

# FINGER-MARKED DESIGNS ON ANCIENT BRICKS IN MYANMAR

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## Introduction

Bricks with finger-marked designs are found at many of the ancient cities of Myanmar. A comparative study of the bricks, the designs, and the sites where they are found has been conducted over the last twenty-five years. Aerial photographs have long been used in Myanmar, but there has been no previous classification of the ancient settlements, numbering over one hundred, whose walls and/or moats make them visible from the air. Aerial discovery has also prompted initial excavations by the Department of Archaeology, for example at Maingmaw and Kyaikkatha. Using a sample of the ancient cities, it has been possible to initiate comparison of common artifacts recovered from surface survey. These include coins, beads, and bricks. It is hoped that publication of this work can encourage recording of more finger-marked bricks in Myanmar, and in other regions of South and Southeast Asia.

The finger-marked patterns of Myanmar bricks constitute a cultural tradition which coincides with the construction of Mon and Pyu walled cities in the early centuries of the Christian era. The practice faded out by the early Ava period (13th-14th century). Many of the artifacts such as beads and coins, diagnostic of this era, are easily collected or traded, perhaps as a souvenir or gift. Bricks, however, are bulky,

heavy, and not very useful as individual pieces. Immense quantities are needed for the construction of a city wall or stupa. Generally, the transportation of this number of bricks is cumbersome and uneconomical over great distances, so that bricks are manufactured locally or in the neighbourhood of a structure. This appears to have been the case even at Pagan, situated in a rain-shadowed area and without sufficient localized woodlands to fuel brick kilns. Pagan's bricks were supplied by many surrounding villages, all within the economical transportation limits. A large number of Pagan bricks bear village names indicating sources of supply; some, such as Sale, are on the west bank of the Irrawaddy River (Dr. Than Tun 1973).

Thus for the construction of a city wall, the production and firing of the bricks would have been carried out by the local people. Alternatively, if local expertise was lacking, technicians may have been brought in from elsewhere to give instruction on methods of making and firing bricks. In this way, expertise in brick making could easily spread. Changes in the patterns marked on the bricks offer a means of charting the spread of this technology. The finger-marked designs found on a percentage of the bricks also implies large-scale production requiring a systematic means of recording output. The designs can be divided into seven stages, forming a scale of increasing sophistication:

(1) *haphazard markings* with no preconceived pattern or design

(2) *known patterns* repeated with variations, including simple lines, straight, curved or diagonal

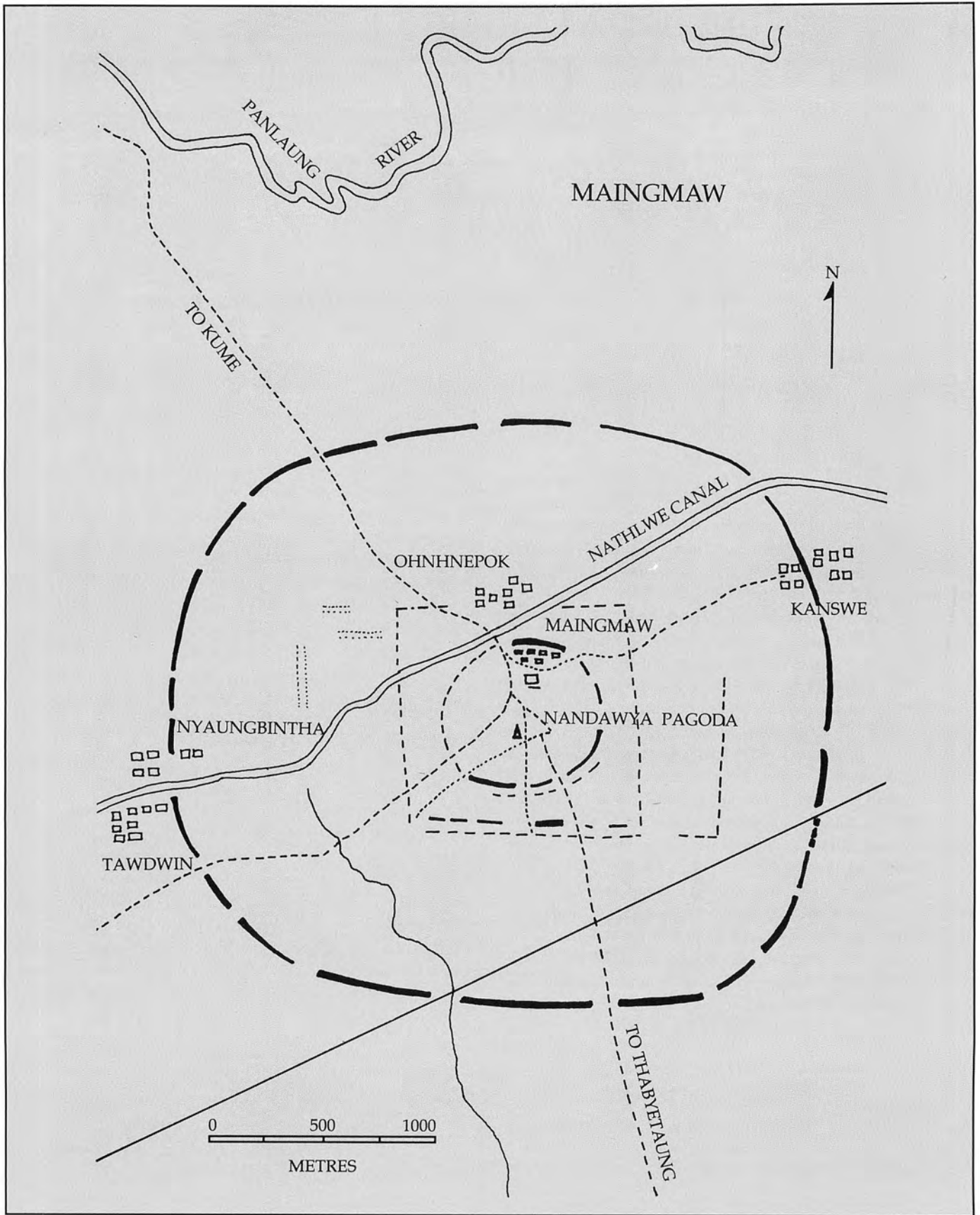
(3) *greater complexity* in the patterns, still using the same straight, curved or diagonal elements

(4) *finger-drawn* numbers, symbols or letters

(5) *stamped* symbols, numbers, or letters, imprinted initially or as overmarks on finger-drawn lines

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*Note on spellings:* As "Myanmar" and "Yangon" are now in common usage, this spelling has been used in this article in place of "Burma" and "Rangoon". However, for ease of recognition and because of different means of transcription, many other placenames have been left. For example, we have used Tavoy (not Dawe or Dawei), Prome (not Pyi or Pyee), Irrawaddy (not Ayarwady or Eyarwady), Pegu (not Bago or Pago), Salween (not Thanlwin), Sittang (not Sittaung).



Map 2

(6) letters which are *scribed, pressed, stamped* or written as overmarks on bricks

(7) bricks with *reliefs, emblems* or other decorative designs

Of note also is the correlation between developments in brick-marking techniques and the enclosure of Pyu and Mon centres. Similarities in city shape, and finger-marked designs on the bricks used to build those cities, present a significant means of understanding the high degree of interchange which took place between two cultures traditionally defined as distinct entities. The presence of finger-marked bricks in the U Thong Museum, Thailand, suggests much future research there as well.

## Marked Bricks: Definition and Description

Marked bricks are found among the bricks of city walls, ruined stupas, and other brick structures at cities up to the Ava period. The designs have been made with one or a number of fingers being drawn across the surface of a soft brick prior to drying and firing. The marks appear on a broad face, in the middle, towards one or the other end, or across the width. Sometimes the brick is marked straight or diagonally along the whole length. A few examples have irregular wavy lines. There are a number of indications that the patterns were made by fingers.

The maximum number of lines is four, made just deep enough to make the lines stand out boldly. Exceptions are weathered bricks where exposure has eroded the marks. Two or three parallel lines are the most common, a position easily taken by the middle two or three fingers of the human hand. The grooves are smooth and rounded, being about the width of the finger tips. Had they been formed by a blunt stylus, the lines would be thinner and more angular. The width of the parallel lines mirrors that of the four fingers when extended naturally. It can be seen that the thumb was not used, for when the hand is laid flat on the brick surface, the line made by the thumb is slightly separate from the close parallel position of the other four fingers.

The marked bricks recovered from Pyu and Mon sites vary in size, but can be divided into two groups. The length, width and thickness of the larger bricks is 43-50 cm x 19-25 cm x 6-9 cm (17-20" x 7 1/2-10" x 2 1/2-3 1/2"). The smaller bricks are 41-43 cm x 18-19 cm x 6-7 cm. [In the accompanying illustrations, the bricks are not drawn to scale, the emphasis being on the patterns.] Generally, the bricks from a site fall into one or the other size group. However, of note at Srikshetra was the mixture of large and small-size bricks. The bricks at nearby Thegon were relatively small, being 35-41 cm long, 15-18 cm wide, and 5-6 cm thick.

Within the matrix of the clay used in making the bricks, large quantities of rice chaff is found. Analysis of a number of these inclusions showed that bricks from the Pyu sites of

Maingmaw, Beikthano, Srikshetra, Halin, and Waddi contained predominantly rounded grains. This study, conducted in the mid-1970's by Kyoto University, tabulated the presence of three types of rice husks embedded in eighty-two samples of old bricks. The types were rounded grains found on early-maturing paddy, large grain upland rice, and slender late-maturing paddy. The results found that the rounded grains predominated up through the Pagan period. From the 12th century AD, the percentage of the slender type increased in the dry-zone Kyaukse region. Today, these late-maturing varieties, many more of which were introduced in the late 19th century, are the most common (Watabe & Tanaka 1981). Unfortunately, dating of the brick samples was not carried out during the research.

## Ancient Cities Included

The presence of marked bricks has been verified at the twenty-two sites, listed below, which are described in this report [Map 1]. Many have been subject to ground survey, but many more await inspection. The sites are arranged in order of archaeological importance in relation to the size of the ancient scars made by old walls and moats.

- |                          |                      |
|--------------------------|----------------------|
| 1. Beikthano             | 12. Taungdwingyi     |
| 2. Halin                 | 13. Thagara (Tavoy)  |
| 3. Srikshetra            | 14. Pinle            |
| 4. Maingmaw              | 15. Zothok           |
| 5. Thaton                | 16. Winka            |
| 6. Kyaikkatha            | 17. Taikkala         |
| 7. Waddi                 | 18. Paan             |
| 8. Thegon                | 19. Waw (Kyontu)     |
| 9. Pagan                 | 20. Mudon (Kawparan) |
| 10. Hmawbi (Sanpannagon) | 21. Muthin           |
| 11. Tagaung              | 22. Kawgun (cave)    |

## Marked Bricks at Maingmaw and Nearby Sites

The present study of marked bricks began with Maingmaw (21-17 north x 76-12 east) [Map 2], about 50 miles (80.5 kilometres) south of Mandalay and some 20 miles (32 kilometres) from Kyaukse. Although U Aung Myint first identified the site on aerial photographs in 1965, preliminary survey was only able to be carried out in 1977.

Maingmaw is enclosed by two walls, the first site discovered where both exterior and interior walls are rounded. The diameter of the site, measured to the outer wall, is 3 kilometres from east to west and 2.5 kilometres from north to south. The diameter within the inner wall measures about eight hundred metres across. Maingmaw appears on aerial photographs as a slightly flattened circle, bisected by the Nathlwe Canal from southwest to northeast. The present village of Maingmaw is located in the northern part of the

MAINGMAW BRICKS

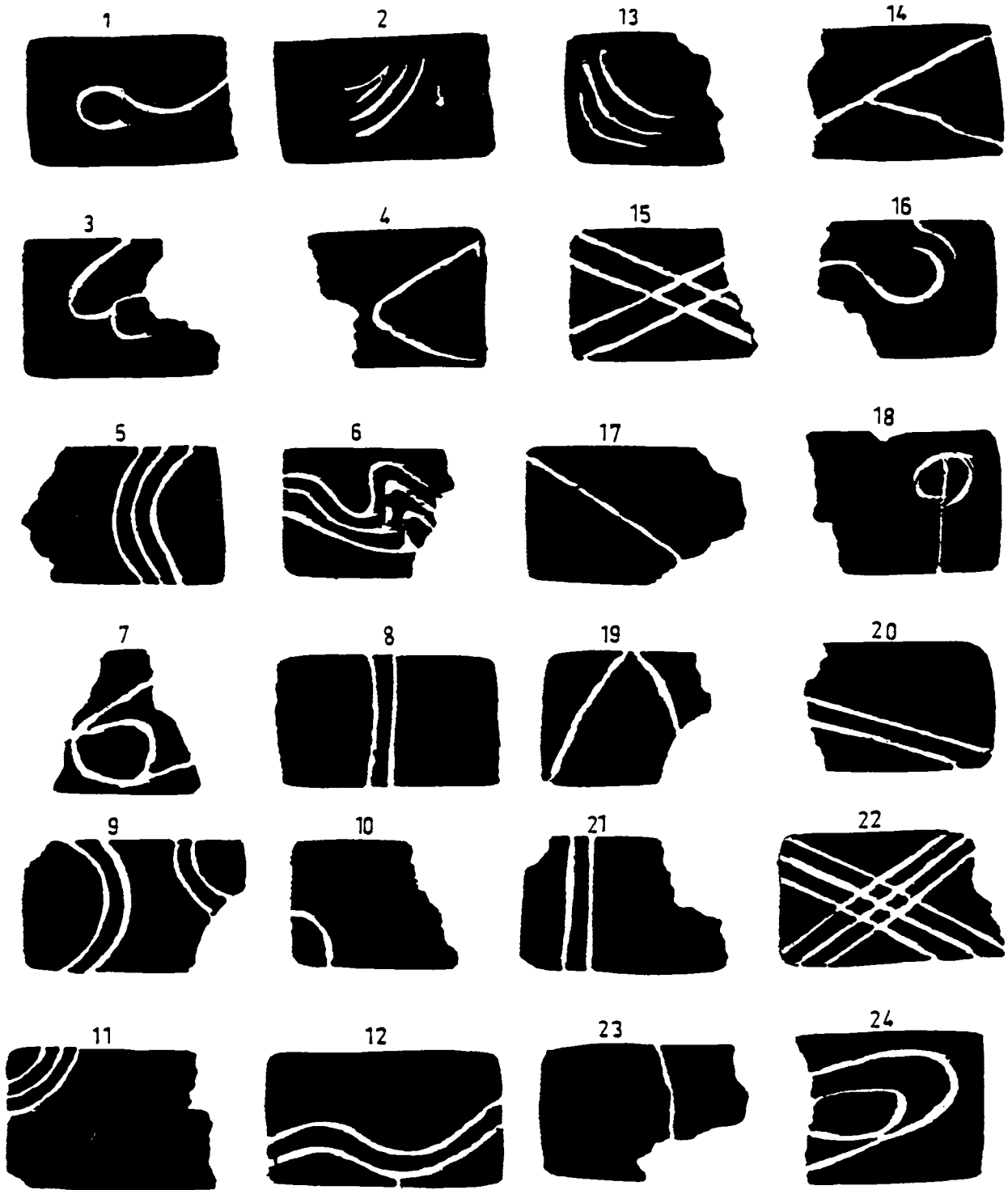


Fig. 1. U Aung Myint Artifacts found in Maingmaw, paper no. 5, June, 1978

inner enclosure, at the heart of the old city. It is also referred to as Mongmao, Mongmai, or Maingmao.

Preliminary work at Maingmaw indicates that it may be the earliest of the large Pyu cities yet investigated, predating even Beikthano (Aung Thwin 1982 : 18). Objects recovered included beads, funerary urns, rouletted ware, coins with *srivatsa* and rising sun motifs and stone molds for casting gold flowers. Mention is also made of bricks with a *badhapitha* relief similar to those found at Srikshetra, and ritual brick structures similar to those found at Beikthano. Silver bowls with Pyu inscriptions dated to the 6th century AD were found at nearby towns (*ibid.*).

During U Aung Myint's first visit to Maingmaw, pieces of brick were found at a number of locations along the city walls. Most unbroken whole bricks had been carted away by villagers to sell in nearby towns. Following a request to village authorities, further pilfering was halted. However, even amongst the broken bricks, a number were found with markings, prompting a search of the ruins of the ancient stupas. Here, too, many of the bricks were marked with lines [Fig. 1]. After a few more trips, a special excursion was made to the site. This time U Aung Myint was accompanied by Dr. Than Tun (Professor of History at Mandalay University), U Maung Maung Tin (member of the Burma Historical Committee), and U Win Maung of Tampawaddy (a keen observer of history and archaeology). The group recorded about twenty-four different patterns of brick markings. Rubbings were also made. The whole bricks recovered were large, measuring about 44-48 cm long, 23-25 cm wide, and 6-8 cm thick.

When darkness came, work continued by candlelight. Finally, the group retired to a nearby cow-shed for the night. Aggressive mosquitoes made sleep impossible, and discus-

sion of the newly discovered city continued throughout the moonlit night until dawn. The next day the neighbouring villages of Hnankin, Ohnhnepok, and Kanswe were surveyed and more marked bricks were found. The last two of these villages are located within the outer wall of ancient Maingmaw.

Marked bricks were also found at Pinle, a walled site located about 5 kilometres southwest of Maingmaw [Map 3]

Pinle is more angular than Maingmaw: although the north wall is straight (about 625 metres long), the other sides are rounded. The total enclosed area of Pinle is about the same as the inner walled portion of Maingmaw.

These two sites highlight some of the as yet unexplored questions about the development of enclosed settlements in Myanmar. Were both walls at Maingmaw built at the same time? What is the chronological relationship between Pinle and Maingmaw? Their form and brick markings indicate some contemporaneity, while their size difference shows that enclosure was not restricted to the larger sites. In this respect, their distribution resembles the protohistoric moated settlements of Northeast Thailand (Moore 1990).

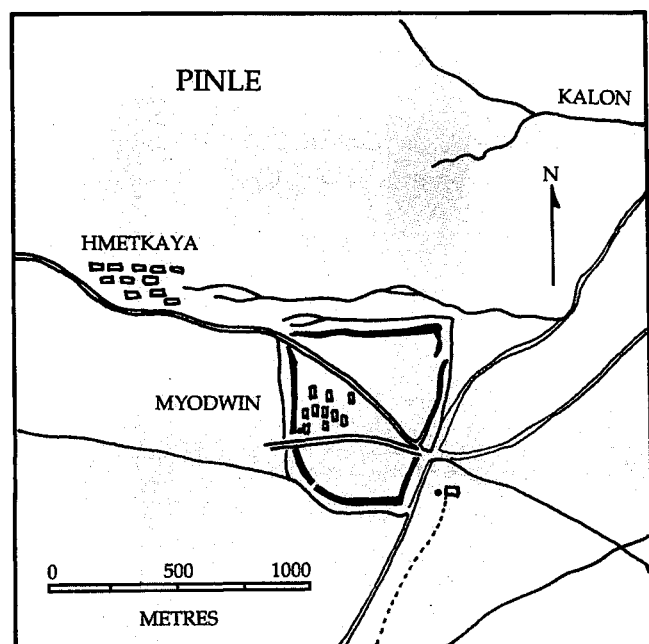
## Marked Bricks at Beikthano, Srikshetra, Halin

Following the discoveries at Maingmaw, the search was extended to other Pyu sites. The well-known cities of Beikthano (1st-5th century AD), Srikshetra (5th-8th century AD) and Halin (2nd-9th century AD) all proved to have marked bricks [Fig. 2, 3, 4]. Halin appeared to have fewer than Beikthano and Srikshetra, but a more thorough search is needed.

When the patterns on marked bricks from all the surveyed Pyu sites were compared, many similarities were seen. Each site also yielded unique designs. At Srikshetra, although a large number of finger-marked bricks were found, there were also many instances where patterns were over-stamped with Pyu numerals or letters.

Another type of brick found at Srikshetra and at Maingmaw was stamped [Fig. 5]. Some were decorated with a bold relief of a horseman. Although much the same, finds from each site differed in the action of the figure. Thus they were not produced from the same mold, but made locally at each of the sites. Somewhat similar designs of riders on horseback form part of the pottery assemblage from Phase V (600-800 AD) at Chansen in Central Thailand (Bronson and Dales 1970: fig 14b). Other stamped bricks from Srikshetra and Maingmaw bear the emblem of the *bhadapita* symbol. The sample from Srikshetra is exhibited in the museum at Hmawza. Like the bricks stamped with horses, the differences in the *bhadapita* symbols show that each of the bricks was made locally.

G.H. Luce (1985) illustrates forty examples of inscribed bricks, which Duroiselle (1924) had published brief mention



Map 3

## BRICKS FROM PYU AREAS: BEIKTHANO BRICKS

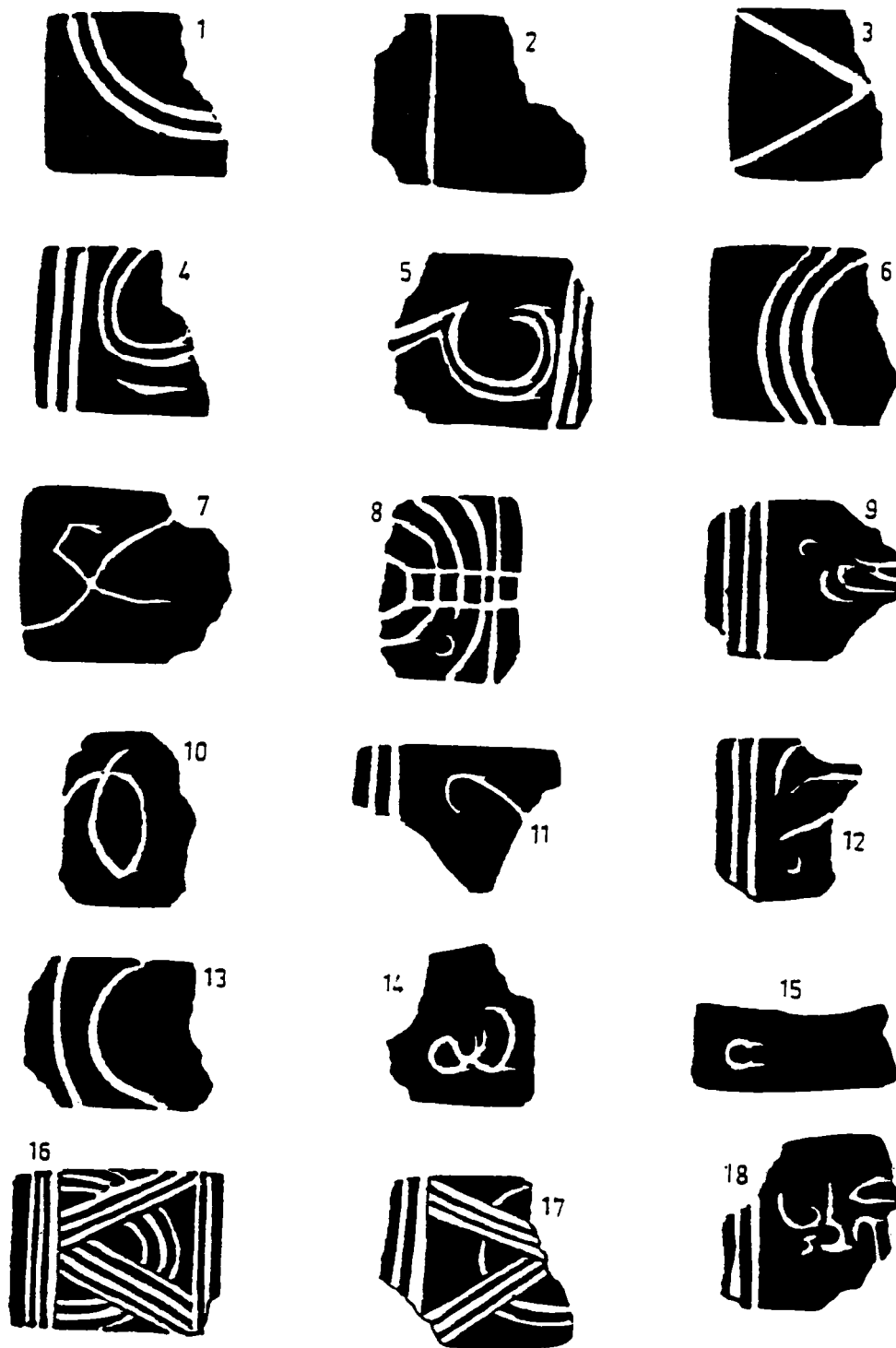


Fig. 2.

1-3 U Aung Myint, *Preliminary Study on Waddi*, paper no. 6, 1979

4-6 U Mg. Mg. Tin, U Myint, Tin Mya Bhein 1979

7-15 U Aung Thaw, *Beikthano Excavation*16-17 U Win Maung (Tampawaddy) *Rubbing from Yekyibin village, near Beikthano* 1979

SHRIKSHETRA BRICKS

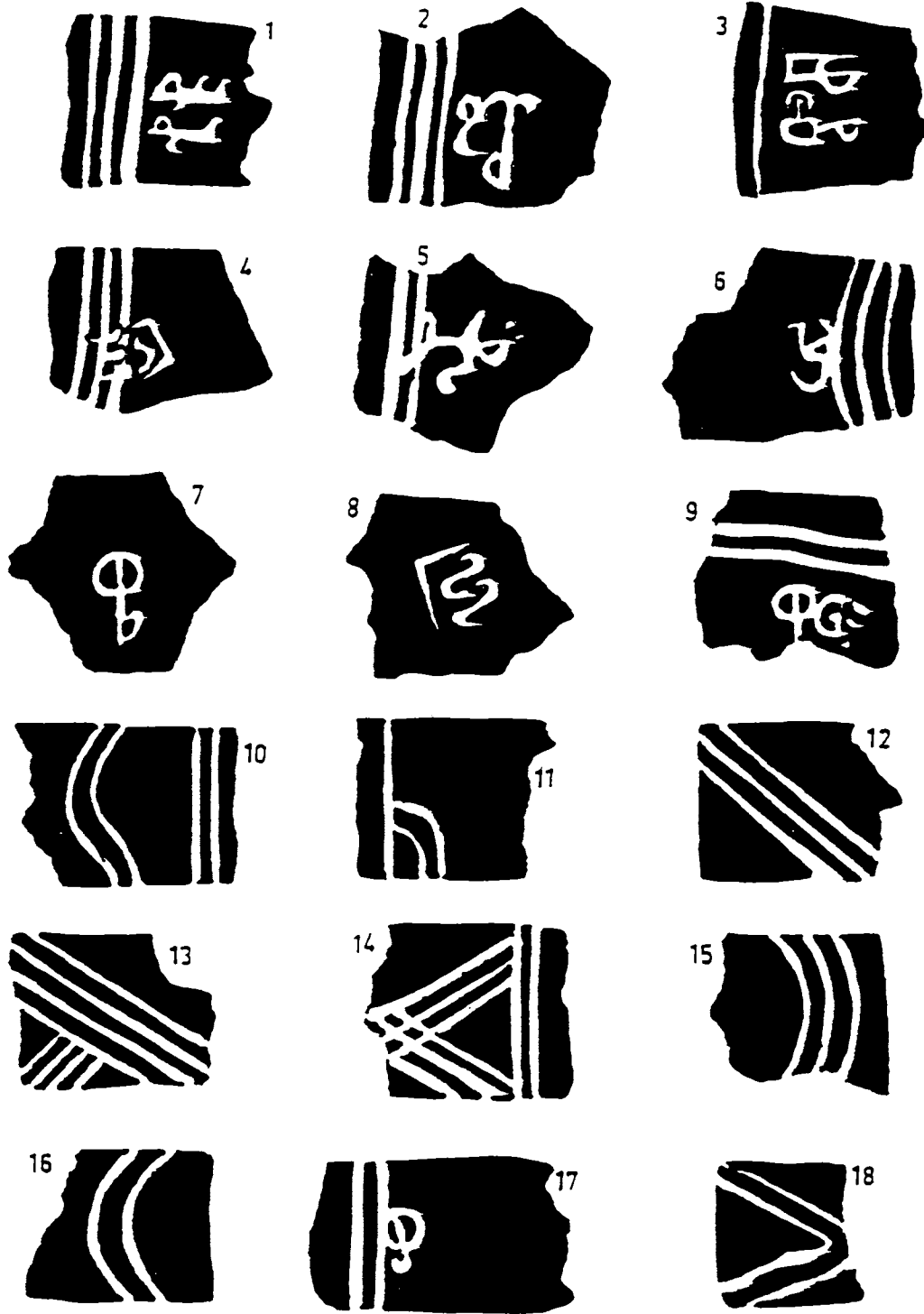


Fig. 3.  
 1-12 U Mg. Tin, U Aung Myint, U Win Aung (Tampawaddy) 1979  
 16-18 U Aung Myint, *Preliminary Study on Waddi*, paper no. 6, 1979

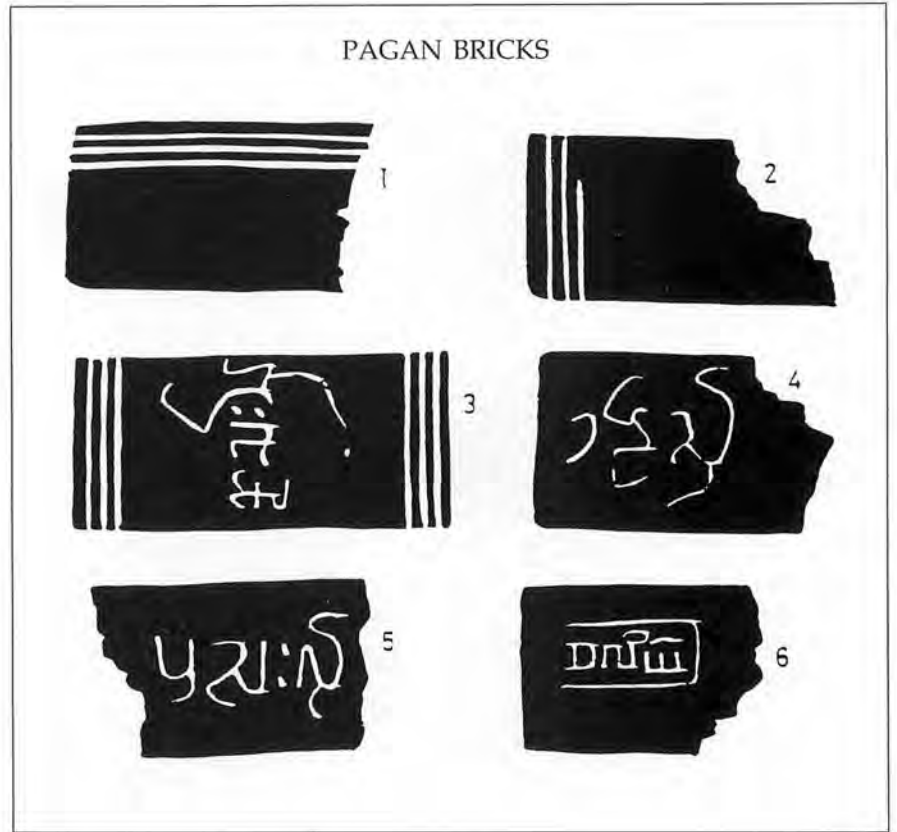
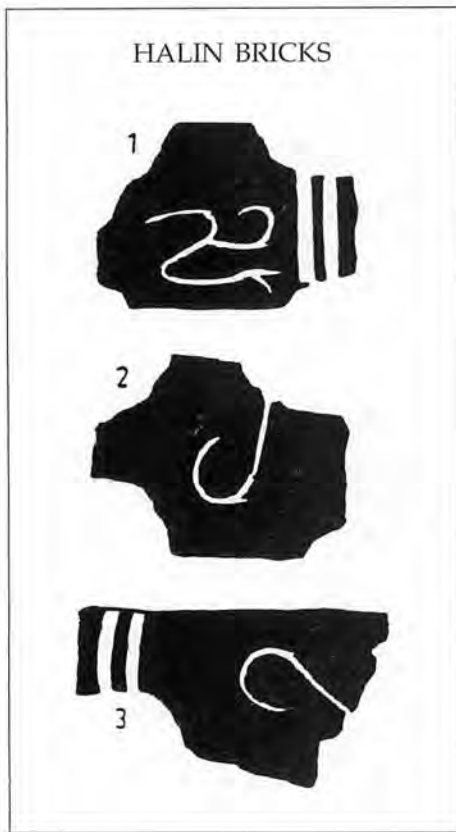


Fig. 4.  
1 U Aung Myint Aung, *Halin Excavation*  
2-3 U Win Maung (Tampawaddy) 1980

Fig. 6.  
1-5 Pagan Museum Collections  
6 Dr. Than Tun, *History of Pottery* 1973

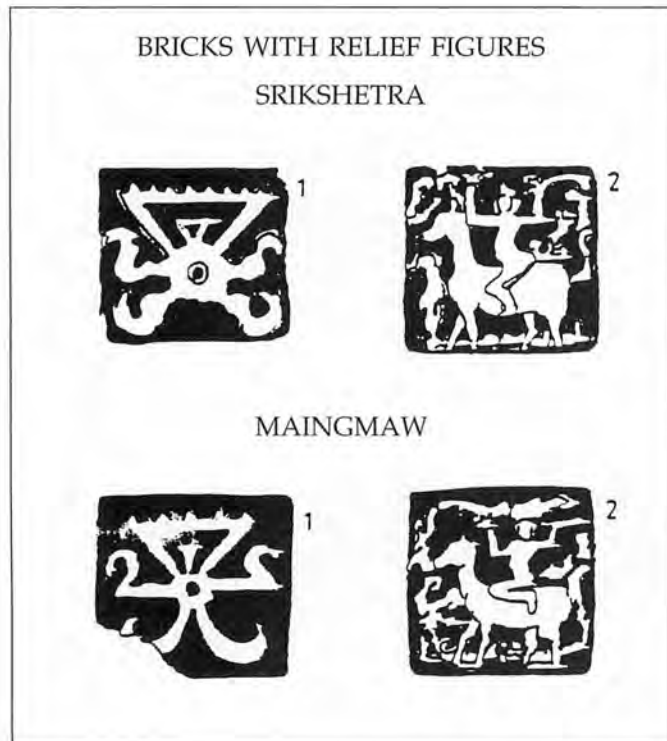
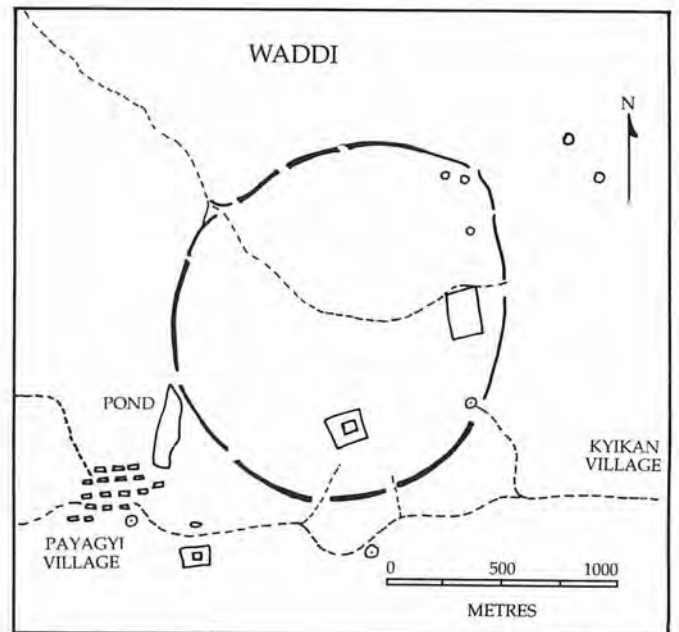
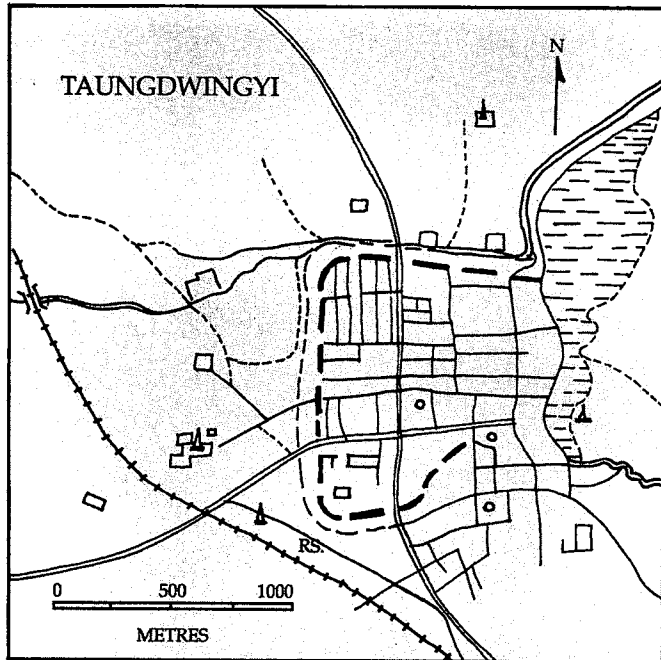


Fig. 5.  
U Aung Myint, *Rangoon University Historical Journal* vol. 1/2 1984

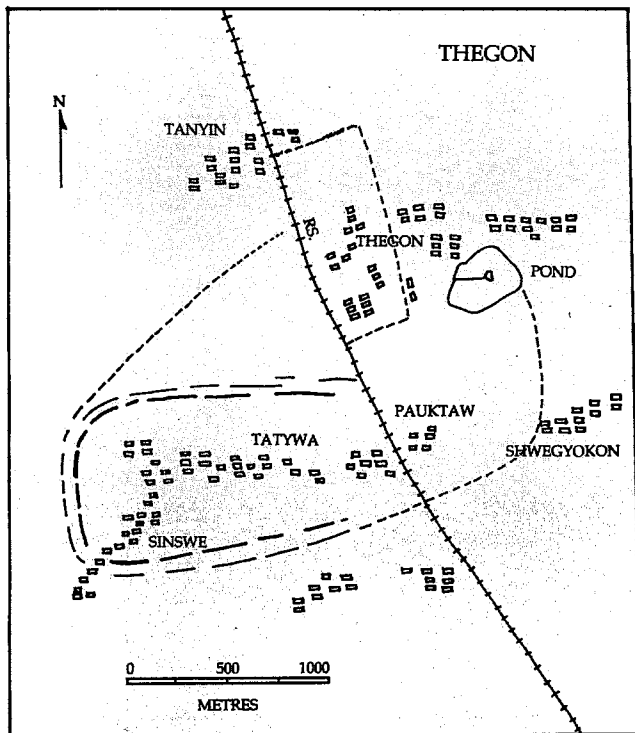


Map 4





Map 5



Map 6

of many years earlier. U Aung Myint was shown by the late U Bo Kay an larger unpublished album of Duroiselle's work recording patterns on Srikshetra bricks. Luce mentions finds of hundreds of bricks with "mason's marks" at Kyangin, Pyogin-gyi, Bawbawgyi, Hsinmakowundin and other Srikshetra sites. He tentatively identifies the symbols as Pyu numerals, perhaps somewhat simplified (Luce 1985 : 140).

The fact that the stamped numbers overlie the finger-marks indicates a later development, a conclusion supported by the lack of standardization in the finger-markings and the occurrence of stamping at later sites. The bricks from Maingmaw, thought to predate Srikshetra, were finger-marked but not stamped. At the somewhat later site of Halin, a brick with a letter etched or drawn with a sharp stick was found (U Myint Aung 1968) [Fig. 4 No. 1]. At Pagan, where the foundation of the city is generally placed in the 9th century AD, many of the finger-marked bricks are also inscribed with letters. One example, found in a toddy palm grove near Wetkyi-In, Pagan, has three finger-marked lines across the width of the brick at both ends. Written on the middle part of the brick are letters which can be interpreted as meaning "Sri, a villager of Kadaw" [Fig. 6]. A number of similar examples, with writing imprinted along the length of the brick, have been collected by the Archaeology Department. Generally the writing refers to the name of a place or village (Dr. Than Tun 1973).

## Other Pyu Sites: Waddi, Taungdwingyi, Thegon

U Aung Myint has also recovered finger-marked bricks at Waddi, Taungdwingyi, and Thegon [Maps 4, 5, 6, Fig. 7, 8, 9]. Waddi (21-25 north x 95-42 east) is enclosed by a rounded wall. It is similar in shape to Srikshetra, but much smaller, with a diameter of 1500 metres. Waddi is situated about six kilometres east of the town of Natogyi. Taungdwingyi (20-00 north x 95-32 east) is a quadrangular-shaped city with rounded corners, located about ten kilometres east of Beikthano. Although cities with single wide moats such as Taungdwingyi are generally dated to post-Pagan periods, the finding of finger-marked bricks shows that it was occupied many centuries earlier. Thegon (18-38 north x 95-25 east) has a lozenge-shaped round wall. It is longer on the east-west axis (about 2500 metres), than the north-south (only about 1000 metres). On the west of the site, parts of the enclosure are double, possibly triple walled.

Because of the proximity of Taungdwingyi to Beikthano, and Thegon to Srikshetra, the presence of similar artifacts such as beads, coins and finger-marked bricks comes as no surprise. Waddi, however, is further from any known major Pyu site, and nonetheless had a number of large-size finger-marked bricks from the wall, and beads with black and white designs.

WADDI BRICKS

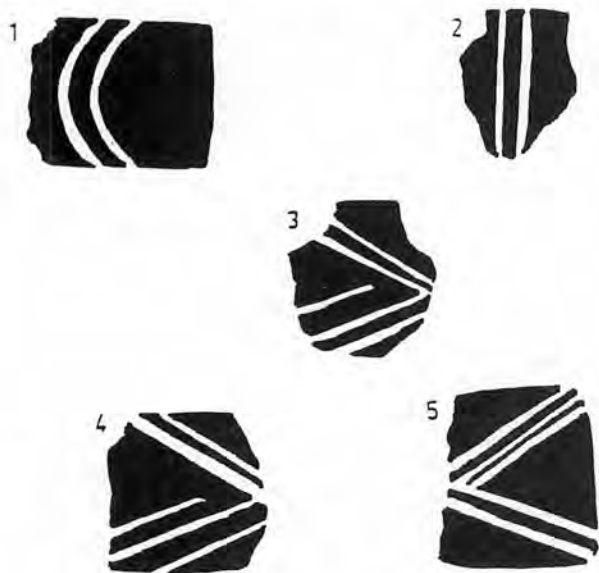


Fig. 7.  
1-5 U Aung Myint, *Preliminary Study on Waddi*, paper no. 6, 1979

THEGON BRICKS

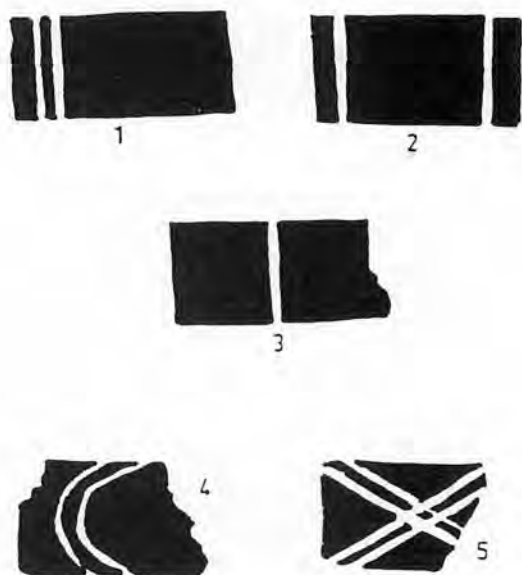


Fig. 9.  
U Aung Myint "Pyu Cities in the process of excavation and hitherto unexcavated," in *Rangoon University Historical Journal* vol. 1/2 1984

TAUNGDWINGYI BRICKS

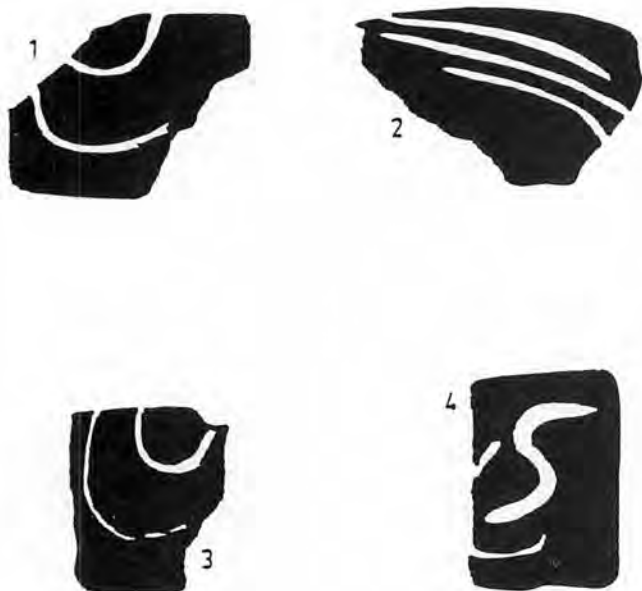
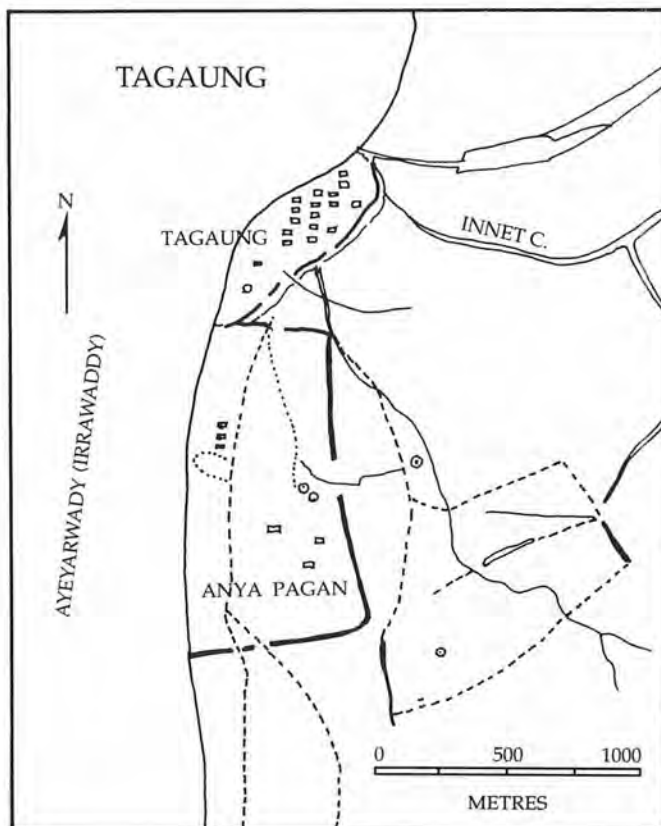


Fig. 8.  
U Mg. Mg. Tin, U Aung Myint, U Win Mg. (Tampawaddy) *rubbing from Taungdwingyi* 1979



Map 7

TAGAUNG BRICKS

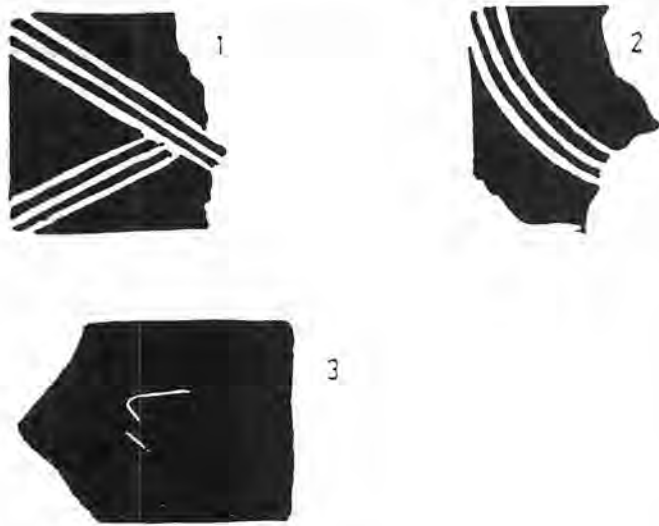


Fig. 10.  
1-2 U Maung Maung Tin 1985  
3 U Than Swe Tagaung excavation

Bricks at Tagaung

Tagaung (23-31 north x 96-01 east) [Map 7], located on the east bank of the Irrawaddy River, is traditionally held to be the cradle of Burmese civilization (Aung Thaw 1972 : 99). However, excavations have not yet substantiated this legend. Today, Tagaung is a small village, with only remnants of the old city wall left. These form two parts, with the northern walled area being irregularly rounded, and the larger southern part being more quadrangular, with angular corners. The wall borders both parts on only three sides, with the fourth side being the Irrawaddy River. Although no finger-marked bricks were reported in these excavations, U Than Swe (Department of Archaeology) has recorded a brick with a scratch mark believed to be the number 17 (Dr. Than Tun 1973) [Fig. 10].

U Maung Maung Tin, who visited Tagaung in March 1985, mentioned in his article "The Old City of Tagaung" that he collected and loaded into his car a number of etched bricks. When asked if the designs were similar to the finger-marked bricks of the Pyu and Mon cities, U Maung Maung Tin said that they were the very same type, a sensational find. The two pieces of brick remaining in U Maung Maung Tin's possession are marked with three curved lines, diagonal on one piece and curved on the other. The pieces measure 8 3/4" long and 2 1/2" thick, the length not being measurable as the whole brick was not recovered. These discoveries, first written up in Burmese for the daily newspaper, were translated into English by the editors and published under the heading of "The Bricks with the Etching" (U Maung Maung Tin 1990).

Finger-marked Bricks in Mon Cities: Introduction

Remains of Pyu cities are spread over a 200 kilometre stretch of the Irrawaddy basin, in the central dry zone of the country. In contrast, the Mon sites are clustered around the mouth of the Sittang (Sittaung) River, the apex of the Gulf of Martaban. The mention in chronicles of the Mon as an early group has been supported by archaeological excavations indicating that many Mon sites were contemporary with the Pyu. For instance, beads, pottery and finger-marked bricks are similar to those from Beikthano. Another find in the Kyaikkatha area was several hundred coins. The coins are of interest as similar coins have also been found at sites ranging from Oc-eo in South Vietnam to Nakhon Pathom in Central Thailand.

Kyaikkatha

Kyaikkatha (17-21 north x 96-51 east) [Map 8] is located between the Mokpalin and Kyaikto railway stations. It was first identified by U Aung Myint in 1976 while studying



Map 8

## BRICKS FROM RAMAÑÑADESA MON AREAS

## KYAIKKATHA BRICKS

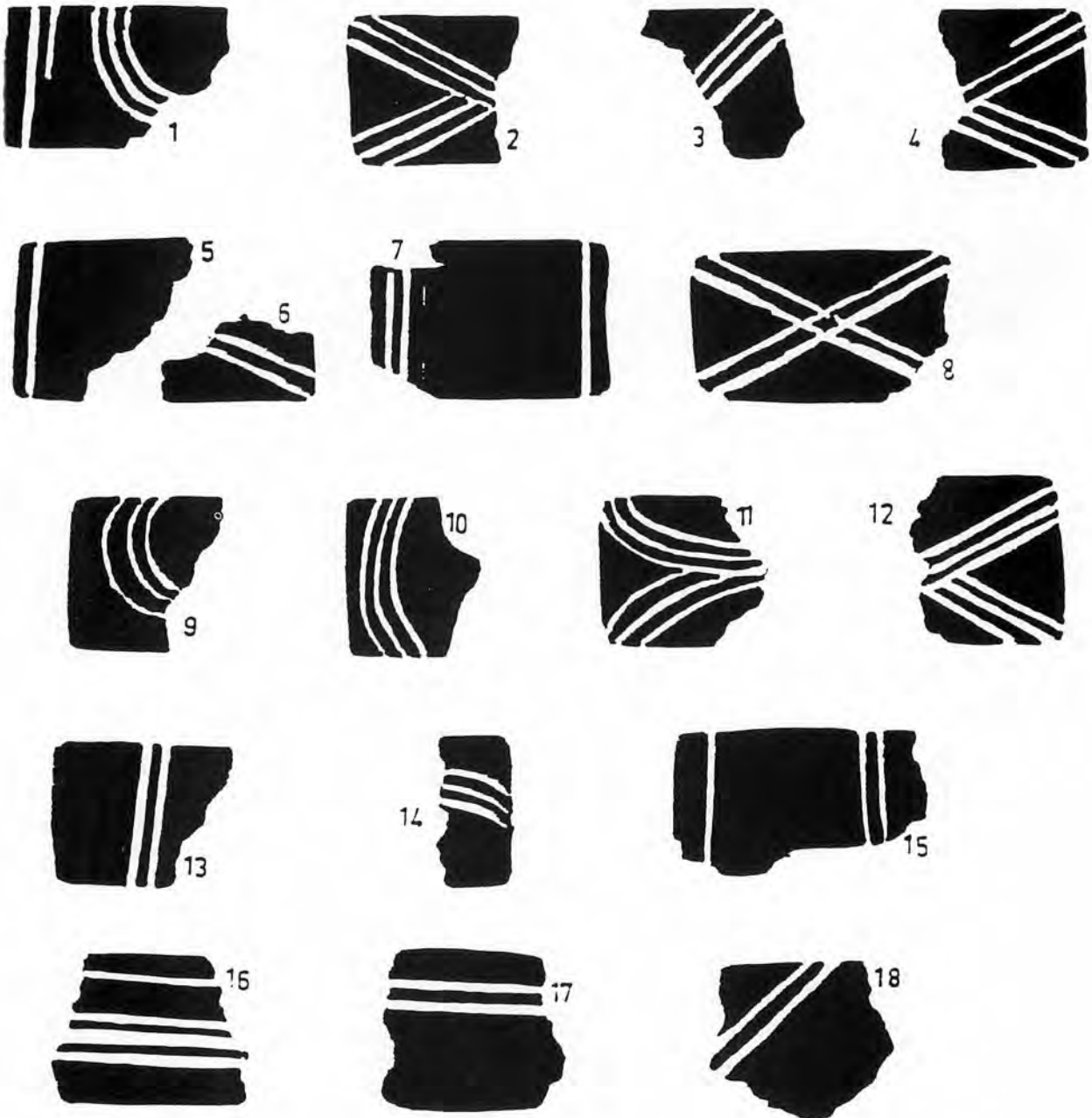


Fig. 11.

1-12 U Aung Myint, *Historical Journal* vol. 1/1 198313-18 U San Win, *Recorded Study* 1985

a World War II aerial photographic mosaic strip (scale 1 1/4" to 10 miles). A re-examination on postwar photos confirmed the peculiar pattern surrounding the small railway station village. The old city has an irregular outer wall, about 2500 metres east-west and 1000-2000 metres north-south. It is very broad in the eastern part, narrowing at the western end bordering the gulf. The inner enclosure consists of three quadrangular walls with rounded corners (750 metres at their maximum extent) which surround the Kyaikkanon pagoda.

Kyaikkatha is a particularly noteworthy site, both because of its unusual shape and its location at the apex of the Gulf of Martaban. This position offered easy access to the sea and to the interior. A preliminary field survey of Kyaikkatha was made in 1981, and in the second trip U Aung Myint was accompanied by U Maung Maung Tin, Dr. Kan Nyunt (History Department, Yangon University), U Tin Mya Thein, and U San Win. Coins, with a conch shell emblem on one side and a *srivatsa* on the other, were found on the first trip. On both occasions, a large number of finger-marked bricks were recorded along the outer wall and from ruined stupas in the interior [Fig. 11]. The bricks were of the large type. While the pattern of straight and curved lines was similar in marking to those found at Pyu sites such as Maingmaw, there appeared to be fewer examples with wavy lines. Marked bricks were also found in the surrounding villages of Supanu, Kalun, Malawgyang, Kalatcha, and Mokka.

## Mon Culture in the Region of Thaton

The region around Thaton, between the Sittang and Salween Rivers, is generally regarded as having been the centre of the Mon country, or *Ramaññadesa*, during the first part of the Christian era (Aung Thaw 1972 : 34). Although the presence of Mon Theravadin Buddhists at Thaton is thought to date to the fifth century AD, the archaeological evidence is scanty. However, the site has been continuously occupied and rebuilt in later periods. It was to Thaton that King Anawrahta turned in the 11th century when he captured that city, taking the Buddhist *Tripitaka*, along with King Manuha, back to Pagan (*ibid*: 35).

Objects dating to this later period include a number of large stone *semas*, or boundary stones, over a metre high. Now at the Kalyani-sima, Thaton, these are carved with scenes from the Jataka stories (see *Archaeological Survey of India*, 1930-34, pl. CXVI). The stones are very similar in form and content to 9th-11th century AD Mon or Mon/Khmer *semas* found at enclosed sites in Northeastern Thailand (Piriya 1974). The *semas* are unique to the Northeast within Thailand, where they are thought to be the continuation of a pre-Buddhist megalithic tradition (Srisakra 1975). Many of the enclosed sites may also have their origin in a pre-Buddhist culture (Moore 1989). The presence of these *semas* in Thaton points to contact between the two regions in the late first millennium AD. Mon migrations into lower Myanmar from Lamphun have been explained as either a result of disease or

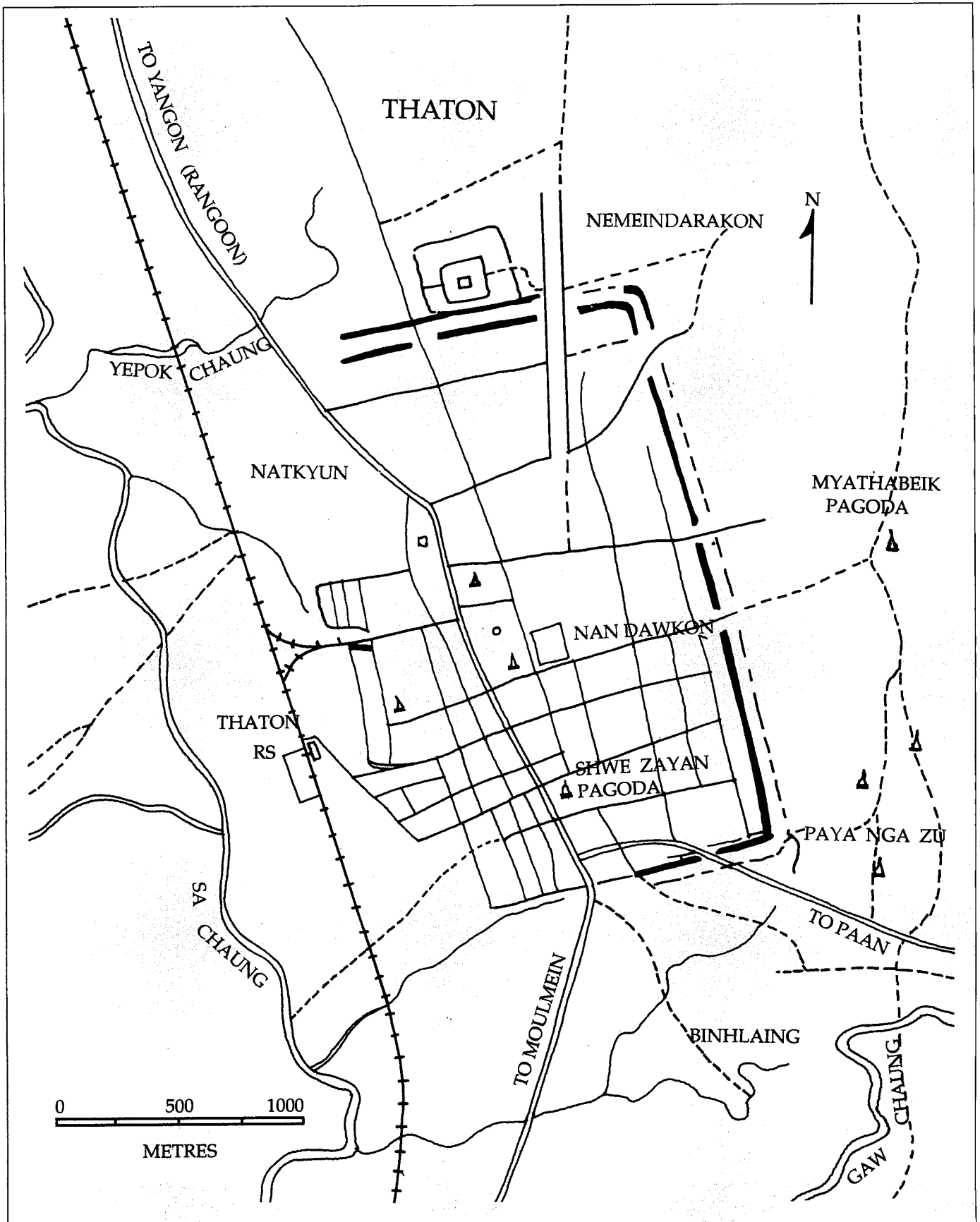
retreat in the face of Khmer incursions during the 11th century (Piriya 1974, Luce 1953, Quaritch Wales 1947). However, this hypothesis provides little information on the presence of the *semas* as they are only found at this period in the North-east. The question is further complicated by the presence of large stone slabs carved with Buddhist scenes found at Srikshetra and Halin (Luce 1985 : 53). The point here is the way the artifacts — *semas* or finger-marked bricks — point to an earlier and more wide-ranging interchange between Mon and Pyu centres than has been previously assumed.

## Thaton and Environs

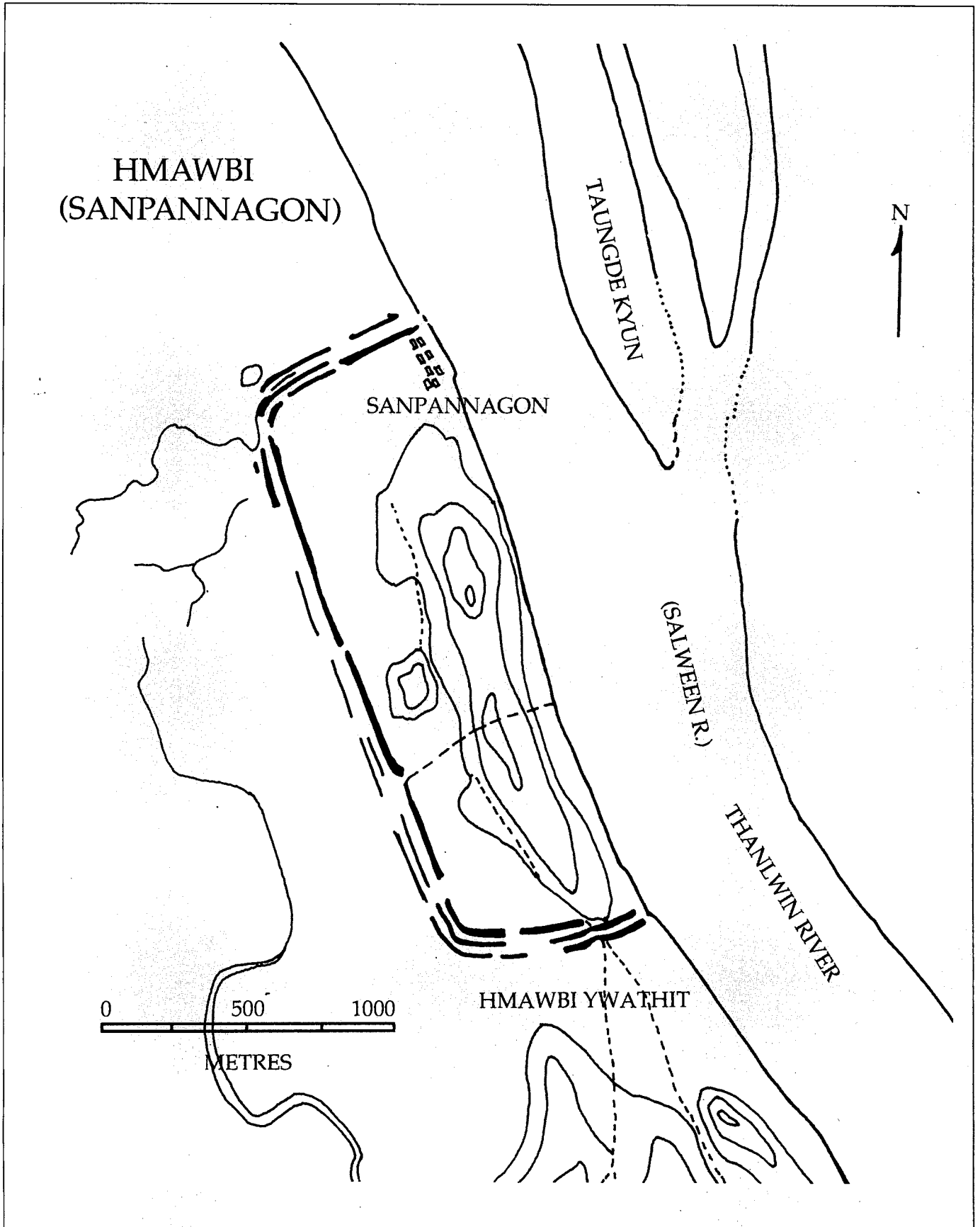
Thaton is surrounded by two quadrangular walls [Map 9]. The moat between is faced with laterite (Aung Thaw 1972 : 35). In a 1986 ground survey, U San Win (Department of History, Yangon University) located some marked bricks on the flattened and weathered southeast part of the city wall. Further bricks were found in the surrounding villages of Gaw, Binhling, Natsingon, Kyetshazun and Sinbyukyun. The size of the bricks was similar to those found at Pyu sites. As at Kyaikkatha, the finger-marked patterns were of the straight and curved varieties, with few examples of wavy lines [Fig. 12].

Hmawbi (Sanpannagon) [Map 10], on the west bank of the Salween River (16-14 north x 97-36 east), is about 25 kilometres north of Martaban (not to be confused with the Hmawbi located about 42 kilometres north of Yangon on the Yangon-Prome road). The southerly Hmawbi, discovered by U Aung Myint from aerial photographs, has the shape of an elongated quadrangle (2225 metres long and 750 metres wide). The triple walls, slightly curved, border only three sides of the site. The remaining side is the Salween River. Ground survey of the Hmawbi environs and the neighbouring village of Kinywa yielded a number of finger-marked bricks, along with a few beads of the type commonly found at Pyu cities [Fig. 13]. No bricks with stamp imprints or overmarked letters were found (U San Win 1984).

In recent years, scholars travelling in the peninsular areas have reported marked bricks at a number of other locations. In the Karen State, U San Win has found marked bricks in Paan [Fig. 14], its surrounding villages, and even in some limestone caves such as the Pagat and Kawgun caves where ancient palm-leaf manuscripts have been found. In 1984, U Thaw Tint (Department of Geology, University of Yangon) discovered some pieces, 6-9 cm thick, during a field trip in Kawparan village in Mudon township [Fig. 15]. Further to the south, another important and exciting brick find was made at Thagara, known locally as Myohaung ("the old city"). Thagara (14-10-30 north x 98-10 east) is located on the west bank of the Tavoy River, about eight miles north of Tavoy. It has a rounded shape [Map 11]. The east-west axis is 1.6 kilometre in diameter, while the north-south axis is slightly shorter. An additional quadrangular wall is found on the interior, presumed to be built in a much later period.



Map 9



Map 10

THATON BRICKS

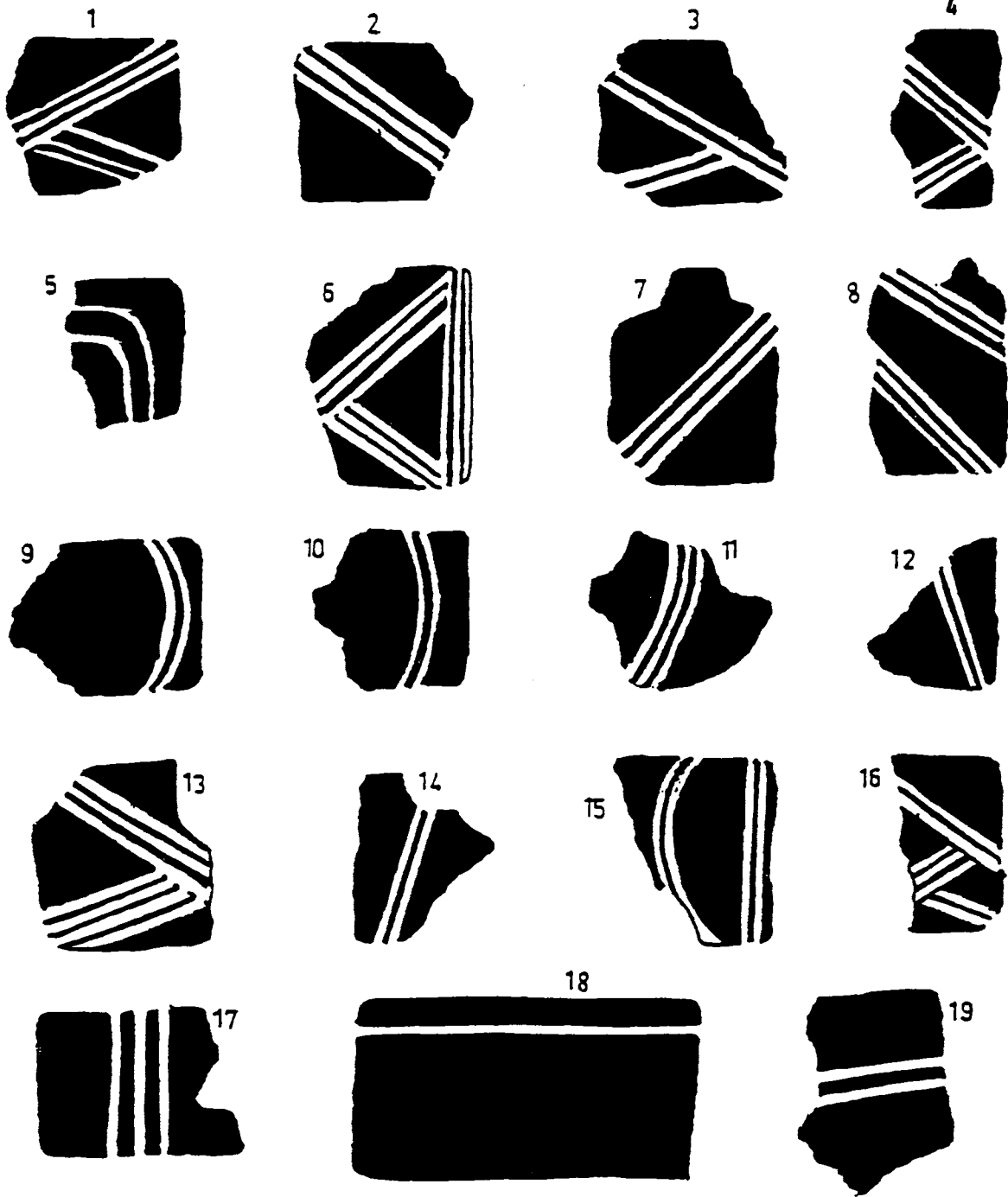
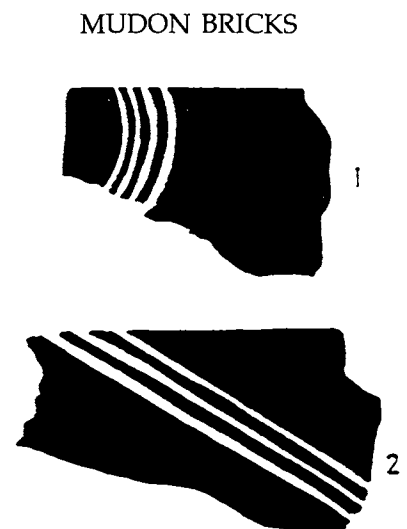
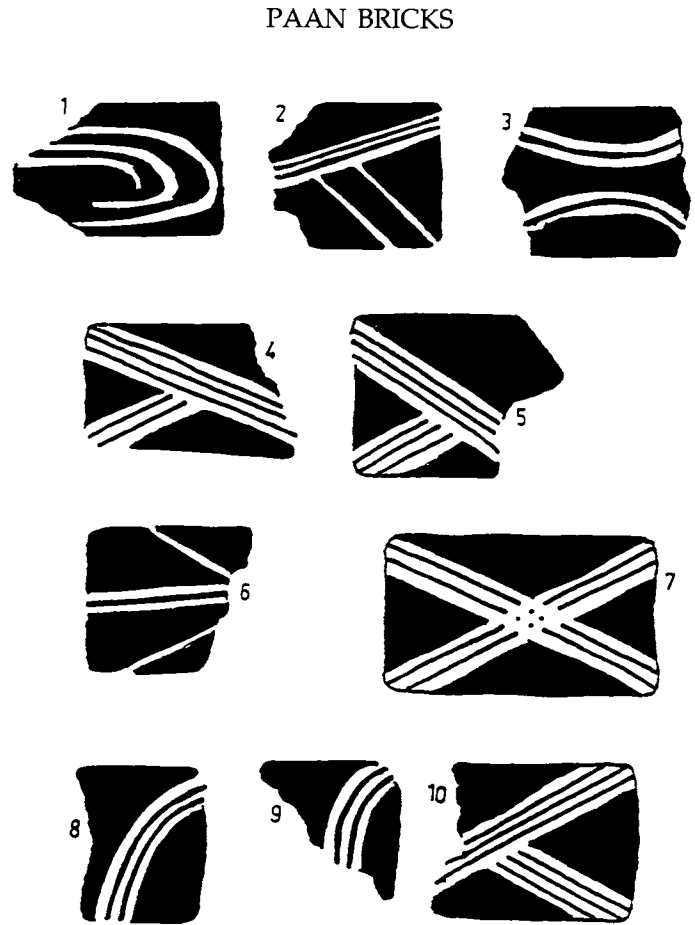
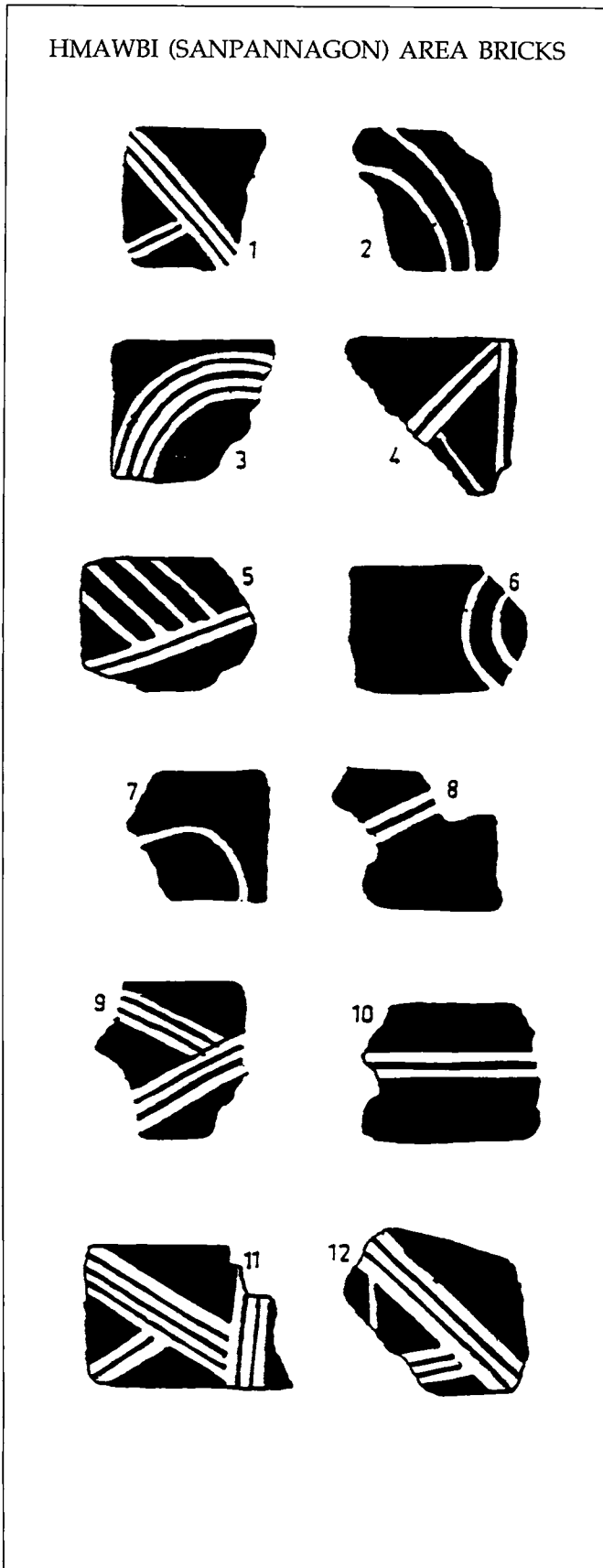
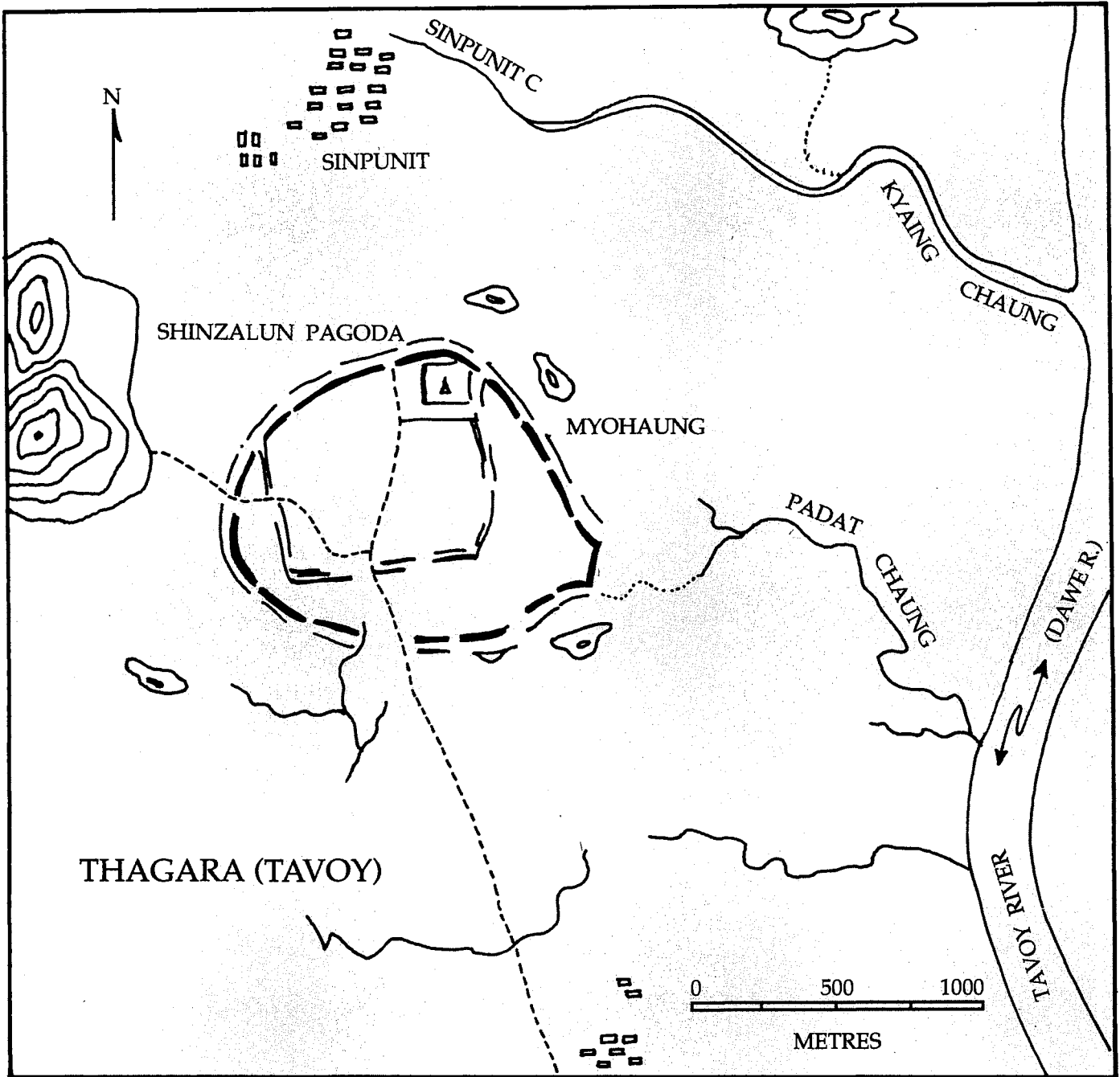


Fig. 12.  
U San Win, *Recorded Study* 1985







Map 11

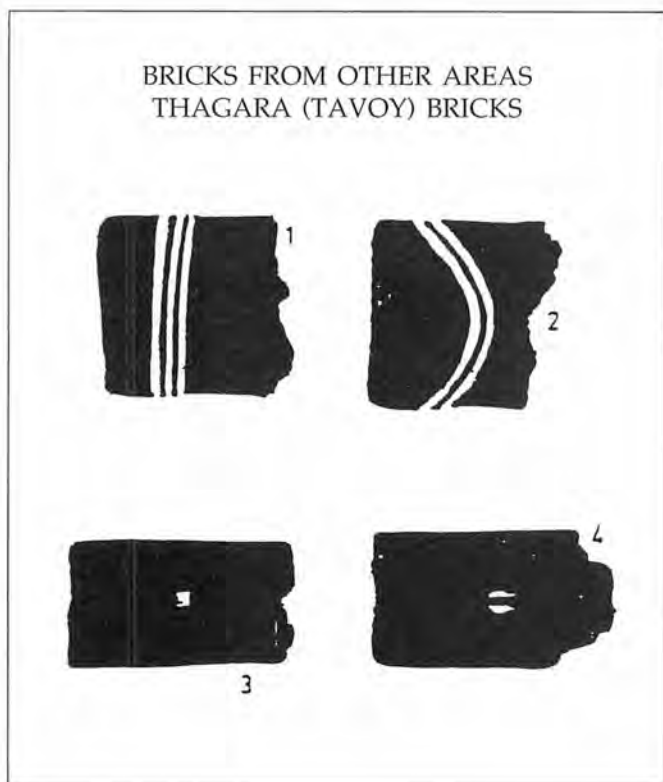


Fig. 16.  
U Aung Myint, *Recorded Study* 1984

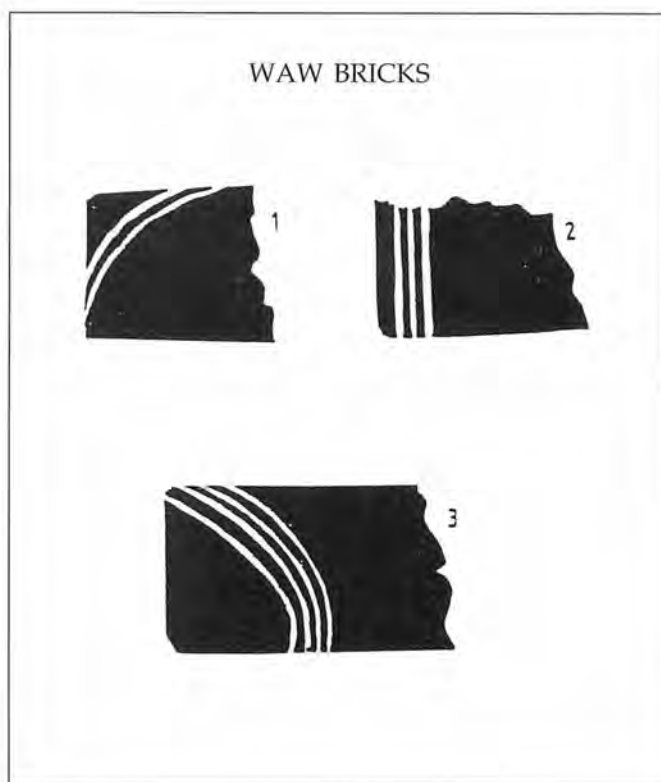


Fig. 17.  
1-3 U San & U Tin Khaing from *Waw, near Kyontu pagoda* 1986

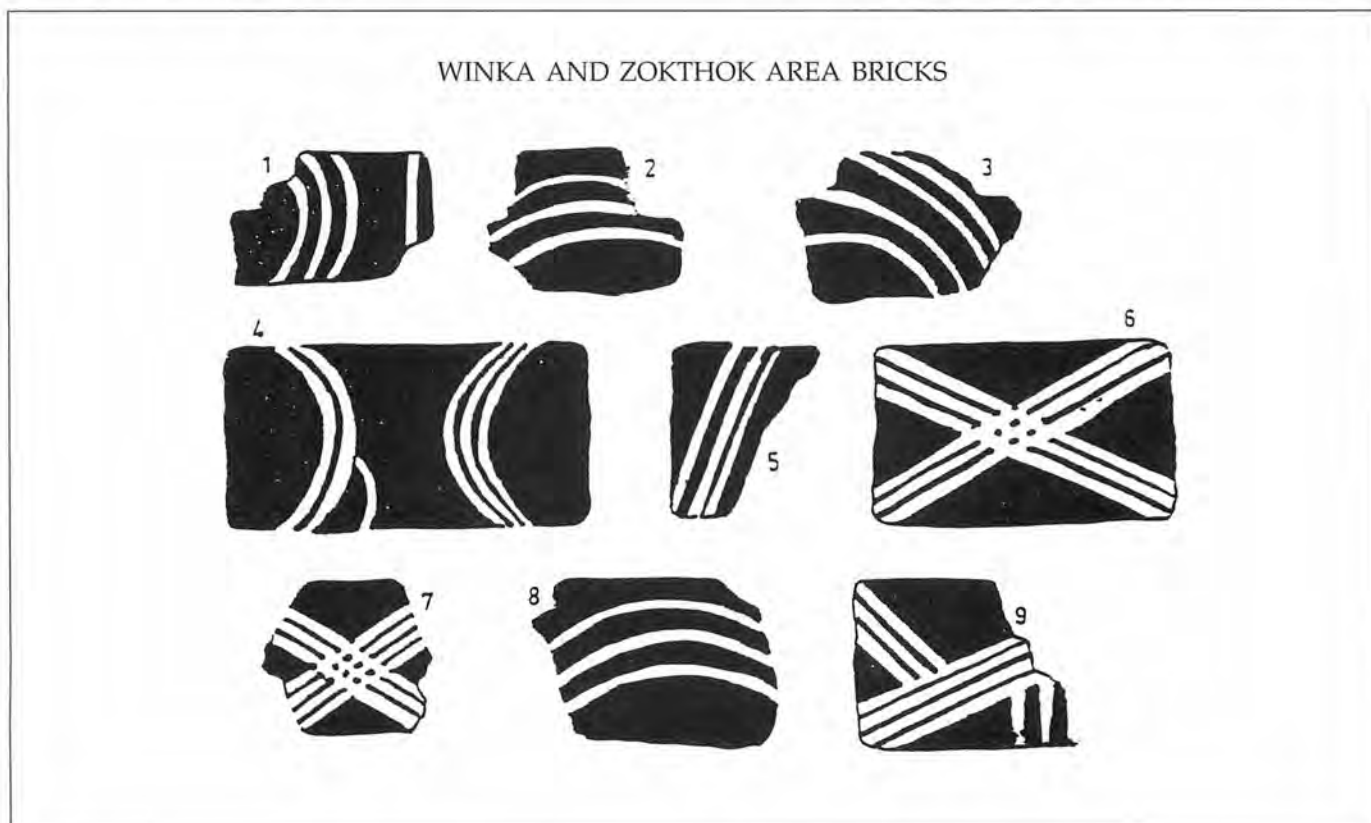
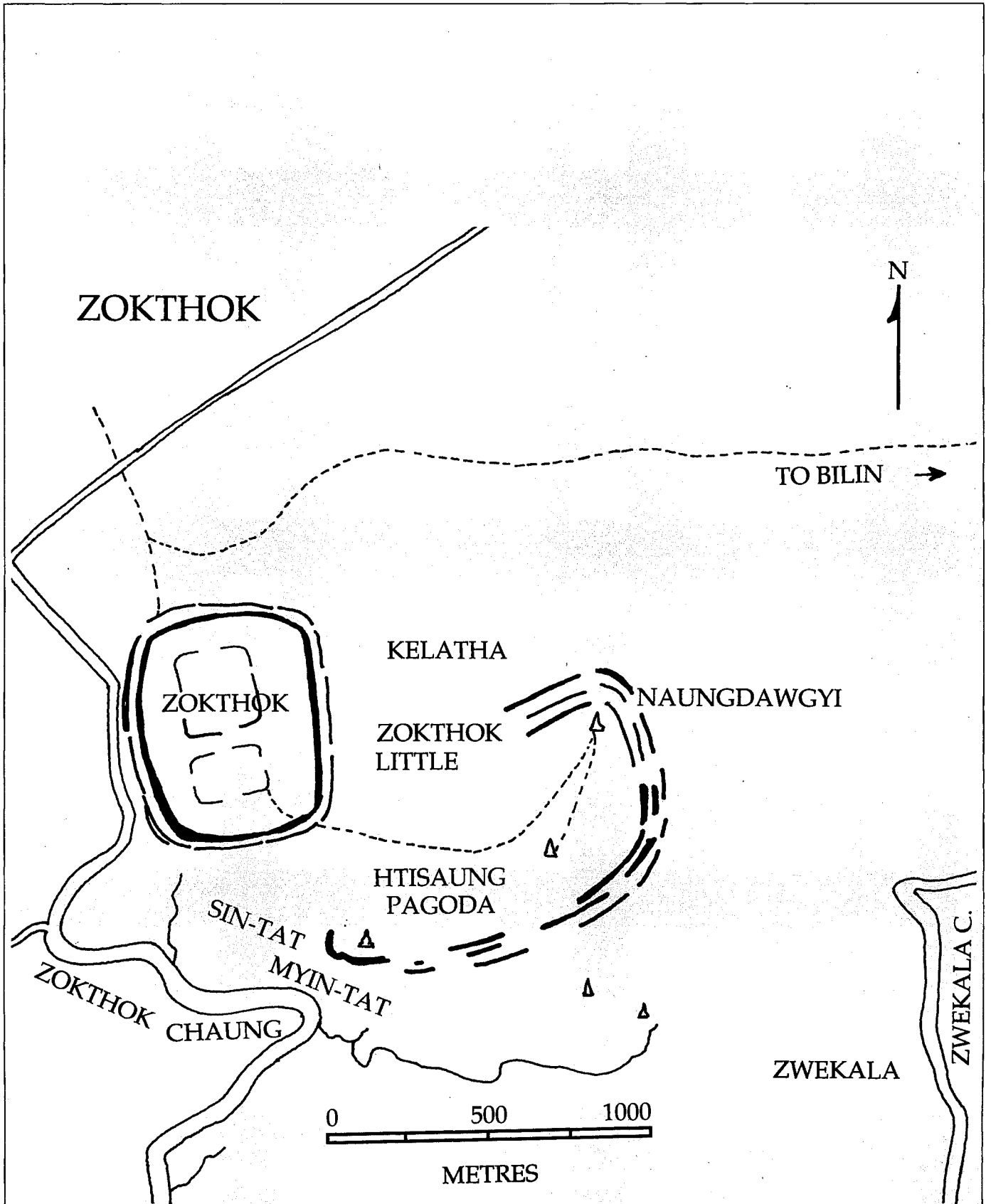


Fig. 18.  
U San Win, *Recorded Study* 1986



Map 12

In Thagara, two pieces of finger-marked brick were found (23 cm wide by 8 cm thick). One had three straight lines across the width while the other had a double curved mark [Fig. 15 Nos. 1, 2]. The bricks had become weathered from being placed near the village well and trodden on. Thus although both marks were still very conspicuous, they were shallow (U Aung Myint 1984).

Two different marked bricks were found in this area, one in a village near Thagara, the other in Tavoy [Fig. 16 Nos. 3, 4]. The patterns were on bricks measuring 41 x 20 x 7 cm. On one surface was a shallow mark, in one instance a rectangle (4 x 3 cm), the other being two semi-circles formed into a circle with a diameter line separating them. It seemed that while the brick was still soft, it was stamped or pressed with the end of a stick or block of wood with these dimensions.

## The Area of Pegu

To date, survey for finger-marked bricks at Pegu (Bago) has had little success. The existing walled city, square with near right-angle corners, was built by Bayinnaung (1551-1581). It is possible that current excavations by the Department of Archaeology of a brick palace dated to this era may provide some examples, although marked bricks do not appear to post-date the Pagan period. A likely location would be the older enclosure of Pegu, located east of the present city. Much of the wall here has been flattened and weathered. A preliminary survey failed to locate any marked bricks, but a careful search has not yet been made.

Within the Pegu region, however, marked bricks have been found at a number of sites. For example, in 1985 U Tin Khaing and U San Win found marked bricks in the neighbourhood of Waw, 27 kilometres northeast of Pegu (U Maung Maung Tin 1990) [see illustration]. Although the length of these three pieces could not be measured, they had a width of 18-20 cm and a thickness of 6-9 cm. A terracotta relief figure and some terracotta tablets, both similar to recorded Pyu pieces, were also found.

Other brick finds occurred in Mon villages and ruins including Taikkala, Winka (see U Myint Aung 1977), Muthin, Zweekala, Leikkon, Kalatha, and Zokthok [Map 12; Fig. 18]. Two well-known laterite structures are found in this area: Htisaung (Tizaung) pagoda is noted for its basement and plinth, both constructed of large laterite blocks; at Sin-tat and Myin-tat (Hsindat Myindat, lions and elephants) is a laterite frieze. Standing 7'6" high, it is said to have once been about a mile long, although today only 360 feet remain. It is very

similar to the laterite frieze which lines one of the ponds at Muang Phra Rot (Kok Pip), Prachinburi, Thailand, a late first millennium AD enclosed site.

## Conclusion

By classifying the finger marked designs on bricks, the spread of the tradition can be charted. Further intensive study should be made of a sample of contemporary sites where these bricks are found; with dating one should also be able to determine the period in which the bricks were fired.

There are a number of possible answers to the mystery of why the bricks were marked, but it is most likely that they were identification marks of a village or group of villages. Each village or village tract may have had a registered mark by which their bricks were distinguished from other villages. This system could have developed in conjunction with large constructions such as city walls, where a number of smaller surrounding villages were obliged to contribute a certain number of bricks to the undertaking. It is reasonable to assume that the bricks with the identification markings were put on top of a stack or pile of a certain number of bricks. A lot may have equalled a hundred, or a thousand, so that the inspection authority could quickly see whether the quota allotted to a certain village tract had been fulfilled.

Inspection procedures may also provide a clue to the stamp imprints, often numbers or letters, which overmark the finger-drawn lines. It may have been that the overseer, when satisfied, may have added his personal stamp, much like the forester's hammer marks on a log or stump. This would have indicated that the lot had been inspected and passed.

When it is remembered that the bricks were used to construct city walls, stupas and other buildings, it is clear that the brick designs were not for decoration. Any pattern drawn on the broad surface would be obscured by the brick laid on top of it, and no designs have been found on the narrow surface of the bricks. This leaves the mystery of why they are so similar from one place to another, and in places such a distance apart.

Future research may come up with other ideas, ones which will lead to a better understanding of the Mon and Pyu cultures. The work to date offers insight into the high degree of hierarchical coordination, if not voluntary cooperation, required to build the massive fortified cities of protohistoric Myanmar. Whatever the final answer, the finger-strokes marking the ancient bricks remain as a surprisingly intimate record of a long ago human gesture.

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