

The Guangfulin Site in Songjiang District, Shanghai in 1999–2000

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The Guangfulin 广富林 Site is located at the Guangfulin Village, Sheshan 佘山 Township, Songjiang 松江 District, Shanghai 上海. The landscape is plain with an altitude of 2–3 m. As part of the project to investigate the formation process of the ancient civilizations around the Lake Tai 太湖 area, we conducted excavation and coring at this site in 1999–2000. The remains of the Liangzhu Culture 良渚 are primarily from burials. We also found a new kind of late Neolithic remains, which we temporarily name them as the “Guangfulin Remain.”

I. The Liangzhu Culture

1. Features

The remains of the Liangzhu Culture include cemetery and ash pits, ditches, and special features within the cemetery. There are nine ash pits, including sacrifi-

cial pits. The shape of these pits includes circular, oval, and irregular shapes, and they have round bottom. There are three ditches. For instance, G18 is a southwestern-northeastern oriented ditch with vertical walls on the upper part and oblique walls on the lower part. There are two ridges made of sterile soil. The refills of this ditch contain ceramic *ding*-tripods, *dou*-pedestal stands, *guan*-jars, and *gui*-containers as well as ceramic balls, bone tools, and animal bones.

A number of special features were found. For instance, TJ6 is a pile consists of burnt clays of different sizes. These burnt clays are either rectangular or L-shaped, and they are possibly debris of house walls (Fig. 1).

2. Burials

23 burials were found. Most of them have rectangular pits, and some have log coffins painted both



Fig. 1 Liangzhu Culture remains at Guangfulin Site in Songjiang District, Shanghai

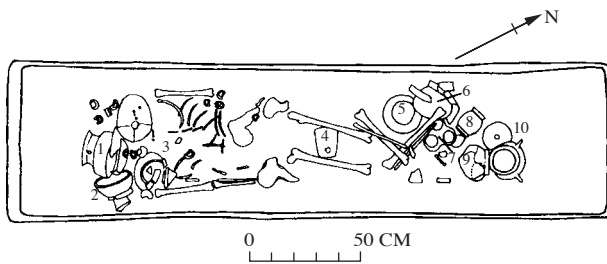


Fig. 2 Plan of burial M3

1–3. pottery *gui*-food containers 4. stone *yue*-battle-axe 5, 6. pottery *pan*-plates 7. pottery three-connected *yi*-ewer 8. pottery cup 9. pottery *hu*-kettle with double handles 10. pottery *ding*-tripod

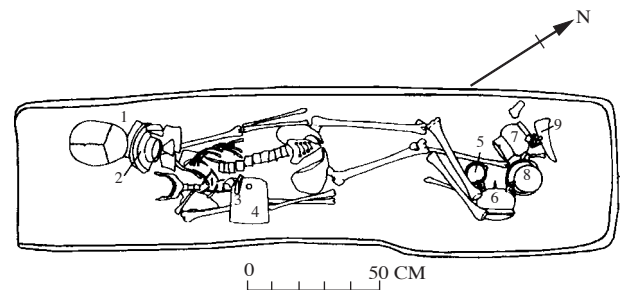


Fig. 3 Plan of burial M8

1, 2. pottery *dou*-pedestal stands 3. stone adze 4. stone *yue*-battle-axe 5, 7. pottery *hu*-kettles with double handles 6, 8. pottery *ding*-tripods 9. stone sickle

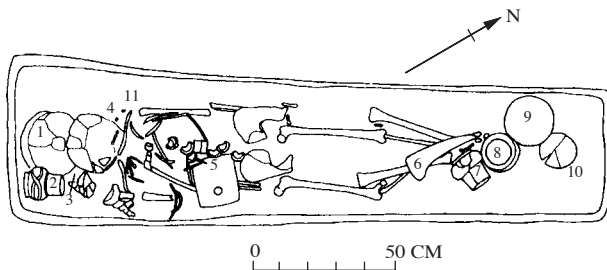


Fig. 4 Plan of burial M9

1. pottery *dou*-pedestal stand 2, 7. pottery *hu*-kettles with double handles 3. pottery cup 4. jade tube 5. stone *yue*-battle-axe 6. stone sickle 8. pottery *ding*-tripod 9. broken pottery object 10. pottery lid 11. bone arrowhead

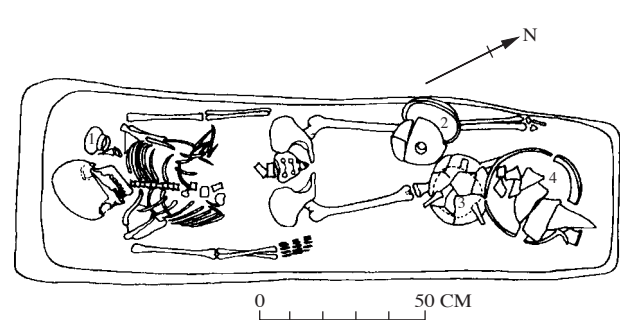


Fig. 5 Plan of burial M13

1. pottery *hu*-kettle with double handles 2. pottery *dou*-pedestal stand 3. pottery *ding*-tripod 4. pottery *guan*-jar

interiorly and exteriorly. A number of burials have rocks as indicators on top of the pits. Most of the dead are oriented toward southwest, the skeletons are mostly well preserved, but some of them were disturbed and thus the bones were misplaced in a wrong location. Some sacra were possibly deliberately placed nearby the head. Most of the dead were identified as adults of around 30 years old. Six burials are elaborated as follows.

M3. This burial is 2.65 m long by 0.69 m wide and 0.56 m deep. The orientation is 207 degrees. Female, 25–30 years old. The skull was upside down, and the ribs are dispersed. The pelvis was turned over, and the legs were crossed with each other. Some vertebrae were placed nearby skulls. There are 10 burial goods placed around head and feet (Fig. 2).

M8. The mouth of the burial pit is 2.2 m long by 0.6 m wide and 0.19 m deep. The orientation is 207 degrees. Male, 20–23 years old, facing up, and the legs and arms are flexed. The skull was misplaced, and the burial goods were put under legs. Nine burial goods were found, mostly under legs, and only one stone axe was put on the chest (Fig. 3).

M9. The mouth of the burial pit is 2.15 m long by 0.58 m wide, and the surviving depth of the pit is 0.24 m. The orientation is 210 degrees. Male, 30–35 years old, facing up with arms and legs stretched. The sacrum was nearby the skull. There are 11 burial goods, mostly near head and feet, but one stone axe was on the chest (Fig. 4).

M13. The mouth of the burial pit is 1.8 m long by 0.6 m wide, and the pit is 0.29 m deep. The orientation is 208 degrees. Female, 20–23 years old, facing up with arms and legs stretched. There are four pottery objects in the burial, one is nearby the head, and others are under the legs (Fig. 5).

M16. The mouth of the burial pit is 0.5 m long by 0.3 m wide, and the pit is 0.1 m deep. The orientation is 190 degrees. Infant, about 1 year old, facing up with arms and legs stretched. A big rock was placed to the south of the pit. One ceramic cup was in the burial.

M21. The mouth of the burial pit is 2.3 m long by 0.76 m wide, and the pit is 0.48 m deep. The orientation is 208 degrees. Male, 25–30 years old. Facing up with arms and legs stretched. A rock was placed in front of the



Fig. 6 Burials M19 and M21

skull. There are 11 burial goods placed nearby head and legs (Fig. 6).

3. Artifacts

The artifacts found in these burials include pottery objects, stone tools, jades, and bone tools. Most of them are pottery wares.

Pottery is either sand-tempered or made of fine clay. The sand-tempered pottery is mostly reddish on exterior, and few of them are brownish. The exterior color of the fine clay pottery include gray, brown, and black, and some of the grayish pottery have black slips or burnished black cover. Most of them are plain, and few are decorated with lines, incision, punctuated dots, and rectangular or circular cut-outs. Some of them were painted with cord designs and lines. Few vessels have incised symbols on the bottom. The vessel types include *ding*-tripod, *dou*-pedestal stand, *hu*-kettle with double tuber handles, *gui*-container, cup, plate, *guan*-jar, lid, and *yi*-ewer with triple interconnected vessel with spout.

Ding-tripods. Sample M3:10, reddish, red slips, flat foot decorated with vertical incised lines and punctuations. It has a grayish lid with a spiral pommel, and the interior of the lid has traces of potter's wheels. The height is 17.6 cm. Sample M9:8, reddish, red slips on exterior, triangular foot. The diameter of the mouth is 12 cm. Sample M13:3, reddish. There are four flat

handles decorated with punctuated dots on the rim. It has chisel-shaped foot decorated with open works. It has lid with spiral pommel (Fig. 7:1–3).

Dou-pedestal stands. This kind of vessel was made of fine clay, and the exterior color includes gray, black slips on gray, black slips on brown, and blackish gray. Few have lid. Sample M23:2, grayish pottery with black slips, its bowl and pedestal have tile ridge-shaped designs on exterior, and the pedestal is also decorated with punctuated dots and rectangular open works. The diameter of the mouth is 19.2 cm. Sample M13:2, grayish pottery with black slips, its mouth has three small handles with equal distance from one to another, its pedestal has circular open works and it has lid with a spiral pommel. The diameter of the mouth is 18.2 cm (Fig. 7:4–6).

Hu-kettles with double tuber handles. This kind of vessel was made of fine clay, and the exterior color includes gray, black, black slips on gray, blackish-gray, and black slips on brown. Sample M9:2, black slips on gray, and the cord design and lines were painted with red pigment. Height: 12.3 cm. Sample M15:1, black slips on gray, and ring foot was decorated with tile-ridge designs and rectangular open works. There is a X. Height: 17.8 cm (Fig. 7:7–9).

Gui-containers. This kind of vessel was made of fine clay, and the exterior color includes gray and black

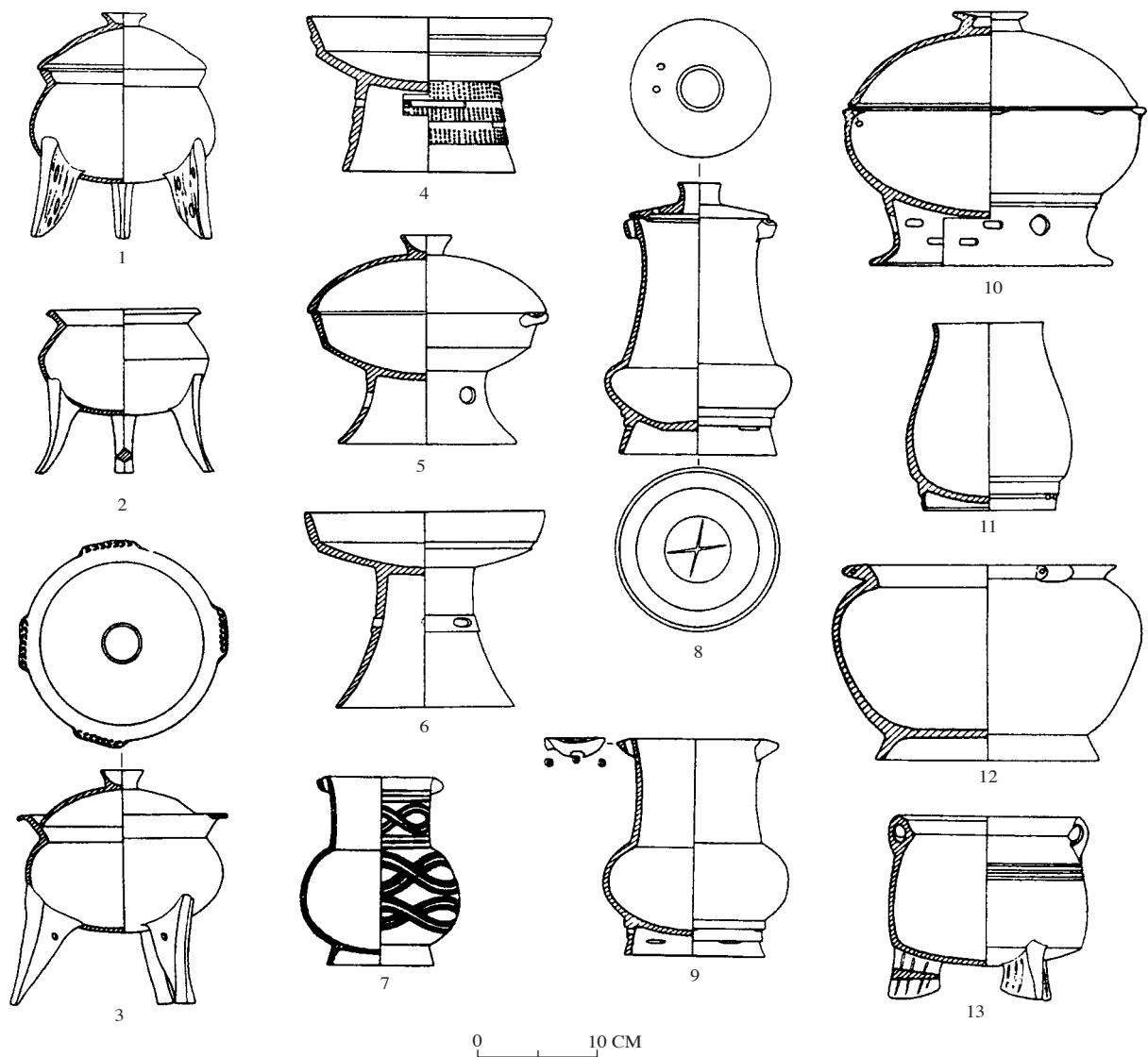


Fig. 7 Pottery artifacts from burials of Liangzhu Culture

1–3. *ding*-tripods (M3:10, M9:8, M13:3) 4–6. *dou*-pedestal stands (M23:2, M13:2, M23:3) 7–9. *hu*-kettles with double handles (M9:2, M15:1, M23:5) 10. *gui*-food container (M3:1) 11. cup (M2:2) 12, 13. *guan*-jars (M21:7, M21:2)

slips on gray. Sample M3:1, black slips on gray. There are seven small holes on its rim, and the ring foot was decorated with both rectangular and circular open works. Vertical mouth was covered by a lid with a spiral pommel (Fig. 7:10).

Cups. Fine clay vessel, gray, black slips on gray, and black on gray. Sample M2:2, gray. There are two perforations on the short ring foot with tile-ridge designs (Fig. 7:11).

Guan-jars. Fine clay vessel, gray and black slips on gray. Sample M21:7, black slips on gray. There are three horizontal handles on the rim with equal distance from one another. The mouth diameter is 12.2 cm. Sample

M21:2, black slips on gray. There are two handles on the rim, and the body was decorated with concave lines. Round bottom with fish fin-shaped foot decorated with vertical incised lines. The mouth diameter is 11.8 cm (Fig. 7:12 and 13).

Yi-ewer with triple interconnected vessel with spout. Fine sand-tempered, red. Sample M3:7, plain, the three bodies were connected by holes, and the spout was upright. Height: 7 cm (Fig. 8).

The stone tools include *yue*-battle-axes, adzes, sickle, plough, and plowing tools. Jades include drill-shaped artifacts, ring, *cong*-tube, bead, and *jue*-earrings. Bone tools include arrowheads.



Fig. 8 Pottery three-connected *yi-ewer* (M3:7, Liangzhu Culture)

II. The Guangfulin Remains

1. Features

15 ash pits were found. The shapes of the pit mouth include circular, oval, square, and irregular shapes. Some pits have good walls which were possibly built specially.

2. Artifacts

Most of the artifacts are pottery, and there are few stone tools, bone tools, and teeth tools.

Pottery was either sand-tempered or made of fine clay. The sand-tempered pottery accounts for 65%, and fine clay pottery accounts for 35%. The color of the sand-tempered pottery includes gray, black, and reddish brown. The color of the fine clay pottery includes gray, black, and red. Most pottery objects were plain, and major decoration is the convex lines. Other designs include incision, impressions, and appliqué (Fig. 9). The vessel types are *ding*-tripods, *guan*-jars, *weng*-urns, *dou*-pedestal stands, basins, plates, *bo*-bowls, and cups.

Ding-tripods. All tripods are sand-tempered. The rims are either flared or rolled outwards. Some vessels have rims decorated with concave lines. Most vessels have laterally attached triangular feet. Sample H43:1, round bottom with three laterally attached triangular feet. The upper body has two groups of concave lines, and the bottom has irregularly incised lines. The diameter of the mouth is 15.8 cm. Sample IT1238 ③:3, the rim is slightly concave, circular belly, round bottom, laterally attached triangular feet with broken end, and the bottom of the body is decorated with irregularly incised lines. The diameter of the mouth is 18 cm (Fig. 10:1 and 2). Sample H53:6, black, outward rolled rims, oblique shoulder. The body under the rim was decorated

with oblique fine cord-marks, and there were three concave lines cut into the cord-marks on the shoulder.

Guan-jars. Sand-tempered or made of fine clay. Sample IT0546 ⑦:34, sand-tempered, gray. It has a flared rim, a restrained neck, and a round shoulder. Several concave lines were decorated under the rim, and the shoulder was decorated with incised oblique lines and appliqué. Sample IT0545 ⑧:11, sand-tempered, gray. It has a wide flared rim with concave surface and a round shoulder. The body under the rim was decorated with basket-impressions. Sample H42:5, made of fine clay, gray. It has wide rim. The shoulder was decorated with basket-impressions. Sample H53:8, made of fine clay, black. It has a vertical mouth, round shoulder and is plain. Sample IT0546 ⑧:36, burnished black. It has a flared mouth, round shoulder and is plain (Fig. 10:3–5).

Weng-urns. Sample IT0546 ⑧:35, sand-tempered, gray. It has a restrained mouth and a round shoulder. The body is decorated with oblique cord-marks, and there is a circle of appliqué on the shoulder. Sample H53:7, sand-tempered, gray. It has a vertical mouth and a flared rim. There are two circles of convex lines on the neck. The wide shoulder is decorated with joint designs consist of oblique incisions and concave lines. Sample IT0645 ⑧:41, sand-tempered, red. It has a vertical mouth and a round rim. The shoulder is decorated with horizontal cord-marks (Fig. 10:8 and 9).

Dou-pedestal stands. This kind of vessel can be divided into two types. The first type has short wide pedestals. Sample IT1238 ③:1, made of fine clay, gray. It has a wide mouth, a shallow belly, and a wide pedestal (broken). There are three convex lines on the pedestal. The second type has thin high pedestal. The mouth diameter is 29.8 cm. Sample IT0645 ⑧:43, made of fine clay, black. The pedestal is decorated with a circle of ridge and six circles of concave lines. The bottom of the pedestal is trump-shaped. Its height is 25 cm (Fig. 10:10 and 11).

Gui-pitcher. Only one spout was found. It is sand-tempered, grayish, and decorated with three convex lines.

Basins. Most of them are plain. Sample IT0546 ⑨:38, made of fine clay, gray. It has a flared mouth and a round belly. The mouth diameter is 29.6 cm. Sample IT0545 ⑨:13, made of fine clay, gray. It has a flared mouth, a shallow belly and a flat bottom. The mouth diameter is 24 cm (Fig. 10:6 and 7).

Cups. Sample IT0546 ⑨:37, made of fine clay, gray. It was made on potter's wheel. Only the lower part

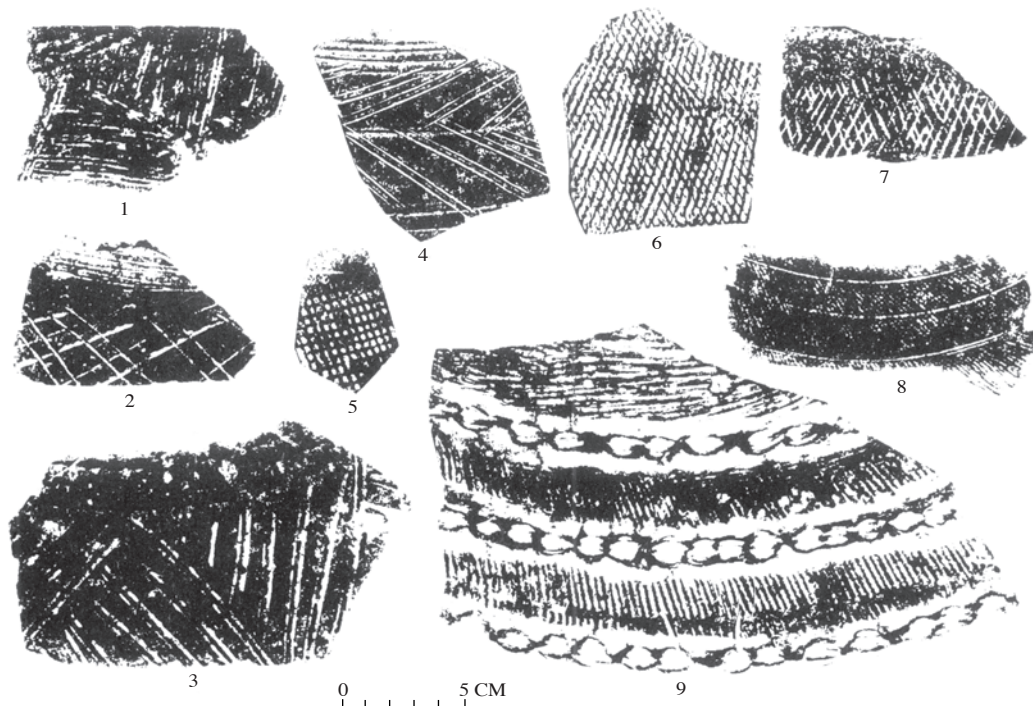


Fig. 9 Pottery patterns of the Guangfulin Site

1– 4, 7. carved patterns (IT0645 ④:47, 48; H53:11-13) 5, 6. trellis patterns (IT0645 ④:49; H53:14) 8. cord marking with line in between (H53:10) 9. cord marking with appliqué in between (IT0645 ④:46)

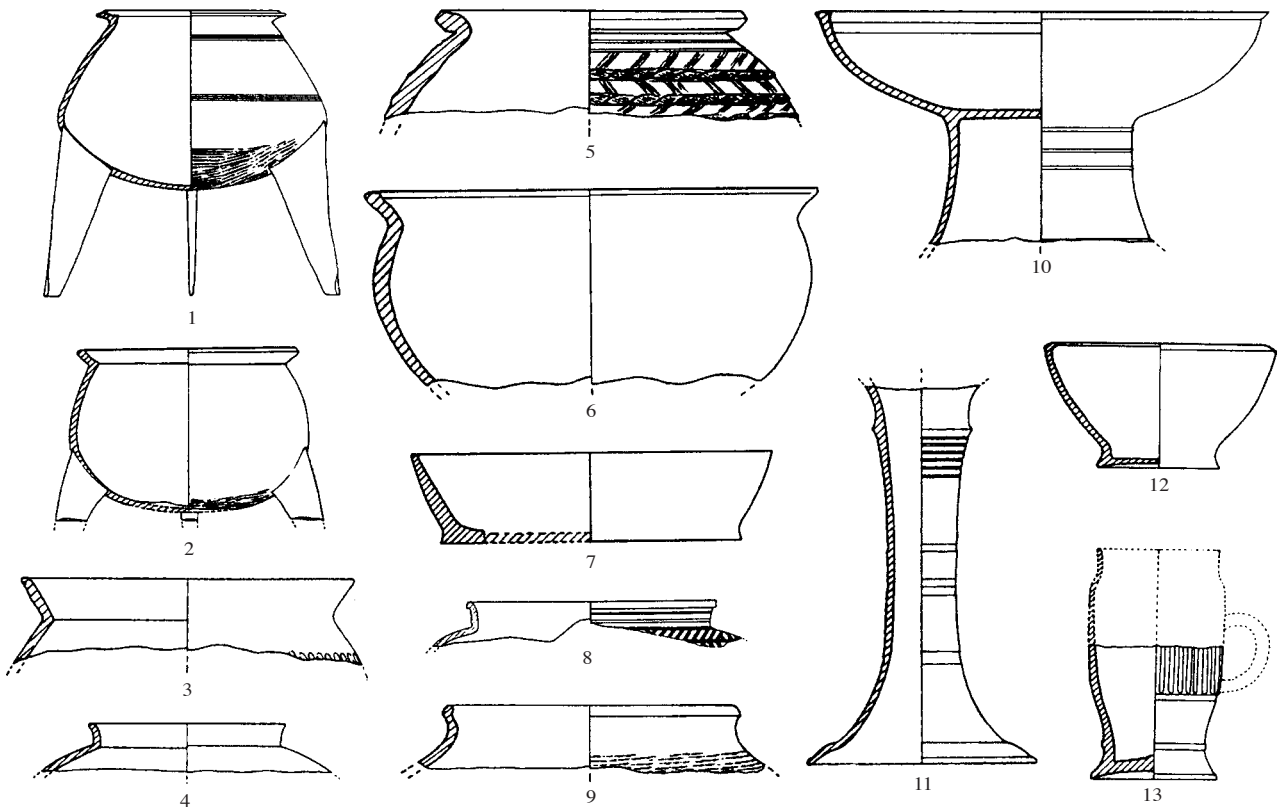


Fig. 10 Pottery artifacts from Guangfulin remain

1, 2. *ding*-tripods (H43:1, IT1238 ③:3) 3–5. *guan*-jars (H42:5, H53:8, IT0546 ⑦:34) 6, 7. *pen*-basins (IT0546 ⑨:38, IT0545 ⑧:13) 8, 9. *weng*-urns (H53:7, IT0645 ⑧:41) 10, 11. *dou*-pedestal stands (IT1238 ③:1, IT0645 ⑧:43) 12. *bo*-bowl (IT1433 ③:6) 13. cup (IT0546 ⑧:37) (Scales: 8. 1/10; all others 1/5)

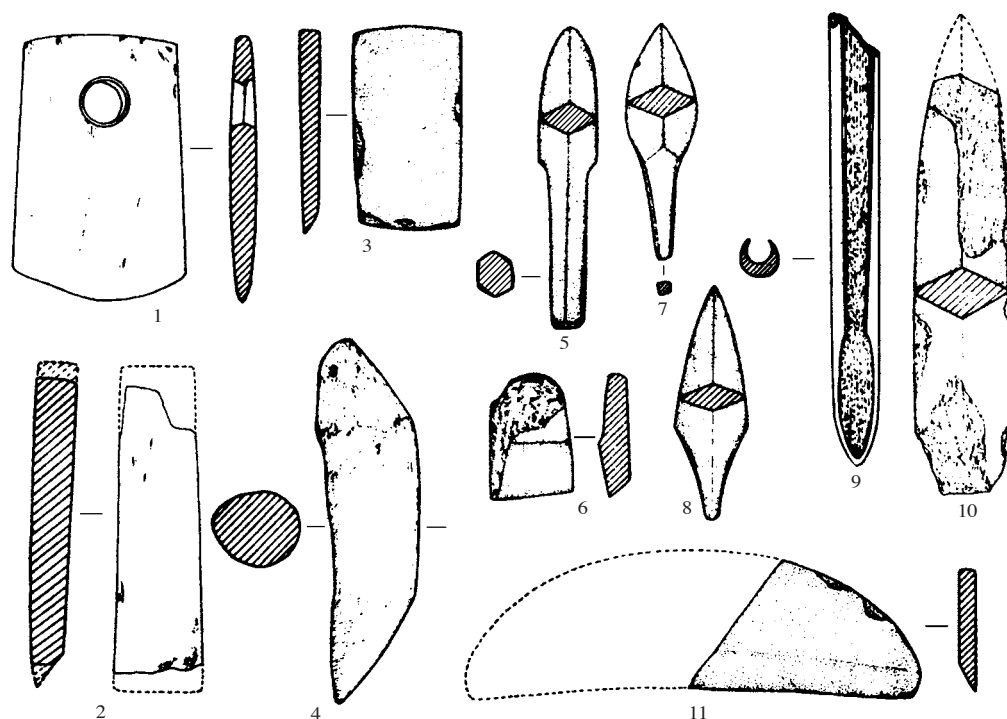


Fig. 11 Artifacts from Guangfulin remain

1. stone axe (H42:1) 2. stone chisel (IT1433⑥:7) 3, 6. stone adzes (IT1241③:15, IT1433⑥:8)
 4, 9. bone awls (IT0645⑧:44 and 45) 5, 7, 8, 10. stone arrowheads (IT0455⑧:27, H57:1, IT1433
 ⑥:10 and 11) 11. stone knife (H53:1) (Scales: 1-3, 11. 1/4; all others 1/2)

survives. It has a cylinder-shaped body decorated with vertical lines. The lower body was flared and was decorated with lines. The surviving height is 8.8 cm (Fig. 10:13).

Bo-bowls. This kind of vessel is either sand-tempered or made of fine clay. Sample IT1433⑥:6, made of fine clay, black. It has a restrained mouth, a round belly and a fake ring-foot. The bottom is slightly concave. Plain. The mouth diameter is 13.2 cm (Fig. 10:12). Sample IT1238③:11, sand-tempered, gray. It has a flared mouth, a thick round rim and a round bottom. There are several convex lines under the mouth, and the lower body is decorated with vertical fine cord-marks. The mouth diameter is 40 cm.

Other kinds of pottery artifacts include lids, net-sinkers, and spindle whorls.

There are a small number of stone tools and bone tools. The stone tools include axes, adzes, chisels, knives and arrowheads. The amount of the arrowheads is relatively large, and they can be divided into various types. The spade of the arrowheads is mostly willow leaf-shaped, and some of them have stems. The knives are primarily semi-lunar shaped with a single bevel. The

bone and tooth tools are mostly drills (Fig. 11).

III. Conclusion

1. The Liangzhu Culture

On the basis of the chronological model which divides the Liangzhu Culture into four periods and six stages, the 23 burials at the Guangfulin Site are mostly in Stage 2 and Stage 3 of Period Two, and few burials are in Stage 1 of Period One.

This Liangzhu Culture cemetery can be divided into two zones separated by an area of lower altitude. A considerable number of rocks were found in the cemetery, and some of them were used as boundary indicators for the two cemetery zones, and others were used as signs for the location of the burials. Most skeletons are well preserved, and it is a common phenomenon that the locations of the bones were misplaced. These burials usually have log coffins. It was possible that the dead was buried after being exposed outside for a certain period. This is the so-called “*cuo zang*” (delayed funeral), possibly the precursor of the funeral ritual of “being buried after three years (of death)” or “not buried for a long period” recorded in *Liji* 礼记.

The sacrificial ritual was popular in the Liangzhu Culture. The sacrificial rituals observed at the Guangfulin cemetery include burning ritual, animal offering ritual and the use of fired clay. Burning ritual was to make a fire on the cemetery, leaving many piles of black ashes. Animal offering ritual is to use animals as sacrificial offerings. The ritual of the use of fired clays is to move the broken fired clays from collapsed house to the cemetery and offer them to the ancestors. Some of the clays were burnt again, becoming another kind of burning ritual.

2. The Guangfulin Remain

This is a new kind of cultural remains in the Shanghai area. It superimposed over the remains of the Liangzhu Culture, and its calibrated date is 2310–2320 BC (Archaeometry Laboratory of Peking University).

The Guangfulin Remain did not originate indigenously. It has much similarity with the Nandang 南荡 cultural remains in Jiangsu 江苏 Province. The pottery decorations of the Nandang Site include cord-marks, basket impressions, check designs, appliqués, and incisions, all similar with those at the Guangfulin remains. These two sites also share similar pottery vessel types, such as *ding*-tripod, *dou*-pedestal stand, *weng*-urn, *gui*-food container, basin, and cup. The Guangfulin Remain also had close relationship with the Wangyoufang 王油坊 Type. The Wangyoufang pottery objects are decorated with basket impressions, cord-marks, check designs, appliqués, and incisions. The incised lines include vertical lines, crossed shallow con-

cave lines, and parallel oblique shallow concave lines, all are found at the Guangfulin Site. The similar pottery vessel types are *gui*-food container and cylinder shaped cups. Therefore, the Guangfulin Remain was originated from the Wangyoufang Type. The Wangyoufang Type not only diffused southward to the Lixiahe 里下河 area, it also reached the Lake Tai area. The discovery of the Guangfulin Remain raises new questions for the study of the cultural history and the formation process of ancient civilization in the Lake Tai area.

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