RECENT ADVANCES IN THE IRON AGE ARCHAEOLOGY OF TAIWAN

Tsang Cheng-hwa

Institute of History and Philology, Academia Sinica, Taipei, Taiwan, ROC

ABSTRACT

During the last decade, quite a number of Iron Age sites have been discovered and excavated due to the rapid growth of rescue archaeology in Taiwan, and a lot of important archaeological materials have been brought to light. Seven regional Iron Age cultures have so far been recognized in Taiwan, including the Shisanhang culture, the Fanziyuan culture, the Daqiyuan culture, the Kanding culture, the Niaosong culture, the Guishan culture and the Jingpu culture. This paper is in an attempt to give a general introduction to each of these cultures.

NB: This paper uses Pinyin romanization for all Chinese archaeological and personal names, except for that of the author himself (Tsang Cheng-hwa), which is in Wade-Giles romanization.

Over half a century ago, the Japanese archaeologist Kano Tadao (1944) speculated that the Iron Age culture of Taiwan was introduced from the Philippines. Since then, few detailed studies on the Iron Age cultures in Taiwan have been conducted. During the last decade, however, quite a number of Iron Age sites have been discovered and excavated due to the rapid growth of rescue archaeology in Taiwan, and a lot of important archaeological materials have been brought to light. Seven regional Iron Age cultures have so far been recognized in Taiwan, including the Shisanhang, Fanziyuan, Daqiyuan, Kanding, Niaosong, Guishan and Jingpu (Figure 1).

The Shisanhang Culture

The Shisanhang culture is distributed mainly in the coastal regions of northwestern Taiwan and is typified by the Shisanhang site, which is located near the mouth of the Danshui River and was discovered by Sheng Qingyi, an amateur archaeologist, in 1959. Professor Shi Zhang-ru and his students in the Department of Archaeology and Anthropology, National Taiwan University, conducted a trial excavation at the site in the same year. A few cultural remains were unearthed, including pottery, pitted stone pebbles, hammerstones, iron artifacts, glass artifacts and agate beads. In addition, two flexed burials were found. Based on these findings, especially the pottery decorated with check-impressions, Yang Junshi (1961) postulated that the culture of the Shisanhang site was similar to that of the historic Ketagalan tribe of northern Taiwan.

In 1990, the Archaeology Division of the Institute of History and Philology, Academia Sinica, conducted large-scale rescue archaeology at Shisanhang because of the damage done to it during the construction of the Bali Sewage plant. A large number of artifacts and features were unearthed which have greatly enriched our understanding of this culture.

The Shisanhang culture is characterized chiefly by a fine-paste, reddish-brown pottery decorated with geometric patterns such as checks, chevrons, circles, parallel lines, rhombi, and so on. The decoration was done mainly by impression, but incised and dot-stamped designs are also common. A few anthropomorphic representations are especially remarkable (Figure 2). The major pottery forms include bottles, bowls, basins and globular cooking pots. These pottery characteristics are indeed similar to pottery used by the Ketagalan and Kavalan tribes in northern Taiwan in recent times. Very few stone tools have been found, and most were objects for everyday use such as pitted stones, hammerstones, pestles, spindle whorls, and so forth. Bone and antler items were mainly pendants, spearheads, arrowheads and hooks. Most of the implements and weapons were probably made of iron, but only a few iron knives and pointed artifacts were found. An iron-smelting furnace found in a workshop in Shisanhang reveals that these people had the knowledge and ability to smelt iron.
The settlements of this culture were mostly located near the sea and rivers. Their houses were probably in the pile-dwelling style. The inhabitants lived on cereals such as rice, but fishing, collecting shellfish and hunting were still important. They engaged in long-distance trade for obtaining exotic goods such as agate beads and ornaments, bronze artifacts, glass beads and bracelets, gold ornaments, porcelain, silver objects, and so on. One bronze bowl gilded with gold, together with copper coins and fragments of Tang and Song ceramics, were also found. These provide important evidence for early contact between Taiwan aborigines and Chinese. More than 200 hundred human burials were uncovered in the site, laid out in a flexed position with heads to the southwest.

Eight radiocarbon dates from three Shisanhang culture sites – Shisanhang itself (Song 1965, Tsang et al. 1995), Xinxionghuangzi (Song 1978) and Puluowan (Liu 1990), are listed in Table 1.

More than forty further C-14 age determinations have been obtained from the salvage excavations at the Shisanhang site recently, and will be published later in the excavation reports. These dates fall mainly between 2300 and 500 bp, and most cluster around 1500 to 1000 bp.

The Fanziyuan Culture

The Fanziyuan culture is located along the west-central coast of Taiwan. The site at Fanziyuan, Dajia Zhen, Taizhong Prefecture, is the type-site. Grayish black bottles, bowls and jars are the common pottery forms of this culture. They are commonly decorated with impressed patterns such as checks, chevrons, dots, herringbones, stamped circles and dentate-stamped wavy lines. The stone tools consist of chipped hoes, polished rectangular perforated stone knives, saddle-shaped stone knives, and pitted stones. The prevalence of knives chipped from pebble flakes is one of the major characteristics of the Fanziyuan culture. Bone and antler tools include harpoons, awls and points. Iron knives, glass and agate beads were also found at Fanziyuan.
Shell middens occur in all sites of the Fanziyuan culture. Shells as well as bones of deer, goat, pig, bird and fish suggest that the major food resources of the Fanziyuan people were acquired by fishing, collecting and hunting. However, the large number of stone knives seems to indicate that they were also agriculturists.

The burials unearthed from the sites of the Fanziyuan culture reveal mortuary practices different from those of the Shisanhang culture. Here they practiced extended and prone burial with the head towards the east. The skull is usually covered by a pot (Song 1962).

Several radiocarbon dates have been obtained from the sites of Fanziyuan (Song 1965), Longquancun (Sun 1977), Shanjiao (Sun 1977) and Shanzijiao (Qu 1991). They are listed in Table 2.

The Daqiuyuan Culture

This culture is located in the hilly region of the middle Zhuoshui River valley in Nantou Prefecture, and is typified by the Tianliaoyuan Site at Ji Ji Zhen, Nantou Prefecture. The pottery of this culture is characterized by a reddish-brown, soft, coarse sand-tempered and plain ware. Stone tools are abundant including chipped and ground hoes, knives and net sinkers. No iron tools have been found in this culture so far, but glass beads, which are similar to those found in the Shisanhang and Fanziyuan cultures in the coastal regions, have been found in the site of Tianliaoyuan. This suggests that interaction occurred between coastal and inland cultures during the Iron Age of Taiwan.

Four radiocarbon dates have been obtained for the Tianliaoyuan site (Tsang 1978) and are listed in Table 3.

The Kcanting Culture

Located on the coast of Yunlin and Jiayi in west-central Taiwan, this culture has been discovered only recently (Tsang et al. 1995). Kcanting and Shicuoliao are the type-sites. Stone tools are completely absent from this culture. Pottery is mostly yellowish brown in color, with a fine sandy paste and without decoration. Glass beads and fragments of Chinese ceramics of the Song, Yuan and Qing dynasties have been found in association. Two radiocarbon dates of 810±60 bp and 780±60 bp have been obtained from the Kcanting site (Tsang et al. 1995).

The Niaosong Culture

The Niaosong culture is widely distributed in the southwestern part of Taiwan, north to the coastal plains and hills of Jiayi and Tainan, and south to those of Gaoxiong and Pingdong Prefectures. Niaosong, which is located at Yongkang Xiang of Tainan Prefecture, is the representative site of this culture. Most of the pottery is reddish brown in color, with a sandy paste. The major forms of pottery are globular cooking pots and bowls. Decoration is rare, but includes incised, circular and shell- impressed patterns. The occurrence of many black hollow bird’s-head shaped pottery figurines, the functions of which are still unknown, form one of the characteristic features of the Niaosong culture. Stone tools, including knives, adzes and pitted pebbles, are very rare, and are even completely absent in some sites (Huang 1979). Iron arrowheads, spearheads, knives, axes, glass beads and beads, and fragments of Chinese ceramics of Ming dynasty date have been found in the sites of Niaosong, Daoye (Tsang n.d.), Wujiancun (Tsang n.d.) and Xiliu (Liu 1994).

Several tens of human burials were discovered during recent salvage excavations in the Daoye and Wujiancun sites of Tainan. Most skeletons rest in a supine and extended posture. An earthenware pot was usually put near the skull. Earthen rings, glass beads and bracelets, iron

| Table 1: Radiocarbon dates for the Shisanhang Culture |
|----------|-----------------|-----------------|-----------------|
| Lab. No. | Site     | Dated material | C-14 Date (bp) |
| NTU-7    | Shisanhang  | Shell           | 1444±204        |
| NTU-8    | Shisanhang  | Shell           | 1145±206        |
| NTU-52   | Xixinzhengzi | Shell           | 1940±135        |
| NTU-237  | Xixinzhengzi | Shell           | 2390±200        |
| NTU-232  | Xixinzhengzi | Shell           | 2010±200        |
| NTU-1607 | Puluowan    | Charcoal        | 900±100         |
| NTU-1090 | Puluowan    | Charcoal        | 667±80          |
| NTU-1127 | Puluowan    | Charcoal        | 791±40          |

| Table 2: Radiocarbon dates for the Fanziyuan Culture |
|----------|-----------------|-----------------|-----------------|
| Lab. No. | Site     | Dated material | C-14 Date (bp) |
| Y-1499   | Fanziyuan  | Shell           | 1500±80        |
| NTU-235  | Longquancun | Shell           | 1653±87        |
| NTU-231  | Longquancun | Shell           | 1689±51        |
| NTU-233  | Longquancun | Shell           | 1669±50        |
| NTU-237  | Longquancun | Shell           | 1597±48        |
| NTU-232  | Longquancun | Shell           | 1480±44        |
| NTU-229  | Longquancun | Shell           | 1429±71        |
| NTU-234  | Longquancun | Shell           | 1365±41        |
| NTU-239  | Longquancun | Shell           | 1349±67        |
| NTU-230  | Longquancun | Shell           | 1193±36        |
| NTU-238  | Longquancun | Shell           | 1185±59        |
| NTU-236  | Longquancun | Shell           | 1081±32        |
| NTU-240  | Longquancun | Shell           | 959±48         |
| NTU-242  | Shanjiao   | Charcoal        | 1595±48        |
| NTU-1363 | Shanzijiao | Charcoal        | 760±60         |
| NTU-1364 | Shanzijiao | Charcoal        | 580±60         |
arrowheads and iron spearheads are occasionally found with the burials.

Ten radiocarbon dates have been obtained from Niaosong (Song et al. 1992), Daoye (Tsang 1996), Wujianguo (Tsang n.d.), Xiiliao (Liu 1994) and Hunei (Song et al. 1992) and are listed in Table 4.

The Guishan Culture

This Guishan culture is represented by only a few sites including Guishan itself (Li et al. 1985) and Houbishan (Huang et al. 1987) in Pingdong Prefecture, and Chulu (Ye 1994) in Taidong Prefecture. Only the Guishan site, which was discovered by the late Li Guangzhou and others in 1985, has been recently excavated, by Li Kuangti (1993, 1994, 1995). Cultural remains from Guishan include potsherds, spindle whorls, pottery rings, ceramic figurines, hard glazed wares, chipped stone hoes, ground stone axes, shell scrapers, bone points, animal bones and shells, as well as iron knives and iron spearheads. The most remarkable feature of this culture is the unique pottery style, which is quite distinctive from that of the other cultures of the same time period in Taiwan. For example, some decorative motifs on pot surfaces, such as impressed human figures (Figure 3) and J-shaped elements, as well as the black bowls with flaring rims, constricted necks and wide bottoms with outward extrusions and low ring-feet, have not been found in any other sites in Taiwan.

Three radiocarbon dates (Li et al. 1985, Huang et al. 1987) are now available for the Guishan culture and are listed in Table 5.

The Jingpu Culture

Distributed mainly in the coastal regions between Hualien and Taidong, the Jingpu culture has been recognized as the latest prehistoric culture on the eastern coast of Taiwan. Recent excavations at the sites of Jingpu in Hualien (Huang et al. 1989), Baisangan in Taidong (Ye 1993), and in sites along the southern bank of the Mawuku River (Huang and Liu 1993), have unearthed more materials belonging to this culture.

Jingpu pottery is reddish-brown and tempered with sand. The major forms consist of globular pots, urns, bottles, cups and plates. Some vessels were provided with handles. Most of the pottery is undecorated. A small number of stone tools, including hoes, adzes, pestles and hammers were discovered, as well as iron implements, bronze, glass, porcelain and glazed pottery. Two human burials were recovered from the Baisangan site. Each of the burials was under a structure, which was piled up with cobbles in a roughly circular shape.

The skeleton was poorly preserved in each burial and remaining teeth and limb bones show that the bodies were probably in supine and extended postures. One burial was particularly rich, with bronze necklaces, copper bells, gold leaves, glassware, glass beads, agate beads and iron tools (Ye 1993).

Archaeologists tend to believe that the predecessors of the Ami people, who still live in this region of eastern Taiwan today, probably created the Jingpu culture. No radiocarbon dates are yet available for the Jingpu culture, but a time range from 1000 to 500 BP has been postulated (Ye 1993).

CONCLUSIONS

On the basis of the above information, it is now known that the Iron Age cultures in Taiwan are indeed far more complex than speculated by Kano. Iron Age cultures in Taiwan occupied not only the eastern coast, as Kano pointed out, but existed all around the island. In addition, all except for the Daqiuyuan culture were distributed mainly in coastal areas. Kano also suggested that the introduction of iron metallurgy into Taiwan probably occurred around AD 600-900, corresponding to the later phase of the Philippine Iron Age as reconstructed by Beyer (Song 1955). But current archaeological data show that Iron Age cultures in Taiwan began around 2000 BP or a little earlier. This date is almost contemporary with that of 370 BC suggested for the first appearance of iron-using societies in the Philippines by Dixon (1998:124).

Although regional differences in pottery styles and burial practices among the Taiwan Iron Age cultures can obviously be seen, almost all possessed a similar assemblage of trade
goods, including ceramics and artifacts made of iron, bronze, glass and gold. This seems to indicate that networks of regional exchange and maritime trade existed in Taiwan during the Iron Age.

The discovery of an iron workshop at the Shisanhang site is of the utmost interest and provides hard evidence for the existence of iron technology in prehistoric Taiwan. A radiocarbon date of 1570±90 bp (NTU-2173) for a sample of iron slag collected from this workshop indicates that the earliest appearance of iron making at the Shisanhang site is no later than 1500 BP. This means that the iron artifacts found in many other Iron Age sites in Taiwan were not necessarily all imported from outside, as Kano and others thought, and some were probably locally made.

The trade between Taiwan and China, as evidenced by Chinese goods such as the gilded bronze bowl, copper coins and porcelains found in Shisanhang and other Iron Age sites, seems to imply that the Chinese mainland would have been a major source area for the introduction of iron technology to Taiwan, in addition to Southeast Asia. But one problem needs to be resolved. All of the trade goods from China have been dated no earlier than the Tang dynasty (AD 618-907), thus apparently later than the date of the appearance of iron technology in Taiwan. Is it possible that trade contact between Taiwan and China could have occurred earlier? Or is the single radiocarbon date for the Shisanhang iron slag problematical? In any event, we can postulate on the basis of current evidence that iron artifacts were introduced to Taiwan as trade goods a little earlier than the birth of Christ, and actual knowledge of iron technology was introduced from neighbouring areas at a later date.

Although a large number of Iron Age sites have been recovered in Taiwan during the past decade, the research on them has been mainly focused on chronology. A detailed time-space framework for the Iron Age cultures has now been reconstructed. Few studies, however, have paid attention to issues of iron technology and the socio-economic and political complexities behind the material remains. Further research on these aspects will be certainly very important, not only for our understanding of the culture and society of Iron Age Taiwan, but also the later prehistory of Southeast Asia.
REFERENCES


Huang Shiqiang and Liu Yichang 1993 Salvage and Assessment of the Prehistoric Sites, North and South of the Tonghe Bridge. Department of Anthropology, National Taiwan University, Monograph no. 19 (in Chinese).


Song Wexun. 1978. Taiwan during the prehistoric period. In Records of the Symposium on Taiwan History. Taipei: Department of History, National Taiwan University (in Chinese).


