The Baozitou Shellmidden Site in Nanning, Guangxi

Guangxi Team of the Institute of the Archaeology, CASS
Cultural Heritage Team of Guangxi Zhuang Autonomous Region
and
Nanning City Museum

Keywords: Baozitou site    shellmidden site
Neolithic ceramic workshop

Dingshishan Culture

The Baozitou site is located on the first terrace of the north bank of the Yongjiang River, about 2 km southwest to the Nabei Village, Liusha Garden, Nanning City, Guangxi Zhuang Autonomous Region. It covers an area of about 100 m long from the north to the south, and about 50 m wide from the east to the west. The site was first discovered during an archaeological survey in 1964. The Cultural Heritage Team of Guangxi Zhuang Autonomous Region excavated this site in September of 1973, discovering pottery, stone tools, bone tools and shell tools. In order to further understand the stratigraphy and cultural contents of this site, we conducted jointly an excavation from November to December, 1997. The total excavated area is ca. 200 sq m, including seven 5 × 5 m grids and one 5 × 1 m trench.

I. Stratigraphy

The excavation was conducted at two zones. Six units (T106, T117, T118, T127, T128, T137) were in the northern zone, and one unit (T205) and one trench (TG1) were in the southern zone (Fig. 1).

Soil samples and shells were collected for further analysis at the end of the excavation. In order to preserve the features of ceramic workshop in T127, T128, and T137, these three grids were not excavated to the sterile soil level. Instead the feature was covered with fine sand and the grids were refilled. It has been observed that the deposits in most grids were disturbed, reaching as much as 3 m deep in T128. However, primary deposits were found in T127, T128, and T137 besides the ceramic workshop feature.

The east profile of T127 is representative. Seven layers are identified in the excavated sections, among which layer 1–layer 3 are top soil and disturbed layers. From layer 4 to layer 7, deposits are generally shell middens with different soil colors, containing ceramic shards, stone tools, shell tools and bone tools. The layer under layer 7 is reddish brown with shells, burned clays, ceramic shards, shell tools, and animal bones. In order to preserve the ceramic workshop feature, this layer was not excavated and its depth was therefore unknown.

On the basis of stratigraphy and the characteristics of artifacts, the cultural remains can be divided into two periods.

II. The Early Period

The cultural remains of early period distribute mainly in

Fig. 1 Distribution of the position of grids at the site
T127, T128, and T137. They include layers 6–8 of T127, layer 4 of T128, and layers 7 and 8 of T137.

1. Ceramic workshop feature

This feature distributes in an area cutting T127, T128, and T137, about 3 m deep below surface. It includes a circular pile (about 40 cm in diameter) of fabricated clay and an area with burnt shell pieces. The fabricated clay is red, and its temper is coarse quartz. A high density of shells, shell knives, pottery, ceramic shards, burnt clays, animal bones and turtle shells is observed on this feature. Some of the artifacts and shells were burnt, indicating the use of fire (Fig. 2).

2. Cultural artifacts

The cultural artifacts include pottery, stone tools, shell tools, and bone tools.

Pottery

All of the pottery were hand-made, and most of them were tempered with coarse quartz. Grayish brown is the dominant surface color. The decorations include basket-impressions and medium cord-marks. The shape of the vessels is simple, and only round bottomed pot has been observed. There are 13 pots, and they can be classified into three styles:

Style I. This style of pot has vertical rim. Four pots belong to this type. Sample T106③:1, yellowish brown, decorated with basket-impression (Fig. 3:2).

Style II. It has inverted rim. Five pots are in this type. Sample T117③:2, yellowish red, decorated with basket impression (Fig. 3:1).

Style III. It has flared mouth. Four pots are in this group. Sample T127①:1, reddish brown, decorated with medium cord-marks (Fig. 3:3).

Stone tools

The chipped stone tools co-exist with the polished
stone tools. The latter is the majority.

Axe. T137 ⑦:9, rectangular plan shape, broken, about 7 cm long (Fig. 3:8).

Adzes. Five adzes were found, and they can be classified into two styles. Style I: trapezoidal plan shape. Three adzes are in this type. T127 ⑦:9, surviving length is 5.8 cm (Fig. 3:12). Style II: triangular plan shape. Two adzes are in this style. T127 ⑦:4, about 7.3 cm long (Fig. 3:11).

Perforated stone tool. T106 ③:26, pentagon plan shape, about 7 cm long (Fig. 3:13).

Chopper. T106 ③:72, cross-section is oval, about 12.7 cm long (Fig. 3:14).

Shell tools

Only knives and one net weight were observed.

Knives. 47 shell knives were found, and they can be classified into two types. Type A, 40 pieces, fish head-shaped, perforated on both sides. It can be further divided into four varieties (Fig. 3:4, 5, 9, 10). Type B, 7 pieces, no perforation.


Bone tools

Only bone awl was observed. Six awls were found. T127 ⑦:20, fully polished, 8.8 cm long (Fig. 3:6). T127 ⑦:21, fully polished, about 6.2 cm long (Fig. 3:7).

III. The Late Period

The late period representative stratigraphic units include layers 4 and 5 of T127 and layers 4–6 of T137. No feature was found. Cultural artifacts include pottery, stone tools, shell tools, and bone tools.

1. Pottery

All were hand-made and tempered with sand. Most of them are reddish brown or red, and medium cord-marks are the major decorations. A small number of basket-impressions and fine cord-marks were also observed. All vessels are broken, and they include pots and cauldrons.

Pots. 32 pots were found, and they all have round bottom. They can be classified into three styles. Style I includes 8 pots, vertical rim. T127 ⑦:1, reddish brown, decorated with medium cord-marks (Fig. 4:1). Style II
includes 14 pots, inverted rim. T128 ③:4, grayish brown, decorated with medium cord-marks (Fig. 4:2). Style III includes 10 pots, flared mouth. T127 ⑤:2, reddish brown, decorated with medium cord-marks, and the mouth is 39 cm in diameter (Fig. 4:3).

Cauldrons. 25 cauldrons were found, and they all have round bottom. They are classified into two styles. Style I includes 9 vessels, vertical mouth. T128 ③:6, reddish brown, decorated with medium cord-marks.

There is one hole under the rim (Fig. 4:5). Style II includes 16 vessels, slightly inverted mouth. T127 ③:7, reddish brown, decorated with medium cord-marks. The mouth is 28.5 cm in diameter (Fig. 4:4).

2. Stone tools

All stone tools are polished, and most of them are axes and adzes. A small number of grinding stones were also found.

Axes. In total 110 stone axes were found, and they
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can be classified into five styles.

Style I includes 24 axes with rectangular plan shape. T117 ③:82, about 9.4 cm long (Fig. 4:8). Style II includes 47 axes with trapezoidal plan shape. T128 ③:101, 8.1 cm long (Fig. 4:7). Style III includes 30 axes with triangular plan shape. T127 ⑤:11, 6.2 cm long (Fig. 4:6). Style IV includes 3 axes with indented waist. T137 ②:8, 5.8 cm long (Fig. 4:9). Type V includes 6 axes, tongue-shaped. T127 ⑤:5, 8.6 cm long (Fig. 4:10).

Adzes. 50 stone adzes were found. They can be divided into four styles. Style I includes 7 adzes, rectangular plan shape. T127 ③:21, 7.6 cm long (Fig. 4:12). Style II includes 23 adzes, trapezoidal plan shape. T128 ③:3, 7.7 cm long (Fig. 4:13). Style III includes 18 adzes, triangular in plan shape. T137 ⑤:24, 7.2 cm long (Fig. 4:11). Style IV includes 2 adzes, tongue-shaped. T117 ③:17, 13 cm long (Fig. 4:14).

Other stone tools include 12 grinding sandstones and one stone hammer (T117 ③:102). The hammer is cylindrical, bearing use-wear on one end, and about 14 cm long (Fig. 4:15).

3. Shell tools

Shell tools include knives and net weights.

521 shell knives were found, and they can be classified into two types. Type A is perforated with a fish head-shaped plan shape. It includes 454 knives and can be further divided into four styles (Fig. 5:1–4). Type B does not have hole. 67 knives are in this group, and they can be further divided into two styles (Fig. 5:5 and 6).

There are 22 shell net weights. They were made of clam shells. T106 ③:43, about 10 cm long (Fig. 5:7).

4. Bone tools include 51 awls, 6 needles, 6 arrowheads, and 4 spearheads.

IV. Conclusion

1. Chronology and cultural types

The cultural remains of the Baozitou site are generally identical or similar with those of the Dingshishan site Phase II and Phase III, thus indicating that they fall within the realm of the Dingshishan Culture. In the broader context of Guangxi, these remains are in the middle Neolithic, dating to ca. 7000–8000 BP.

2. Archaeological implications of the ceramic workshop feature

The ceramic workshop feature is the first discovery of this kind in Guangxi as well as in Southern China, thus bearing significant archaeological implications. First, it provides direct evidence to study the selection of ceramic raw materials and their provenance. The fabricated clay contains reddish clay and coarse quartz of different sizes, identical with the compositions of the associated pottery, suggesting these are the byproducts of pottery manufacturing. Our survey demonstrates that these reddish clay and quartz pebble are available in the nearby area of the site, thus indicating that these raw materials were obtained from the local sources. Secondly, it provides evidence for the study of the pottery manufacturing techniques. This workshop is on a relatively smooth ground, similar to the open air pottery firing ground recorded in the ethnographic data, thus suggesting the Baozitou people probably firing their pottery in the open air fire. Thirdly, it will help to solve a series of experimental archaeological problems of pottery making in the future.

3. An interpretation for the fish head-shaped shell knives
The perforated shell knives are the most abundant artifacts in the material cultural inventory of the Baozitou site. The hole looks like a fish eye, the concave or convex curve resembles with the open or closed fish mouth, making the whole shape of the knife similar to a fish head. In order to distinguish it from other kinds of perforated shell knives, we therefore name it as “fish head-shaped shell knife.” This kind of knives is not only discovered at the Baozitou site, they are also found at the Dingshishan site and other Neolithic sites on the Yongjiang River banks near Nanning City, representing a distinctive characteristic of the Dingshishan Culture. Despite the fact that these are utilitarian tools, they might also bear implications on the people’s worship of fishes, an embodiment of people’s wish for a good harvest and a better life.

References


Note: The original paper was published in Kaogu 2003.10: 22–34 with 12 figures and 1 page of plates, and written by Zhang Long 张龙. The present version, an abridgment from the original, is prepared by the author and English-translated by Jiao Tianlong 焦天龙.