

# A REVIEW OF NORTHEAST THAILAND PREHISTORY

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## ABSTRACT

*This paper gives a historical review of some of the major archaeological projects which have been undertaken in northeast Thailand since the 1960s.*

Prior to the 1960s no systematic archaeological work had been undertaken in northeast Thailand. Historical monuments, including Khmer sandstone temples, fortified settlements and a large number of moated sites, were the major interest. Archaeological activity at that time simply consisted of the removal of the vegetation, dirt and debris enveloping the monuments.

In 1959, the Ministry of Education decided to establish nine branch offices of the Fine Arts Department in different parts of the country. Two of these branches were located in northeast Thailand; the Sixth Fine Arts Branch in Phimai district, Nakhon Ratchasima province, and the Seventh Fine Arts Branch in Muang district, Khon Kaen province (Fine Arts Department 1965). These two branches are involved in regional survey and excavation on a small scale. In 1977, the northeast Thailand Archaeological Project (NETAP) of the Fine Arts Department was founded to deal with archaeological work in the area on a larger scale. Unfortunately, this project was terminated in 1987.

## ARCHAEOLOGICAL RESEARCH SINCE THE 1960S

The first major archaeological work in the area was commenced, in 1963, by a joint team of the Thai Fine Arts Department and the University of Hawaii. This project involved a three-year programme of salvage archaeology, carried out in the area to be flooded by dam construction along the Mekong River and some of its tributaries. As a result of this salvage programme, a total of

21 archaeological sites was discovered, of which four appeared to be prehistoric. The Non Nok Tha site was found during this survey and was then known as Nam Phong 7 (Solheim 1966; Solheim and Gorman 1966; Macdonald 1980). The site was tested during a second season in early 1965 (Bayard 1971).

The results from that excavation proved to be fruitful so in 1966 an extensive excavation at Non Nok Tha was undertaken by R.H. Parker as director with D.T. Bayard as assistant. The four-month excavation produced such promising materials that Bayard undertook another large-scale excavation there in 1968 (Solheim 1968; Bayard 1971). Non Nok Tha was the first site in the northeast to be excavated systematically, thus revealing reliable and valuable material culture and charcoal samples for C14 dating.

## The Phu Wiang and Roi Et Sites

The early dates proposed by Bayard for bronze-working in northeast Thailand, following his excavations at Non Nok Tha, attracted considerable interest. So in 1969 a University of Otago team led by C.F.W. Higham and R.H. Parker surveyed and did further test excavations in Phu Wiang district, Khon Kaen province, and in Suwannaphum district, Roi Et province. Four sites were tested in Phu Wiang — Non Nong Chik, Don Sawan, Don Kok and Don Wat Koo. From the pottery analysis and radiocarbon dates from Non Nong Chik and Don Sawan, it was shown that these sites were occupied during Non Nok Tha Middle and Late Periods.

In the Roi Et area three sites were tested — Bo Phan Khan, Don Taphan and Non Dua (Higham 1977). The cultural deposits of these sites belonged to the middle of the first millennium BC. Higham and Kijngam (1984: 7) were unable to identify any correlations in terms of pottery style with other sites in northeast Thailand, and it

was clear that the pottery assemblages from Non Nok Tha and the Roi Et sites were quite different.

#### Ban Chiang

The next phase of archaeological research in northeast Thailand was focused on the famous site of Ban Chiang. The site, a mound in east Udon Thani province, was first excavated by an archaeologist from the Fine Arts Department in 1967. In 1972, more test excavations were carried out by the Fine Arts Department. In 1974 and 1975, the Thai Fine Arts Department and the University Museum, Pennsylvania, established a joint project for a large excavation at Ban Chiang under the direction of Pisit Charoenwongsa and Chester Gorman (1976). They excavated a total area of 180 sq m at the site and subdivided the cultural sequence into six prehistoric phases by using changes in material culture. This dating sequence has now been partly superseded by the sequence of Joyce White (1982, and see also her paper on Ban Chiang dates in this volume). White has analysed the Ban Chiang pottery and rearranged the Ban Chiang cultural sequence of Gorman and Charoenwongsa into three major periods on the bases of soil stratigraphy, burial types and ceramic styles. White's Early Period is dated to between about 3600 and 1000 BC, the Middle Period to between about 1000 and 300 BC, and the Late Period to between about 300 BC and AD 200 (White 1982: 21).

The Ban Chiang excavation fuelled controversial debate on the chronology of bronze and iron technology in Thailand (Bayard and Charoenwongsa 1983; Solheim 1983; Loofs-Wissowa 1983; Higham and Kijngam 1984: 8). Higham (1983) suggested that the initial appearance of bronze occurred in the early or mid-second millennium BC, with iron following between 400 and 200 BC. White (1982) proposed that the earliest bronze artefacts found at Ban Chiang dated to about 2000 BC or later, and iron between about 1000 and 400 BC. Higham, using the Ban Na Di results, gave dates for bimetallic (bronze and iron) spearheads as no earlier than 300-500 BC (Higham and Kijngam 1984: 7). Bayard, on the contrary, proposed that the first appearance of bronze-working occurred during the latter half of the third millennium BC, and iron at about 600-800 BC (Bayard 1984: 162).

#### Non Chai

In 1978, the Fine Arts Department decided to excavate the habitation site of Non Chai in Muang district, Khon Kaen province, directed by Pisit Charoenwongsa. The stratigraphy produced fifteen cultural layers divided into five phases, as follows:

Phase I dated to about 400 BC;

Phases II and III dated to between 300 and 200 BC;

Phase IV dated to about 200-0 BC;

Phase V dated to the 2nd century AD (Charoenwongsa and Bayard 1983; Rutnin 1977; Bayard *et al.* 1982-83).

In 1979, another joint project between the Fine Arts Department and the University of Otago, co-directed by Ampham Kijngam and Charles Higham, conducted site survey and excavation in the Upper Songkhram River Valley and Kumphawapi district. The aim of this project was to examine the extent and boundaries of the "Ban Chiang Culture" in the area. Three sites were excavated — Ban Na Di, Ban Muang Phruk and Non Kao Noi (Higham and Kijngam 1984).

Evidence from Ban Na Di suggested that the site had witnessed two distinct and successive metallurgical practices. The earlier was a local casting of bronze ingots into jewellery, projectile points and axes. Bronze objects occurred only in a small proportion of burials in this phase. The younger assemblage yielded both bronze and iron (Higham 1988).

The technology of bronze-working evidenced in levels 8-6 at Ban Na di is almost identical with that identified at Ban Chiang, 24 km to the northeast. Similar items present at both sites include crucibles and casting spillage. Non Nok Tha also showed a clear association in bronze-working activity with Ban Chiang and Ban Na Di. Sandstone bivalve moulds for casting were found at Non Nok Tha. With the discovery of the Phu Lon copper mining site, more detailed knowledge of prehistoric metal-working in northeast Thailand will probably be acquired in the near future (Pigott 1984; Pigott and Natapintu, in press).

The Thailand Archaeometallurgy Project (TAP), a joint project between the Fine Arts Department and the University Museum of the University of Pennsylvania, was organised to investigate the archaeology of metal production in Thailand. The area chosen for survey was Loei province, which lies on the edge of the Khorat Plateau and which was known to have a number of ore deposits which could have been exploited in prehistoric times (Pigott 1984).

The first TAP survey was carried out in 1984 to locate the base-metal ore sources (copper-lead-zinc) and their prehistoric exploitation sites. Two major mining complexes were recorded — Phu Lon, Sangkhom district, Nong Khai province; and Phu Luak, Muang district, Loei province (Pigott 1984). Phu Lon, the copper mining complex, was excavated in early 1985. A large quantity of potsherds, some chipped stone artefacts and iron slag were also recovered from the squares. The radiocarbon

dates from this site suggest that usage occurred in the first half of the first millennium BC. Apart from being an intensive mining site, the variety of artefacts found indicates habitation by people who used the copper mine at the same time (Pigott 1984; Pigott and Natapintu, in press).

#### The Phimai Sites

During December 1979 and January 1980, David Welch surveyed an area around the town of Phimai in Nakhon Ratchasima province. The survey area extended 15 km east-west and 5 north-south. 24 sites, including a walled town, fifteen habitation mounds and five religious shrines, were recorded (Welch 1983, 1985). Only two sites were excavated — Non Ban Kham and Ban Tamyae.

From the preliminary analysis of the ceramics from Non Ban Kham and Ban Tamyae, Welch (1983: 63-64) suggested that four major traditions of pottery manufacture succeeded one another chronologically from late prehistoric to modern times in the Phimai district. These are the Tamyae tradition (1000-500 BC), the Phimai tradition (500 BC to AD 500), the Late Historic Tradition (AD 500-1300) and the Recent Historic tradition (AD 1300 to present). Welch concluded that the earliest inhabitants of the Phimai region were rice farmers. Bronze and iron tools were involved in an exchange network during the Phimai and Late Historic traditions, and perhaps a hierarchical political structure was developing according to the size ranking of sites in the area (Welch 1983; 1984: 142-149; 1985). Welch and McNeill later published a modified version of the above sequence (Welch and McNeill 1991).

After the excavations in the Upper Songkhram area in 1979, Higham and Kijngam started another survey and excavation project in the Mun-Chi Valley. The aim of this project was to see how far the "Ban Chiang Culture" spread south, and also to study the initial stages of state formation in the Roi Et and Mahasarakham regions. As a result, two sites in Mahasarakham province were excavated — Ban Chiang Hian and Ban Kho Noi. The sites nearest to Ban Chiang Hian are Non Chai and Non Nok Tha in Khon Kaen province. There is not enough evidence to say that the earliest inhabitants of Ban Chiang Hian were practicing bronze working on site; this technology might have been restricted to areas further north during the second millennium BC, particularly the Upper Songkhram Valley and the Phu Wiang region (Higham and Kijngam 1984: 585).

#### Non Pa Kluay

There is still considerable debate on the chronology of Non Nok Tha, particularly about the earliest dates for rice agriculture and bronze working. During 1984 and 1985, Richard Wilen surveyed in the Phu Wiang area again, previously surveyed by Bayard in 1966 and 1968, to find more evidence of early food production. The area surveyed included both Phu Wiang and Sri Chomphu districts, Khon Kaen province. A test excavation was carried out during October 1984 and April 1985 at Non Pa Kluay, Ban Na Chan village, Sri Chomphu district, Khon Kaen province.

The Non Pa Kluay chronology corresponds to the General Periods B (after 2500-1800 BC) and C (mid first millennium BC) proposed by Bayard (1984: 163), judging from the ceramic tradition from both sites and Non Nok Tha dates (Wilen 1986-87).

#### ARCHAEOLOGICAL RESEARCH IN THE WESTERN UDON THANI-LOEI AREA

##### The Pa Mong Archaeological Programme

The first programme of archaeological research in this area, the Pa Mong Archaeological Programme, was started when the Pa Mong Reservoir was planned in the area of the lower Mekong Basin (Bayard *et al.* 1974). The project was sponsored by the United Nations Organization (ESCAP) and the Ford Foundation. In 1969, Terry Marsh (n.d.) surveyed an area in Na Klang district, Udon Thani province. Then, in 1972 and 1973 more surveys were done by the Thai Fine Arts Department for the Thai National Authority. They covered Na Klang and Nam Som districts in Udon Thani province; Sangkhom district in Nong Khai province; and Pak Chom, Chiang Khan, and Wang Sa-phung districts in Loei province (Bayard *et al.* 1974).

In 1974-75, a team from the Anthropology Department of the University of Otago revisited the survey area in Udon Thani and Loei provinces, and also in Laos. The archaeological team recorded one hundred and sixteen sites of both prehistoric and historic date. Seven of them were test excavated, and the Mekong Riverbank Site in Chiang Khan village, Loei province, was area excavated.

The results from these two periods of survey and excavation provided valuable information for the province of Loei, Nong Khai and western Udon Thani. After 1975, archaeological work ceased because of political unrest, but some tentative conclusions can be drawn from the limited archaeological information gained from the Pa Mong Archaeological Programme (Bayard 1980: 128-

135). Further detailed field reconnaissance is needed to provide suitable sites for answering some questions.

In 1978, another joint programme between the Fine Arts Department and the University Museum, Philadelphia, directed by James Penny, conducted both survey and excavation between Phu Kradung district, Loei province, and Phu Khieo district, Chaiyaphum province (Penny 1982, 1984, 1986). 45 sites were recorded from the survey and 3 were excavated — Non Khao Wong, Ban I Loet and Ban Puan Phu (Penny 1982: 67-68).

#### A Summary of Archaeological Research in the Loei Area

The archaeological evidence from the area surveyed by the Pa Mong Archaeological team and by Penny suggests a different kind of cultural sequence for the Loei Valley. Clearly, this area was not densely populated until historic times. Also, the commencement of wet rice cultivation appears to have been quite late in the area, probably as late as the early historic period (Bayard 1980: 130-131). The number of inhabited cave sites and open habitation sites is not high in the area and more archaeological research is needed to describe the cultural sequences of the region.

From Penny's three excavations it can be concluded that the inhabitants of this area were familiar with bronze and iron technology and, judging from a large number of crucible fragments found in the Non Khao Wong site, that bronze was probably locally produced. There is no clear evidence at this stage for iron working in the area, even though iron artefacts were encountered at the Ban I Loet and Ban Puan Phu sites. A radiocarbon date from a Ban Puan Phu burial indicates an early use of iron at about 900 BC. There is no strong evidence indicating trade within this region at present, but the evidence of bronze working at Non Khao Wong may suggest that the copper ore was obtained from mining sites such as Phu Lon in Nong Khai province, about 130 km to the north. (Pigott 1984; Pigott and Natapintu, in press).

Another archaeological survey and excavation project in western Udon Thani and Loei provinces was carried out during 1983 and 1985 by myself (Rutnin 1988; Leyavanija 1992). This area partly overlaps those examined by the Pa Mong Archaeological team and by Penny. One of the goals of this project was to attempt again to establish a tentative cultural sequence for the region. Between May and July 1983 I carried out a site survey programme in four provinces of northeast Thailand — Udon Thani, Sakon Nakhon, Khon Kaen and Loei — using the sites of Ban Chiang, Non Nok Tha and the sites recorded by the Pa Mong Archaeological Programme team and by Penny in the Loei area as background refer-

ences. The initial aim of my survey was to construct a cultural and chronological sequence for the survey area and to integrate the data within the general scheme of northeast Thai prehistory. During the 1983 survey 31 sites were recorded. Three sites from the first survey were then excavated in 1984 and 1985 — Non Sila in Udon Thani province, and the Phrik Mound (Non Phrik) and Pha Phim Cave (Tham Pha Phim) in Loei province. Between December 1984 and May 1985 three more field trips were carried out in the area around the three excavations, and 30 more sites were recorded.

Non Sila, a stone axe quarry site, dates to within the first millennium BC — its use was thus contemporary with that of the Metal Age sites in northeast Thailand. Only 50 km to the north is the copper mine at Phu Lon where there was settlement and intensive mining at the time that villagers were visiting Non Sila to fashion axe/adze preforms.

Non Phrik mound is a typical habitation mound site in the region which yielded polished stone tools, a large quantity of potsherds, iron artefacts, spindle whorls and grinding stones. No burial or faunal remains were found. The occurrence of ground stone tools here also confirms their continued use into the metal-using period in the northeast. The radiocarbon dates for Non Phrik indicate that occupation may have begun in the Iron Age and continued until the Early Historic Period, in the second millennium AD. The general artefact assemblage at Non Phrik is similar to that of other Iron Age sites in the vicinity (Penny 1982; Wilen 1986-87, 1987).

Pha Phim Cave was the only burial cave found in the survey region. A human skeleton was found in association with polished stone tools and pottery. The burial had been severely disturbed by looters prior to the excavation, but all evidence indicates that it was placed prior to the arrival of Buddhism in the Loei Valley, given that it is an extended inhumation and not a cremation. This evidence points to a date prior to about AD 600-700 when Buddhism was adopted by the inhabitants of the Khorat Plateau (Welch 1985).

The most recent archaeological work done in northeast Thailand by the Fine Arts Department is at Ban Prasat and Ban Kan Luang villages. Ban Prasat village, Non Sung district, Nakhon Ratchasima province, was first surveyed and test excavated in 1983 and 1984 (Fine Arts Department 1991). During that time the site was heavily looted so that the Ministry of Education declared the area to be a National Treasured site (according to the Ancient Monuments, Antiquities and Museum Act 1961). Then, in 1991, the site was included in the Tourist Promotion Development Plan and a budget was provided for

excavation, not only for research but for tourism as well. The open site museum here displays the evidence that has been scientifically conserved *in situ*. The evidence also suggests use of site since prehistoric times until as late as the tenth century AD.

Another excavation at Ban Kan Luang village, Ubon Ratchathani province, was carried out by the Fine Arts Department Sixth Regional Office between January and June 1992 (Doyarsa 1992). Many large jars with lids were found, probably burial jars, along with artefacts such as terracotta anvils, bronze rings, iron axes and iron slag, blue glass beads and a large number of potsherds. The site is now an open museum displaying archaeological finds *in situ*. From archaeological evidence, two distinct periods can be traced at Ban Kan Luang — the late prehistoric and early historic (or Dvaravati) period.

#### SUMMARY

Archaeological research in northeast Thailand has shown some impressive progress, especially during the past two decades. The 1960s and 1970s not only marked the beginning of prehistoric archaeology, but also of improved field techniques in the form of systematic survey and careful stratigraphic excavation (particularly Parker's excavations at Non Nok Tha and Phimai, then Bayard's excavations at Non Nok Tha). These decades also recorded the first attempts to interpret Southeast Asian archaeology in terms of internal evolution rather than outside influence. There was a lot of emphasis on excavating sites which greatly extended the time depth and richness of Thai prehistory — Non Nok Tha, Ban Chiang and Non Chai.

While the early work did include surveys, these tended to be for the purpose of finding sites with potential for excavation, not as part of a strategy to understand settlement patterns in a region. This situation began to change between 1978 and 1980, when several surveys were undertaken — e.g. by the Pennys in the Petchabun Range, by Kijngam and Higham in Kumphawapi and Mahasarakham, by Welch and McNeill in the Phimai area, and by Srisakra in the middle Mun Valley. Later, there were the surveys by Elizabeth Moore in the Mun Valley and Richard Wilen in the Nam Phong or Phu Wiang region. Many of these regional surveys found inspiration in Williams-Hunt's article of 1950. Excavations, when conducted, tended to be embedded in the more general survey programme, rather than survey being attached to an excavation programme.

Despite the considerable amount of work done, the cultural sequence and chronology for northeast Thailand and the regions within it is still in many respects incom-

plete. The numerous surveys and excavations undertaken by foreign, Thai and joint projects have proven to be very important for the prehistoric archaeology of northeast Thailand. Some controversial issues remain, such as the question of the claimed early dates for bronze and iron working. Many questions remain unanswered — were there any hunter-gatherers in the northeast before the early farming settlements; what were the factors that led to the development of more complex societies; how were the towns and villages of northeast Thailand organised during the late prehistoric period? More archaeological work, undertaken with definite research questions in mind and careful attention to the methods employed, will be needed in the future to provide more data for better conclusions, not just for northeast Thailand, but also for Southeast Asian prehistoric archaeology as a whole.

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