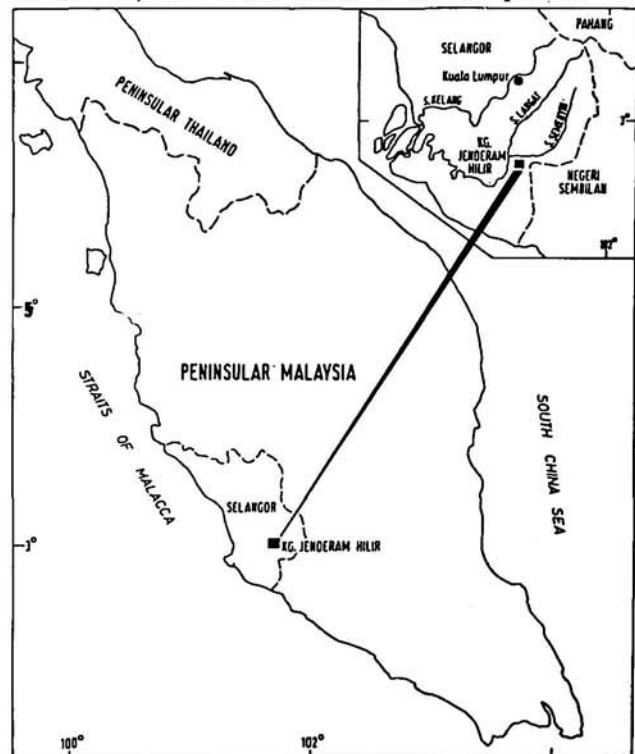


# RECENT RESEARCH ON THE NEOLITHIC IN PENINSULAR MALAYSIA

by *LEONG Sau Heng*

Archaeological evidence for the Neolithic<sup>1</sup> in Peninsular Malaysia is far from scanty. At least over 130 sites have been reported. These include a handful of archaeologically excavated sites, and numerous locations where chance finds of cord-marked pottery and/or ground stone artifacts have been reported.<sup>2</sup> Chance finds are of little archaeological value apart from the information they provide on the material culture, particularly the types of ground stone artifacts and earthenware pottery of the prehistoric groups involved, and to some extent, the geographical distribution of these artifacts in the peninsula. Data from the excavated sites are, undoubtedly of far greater value. However, since only small scale excavations were conducted at these sites some of the interpretations arrived at based on the data retrieved from these sites remain largely tentative. For the earlier (pre-war) excavations the value of the data yielded would also have to depend on how systematically these sites were excavated.<sup>3</sup> The types of data obtained from these sites would also depend on the types of retrieval methods known at that time, and the range of laboratory analyses available. For instance, the collection of soil samples, the use of dry and wet sieving for the recovery of small items were seldom practised at that time, although dry-sieving was reportedly undertaken during H.D. Colling's excavation at Gua Bintong in Perlis (Collings 1937). It was also a great loss to the archaeological record that no attempts were made to collect charcoal samples from the hearths (ash layers) encountered in the excavations at the cave sites for the purpose of radiocarbon dating. This was simply because radiocarbon dating for archaeological purposes was then unknown.<sup>4</sup>

Many of the cave sites in Peninsular Malaysia have suffered some degree of disturbances resulting from burrowing animals,<sup>5</sup> and from human activities, such as burials during the later prehistoric times, and the digging of guano in modern times. Some sites were completely destroyed by the guano collectors, such as the Bukit Chintamani site (Peacock and Dunn 1967). The disturbances can cause a great deal of problems connected with the interpretation of the stratigraphic relationship of the various finds, especially, if we are dealing with a multiple component site where more than a single cultural layer are present. Tweedie (1953: 14 and 45) has drawn attention to the problem of



Map showing the location of Kg. Jenderam Hilir in South Selangor.

Mrs. Leong Sau Heng is Lecturer at the Department of History, Universiti Malaya, Kuala Lumpur, Malaysia.

This article was originally presented at the SPAFA Seminar in Prehistory of Southeast Asia held in Bangkok, Surat Thani, Phangnga, Phuket and Krabi, Thailand, on January 12-25, 1987.

this mixing of cultural deposits, and Bellwood (1985:168) has also commented on the possibility of the presence of some residual remains (from an earlier cultural layer) in the pottery-bearing upper layer at Gua Cha.

Outlined above are only a few of the problems facing the researcher working on the Neolithic phase of the peninsula's prehistory. A major portion of the archaeological record for this phase comprises the artifactual material and their distribution in the peninsula. There is, therefore no lack of data on the material culture of the Malayan (i.e. Peninsular Malaysia) Neolithic. Much of the early works are largely focused on the description of the material culture encountered at the sites.<sup>6</sup> The discovery of Gua Cha and its subsequent excavations (Noone 1939, Sieveking 1954) have provided much invaluable data on Neolithic burials in the peninsula, at the same time adding more items (e.g. stone and shell beads, shell spoons) to the artifact inventory of the Malayan Neolithic. The large number of whole, as well as partly restorable earthenware vessels recovered from the site has also expanded our knowledge on the range of pot forms and types of surface decoration.

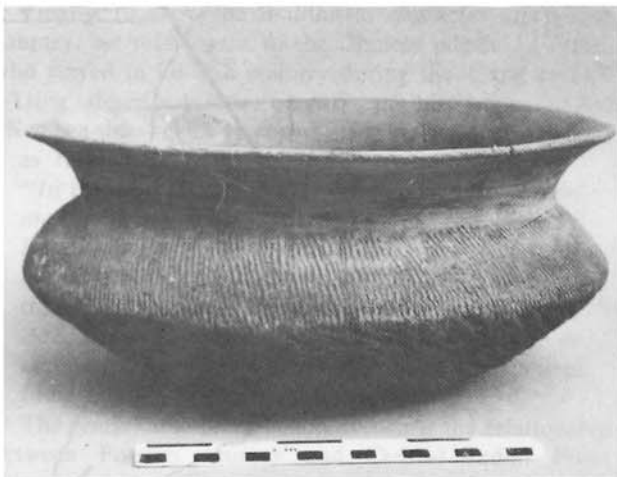
The early Gua Cha excavations, on the other hand, have yielded little information on the subsistence economy of the Neolithic groups(s) involved. It was not until the 1979 excavation that attempts were made to recover (by flotation) plant food remains. Unfortunately no recognizable plant food remains were found in the prehistoric deposits. According to Bellwood (1985) there is no evidence to suggest cereal cultivation at Gua Cha, but some kind of horticulture can be assumed.<sup>7</sup>

Indirect evidence for the presence of some form of horticulture has also been suggested earlier by Dunn (1964). The evidence came from the Gua Kecil III levels

where both pottery and ground stone artifacts were present. In the levels below this phase, cord-marked pottery were already present, but there were no ground stone tools. These earlier levels namely, Gua Kecil I and II, yielded lithic finds comprising flake tools and Hoabinhian type tools. The levels Gua Kecil I and II are regarded by Dunn as deposits representing the late Hoabinhian phase, and it is interesting to note that Dunn's quantitative analysis of the excavated finds showed a marked drop in shell and animal bone counts in the Gua Kecil III levels and not in the earlier (Hoabinhian) levels. The marked drop in shell and bone counts at Gua Kecil III apparently suggest a decline in hunting and gathering activities. This has been interpreted by Dunn as indirect evidence for the appearance of horticulture. Similar quantitative analysis was also conducted at Kota Tongkat (Peacock 1917). Both the Gua Kecil and Kota Tongkat evidences, however, are from small scale excavations. Further work at these sites are required to confirm the observations of their earlier excavators. Furthermore, it is also necessary to bear in mind that the cultural stratigraphy at the cave sites are often beset with problems, especially in the absence of clear natural stratigraphy to assist in our interpretation of the cultural stratigraphy. My own view is that very often fine sub-surface disturbances in the cultural layer of each occupational phase is hard to detect. This can often result in the mixing of cultural materials from different occupational phases. This problem is particularly acute in the inter-faces between the occupational phases. In view of this, one can only accept with some caution the Gua Kecil and Kota Tongkat findings.

In the past, with regards to the study of the Neolithic in Peninsular Malaysia, too much emphasis has been placed on the cave sites, and many of the potentially important open-sites have not been properly investigated. This is probably due to the fact the archaeological record in the open sites is usually less well preserved. The problem of stratigraphy is even more serious at these sites since many of the sites are often located near the rivers. Flooding during the heavy rains and the erosion of river banks can result in serious disturbances of both the horizontal and vertical stratigraphy of the sites. There is also a tendency for the early researchers to look for sites in the caves and rock-shelters since their efforts were often rewarded by finds. Only Evans (1931) attempted an excavation of an open site at Nyong on the banks of the Tembeling River in Pahang. In other instances, however, excavation was no longer possible because the sites have already been destroyed by tin mining activities. These are often sites where Neolithic finds were accidentally unearthed during mining operations, but report on their discoveries reached the museum authorities much too late to prevent further destruction of the sites.

The importance of open sites in connection with studies



*A wide-mouthed carinated pot from Jenderam Hilir site. Black burnished on the exterior upper portion, and cord-marked below. Notice the two varieties of cord-marking featured on the same vessel.*

related to prehistoric subsistence economics and settlement patterns cannot be overemphasized. Cave sites were only occasionally frequented by the Neolithic communities, and were also sometimes used for burials. This may be one of the reasons why no recognizable plant remains have been recovered from the prehistoric deposits at Gua Cha. Study of the palaeoenvironment within which the prehistoric economic system operated would also be pertinent to our understanding of the actual settlement sites themselves and may yield more information than the caves sites. With recent developments and advances in the sciences, more scientific analytical methods are now available to the archaeologists. Besides chronometric dating methods, a wide range of laboratory analyses can be used to extract data previously thought impossible to obtain.

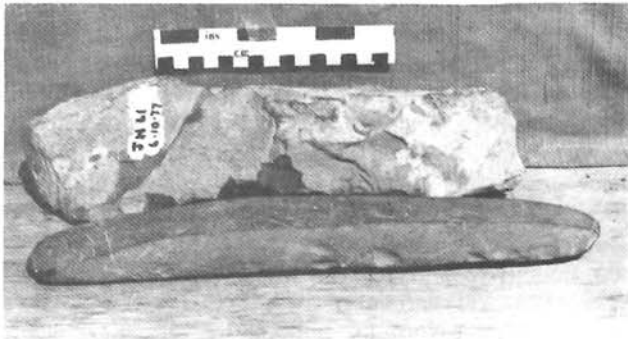
Recent work at Jenderam Hilir in South Selangor (2° 53' 25" N, 101° 43' 51" E) has for the first time, been able to throw some light on the settlement pattern and economic activities of a tripod pottery group in the peninsula. Abundant cord-marked pottery (including over 135 legs of tripod vessels), several ground or polished stone tools and other stone artifacts and implements have been recovered from the site. The site itself is located in the floodplain of the Langat River near the confluence of the Langat and Semenyih Rivers. The presence of tripod pottery in Peninsular Malaysia has long been known since their discovery at Kodiang (Gua Berhala in Bukit Kepelu) by Williams-Hunt (1952) in Kedah, and Gua Bintong (Peacock 1959) in Perlis. At the time of their discoveries archaeological interest was focused mainly on the tripod pottery finds rather than the surrounding topography. It is interesting to note that although both were cave sites (in limestone hills)

they were located in, or in close proximity to the fertile Perlis plain. Recently tripod pottery finds have been reported from many more cave sites in the low limestone hills on the Perlis Plain. The geographical distribution of the tripod pottery sites in the peninsula clearly suggest that the tripod pottery communities apparently had preferences for certain types of localities for habitation-that of the lowland plains and fertile alluvial valleys. I believe that the preference for these locations are undoubtedly related to the change in subsistence economies. Very probably these were lowland dwellers practising some form of horticulture.

At the Jenderam Hilir site itself some degree of sedentism in their settlement pattern is indicated by various artifactual finds such as several stone adzes, more than 44 pieces of heavy stone equipment for various grinding and pounding chores. The latter tools are heavy items, many of them weighing from 1 kg. to 7 kgs. These are clearly not easily portable items and were most probably implements connected with still unspecified activities of the Neolithic community at the site. Judging from the wear patterns found on many of these implements, particularly the presence of deep grooves and deep circular depressions found on some of the grinding equipment indicate long and continuous use. The presence of pottery, especially large cord-marked storage jars and the tripods (characterized by splayed hollow feet which make them too cumbersome to pack) again points to some degree of sedentism at the site. X-ray fluorescence analysis conducted on the clay of the tripod pottery from the Jenderam Hilir site has shown that local clay sources were used highly indicative of local manufacture. More importantly still, the analysis has revealed quite high values for phosphorus ( $P_2O_5$ ) in the clay of the Jenderam Hilir sherds (tripods, and other cord-marked vessels). The values were 0.575 for the tripod (leg sample), 2.439 for a sherd of a cord-marked jar, and 0.653 for the base of a cord-marked bowl (all values are expressed as a percentage by weight of the element in the sample). Such values for phosphorus are very high compared to the values recorded for clay samples from other clay deposits near the site but from strata not contemporaneous with the prehistoric occupation. All these samples had low phosphorus values ranging from 0.013 to 0.33, and in one case there was no trace of the element at all. The very high values recorded for phosphorus in the Jenderam Hilir pottery samples is suggestive of the fact that the clay for making these pots were actually obtained from the nearby river bank or even within the habitation area. This is because high phosphorus content in the soils are usually found at habitation sites. The most likely cause for the high percentage of phosphorus is the decomposition of organic matter due to human activity. These organic matter may include human and animal excreta and



*Base of a Tripod Pot showing aperture where one of the legs was detached. Jenderam Hilir site, Selangor, Malaysia. Similar tripods were found in Kodiang, Kedah.*



A large unfinished adze; and a long finished adze from Jenderam Hilir site residues, as well as all types of food debris.

So far no direct evidence have been obtained from the site that would permit me to point more specifically at the types of activities directly related to their subsistence economy. However, judging from the geographic location of the site, as well as the evidence suggesting some degree of sedentism in their settlement pattern it is very likely that this prehistoric group was a farming group. In this connection it is also interesting to note that some pieces of burnt clay have also been excavated from Jenderam Hilir.<sup>8</sup> It is tempting to link these finds with slash and burn activities that might have taken place during the settlement at the site. Further investigation has to be undertaken before this interpretation can be confirmed. Pollen analysis conducted on excavated soil samples from the site has indicated an open environment. This is suggested by high counts of fern spores, and the presence of pandanus. However, the evidence are again tentative since the site has undergone some disturbances in the past.

### FOOTNOTES

1. The term "Neolithic" here refers to those prehistoric cultures which do not have metal artifacts, and which possess at least two of the following traits viz. fully ground stone artifacts, earthenware pottery, and a food-producing economy based for the most part on horticulture.
2. The discoveries are reported mainly in the BRM, JMBRAS, JFMSM, and FMJ.
3. Excavations by L. Wray at Gunong Cheroh in 1886, and W.M. Gordon at Gua Kerbau in 1921 were inadequate by modern scientific standards.
4. It was only in 1951 that the first samples were submitted (by P.D.R. Williams-Hunt) for radiocarbon dating.
5. Minor disturbances caused by burrowing animals have, for example, been reported by Stein-Callenfels and Evans at Gua Kerbau (Stein-Callenfels and Evans 1928:152). Similar disturbances were also noted in the Bukit Chintamani deposits (Tweedie 1953:14).
6. The best general account is found in M.W.F. Tweedie's "The Stone Age in Malaya" (1953).
7. Also see Bellwood and Adi 1981.
8. Vast quantities of pieces of burnt clay have also been reported from a major tripod pottery site at Ban Kao in West-Central Thailand (Sorensen 1964, Sorensen and Hatting 1967).

### REFERENCES

- ADI Haji Taha  
1983 "Recent Archaeological Discoveries in Peninsular Malaysia". *JMBRAS* 56 (1):47-63.
- BATCHELOR, Brian  
1977 "Post Hoabinhian Coastal Settlement Indicated by Finds in Stanniferous Langat River Alluvium near Dengkil, Selangor, Peninsular Malaysia". *FMJ* n.s. 22:1-55.
- BELLWOOD, Peter  
1985 *Prehistory of the Indo-Malaysian Archipelago*. Sydney: Academic Press.
- COLLINGS, H.D.  
1937 "An Excavation at Bukit Chuping, Perlis". *BRM* 1 (2): 94-119.
- DUNN, F.L.  
1964 "Excavations at Gua Kecil, Pahang". *JMBRAS* 37 (2): 87-124.
- EVANS, I.H.N.  
1931 "Excavations at Nyong, Tembeling River". *JFMSM* 15 (2): 51-62.
- LEONG Sau Heng  
1977 "Ancient finds from Kampong Jenderam Hilir". *MH* 20 (2): 38-47.  
1980 "Archaeology in Peninsular Malaysia, 1976-79". *IC* 22: 73-78.
- PEACOCK, B.A.V.  
1959 "A Short Description of Malayan Prehistoric Pottery". *AP* 3(2):121-56.  
1964 "The Kodiang Pottery Cones. Tripod Pottery in Malaya and Thailand with a Note on the Bukit Tengku Lembu Black Ware". *FMJ* 9 n.s.:4-18.  
1971 "Early Cultural Development in Southeast Asia with Special References to the Malay Peninsula". *APAQ* 6:107-23.
- SORENSEN, Per.  
1964 "Ban Kao". *JSS* 52(1):75-97.
- SORENSEN, P. and T. HATTING  
1967 *Archaeological Excavations in Thailand. Vol. 2 Ban Kao (Part II)*. Copenhagen, Munksgaard.
- STEIN-CALLENFELS P.V. and I.H. EVANS  
1928 "Report on Cave Excavations in Perak". *JFMSM* 12 (6): 145-159.
- STEIN-CALLENFELS, P.V. van and H.D. NOONE  
1940 "Report on an Excavation in the Rock Shelter Gol Bait, Near Sungai Siput (Perak)". *PTCPFE* 119-125.
- TWEEDIE, M.W.F.  
1940 "Report on Excavations in Kelantan". *JMBRAS* 18(2):3-22.  
1953 "The Stone Age in Malaya". *JMBRAS* (2):5-90.
- WILLIAMS-HUNT, P.D.R.  
1952 "Recent Archaeological Discoveries in Malaya". *JMBRAS* 25(1):181-190.

### ABBREVIATIONS

- AP Asian Perspectives. Honolulu.  
APAQ Archaeology and Physical Anthropology in Oceania.  
BRM Bulletin of the Raffles Museum, Series B. Singapore.  
FMJ Federation Museums Journal, Kuala Lumpur.  
IC Indonesian Circle. London.  
JFMSM Journal of the Federated Malay States Museum. Kuala Lumpur.  
JMBRAS Journal of the Malayan/Malaysian Branch of the Royal Asiatic Society. Kuala Lumpur.  
JSS Journal of the Siam Society. Bangkok.  
MH Malaysia in History. Kuala Lumpur.  
PTCPFE Proceedings of the Third Congress of Prehistorians of the Far East. Singapore.