

Prehistory to Proto-history of Myanmar: A Perspective of Historical Geography

Win Naing Tun
Myanmar Environment Institute

Introduction

Myanmar is located between the east Himalayan syntaxis and the Andaman Sea to the south, washed by the Bay of Bengal on the west, Myanmar links **Alpine- Himalayan orogenic** belt to the west with its extension in the rest of Southeast Asia. Myanmar lies in the Southeastern Asia, bordering the Andaman Sea and the Bay of Bengal, between Bangladesh and Thailand. Myanmar is the biggest country in the mainland Southeast Asia. It has a total area of 678,500 sq. km. Of this, land covers 657,740 sq. km, and water covers 20,760 sq. km. The total length of national boundary is 5,876 km, bordering with five neighboring countries: Bangladesh at 193 km; China at 2,185 km; India at 1,463 km; Lao PDR at 235 km and Thailand with a shared boundary of 1,800 km. There is also 1,930 km of coastline.

Eocene age primates found in the Pondaung Formation are represented by *Pondaungia cotteri* Pilgrim, 1927, *Amphipithecus mogcmngensis* Colbert, 1937, *Bahinia pondaungensis* Jaeger et al., 1999, and *Myanmarpithecus ytmhensis* Takai et al., 2001. Homo erectus had lived in Myanmar 750,000 years ago, and the Homo sapiens about 11,000 BCE, in a Stone Age culture called the Anyathian named after the sites found in the Dry Zone of Central Myanmar. The Padah-lin caves located in Ywa-ngan Township, Southern Shan State uncovered more than 1,600 stone artifacts of the Neolithic Age which are dated between 11,000 to 6,000 BCE and also found wall paintings. The Bronze Age evidences which dated 1500 BCE were found in Nyaunggan, Budalin Township. The Iron Age arrived around 500 BCE when iron-working settlements emerged in a lying to the south of present day Mandalay and near Bagan. The Pyu people, the earliest inhabitants of Myanmar moved into the upper Ayeyarwady valley from present day Yunnan, China around 200 BCE. The Pyu were followed by the Mon, the Rakhine and the Bamar in the first millennium CE.

Prehistory to protohistory of Myanmar is actually before Bagan period or before recorded history which we found inscriptions. The evolution of human civilizations, differ from region to region. Most of civilizations reached the end of prehistory during Iron Age and comprises all events which took place before the creation of written records.

Protohistory of Myanmar refers to a period between prehistory and history, during which a culture or civilization has not yet developed writing but other cultures have already noted its existence in their own writings. That period is transition period between the advent of literacy in a society such

as Pyu and Mon. Some historical records got through Chinese records in order to reveal the past of Myanmar history.

The Bronze Age evidences were found at Nyaunggan, Budalin Township, Sagaing Region. It can be found cultural development when the most advanced metalworking included techniques for smelting copper and tin from naturally occurring outcroppings of ores, and then combining them to cast bronze.

The Iron Age refers to the advent of ferrous metallurgy. The adoption of iron coincided with other changes in some past cultures, often including more sophisticated agricultural practices, religious beliefs and artistic styles, which make the archaeological Iron Age, coincide with the "Axial Age" in the history of philosophy.

Timeline of Prehistory to Protohistory of Myanmar

Date	Event
40 million years BP	Eocene age primates found in the Pondaung Formation (<i>Pondaungia cotteri</i> , <i>Amphipithecus mogaungensis</i> , <i>Bahinia pondaungensis</i> , and <i>Myanmarpithecus ytmhensis</i>).
750,000- 275,000 years BP	Lower Paleolithic men of early Anyathian culture (<i>Homo erectus</i>) lived along the bank of the Ayeyarwady river.
275,000-25,000 years BP	Lower Paleolithic men of late Anyathian culture
11,000 BCE	Upper Paleolithic men (<i>Homo Sapiens</i>) lived in Padah-lin caves which is situated in Ywagan township in southern Shan State.
7,000 - 2,000 BCE	Neolithic men lived in central Myanmar, Kachin State, Shan State, Mon State, Taninthayi Region, and along the bank of the Chindwin and Ayeyawaddy rivers.
1500 BCE	Earliest evidence of copper and bronze works, rice growing, domesticating chickens and pigs in Ayeyarwady valley
500 BCE	Iron-working settlements south of present day Mandalay
200 BCE	Pyu people entered the Ayeyarwady valley from Yunnan

Geology, Topology and Terrain

As a country, Myanmar slopes downward in elevation from the north to the south, and is naturally divided into "Upper Myanmar" and "Lower Myanmar". The terrain is made up of central lowlands fringed by steep, rugged highlands. In the north, the Kachin and Shan Mountains form the border with China. Mount Hkakabo Razi, located in the Kachin State, is at an elevation of 5,881 m (19,295 ft), and is the highest point in Myanmar. The mountain ranges in Myanmar generally run from north to south as well. Three of these mountain ranges, namely the Rakhine Yoma, the Bago Yoma, and the Shan Plateau, all exist within Myanmar, and all of these ranges run from north-to-south from the Himalayas.

These mountain chains also divide Myanmar's three main river systems, which are the Ayeyarwady (Irrawaddy), the Thanlwin (Salween), and the Sittaung rivers. Myanmar's longest river, the Ayeyarwady River, is nearly 2,170 kilometers (1,348 miles) long, and it flows through the country and into the Gulf of Martaban. Fertile plains exist in the valleys between the mountains. The majority of Myanmar's population lives in the Ayeyarwady valley, which is situated between the Rakhine Yoma and the Shan Plateau. As a whole, Myanmar can be divided into five physiographic regions: the northern mountains; the western ranges; the eastern plateau; the central basin and lowlands, and finally the coastal plains.

Weather and Climate

Myanmar is located in the monsoon region of Asia, its climate is greatly modified by its geographic position and its topographical relief. The cold air masses of Central Asia bring snow to the northern mountains for two months of the year, but this mountain wall prevents the cold air masses from moving farther south, so that Myanmar lies primarily under the influence of the monsoon winds. The north-south alignment of ranges and valleys also creates a pattern of alternate zones of heavy and scanty precipitation during both the northeast and southwest monsoons. Most of the precipitation comes from the southwest monsoon. The west coast is subject to occasional tropical cyclones.

Most of Myanmar lies between the Tropic of Cancer and the Equator. The Tropic of Cancer divides the country into two regions: the tropical south that covers two-thirds of the country, and the sub-tropical and temperate north, which is the remaining one-third of Myanmar. This causes two distinct seasons: the dry season from mid-October to Mid-May, and the wet season. There is a cooler spell during the wet season from December to February. The hottest month is April and the recorded temperature is 47.2° Celsius in Myinmu, Sagaing Region.

The coastal areas, the western and southeastern ranges receive more than 200 inches (5,000 mm) of precipitation annually, while the delta regions receive about 100 inches (2,500 mm). The central region is not only positioned away from the sea but also on the drier, lee side- in the rain shadow- of the Rakhine and Bago (Pegu) Yoma Mountains. Precipitation gradually decreases northward until in the region's dry zone it amounts to only 20 to 40 inches (500 to 1,000 mm) per year. The Shan Plateau, because of its elevation, usually receives between 75 and 80 inches (1,900 and 2,000 mm) annually.

Pondaung Primate

Eastern highlands (Shan Plateau) and the southern coastal strip (Tanintharyi) were formed slowly during the eras Precambrian and Mesozoic (between 600-700 million years ago). The western range (Rakhine Yoma) and partly the Chin hills were formed by faulting during the Cenozoic era from as early as 40 million years ago. Both the central plains and the western coastal strip of Rakhine appeared from about 5 million years ago.

Dr. Brown collected in 1923 a fragment of mandible (lower jaw) with two premolars near Mogaung on the west bank of Chindwin River in Monywa District in the Pondaung sandstone formation of 40 million years BP. It is named *Amphipithecus mogaungensis* and the fossil is now at the American Museum of Natural History. The Pondaung formation indicates that the fauna there lived a least 40 million years BP.

Dr. G.D.P Cotter found in 1927 in the same locality another fossil of the same age (40 million years BP). The animal is named Pondaungia Cotteri. In 1978, U Ba Maw, leader of Mandalay University Geology students' field study group, found a fragment of a higher primate's lower jaw, the second and third molars intact on the Pondaung hills about one and half miles northwest of Mogaung village. The jaw is believed to be a further evidence on the existence of *Pondaungia cotteri* and *Amphipithecus mogaungensis* found in 1923.

For a further search of primate fossils in the Pondaung region in Pale Township in and Myaing Township, a team led by the Col. Than Tun, Head of the Department of the Office of Strategic Studies, explored the hilly part of the said townships in 1997. And they excavated some primate fossils at the vicinity of Mogaung village, Pale Township and Bahin village, Myaing Township. A fragment of the right mandible with molars second and third of *Pondaungia cotteri* was found by Dr. Tin Thein from Lema Kyit Chaung, one and a half miles northwest of Mogaung village. Then U Win of Mogaung found a left mandible with two molars of *Amphipithecus mogaungensis*. U Paw Nyunt of Bahin also found a few fragments with two molars in Bahin. Capt. Bo Bo and U Aung Naing Soe found three lower jaw fragments of the same animal. When fitted together, they form, to everyone's amazement, a complete lower jaw. The animal is named *Amphipithecus bahinensis*. In addition to these, the team collected quite a number of fossils and excretes of ancestor rhinoceros, pigs, alligators, fish, turtle and even some leaf fossils.

An international team of researcher, led by Professor Jean-Jacques Jaeger, IPHEP (University of Poitiers / CNRS), reported the discovery of a new anthropoid primate from Myanmar dated of 37 million years ago (late middle Eocene). In the Proceedings of the National Academy of Sciences (week of June 4th 2012) we report the discovery from Pondaung Formation (Central Myanmar) of a new anthropoid primate – *Afrasia djijidae*- which shares similar dental morphology with contemporaneous *Afrotarsius* of Libya and also belong to the same family, *Afrotarsiidae*. This family is the closest sister group to the basal Asian anthropoid family *Eosimiidae* and together they represent a new infra-order called *eosimiiforms*.

The fossil primates are represented by 4 isolated teeth, 2 upper molars and 2 lower molars. Their size is tiny, being millimetric in dimensions, attesting the small body size of the corresponding animals. Based on their teeth, the animal was estimated body mass of about 100 grams, which is tiny, about the size of the living tarsier.

The American paleontologists confirmed the *Amphipithecus* as higher Anthropoid primate. However, due to the lack of anterior portion of jaws, the problem whether the Pondaungia specimen belonging to higher Anthropoid primate, remain still uncertain. Nevertheless, the French and

Myanmar paleontologists considered both the *Pondaungia* and *Amphipithecus* belonging to higher Anthropoid primate.

In comparison with the *Eosimias* from China, i.e. the Middle Eocene, the size of the latter is larger and the dental characters are far more advanced. When it is compared to those of Thailand, *Siamopithecus* and *Wailekia*, it is learnt that the *Bahinia* shows more primitive characters, in size and dental morphology. In this respect, the *Bahinia* is at least 3 million years older than those found in Thailand. With Fayum Anthropoid primates of Egypt, the size is comparable whereas *Bahinia* shows more primitive indication as it is at least 7 million years older than Fayum forms. It is assumed that the primates, to higher Anthropoid occurred in the Anthropoid occurred in the Anthropoid primates, the descendants of Man, had existed in Asia for more than 7 million years earlier than Africa.

The late Pleistocene man, *Homo erectus*, lived in the Nwe Gwe hills (west of Monywa) about 200,000 years ago. The upper right first molar and second premolar intact with a maxillary bone fragment, of a *Homo erectus*, at the Dinga Gone, one mile on the northwest of Nwe Gwe village, Chaung-Oo Township in Myanmar. It is also called Nwe Gwe man. As this "Nwe Gwe Man" lived during the third Pluvial Period (240,000 – 190,000 years ago), the rainfall was about two to three times heavier than the present. Java and Chou-kou-tien were the first sites at which *Homo erectus* was found. The emergence of *Homo erectus* is undoubtedly one of the most important developments in the evolution of man.

Padahlin Culture

Then, in the Fourth Pluvial Period (80,000 – 10,000 years ago), there were cave artists who left pictures of animals and fish in the Padahlin Caves on the eastern slope of the Shan Plateau near Myittha in Mandalay Region. The charcoal from the midden in the cave testifies that the painters lived there 11,000 years ago. They were already using pots (made without the potter's wheel). To supplement their bamboo shafts and wooden clubs, they formed edge-ground stone tools.

It was about this time that the climate gradually changed to present-day conditions. This change of climate came just before the Neolithic period (10,000-2,000 years ago). The cultivation came very much later when the Mon-Khmer speaking people left the Tongkin delta to live in the plains and river valleys of the west, including the Ganges, in about the first millennium B.C.

Padah-lin limestone caves are situated in Ywa-ngan Township in Taunggyi district, Southern Shan State. They can be found in a spur of a foothill 1050 feet above mean sea level, 4 miles from Nyaunggyat village and 1 mile from Yebok village.

Quite a plentiful of clay statuettes and figurines were also found there. Coarse potsherds found at Padat Hlaing (Padah-lin Cave) of Myanmar, were of 12,000- 10,000 years BP. The rock art found in that cave were also of that period when the weather conditions changed from pluvial (very heavy

rain) to present day weather of moderate rain. They are not Neolithic as mentioned in an archaeological report of 1969. (Aung Thaw, 1969, 13).

The excavations at Padahlin exposed a stratification consisting of 5 layers which are mainly made up of calcareous soils of different textures and clay. These layers are implementiferous. The tools given up from them consist of choppers, chopping tools axes, an adze and scrapers. The excavator remarked that the majority of them were made from the river pebbles. Choppers were unifacially flaked while the chopping tools were flakes struck off from them on both faces. Some traces of grinding on the tools, crude shouldered adze and a few chord impressed potsherds led the excavator to a conclusion that Padahlin was "Neolithic". The excavator also remarked the paucity of partially ground tools is indicative of the transition stage to the new technique which is to be regarded as early Neolithic and has a parallel in the Hoabinhian and Basonian of Indo- China. Dr. Janice Stargardt of Cambridge University who has dwelt on this theme somewhat in a little more detail in her book, "The Ancient Pyu of Myanmar" She gives reasons that many sites in Vietnam and Thailand have yielded the Hoabinhian stone tools resembling those of Padahlin caves.

Dr. Than Tun has said from his general studies of human evolution that the Padahlin caves dwellers were men of the Mesolithic Period and were not of the Neolithic times. The Hoabinhian culture has spread far and wide in Southeast Asia, covering the whole landmass Cambodia, Thailand, Laos, Malaya, even to some islands, Sumatra and spread to China in the north and Myanmar in the west. The Padahlin stone tools resemble the Anyathian chopper-chopping implements in their workmanship and finish. It is also found some edge round and a shouldered adze in the Padahlin Stone Age tool assemblage. But it is incumbent to examine if they did really belong to the Neolithic or were they earlier in age than what they had been originally thought of. The essential criteria of the term Neolithic have always been held to be the domestication of stock, the cultivation of cereals, the making of pottery and the manufacture of polished stone tools.

The bones collected from the Padahlin excavations were sent to the Anatomy Department of the Institute of Medicine I in Yangon. The experts at that department duly studied and analyzed them and said that there was no human bone among them. They are bones of the animals of the sizes ranging from goat to buffalo.

The radio carbon date from Padahlin 11000 B.P. (a revised date 13000 B.P.) tallies quite well with the known dates from the Southeast Asia: the Hoabinhian rock shelters in the Gulf of Bac Bo in Vietnam were occupied by their respective settlers from about 10,000 B.C. The Spirit Cave in the Northern Thailand saw occupation intermittently from 11000 B.C and ended about 5500 B.C. and the excavations in the Northeast Thailand, the Chao Phraya valley also in Thailand, Central Cambodia and the Middle Country above the Red River in Vietnam are unanimous in disclosing village settlements based on a mixed economy of hunting, gathering, stock raising and cultivation of rice by the third and possible the fourth millennium B.C.

All Hoabinhian criteria are sufficiently met by the Padahlin caves which are ideally located at the mid-point of the upland near Yebok village in the Southern Shan State. This location is presumed to

be free from flooding. The Padahlin caves are above the Yebok stream which is a tributary of the Panlaung River on the west that meanders near Nyaunggyat village. The pebble tools of Padahlin look like the Hoabinhian large flaked implements in their workmanship. The pieces of red ochre and edge ground tools also conform quite well with one of the six principles prescribed for Hoabinhian by Gorman.

The unique features of the Padah-lin is its rock paintings. They are unique because we have not yet come across any report on similar paintings elsewhere in Southeast Asia. The people who lived in Padahlin painted the pictures of setting sun, fish, mutilated hands, fighting bulls, cow and calves, stampeding wild cattle toward a trap, a herd of deer etc. Dr. Than Tun remarks that the rock artists were late Paleolithic people who were experiencing a change in climate from heavy rain to moderate rain of present day conditions.

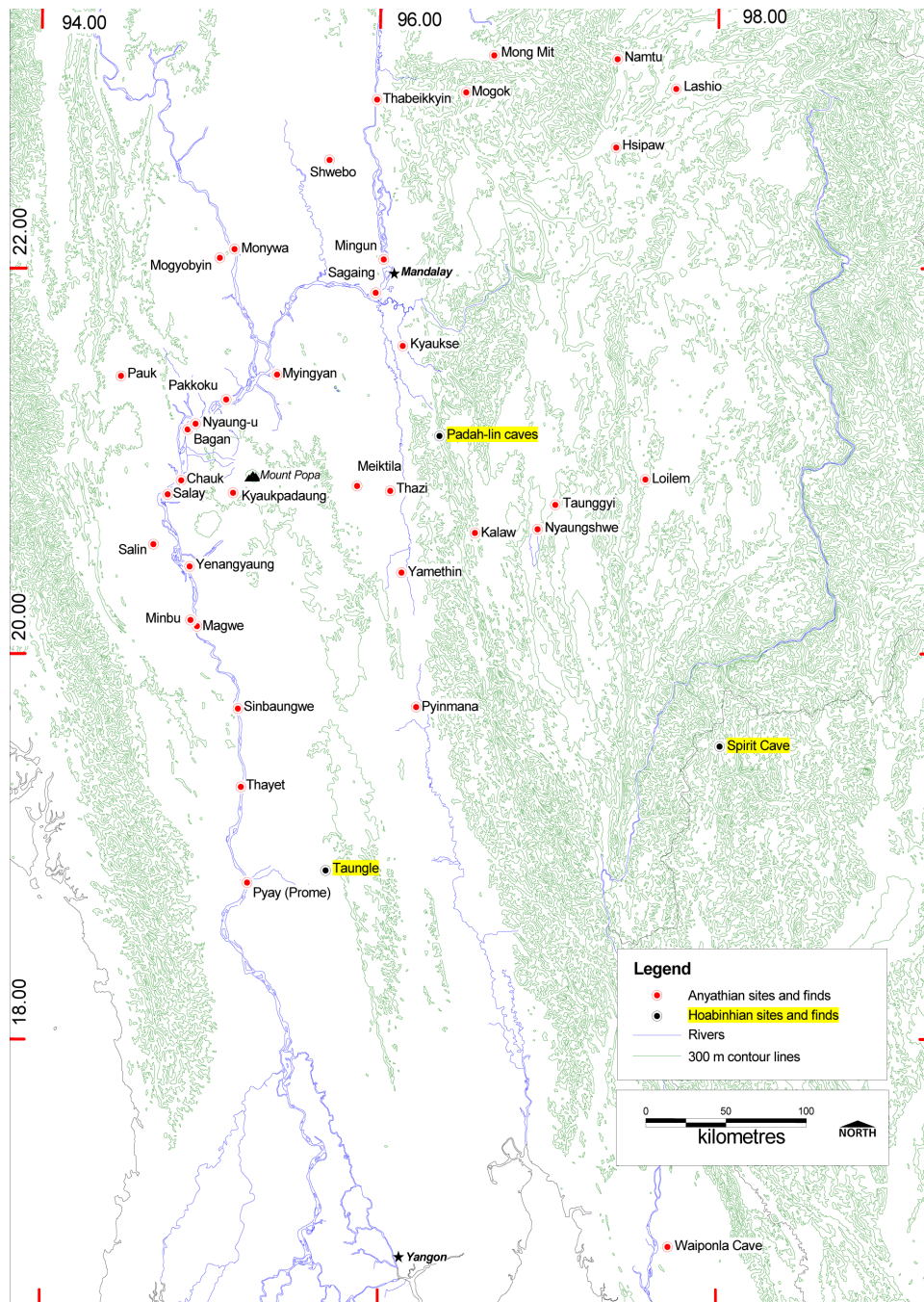
The development of the history was not the same from one place to another. Brahmi Script and writing style developed 2800 years ago in southern India. Pyu adopted Brahmi script 2000 years ago, Mon and Rakhine used to write 1300 years ago and Myanmar used to write only 900 years ago.

A prehistoric Taungthaman site near Amarapura on the west bank of the Taungthaman Lake is situated at Latitude 24 54'N and Longitude 96 54'E. Taungthaman site was excavated in between Aunggyin Shitper and Mahadanderyon monasteries which was supposed to have been inhabited more than 2,000 years ago. Two excavations (in February 1971 and January 1972) led by U Sein Maung Oo and yielded quite a considerable number of pots and potsherds together with polished stone tools. Human skeleton were found buried together with pots which were usually located between or around the legs of the body. Most of the pots are turned out by the potter's wheel and categorically we have about nine shapes.

G. H. Luce attempted an account of Pre-Bagan period using all the sources available such as linguistic analyses, Chinese and other foreign accounts, archaeological investigations of the Pyu sites and reports of other sites and epigraphic evidence. The Austro-Asiatic Mon-Khmer speakers stretched along the length of the Salween and around the Gulf of Martaban – pioneers of wet rice cultivation. Within the Sino – Tibetan family, the Karen, who had moved south down the ranges between the Thanlwin and the Ayeyarwady, were later to be displaced by the Mranma (Burmans) to the southwest across the head of the Delta and down to Taninthari (Tenasserim).

Within the Tibeto – Burman subgroup of the Sino- Tibetan language family, the Sak-Kantu (Thet Kadu) languages once spread from Manipur to north Yunnan. One group the Loi of Manipur, were recorded in 1859 as being silk manufacturers, smelters of iron, makers of earthenware vessels and polished stone bowls. In the Bagan period the Sak were spread over central Myanmar, above and below Bagan, while the Kadu were to the east and northeast, their capital being at Tagaung. The Pyu were also Tibeto – Burman speakers whose walled settlements are spread from Halin to Thayekittaya (Sri Ksetra) in central Myanmar. The Kyan, or Chin followed the Sak from the northwest, occupying part of the Chindwin valley. Maru and Kumi of northern Arakan and Chittagaung Hill tracts also spoke Tibeto – Burman Languages. The Burma – Lolos, Tibeto – Burman

speakers who had been forced south from Yunnan, spread as far as Keng Tung in the east. This spread of languages and culture perhaps reflected the movement of relatively small groups after the beginnings of political centralization on the alluvium, which its high potential for rice irrigation, in the first millennium BC.



Anyathian and Hoabinhian Sites, distribution (after Bob Hudson, 2004)

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

The discoveries at Nyaung-gan extend into prehistory a long-term pattern of occupation, technological developments, and the beginnings of urbanism within the most arid region of the country. Since 1998, the Department of Archaeology has excavated seven Bronze and Iron Age cemetery sites in Upper Myanmar by 2 (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 artifacts 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 (Moore and Pauk Pauk)

<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 95.22N
(4) Kok Ko Kha Hla	Wundwin	Mandalay	21.12N x 95.51N
(5) Myin Oo Hle	Mahlaing	Mandalay	21.07N x 95.32N
(6) Hnaw Kan	Mahlaing	Mandalay	21.15N x 95.43N
(7) Ywa Htin Kon	Pyawbwe	Mandalay	20.34N x 95.56N

At the other four excavated sites, the Samon group, the grave goods again included pottery, stone and bronze artifacts. 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 Ayeyarwady 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.

Brick walls enclose most Pyu sites giving them a characteristic form. Aung Myint has classified Beikthano, Halin and Taungdwingyi [20.00N x 95.32E] as quadrangular and Sriksetra, Maingmaw, Waddi, Thegon [18.32N x 95.20E] 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).

Table 2. Pyu or Iron Age sites in the central basin (Moore and Pauk Pauk)

<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 x 95.49E	208 ha [512 acres]
Taungthaman	Amarapura	Mandalay	21.53N x 96.05E	
Waddi	Natogyi	Mandalay	21.25N x 95.47E	130 ha [320 acres]
Maingmaw (Pinle)	Myittha	Mandalay	21.17N x 96.12E	222 ha [548 acres]
Beinnaka	Pyawbwe	Mandalay	20.36N x 96.12E	
Beikthano	Taungdwingyi	Magwe	20.00N x 92.23E	291.7 ha [717 acres]
Sriksetra	Pyay	Bago	18.48N x 95.17E	1477ha [c.30 sq.km]

The Early People of Myanmar

Austroasiatic (Mon-Khmer), Austronesian (Java-Malay), and perhaps Negrito peoples were in Myanmar long before the Mongoloid (Tibet-Myanmar) people came into the Myanmar plains. It was from about the third millennium B.C. that the Mon-Khmer people started wet rice growing in the Tongkin delta; and either because of the growing population or aggression by the Nan-Yueh, they left the delta and spread south and southwest all over mainland Southeast Asia [Luce 1985, 4]. One branch of them, however, went up the Red River and crossed north Myanmar into upper Assam and even to the Ganges plains. The Wa, Palaung, Riang, etc., remained behind in north Myanmar. Rice in this way reached Myanmar, India, and China in about 800 B.C. at the latest. The Khmers descended due south from Tongkin into Kampuchea when the Mons took a diagonal course across the peninsula to the Ayeyarwady delta across north Laos and upper Thailand [Luce 1985, 11].

In about 100 B.C. the descent began by the Tibeto-Burmans along the upper Yangtze, Mekhong, and Thanlwin [Luce 1985, 12]. The Mon-Annam tribe, too, moved from central Yunnan into the Shan State and Laos. All these were due to the Chinese advances into Yunnan. The Kayin entered around the fifth century A.D. [Luce 1985, 30] from the east through Kaya and passed into the Taungoo area. The Pa O (Taungthu) spread from Kalaw in the west to Loilem in the east, and from the Myitnge in the north to Thaton and Kyeikkhami in the south. The Cakraw reached as far west as the Minbu area around the eighth century A.D. [Luce 1985, 28]. The Pyu (Tircul), who would have been in the Myanmar plains very early, were in control of the land from the northern Shan area right down to the deltaic south by the eighth century [Luce 1985, 19]. The Myanmar came after the fall of Pyu in 832 and, like the Cakraw who preceded them, they occupied the rice-producing Kyaukse and Minbu areas.

The earliest Tibeto-Burman people who came to northern Myanmar were the Nga [Luce 1985, 36]. The Thet and Gadu followed. All of northern Myanmar was once theirs. They were early Buddhists, and it seems that the Pyu were converted to Buddhism by the Thet and Gadu (Luce 1985, 36). Considering the fact that some big Pyu towns of Maing Maw, Vishnu, Halin, and Srikestra were in existence in the period ranging from the second century B.C. to second century A.D. [Than Tun 1997], the Pyu should have entered Myanmar as early as the third century B.C., and by the situation of their garrison towns and the extension of their settlements, we assume that they were in control of almost all the plains of Myanmar and the northern Shan State in about the fourth century A.D. In another words, the Pyu kingdom from the fourth to the ninth century A.D. was the first unification of Myanmar. Bagan kings brought about the second unification during the eleventh through thirteenth centuries.

The next wave of invaders called the Methei (Mnipuri or Kathe) weakened the Kadu considerably. When the Chin entered the Chindwin valley, the Kadu were split in two. Then the Myanmar in the ninth century took the land on their south and penetrated into Rakhine. The fall of the Kadu was completed by the Shan, who rushed in torrents into Myanmar when the Yunnan province was seized by the Mongols [Luce 1985, 43].

The Pyu were confined first to central Myanmar, but from the first century A.D. they started to grow in strength with thriving towns like Maing Maw, Vishnu (Beikthano), Halin, and Sriksetra. Except for Sriksetra, we do not know what the Pyu called these towns. Long before the first century A.D. there was a trade route from Funan (Kampuchea) to Pyu centers passing through northern Dvaravati to possibly Vishnu (Beikthano), which was perhaps Lin-Yang of the Chinese [Ba Shin 1966, 211; Chen 1992b, 5]. Funan King Fan Man (Srimara; A.D. 205-25) came along this route and conquered all the lands touched by it, including Vishnu (Beikthano) [Chen 1993a, 7]. By sea he came to Tien Sun (Dun Sun), identified as Tukuapa near the Isthmus of Kra, north of Malay. It is so close to the Tanintharyi coastal region that he could have reached Mo-ti-po (Martaban, Mottama), if it were not for his sudden death due to illness [Luce 1985, 8]. But some of his forces came to the Sittaung delta from the Gulf of Siam [Luce 1985, 10]. As a result of these invasions, the Pyu abandoned Vishnu (Beikthano) in favour of Sriksetra. The Mon, who seemed to be in alliance with Funan, occupied Vishnu (Beikthano) and rebuilt it. A Chinese mission in A.D. 231 to Funan observed that change in its report. The Pyu revived slowly, and in about the fourth century they were able to discard Funanese control, destroy Vishnu (Beikthano), where the Mon were living, and ultimately subdue all the Mon living around the Gulf of Mottama. Mon of lower Menam valley continued to be subjected under Funan. That is why the Pyu kingdom mentioned Funan as its neighbor to the east. The Pyu kingdom meets "Chenla (Funan) in the east; East India in the west; Nan Ch'ao with its capital at So-lo in the north; and the sea in the south."

The Origin of the Myanmar Majority Group

Most Chinese scholars agree that the Myanmars originated from the Qiang group of ancient China, but a few scholars such as Chen Xi insist that the Myanmars originated in central Myanmar. Having analytically studied the chapter on the Bailang in the Chinese ancient work Houhanshu: Xinanyi Liezhuan Dai Qingxia came to believe that one branch of the ancient Tibeto – Myanmar linguistic group, the Bailang language spoken by the Bailang people inhabiting ancient southwest China, is linguistically closer to the Myanmar language than the Yi language. Zhengzhang Shangfang made it clear that the Bailang people were the ancestor of the Myanmars. Some other scholars put forward the conception of the Qiang language family and argue that the Myanmar language split off from the Qiang language around the 2nd century BC. Based on these linguistic studies, the Qiang group of ancient China is regarded as the ancestor of the Myanmars. They migrated south from northwest China several centuries before the Christian era and then, as the Bailang people, inhabited a region in western Sichuan province during the Eastern Han dynasty. Later they gradually moved further south into Myanmar and eventually formed the ethnic groups of Myanmar and Rakhine.

The Pyu Group and Its Language

The Pyu people appeared in wide areas of Myanmar from the 1st Century, founded the Pyu kingdom which was territorially extensive, and gradually disappeared after the 9th century. Historians show a high interest in "the puzzle of the Pyu group".

Some even believe that the Pyus were proto-Myanmars, or the same as Myanmars. Having contributed an integrated study of the history, territory, culture and region of Pyu Byi, Chen Xujing argued that both the Pyus the Myanmars traced back to the Qiang group in northwest China. "Because of long-distance migration, and co-existence in Yunnan and Myanmar with local with ethnic groups such as the Shans and the Mons, the Pyu people were ethnically and culturally influenced by these local groups and made themselves quite different in blood lineage and culture from the Myanmars who came later, although the two shared a common ancestry."

In the early 1980s, Zhao Jiawen argued that the Pyu group was Kunlun, i.e. Mon-Khmer as recorded in ancient Chinese works. However, most Chinese scholars hold to the same idea as G.H. Luce that the Pyu was one branch of the Tibeto-Myanmar linguistic group.

Ji Lianfang believed "both the Pyu and the Myanmar are part of the Tibeto-Myanmar linguistic group, with close relations." "The integration of different languages of the same language family resulted in the disappearance of the Pyu language" with the same process happening in ethnic relations. "Various groups of the Tibeto-Myanmar linguistic group moved south successively from southwest China to Myanmar and it is quite possible that the Pyus reached Myanmar before the Myanmars." "The Pyu kingdom was eliminated by Nanzhao and the Pyus were eventually replaced by the Myanmar group."

Li Mou and Li Chenyang conducted a comparative study of the Pyu in Myanmar and the ancient Bai ethnic group in Yunnan in terms of daily customs (e.g. linked names of father and son, tablet records and cremation), beliefs and taboos (worshipping white dragon and snake worship, relations between Ari and Acarya in Buddhism) and languages (xin) in the ancient Bai language meant baizu (white ancestor) while in the Myanmar language it meant zhuren (master). They came to the conclusion that it was possible that the ancient Pyu and the Bai were two branches of the same ethnic group.

Beikthano

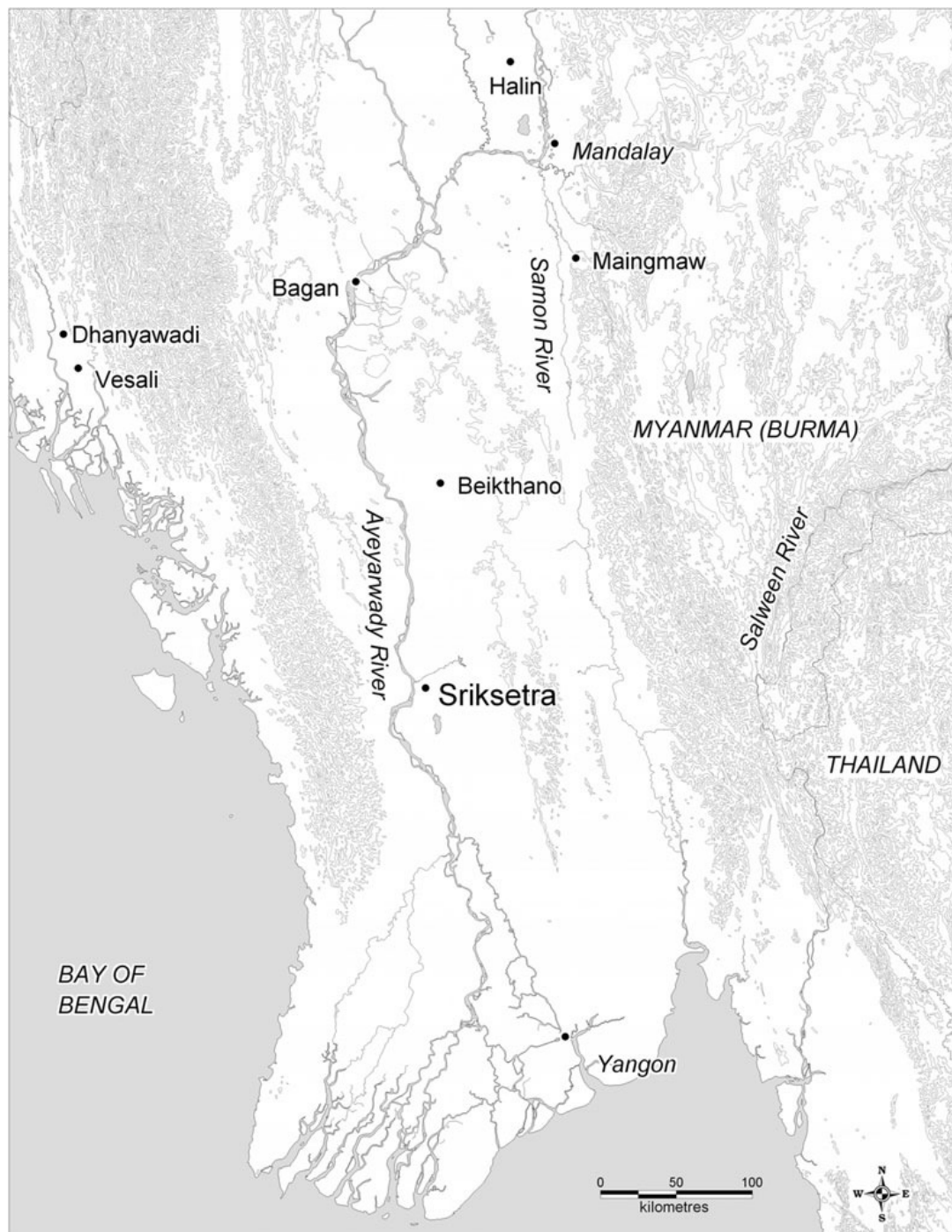
Beikthano is the earliest Pyu City in Myanmar. Beikthano ancient city (Lat 20 N, Long 95 23'E) lies immediately to the north of Kokkogwa, a village (12) miles to the west of Taungdwingyi and 450 feet from sea level. The city is almost square. It is about two miles from east to west and south to north is only two furlongs shorter. The area of city is (3.3) square miles. Altogether (59) brick mounds have been systematically excavated starting from 1959 to 2010. According to the excavation research work, reveal that the cultural equipment of the Beikthano site is essentially Pyu in character and datable to 2nd century B.C to 4th century A.D.

The radio-carbon date of Beikthano are 1950± 90 BP (cal. 180 BC – AD 260), 1890 ±95 BP (cal. 100 BC – AD 390), 1725 ± 95 BP (cal. AD 80-540), 1650 ± 85 BP (cal. AD 210-610). The date indicated outer limit of BC 180 and AD 610. Beikthano shows no evidence of Indian religion in its earliest levels, although certain links with Indian Technology have been identified in brick sizes. There are notable

exceptions. For example, at Beikthano the wall on the north and a southern partition wall were constructed on top of a dike of yellow clay.

The cultural characteristic of the Pyu as revealed comparatively through excavation are as follow;

1. Pyu built the city walls, palace and religious buildings using big bricks
2. Pyu bricks are 18 inches long, 9 inches wide and 3 inches thick. On the surfaces of the bricks were finger marks in different variety as well as the paddy husks, alphabets and Pyu script
3. Pyus made records written in Pyu script or Pali language
4. Pyus made beads and wore them. The beads were made of earth and stone and bear the figures of animals such as elephant and tiger
5. They made gem handicrafts for wearing and decoration. Examples include gold beads, bracelets, rings etc.
6. Pyus built religious buildings and worshipped the Buddha images made of jewel
7. They specified the place or building to bury the urns
8. The city gateway have wider mouth or entrance points which narrow down inside in flanking bends.
9. The Pyu were well-versed with pottery making, decorating their pots with human figuring and bird species, as their designs.
10. They are cremated their dead bodies putting the remaining broken bones and ashes in the funerary urns and buried as their designs.
11. They used a kind of coinage generally known as the Pyu coins containing Bhaddapitta on the obverse and Srivatsa and the rising sun on the reverse.
12. They adorned themselves with beads of various materials.



Location map of Sriksetra and major early urban walled sites Dhanyawadi, Vesali, Halin, Maingmaw and Beikthano (after Bob Hudson and Terry Lustig)

Sriksetra

Sriksetra old city located in Pyay Township which lies in the western Bago Region and is located on the eastern bank of Ayeyarwady River. The study area lies between north latitude $18^{\circ} 46'$ and $18^{\circ} 50'$ and also between east longitude $95^{\circ} 12' 44''$ and $95^{\circ} 19'$.

The total area of Sriksetra old city is about 17 square kilometers, (4226 acres). Generally study area is a flat lowland area. It is transitional zone between the central of Myanmar and the Wet Deltaic Zone. That area experiences Tropical Savanna Type of Climate (Aw).

The Pyay Township is bounded by Paukkhaung Township in the south east and east, Thegon Township in the south, Shwedaung Township in the northwest. In the west, the Areyarwady River forms about 13 miles as the boundaries of Pyay are administrative and physical boundaries. In the north and west, of the south of Bago Yoma and Ayeyarwady River are used as Physical boundaries.

Sriksetra is the biggest ancient city in Myanmar. As mentioned of the legend, city was built for King Duttabung by Sakra, lord of the Devas, with the help of Guvanpati, Rashi, Naga (Dragon), Garutta, Candi and Parameswar. As the evidence of an archaeological studies, this Pyu state was flourished from 4th century A.D to 9th century A.D. Sriksetra is neither ellipse nor circular in shape. The entire city walls measure 8 miles 5 furlongs. Total area of the city is approximately 5.5 square miles.

A Chinese chronicle of the Tang Dynasty paints a vivid picture of life at Pyu capital around 800 AD: "The city wall, faced with green-glazed brick is 600 lines in circumference and has 12 gates and pagodas at each of the four corners. Within there are more than 100 monasteries. All resplendent with gold, silver and cinnabar. Likewise the palace of the sovereign. The women wear their hair in a top-knot ornamented with flowers, pearls and precious stones and are trained in music and the dance. Having no oil, the use candles of perfumed beeswax. The people have a knowledge of astronomy and delight in the Law of the Buddha. At the age of seven, both boys and girls shave their heads and go to live at a monastery as novices until they are 20. If at this age they have not awakened to the religious life, they once again allow their hair to grow and return to town. The people deplore the taking of life. Their clothing is of cotton, for they maintain that silk should not be worn as it involves injury to the silkworm."

The archaeological investigation in Srikshetra had been started since 1882-83 by Dr. E. Forchammer. The intermittent excavations of ancient monuments in Srikshetra have been conducted since 1907 and intensive excavation and preservation carried out from 1964 onwards. At present, 53 mounds including city walls and gateways, Religious monuments, Residential buildings and Ritual monuments.

Hanlin

Hanlin was a Pyu city 10 miles from Wetlet in Shwebo District, Mandalay Division. Hanlin city flourished between the 4th and 9th century A.D. Their coins had symbols and they are literate. Buddhism developed early in Hanlin, but there was no evidence of image worship in Hanlin. Hanlin city was burnt and destroyed in 9th century A.D. The site was superficially explored in 1904-05 and few test excavations were made in 1929-30. Systematic excavation at Halin was started in 1962 with further excavation in the 1990s. Halin City is rectangular shape. Recent excavation were carried out in the south and north of Shwegugyi Pagoda in old Halin town in 2005. The excavation yielded a total

of eleven sets of fossilized human bones. The four gateways excavated turn inward to the citadel, like the gates at Beikthano. There are both skeletal and cremation burials within the walls of Halin. There are 33 mounds excavated up to now including city walls and gateways, Religious monuments, Residential buildings, Ritual monuments and Structure of reservoir.

A radiocarbon dates from charcoal samples at Hanlin have been recalculated since they were published by Myint Aung. The new dates were 1369 ± 64 (cal. AD 540-780), 1818 ± 65 (cal. 60-390) and 1750 ± 65 (cal. AD 120-430). The Rafter laboratory has also supplied a human bone collagen from site 17, which is 1403 ± 98 (cal. 420-870). The date indicate activity at Hanlin between outside limits of AD 60 and 870.

Many differences between Pyu sites and their repertory of finds, the presence of Nyaung-gan type bronzes at Halin suggests the possibility of an earlier occupation of some Pyu sites. The cemetery location is also significant, both its siting on the crater and adjacent to the rich copper deposits on the opposite bank of the Chindwin. The area's low rainfall and access to navigable waterways links it to other sites in the central zone, Pyu, and Bagan.

Tagaung

Tagaung city located 127 miles north of Mandalay on the left bank of the Ayeyawady River. The excavation yielded evidence that Tagaung rose to become an important fortified city during Anawrahta's reign in the early Bagan period. The first excavation of the site was done in 1967-68. The excavations yielded many votive-tablets of which two types are peculiar to Tagaung. The site of Tagaung actually contains another ancient city site called "Up-country Bagan" (Anyabagan). In 2004, in the site of that city on which now stands a high school, pot shards were found while digging in the school compound. So, the Department of Archaeology excavated at this site. The remaining of many pots was found in this site. Now, these pots were preserved and restored by the Department of Archaeology.

Historical Periods of Rakhine

There are four historical periods in Rakhine State namely (1) Dhanyawadi period (2) Wethali (Vesali) period (3) Lemyo period and (4) Mrauk-U period. Rakhine State is located in the western part of Myanmar and area measures 14200 square miles. The length of Rakhine State from North to South is 360 miles. Rakhine Yoma mountain ranges lie in the east and the Bay of Bengal is in the west.

(1) Dhanyawadi period

According to Rakhine chronicles the first Dhanyawadi dynasty was founded by King Marayu in 3000 BC. Fifty four kings ruled over Dhanyawadi for 1816 years in three places called Kan-thone sint, Nilar Pantaung and Kyauk-pan-taung. The first Dhanyawadi period was from 3000 to 1508 BC.

The second Dhanyawadi dynasty was founded by King Kanyarzargyi in 1507 BC. Twenty eight kings ruled over Dhanyawadi for 927 years. The second Dhanyawdi period was from 1507 to 580 BC.

The third Dhanyawadi period was founded by King Sanda Thuriya in 580 BC. King Bheimbitharya was a contemporary king who ruled over Maghada Kingdom in India. The third Dhanyawadi dynasty was started with King Sanda Thuriya 580 BC and ended with King Thuriya-ketu AD 326.

(2) Wethali (Vesali) Period

According to Ananda Sandra inscription recorded in AD 729 three dynasties ruled over Wethali Kingdom from 510 BC to AD 720. Altogether 36 kings ruled at Wethali Kingdom. The first Wethali dynasty was founded in 510 BC and ended in the time of King Linki in AD 370. The name of the first king is unreadable. There were fourteen kings in the first Wethalidynasty. However thirteen kings ruled for 230 years in the second Wethali dynasty starting from Dwen (who ascended the throne in AD 370 and the second Wethali dynasty ended with Sariti Sandra in AD 600. The third Wethali dynasty was founded by King Maha Vira in AD 600 and ended with the reign of King Anatha-wa-thaya in AD 720 according to Ananda Sandra inscription.

However, Rakhine chronicles mentioned that Wethali Kingdom was founded by King Maha Sandra in AD 327 and twelve kings ruled over Wethali kingdom. Wethali dynasty ended at the time of the last King Ngatone, son of Sula-Sandra in AD 794. According to Rakhine chronicle splendid Wethali city was founded by King Maha Sandra or Dwen-Sandra in AD 327.

Wethali (Vesali) the ancient city

The remains of the Wethali city walls and building in the form of earth mounds are still visible about 6 miles north of Mrauk-U town. Wethali city (93° 9' E Longitude and 20°40' N – Latitude) is irregular circular in shape measuring 1.7 miles from north to south and 1.2 miles from east to west.

Wethali walled city is about 2.7 square miles in circumference and the city walls were built of large-sized bricks. It was found that the city walls were surrounded by a deep moat which was now already dried and silted with earth and mud. The city was built near a large stream called Randawadi or Ran-chaung.

Wethali stream a tributary stream of Randawadi flows across Wethali city providing sufficient water for cultivation. The palace buildings surrounded by palace walls were located in the centre of the city. Now the remains of the palace buildings can be seen in the form of flat mounds inside modern Wethali village.

(3) Lemro Period

Wethali (Vesali) period was followed by Lemro period. When Wethali (Vesali) city was ruined in AD-794, Rakhine people moved from Wethali to Lemro delta region where they founded a new city

Pyinsar. Lemro period was started from AD-818, and ended in AD-1430. Altogether four cities were built in Lemro delta region such as Pyinsar, Purain, Cheik, and Laung-kyet. Lemro kings built one city after another and ruled for 600 years. Because of the changes of the river course and erosion, all the city walls and structural remain were no more in existence. Besides, religious buildings and palatial buildings were destroyed and wiped out by river erosion. Therefore substantial structural remains of Lemro period were all lost from our sight. A few remaining stupas were also renovated or rebuilt in modern times.

Mrauk U Period is very important for Rakhine history. The arts and architectures of Mrauk-U are unique styles. Mrauk U town is in northern Rakhine State. It was the capital of Mrauk U Kingdom, the most important and powerful Rakhine (Arakanese) kingdom, from 1430 to 1785.

Mon

The Mon people of Haribhunjaya and Dvaravati kingdoms in modern Thailand may have entered present-day Lower Burma as early as the 6th century CE. According to mainstream scholarship, the Mon had founded at least two small kingdoms (or large city-states) centered on Pegu (Bago) and Thaton by the mid 9th century. The earliest external reference to a Lower Burma "kingdom" was in 844-848 by Arab geographers. The Mon practiced Theravada Buddhism. The kingdoms were prosperous from trade. The Kingdom of Thaton is widely considered to be the fabled kingdom of Suvarnabhumi (or Golden Land), referred to by the traders of Indian Ocean. In 1057, King Anawrahta of Bagan Kingdom conquered the Thaton Kingdom. The Mon culture and the Mon script were readily absorbed by the Burmese and the Mons, for the first time, came under Bamar rule. The Mon remained a majority in Lower Burma. The Mon language is part of the Monic group of the Mon-Khmer family, closely related to the Nyah Kur language and more distantly related to Khmer. The writing system is Indic based. The Burmans adapted the Mon script for Burmese following their conquest of Mon territory during Anawrahta's reign.

Conclusion

The detailed study for prehistory to protohistory of Myanmar is still needed. The Prehistory to protohistory of Myanmar started from immemorial to before Bagan period which was flourished 11th century AD. It is difficult to trace out the history due to the discrete evidences, budgets, technical and administrative permissions. The past is key to future and if we could not reveal the past event, it is difficult to correlate present. Most of early settlements have been found in the central dry zone of Myanmar, where scattered sites appear in close proximity to the Ayeyarwady (Irrawaddy), Thanlwin (Salween) and Sittaung rivers. Most of the human civilizations were found along those major rivers and their valleys areas. These evidences pointed out that people were moving from one place to another followed the water is clearer and glass is tender. Their life style was changed from hunters-gatherers and more tend to agriculturalists through advancements of metallurgy.

Many factors controlled their migration, diffusion and friction along the distance where they have moved from to. Those facts are very important to track the historical geography. Resources, climatic conditions, internal and external pressures drove them out to new settlements and they had to adapt for their survivals. The artifacts from early cultures resemble those from neighboring areas in Southeast Asia as well as India. Although these sites are situated in fertile areas, archaeological evidence indicates that these early people were not yet familiar with agricultural methods. It may be gifted environs have more favorable conditions than other areas of the world, for example, pottery was less advanced because plentiful of bamboo in order to use as container.

Nyaung-gan adds a new dimension to the prehistory of Myanmar. Further research may also be required between Pyu and earlier periods, such as Taungthaman and Samon valley civilizations. The possibility of Bronze Age burials at Pyu sites also deserves further investigation. The paleoclimate study such as speleothems and Crater Lake studies, etc. are also required to trace out the relationship between climate change and patterns of human migration. The joint research on paleo-archaeology study is also needed among Southeast Asian countries and Asian countries in order to exchange information.

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