CHANGKUANG: A NEOLITHIC BURIAL SITE ON THE EASTERN COAST OF TAIWAN

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ABSTRACT

The Changkuang site is located on the eastern coast of Taiwan in Taitung county. Two seasons of trial excavation were carried out in 1993 and 1998 that revealed two independent components. The lower component with cord-marked pottery is dated to c.5700 BP. The upper component probably dates from the late 2nd millennium BC and contains three different types of burial. In this preliminary report, I focus on the upper component and discuss the regional interactions of Neolithic societies in eastern Taiwan.

NB: Spelling of Taiwan placenames is retained as in the submitted manuscript. It is essentially streamlined (hyphen- and apostrophe-free) Wade-Giles.

The middle portion of the eastern coastal plain of Taiwan, between Taitung and Hualien (Figure 1), is about 140 km long and less than 1 km wide on average. Geomorphologically it consists of marine terraces and is separated from the interior East Taiwan Valley by the steep Eastern Coastal Ranges, which vary in height from about 1600 m in the mid-portion to less than 1000 m at the north and south ends.

In the past twenty years, tremendous advances in the archaeology of eastern Taiwan have taken place, not only in the excavation of key sites (Sung and Lien 1987; Huang and Chen 1990), but also through a series of regional projects conducted by various academic agencies (Lien and Sung 1992; Liu 1993; Li 1994). These efforts have updated many aspects of the prehistoric cultures since they were first recognized by Torri (1926).

Archaeological work on the eastern coast of Taiwan began as early as the end of the 19th century, with Torri in 1896 (Sung 1952). Then, after surveys during the 1920s and 1930s, Kano (1955) suggested that the Megalithic culture of eastern Taiwan showed a close relationship with Indochina. Pearson (1968) grouped the sites with megalithic monuments or stone slab graves into one single component which he termed the Taiyuan phase. However, Sung did not agree with this unified classification and argued that two different Late Neolithic cultures could be easily distinguished in eastern Taiwan. The first, the Chilin culture (an alternative term for the Megalithic culture), is best-known by its stone monuments in the coastal area dating to about the late second millennium BC. The second, the Peinan culture, which is well represented by stone slab graves, flourished in the interior valley area and on the Taitung plain at about the same period or earlier (Sung 1980, 1989). Since Sung's publications, more details concerning Neolithic cultural sequences along the east coast have been recovered, including identification of the Tapenkeng phase, the succeeding Red Corded Wares phase, and the newly-proposed Huakangshan culture in the northern portion of the east coast (Liu 1993; Yeh 1996).

THE CHANGKUANG SITE

The site is situated in a sand dune behind Changkuang village in Taitung County. It was discovered in 1992 and teams from the National Museum of Prehistory carried out two seasons of excavations in 1993 (Chao 1994) and 1998. However, the site was first reported by Kano during the period of Japanese colonisation as Shilkeng, the former name of Changkuang village. Two vessels illustrated by Kano (1955 :47-50), although only with brief descriptions, were believed to have been discovered here.

The site can be roughly divided into three areas. The southern part of the dune is locus A. Loci B and C are located 400 m north of locus A. A shallow depression separates them across a distance of about 150 m. Locus B lies to the east of locus C.

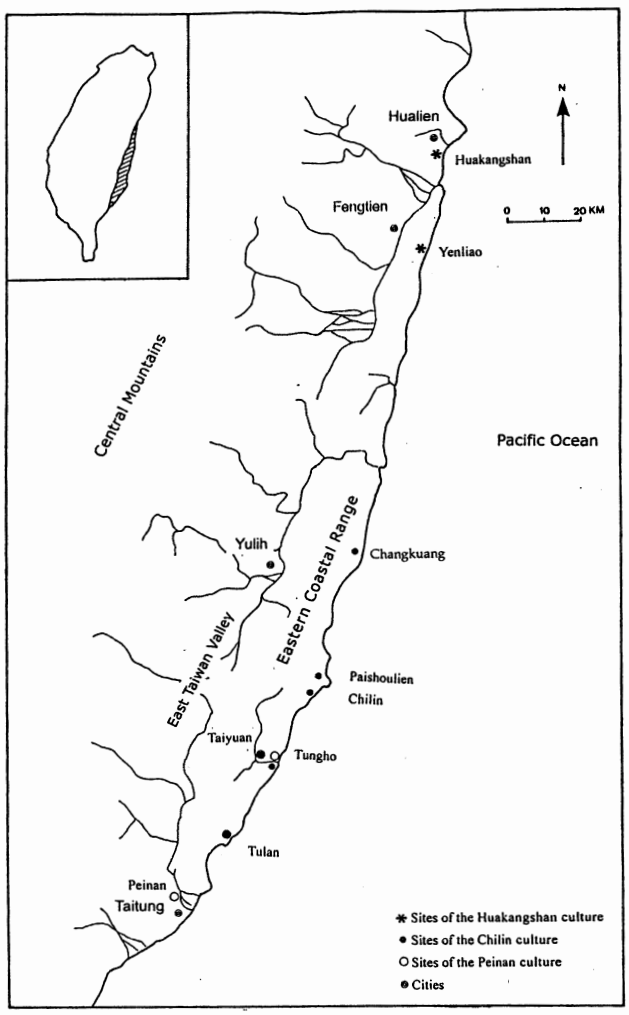

Figure 1: Archaeological sites on the Eastern Coast of Taiwan.

Two independent cultures have been identified within a profile less than 1 m in depth. The lower cultural layer is about 65-80 cm deep. It is represented by coarse corded wares of the Tapenkeng culture, dated to about 4,500~5,400 BP by thermoluminescence dating carried out at National Taiwan University. No other artefacts were found associated with the corded sherds, except for the younger slab graves dug down from above and embedded amongst them. On the other hand, the assemblage from the upper cultural layer includes red plainware pottery, nephrite artefacts and stone axes and adzes, which possess many similarities with the well-defined Chilin culture of the late 2nd millennium BC This upper cultural layer is normally 40 cm thick. From it, significant features were recovered including three types of burial; rock-cut graves, slab graves and jar burials.

Rock-Cut Grave

The single rock-cut grave (Sung 1989) was located on the eastern edge of the dune. When the landlord bulldozed for cultivation in 1992, it came to light, topped with a slab cover. It was a roughly rectangular cavity, hollowed into a huge, *in situ* boulder of agglomerate. The interior is about 45 cm deep, 180 cm long and 45 cm wide at the north end, 60 cm wide at the south end. The long axis is aligned approximately N 25° W. One perforation in the SW corner of the cavity is inclined slightly downwards from inside to outside. According to these characteristics, this rock-cut grave resembles rock-cut graves in other east Taiwan sites, especially Tulan and Paishoulien. Only a few artefacts were found near the grave, mainly sherd fragments, but the landlord reported that two stone axes and one shallow bowl were once found inside, possibly placed as grave goods.

Stone Slabs

Four stone slab graves have been discovered in Changkuang, buried 50-80 cm under the ground surface. None were in perfect condition. Less than half remained of B3 and B4 was in even worse condition. Human bone was extremely rare; part of a cranium in B3 and one tooth in B2.

The stone slab grave B2 in locus C was the best-preserved (Figure 2). It was assembled with a slate slab on each side as a rectangular cist. The west lateral slab had probably been removed by recent farming activities. B2 was about 150 cm long, 50 cm wide and at least 35 cm deep. The bottom slab was *in situ* but fragmentary. What attracted the most interest was that the cover of B2 was composed of more than fifteen slabs, presumably a result of reusing the same grave. Disturbances caused by such behaviour were also visible in places during excavation of the overlying soil. Only a few artefacts were found inside the grave, including sherds, a nephrite chisel, an earring and small tube, and slate bracelets. However, judging from the site formation process as inferred by Chao (1996), lots of stone artefacts and vessels recovered in surrounding areas were presumably once grave goods which had been shifted out of their original contexts.

Jar Burials

It is not absolutely certain that jar burial was actually practiced in Changkuang. One upside down pot beside B3 that contained 9 human teeth and a few bone fragments was probably evidence of a jar burial, although the pot was only of a middle size with a maximum diameter less than 25 cm. Another example was a crushed pot like the burial urns found

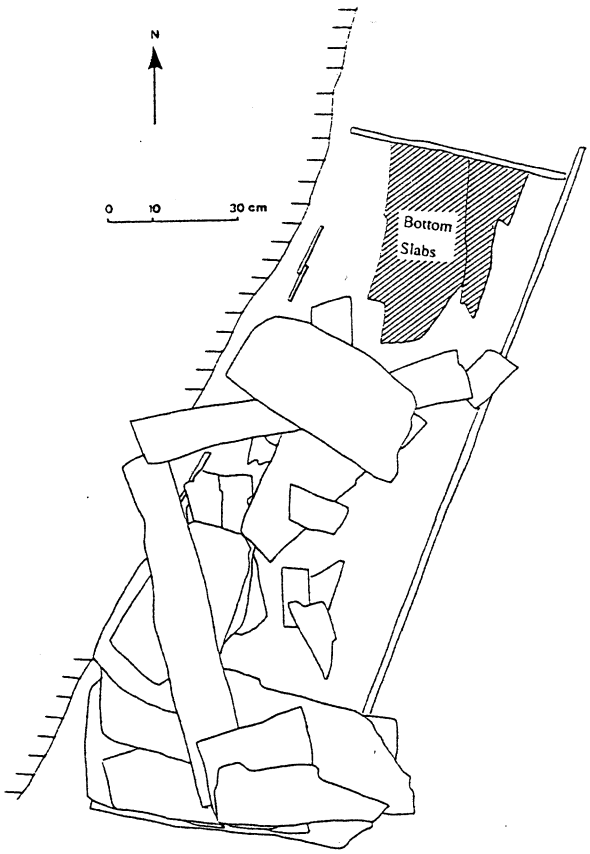

Figure 2: Slate cist coffin (B2).

at other sites, for example Yenliao or Huakangshan in Hualien. No bones were found associated with this pot.

Also, a peculiar method of vessel arrangement in the Changkuang site should be discussed here. A standing bowl in locus B was intentionally covered by a pot, which was carefully cut apart. A similar pattern also occurs in the nearby Chentsihpu site, which lies in another dune across a stream and about 400 m to the northeast. In this case, a pot with a ring foot was also cut apart, then covered upside down. Three nephrite earrings were recovered from the inside. Based on the nature of these earrings as grave goods, it seems safe to assume that the vessels were arranged in this particular way to serve as a special kind of jar burial. However, the exact meaning is still obscure.

ARTEFACTS FROM THE CHANGKUANG SITE

The recovered materials were highly concentrated in the vicinity of the stone slab graves. Except for the sherds of corded ware, all were recovered from the upper cultural stratum. No organic artefacts have been discovered.

Stone artefacts

Surprisingly, stone axes (or hoes) are only one quarter of all stone artefacts, while they usually dramatically predominate in other prehistoric sites on the eastern coast. Also, two types of stone artifacts often found in dwelling sites, namely stone net sinkers and hammers, are absent. On the contrary, artefacts usually regarded as grave goods or having non-utilitarian functions add up to almost a half of the total, including stone bracelets and nephrite artefacts such as adzes, ornaments, arrowheads and small beads. Their distribution is not limited to graves, and in fact only a few were actually recovered inside graves.

Nine types of stone artefact occur, as follows:

1. Flaked axes or hoes made on flaked sandstone pebbles. These are nearly rectangular in shape and have dulled edges. One wonders if they were actually employed as grave goods.
2. Flake scrapers made of unretouched sandstone flakes. The only recognizable feature is the use wear that usually occurs on one longitudinal edge. They are normally semilunar or oval in shape.
3. Polished arrowheads of very thin slate. Two specimens are of nephrite and are perforated.
4. Polished slate needles with round or oval cross-sections.
5. Polished bracelets of slate, varying from 6 to 9 cm in diameter.
6. Nephrite chisels, all small with a sharp edge at one end.
7. Polished rectangular-sectioned adzes. More than half are made of nephrite, others of very fine-grained andesite or hard greenstone (Pearson 1968 :148), and only few are made of sandstone. They are well-finished implements and some obviously have been resharpened.
8. Nephrite earrings, including split rings with four lugs, some shaped like the Chinese character *chi*, the so-called IIIB1 type in Peinan (Sung and Lien 1987; Lien 1991:Figure 4, III, 4-5).
9. Nephrite ornaments, including small tubular beads bored from both ends and one polished chip with a perforation, probably used for hanging.

According to surface treatment two categories of pottery can be easily distinguished. These are corded ware and plain ware. Sherds of corded ware were mainly recovered from the lower cultural layer and are outnumbered by plain ware from the upper layer. Their paste is relatively fine but contains mineral temper of large grain size. Thin sections reveal that the inclusions are largely quartz, fragments of sandstone and metaquartzite, and a few igneous minerals. The color of corded sherds is normally brown to dull reddish brown. The jar is the only shape that can be recognized. The whole body is always impressed with coarse cord marks. Decoration of incised curves and parallel lines often occurs

on rims and on the exterior above the shoulder (Figure 3). These outstanding characteristics, including the shapes of the ridged rims and the decoration, have their analogues in the Tapenkeng culture of western Taiwan. These similarities confirm the assumption that the earliest pottery makers settled the eastern coast as early as the upper Neolithic stage.

Vessels of plain ware are the most abundant in the Changkuang site and have been recovered from the upper component associated with the burials and stone artefacts described above. Compared with the corded wares, the plain wares are more complex in terms of paste and comprise four groups.

Group A1: sandy red ware. This is the most abundant group. Sherds are coarse textured and surfaces generally have light reddish-orange color. Tempers are mainly of andesite fragments, pyroxenes and feldspars, a combination that indicates an igneous source environment.

Group A2: fine red ware. Normally rather uniform in shape and color, this ware is not homogeneous in paste due to variation in the temper which ranges from fine to considerably sandy. Analyses of thin sections show similarities with group A1.

Group B: sandy orange ware. Sherds of this ware are mainly bright reddish orange on the surface and gray in the core. Slate sand grains of different size were used as temper.

Group C: sandy brownish ware. Sherds of this ware have varying degrees of surface polishing and black cores. They tend to be thicker than the other wares. Many samples exhibit a red or reddish brown slip. One thin section indicates that the inclusions might come from complex geological environments, both igneous and metamorphic.

Complete and restorable vessels of the plain wares can be classified into the following five basic types (Figure 3):

1. Urns with ring feet; short rims, obvious shoulders, at least 70 cm in height and 50 cm in diameter.
2. Bowls and dishes on low ring feet, normally of small size, some with a pair of chunky lugs below the rim.
3. Shallow dishes or bowls supported by high pedestals (*tou* in Chinese). Typical *tou* are rarely seen in eastern Taiwan, except for a few examples from the Peinan site.
4. Simple pots. Rims are short and in some cases the diameter of the rounded body may reach more than 30 cm.

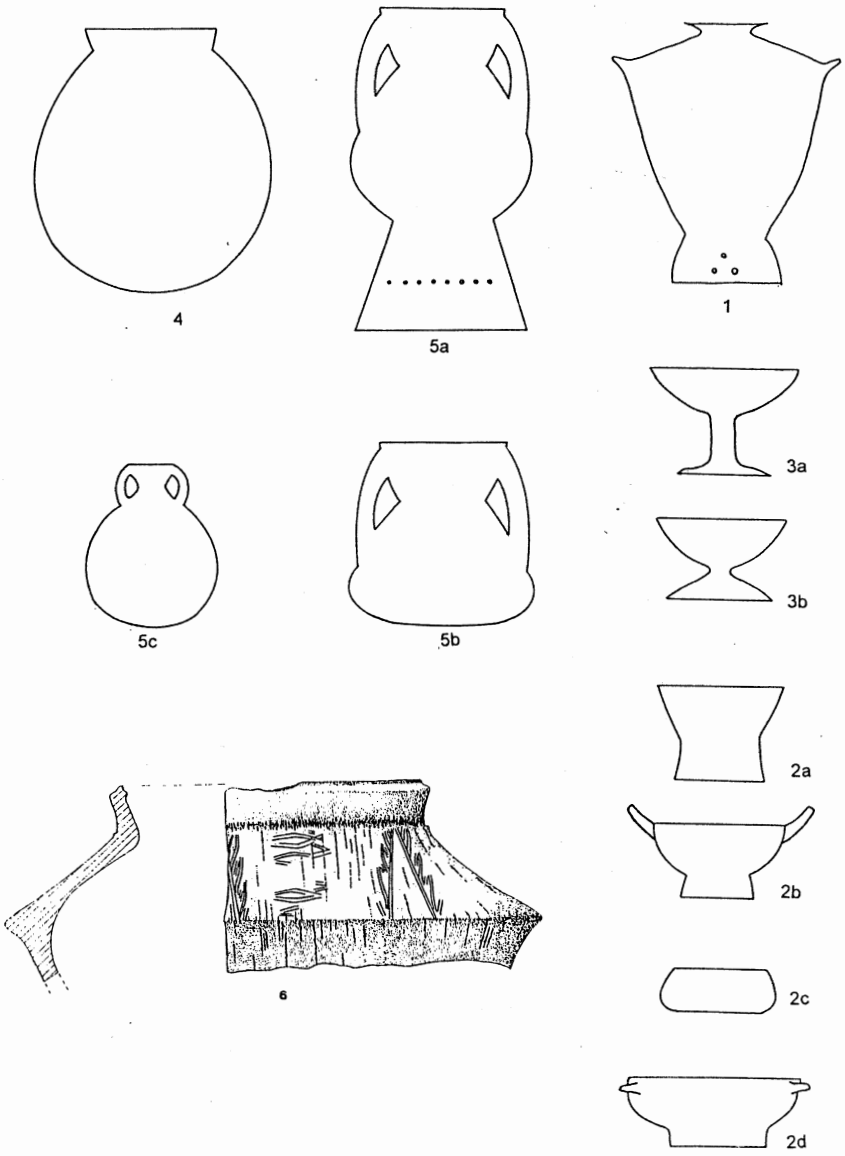

Figure 3: Pottery vessels, Changkuang. 1. Urn jar; 2. Bowls; 3. Tous*; 4. Simple pot; 5. Pots with vertical handles; 6. Coarse corded pot*

5. Pots with pairs of vertical handles. Vessels of this type slightly outnumber the others. In most cases, numbers of small circular cutouts were made through the ring feet. The handles extend from the lip down to the shoulder and are often decorated with successive rows of punctuates.

TRADE AND INTERACTION IN EASTERN TAIWAN

Trading activities in Taiwan prehistory have long attracted attention, especially in the case of nephrite artefacts. Since the only nephrite sources are located in the foothills of the East Taiwan Valley, in the vicinity of Fengtien (Figure 1), it has been suggested that the nephrite artefacts discovered in sites all around Taiwan were traded from here (Tsang 1989; Shih and Liu 1987). The presence of exotic vessels and artefacts made of non-local materials in the Changkuang site suggests quite a complex situation. This site is situated in an igneous environment where both slate and nephrite are not locally accessible. Yet, from cultural layers these two materials accounted for more than 60% of all lithic artefacts. Moreover, many vessels with slate tempers (group B) are found associated with the graves. The shapes and styles of these vessels were also popular within the Peinan culture area, more than 50 km to the south. Also in Changkuang, the bowls and jars with a red slip (group C vessels) have so far only been observed in sites of the Huakangshan culture, 70 km to the north.

As discussed above, three contemporary Late Neolithic archaeological cultures of the east coast have been rigidly defined as the Chilin culture in the centre, the Peinan culture to the south, and the Huakangshan culture restricted to the northern part. Allowing for their separate spatial distributions, it seems safe to assume that vessels of groups B and C at Changkuang are exotic to the site, obtained through trade or exchange. As a result of investigating the coastal region for several years, I believe this exchange phenomenon was not just limited to few sites. Long distance transfer of resources like slate and nephrite was probably practiced along the whole length of the coastline. Because of the context of these vessels as grave goods, and the long distances between the sites, one can conclude that wide interaction took place in the late Neolithic east Taiwan, although the exact nature of this is not quite clear at present. Further research on these matters is still required.

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