) 12. *weng*-urn (X9:11) 13. painted *hu*-kettle (X1:42) 15. ring-footed *guan*-jug (T2306 ⑤:25) 16. curved bellied *li*-tripod (H34:1) (Scales: 1, 8, 9. c. 1/3; 4, 5 and 13. c. 1/11, 12. c. 1/23, 15. c. 1/4; the others. c. 1/6)

ing bottom of sandy reddish-brown *zeng*-steamer, leg of sandy reddish-brown *ding*-tripod, angular bellied fine gray *ding*-tripod, angular bellied fine reddish-brown *bo*-bowl, plain fine gray high-stemmed *dou*-pedestal stand, high solid-stemmed sandy reddish brown *bo*-shaped *dou*-pedestal stand decorated with cord marking pattern, sandy reddish brown lid, high ring footed fine reddish brown dish, fine reddish brown cup decorated with cord marking pattern, sandy reddish brown spindle whorl, fine brown net weight and painted fine reddish brown *hu*-kettle (Figs. 12–19).

3. Bone artifacts. Made of limb bone or scapular of animals and traces of grinding still could be seen on most of them. The main types were needle, arrowhead, hairpin, awl, oracle bone and pendant.

4. Bronze. Only one knife was found. The blade and the hilt were cast integrally. The tip was broken, the blade was curved and the back was zigzag. The overall length of the knife was 15.5 cm and width, 2.3 cm.

IV. Conclusion

The excavation of the Kangjiatun city-site is still

in progress, and the field work inside the city has been only limited in Layer 4 with few parts into Layer 5. Therefore, we can only put forward the following thoughts on our finished work.

1. From the deposit in the southeast moat we inferred that the city wall had suffered from two times of large-scale collapses. The remains of wall and *mamian* showed many traces of reinforcing and rebuilding. The building remains beneath Layer 4 widely overlapped and/or intruded those beneath Layer 5, and this phenomenon implied this stone city was used for a rather long time.

2. Based on the building remains beneath Layer 4, we analyzed that the area inside the city was yards and yard groups in classes divided by walls and partitions. Between the walls separating and enclosing the yard groups, there were lanes linking each other, each yard group and yard also had entrances leading to these lanes. The lanes were built very exquisitely: the part near the wall was pavements constructed with stone slabs and the other part was shallow ditch. On the walls of yard groups, there were drainage holes conducting the water to the shallow ditches. In each yard group, partitions framed yards enclosing houses built on platforms,



Fig. 14 Pottery *weng*-urn (X9:11)



Fig. 15 Upright bellied *li*-tripod (X9:15)



Fig. 16 Curved bellied *li*-tripod (H34:1)



Fig. 17 *Yan*-steamer (T2908 ⑤:27)



Fig. 18 Flared-mouthed *zun*-vessel (T3113 ④:18)



Fig. 19 *Zun*-vessel (X12:26)

underground stone chambers, stone granaries and stone cases.

3. Referred to the stratigraphic evidences and the relationships of superimposition and intrusion among the remains of the buildings, we divided the remains inside the stone city into three phases. Phase I was represented by the building remains beneath Layer 5. Phase II was represented by the building remains beneath Layer 4. They belonged to the middle and late stages of this city-site, some buildings succeeded the foundations of Phase I, but most of them were re-planned, rebuilt and/or extended. Phase III was represented by the building remains beneath Layer 3, which belonged to the stage of declining and abandoning after the late stage of the city-site.

4. From the features of the artifacts unearthed in the city-site, we judge the site to remain of the

Lower Xiajiadian culture. The typical artifacts were *guan*-jug decorated with cord marking patterns, upright-bellied *li*-tripod and dish-shaped tool. The pottery wares such as *guan*-jug, *li*-tripod, *zun*-pitcher, *yan*-steamer, *dou*-pedestal stand and dish were made regularly and fired in rather high temperature but the jug, basin and bowl were made roughly and fired in low temperature. In general, the black and red pottery wares were refined on potter's wheel and polished but the sandy reddish-brown pottery wares were not, only the part on the shoulder was polished and the traces of cord marking pattern were still visible. Most of the pottery wares were decorated with cord marking patterns and the patterns were polished. On the whole, the majority of the pottery wares were similar to that the sites of the Xiajiadian culture at Dongshanzui 东山嘴, Zhizhushan 蜘蛛山, Yaowangmiao 药王庙 and Xiajiadian of Chifeng

赤峰 city, Nanshangen 南山根 of Ningcheng 宁城 city, Fengxia 丰下 of Beipiao 北票 city and Shuiquan 水泉 of Jianping 建平 county. However, in view of the pottery assemblage, the Kangjiatun city-site was most similar to the Fengxia site. The data of radiocarbon dating show the date of Layer 4 in T2606 was 3410 ± 245 BP and the X12 beneath Layer 4 was 3420 ± 75 BP. Thus the dates of the middle and late phases of the city-site were approximately 3500 years before present.

5. The structures of underground stone chamber and stone case had never been seen before in other sites of the Lower Xiajiadian culture. The pottery wares broken intentionally and buried with skeletons in the underground stone chambers and the stone cases coexisting with the underground stone chambers hinted they might be used as sacrificial offering, but further researches are needed for more conclusions.

References Cited

1. Liaoning Sheng Bowuguan deng 辽宁省博物馆等 (1983). "Neimenggu Chifeng xian Sifendi Dongshanzui yizhi shijue jianbao 内蒙古赤峰县四分地东山嘴遗址试掘简报" (Excavation of the Dongshanzui Site at Chifeng, Inner Mongolia). *Kaogu* 考

古 1983. 5: 420-429.

2. Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Neimenggu Gongzuodui 中国社会科学院考古研究所内蒙古工作队. "Ningcheng Nanshangen yizhi fajue baogao 宁城南山根遗址发掘报告" (Trial Diggings at Nanshangen in Ningcheng County, Liaoning Province). *Kaogu Xuebao* 考古学报 1975. 1: 117-140; "Chifeng Zhizhushan yizhi de fajue 赤峰蜘蛛山遗址的发掘" (Excavations at Zhizhushan in Chifeng). *Kaogu Xuebao* 1979. 2: 215-244; "Chifeng Yaowangmiao, Xiajiadian yizhi shijue baogao 赤峰药王庙、夏家店遗址试掘报告" (Trial Diggings at Yao-wang-miao and Hsia-chia-tien in Ch'ih-feng). *Kaogu Xuebao* 1974. 1: 111-144.

3. Liaoning Sheng Wenwu Ganbu Peixunban 辽宁省文物干部培训班 (1972). "Liaoning Beipiao Fengxia yizhi 1972 nian fajue jianbao 辽宁北票丰下遗址 1972 年发掘简报" (Preliminary Report of the Excavation at Fengxia Site, Beipiao County in 1972). *Kaogu* 1976. 3: 197-210.

4. Liaoning Sheng Bowuguan 辽宁省博物馆, Chaoyang Shi Bowuguan 朝阳市博物馆 (1986). "Jianping Shuiquan yizhi fajue jianbao 建平水泉遗址发掘简报" (Preliminary Report of the Excavation at Shuiquan Site, Jianping County). *Liaohai Wenwu Xuekan* 辽海文物学刊 Vol. 2: 11-29.

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