

**SUMMARY
OF
ARCHAEOLOGICAL
WORK
IN SARAWAK:**

with special reference
to niah caves

sarawak museum



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INTRODUCTION

Before the Sarawak Museum began systematic archaeological work in Sarawak in 1949, the only meagre information about stone-age culture and early human activities in Borneo depended on the handful of stone implements in private possession of a few persons.

The Museum first began excavation at Sungai Jaong in the Sarawak River Delta of the First Division of Sarawak in 1949. Several other sites in the Delta were also excavated from 1949-1954. All these are however, predominantly proto-historical sites (dating back to the 10th century).

Several caves in the Bau District of the First Division were investigated at the same time. The results were, however, somewhat unimpressive. No stone implement or other stratified evidence of archaeological importance were encountered though shell middens and early earthenware sherds were widely distributed in these caves.

In 1954 a small reconnaissance expedition spent two weeks exploring and investigating the Niah Caves in the Fourth Division of Sarawak about 400 miles from Kuching. The result of this brief expedition was encouraging. So from 1957 up to 1967, large-scale seasonal expeditions averaging two months a year were conducted in the caves.

THE NIAH CAVES

The Niah Caves are located in a massive island of limestone completely 1,300 feet high set in the sub-coastal sandstone plains, 10 miles inland from the China Sea, situated at longitude $113^{\circ} 47'$ longitude and latitude $3^{\circ} 48'N$.

The limestone formation consists of several caves and caverns, the largest one, covering about 26 acres, is the Great Cave. This huge cave is some 200 feet wide and over 100 feet high in the main cave mouth which has a large undisturbed deposit well over 150 feet above present sea level.

It is here that the Museum has been excavating since 1957. This site is unique because it gives in situ a succession of phases from palaeolithic (old stone age) through mesolithic into neolithic (new stone age) which were well documented by artifacts. The Metal Age was, however, only slightly represented in situ.

Because of the undisturbed conditions prevailing in the site, the human deposits in situ remained well preserved without becoming fossilised. Human and faunal remains go back to 40,000 years to the depth of about 100"; any remains below this level disintegrated and the sequence is based on stone implements.

The following is a revised phaseology of the site brought up to date to 1967:

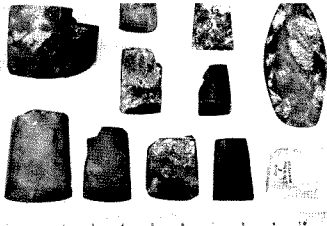
Revised Phaseology at West Mouth, Niah
(up to 1967)

| <u>Phase</u> | <u>Main material/characteristics</u> | <u>Approx. Niah Start (Date in round figs.)</u> | <u>Method of Dating</u> |
|-----------------------------------|--|---|--|
| Metal | Iron tools, imported ceramics, glass beads, death ships (for burial) | 700 A.D. | By coins |
| Intermediate (Neolithic) | "Soft tools", beads, elaborate pottery | c. 250 B.C.? | By coins "Donk" C14 |
| Late Neolithic | Quadrangular adzes, pottery, elongated extended burial, mats, nets. | c. 2,500 B.C. | By stratigraphy and coins C14 |
| Early Neolithic | Round axe | c. 4,000 B.C.? | By stratigraphy and coins |
| Intermediate (Mesolithic) | Advanced flakes; Edge-ground pebble tools | c. 10,000 B.C. | By stratigraphy in association with a burial |
| Early Stone | Smallish quartzite flakes | c. 30,000 B.C. | By C14 |
| Early Stone (Upper Palaeolithic) | Chopper tools and large flakes | c. 40,000 B.C. | Stratigraphy |
| Early Stone (Middle Palaeolithic) | Very "chip flake" | " | Flake dating |

Typology of Stone Tools from West Mouth, Niah

Six reasonably distinct types of stone tool can be provisionally distinguished at the Niah West Mouth site. These are

1. Quadrangular - smallish adzes or chisels, finely finished; always of a black (? basaltic) stone. These tools were found in association with earthenware pottery and (Mongoloid) extended burials. They are of the types common throughout the islands of S.E. Asia and on the mainland far north into China.



1. QUADREGULAR ADZES

2. Round - polished tools with fairly symmetrical cross-section, tapering to the butt. These tools are axes or adzes. Similar tools are known from Melanesia to Burma. These are not associated with any extended burials (Mongoloid).

2. ROUND AXES



3. Pebble tools - more numerous and much more variable in size and shape than the round and quadrangular tools. These intermediate tools, occurring between the polished neolithic tools and the palaeolithic rough flakes, can, at the time being, be treated as transitional - mesolithic. The intermediate material can be broadly phased into:



3. CHOPPER TOOLS

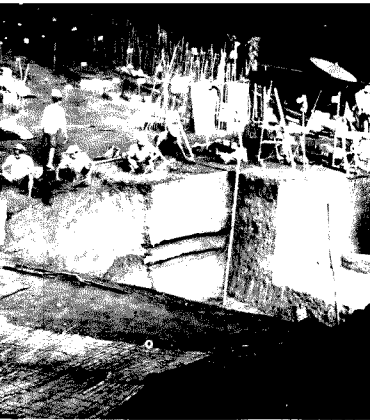
- i) Edge-ground adzes, usually small pebbles, sometimes ground all over to shape, almost to the extent of polishing;
- ii) Edge-ground axes, sometimes carefully symmetrically worked, the butt end commonly struck and flaked bifacially to a rough point;
- iii) Worked flakes of advanced kind.



4. VIEW OF MAIN SITE

Curiously enough, among the many stone tools found in Borneo, not one so far can be properly be classed as "Hoabinhian" which has become the accepted term for "middle stone-age" pattern in S.E. Asia.

In this band roughly between 42" and 72", a different type of burial, spread-eagled, flat but decapitated, bent over with head to knee, face downward, was



TE AT WEST MOUTH: NIAH

found scattered about. The dentitions of these remains had been identified in 'Melanoid' in character.

4. Flakes - occur in large numbers between pebble tools at all stratified levels in situ. 95% are one kind of quartzite. They show no finesse, reworking or other secondary features. No such tools have been found in S.E. Asia in sequence before. By western analogy, these

have widely been regarded as mesolithic. These tools from Niah, however, seem doubtful, both by stratification and C14 dating.

Four main types of flake have been distinguished to occur in situ:

- i) Flakes which have been carefully reworked, sometimes to a fine finish. These are less common, mostly occurring between 24" and 40";
 - ii) Smaller, usually less crude, nearly always of quartzite, found extensively around 48" and below;
 - iii) Big, rough primary flakes, very variable, and nearly always fairly well shaped and bladed. A few are dressed but no secondary working.
 - iv) 'Mid Sohan'
5. Chopper tools - crudely struck from pebbles occur below 72". They are all uniface or monofacial and with hammer marks on the butt end. These tools are smashed off (rather than struck off) at one end, to give a roughly chisel or chopper effect. These are not related to the Malayan Tampan, but seem parallel to some of the Sohan of NW India. However, Sohan forms show definite biface trimming; only one of our Niah tools has this feature, the others being uni-

face. Moreover, Sohan tools date c. 50,000 to 100,000 years and our C14 dating for this level where these tools occur is c. 40,000 years.

6. 'Mid Sohan' - ten inches below the c. 40,000 years C14 sample and directly underlying a well preserved human skull, a single and distinctive flake was found. This flake is rough and crude, but is notably thin, wide and sharp, with a coarsely faceted butt. It is the flattest in cross-section of all our Niah artifacts; of a quartzite. This tool so far does not resemble any others known from S.E. Asia. Dr. T.T. Patterson, who pioneered research on the Sohan palaeolithic culture of north-west India, examined this tool and gave his opinion that it appeared equivalent to the 'Mid Sohan' - that is Middle Palaeolithic.

Carbon 14 Dating

Charcoal is unevenly distributed throughout the occupation deposit right down to the depth of 160 inches and below at West Mouth. A series of charcoal samples were taken at various levels as shown below.

Professor Hl de Vries at the Physical Laboratory of the University of Groningen, Holland, had generously analysed all the Niah charcoal samples for us. Prof. de Vries is widely regarded as the most advanced and accurate expert of the C14 method.

| <u>Code No</u> | <u>Location of Sample</u> | <u>Trench</u> | <u>Ascertained (years)</u> | <u>Original date (B.C.)</u> | <u>Margin of error ± 30%</u> | <u>Material sampled</u> |
|----------------|--|---------------|----------------------------|-----------------------------|------------------------------|--------------------------------|
| GR1897 | Sub-surface tree-trunk coffin; "late neolithic" in main cemetery | K/4 | 3,415 | 497 | 55 | Wood |
| GR1895 | Charcoal "seal" sub-surface in the entrance to main occupation | W/2 | 3,450 | 502 | 70 | Charcoal |
| GR1159 | Upper & Middle band of "flake and blade" levels in main occupation, c. 48" | E/1 | 19,570 | 17,513 | 190 | Charcoal |
| GR1158 | Lower band of above; c. 72" | E/1 | 32,630 | 30,678 | 200 | Charcoal |
| GR1339 | Level of large rough tools, between 96-100" in main occupation | K/1 | 38,600 | 37,634 | 1,000 | Charcoal, charcoal, four-flint |
| GR1338 | At c. 100" | | 41,300 | 39,533 | 1,800 | Charcoal, deep sink |

CONCLUSION

The following aspects may be stressed in conclusion:

1. A rich Chinese traffic with Borneo, especially in the T'ang (618-908 A.D.) traded ceramics, beads and metals for Niah Birds' nests, horn-bill ivory, etc;
2. Before the advent of metal, the Late Neolithic was characterized by quadrangular tools, associated with Mongoloid peoples and quite a rich material culture;
3. An earlier Neolithic, merging downward into 'Mesolithic', is characterized by round axes, distinctly stratified at Niah;
4. A transitional Mesolithic is complicated; and not provisionally classified with three main tools. All artifacts of this period at Niah are dissimilar from the usual Asian forms;
5. The relationship between Niah chopping tools and the Sohan of north-west India is confirmed and elaborated - with implications possibly affecting the classification of such tools widely in Asia;
6. There is indication that much material continues to 144 inches and below beyond the present limits of C14 dating (c. 40,000 years). The only stone tool below this level is a tiny flake, regarded as 'mid Sohan' at 110 inches;

7. The mammal fauna shows little sign of change within the 40,000 years span. The imported food and endemic cave fauna in the Upper Palaeolithic resembles that of today but includes large mammals like Tapir, Rhinoceros and Giam Pangolin no longer found anywhere near Niah. Rhinoceros remains occur at all levels from subsurface to 72" (Upper Palaeolithic 40,000 B.C.). Unfortunately, Niah remains are insufficient to indicate which of the two Rhino species they belong to. Historically, the Sumatran Asiatic two-horned Rhino (*Diceros sumatransis*) is recorded from Borneo. Bones of Giam Pangolin (*Manis palaeojavanica*) were well represented in the deeper levels of Niah deposit as ordinary non-fossil bone. Fossil remains of this animal was known to be collected in association with *Pithecanthropus* in Java by Dubois. Therefore this animal survived into relatively recent times in parts of Borneo. But unknown in historical time anywhere in the Archipelago.

This evidence may be necessary to reconsider the dating of major faunistic changes in the Upper Pleistocene of South-East Asia hitherto largely assumed from western parallels.

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