



Title	A comparative study on the Bronze artifacts of among the Nyaunggan burial site and the burial sites of Samon Valley
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A comparative study on the Bronze artifacts of among the Nyaunggan burial site and the burial sites of Samon Valley

By Dr. Aung Mon¹

Abstract

In 1998, the evidence of Bronze Age was discovered at Nyaunggan village in Budalin Township near Monywa where produced a various collections of burial offerings which were included many bronze and stone implements. On the other hand the traces of late Bronze Age and early Iron Age were found along the Samon valley which origins from Kyenikan lake near the Yemethin Township flows to the Kyauk-Se Township, since 1970s. But there are many differences and some similarities characters on both sites. By according to the archaeological finds, especially the Bronze artifacts, there are two different cultures had been flourished among them.

Introduction

The Age of metals started in the valleys of Nile, Euphates and Tigris from about 6000 years ago. In the early phase the use of stone implements was gradually reported by copper ones. Both Copper and Stone tools were in use and this mixed culture is usually called 'Chalcolithic' Age. Then copper was used exclusively to make tools. Around 2300 B.C men discovered that an alloy made of 90% copper and 10% tin. This alloy is known as bronze and thus Bronze Age appeared. Some historical records from about the beginning of the third millennium B.C are available.² Most of the countries around the world, classifications of the Prehistoric Culture, such as Stone Age, Bronze Age and Iron Age, were made according to the tools discovered.

The earliest finds of Prehistoric celt from Bahmo Township was reported by J. Anderson in 1871. Another report about collection of Bronze Age spear-head and a socketed Bronze celt from Shan State was given by H. Balfour in 1901. As early as 1938, T.O Morris recorded that of the 14 coppers or bronze artifacts have been found in Myanmar; 7 are in the British Museum; 2 in the Pitts Rivers Museum, Oxford; 1 in the Museum of Far Eastern Antiquates, Stockholm; 2 in the collection of a Mr. A.A Cameron of Kalaw Township; a

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² Than Tun, *မြန်မာ့သမိုင်း* (*The Story of Myanmar History*), Moneywe Offset, Yangon 2004,p-73 (Hereafter cited as Than Tun, *Myanmar History*, 2004)

fragments in the possession of villagers in Thayet Township and Lower Chindwin districts.¹ Early days of Bronze Age research in Myanmar, discovering of the Bronze Age sites are extremely rare in Myanmar. Perhaps it is due to (1) the lack of through investigation (2) the quick decay of copper material, through oxidation and (3) the belief of the Myanmar people that the bronze tools known to them by the name of Kyemyogyo-thwar have some magic powers of cure.²

After the excavations of Taungthaman site in 1970s, near Amarapura Township in Mandalay Division, stone and iron objects were unearthed as the associated finds with the skeletal remains. Most of the scholars suggested that in central Myanmar the great technological shift was from stone-working to Iron-working study based on the two materials of Taungthaman Site. In 1998, a cemetery was excavated at Nyaunggan village in Budalin Township near Monywa where produced a various collections of burial offerings which were included many bronze and stone implements but absent of stone-mould for bronze casting. According to the archaeological theory, Archaeologists classified on the cultural status of prehistoric people who were user or producer, base on their technological process. After the discovery of Nyaunggan cemetery site, A Symposium has been made in Yangon, discussed about the cultural status and dating of Nyaunggan burial site. All scholars mentioned that this site is flourished in Bronze Age. But there are different suggestions among the scholars about the bronze implements of this site which are import or local made because of absent of crucibles and moulds for bronze tools. After that many burial sites were discovered along the Samon River valley. From these sites revealed the various funeral offerings which included ceremonial and ornamental artifacts made of stone, bronze and iron. Among these are axes, spears, bronze-wire packets and miniature bronze spears as well as bronze coffin's decorations.

¹ Aung Thwin, "Origin and Development of the Field of Prehistory in Burma (Myanmar)", *Asian Perspectives* **40** (1)2001,p-27 (Hereafter cited as Aung Thwin, *Asian Perspectives* **40** (1)2001

² Than Tun, *Myanmar History*, 2004,p-75

This area is situated at the south-western part of Nyaunggan Village, Buddlin Township, Monywa District, Sagaing Region. It is about 1.5 miles from Nyaunggan village (22 24' 40" N-Lat and 95 03' 28" E-Long). There are three major divisions can be recognized in the area; these divisions are;

1. Low-lying flat alluvial plain
2. Alluvial area with some small hillocks, and
3. Hilly area.

These divisions are summarized as follows;

(1)Low-lying flat alluvial plain: This division occurs in the eastern, southern and north-western parts of the region. It is characterized by the general elevation below 350 ft and much cultivated coverage.

(2)Alluvial area with some small hillocks: It is widely distributed in the central and north-western parts of the regional area. General elevation is ranging from 350 ft to 450 ft. Naunggan burial ground is situated in this topographic division.

(3)Hilly area: It occupies as the most distinctive topographic feature, which is characterized by the Twintaung volcanic cone and volcanic crater. Various types of volcanic rocks, tuff-layers, and ash beds are well exposed within the topographic division.¹

There are two excavation made in this site. The first one was from 29 January to 18 March in 1998. The second season of digging at this site began on 16 December 1998.² The largest was the southeast (SE, 8.2 x 24.3 m) where 23 burial features were identified. The majority of bronzes came from this pit. The other pits were of variable size, named in relation to their location on the cemetery spur: northwest (NW, 5.5 x10.7 m), middle (M, 703 x 12.1 m) and northeast (NE, 4.6 x 7.0 m). Four further pits (I-4,I-5,J-4 and J-5) were excavated in 1999 northwest of the 1998 pits.³ Many archaeological objects revealed during the excavation at Nyaunggan site. The major finds of excavation were human skeletal remains and associated with the potteries, some bonze implements, stone objects and some organic artifacts. In which one of the distinctive artifact was bronze implement. The total number of bronze tools found at Nyaunggan excavation site is eleven in number. These tools are various shape and size among them. They are

¹ Phye Maung Than & Win Naing, "Geological observations on the Nyaunggan burial site", *Proceeding of the workshop on the Bronze Age culture in Myanmar*, Yangon, UHRC, 1999, p-3-4 (Here after cited as Phye Maung Than & Win Naing, "Geological observations", 1999)

² Pauk Pauk, "Excavation at Nyaunggan Bronze Age site", *Proceeding of the workshop on the Bronze Age culture in Myanmar*, Yangon, UHRC,1999, p-27

³ Moore, *Early Landscape of Myanmar*, River Books, 1st publish, Thailand, Bangkok, 2007, p-90 (Here after cited as Moore, *Early Landscape*, 2007)

1. Two small socketed axes
2. Two medium socketed axes with round bottom
3. One large arrow-head
4. Four small arrow-head
5. One spear-head and
6. One halberd typed flared-edge axe.¹

But some scholars mentioned about the bronze tools are 18 tools. Five tools were associated with pot-burials and four found on inhumation burials. The other nine were either from outside the pits or previously recovered by U Chit Hlaing. The halberd from burial M-5 is very similar to the first tool Chit Hlaing recalls finding. A third halberd has similar to those found in Halin. However, the shaft of the Halin halberd bears a finely made raised pattern of cross-hatching bordered by the lateral lines.²

The following table will show the sizes and weights of various types of Bronze-Age tools found at Nyaunggan excavation site.³

No	Name of object	length	Breadth	Weight
1	Small socketed axes(two)	2-inches	1.5-inches	18.22.gm to 27.96.gm
2	Medium socketed axes (two) (round bottom type	3-inches	2-inches	83.48.gm
3	Large arrow-head (one)	5-inches	1.5-inches	43.gm
4	Small arrow-head (four)	3-inches	1-inches	9.gm
5	Spear-head (one)	8-inches	1.6-inches	172.22.gm
6	Halberd type flared-edge axe (one)	6-inches	Edge-6- inches	222.52.gm

Of all the bronze tools, the one found at burial site No-M-5 is very peculiar which has a wide flaring edge. This type of tool is very uncommon in Myanmar. No bronze ornaments, moulds and crucibles were found during the excavation period and nearby the around this site. But recent Copper mines are still, situated across the Chindwin River, near this burial site and some ancient furnaces, unknown date, found along the river bank near Kyautmyet

¹ Nyunt Han, "Archaeological finding at Nyaunggan Bronze Age site", *Proceeding of the workshop on the Bronze Age culture in Myanmar*, Yangon, UHRC 1999, p-33-34 (Here after cited as Nyunt Han, "Archaeological finding at Nyaunggan Bronze Age site", 1999)

² Moore and Pauk, "Nyaunggan: A Preliminary Note on a Bronze Age Cemetery near Mandalay, Myanmar", *ASIAN perspectives*, Vol 40, No-1, University of Haiwa I, U.S.A 2001, p-42

³ Nyunt Han, "Archaeological finding at Nyaunggan Bronze Age site", 1999,p-34

village.¹ But all scholars mentioned that this site is flourished in Bronze Age, absent in crucibles or moulds for the Bronze implements of this site. And it could not be definitely to mention that it is import or local made.

In 1965, U Aung Myint who is the former commissioner of Forestry, discovered the ancient city from aerial Photo which is located from the west of Pinle Old city at 13th century A.D. Eleven Old cities, Myittha eleven districts, from Kyauk-Se Plain were researched by some Scholars since 1956. About 1970 U Mg Mg Tin and his students discovered new Prehistoric Sites of Samon River Valley, with helping the reports of local people.

Some examples sites were as follows-

An old Pyu city of Maing Mao (Pinle) in Myint Thar Township

An old city in Bain-Na-Ka

Early Prehistoric settlements like as-

Taunt-Gyi and Myo-Hla areas in Ye-me-thin Township

Ywa-Thin Gon, Hton Bo , Aye-Thayar, Aye-Thanyan, Kyo-Gon, Kok-Ko-Kon etc in Pyaw-Bwe Township

Kyut-Kan, Shaw-Bin, Bulu-Gon, Kokko-Kha-Hla etc in Wun-dwin Township.²

Since 1998, Department of Archaeology in Ministry of Culture has excavated numerous Bronze and Iron Sites inside the Mandalay Region including Nyaunggan and Monhtoo in Lower Chindwin areas, and Inde', KokkokhaHla, MyinUhle', Hnawkan, YwaHtingon and Myohla in the Samon Valley from 2001 to 2003, jointed with the French Archaeological Team.³ Many artifacts were unearthed from excavations at Samon Valley and its tributaries. Such as earthen wears, stone objects, Blue glass bracelets, Beads, various types of Bronze artifacts and Iron implements. All in which one of the distinctive artifacts was Bronze implements were found along the Samon River Valley. Such as Bronze weapons and tools, non-functional Bronze objects, Bronze ornaments and Bronze coffin designs and Mother goddess. About 200 axes were recorded from the whole of Myanmar. Most of axes were discovered from the Samon valley regions. All of these are socketed implements. These objects made from a copper-alloy. The axes were manufactured by using the bi-valve molding technique. These moulds were made of sandstone of which were yielded from the excavations at Myin-Oo-Hle and Kok-ko-kha-Hla.

¹ Field Trip in December, 1998

² Win Maung, *Samon River Valley Civilization*, Goldthenburg Conference, Sweden, 2002,p-2 (Here after cited as Win Maung, *Samon River*, 2002)

³ Moore, *Early Landscape*, 2007,p-28

All of the bronze axes of Samon Valley can be classified into seven large type. These are;

Type-1; Axes with the shoulder more or less marked. The blade is usually elongated with the edge turning inward parallel or widening out but never convex.

Type-2; All of these group of axes have a convex edge which gives them a more rounded aspects. The other peculiarity is that of an absence of breaking point of the slope at the level of cutting edge.

Type-3; have a fan-like shape. Some of them have a pointed or anchor-shape at the extremities of the blade while other have softer general contours.

Type-4; are specimens which all have a rounded crescent-shaped blade.

Type-5; are all have extended bits at the sides. This type is nearby similar with Type-1 different in the edge of axes is convex and little flare.

Type-6; axes have blades turned away from the axis of the shaft.

Type-7; These rectangular shape axes are very simple axes with no shouldering and have either straight or mostly straight sides or parallel.¹

Most of the Bronze Axes of Samon valley had a straight and long edge. Type-1 alone represents 50% of collections and excavation finds. Type-1, Type-5 and Type-7 are classified, like a present day hoe. It was used probably for extraction of mineral resource as tool and not for use in warfare object. Type-7 is only closely similar with Iron hoe which were yielded from excavations at YwaHtin Gone, near Pyawbwe Township. It can be possible date back during the transitional period from Bronze to Iron Age. Type-3, 4 and 6 of Samon Axes might be used as a weapon. Functionally, a number of working Bronze tools are more than amount the weapons of the Bronze implements of Samon valley. Only reviews on the YaHtin excavation suggested that J.P Pautreau recorded 14 Bronze implements. From this collection there are only two Bronze axes were excavated as a weapon. Some 76% of the collection of the Bronze implements of Samon valley came from Pyawbwe Township. The distribution of the axe types in the Samon valley corresponds largely to the production of Pyawbwe Township On the other hand, Pyawbwe is geographically situated near the copper mines of the edge of Shan Plateau. Some of the socketed axes were marked with lines, crosses and other geometric designs. The decorative bronze axe might have been used as ceremonial weapons or social status.

¹ Pautreau, *Ywa Htin*, Iron Age burials in the Samon Valley, Upper Burma, SIAM RATANA, L.td, Thailand 2005, p-55 (Here after cited as Pautreau, *Ywa Htin*,2005)

The Bronze socketed spear-head make up the second group of copper-base implements discovered along the Samon valley. These Bronze socketed spear-head can be divided into two groups, such as weapons and ceremonial or ritual miniature implements. Spear-head have midribs of varying thickness used as weapon. Most of the spear-head had been found usually at a right side of the feet of dead.¹ For example, At Ywa-Htin-Gon, in grave S-5-10, three spear tips were placed parallel to the body with the shaft toward the head of the dead and the tips towards the feet.² Most of the spear-head had usually socket which appear narrow, short and fragile with no trace collar. Almost all of the spear-head were probably buried with the shaft in the graves. The study on the composition of socket and situation of spear-heads of Samon valley suggest that a shaft of spear might have not been exceeding one meter long.

Miniature bronze spears have been found in Samon valley and other regions such as Halin and west of Samon valley, as far as across the slopes of Mount Popa.³ Most of the miniature bronze spears have been found laid lengthwise below the lower arm or in the hand.⁴ These implements are varying size in length from 2-cm to 10-cm. Sometime they bound up in bundles of five or six.⁵ These flat, leaf-like implements are from beaten Bronze. Those finds are also reported at Nil Kham Haeng on the Cho-Phra Valley in Thailand which dated back 1100-300 B.C.⁶ The similar finds have been found in different number on each site from Samon Valley. It is until unknown function about the using of these thin socket implements. In certainly, these implements were used as social status symbols during this period. Another suggestion is probably owners of these implements might have shown the power of their force of kinship family.

¹ U Tin Thaug, Personal Interview, 2011

² Pautreau, *Ywa Htin*, 2005, p-56

³ Hudson, *The Origins of Burma to AD 1300*, Ph. D (Dissertation) University of Sydney 2004, p-82 (Here after cited as Hudson, *The Origins of Burma*, 2004)

⁴ Win Maung, Personal Interview, 2010

⁵ Mg Than, Personal Interview, 2010

⁶ Higham, *Early Cultures of Mainland South-East Asia*, River Books, Bangkok 2002, p-116-117, 121-122 (Here after cited as Higham, *Mainland South-East Asia*, 2002)

Conclusion

Before the discovery of the Nyaunggan burial site, no Bronze Age sites were found in Myanmar Land. A Symposium has been made in Yangon discussed about the cultural status and dating of Nyaunggan burial site. All scholars mentioned that this site is flourished in Bronze Age. But there are different suggestions among the scholars about the bronze implements of this site which are import or local made. Dr. Ian C. Glover who is Emeritus Reader in Southeast Asian Archaeology, University College London and has many experiences on the Bronze Age in Thailand. He compared among these sites and mentioned that the lack of evidence among the burial furnishings for local manufacturing (e.g no crucibles or moulds as are commonly found in Bronze Age burials in Thailand and Vietnam) supports this. After that both Sand stone moulds and archaeological contexts in Bronze Age were found in Samon River valley. There are many ancient burial sites which were clustered along the Samon valley from Mandalay to the north to Pinyinmanar to the south. The wealth in Samon valley can be more credited than the Nyaunggan to the successful exploitation of natural resources such as agricultural land and minerals as well as the dominance of trade route. Mortuary finds in Samon valley indicate a broadening of a range of Bronze artifacts. It suggest that this may be the area where social rank was beginning to intensify and represents the transitional period from Bronze Age to Iron Age. The Bronze implements of Samon are socketed but longer and more retangular than Chindwin Bronze implements. Some of the socketed axes were decorated with geometric patterns. Most of the Bronze axe of Samon are functionally analysed that they were working tools, especially used for agriculture or extracting mineral resources, rather than weapons. The ancient people of Samon valley were basically peace-loving traders and agriculturalists. It may be concluded that bronze axes found in Upper Myanmar morphologically range from small solid chisels to the socket halberd. According to the technological process the Nyaunggan Bronze tools were earlier than the Samon Bronze contexts. So Nyaunggan Bronze burial site possible dated about 1500-BC to 1000-BC and the Culture of Samon Valley might be flourished between 700-BC and AD- 200. Nevertheless we need to do more research on both these two sites for the further research of Bronze Age in Archaeological contexts of Myanmar Prehistory.

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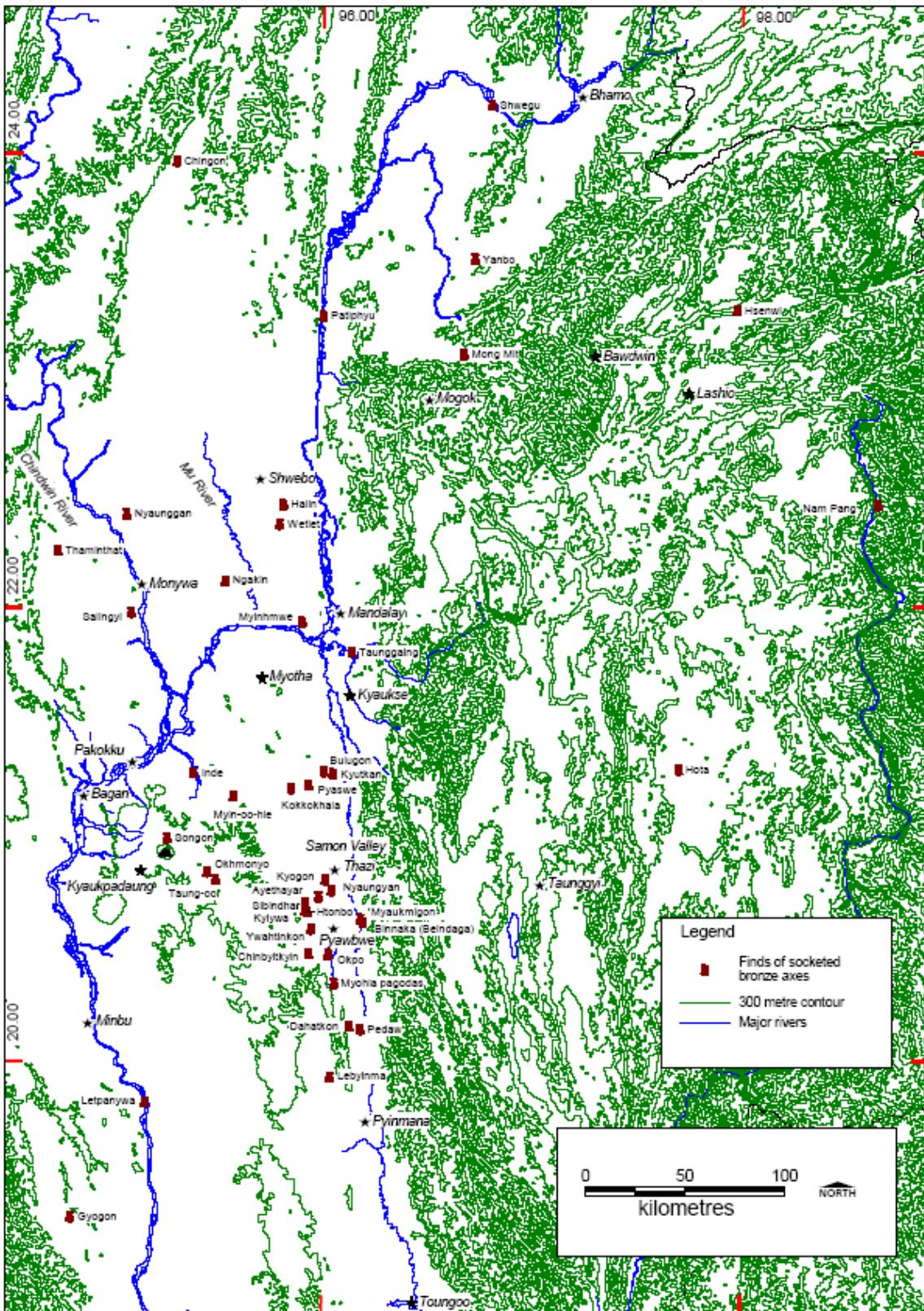
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Personal Interviews

- Personal Interview with U Tin Thaung who is citizen of Pyaw-bwe Township, 3.1.2011, Pyaw-bwe
- Personal Interview with U Win Maung (Tampawady), 22.12.2010, Tamoke Cedi, Kyauk-Se Township
- Personal Interviews with U Mg Than (Villager from U-Min Village)
- Personal Interview with Sann Win, Villager of Kyauttae Village, 4.1.2011

Aerial Photo-1

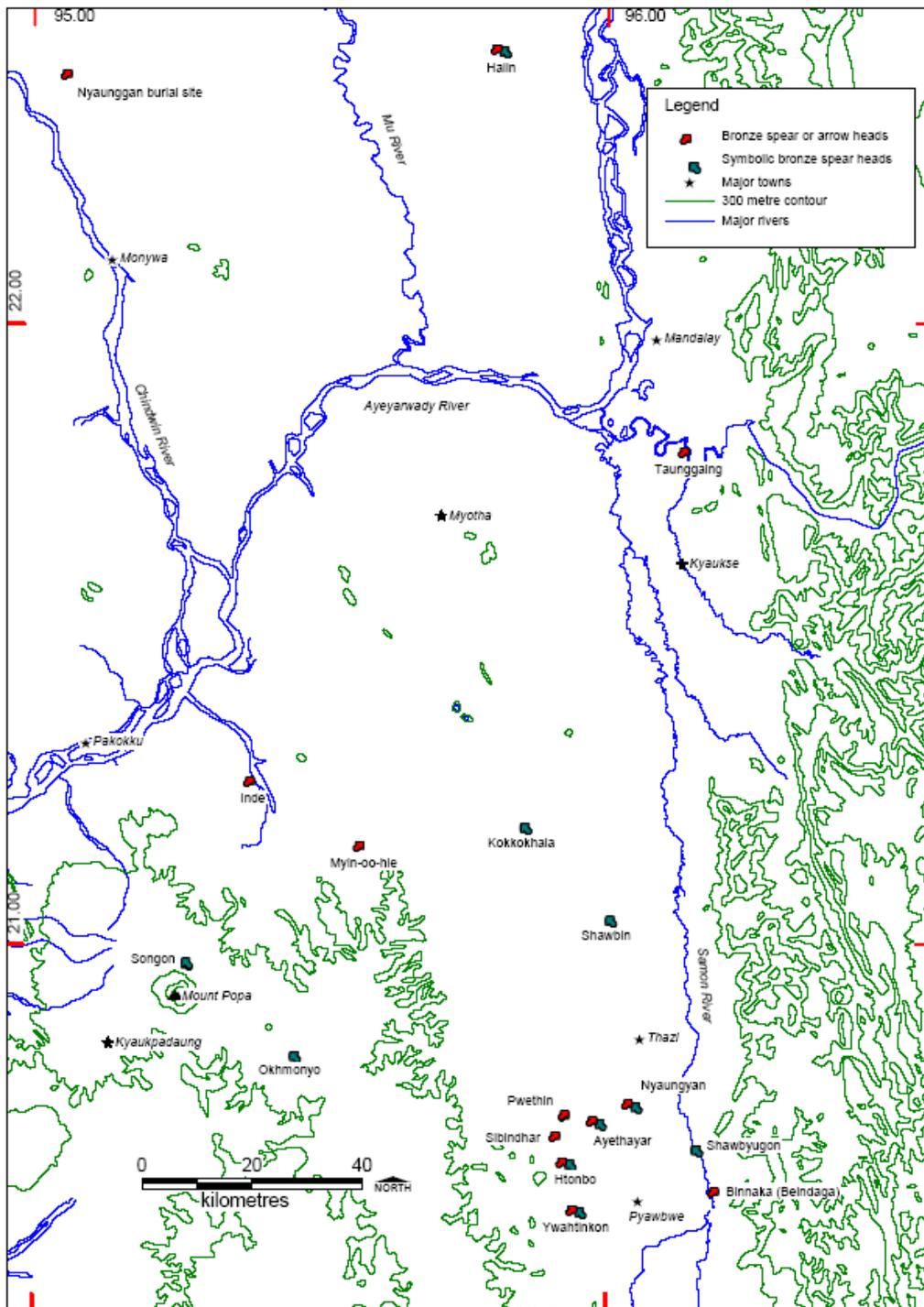
Distribution of Bronze Axes in Upper Myanmar



Source; Bob Hudson

Aerial Photo-2

Distribution of Bronze spear and arrow heads in Upper Myanmar



Source; Bob Hudson

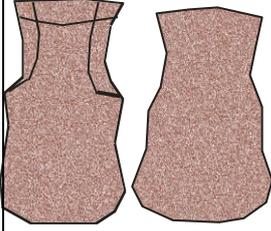
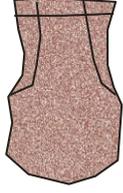
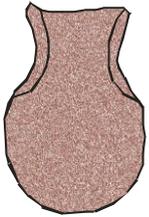
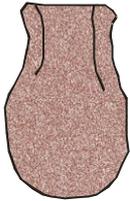
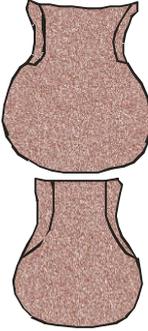
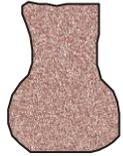
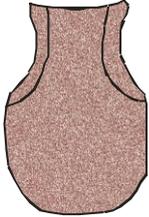
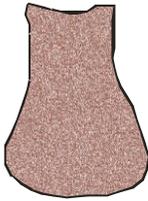
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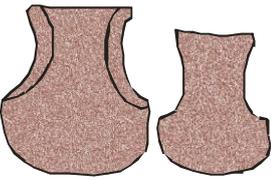
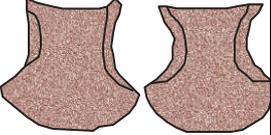
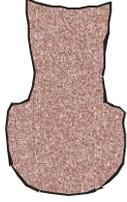
Nyaunggan Area

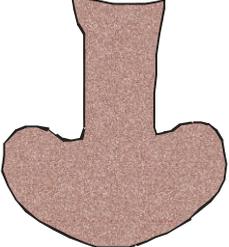
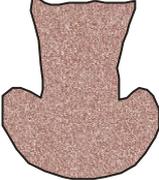
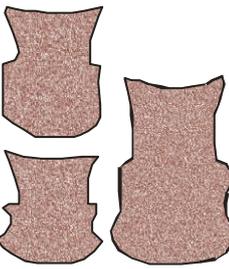
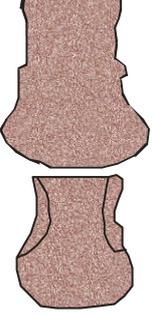
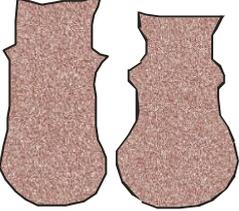


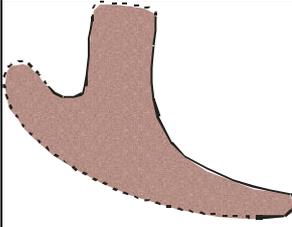
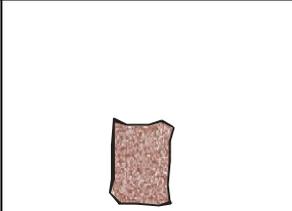
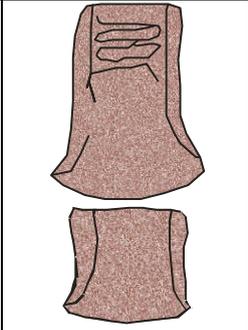
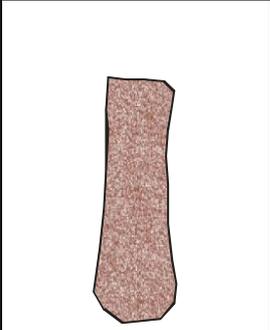
Source; Moore, E

Table-1-Varieties types of Bronze Axes in Samon Valley

Type I	 A1	 B1	 C1	 D1
	 A2	 B2	 C2	 D2
Type II	 A3	 B3	 C3	 D3
	 A4	 B4	 C4	

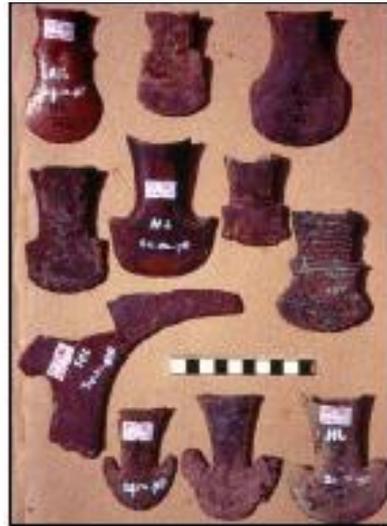
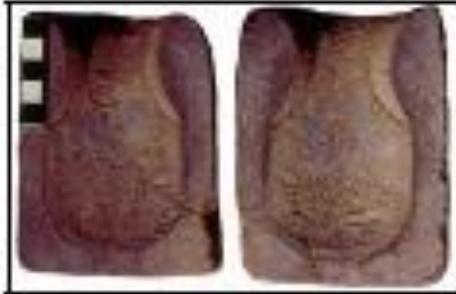
Type	 A5	 B5	 C5	 D5
III	 A6		 C6	

Type	 A7	 B7	 C7	
Type	 A8	 B8	 C8	

<p>Type</p> <p>VI</p>	 <p>A9</p>	 <p>B9</p>		
<p>Type</p> <p>VII</p>	 <p>A10</p>	 <p>B10</p>	 <p>C10</p>	
	 <p>A11</p>			

Some Bronze axe from Halin

Figure (1) Sand Stone Mould from Kokkokhahla



Some types of Bronze axes from Samon Valley



Figure (2) Excavated Finds from Hnawkan village

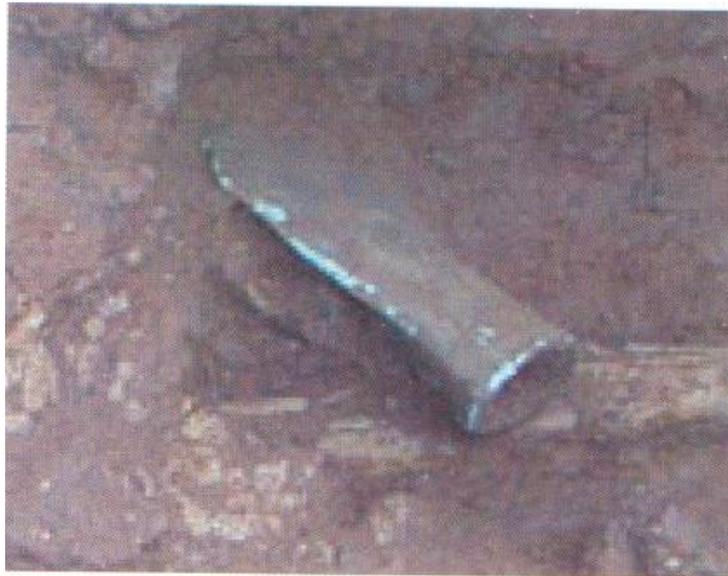


Figure-3; Bronze weapons from Nyaunggan



Source; Moore, E