

New Light on Taiwan's Prehistory

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INTRODUCTION

EXPLANATIONS FOR THE cultural diversity found both ethnographically and archaeologically on Taiwan have been one of the key issues for anthropologists studying the island for the last 70 years (Chang 1969; Triestman 1972). Linguistically, three major groups with 16 subgroups have been delineated (Ferrell 1969: 69). Ethnologists have divided the peoples of the island into at least eight tribes according to marriage systems, house types, origin myths, and the presence or absence of traditions like tattooing or wood carving (Chen 1968; Hsieh 1964). Archaeologically, we see at least three spatially distinct areas in the north, the central and southern area, and the east coast. Temporally, we have possible Palaeolithic remains from the Chang-pin sea caves on the east coast (Sung 1969) and several Neolithic cultures on the west coast.

Archaeological work was begun by the Japanese as early as 1896. Although several sites were located in the next 47 years, it was not until 1943 that the first stratified site was excavated at Ch'iang-t'ou in the northern part of the island (outside Taipei) by Kanaseki and Kokubu (1953). Since the end of World War II and the reestablishment of Chinese control over the island, more fieldwork has been carried out. Most of the major work has been carried out by the Department of Archaeology and Anthropology, National Taiwan University, county historical commissions, and the Academia Sinica.

In this paper we will look at three explanations for the ethnographic and archaeological diversity of Taiwan: first, the Chinese historians' view; second, K. C. Chang's case for cultural continuity with the Asia mainland; and third, Judith Treistman's suggestion that differences are due to different ecological adaptations. Results from the author's 1972-73 fieldwork will then be used to shed light on the explanations.

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THE CHINESE HISTORIANS

During the period of the Three Kingdoms, Sun Chuan in 230 A.D. sent 10,000 troops to Taiwan, where they engaged and defeated the plains tribes. Further contact was made in the Sui Dynasty in 610 A.D., and again during the Sung Dynasty in 1225 A.D. This was possibly the largest single emigration of Han Chinese up to that time. During the Ming Dynasty (1368–1643), emigration to Taiwan was forbidden but still occurred. In 1626, during a period of famine on the mainland of China, thousands of refugees were transported to Taiwan. Taiwan was occupied by the Dutch and the Spanish between 1624 and 1642. In 1642, Cheng-kung Cheng (Koxinga) recaptured the island, allowing emigration from the mainland to continue. In 1895, Taiwan was lost to Japan as a result of the Sino-Japanese War.

In writing about the aborigines, the Chinese explained that the aborigines had previously lived on the plains but were “pushed out of the plain and into the mountains by swelling agricultural populations emigrating from the mainland” (Treistman 1972: 75; see also C. Y. Chang 1953). J. W. Davidson, in summarizing the Chinese works at the turn of the last century, discusses the origins and distribution of the aborigines. The Chinese scholars divided the aborigines into two main groups:

The domesticated (or sinicized) savages live on the western plain. The other groups dwell in the central mountain range, some occupying districts of five or six thousand feet elevation. The traditions of all, however, agree that they did not occupy the rough mountainous districts prior to the arrival of strangers (i.e. the Chinese) . . . the vast and fertile plain of the western half was their homeland, and here they enjoyed a life of ease and plenty. It was their defeat in the struggle for supremacy with the immigrants that drove them into the mountains. (Davidson 1903: 563)

In the early writings, the Chinese gave two classifications for the aborigines—P'ing-pu-tzu ('plains tribes') and Shan-ti-jen ('mountain people'). The explanation for the difference was that the first group had recognized the superiority of Chinese culture and allowed themselves to be sinicized while the others had retreated to the hills. This point of view was still being expounded into the 1960s (Hsieh 1964; Chai 1967).

PREHISTORIC MIGRATIONS FROM THE ASIA MAINLAND

Kwang-chih Chang, as a student in the early 1950s in the newly formed Department of Archaeology and Anthropology of the National Taiwan University, worked firsthand with much of the material then being excavated on Taiwan. Using the data from these excavated sites, he formulated in 1954 a cultural grouping and stratigraphic sequence for the prehistoric cultures of Taiwan. In the sequence published two years later (1956: 379–380), he isolated six major “cultures” along the west coast according to ceramic and lithic remains. These were spatially divided into the Northern, Central, and Southern areas. At least two temporal horizons were noted.

In the late 1950s and 1960s, great strides were made in archaeological method, technique, and theory. It was realized that large-scale excavation with interdis-

ciplinary skills would be required to understand Taiwan's prehistory more clearly. In 1964–66, Chang coordinated a project cosponsored by the Department of Anthropology and the Peabody Museum of Natural History of Yale University and the Department of Archaeology and Anthropology, National Taiwan University. Extensive excavations were made at the sites of Fengpitou and Tapenkeng, the results of which appeared in monograph no. 73 of the Yale University Publications in Anthropology (Chang 1969). This work demonstrated the presence of three main prehistoric cultures on western Taiwan: the Corded-Ware Culture, the Yuan-shan Culture, and the Lungshanoid Culture. We will look briefly at these cultures.

Corded-Ware Culture

The 1964–66 research verified Chang's earlier (1956) suggestion that cord-marked pottery was used by the earliest inhabitants on the west coast. On the west coast no remains have been found that compare with Wen-hsün Sung's pre-ceramic Chang-pinian material. Dates for the cord-marked pottery are lacking, but Chang has suggested that it appeared on the scene about 9000 B.C. and lasted until about 2000 B.C. (Chang 1969: 218). [First C-14 date for cord-marked pottery 3695 ± 60 B.C. from K. C. Chang, 1973, Radiocarbon dates from China: Some initial interpretations, *CA* 14(5): 525–28.—Ed.] This earlier culture represented by coarse, cord-marked pottery clustered in at least two areas: the southernmost areas of the western coast and the northwestern coast. The pottery was thick, brown-buff with coarse cord impressions (Chang 1969: 5708). Typical stone artifacts include rectangular adzes; retouched river pebbles; and perforated triangular slate points (Chang 1969: 217). The artifact inventory suggests to Chang that "hunting and collecting were of great importance and the absence of the characteristic stone knives that came with the subsequent grain-growing cultures indicates that the Corded-Ware Culture did not possess the techniques of intensive agriculture if, indeed, it had any at all" (Chang 1969: 217). He suggests that they may have been dependent on an early form of root and fruit cultivation.

Lungshanoid Cultures

In central and southwestern Taiwan (approximately 2500 B.C.), a cultural tradition clearly different from the previous Corded-Ware Culture appears in the archaeological record. Three major types of pottery are found: fine paste, cord-marked red; sandy, incised brown-buff; and incised and impressed black wares. The fine paste, cord-marked red pottery occurred first in both southwest and central Taiwan. Associated stone tools include flat, polished hoes, rectangular adzes, rectangular and saddle-shaped slate knives, and stemmed arrowheads. The large percentage of agriculture-related tools (hoes, reaping knives, etc.) and evidence from a pollen core taken from Sun Moon Lake in central Taiwan (Tsukada 1966) indicated to Chang that intensive grain agriculture was probably the economic base of these people. About the middle of the second millennium B.C., sandy brown-buff and black pottery (which shades to grey) occurred. The pottery is decorated with cord, basket, and mat impressions or incisions. Shellmounds occurred in great abundance. Bones of deer, wild boar, monkey, fish, crab, and turtle were also found.

Yüan-Shan and Botanical Garden Culture

Around 2500 B.C. in the Taipei Basin of northern Taiwan, another cultural manifestation appeared that is clearly different from the underlying Corded-Ware level. The pottery is distinctive—sandy buff, plain, incised, ring-impressed, and paintbrushed. Stepped adzes, shouldered axes, and perforated triangular arrowheads make up a distinctive stone inventory. The large number of hoes and pottery jars, presumably used for storage, suggests that agriculture was important. The abundance of shellmounds as well as deer, monkey, and wild boar bone along with the arrowpoints and sinkers shows the continued importance of hunting, fishing, and shellfish collecting. Bones of domestic dog were also found at these sites (Chang 1969: 218–219). A few bronze items have been found from the later half of the Yüan-shan occupation (1000 B.C.–1 A.D.), but these were probably trade items from the mainland and appear to have had no major influence on the culture itself.

After about 500 B.C., what appears to have been a mix of Lungshanoid influence from the south with Yüan-shan Culture resulted in the Botanical Garden Culture in the southwestern part of the Taipei Basin.

How do we explain the presence of these different cultures in Taiwan? Chang (1969: 232–233) suggests that the groups migrated to Taiwan from different areas of the Asia mainland, bringing with them diverse adaptive systems, social customs, and material culture.

The Corded-Ware Culture is generally similar to the widespread cord-marked pottery horizon found throughout most of eastern Asia (Chang 1970: 175–176). Possible cultural affinities for Taiwan's Corded-Ware Culture are in Japan (the Jomon), Southeast Asia (including southern China), or the Philippines (the Kalanay complex), but the paucity of data at this time makes it impossible to demonstrate direct ties between the Taiwan material and any of these areas (Chang 1969: 225).

Chang (1969: 233–238) suggests that the Yüan-shan Culture shows strong continuity with the underlying Corded-Ware Culture but also was the recipient of cultural influences from the South China seacoast and/or the area around the Gulf of Tonkin. Sung (1964: 99) concurs, suggesting that the "home of the Yüan-shan culture should be in the area between Haifeng and Canton."

Chang (1969: 226–232) has made a strong case for cultural continuity between the Lungshanoid sites in central and southern Taiwan and the Lungshanoid cultures of the southeastern coastal areas of China. He goes so far as to distinguish local Lungshanoid phases on Taiwan and trace them to their "close relatives on the mainland" (Chang 1969: 238).

MAINLAND

TAIWAN

- | | | |
|------------------------------------|--------|--|
| Ch'ing-lien'kang Culture (Kiangsu) | —————→ | Red ware phase (central and southwestern Taiwan) |
| T'an-shih-shan Culture (Fukien) | —————→ | Shellmound phase (southwestern Taiwan) |
| Liang-chu Culture (Chekiang) | —————→ | Black pottery phase (central Taiwan) |

As shown, Chang uses a series of migrations from the Asia mainland at different periods as an explanation for the culturally diverse picture we find on Taiwan.

DIFFERENT ECOLOGICAL ADAPTATIONS

In 1972, Judith Treistman published a short but searching article in *Science* wherein she questioned the "schemata" devised by ethnologists, linguists, archaeologists, and physical anthropologists for explaining the cultural and linguistic diversity found in aboriginal Taiwan.

Treistman, working in the high central mountain range in Nant'ou Hsien (county), found archaeological remains around the village of Tungp'u (elevation 1000 m). A radiocarbon sample from one of her test pits yielded a date of 785 ± 110 A.D. for the upper portion of the occupation layer. She feels that this date is too early to represent peoples who were "pushed out of the plains and into the mountains by a swelling population emigrating from the mainland" (Treistman 1972: 75), as had been previously suggested by the Chinese historians. She suggests instead that "the cultural ecology of aboriginal Formosa shows the adaptive dichotomy between uplands and plains that is typical of Southeast Asia" (Treistman 1972: 74). She then discusses the artifact inventory found. Stone hoes which were recognized by the people as "tools used by their ancestors" are similar to the short-handled hoes they use today to carve narrow terraces from the steep hillsides for growing millet and sweet potatoes. Further, the settlement pattern appears to vary in relation to the altitudinal zones. The Bunun peoples, where she studied, tend to live in small hamlets of dispersed homesteads above 1000 m. The Tsou live below 1000 m in centralized villages with satellite hamlets. The general subsistence diet consists of cultivated millet (several varieties), sweet potatoes, and fruits supplemented with small game hunted in the forest. There seems to have been a good deal of small-scale movement of villages within the tribal territory, as well as some annual migration. Treistman states:

We can hypothesize that at an early, but as yet unknown, date, a people with a fully established upland style of life had covered the central mountain ranges with a thin blanket of population. They engaged in cultivation of millet and tubers and exploited the diversified natural resources of the environment. The dispersed settlement pattern was a function of their subsistence technology. There is no reason to postulate a prior existence on the plains which would have been characterized by an entirely different lifestyle. (Treistman 1972: 74)

She feels that there is sufficient time depth in the upland sites to allow for "internal differentiation and indigenous cultural change apart from external pressures" (Treistman 1972: 75). The implication is that internal change should or could account for the cultural diversity found instead of "invoking waves of populations, migrating to Formosa."

RECENT FIELDWORK

Recent fieldwork by the author supports both Chang's belief that there was a connection with Lungshanoid cultures from southeastern China and Treistman's contention that the uplands were occupied at an early date. As part of the Choushui and Tatu River Valley Project in Environmental and Anthropological Research, the author in 1972-73 conducted an archaeological survey of the P'uli Basin in west

central Taiwan. The elevation of the P'uli Basin, located in the foothills of the central mountain range, ranges from 360 to 800 m, while mountain peaks that surround the basin rise to 2400 m. The annual temperature is 19.3°C to 21°C and the precipitation is 2100–2500 mm. The basin is in the subtropic climatic zone.

During the survey, 19 sites were pinpointed and tested. Of interest here is a series of radiocarbon dates from the survey. The radiocarbon dates from five different sites (processed by the Radiocarbon Laboratory, National Taiwan University) show the basin to have been occupied more or less continuously for the last 3000 years. A comparison of ceramic materials suggests that the earliest dated site, Pl 30 (Pl denotes P'uli; the arabic numerals, sites within the basin), located on a terrace on the basin floor (elevation 415 m) and two sites, Pl 38 and Pl 39, located at about 800 m elevation, were occupied at about the same time 3000 years ago. These sites from this early period tend to support Treistman's hypothesis that at an early date an "upland style of life had covered the central mountain ranges" (Treistman 1972: 74). The early Chinese historians' explanation seems less likely to be correct, since at 1000 B.C. there was no pressure on the western plains from Chinese emigrants forcing the aborigines into the mountains (although the question of internal population pressure may have been a factor). Even with such early dates for upland sites, the question still remains of whether the cultural diversity was due to "internal differentiation and indigenous cultural change apart from external pressures" (Treistman 1972: 75). This author, while agreeing with Triestman that the uplands were occupied at an early date, still tends to accept Chang's evidence showing continued influences from the mainland to explain the total cultural diversity found on Taiwan.

The P'uli Basin survey failed to locate any Corded-Ware sites. The Sun Moon Lake pollen core studied by Tsukada (1966) had suggested that a noted shift in the pollen profile from tree pollen to non-tree pollen at 9000 B.C. had been caused by slash-and-burn agriculturists. Sites from this early horizon were not located in the P'uli Basin, although Cheng-hun Tsang did locate some corded-ware materials downstream near Tsao-tan (Tsang, personal communication). Results from a study of the pollen from the P'uli survey (Chung, Hwang, and Stamps 1973) showed that the shift from tree pollen to non-tree pollen had taken place before the earliest levels of the later Lungshanoid sites that were located.

The sites located and artifacts recovered from the P'uli survey correspond closely with Chang's sequence for central Taiwan. Current analysis of the data now in in process seems to support what appears to be a close parallel in the P'uli Basin with the Niumat'ou and Yingp'u sequence.

Recent radiocarbon dates as published in *K'ao Ku* (1972 A:57; B:57), and the P'uli dates, support Chang's suggestion that the Ching-lien-kang (5395 ± 105 B.C.) and the Liang-chu (2750 ± 100 B.C.) cultures are early enough to be ancestral to the Niumat'ou (2500 B.C.) and Yingp'u (1400 B.C.) horizons, respectively, of central Taiwan. In P'uli, the Shui-wa-ku (Chang's Niumat'ou horizon) dates from 1332 to 421 B.C., and the Ta-ma-lin period dates from 247 B.C. to 167 A.D., which fits in on the upper limits of the Yingp'u horizon, as might be expected for a frontier area.

Although the case cannot be proven by this series of dates, the data do agree with the explanation Chang puts forth.

The stone hoes, net sinkers, adzes, arrowpoints, knives, and pottery from P'uli also compare well with the Lungshanoid materials from the southeastern coast of China. Further research is needed to show more clearly the exact relationship between these cultures on the mainland and Taiwan.

This paper has attempted to look at three explanations for the cultural diversity seen among the native peoples on Taiwan. Although no one idea has been proven totally correct or incorrect, we have been able to bring more data to bear on the question and, hopefully, improve our understanding of the total picture.

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