

The Xiantouling Neolithic Site at Shenzhen City, Guangdong

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Introduction to the Site

The Xiantouling site is located in Xiantouling village administrated under the Dapeng town office of Longgang District in Shenzhen City. Nearly 30,000m² in area, the site was identified during archaeological general surveys in 1981. Four excavation sessions were carried out at southeast, central, and northern areas of the site from 1985 to 2004. The fifth field session was undertaken at northwest part of the site during February to April in 2006. Thus a total area of 2,300m² was exposed during the five excavations up today.

Surrounded by water and mountains, Xiantouling was situated at the second-to-third terrace of sandy-hill near crescent-shaped Diefu Bay, which is northeast part of the Dapeng Bay. The site topography shows a sloping landscape with high at northwest and low at southeast, from 7m to 2.5m above sea levels. To its north and northwest is the Qiushui Hill, while a lake is at northeast to the site. The site faces the Guanyin Mountain at its southeast, and the ocean at southwest as the site being 300m away from the coastline. The Diefu River, running from northeast to southwest to the ocean, goes through the site in southeast part. Due to the Diefu Cape situated deep inside at northwest and southeast, the Bay forms a northeast oriented concave crescent.

The nature of sandy surface at the site caused a great difficulty in excavations. The unstable sandy surface and profiles of the excavation units added more difficulties in identifying associations of artifacts and features recovered from appear-

to-be-mixed stratigraphical layers. However, we learned from previous painful experiences excavating several similar type of sandy archaeological sites, and finally developed a excavation method of stabilizing sandy profiles of units by applying followings: digging excavation units in funnel shape, installing wood-slab for enhancement, leaving adequate edges, frequently shaping the edges, applying waters, drawing lines, applying glue materials, and filling, etc. By employing such techniques, we can control the layers in distinguishable profiles so as to identify artifact associations in archaeological contexts.

Major Discoveries

Cultural material recovered from Xiantouling in 2006 are consisted of those from Neolithic and Shang periods. Most important findings are from Neolithic, which we will introduce in the following text only.

1. Features include hearths (Figure 1), stone poles, structure foundations, and clay burnt ground floor



Figure 1. Hearth (Z2, photo taken from south to north)

(Figure 2). Artifacts are pottery and stones. The pottery is represented by sand-tempered earthenware, in types of *fu* pots, *wan* bowls, *zhijiao* supporting posts, and *qizuo* vessel-bases. Most fine clay earthenwares are white and painted. In addition, a few polished black in types of *guan* pots, *bei* cups, *pan* basins, *dou* dishes, *bo* bowls. Stone tools include adzes, stampers, anvils, pestles, discs, and grinding stones.

Based on stratigraphical relations, pottery seriations and their assemblages, we divided the site deposits into five stages.

Stage I. The cord-marks from the sand-tempered earthenware are very fine; some presenting fine incisions. *Fu* pots of sand-tempered wares have a curved rim. Most fine-clay painted wares have light yellowish background, decorated with brownish-red stripes motifs. Some of them have red brownish inlay on stamped motifs. A few polished black as well as fine-clay cups with curved belly and ring-base are characterized by their large wide open mouths. Painted *hu* vessels have a long and upright neck. Incised line motifs are frequently seen on ring-bases or rims of those fine-clay vessels. *Pan* basins with ring-base have commonly shapes in deep belly with fewer open-holes on ring-base. White wares are few in quantity, but they were finely made in high temperatures resulting harden pottery walls. The decorated surface of white wares display complicated poking-stamped motifs. The pottery ware association in this stage is *bei*, *pan*, *guan*, and *fu* (Figures 3 & 4).

Stage II. Most sand-tempered earthenwares are decorated with fine cord-marks. *Fu* pot of this type earthenware has a curved rim. Most fine-clay painted wares have light-yellowish background, decorated with brown-



Figure 2. Clay burnt ground floor (HST1, photo taken from west to east)

ish red stripes. Motifs with curved lines are common, as well as continuous dots motifs. Lines of these motifs are finely incised. The sizes of holes on the fine-clay ring-base are small, while the belly of ring-based *pan* basin is shallow. The mouth of fine-clay curved-belly *bei* cup with ring-base is smaller than that in previous stage. The collar of painted *hu* vessel is relative short but oblique. White wares become common, made in high temperature. Pottery walls are hardened in quality; the white wares are decorated with complicated poking-stamped motifs. The pottery ware assemblage in this stage is *bei*, *pan*, *guan*, *bo*, and *fu* (Figures 5–7).

Stage III. Most sand-tempered earthenwares are decorated with fine cord-marks. *Fu* pots of this type earthenware have a curved rim. Most of fine-clay painted wares have light yellowish background, brownish red in painting and decorated with curved lines. The sizes of holes on the fine-clay ring-base are relatively large, while the belly of ring-based *pan* basin is shallow. The mouth of fine-clay curved-belly *bei* cup with ring-base is relatively outward. White wares are more common, whose decorations are represented by both fine and coarse poking-stamped motifs. In addition, white wares in this stage were made in relatively low temperature, pottery walls are softened. The pottery association in this stage is *bei*, *pan*, *guan*, *bo*, *fu*, and supporting posts (Figures 8 & 9).

Stage IV. Most sand-tempered earthenwares are decorated with coarse cord-marks. *Fu* pot of this type earthenware has a bent rim, a few presenting with plate-shape mouth. Painted wares are made with fine clay having light reddish colored background, few with light yellowish, commonly decorated with reddish stripes and curved lines, most of which are rough. The sizes of holes on the fine-clay ring-base are small, while the ring-bases are decorated with curved line incision. The belly of ring-based *pan* basin is shallow, and the ring-base is large with up-right wall. White wares are few, most with plain surfaces. Only a few white wares are decorated with poking-stamped decoration, fired in lower temperature, and soften walls. Some sand-tempered wares are decorated with shell-carved motif. The pottery assemblage in this stage is *pan*, *dou*, *fu*, supporting posts, and vessel stands (Figure 10).

Stage V. Most sand-tempered earthenwares are decorated with coarse cord-marks, along many with shell-carved motifs and a few with poking-stamped motifs. The mouth of sand-tempered wares has a bent rim. Painted pottery is rare, some are decorated with brown-



Figure 3. White earthen cup (T14 ⑧:4)



Figure 6. Painted earthen dish (T12 ⑥:1)



Figure 4. White earthen dish (T1 ⑧:2)



Figure 7. Painted earthen pot (T7 ⑥:1)



Figure 5. White earthen cup (T2 ⑥:1)



Figure 8. White earthen cup (T1 ⑤:2)

ish red color on surface, and other has brownish red color painting inside. White wares are rare too, some with poking-stamped motifs. A new type of pottery wares include open-mouth bowls with a ring-base made on sand-tempered clay. The vessel association is *fu*, *wan*, supporting posts, and vessel stands (Figure 11).

Based on the above-mentioned pottery seriations and associations, the cultural materials from the Xiantouling site can be further divided into three cultural phrases. Phase I is represented by Stages I–III, Phase II is represented by Stage IV, and Phase III is represented by Stage



Figure 9. Painted earthen dish (T9 ⑤:1)



Figure 10. Painted earthen dish (T3 ⑤:1)



Figure 11. Sand-tempered earthen bowl (T9 ③:2)

V. Wood charcoal samples were taken from 2004 and 2006 excavations for radiocarbon ^{14}C dating tests; the results are compared with ^{14}C dates from relevant sites / cultural materials. Based on these dating results, it is estimated that the upper end of Stage I is dated to around 7,000 BP, the bottom end of Stage II is around 6600 BP; Stages III and IV fall in to a range from 6,400–6,200 BP, and Stage V is about 6000 BP or slightly later.

Significance of the Discovery

1. The 2006 excavation has explored an effective excavating method that can be applied to the future digs on similar sandy-hill deposits. It is foundational to identify stratigraphic relations of artifacts and relationships among features. It is extremely difficult to excavate sandy deposits, of course; thus that question how to stabilize the profile of excavation units has been always puzzled by archaeologists for many years. This excavation suggests such consolidation techniques are effective and can be further practiced.

2. The cultural chronology in three phases and five stages identified from this discovery is so far the most reliable and thorough periodizations of Neolithic sites in the Zhujiang Delta area. The radiocarbon dates, resulted from various testing samples from different stages, verify the chronological sequences at the site. Therefore, the research of Xiantouling dates and seriations provides us with not only a foundation on periodization of other Neolithic sites, but also setting up an important standard and reliable references on Neolithic cultural chronology in the Zhujiang Delta area. In addition, because no other earlier Neolithic remains can be clearly identified in this area, cultural materials from Xiantouling Stage I are the earliest manifestation of the Zhujiang Delta Neolithic with reliable dating references.

3. Doubtlessly for the time being, Xiantouling is the most representative Neolithic site in the Zhujiang Delta area, presenting its unique cultural traits in comparison with other related sites in the region. The features of this site include large in size, rich in pottery wares, and high craftsmanship of pottery-making. Many early sites in this area do not yield much of remains and features; for example, cultural remains recovered from Xiantouling Stage I are not commonly seen in other 20 plus sites in the Zhujiang Delta. It suggests that Xiantouling may be the center of settlements in the area, with great influences and powers of controls. It also represents the only type-site of the Middle Neolithic period in the region. Thus by conducting detailed study

of Xiantouling cultural material it is possible to provide important clues for solving a series of research questions concerning of Lingnan prehistory.

4. Archaeological remains similar to Xiantouling are mainly distributed in the Zhujiang Delta, with a density at the mouth of Zhujiang River. Although these archaeological material are very limited, they have been a research focus on Lingnan prehistory. The early two field sessions as well as the excavation at Dahuangsha yielded cultural material dated back to 6,000 years ago in this region; thus some scholars in 1992 proposed the term “Xiantouling Culture” for this regional manifestation, represented by the Xiantouling site. Detailed analysis of Xiantouling material will not only improve our research standard on the Zhujiang Delta’s “Xiantouling Culture”, but also further provide our understanding of chronological framework and regional variations of Lingnan prehistory.

5. Discovery of white wares and painted potteries at the Xiantouling Stage I is so far the earliest presences of such pottery product in the region. The manufacturing technique of white wares and painted pottery were well developed at the Stage I, but began to decline throughout up to Stage V. This may indicate that white wares and painted pottery were not originated locally. Such white wares first appeared in China from “Gaomiao Culture” in the Yuanshui Valley of western Hu’nan province, dated back to 7,800–6,800 years ago. Gaomiao white wares were also accompanied with painted pottery or pottery with colored lines. Subsequently, “Songxikou Culture” replacing “Gaomiao”, dated to 6,600 BP, also appeared with white wares and painted pottery. From evidence so far being published, elements of complicate poking-stamp decorations seen on the white wares as well as appearance of *pan* basins with ring-base can be traced back to these two cultures in the western Henan. It is, thus, speculated that Xiantouling white wares and painted pottery could be influenced by those from western Henan. In addition, delicate white wares and painted pottery were also found from sites of “Tangjiagang Culture” dating to 6,800–6,500 BP as well as “Daxi Culture” dating to 6,500–5,300 BP, both in the Dongting Lake region. Similarly, those above-mentioned elements from Xiantouling, like complicate pok-

ing-stamp decoration and *pan* basins with ring-base, were also seen in archaeological assemblages from these two cultures. It suggests that cultural manifestations in the Zhujiang Delta might have been in some contacts with those in Hunan, sometimes around 7,000–6,000 years ago or slightly later. However, from the evidences at present, although there is no indication of how such contacts had been made, we can only speculate that cultural influences were transformed from north to south.

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