

## **Bronze and Iron Age sites in Upper Myanmar: Chindwin, Samon and Pyu**

‘The people moved about in quest of a place, ‘where water is clear and grass tender’

(ရေကြည်ရာ၊ မြက်နုရာ။)<sup>1</sup>

**ELIZABETH MOORE**

### **Introduction**

Since 1998, the Department of Archaeology has excavated seven Bronze and Iron Age cemetery sites in Upper Myanmar by.<sup>2</sup> (Table 1) At the first three sites listed below, referred to here as the Chindwin group, the principal grave goods were pottery, stone tools, bronze axes and swords, and ceremonial stone rings. Similar artefacts have been recovered during survey at a number of sites in the Lower Chindwin (c. 21.20-22.30n x 94.45-95.30e)(Moore and Pauk Pauk. 2001).

Table 1. Cemetery sites in Upper Myanmar excavated since 1998

<i>Village</i>	<i>Township</i>	<i>Division</i>	<i>Latitude x longitude</i>
(1) Nyaunggan	Budalin	Sagaing	22.24n x 95.04e
(2) Monhtoo	Budalin	Sagaing	22.19n x 95.14e
(3) In-de	Taungtha	Mandalay	21.15n x 95.22e
(4) Kok Ko Kha Hla	Wundwin	Mandalay	21.12n x 95.51e
(5) Myin Oo Hle	Mahlaing	Mandalay	21.07n x 95.32e
(6) Hnaw Kan	Mahlaing	Mandalay	21.15n x 95.43e
(7) Ywa Htin Kon	Pyawbwe	Mandalay	20.34n x 95.56e

At the other four excavated sites, the Samon group, the grave goods again included pottery, stone and bronze artefacts. Some pieces, such as stone rings, are comparable to those of the Chindwin, but for the most part are different in form and composition. Bronzes include ‘mother goddess’ figures, *kye doke* (bronze packets), and floral coffin ornaments. Iron and glass artefacts were also recovered. These included weapons such as swords, spearheads and arrowheads and agricultural implements such as socketed hoes. The sites are part of a larger distribution extending south to at least to Pyinmana in the Samon valley on the east of the central Ayeyarwaddy basin (c.19.40-22.00n x 95.30-96.15e) (Nyunt Han, Win Maung and Moore 2002). There is as yet no distinct site form associated with either group of sites. With the exception of Nyaunggan, located on a crater rim, the Chindwin and Samon sites are located in or near small village mounds.

<sup>1</sup> Hla Thamein 2000:124, Than Tun 1965:8

<sup>2</sup> In addition to citations, information and help courtesy Department of Archaeology, Ministry of Culture; Department of Archaeology, University of Yangon, and Universities’ Historical Research Centre, Ministry of Education.

A number Pyu walled sites are found in and peripheral to the Samon valley. (Table 2) The Iron Age site of Taungthaman, and Kyaukse, whose ricefields supplied the 9-13C city of Bagan, are located here as well. Halin and Beikthano are on the north and south margins of the Samon bronze-iron distribution. Further south is Sriksetra, by far the largest of the enclosed Pyu sites. Its dating (5-9<sup>th</sup> C AD) is based on stylistic analysis although its location near the probable ancient shoreline suggests far earlier occupation. Traditional histories indicate habitation of the area long before the founding of the Pyu city (Moore. 2000: 172). Despite clear links to other Pyu sites such as brick walls, finger-marked bricks, and urns, Sriksetra presents a rather different profile in terms of the range of Pyu objects and the paucity of stone or bronze tools. This may well be dispelled with further research and excavation.

Table 2. Pyu or Iron Age sites in the central basin

<i>Pyu or Iron Age site</i>	<i>Township</i>	<i>Division</i>	<i>Latitude x longitude</i>		<i>Area enclosed by wall (AungMyint 1998:18)</i>
Halin	Wetlet	Sagaing	22.27n 95.49e	x	208 ha [512 acres]
Taungthaman	Amarapura	Mandalay	21.53n 96.05e	x	
Waddi	Natogyi	Mandalay	21.25n 95.47e	x	130 ha [320 acres]
Maingmaw (Pinle)	Myittha	Mandalay	21.17n 96.12e	x	222 ha [548 acres]
Beinnaka	Pyawbwe	Mandalay	20.36n 96.12e	x	
Beikthano	Taungdwingyi	Magwe	20.00n 92.23e	x	291.7 ha [717 acres]
Sriksetra	Pyay	Bago	18.48n 95.17e	x	1477ha [c.30 sq.km]

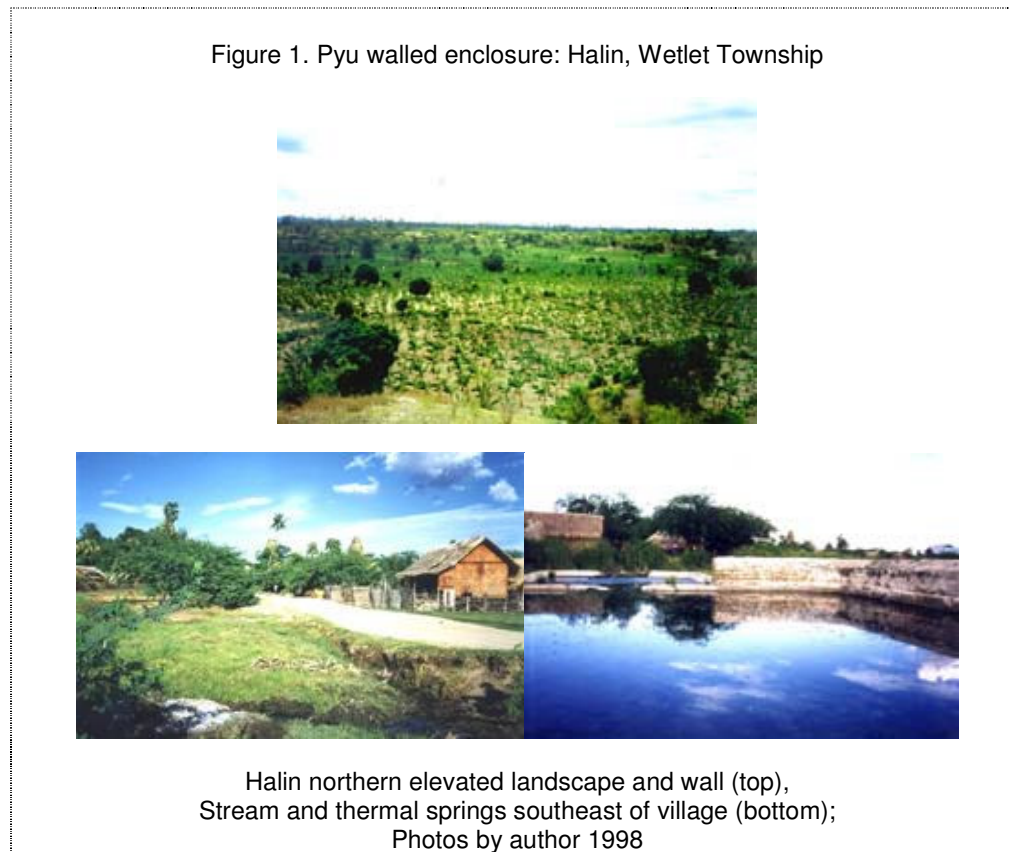
Brick walls enclose most Pyu sites giving them a characteristic form. Aung Myint has classified Beikthano, Halin and Taungdwingyi [20.00n x 95.32] as quadrangular and Sriksetra, Maingmaw, Waddi, Thegon [18.32n x 95.20] and Pinle [21.17n x 96.10e] as rounded (1998). At Beikthano and Halin, and the interior quadrangle at Maingmaw, the walls are inclined 13-18 degrees west of magnetic north, a deviation which has been cited to date their construction to the 2nd to the 1st century BC (Than Tun 1996a: 5, 1979:55).

At Beinnaka and at Halin, both Samon bronze-iron as well as Pyu artefacts have been recovered. Quadrangular walls are visible at Beinnaka and although perhaps Pyu, villagers attribute these to the Shan, suggesting that they date to the 9-13C AD Bagan period. The site is one of a row of mounds forming a north to south alignment. One of these, Padi Kon ('bead mound') was excavated by U Sein Maung Oo, Department of Archaeology in 1985. Skeletons unearthed under the northwest corner of the Beinnaka wall in 1982 were accompanied by lead rolls with writing, which are generally assigned to the Pyu period. In 1998, two further skeletons were found on the east of the wall, along with bronze spears, *kye doke* and stone ceremonial rings.<sup>3</sup>

<sup>3</sup> Field survey 1998-9 carried out with U Win Maung (Tampawaddy), courtesy help from Pyawbwe SPDC Township Head and Ministry of Defence.

A similar pattern of finds is seen at Halin. The lowest portion of the site, marked by thermal springs and streams, is on the southeast. (Figure 1) It is in this area that most Chindwin and Samon-type artefacts have been recovered, especially from villages just southeast of the city wall. These include a number of bronze axes and highly polished stone rings typical of Chindwin sites. Also found are blue glass rings, bronze *kye doke* and floral 'coffin' ornaments characteristic of the Samon region. From the same area at Halin, Pyu beads, including carnelian 'tiger' beads, painted pottery, and broad petal-shaped iron swords set in finely decorated bronze hilts have also been found (Win Maung 2002, 2003).

).



### Chronology and terms

The Bronze Age cemetery of Nyaunggan in the Chindwin has been dated through comparison to bronze artefacts from other areas in the region to c. 1500-1000 BC, the time period given for the establishment of a bronze-working tradition in Southeast Asia.<sup>4</sup> However, the start of bronze production in this area and the duration of cemetery use are not yet known. Absolute dating is underway but not yet available for the excavated

<sup>4</sup> Attempts to date bone from both Hnaw Kan and Nyaunggan failed to give results due to lack of collagen in the samples. Charcoal was recovered Hnaw Kan, but the results are not available at the time of this writing (Patreau et al.2001: 100; Patreau 2002).

cemetery sites in the Samon, and again an initial date for bronze and iron working there has not been formulated. From c. 700-400BC, fairly rapid change probably took place in Southeast Asia, a shift from unstratified agriculturalist economies using stone tools, to ranked metal-using communities (Glover 1999b: 104). The inception of localised iron production in the region is generally placed around 500 BC (Glover 1999a: 87, Higham 2002: 158, 166). Thermo-luminescence dates were obtained from both pottery and iron excavated at Taungthaman, the latter yielding a date of 460 ±200 BC. The iron date was from a fishhook found on the chest of a skeleton, one of forty-four inhumation burial excavated by U Sein Maung Oo in 1982 (Stargardt 1990: 15-6,29).

The Pyu sites have been dated to about 200 BC – 900 AD, with charcoal samples from Beikthano yielding the earliest dates (Aung Thaw 1968, Aung Thwin 1982-3). The sequence of 1000+ years bracketed as 'Pyu' rests on more information than thus far is available for the Chindwin and Samon sites. Radiocarbon dates are available from Beikthano and Halin, there is palaeographic analysis of a limited number of inscriptions on stone and on gold plates, and stylistic analysis of bricks, beads, pottery, sculpture, monuments and walls. However, many aspects of related to the Pyu remain uncertain. These include deciphering the language and, as discussed below, determining whether the Pyu were a distinct ethnic group that entered the central basin or were one of a number of groups already present. Dating the different elements of Pyu sites, from walls to structures merits further research as well. Also important is a clearer picture of developments during the early centuries AD. This was a period of expanding trade with both northern and southern parts South Asia and China, and there are indications that the changes indicated at sites such as Chansen in Central Thailand during the third century AD (Bronson 1976), were mirrored at Pyu settlements.

Covering c.1500 BC – 1000 AD, this chronology spans the pre- to proto-historic, and thus embraces the period recorded in Myanmar's chronicle tradition. The hypotheses presented here attempt to integrate 'Pyu' within a fresh framework, juxtaposing this long-used ethnic label to 'Chindwin' and 'Samon' also in order to recall the way that conceptions of the past are involved in the current production of knowledge. "In this sense, the past is real and not dead and gone: through archaeological and historical production it is an active part of the present." (Shanks and Tilley 1987:114-5).

The past is also part of the chronological present as most prehistoric sites in Upper Myanmar continue to be occupied today. Nonetheless, many tend to yield artefacts associated with one 'culture' and consequently come to be identified with a single chronological period.<sup>5</sup> There are numerous exceptions, prompting caution when assigning or assessing 'terminal' dates. For instance, among the surface finds at Nyaunggan were lead rolls similar to ones from the Pyu site of Maingmaw. Also at Nyaunggan, 18-19<sup>th</sup> C Konbaung pottery was found at a walled structure near the earlier cemetery (Moore and Pauk Pauk 2001:38). As mentioned above, at Halin and Beinnaka, a range of bronze, bronze-iron, Pyu, Bagan and later artefacts have been recovered (Win Maung 2001, 2002, 2003). As implied by these notes, in describing Chindwin, Samon and Pyu assemblages the intent is not to delimit periods or spheres of social activity but rather to investigate continuities and interaction. Occupation levels at sites and within regions certainly fluctuated over time, but both areas were continuously inhabited.

---

<sup>5</sup> U Hla Tun Pyu, Department of Archaeology, University of Yangon, discussion 2003.

### Chindwin grave goods

Finds in this area are generally typed in comparison to artefacts from the 1998-9 Nyaunggan cemetery excavations (Yee Yee Aung 2001, 2002; Nyunt Han 1999). During the two field seasons, five pits were excavated. Forty-four burial features were identified, most extended and supine primary burials, located between 10cm to 1.5m below the surface. One secondary burial was found, a skull in a large pot. It is also possible, based on burials in Thailand, that infants were contained in a number of the large jars that were excavated (Figure 2) (Tayles, Domett and Pauk Pauk 2001). The Nyaunggan grave goods are principally pottery, bronze axes and spears, and stone tools and rings. The burials show a degree of social hierarchy, with bronze tools and weapons as well as stone rings being excavated in a limited number of inhumations. A ceremonial use for the stone rings is suggested by the different shapes (square, egg-shaped, triangular, round or pinion), the smallness of the central hole (averaging 5cm) and their placement on various parts of the body.

Figure 2. Nyaunggan cemetery, Budalin Township



Secondary burial with skull (above) and burial with large pots (right) Nyaunggan.



Photographs courtesy of Ministries of Defence and Culture.

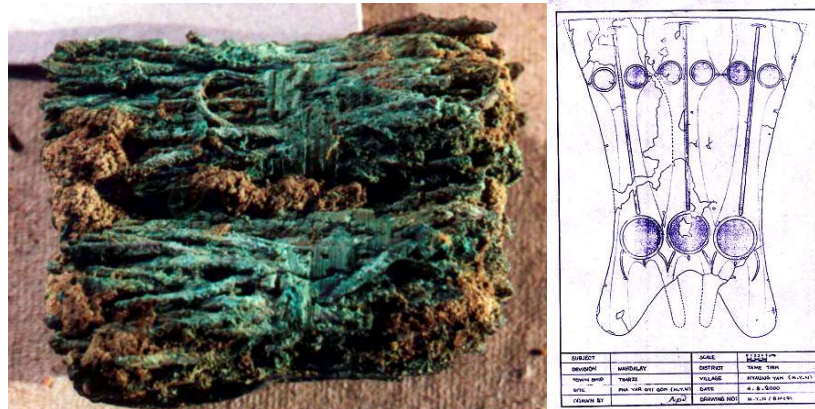
### Samon grave goods

Ceremonial rings found in the Samon are made of either stone or glass, the latter ranging in colour from blue to green. The shape is often round, but rings that are ovoid or round with points have also been recovered. Stone rings have been found at a number of sites in Thailand, many being more similar to those from the Samon rather than the Chindwin. One example is stone rings from Kok Pleb, Bang Phae, Ratchaburi Province in central west Thailand. Rings excavated at this site included not only ones made of stone but shell, bone, and bronze 'bracelets' as well as stone ear pendants (Daeng-iet 1978).

Samon bronze axes are different from those of the Chindwin, and other bronze forms are new: female 'mother goddess' figures, *kye doke* (bronze packets), and floral coffin ornaments. The female figures are thin beaten sheets, some 60-90cm long. Breasts and womb are prominent cones bounded by a thin raised circular rim or ring. Some examples have several torsos joined at breast and hip. All are headless, in contrast to the preservation of only a skull seen on one secondary burial at Nyaunggan. While Win Maung (2002) interprets the neck of the figures as a triangular head, it is also possible that a mask-like head portion was present but made of a perishable material such as wood. Further excavation will hopefully clarify the form and placement of the figures. The rim around the female figure sometimes has double-pointed curvilinear designs, similar in shape to double-pointed Chindwin axes. (Figure 3) The same form has been found on a small gold cubical bead from Sriksetra and on silver 'coins' in association with motifs such as Srivatsa and Bhaddapitha (Win Maung 2002). In this context, the figures could be read a pairing of female and male elements, a wider ritual significance not yet fully understood.



To date, the bronze female figures have been found at only some Samon sites such as Myin Oo Hle, Kok Ko Kha Hla and Nyaunggan (20.46n x 96.06e), and not at Halin. In contrast, the *kye doke* and floral ornaments are found at virtually all sites in this area, and at Halin. The *kye doke* are packets of thin bronze wire 'tied' into bundles with an outer wire. (Figure 4) It has been suggested that they were indicators of age, or needles (Patreau et al. 2001:100), but they also resemble bundles of padi and may have been markers of wealth. The floral ornaments are flat curvilinear v-shaped strips, often framed and with holes on the ends or corners to fix to coffins.

Figure 4. Samon bronzes: *Kye Doke* & triple 'Mother goddess' figure

Length circa 5cm

Height circa 80cm

Photo and drawing courtesy U Win Maung (Tampawaddy)

Although some of the bronze ritual goods such as 'mother goddesses' may have been gilded, the principal metals recovered from Samon sites are bronze and iron. Iron is found not only in the form of bi-metallic swords but used to produce socketed hoes, spearheads and arrowheads (Win Maung 2002). However, iron architectural fittings such as hinges and door sockets found at Pyu sites were not reported at either Hnaw Kan or Taungthaman. At Hnaw Kan, eighty-four burials were unearthed from twenty graves. Bronze was only seen in *kye doke*, with iron tools including socketed axes and spearheads, sword and daggers (Patreau et al. 2002).

In general, bronze working became more elaborated at sites in the Samon. Although the Chindwin area was rich in copper, the Samon offered access to the tin and silver resources of the Shan Plateau. No stone moulds have yet been recovered from the Chindwin, but in the Samon, a number have been found, for example at Kok Ko Kha Hla. Bronze sword hilts and hollow bracelets from Samon sites also indicate casting while thin ceremonial swords, 'mother goddess' figures, and floral ornaments appear to have been hammered. While both Chindwin and Samon sites have bronze tools, the rounded axes of the Chindwin differ from the longer, more rectangular axes of the Samon. The composition of bronze implements also appears to vary. For instance, analysis of a bronze axe from Salingyi (21.58n x 95.05e), south of Monywa, gave a result of 99.5 percent copper content<sup>1</sup>, whereas the friability of the *kye doke* and 'mother goddess' figures of the Samon may indicate a higher tin content.

While artefacts from sites such as Halin and Beinnaka span several cultural periods, the relationship of these to the spatial extent of the 'site' is not yet clear. In-de, for example, is some 20 kilometres west of Myin Oo Hle. Both associated villages are located on streams draining into the Ayeyarwaddy, just below its confluence with the Chindwin. Excavations at both cemetery sites yielded ceremonial stone rings. However, the In-de bronzes resembled those from Nyaunggan while the Myin Oo Hle burials contain *kye doke*, 'mother goddess' figures and floral coffin ornaments. These artefacts

<sup>1</sup> Test carried out for author courtesy Nara Cultural Properties Research Institute, 1998.

give some idea of burial practices, but habitation evidence would begin to set these in a wider perspective.

### **Pyu Artefacts**

The Pyu 'period' brought major transitions to ritual as Hindu and Buddhist practice was integrated into an increasingly hierarchical society. Although bronze and iron metallurgy and the firing of clay for pots and beads was already well established, this technology was used in new ways to manufacture goods, define territory, erect ritual structures, and to honour the dead. There remain varied opinions on the manner in which South Asian technical influence and ritual change were incorporated, however. Where most authors suggest that both were corollaries to increased urbanism (e.g. Wheatley 1971: 249), others, posit that techniques preceded concept, with for example pre-Buddhist funeral buildings constructed at Pyu sites using locally manufactured bricks (Stargardt: 1990, 1994).

### ***Stone and metal***

Skilled stone carving is seen in semi-precious stone beads common to both the Samon and Pyu, but the finely carved ceremonial rings of the Samon are not part of the Pyu assemblage. Three-dimensional stone sculptural pieces are relatively rare, and tend to be large relief carvings on stone slabs rather than freestanding. These have prompted suggestions of megalithic practice, a possibility furthered by the presence of megaliths at Moegyobyin, Salingyi in the Chindwin, and Kok Ko Kha Hla in the Samon.<sup>2</sup>

Although the Samon metallurgical tradition was well developed, increasing technical skill was likely to have been one catalyst in the Pyu use of bronze to make figural images. Pyu metal goods ranged from bronze bells, to cubical gold beads, and silver 'coins'. The ninth century Man Shu notes that in the P'iao [Pyu] kingdom a silver coinage is used (Luce 1961:90). Whether coinage or bullion, these distinctive silver discs are recovered from all Pyu sites. A Pyu or Mon origin is attributed to certain types of coins, in some cases based on distribution of finds such as the rising sun motif, and in others such as the Srivatsa design, its presence on stamped pottery as well as silver coins from Beikthano (Wicks 1992: 118, Bronson 1969:142). It is possible that the metal working skill of Samon cultures was expanded by the Pyu to include work in silver. Indeed, the technology to smelt silver from a lead-zinc ore seems to have been particularly well developed by the Pyu, perhaps given their proximity to major deposits (Bronson 1992:82-3).

### ***Brick walls and gates***

The massive brick walls of Pyu cities enclose apparently royal, sacred and agricultural areas. Walls were built of large bricks (up to 50cm long), and were often 2-5m wide and with sections of wall at Sriksetra being some 30m broad at the base. Remains today are some 6-15 ft (1.8- 4.5m) in height, although erosion and use of bricks for roads and railways has reduced this in many cases. (Figures 1, 5) Knowledge of local topography was incorporated into the plan of the enclosure, often related to natural hydrological features. For instance, given the presence of natural water sources, manmade moats

<sup>2</sup> Excavations at Kok Ko Kha Hla carried out by U Hla Gyi Maung Maung, Department of Archaeology, Ministry of Culture; Daw Yee Yee Aung, Department of Archaeology, University of Yangon, discussion 2003



apparently were not constructed on the lowest land on the south of Halin. (Figure 1) Likewise, no wall is visible on the west of Beikthano where lakes are found on the lower terrain.

Curved gates break the walls at all Pyu sites, often with sizeable openings once fortified with wooden gates and iron fittings. At Beikthano, the arms of one gateway extend some 86 ft (25.8m) into the enclosure (Aung Thaw 1972:3). The cities are thought to have had twelve gates, giving them a cosmological significance repeated at later capitals such as Mandalay (Moore 1993: 338). The number of gates is mentioned in Chinese records, although only two have yet been excavated at Beikthano, three at Halin (Luce 1961: 90, Aung Thaw 1972:12). Bricks were used extensively not only to demarcate the domain but sacred areas within and along its walls. Thus brick funerary halls, stupas, and temples, are found, although particularly at Sriksetra, some of these structures may have been built during the Bagan period (Stadtner 1986, 1998).

### ***Urns***

A range of ritual purposes, from royal inhumation, to memorial groupings and apotropaic protection of domain is suggested not only by the various materials from which Pyu urns were made, but the range of places where they were interred. Pyu urns were made of terracotta, copper, bronze or stone, with the majority being terracotta. (Figures 5a & 5b) Some may have been purpose made, but many different shaped vessels were used. At Halin, the lid of a terracotta urn been likened to the structure of pagodas thought to have evolved only the in the late 11th C AD (Than Tun 1972:209, Myint Aung 1970; fig.5). The urns suggest various functions, and also provide a useful general index of burial custom, burials providing the provenance of most of the material from bronze and bronze-iron sites in the Chindwin and Samon.

Figure 5a: Pyu urn



Urns at KKG-12, Beikthano  
Photograph from Aung Thaw Excavation Report, 1968

Figure 5b: Pyu wall



Maingmaw outer walls (c. 3.5m in places).  
Photograph Courtesy of U Aung Myint, 1988

Within Pyu city walls, urns have been recovered on the interior and exterior of halls and stupa-like structures. Most of these buildings have semi-circular and mango sprout bricks on the stairways and exterior walls. Sometimes one or two skeletons or a pile of bones marked the cluster of urns. Some forty terracotta urns were excavated from a large hall (KKG9) south of the citadel-palace at Beikthano. This building and a similar one (KKG11) just inside the north wall gate (KKG13) have been described as a memorial structures (San Shwe 2002:16). The cremated remains of venerated persons are thought to have been gathered until burial could be carried out. Similar customs of burial deferral have been recorded in the last century among various groups in Southeast Asia. For instance, amongst the Chin, a corpse was first kept for one or two years until a feast could be held, and then laid in an open coffin raised above the ground until only bones remained. These were then gathered and placed in an earthen pot (Carey and Tuck 1896:193).

Veneration of the deceased may have also included burial of funeral ashes and bones in the foundation wall of structures where the owners died. At Beikthano, instances cited include a monastic building (KKG2) and a cluster of three rectangular buildings to the north of this (BTO 8,9,10). In addition to urns, iron nails, shallow clay oil lamps and children's toys were found (San Shwe 2002:11,12). This cluster (BTO 8,9,10) was excavated between 1996-9, categorized with an earlier group (KKG 11,12,14), excavated in the 1960's. The earlier excavated group includes a memorial hall (KKG11), a square temple with a rectangular projection (KKG12), and a stupa-style monument on a square base (KKG14). This last type of building has often been likened to domed structures at Nagarjunakonda. In connection with the practice of urn burial in monasteries, Aung Thaw cites instances at Nagarjunakonda where remains of monks or priests were enshrined in terracotta water pots within monastic stupas (1968:65).

Urn were also placed in the city gate areas. At Halin, urns and skeletons were found in the lowest stratum under the road of the south gate (HL10), while six skeletons were found in the fourth layer under the southeast gate (HL17). Five of the six skeletons

faced west, with the remaining one laid with the head to the east. Bronze blades were recovered from the bend in the arm, one piece having fragments of cloth attached to it (Than Tun 1996b: 5). Mounds with urns are found outside city walls at most of the Pyu sites. At Beikthano, Aung Thaw cites “countless low mounds which are urn graves” (1968:2). In this context he notes the long tradition of the highly venerated Shweyaungdaw pagoda, some 400 yards east to the northeast corner of the city wall. The zedi is located on the highest part of the terrain, with water flowing from this part through the site to the southwest. Stargardt links this to ancestral practice, suggesting that at both Beikthano and Sriksetra that water was channelled through the burials on elevated areas before circulating via canals within the city walls (1994:67). The Sriksetra urns, like those at Beikthano, are located on elevated areas, and have been found together with iron artefacts. Located southwest of the wall, these were unearthed in rows layered on brick terraces. Remains of a possible wooden structure were reported on the mound. Some 1000 terracotta urns were removed, with a further 1000 left undisturbed. The associated iron objects included iron nails, pins and a spiked plate with forty-three nails ranging from 7-11 1/2” (17.5-29cm) (Duroiselle 1926:83). The iron finds at Halin do not include similar plates, although a large number of spiked caltrops were recovered outside the city gates (Aung Thaw 1972:14)

### Transitions in material culture and domain

As described in the paragraphs above, an abundance of burial urns links all Pyu sites, their ubiquity highlighting questions about the interface between this and other burial customs. For instance, large pots excavated at Nyaunggan indicate that secondary burial may have been practiced, although full analysis of the excavated pottery has yet to be undertaken. Thus far, there is no evidence at Chindwin or Samon sites for cremation and use of urns for ashes analogous to the Pyu. Nor is the manner in which domain was demarcated at these sites yet known. It is unclear, for example, if the skeletons with *kye doke* and bronze tools recovered under the wall at Beinnaka mentioned earlier in this paper are chance finds or whether their placement was known and is associated with later building of the wall.

Urn are not typical of the Bagan period, despite the city’s traditional Pyu origins and the possible continuance there of apotropaic inhumation. The range of burial customs described above indicates that a combination of Hindu and Buddhist practice, ancestral veneration, and animist ritual was observed during the Pyu period. However, although Pyu urns and inhumations are associated with Hindu-Buddhist structures, there is a scarcity of figural sculpture found in and around these. The absence is striking, given the numerous buildings with obvious South Asian links. Most scholars explain this rarity of figural images in one of three ways: aniconic practice such as the Apraseliya or Mahisasaka sects of South India, an abrupt end to occupation of sites with sculpture destroyed or taken to another city such as from Beikthano to Sriksetra, or pillaging by treasure hunters over the centuries.

The sculpture that has been recorded is varied in material and iconography, much of it stemming from Hindu-Buddhist practice. For instance, the feet of two massive standing *dvarapala* figures carved in stone were found at the eastern gate of the Beikthano palace wall, but Buddhist and Hindu sculpture was not found during excavation (Aung Thaw 1972:5). An image thought to be a *kinnari* was excavated from Beikthano and mythical creatures such as *naga* and *makara* are represented in Pyu art (Aung Thaw 1968:51 & Pl. LV). However, with the exception of the *kinnari*, none of these are anthropomorphised and none appear to have been venerated as deities as was sometimes the case in South Asia (Shaw and Sutcliffe 2002). At present, the greatest number of figural pieces are have been recovered from Sriksetra. The dating of these

goes back to about the late 5<sup>th</sup> century AD in contrast to radiocarbon dates for Beikthano of the second century BC. Bronzes from Sriksetra suggest both Theravada and Mahayana practice, possibly following or contemporaneous with Hindu sects. At Halin, sculpture is also scarce although the few finds present a well-developed carving tradition. One piece is the lower section of sandstone stele, over a metre in height, found southeast of the city wall at Halin. This depicts the feet of a seated figure variously identified as Mettaya, the future Buddha, or a Bodhisattva, below which are figures of fifty-three devotees with hands held in veneration. Like the royal stone urns from Sriksetra, this stele has been cited as indication of an earlier megalithic tradition (Guy 1999:19).

The contrast between the technical and ritual sophistication suggested by these varied depictions, and the scarcity of provenanced Pyu pieces suggest that there is much more research to be carried out. Turning to the Samon finds, the same is indicated by the recent finds of the anthropomorphic 'mother goddess' figures, *kye doke* and other finds. All testify to specialised manufacturing skills and a complex ritual context. These figures are thought to have been fixed to the top of wooden coffins along with floral ornaments and small conical pieces. Perhaps reminiscent of the paucity of Pyu sculpture, there is no hint in earlier literature of their existence or associated objects such as the *kye doke*, with the first example from Myin Oo Hle, being unearthed in 1998 (Win Maung 1998). A number of the 'mother goddesses' have now been found, and like the uniquely elaborated Pyu burial customs, parallels elsewhere are not yet apparent. There are certainly depictions of human figures in assemblages of the Pyu or earlier periods, some of which were noted above and further below. However, apart from possibly the cave paintings, none have been identified as fertility figures, ancestral memorials or as spirit (*nat*) images. Even when, *nat* images are mentioned in traditional accounts, these are in the context of nature spirits, untimely deaths, or tutelary figures. In such cases, female fertility may be a clear theme in the story or depiction, but at least in its form, the 'mother goddess' rendition bears little resemblance these.

Aung Thaw identified figures of human hands and skulls amongst the cave paintings at Badah-lin, where radiocarbon dates from charcoal and bone collagen yielded dates of around 7-13,000 years before present (1969:15 Aung Thwin 2001:26). Virtually all other figures fit within a Hindu-Buddhist or court context. Stamped sherds from Beikthano included the figure of a man, seated in one case and standing or dancing in another. Although the depiction is stylised and dress is not apparent, the seated figure is under an umbrella (Aung Thaw 1968:Fig.71). Terracotta plaques from KhinBaGôn and Kinmunchôn at Sriksetra and from Maingmaw show various figures, mostly guardians and *rishi*. In a few instances the large plaques bear the figure of a man on a horse, identified by Luce as one of the four celestial horses of Vishnu (1985: 143, Pls.40,41). Stone depictions from Sriksetra include a female deity, possibly Mahayanist and a *dvarapala*. Five bronze figures of musicians and dancers are thought to resemble a troupe sent by the court to the Chinese capital in 802AD (Aung Thaw 1972).

According to traditional accounts, neither Pyu nature spirits nor ancestral figures were represented in human form. It has been suggested that it was only with the absorption of Pyu Tagaung by the consolidation of the Bamar at Bagan, that venerated but not represented natural elements were transformed into fully recognised tutelary spirits (Brac de la Perriere 2002:100). Amongst the Pyu and at bronze working sites of the Chindwin and Samon, anthropomorphic wooden images may have existed. Evidence for such images has not survived, although ancestral or memorial figures are well recorded more recently such as amongst the Chin (Carey and Tuck 1896: Pl.16). Thus in the context of prehistoric practices, the Samon 'mother goddess' bronzes may represent a different strand of anthropomorphism, and when fully understood may prompt revision of the circumstances within which Pyu images were produced

The catalyst for change in materials if not concepts may have come from a new population group, as has long been suggested in relation to the Pyu (Luce 1974). Alternatively, this may have been one result of norms and technology acquired by sectors of an existing population through maritime and overland trade. The clustering of sites around Beinnaka has prompted suggestions that it might be a Pyu 'homeland' pre-dating walled Pyu settlements (Hudson 2001:7). With increasing Pyu social complexity and related territorial dominance, however, there appears to have been a gradual disappearance of the overt animistic-ancestral practices in the Samon, possibly in the early centuries AD. By the mid-ninth century AD, the Pyu (and Mon) began to be absorbed into Bamar ritual and kingship at Bagan. The absence of a major fortified site may have facilitated consolidation of existing settlements including the traditional 'nineteen Pyu villages'. At a royal rather than chiefdom urban scale, Bagan becomes naturally defensible, a potential not offered by the position of Pyu cities. A number of Pyu features, ranging from outer walls and urn burials to silver coins, are absent at Bagan. Other customs are retained but change in form. For example, bricks stamped with village names replace the finger-marked bricks of the Pyu (Moore and Aung Myint: 1991). As with the apparent transition from the Samon to the Pyu, the Pyu-Bagan interface may reflect not the influx of intrusive groups, but a "fresh merger of existing tribes" (Maung Htin Aung. 1970:11). In both cases, more research may bring very different scenarios from to that are now formulated and at the same time find commonalities with earlier historiography.

## Conclusion

Chindwin and Samon sites, as understood to date and described here, were village-based bronze-using societies. Both groups engaged in animistic ritual practice, making use of ceremonial rings. Around Monywa, at Chindwin villages, these were made of stone. To the east, south of Mandalay, the rings were made from stone and also glass. In addition, these Samon inhabitants produced a range of distinct grave goods, notably bronze packets (*kye doke*), floral ornaments and 'mother goddess' figures. Bronze was also used to cast hilts for iron swords, although production sites for these goods have not yet been excavated. Similarly, the nature of agricultural intensification generally linked to localised iron production is not yet clear. The mortuary finds of the Samon suggest a stratified rice-producing society, one where rice was used as a ceramic temper. In contrast, the Chindwin bronze sites are not clearly associated with intensive paddy production, and in pottery examined to date, sand not rice chaff was used as a temper. Wet rice cultivation already underway at Samon village sites may have been augmented by the Pyu grouped around walled sites in the Samon valley and on its fringes. Another aspect of accelerating land alteration was related to control of water resources. Remains of this are detectable at a number of Pyu sites, to the extent that existing canals and moats can be attributed to this period.

For the three groups of sites described here as Chindwin, Samon, and Pyu, the extent of agricultural and cultural spheres is distinct at some junctures and amorphous at others. Within these variable domains, links to place provided focal points for human activity and instigation of change. A representative classification of these bronze and iron cultures should harmonise this constancy of the land with an inherently changing environment. Such a typology does not exclude a temporal sequence but the purpose of the process is to interpret the reasons and circumstances that prompted events rather than solely marking out the passage of time. Analogously, the present understanding of that past exists only in the context previous interpretations. In both instances, the exercise is ongoing, always in need of adjustment of ideas, concepts and representations.

## References

- Aung Myint. 1998. "Site Characteristics of Pyu and Pagan Ruins." Paper presented at "A Comparative Study of the Dry Areas in Southeast Asia." Kyoto, October 14-16 1998.
- Aung Thaw. 1972. *Historical Sites in Burma*. Rangoon: Government of the Union of Burma.
- Aung Thaw. 1968. *Report on the Excavations at Beikthano*. Rangoon: Government of the Union of Burma.
- Aung Thaw. 1969. "The 'Neolithic' Culture of the Padah-lin Caves." *Journal of the Burma Research Society* 52.1: 9-23 (plus figures).
- Aung-Thwin, M. 1982-3. "Burma Before Pagan: The Status of Archaeology Today." *Asian Perspectives* 25.2: 1-20.
- Brac de la Perriere, B. 2002. "'Royal Images' in their 'palaces': the place of the statues in the cult of the 37 nats." In Alexandra Green & Richard Blurton (eds.). *Burma: Art and Archaeology* (London: British Museum Press): 99-106.
- Bronson, B. 1992. "Patterns in the Early Southeast Asian Metals Trade." In *Early Metallurgy, Trade and Urban Centres in Thailand and Southeast Asia* (Bangkok: White Lotus): 63-114.
- Bronson, B. 1976. "Excavations at Chansen and the Cultural Chronology of Protohistoric Central Thailand." PhD dissertation, University of Pennsylvania.
- Bronson, B. 1969. "Report on the Excavations at Beikthano." Aung Thaw (review). *Asian Perspectives* 12: 142-3.
- Carey, B.S. and Tuck, H.N 1896. *The Chin Hills. A History of the People, our dealings with them, their Customs and Manners, and a Gazetteer of their Country*. Rangoon: Superintendent, Government Printing Office.
- Daeng-iet, S. 1978. "Khok Plab: a newly discovered prehistoric site." *Muang Boran* 4.4: 17-26.
- Duroiselle, C. 1926. "Burma Circle: Exploration." In *Archaeological Survey of India 1923-4*. (Calcutta: Central Publication Branch): 82-4.
- Glover, I. 1999a. "Observations on a Visit to the Nyaunggan Archaeological Site." In *Proceedings of the Workshop on Bronze Age Culture in Myanmar (Yangon, 7 January 1999)*. (Yangon: Universities' Historical Research Centre): 83-9.
- Glover, I. 1999b. "The Bronze-Iron Age in Western Thailand." In *Proceedings of the Workshop on Bronze Age Culture in Myanmar (Yangon, 7 January 1999)*. (Yangon: Universities' Historical Research Centre): 101-125.
- Guy, J. 1999. "The Art of the Pyu and Mon." In Donald Stadtner (ed.). *The Art of Burma, New Studies*. (Mumbai: Marg): 13-28.
- Higham, Charles 2002. *Early Cultures of Mainland Southeast Asia*. Bangkok. River Books.
- Hla Thamein. 2000. *Myanmar Proverbs in Myanmar and English*. Yangon: Pattamyia Wamauk.
- Hla Tun Pru. 2002. "Excavation of HL20 at Halin and its Culture." Paper presented at Yangon University Family Day Paper Readings, Archaeology Section, December 31, 2002.

- Hudson, B. 2001. "An Archaeological Settlement Database for Burma/Myanmar. Conference presentation: Towards an Electronic Cultural Atlas: e-Publishing and Knowledge Management in the Humanities." Sydney, June 12-12, 2001.
- Hudson, B., U Nyein Lwin, and U Win Maung (Tanpawady). 2002. "Digging for Myths: Archaeological Excavations and Surveys of the Legendary Nineteen Founding Villages of Pagan." In Alexandra Green & Richard Blurton (eds.). *Burma: Art and Archaeology* (London: British Museum Press): 9-22.
- Luce, G. H. 1985. *Phases of Pre-Pagan Burma*. Oxford: Oxford University Press.
- Luce, G.H. 1974. "The Advent of Buddhism to Burma." In Cousins, et al. (eds.). *Buddhist Studies in Honour of I.B. Horner* (Dordrecht: D.Reidel): 119-138.
- Luce, G. H. 1961. *The Man Shu (Book of the Southern Barbarians)*. Edited by G. P. Oey. Ithaca: Southeast Asia Program.
- Maung Htin Aung. 1970. *Burmese History before 1287: a defence of the chronicles*. Oxford; The Asoka Society.
- Moore, E. 2000. "Ritual continuity and stylistic change in pagoda consecration and renovation." *Proceedings of the Myanmar Two Millennia Conference, Universities' Historical Research Centre, Yangon, December 15-17, 1999*. (Yangon: UHRC): III:156-191
- Moore, E. 1993. "The Reconstruction of Mandalay Palace: an interim report on aspects of design." *Bulletin of the School of Oriental and African Studies* 56.2: 335-50.
- Moore, E. and Pauk Pauk. 2001. "Nyaung-gan: A Preliminary Note on a Bronze Age Cemetery near Mandalay, Myanmar (Burma)." *Asian Perspectives: Journal of Archaeology for Asia & the Pacific* 40.1 (Spring): 35-47.
- Moore, E. and Aung Myint. 1991. "Finger-marked designs on ancient bricks in Myanmar." *Journal of the Siam Society* 79.2: 81-102.
- Myint Aung. 1970. "The Excavations at Halin." In *Journal of the Burma Research Society* 53.2: 55-64.
- Nyunt Han. 1999. "Archaeological Findings at Nyaunggan Bronze Age Site." In *Proceedings of the Workshop on Bronze Age Culture in Myanmar (Yangon, 7 January 1999)*. (Yangon: Universities' Historical Research Centre): 29-52.
- Nyunt Han, Win Maung (Tanpawady) and Elizabeth Moore. 2002. "Prehistoric Grave Goods from the Chindwin and Samon River Regions..". In Alexandra Green & Richard Blurton (eds.). *Burma: Art and Archaeology* (London: British Museum Press): 1-7.
- Patreau, J.P., U Pauk Pauk and Kate Domett. 2001. "Le cimetiére de Hnaw Kan, Malhaing (Mandalay), Note préliminaire." *Aseanie* 8 (December): 73-102.
- Patreau, J.P., Kate Domett and U Pauk Pauk. 2002. "Hnaw Kan: an Iron Age Cemetery in Central Myanmar. Archaeology and Anthropology: First Results." 17<sup>th</sup> Congress of the Indo-Pacific Prehistory Association, Taipei. September 2002.
- Pe Maung Tin and Luce, G.H. 1960. *The Glass Palace Chronicle of the Kings of Burma*. Rangoon: Burma Research Society.
- San Shwe. 2002. "The Culture of Vishnu Old City." Master of Research thesis, University of Yangon.
- San Win. 1995. *Report on Archaeological Field Training at Hanlin*. MA Field Report. Yangon University.

- Shanks, M. and Tilley, C. 1987. *Re-Constructing Archaeology, Theory and Practice*. London: Routledge.
- Shaw, J. and Sutcliffe, J. 2002. "Ancient irrigation works in the Sanchi area: an archaeological and hydrological investigation." *South Asian Studies* 17: 55-75.
- Stadtner, D. 1986. *The Pyus and the formation of Burmese Art*. Southeast Asian Art Symposium, University of Colorado.
- Stadtner, D. 1998. "The Art of Burma." In Girard-Geslan, et al. (eds.). *Art of Southeast Asia*. New York: Abrams.
- Stargardt, J. 1990. *The Ancient Pyu of Burma: Early Cities in a Man-Made Landscape*. Cambridge: PACSEA.
- Stargardt, J. 1994. "Urbanization before Indianization at Beikthano, Central Burma, c.1<sup>st</sup> cent. BC-3<sup>rd</sup> cent. AD?" In Pierre-Yves Manguin (ed.). *Southeast Asian Archaeology 1994*. (Hull: Centre for Southeast Asian Studies): 125-38.
- Tayles, N., Domett, K. and Pauk Pauk. 2001. "Bronze Age Myanmar (Burma): a report on the people from the cemetery of Nyaunggan, Upper Myanmar." *Antiquity* 75: 273-278.
- Than Tun. 1996a,b. "Ancient Myanmar Cities II: Halin." *Golden Myanmar* (Yangon) 3.3-4: 5-8, 5-6.
- Than Tun. 1979. "A Forgotten town of Burma." *Shiroku* 12 (November): 51-6.
- Than Tun. 1972. "Pottery in Burma." *MASU Annual 1972-3*: 199-231.
- Than Tun. 1965. *The Story of Burma told in Pictures*. Rangoon: Working Peoples Daily Sunday Supplement.
- Wheatley, P. 1971. *The Pivot of the Four Quarters*. Edinburgh: Edinburgh University Press.
- Wicks, R. 1992. *Money, markets, and trade in early Southeast Asia. The Development of Indigenous Monetary Systems to AD 1400*. Ithaca: Southeast Asia Program.
- Win Maung (Tampawady). 2003. "Samon-myet-hwan yin-kye-hmu." *Myawadi (Shweyatu) 1952-2002* (Golden Jubilee Issue): 249-256.
- Win Maung (Tampawaddy). 2002. "Sa-mon River Valley Civilization (Recent information from field exploration)." Paper submitted to conference, Gothenburg (Sweden).
- Win Maung (Tampawady). 2001. "Beinnaka Myo Haung hnit Pet-wan-kyin Kye-ywa-mya." Paper reading to commemorate the 86<sup>th</sup> birthday of Sayagyi U Maung Maung Tin (Mahawiza). Mandalay.
- Win Maung (Tanpawaddy). 1998 "Myanmar-pyi-hma ami-nat thami-yoke." *Mya Yeik Nyo Magazine* (Yangon) 6 (February): 83-90.
- Yee Yee Aung. 2001. "Identification and dating of Skeletal Remains Discovered at Nyaunggan, Budalin Township, Monywa District, Sagaing Division." Master of Research thesis, University of Yangon.
- Yee Yee Aung. 2002. "Skeletal Remains of Nyaunggan, Budalin Township, Sagaing Division." Archaeology Department, Yangon University. Family Day Celebrations. 30.12.02