

# Excavation of the Bohai Period City-site in Hailin City, Heilongjiang

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The Xingnong 兴农 city-site lies to the northeast of Xingnong Village in Sandaohezi 三道河子 Township of Hailin 海林 City, Heilongjiang 黑龙江 Province, on a terrace near the left bank of the middle and lower Mudan 牡丹 River. To its east and north run winding, undulating mountains, while the terrains to the west and south are rather flat and wide. The Mudan River zig-zags along its northeast, and the old course of the river stretches closely to the west.

It was in 1958 that the city-site was discovered through archaeological survey. In 1983, the Heilongjiang Provincial Institute of Cultural Relics and Archaeology re-surveyed the site. In June to July 1994, in coordination with the construction of the Lianhua 莲花 Reservoir, the Institute carried out a trial excavation on the site; in August to October of the same year, along with the Archaeology Department, Jilin University, they carried out excavation on the site, in an area of ca.700 sq m. In June to July 1995, they made more detailed survey and drilling to inquire into the layout and function of the original buildings in the city.

The cultural deposits on the site fall into three layers. Judging from their stratigraphic relationships and contents, they can be divided into two phases: the small quantity of early Iron Age remains represented by House-foundations F2 and F5 and Ash-pit H43 with the opening beneath the third layer; and the remains of Bohai 渤海 period consisting of the vestiges opened in and beneath the second layers, as well as the major remains in and beneath the third layers.

## I. Remains of the Early Iron Age

The early remains discovered embrace two house-foundations (F2 and F5), 15 ash-pits and a ditch (G1). The

objects unearthed are small in number, including mainly pottery, and also some stone implements and bone and tooth artifacts.

The pottery objects are mostly of sandy ware, and the clay artifacts are very small in quantity. They are largely yellowish-, grayish-, reddish- and blackish-brown. The sandy ware is hand-made, polished in some cases, and fired at a low temperature. The surface is often plain, and cylindrical handles and nipple-shaped knobs occur on the neck of a few utensils. In type there are the jar, bowl, *dou* 豆 stemmed bowl and *zeng* 甑 steamer, with the jar as the greatest in quantity. The base is principally flat or false-ring-footed (Fig. 1).

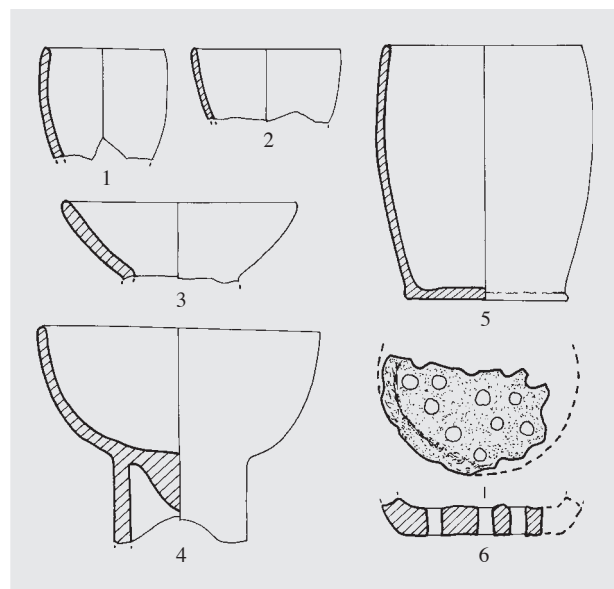


Fig. 1 Pottery of the early Iron Age

1, 5. jars (T11 ③:4, H43:2) 2. bowl (T11 ③:7) 3. type B *dou* (F2:17) 4. type A *dou* stemmed bowl (H43:1) 6. base of *zeng* steamer (G1:1) (scales: 2, 5. c. 1/5; the rest 2/5)

## II. Remains of the Bohai Period

### 1. Remains along the city walls

The city-site has an irregularly square plan, with the eastern wall measuring 176 m in length, the northern one 140 m, the western one 145 m and the southern one 181 m, totaling 642 m in circumference (Fig. 2). These walls are built of rammed-earth, 0.5–1.25 m in remaining height and about 3.8 m in width. In the middle of the southern wall is a city-gate with a width of about 3 m and an azimuth of 166 degrees. Outside the walls is a moat, 5–8 m wide and 4 m apart from the wall, with the northeastern corner having no clear vestiges owing to serious destruction. Inside the city walls, the present ground has been cultivated, the northern and middle areas are a little higher, and pottery shards, textile-impres-

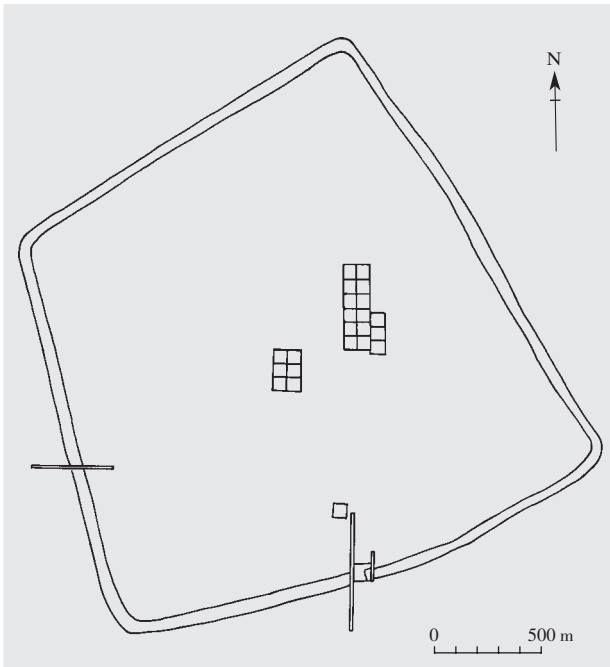


Fig. 2 Plan of the city-site

sion tile fragments and broken bricks are scattered sporadically.

As known from the excavation square T26, the building method of the city walls was as follows. Trenches were dug, foundations were laid in them, and rammed-earth wall bodies were built on the latter course (Fig. 3). The trenches were opened beneath a yellowish-brown soil layer and intruded into the then ground and a sterile soil level. They are 4 and 5.2 m wide for the bottom and the opening respectively and 1.15 m deep. Inside are three courses of underlying soil different in composition, totaling about 1.5 m in thickness. They yielded some pottery shards of sandy and clay wares. On the underlying courses, wall bodies were built of rammed yellow earth in five courses, each 0.05–0.1 m thick, which contain a small number of sandy and clay pottery shards.

The inner and outer sides of the wall body are protected with sloping revetments of rammed earth, red in color and hard in texture. The inner revetment is 0.9–2.1 m in width and 0.15–0.55 m in remaining height; the outer one, 1.9–3.5 m and 0.1–0.55 m respectively. The rammed earth contains no pottery shards. Either of the two protections covers a 0.05–0.1 m thick yellow sand layer. Along either side of the city wall is a narrow ditch. The inner ditch is opened beneath the yellowish-brown soil layer and measures 2.6 m apart from the wall-foundation trench, 0.7 m in width and 0.4 m in depth; the outer one is opened beneath the second course of underlying earth, intruding the edge of the trench and measuring 0.7 m in width and 0.8 m in depth.

Outside the city walls is a moat, 6.5 m and 1.5 m wide for the opening and bottom respectively. The deposits it contains fall into three layers: 0.2–0.45 m thick blackish-brown silt on the bottom; 0.4–0.45 m black sandy clay in the middle; and 0.3–0.45 m blackish-brown soil in the upper part, with great, rather hard lumps of

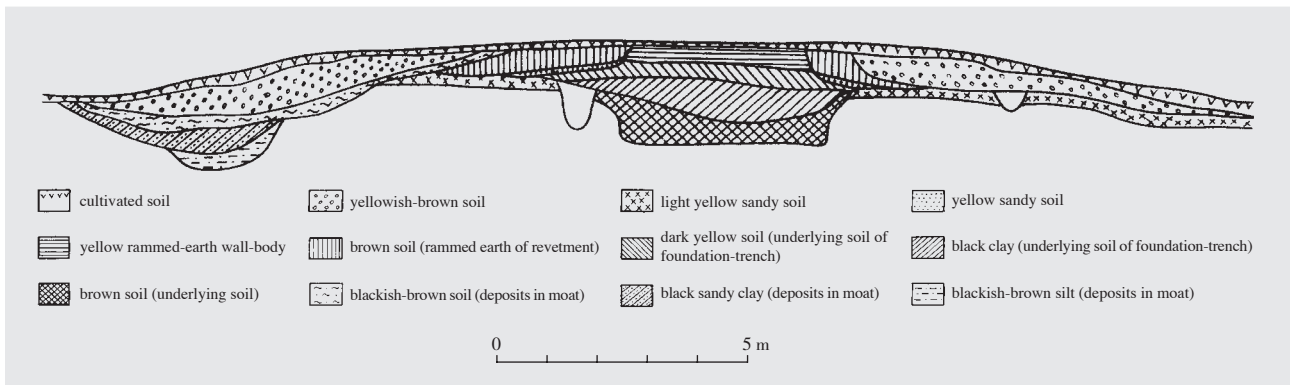


Fig. 3 Section of the western city-wall (northern wall of T26)

earth, which may have been piled up during the collapse of the city walls. They contain only several pottery shards of sandy and clay wares in brown color.

The city-gate is opened in the middle section of the southern wall. About one meter apart from the surface of the remaining city-wall section, excavation recovered two roughly parallel rows of plinths, which total 18 pieces: nine in the west, five in the east, and four scattered in the middle—maybe a result from later disturbance. These plinths vary in dimension and uneven in thickness. The fifth piece of either row has a circular hole 0.1 m in diameter. They must have been heel stones. The two holes are 3.3 m apart from each other. What is noteworthy is either the bottom of the western heel stone or a side of the lower end of the eastern heel stone also has a circular hole. The two rows of plinths cover a 3.8 m wide area, the interval between plinths is 0.2–0.4 m, and the western row measures 6.75 m in total length (Figs. 4 and 5). The surface of the passageway through the city-gate is hard, blackish-brown and about 3 m and 0.08–0.1 m in width and thickness respectively, and the plinths are 0.05 m high from the ground. Selective excavation of the passageway surface, plinths and city-wall shows that the plinths were placed on the ancient ground. In the deposits on the passageway, a few pottery shards were found to be of brown clay ware.

## 2. Remains within the city-walls

Inside the city walls, excavation revealed three house-foundations (F1, F3 and F4), 89 ash-pits and a ditch (G2).

The houses are all surface buildings. Foundation F3 is preserved quite well. It lies in the excavation squares T15 and T13. Its opening is beneath the first layer, and has intruded the second and third layers. Judging from the arrangement of the peripheral post-holes, it is sub-square in plan, each side measuring 5.75–6.5 m in length. Altogether there are nine post-holes: six in the periphery and three in the center. They are 0.15–0.25 m in diameter and 0.3–0.4 m in depth. Hole No.1 contains earth filling with tree-ring traces on the surface and, below this, a stone mortar, maybe used as the post base originally. In the west of F3, a heatable bed was found to have

double L-shaped flues of beaten earth. Their walls measure 0.2–0.5 m in width and 0.15–0.18 m in height, and are topped with small stones. Each flue is 0.2–0.3 m wide, and the bed measures about 1.6 m in maximum width. The east to west flue sections are 1.7 m long each, and the north to south ones, 3.8 m. In the middle of the partition between the two north-south sections is an opening for linking the two flues. In the north to south section of the utter flue, excavation revealed a stone



Fig. 4 Layout of the plinths in the city-gate



Fig. 5 Plinths of the city-gate on the Xingnong city-site

quern and a roller. The northeastern entrances of the flues lead to a cooking range. The latter is built directly on the sterile soil level by piling up yellow clay, which has become burnt clay. In plan it is roughly round, 0.8–1 m in diameter and 0.35 m in height. It has two

entrances, which measure 0.2 m and 0.35 m respectively in width and lead to each other, as well as to the flues respectively. Atop either entrance is a covering small slab-stone. The two flues merged together in the southwest, forming the outlet of the flues, i.e. the bot-

tom of the chimney. The outlet is shaped like a shallow pit round in plan, 1.2–1.3 m in diameter and 0.2 m in depth. In its center is a large black slab-stone with an even surface. In the middle of the room, near the flues, there remains a plot of broken floor, black and quite hard, formed through a long-time treading. It is 3.2 m in remaining length from the north to the south, 2 m from the west to the east and 5–6 cm in thickness. The objects discovered on its surface include pottery net-weights, bone artifacts and antler implements in a small number. The doorway can be inferred to be in the southeast (Figs. 6 and 7).

### 3. Objects

The objects unearthed are mainly pottery articles, the rest including artifacts made of iron, bronze, stone, bones, antlers, shells and teeth.

The pottery is principally of yellowish- and grayish-brown sandy wares, grayish-brown and gray clay wares come next, and blackish-brown and black wares occur in a small amount. Most of the objects are hand-made, and a few pieces bear traces of retouching on the wheel. In decoration, plain-surfaced are seen most frequently, and some products are ornamented with incised, bowstring, raised-band and impressed patterns. In type the sandy wares include jars, cups, spindle-whorls and net-weights (Fig. 8); the clay ware, jars, bowls and boat-shaped ob-

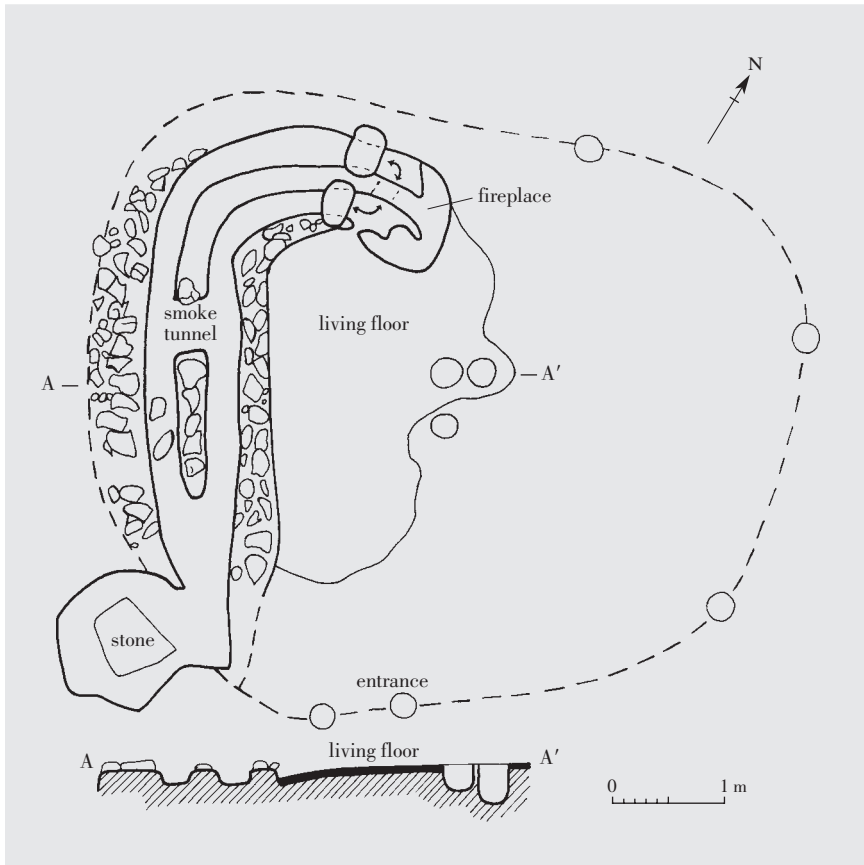


Fig. 6 Plan and cross-section of house-foundation F3



Fig. 7 House-foundation F3 of the Bohai period on the Xingnong city-site

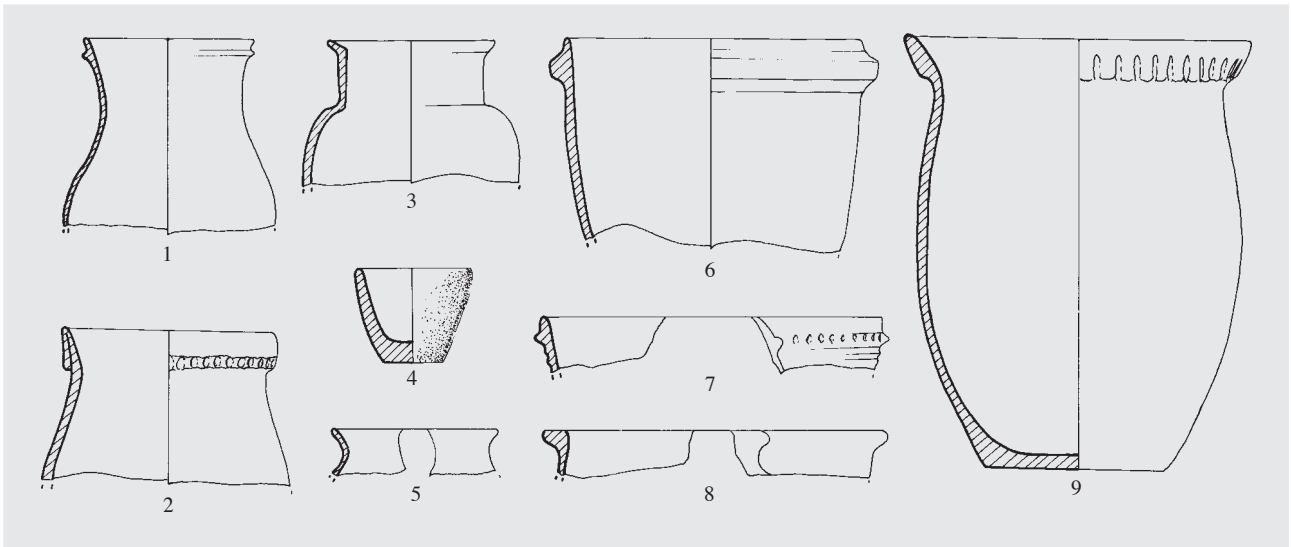


Fig. 8 Sandy pottery of the Bohai period

1. type B jar (H94:1) 2, 9. type A jars (T11②:3, H78:1) 3. type F jar (H28:1) 4. cup (F1:1) 5. type D jar (T11③:6) 6. type CI jar (H87:3) 7. type CII (T11 ②:11) 8. type E jar (T22 ③:1) (scales: 1, 3. c. 1/5; 5–7. c. 1/6; the rest 3/10)

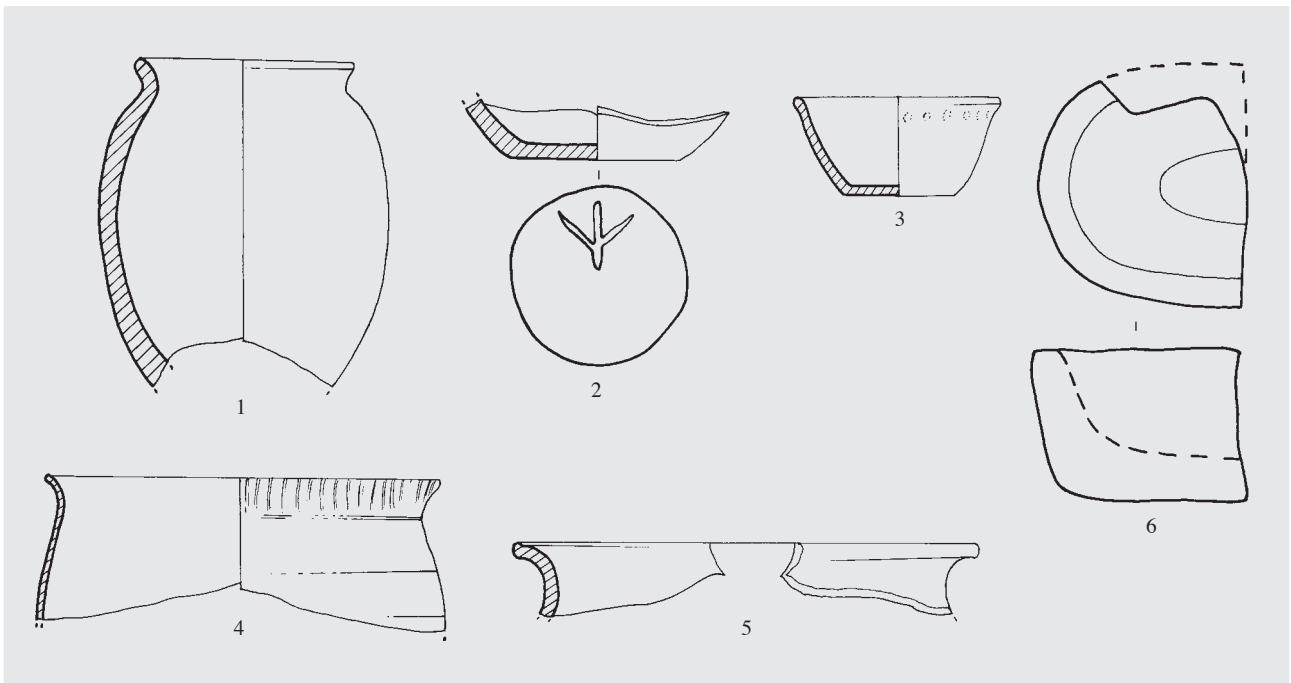


Fig. 9 Clay pottery of the Bohai period

1. type A jar (H87:2) 2. vessel base (T10 ③:2) 3. bowl (H87:1) 4. Type BII jar (T10 ③:3) 5. type BI jar (H97:1) 6. boat-shaped object (T12 ③: 8) (scales: 4. c. 1/10; 6. c. 3/5; the rest c. 3/10)

jects (Fig. 9).

The iron and bronze articles number 23 pieces. They belong to the arrowhead, knife, chisel, ring, armor plate, plaque, *etc.* All of them are badly corroded with rust. There are two copper coins, both bearing the legend “*Kai yuan tong tao* 开元通宝.” The stone implements number eight. They are made of basalt, sand stone,

gabbros, tuff, clay rock, etc. The querns, rollers, mortars and some other larger implements are made with the pecking method, and the rest are polished.

The bone, antler, tooth and shell artifacts total 22 pieces. Most of them are made of animal bones by chopping, whittling and polishing. They include arrowheads, awls, spoons and hairpins (Fig. 10).

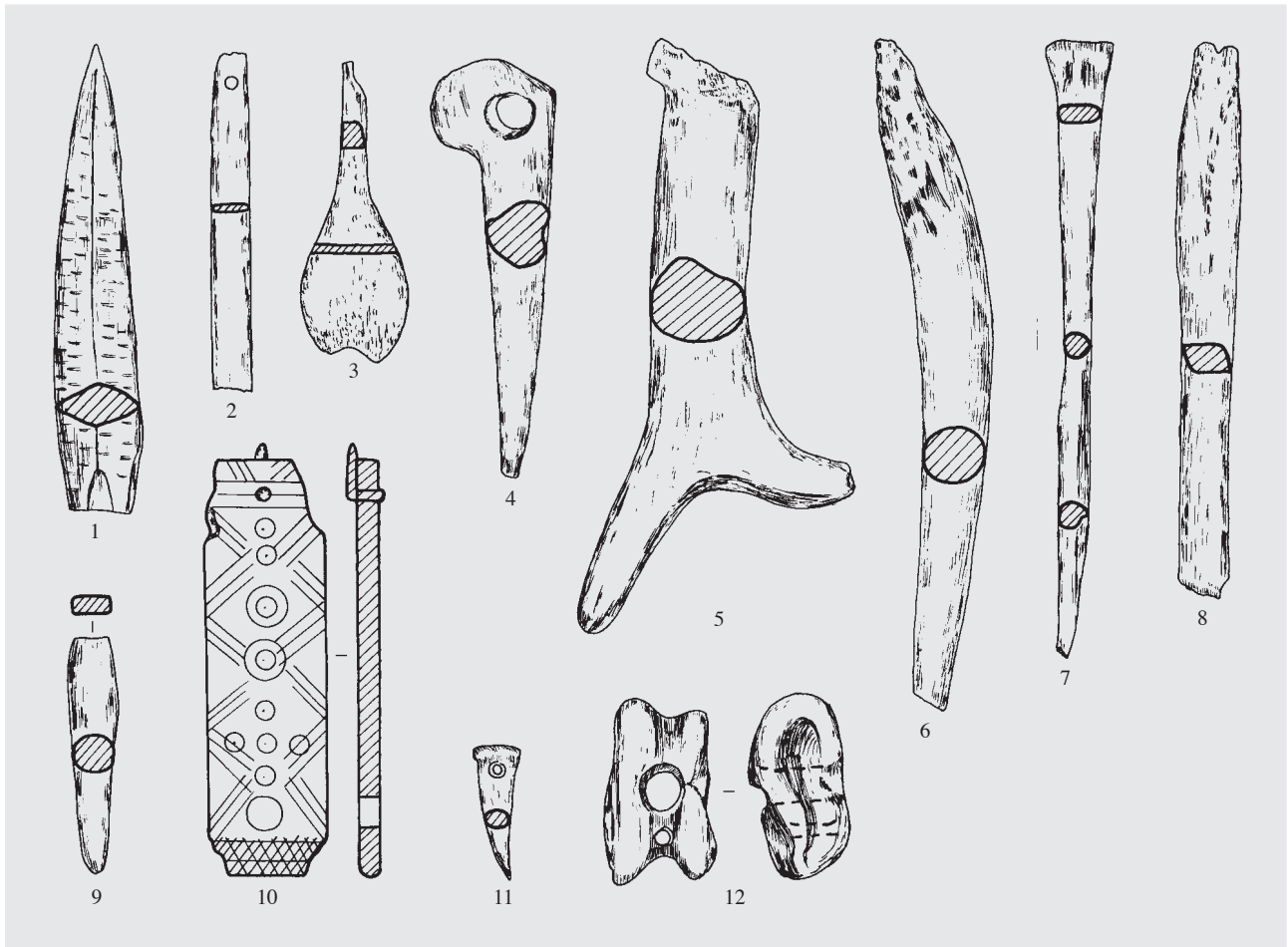


Fig. 10 Bone, antler, tooth and shell artifacts

1. bone arrowhead (H61:1) 2. type A bone spoon (T16①:4) 3. type B bone spoon (T13③:2) 4, 11. type A antler awls (T12②:2, H91:1) 5. type C antler awl (F3:9) 6. type B antler awl (T15②:5) 7. bone hairpin (T11③:2) 8. chisel-shaped bone object (H89:4) 9. bone awls (T17②:1) 10. bone handle (T16②:6) 12. talus ornament (H44:2, F3:3) (2, 3. c. 1/3; the rest c. 7/10)

### III. Conclusions

According to literal records, during its powerful and prosperous period, the Bohai Kingdom “possessed five capitals, 15 prefectures, 62 districts and above 130 counties in its territory.” So far, the Bohai period city-sites archaeologically discovered have reached no less than one hundred. But in earlier years, only some large-sized city-sites were explored by means of preliminary excavation and drilling, while the medium and small ones accounting for the majority of the total have not been excavated carefully, though a few of them were surveyed and investigated in a simple way.

To inquire into the structure and layout of Bohai period medium- and small-sized city-sites, the Xingnong city-site was selected as the breakthrough of the excavation and study of ruined Bohai cities. The site is relatively small in area. It is the first time excavation has

been carried out on small-sized city-sites in northeast China, which has important academic value to promoting the deep-going study of Bohai cities.

Excavation on the ruins brought comprehensive knowledge of the city’s building structure and features, as well as the aspect of the archaeological culture represented by the remains revealed there, which provided an important scale for researching into the connotation of related cultural remains.

The early vestiges and objects are not great in quantity. The pottery is much similar to that of the adjacent Tuanjie 团结 culture and Dongkang 东康 type in shape and texture. Such cultural remains of the early phase have also been discovered on the Hekou 河口 and Zhenxing 振兴 sites within the area now submerged by the Lianhua Reservoir. It is noteworthy that the early remains of the site yielded also a small number of *dou* stemmed bowl shards, which have no counterparts on the Hekou and

Zhenxing sites. The Xingnong site in its early phase embodies mainly the major elements of the Tuanjie culture. So it shares a lot of common features with the Tuanjie culture and Dongkang type. Chronologically it was already in the temporal range of the Han Dynasty, belonging to the early stage of the early Iron Age.

The late remains are rather rich. The main objects are pottery, and the rest include ironware, bronzes, stone implements and bone, antler, tooth and shell artifacts. The pottery resembles in type and shape its counterparts from Bohai period remains in the Lianhua Reservoir submerged area and other zones, especially sandy jars with a decorative border along the outer rim are encountered quite often. The two “*Kai yuan tong bao* 开元通宝” coins provided an important clue for dating the late remains on the site. Recently, studies of the periodization of the pottery from Bohai sites and tombs have greatly advanced. Although they somewhat differ in the selection of samples, most of the researchers divide the pottery into four stages: the pre-Bohai phase and the early, middle and late phases after the founding of the Bohai Kingdom. It is difficult to divide further the late remains on the Xingnong site into stages as the pottery from them contain few intact samples. Judging from its main features, most of it can be assigned to the early to middle stages of Bohai period, and a small proportion consists of late objects.

Excavation and drilling suggest that building and other vestiges are quite densely distributed in the middle and northern areas of the Xingnong city-site. The house-foundations are mostly surface buildings with L-shaped double flues, which embody the characteristics of dwellings at that time.

Based on a comprehensive study of the stratigraphy of the site and the remains unearthed from there, as well as the city-wall vestiges selectively excavated, it can be concluded that the city was built at the middle stage of Bohai period and functioned from then on through the late stage.

The Xingnong city was located in the middle and

lower Mudan River valley, about 70 km apart from Nanchengzi 南城子, a relatively large city-site in the middle valley of the river. It is believed that the latter was the location of Bozhou 渤海州, which was in the jurisdiction of Bohai's upper capital Longquanfu 龙泉府 and played the role of an important protective screen for the communications along the Heishui 黑水 River in northern Bohai. The Xingnong city was just on the route, functioning undoubtedly as an important pass with considerable defensive forces in the north of the kingdom. The iron weapons from the site also indicate that the city had military nature in a certain extent. Moreover, the city was strategically located and difficult of access, with the Mudan River winding round its northeastern corner and peaks raising on the right river-bank, which provided a natural protective screen. This is also a reflection of the city's defensive features.

In structure, the Xingnong city was quite similar to the upper capital Longquanfu. Its city-gate had a beam frame supported with two rows of Y-shaped pillars, which imitated clearly the Tang style and reflected the influence of the Tang culture upon the Bohai culture and the relations between them.

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