

Excavation on the Neolithic Xiaozhushan Site in Changhai County, Liaoning Province

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I. Situation and Cultural Accumulations of the Site

The Xiaozhushan Site is situated west of Wujiacun Village in the center of Guanglu Island in Changhai County of Dalian City, Liaoning Province, on the eastern slope of Xiaozhushan Hill, which extends from the higher north to the lower south, with the top looking fairly even and the highest point measuring 28.6m above sea level. To the east of the site, at a distance of 300–400m, is the Wujiacun Site. Between the two sites is a rivulet flowing from south to north into the Yellow Sea. The shortest distance from the present site to the sea is about 1.3km.

In 1978, the Liaoning Provincial Museum and other institutions carried out small-scale survey and trial excavation on five prehistoric sites on Guanglu Island. In the early 1980s it was proposed for the first time that the Neolithic culture in the Liaodong Peninsula can be divided into three cultural types, or three phases, namely the Upper, Mid and Lower Xiaozhushan Cultures, which marks the preliminary establishment of the Neolithic cultural sequence for the peninsula. In May to August 2006 and April to July 2008, the Institute of Archaeology, CASS, the Liaoning Provincial Institute of Cultural Relics and Archaeology and the

Dalian Municipal Institute of Cultural Relics and Archaeology carried out excavation on the Xiaozhushan and Wujiacun Sites.

The Xiaozhushan site is about 100m long from the north to the south and about 50m wide from the west to the east. As its north part had been almost entirely destroyed, the two seasons of excavation were made mainly in the middle and south parts, revealing over 220sq m in total.

The west part of this site is higher than the east, and the cultural layers are uneven in thickness, measuring from 0.3 to 1.75m. It is a typical shell-mound site; the cultural accumulations are largely shells in heaps. Below is the section of the northern wall in Excavation

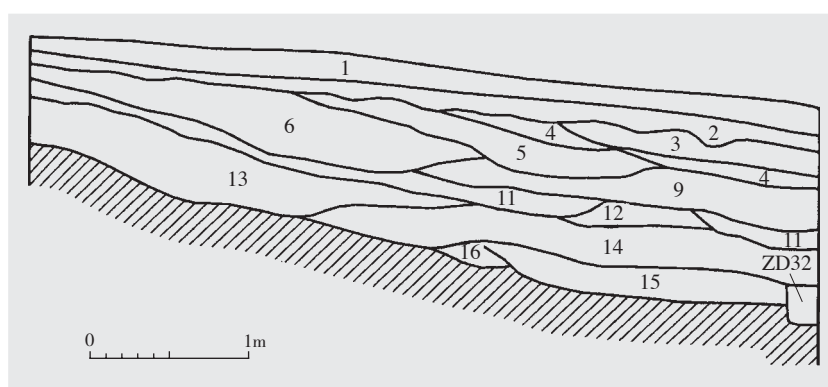


Figure 1. Section of the Northern Wall of Excavation Square T1211

1. yellowish-brown sown soil 2. yellow sandy soil 3. fragmentary shells mixed with a small amount of gray soil 4. fragmentary shells mixed with a small amount of blackish-gray soil 5. fragmentary shells mixed with a small amount of yellow soil 6. a layer of shells 9. fragmentary shells mixed with a small amount of gray soil 11. gray soil 12. yellowish-gray soil 13. gray soil 14. blackish-brown soil 15. gray soil 16. fragmentary shells mixed with a small amount of gray soil

Square T1211 for example. The accumulations are inclined from the west down to the east and can be divided into 16 strata (Figure 1). House foundations F4 and F6 and ash pit H11 are opened beneath Stratum 15, with F4 intruded by F6.

Judged by the unearthed objects, the cultural remains on the site can be roughly divided into five phases. The Phase V is represented by Stratum 3, the Phase IV by Strata 4–11, the Phase III by Strata 12–15, the Phase II by House Foundation F6 opened beneath Stratum 15, and the Phase I by House Foundation F4. As for Stratum 16, because it yielded no dating objects and no evidence of intrusion or superimposing by F6 that is also covered by Stratum 16, its phase-attribution waits for further research.

II. Vestiges

The two seasons of excavation revealed eight house foundations, 10 ash pits, 10 outdoor hearths and several dozen postholes. The house foundations are semi-subterranean dwellings in square or rectangular plan with curved corners (6) or oval plan (2). The first type belongs to Phase I while the two oval houses to Phases II and III respectively. Let's take F4 for example:

F4 is in the south of the site. It is opened beneath Stratum 15 as seen in excavation square T1121, and was intruded by F6 in the northeastern part. It has a rectangular plan measuring 4.8m in length (E–W), 3.5m in width (N–S), and 0.11–0.23m in depth. Dug directly in primary soil, the pit has walls a little sloping. The north part of the eastern wall and the east part of the northern wall were damaged by house foundation F6, and only the floor in this part remains *in situ*. The floor is not retouched. No postholes were found in the room. An oval hearth remains in the center of the floor, a bit to the southeast. No traces of doorway were found. Stone spades, scrapers, querns, rollers and hammers, bone awls and a restorable pottery vessel were yielded from the floor. The vessel is a flat-bottomed cylindrical jar of reddish-brown

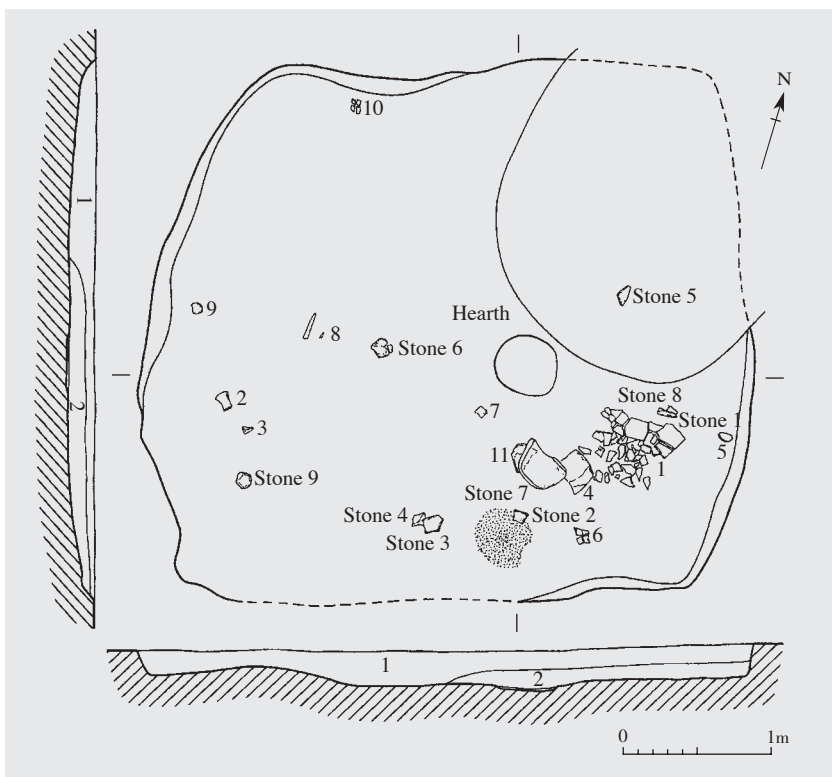


Figure 2. Plan and Section of House-foundation F4

1. pottery jar 2. stone spade 3. stone scraper 4 and 11. stone querns 5. stone implement 6 and 10. potsherds 7. stone roller 8. bone awl 9. stone hammer (Stone 1–9. natural stones)



Figure 3. House-foundation F4 (S–N)

sandy ware with talcum in the body, and is decorated with impressed mat and zigzag patterns (Figures 2 and 3).

F6 is roughly in the south of the site. It is opened beneath Stratum 15 of T1211 and intruded F4. The foundation pit is oval in plan and measures 2.59m in major axis, 2.33m in minor axis and 0.04–0.18m in depth. Traces of stepping remain on the floor, an oval hearth with plant ash occurs in the northeast, and stone implements, bone artifacts and potsherds of gray sandy ware decorated with incised linear pattern were unearthed from the room (Figures 4 and 5).

III. Artifacts

The unearthed objects include stone implements, pottery vessels and bone, shell and tooth artifacts.

1. Pottery. The pottery shows especially clear features and changes in different phases.

In Phase I, pottery is hand-made and baked at a lower temperature. It is largely reddish-brown sandy ware with a great amount of talcum. In type it belongs mainly to the large-sized flat-bottomed cylindrical jar with a straight mouth, an oblique deep belly and a thick wall. The chief decorations are impressed zigzag, mat and net patterns, and incised designs occur in some cases (Figure 6).

Jars: T1512^⑮:1 is of reddish-brown sandy ware with talcum and has a smooth surface. Below the rim are impressed vertical zigzags in horizontal rows, which are made neat and deep. The vessel measures 21.8cm in mouth diameter (Figures 7:1 and 8). T1512^⑩:1 belongs to red sandy ware and bears on the belly several circles of incised uneven horizontal lines. It is 16.8cm in mouth and 17cm in height (Figures 7:2 and 9). T1612^⑮:2 is a

piece of brown sandy ware decorated with two circles of incised bowstring patterns on the rim, incised mat pattern on the upper belly and three circles of horizontal

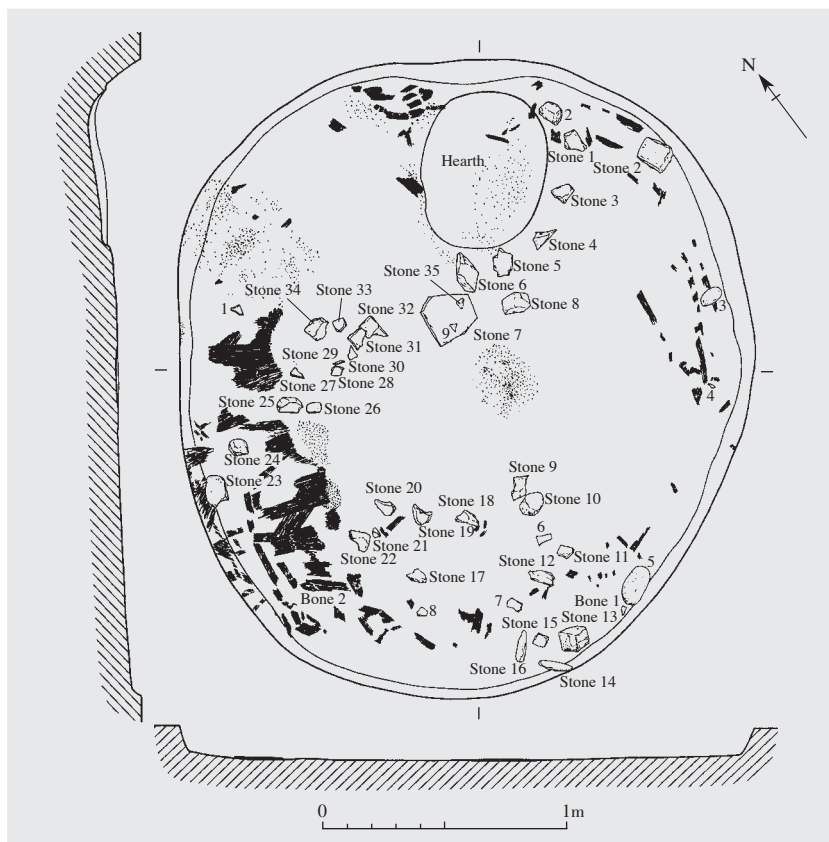


Figure 4. Plan and Section of House Foundation F6

1 and 6–9. potsherds 2 and 3. stone hammers 4. bone arrowhead 5. stone implement (Stone 1–35. natural stones Bone 1 and 2. animal bones)



Figure 5 House Foundation F6 (N-S)

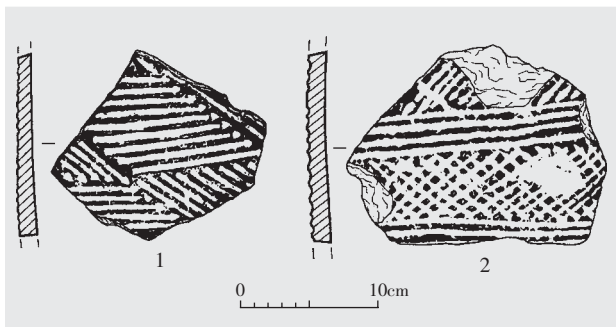


Figure 6. Patterns of Pottery in Phase I
1. T1512-North Partition ⑩:1 2. T1512 ⑩:1

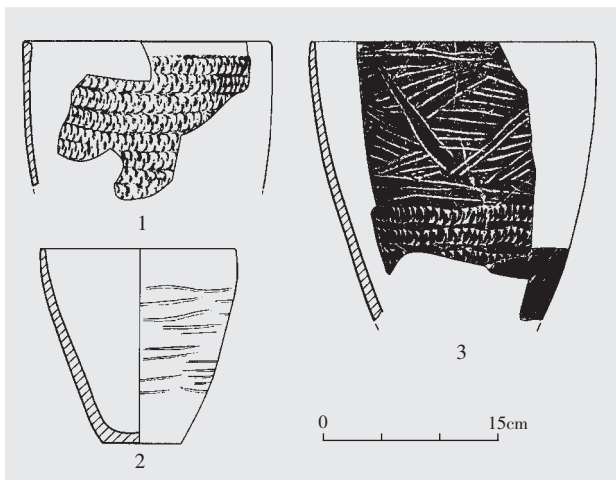


Figure 7. Pottery Jars of Phase I
1. T1512 ⑩:1 2. T1512 ⑩:1 3. T1612 ⑩:2



Figure 8. Pottery Jar (T1512 ⑩:1)

zigzag patterns on the lower part. It measures 22.5cm in mouth diameter (Figures 7:3 and 10).

In Phase II, pottery is still hand-made and belongs largely to grayish-brown sandy ware with a small amount



Figure 9. Pottery Jar (T1512 ⑩:1)



Figure 10. Pottery Jar (T1612 ⑩:2)

of talcum. The cylindrical vessel remains the main type; the wall became thinner and the mouth often wide-opened. It is decorated principally with incised patterns and occasionally impressed ones, the former including horizontal-line, mat-shaped, oblique-line, vertical-line, oblique-line triangular, vertical parallel line and several-motifs-combined designs.

Jars: T1512 ⑩C:1 is of grayish-brown sandy ware with a small amount of talcum. It has a curved deep belly. The surface bears a mat pattern on the upper belly, ob-

lique lines with stabbed design in between on the middle belly, and a design combined of incised oblique-line triangles, horizontal lines and stabbed pattern on the lower belly. Two pairs of oppositely perforated small holes are made in the wall, on the two sides of a crack. The vessel measures 24cm in mouth diameter (Figures 11:1 and 12). T1111⑧:1 is of grayish-brown sandy ware with a small amount of talcum. The mouth is wide-opened, and the rim out-curved. On the belly are incised horizontal lines and groups of six short vertical parallel lines. The mouth diameter measures 23.1cm (Figure 11:2).

In Phase III, pottery is still hand-made and belongs largely to red or reddish-brown sandy or fine sandy ware, with mica mixed in the paste. The main type is the flat-bottomed cylindrical jar, and pots and bowls are also seen. The cylindrical jar became smaller in size and had

an angular-profiled or flared rim and a thin wall, mostly measuring 0.3–0.5cm in thickness. It is decorated mainly with incised designs, such as zigzags, network, short oblique or vertical lines, cords, stabbed dots, etc., occurring principally near the rim. In addition, few black-painted red potsherds were also discovered.

Jars: F1:1 is of reddish-brown sandy ware. It has a straight mouth with an angular-profiled rim, a curved deep belly and a small flat bottom. Below the rim is a circle of stabbed pattern and then incised vertical zigzags. It is 22.1cm in mouth diameter (Figures 13:2 and 14). T1512⑦B:2 is a piece of red sandy ware. It has a flared

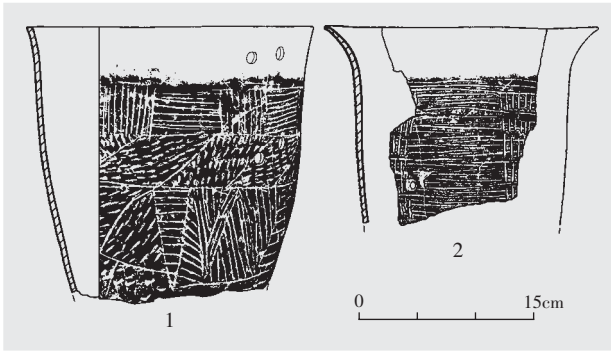


Figure 11. Pottery Jars of Phase II
1. T1512⑩C:1 2. T1111 ⑧:1

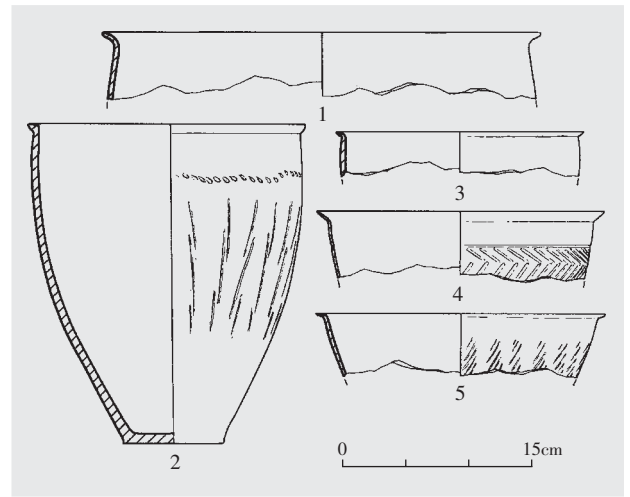


Figure 13. Pottery Jars of Phase III
1. T1512 ⑦B:3 2. F1:1 3. T1512 ⑦B:4 4. T1512 ⑦B:2 5. T1512 ⑦B:1



Figure 12. Pottery Jar (T1512⑩C:1)



Figure 14 Pottery Jar (F1:1)

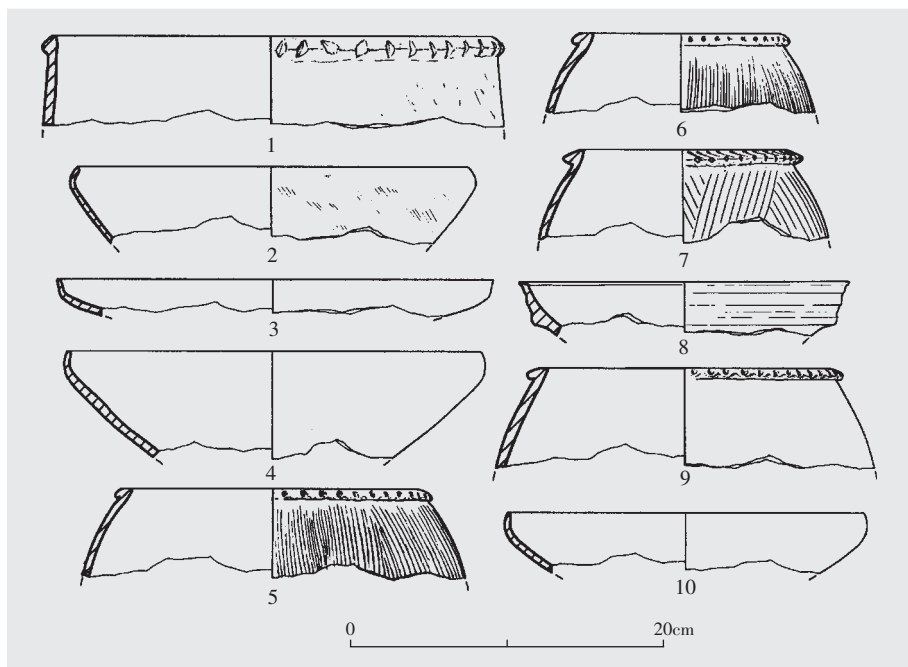


Figure 15. Pottery of Phase IV

1, 5-7 and 9. jars (T1512 ④D:1, T1512 ④C:1, T1512 ④C:2, T1512 ④A:1, T1512 ④B:1) 2-4 and 10. bowls (T1512 ④A:2, T1512 ④D:3, T1512 ④D:2, T1512 ④B:2) 8. dou-stemmed bowl (T1512 ④B:3)

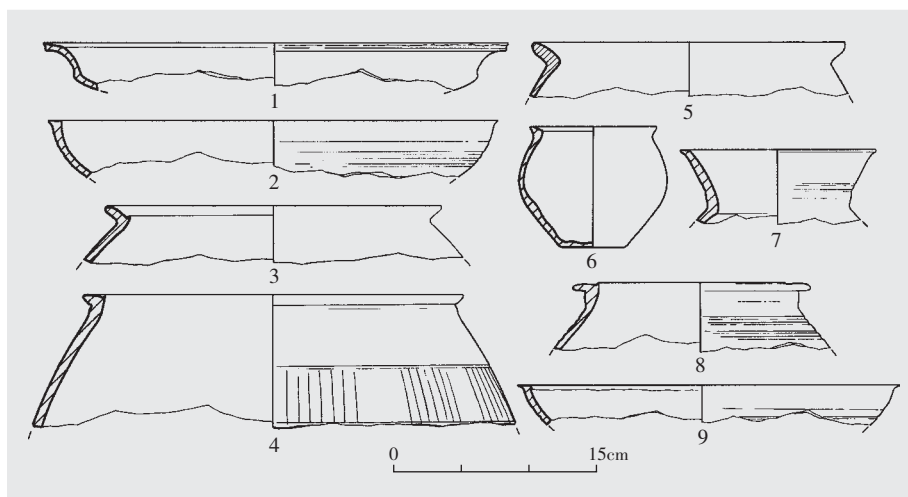


Figure 16. Pottery of Phase V

1. basin (T1212 ③:8) 2 and 9. bowls (T1212 ③:7, T1212 ③:6) 3-8. jars (T1212 ③:2, T1212 ③:1, T1212 ③:5, T1211 ③:17, T1212 ③:4, T1212 ③:3)

mouth and an angular-profiled rim. A circle of incised cord pattern is made below the rim, and horizontal zig-zags are incised in a lower position. The mouth diameter measures 23cm (Figure 13:4). T1512⑦B:1 is decorated with vertically rowed short oblique lines (Figure 13:5). T1512⑦B:4 has a straight mouth and an angular-profiled rim (Figure 13:3). T1512⑦B:3 has a con-

tracted mouth and a curved rim (Figure 13:1).

In Phase IV, pottery is mostly of blackish-brown and brown sandy ware with mica in the paste. The main type is the flat-bottomed jar, which has a contracted mouth, a false double lip formed by adding a clay stripe to the outer side of the rim, and a thick wall. The other types include the bowl and dou-stemmed bowl (?). The decorations are chiefly raised cord pattern and stabbed or incised patterns. The raised cord patterns are largely made near the rim, and vertical parallel or horizontal wavy raised narrow stripes are also seen on the belly.

Jars: T1512 ④C:1 is a piece of brown sandy ware. It has a contracted mouth; the outer side of the lip is decorated with a clay stripe that bears stabbed dots; and a comb-incised pattern is made in the lower part. The mouth diameter is 18.5cm (Figure 15:5). T1512④C:2 measures 11.6cm in mouth diameter (Figure 15:6). T1512 ④A:1 is of brown fine sandy ware and is decorated with a mat pattern formed of incised oblique lines. The mouth diameter is 12.8cm (Figure 15:7).

T1512 ④D:1 is a piece of blackish-brown sandy ware and measures 17.8cm in mouth diameter (Figure 15:1).

Bowl: T1512④A:2 belongs to reddish-brown sandy ware with a small amount of talcum in the paste, and has a polished surface, a contracted mouth and an obliquely contracted belly. It measures 25cm in mouth diameter (Figure 15:2). T1512 ④B:2 is a piece of pol-

ished blackish-brown sandy ware and measured 22.7cm in mouth diameter (Figure 15:10). T1512 ④D:2 is a piece of reddish-brown sandy ware (Figure 15:4). T1512 ④D:3 is of blackish-brown sandy ware (Figure 15:3).

Dou-stemmed vessel: T1512④B:3 belongs to blackish-brown sandy ware and has a wide-opened mouth and an angular-profiled belly. The mouth diameter is 21cm (Figure 15:8).

In Phase V, pottery is largely of blackish-brown or brown sandy or fine sandy ware, with the surface polished in most cases. The types increased, though jar remains the most common. The main features are the angular- or curved-profiled rim and the false double lip formed by adding a clay stripe to the outer side of the rim. The other types include the bowl, basin and *dou*-stemmed vessel. The chief decorations are cord pattern and incised vertical parallel lines, and plain-surfaced vessels occur quite frequently.

Jars: T1212 ③:1 is a piece of blackish-brown sandy ware and has a polished surface, a contracted mouth and a double lip. The shoulder is oblique and the belly is swelled. On the shoulder are two circles of cord pattern, between which are incised vertical parallel lines in sevens. The vessel measures 27cm in mouth diameter (Figure 16:4). T1212③:2 is a brown sandy vessel with a double lip and measures 23.8cm in mouth diameter (Figure 16:3). T1212③:4 is a polished black sandy vessel with a flared mouth and a contracted neck decorated with two circles of bow-strings. The mouth diameter is 13.9cm (Figure 16:7). T1212 ③:3 belongs to reddish-brown sandy ware and has an angular-profiled rim and a short neck, and bears cord pattern (Figure 16:8). T1212 ③:5 is a piece of blackish-brown ware (Figure 16:5). T1212 ③:17 is a small reddish-brown sandy jar with a flared mouth and a contracted neck. The mouth diameter measures 8.9cm (Figures 16:6 and 17).

Bowl: T1212③:7 is a piece of black sandy ware with a polished surface, a slightly contracted mouth and a small flat rim. The belly is decorated with cord pattern. The mouth diameter measures 32cm (Figure 16:2). T1212③:6 is a piece of reddish-brown sandy ware and measures 27cm in mouth diameter (Figure 16:9).

Basin: Number T1212③:8 belongs to blackish-brown sandy ware and is polished on the surface. The mouth is wide-opened; the belly is angular in profile and then contracted inward. On the surface of the lip is a circle of bowstring pattern. The mouth diameter measures 33cm (Figure 16:1).



Figure 17. Pottery Jar (T1211 ③:17)

2. Jades. Among the unearthed objects are four jades, namely two axes, a chisel and a pendant. The axes belong to Phase I, while the chisel and pendant to Phase IV.

Axes: Sample T1512⑳:1 is made of green jade, but only the edge remains. Originally it must have been rectangular in shape and roughly oval in section, with the two longer sides ground flat, and the edge made curved and trimmed on both faces. It measures 5.3cm in remaining length, 8.9cm in edge width and 2.4cm in thickness.

Pendant: H1:4 is green in color and roughly in trapezoid shape. It has a flat body, a curved top and a bifacial curved edge. Near the top is a unilaterally drilled round hole, and in the middle is a bilaterally ground willow leaf-shaped vertical perforation. It measures 4.1cm in length, 2.2cm in width and 0.4cm in thickness.

IV. Conclusion

The Xiaozhushan Site is a typical prehistoric shell-midden site. In the earlier period, its remains include a lot of house foundations, while in the later period, on the contrary, house foundations are rare, but shell heaps and outdoor hearths were found frequently. Judged by the stratigraphical data and unearthed artifacts, its cultural relics can be divided into five phases.

The pottery of Phase I is largely reddish-brown sandy ware with a great amount of talcum in the paste. The principal type is the cylindrical jar with a thick wall. The common decorations are impressed patterns, and incised ones occur in some cases. The large flat-bottomed

cylindrical jar with impressed zigzags resembles that of Zhaobaogou Culture unearthed from Aohan Banner of Inner Mongolia, so the starting point of this phase must have been close to the Zhaobaogou Culture period or a little later.

In Phase II, sandy ware remains prevalent, but the content of talcum distinctly decreased. The cylindrical jar is still the main type, but the wall became thinner. The impressed pattern characteristic of Phase I disappeared on the whole, and the incised design held the leading position and features thicker and deeper incision. In the 1980s, both the pottery of this stage and that of Phase I were considered to be objects of the Lower Xiaozhushan Culture in the then excavation report. But the present excavation revealed clear stratigraphical relations between the two phases, and some potsherds of Phase III were discovered in layers of Phase II, thus the Phases I and II evidently should not be assigned to the same phase.

In Phase III, pottery went through an obvious change. It belongs largely to reddish-brown sandy or fine sandy ware with a large amount of mica. The cylindrical jar remains the principal type, but the size and the bottom became obviously smaller, the rim angular-profiled or flared and the body still thinner, and the *ding*-tripod, pot and bowl made their first appearance. Incised patterns became the most important decorations, though featuring shallower and smaller incision in comparison with their counterparts in Phase II, varying widely and occurring chiefly on the upper belly. In addition, the *ding*-tripods and *gui*-pitchers and red potsherds with black-painted triangular whorls characteristic of the Shandong Dawenkou Culture were found at this stage, which suggests a date corresponding to the period of Dawenkou Culture.

The pottery of Phase IV is largely brown or blackish-brown sandy ware with mica. Most vessels belong to the swollen-bellied jar, the mouth being added with a clay stripe to form a false double lip, the belly swollen, and the wall again thickened. There prevail cord pattern bearing various incised patterns. This sort of pottery was often discovered in the Santang I Culture on offshore

Changxing Island of the Bohai Sea in the Dalian Area. Thus the date of this phase can be inferred to correspond to the Sangtang I Culture.

The Phase V pottery features most distinctly often-polished blackish-brown or brown sandy or fine sandy ware with a little mica or without this material. It is diversified in type: the flat-bottomed jar occurs most frequently, and the bowl, basin and *dou*-stemmed vessel are also seen quite often. The jar has an angular-profiled or flared rim with the outer side added with a clay stripe to form a double lip, and the belly is swollen. The attached emboss pattern disappeared on the whole, the concave parallel cord pattern and the plain surface became more popular, and incised motifs occur occasionally. In date this phase can be inferred to correspond to the period of Shandong Longshan Culture.

The excavation and study of the Xiaozhushan Site is just on the incipient stage, and the above inference is merely preliminary understanding, and the solution of many problems on the prehistoric Liaodong Peninsula is still waiting for further researches.

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Postscript: The original report is written by Jin Yingxi 金英熙 and Jia Xiaobing 贾笑冰 and published in *Kaogu 考古 (Archaeology)* 2009.5: 16–25 with 15 illustrations and two plates. The present version is prepared by the authors and translated into English by Mo Runxian 莫润先.