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PREHISTORIC SITES AND RESEARCH IN SEMPORNA, SABAH, MALAYSIA

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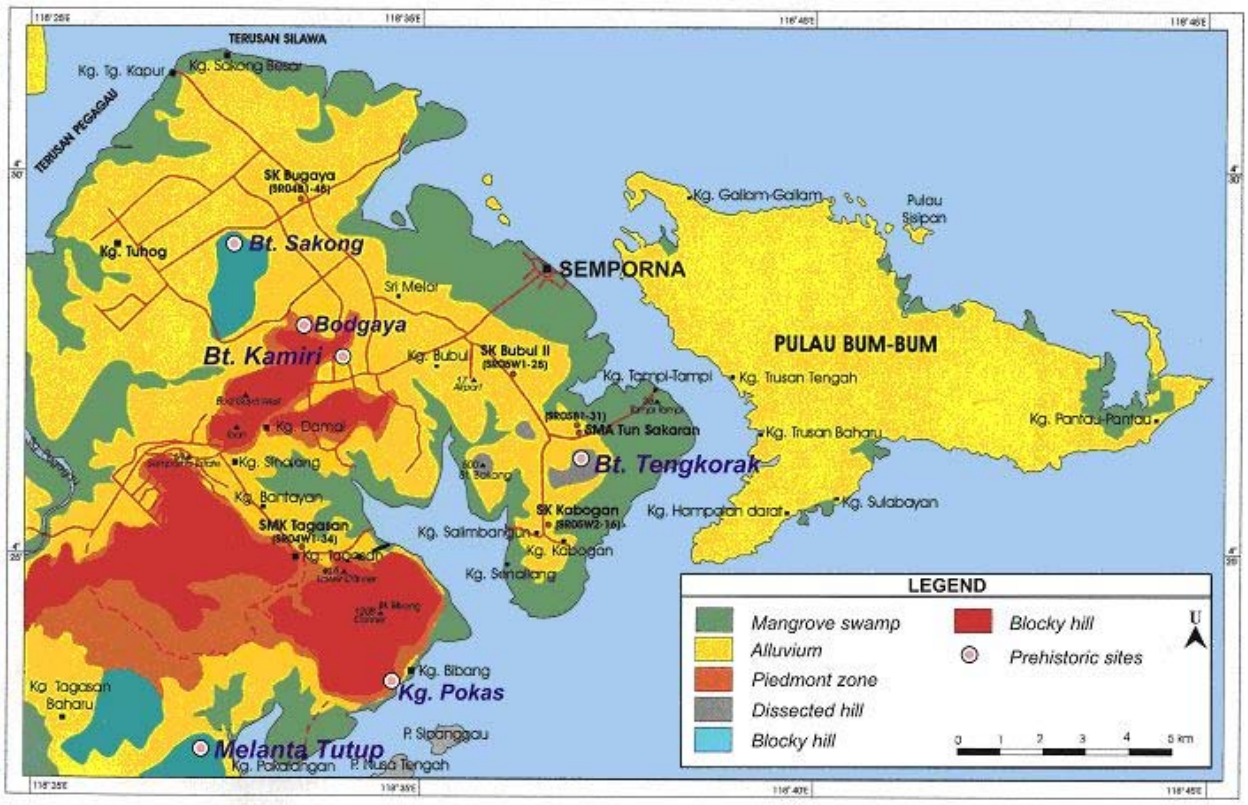
INTRODUCTION

This paper presents an overview of prehistoric sites and research carried out in Semporna from 2002-2007 in South-eastern Sabah (Borneo), Malaysia. Archaeological research in this region of island Southeast Asia has discovered several interesting prehistoric sites and yielded findings related to the archaeology of Southeast Asia, Melanesia and south China. Archaeological excavations conducted at some of the sites such as Melanta Tutup and Bukit Kamiri as well as new areas in Bukit Tengkorak have extended the presence of ancient human habitation in the Semporna region back as early as the late Palaeolithic period to the Neolithic, Metal and early historical periods. Radiocarbon dating placed some of these sites to date more than 10,000 BCE to 1280 CE. Amongst the findings were several burial sites and log coffins from the Neolithic, Metal and early historical periods, radiocarbon dated between 1620 BCE and 1280 CE as well as considerable amount of archaeological artefacts such as earthenware pottery, microliths, flake tools, stone adzes, animal and fish bones, beads, metal tools, shell and stone ornaments.

The archaeological research carried out in Semporna, Sabah, Malaysia as aimed at searching for new sites and data on the prehistory of Semporna in Southeast Asia. The archaeological fieldwork was conducted by a research team, headed by the author from the Centre for Archaeological Research Malaysia, Universiti Sains Malaysia, Penang, with technical help from staff of the Sabah Museum Department and the Mineral and Geoscience Department of Malaysia in Kota Kinabalu, Sabah as well as local villagers from Semporna. Three seasons of reconnaissance surveys were done in 2002, 2003 and 2007 in order to locate prehistoric sites in the Semporna region. The surveys were done to search for signs of prehistoric human habitation, camp or burial site. The survey discovered clues to prehistoric human presence in the form of human teeth, stone tools, pottery sherds, and food remains at several new sites. These new sites include Melanta Tutup, Bukit Kamiri, Bodgaya, Bukit Sakong, Kampung Pokas, and new areas in Bukit Tengkorak (see map). At Bodgaya, two log coffins, one belonging to an adult and the other a child, were discovered and radiocarbon dated between 1050 and 1280 CE. Surface finds of potsherds and flake tools were discovered at Kampung Pokas and Bukit Sakong. Three of the more potential sites – Melanta Tutup and Bukit Kamiri as well as new areas in Bukit Tengkorak – were excavated. The excavations have uncovered new evidence of ancient human habitation in the Semporna region, covering the late Palaeolithic period to the Neolithic, Metal and early historical periods. Radiocarbon dating analyses carried out at some of these sites placed them to range from about 10,730 BCE to 1280 CE. The following discusses in more detail the surveys, excavations and findings at these three sites in Semporna, Sabah.



Map: Location of archaeological sites in Semporna, Sabah, Malaysia (after CHIA and MATSUMURA 2007:371)

Bukit Tengkorak

The first season of survey and excavation at Bukit Tengkorak was done for a period of more than two weeks between the end of September and early October 2002, while the second season of survey and excavation was carried out for a period of more than three weeks in May 2003. Excavations at Bukit Tengkorak were carried out at one of the archaeologically potential areas situated at the summit of Bukit Tengkorak. This area was excavated in order to further assess its potential for more excavations and to determine if the location is disturbed or not. Two trenches were excavated using only trowels, brushes, and ice picks in arbitrary levels or spits of 10 cm. The excavated soil was sieved using 0.2 cm and 0.5 cm wire meshes in order to retrieve small pieces of artefacts. The *in situ* positions of the associated artefacts were recorded using the standard established methods and the excavations were carried out until the sterile layers or base rocks at a maximum depth of about 120 cm. Samples of charcoal or shells were collected whenever possible at different levels during the excavations for radiocarbon dating purposes. Soil samples were also collected from the different soil layers and were subjected to flotation at the base camp to check for botanical remains but no botanical remains were found. The excavations at Bukit Tengkorak revealed the findings of pottery sherds, stone tools and faunal remains. The close association of the cores, flake tools and waste flakes suggested stone tool making at the site. Radiocarbon dating analyses of three organic samples (two charcoal and one shell samples) from the 30 to 45 cm levels placed the Bukit Tengkorak assemblages to date from 1620 to 910 BCE.

The excavated artefacts, which include pottery sherds, stone artefacts and faunal remains were cleaned with water and air-dried at the base station in Semporna. These artefacts were properly labeled, packed and brought back to Penang for further analyses at the laboratory of the Center for Archaeological Research Malaysia in Universiti Sains Malaysia. Briefly, the preliminary results of the analyses of the assemblage recorded a total of about 256,464 pieces of pottery sherds, weighing approximately 183 kilograms. The pottery sherds consisted of mainly body sherds, while some were broken parts of bases, handles, flanges, knobs, lids and fragments of pottery stove. A majority of the pottery was plain while the remaining sherds were decorated with impressed, incised, red-slipped, and perforated designs. Some 3,664 stone artefacts were also found during the excavations, comprising nine main classes of stone types: core, hammerstone, borer, adze, utilized flake, flake, waste flake and chunk. The stone artefacts were made from a variety of raw

materials such as chert, agate, obsidian, andesite, sandstone, and slate. The faunal remains consist of animal and fish bones as well as shells. The fragmentary animal and fish bones recovered during the excavations weighed about 10.3 kilograms. Preliminary analyses suggested mostly marine fish bones and animal bones belonging to various types of terrestrial mammals such as pigs, monkeys and other small mammals. The shell remains recovered from the excavations weighed approximately 6.3 kilograms and preliminary analysis of the shell remains suggested that they are mostly edible marine species.

MELANTA TUTUP

The volcanic rock shelter site of Melanta Tutup is located about 600 feet above sea level at the Tagasan Bay in Semporna (see map). Our archaeological survey in 2002 and 2003 at this rock shelter site uncovered surface finds, which include an ancient log coffin with a carved buffalo head and considerable amount of pottery sherds, animal bones, shells, and some stone tools. The ancient log coffin is believed to be that of an important person, perhaps an aristocrat or leader of a community. The lid of the coffin was carved in the shape of a buffalo head at one end and its tail at the other end. The coffin was disturbed as no human skeletal remains or artefacts were found inside. Some of the human remains and burial items – mostly teeth, some beads and metal objects, which possibly belonged to the coffin – were found scattered on the floor near the coffin. The coffin was radiocarbon dated between 880 and 1110 CE (CHIA and KOON 2003). This site also produced the earliest evidence of human habitation, more than 10,000 BCE, in Semporna. Our archaeological research also revealed that this site was used as a burial site from the Neolithic to the early historical period, about 1380 BCE to 1170 CE.

Three seasons of excavations were carried out at Melanta Tutup in 2003, 2004 and 2006. During the first season in 2003, a 2 x 1 metre test trench was excavated to determine the types of archaeological artefacts and depth of the cultural layers at the site. The test trench was excavated using only trowels and brushes in arbitrary levels or spits of 10 cm. The excavated soil was sieved using 0.3 cm and 0.5 cm wire meshes in order to retrieve small artefacts such as beads and seeds. All the sieved soil was collected and subjected to flotation in order to collect botanical samples. The *in situ* position and the association of the artefacts were recorded using the standard established methods. Radiocarbon dating samples were collected whenever possible at different levels during the excavations. The excavation was carried out until the sterile layer at 150 cm and the soil profile of the excavations was recorded. The excavation produced many artefacts such as pottery sherds, stone tools, shells, seeds, beads, metal objects and stoneware. A total of 4,036 pieces of pottery sherds, weighing about 16.5 kilograms were recovered. Preliminary analysis of the pottery sherds identified them as parts of the body, rim, base, handle, flange, knob and fragments of pottery stove. A majority of the pottery was plain while the remaining sherds were decorated with impressed, incised, red-slipped and perforated designs. There were also about 27 pieces of stoneware, weighing about 113 grams, found mostly at the top layers of the site. A total of about 32 stone artefacts were recorded, consisting of five main types: core, utilized flake, scraper, borer, and waste flake. They were made from a variety of raw materials such as chert, agate, obsidian, andesite and sandstone. The faunal remains comprised animal and fish bones as well as shells. The animal and fish bones, weighing about 2.6 kilograms, were in small pieces and fragmentary with only a small number of the teeth. The shell remains recovered from the excavations weighed about 6.5 kilograms, and comprised mostly edible marine species. A total of about ten pieces of metal objects, weighing about 102 grams, were found at the top layers in rather badly corroded conditions together with six small beads in various colours of yellow, red and white.

The second season of fieldwork in 2004 revealed the presence of a long chronology of human habitation in Melanta Tutup. An additional trench, measuring 2 x 2 metre, was excavated using the standard established method until the sterile basal layer, about 2.5 metres in maximum depth. The excavations uncovered many artefacts such as extended human burials, possibly burial jars, stone tools, pottery sherds, metal objects, beads, food remains comprising shells, fish and animal bones and botanical remains. The findings and association of these artefacts from the first to the last cultural layers suggested that the site was used for a long period of time, from the late Paleolithic period to the Neolithic, Metal and early historical periods. Radiocarbon dating analyses carried out during the first and second season of fieldwork placed the Metal period burials between 890 and 1170 CE, the Neolithic burials from 1380 to 550 BCE, and the lower Paleolithic cultural layers at around 10,370 to 9800 BCE. However, the earliest human habitation at the site remains unknown because no datable organic radiocarbon samples were found at the lowest layer.

The human burials discovered at the top 20-30 cm levels comprised several individuals buried with funerary items such as pottery, beads, metal artefacts, ornaments, shells and stoneware. Some of these burials were extended while some may have been jar burials as the skeletal remains were found associated with large pieces of pottery sherds, possibly in the form of a jar. About 81

pieces of human teeth has thus far been identified as belonging to perhaps several individuals and about 42 pieces of bones were identified as finger and foot bones. The analyses of the dental characteristics of the prehistoric human teeth, dated about 1380 to 550 BCE, from Melanta Tutup and its comparisons with those of other ancient populations in Southeast Asia, China, Japan, Melanesia and Australia so far suggested that the inhabitants of Melanta Tutup are genetically linked to the southern China Neolithic populations and are different from the Neolithic populations of Peninsular Malaysia (CHIA et al. 2005). In addition, eight human skeletal remains from a mass burial in Melanta Tutup dated to the Metal period, between 890 and 1170 CE, were also analysed and compared with other known skeletal remains in Southeast Asia. The results suggested that the Melanta Tutup inhabitants did not resemble the Tasmanians and Tolai Melanesians but have close affinities with the Atayal Taiwanese and Hainan people in south China (CHIA and MATSUMURA 2007).

During the third season of excavations in 2006, another 2 x 2 metre trench was excavated using the standard established method until about 200 cm in maximum depth. The excavations produced a variety of potsherds, flake tools made of agate and chert, obsidian flakes, food remains in the form of animal and fish bones and shells. These archaeological assemblages are currently being analysed at the Centre for Archaeological Research, Malaysia. Radiocarbon dating analyses have so far placed the Neolithic layers to dated about 1370 to 590 BCE and the Palaeolithic layer to about 10,730 to 10,120 BCE. Two soil samples were collected from the last Palaeolithic cultural layer of the site, about 200 cm deep, for optically stimulated luminescence dating at the University of Wollongong, Australia, and we are still awaiting the results.

Bukit Kamiri

Bukit Kamiri is a volcanic rock shelter site located about 3 km from the town of Semporna, Sabah (see map). A systematic excavation was carried out at Bukit Kamiri, Semporna, Sabah for a period of about three weeks in April 2007. A total of five trenches were excavated using trowels, ice picks and brushes in arbitrary levels or spits of 10 cm. The excavated soil was sieved using 0.3 cm and 0.5 cm wire meshes in order to retrieve small pieces of artefacts. The *in situ* position and the association of artefacts were also recorded. In addition, dating samples such as charcoal and shells were collected from different levels, whenever possible, for radiocarbon dating purposes. The excavation at Bukit Kamiri was carried out to a maximum depth of 110 cm. The results of the archaeological research at Bukit Kamiri have revealed evidence of a Metal Age burial and a Neolithic habitation site radiocarbon dated ranging from about 1380 to 760 BCE. The excavation produced various findings such as stone tools, pottery, metal objects, beads, faunal remains and two human skeletons. These artefacts are currently being analysed at the Centre for Archaeological Research, Malaysia, USM, in order to classify as well as to study the function and manufacturing technology of these artefacts.

Briefly, a total of 780 lithic artefacts were found in Bukit Kamiri. The lithic artefacts can be divided into three main categories – tool-making implements (hammerstones and cores), stone tools (borers, flake tools, adzes and miscellaneous tools) and debitage. The lithic artefacts were made from various raw materials such as agate, obsidian, chert, slate, sandstone, flint, volcanic rock and quartz. A total of 65,054 pieces of pottery sherds were also found in Bukit Kamiri. These pottery sherds were classified according to parts such as body sherds, rims, bases, stove parts and unidentified sherds. Pottery decorations were mostly found on the body and rim parts. The majority (59,183 pieces) of the pottery sherds are undecorated. The remaining sherds are decorated with impressed, incised, red-slipped and perforated designs. Also, faunal remains weighing 11,764.7 grams were found. The faunal remains consist of mammal bones, reptile bones, fish bones and shell remains. The shells remains include gastropods and bivalves from the marine, estuarine, mangrove and freshwater environments. In addition, the excavation produced five metal artefacts and three small beads associated with the two human skeletons.

Discussion and Conclusion

The research in Semporna from 2000-2007 has provided new and significant data on the prehistory of Semporna in Southeast Asia. The archaeological survey has identified several new archaeological sites in the Semporna region. Archaeological excavations at some of the these sites – Melanta Tutup, Bukit Kamiri and new areas in Bukit Tengkorak – had so far uncovered many *in situ* potsherds, shells, fish and animal bones, stone tools, including obsidian artefacts needed for the research. Radiocarbon dates placed the obsidian artefacts at Bukit Tengkorak in the Semporna region to date about 1200 to 900 BCE (CHIA 2003). Archaeological and geological surveys conducted in 2003 with the help of a geological team from the Mineral and Geoscience Department of Malaysia in Kota Kinabalu, Sabah, has discovered possible sources of agate and chert rock materials that were probably used to make the stone tools at Bukit Tengkorak, Melanta Tutup and Bukit Kamiri. These *in situ* agate and chert sources were found embedded in magma at the foothills of Melanta Tutup. A number of stone tools were also found at the

agate and chert sources during the survey. However, no obsidian source was found during the survey although some of the obsidian artefacts at Bukit Tengkorak had been traced chemically to sources in Melanesia (BELLWOOD and KOON 1989; TYKOT and CHIA 1997; CHIA 2003).

The obsidian artefacts found at Bukit Tengkorak, Melanta Tutup and Bukit Kamiri are currently being analysed in order to trace their sources and possible origins. The most significant findings thus far come from Melanta Tutup as this new site contained rich archaeological evidence, which include the first evidence of human remains in Semporna, along with other artefacts such as log coffin, stoneware, beads, metal artefacts, potsherds, stone tools, fish and animal bones, food shells and botanical remains. Melanta Tutup has provided important evidence and dates on ancient human habitation in the Semporna region and its relationships or origins in Southeast Asia and the Pacific region. Radiocarbon dating results from Melanta Tutup reveal a long chronology of human habitation from the early historical period to the late Palaeolithic period, dated more than 10,000 years ago in Semporna. The fauna remains at Melanta Tutup, like those in Bukit Tengkorak and Bukit Kamiri, indicated a broad-spectrum economy with a predominantly maritime-based diet, focused on marine and forest environments. A wide range of marine fish, molluscs, reptile, and crustacean from the seas as well as animals from the forest were exploited by the inhabitants using various fishing, hunting, and gathering methods. Analyses of the dental and facial characteristics of the Melanta Tutup human remains from the Neolithic period (dated about 1380 to 550 BCE) and from the late prehistoric period (890 and 1170 CE) and their comparisons with those of other ancient populations in Southeast Asia, China, Japan, Melanesia and Australia suggested possible affinities with ancient populations in south China and Taiwan (CHIA et al. 2005; CHIA and MATSUMURA 2005).

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REFERENCES

BELLWOOD, P. and P. KOON 1989, Lapita colonists leave boats unburned. In: *Antiquity, 63*, pp. 613-622.

CHIA, S. 2003, *The Prehistory of Bukit Tengkorak as a Major Prehistoric Pottery Making site in Southeast Asia,* Sabah Museum Monograph, vol. 8, Kota Kinabalu, Malaysia.

CHIA, S. and P. Koon 2003, *Recent Discovery of An Ancient Log Coffin in Semporna, Sabah*. Sabah Society Journal, vol. 20, Kota Kinabalu, Sabah.

CHIA, S., J. ARIF and H. MATSUMURA 2005, The Dental Characteristics of Prehistoric Human Teeth from Melanta Tutup, Semporna, Sabah. In: Zuraina Majid (ed.), *Perak Man and Other Prehistoric Skeletons in Malaysia,* Centre For Archaeological Research Malaysia, Universiti Sains Malaysia, Penang, pp. 239-251.

CHIA, S. and H. MATSUMURA 2007, Late Prehistoric Burials at Melanta Tutup, Semporna, Sabah. In: *Archaeological Studies on Cultural Diversity in Southeast Asia and its Neighbors*. Sophia University, Tokyo, pp. 361-379.

TYKOT, R.H. and S. CHIA 1997, Long-distance Obsidian Trade in Indonesia. In: P. Vandiver, J. Druzik, J. Merkel and J. Stewart (ed.), *Materials Issues in Art and Archaeology V,* vol. 462, Symposium proceedings of the Materials Research Society, Warrendale, PA, pp. 175-180.