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THE GREAT CAVE OF NIAH

A PRELIMINARY REPORT ON BORNEAN PREHISTORY*

by

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2II No systematic archæology was undertaken in Borneo until 1949, when the Sarawak Museum began operations on a small scale.[1] Hitherto, the meagre information about stone-age sequences and early human activity in the island depended entirely on collections of stone tools and other objects not found *in situ*.[2] Misunderstandings readily arise from deductions based on such data, among people much on the move in recent centuries and carrying stone tools latterly as sacred talismans, of supposed thunderbolt origin.[3]

In the past decade we have gained extensive information by excavations at several related sites around Kuching in the Sarawak river delta[4] and at Kota Batu in the State of Brunei[5]; but these are predominantly proto-historical Chinese and 'Indian' sites covering the T'ang (and perhaps earlier) on through the Sung dynasty into early Ming.

With the advice of Sir Wilfred le Gros Clark, F.R.S. (who visited us in the field), encouragement from Dr. G. H. R. von Koenigswald (in correspondence), and much active co-operation from Mr. M. W. F. Tweedie (lately Director of the Raffles Museum, Singapore), search for earlier material extended to a large group of small limestone caves (Bau Caves) in south-west Sarawak, of the type usually yielding evidence of fairly early (neolithic and mesolithic) man in Malaya and elsewhere in South-East Asia.[6] But the results were somewhat inconclusive. Big shell middens and early earthenware sherds in bulk were located widely, but without a single satisfactory stone tool or other stratified evidence of importance.[7]

Meanwhile, in extensive inland journeys, I inspected many caves, without finding indications any better than at Bau except in one case: the isolated hill called Gunong Subis, an island of limestone set in the sub-coastal sandstone plain, 10 miles inland, near the Government station at Niah, 300 miles up the coast from Kuching, longitude 113° 47′ E., latitude 3° 48′ N. Here there are one large (*c.* 26 acres) and many smaller caves; the large one is generally referred to as Niah (Great) Cave (Plate M*a*, *b*).

Niah Great Cave

This magnificent cathedral, some 800 feet wide and over 200 feet high in the main mouth, showed no superficial signs of ancient human activity; though there is daily and even drastic extraction of guano[8] deposited by literally millions of bats and swiftlets (*Collocalia*) which live inside the cave, and seasonal extraction of the nests of the swiftlets as a major source of Birds' Nest Soup.[9] Fortunately the cave mouth is unaffected by these latter-day human goings-on. It is also light, cool and usually perfectly dry. There are over a million swifts and bats in the cave which are highly edible. If there ever were early cave men in Borneo, where better to live than here?

So, in October, 1954, again with my friend Michael Tweedie, and Mr. Hugh Gibb, a small reconnaissance expedition spent two weeks examining Niah, which is awkward (and therefore expensive) to get at. We did not find enough to justify a report, but at last did find unquestionable evidence of long-term human occupation, habitation and burial, with signs of distinct stratification.

Thus encouraged, in 1957 the Sarawak Museum, greatly assisted by equipment and transport from Brunei Shell Petroleum and Sarawak Oilfields Ltd. (Shell) and by Henry Waugh & Co., mounted a larger expedition, which first reached the cave on 27 February and left on 26 April. Tweedie and Gibb again generously helped during parts of this dig; and the latter filmed the whole process for B.B.C. Television.[10]

Although only a fraction of the excavation is complete, the results are now sufficiently substantial to require a preliminary report. From the previous total blank in Borneo, Niah now emerges with probably the most varied and wide-spanning neolithic, mesolithic and upper palæolithic material found together in any one cave in South-East Asia; and with the further possibility that it also continues steadily deeper.

Habitation and Cemetery Sectors. Excavation has so far been confined to the northern side of the main mouth of the Great Cave (Plate M*a*, *b*). This is the only direction in which there is quite easy access, by ladder, up the cliff face. It is relevant that here the present cave floor, as a whole, is over 100 feet above a deep gorge and stream, with precipitous approaches on all sides. This has prevented wild animals, particularly pig, deer and porcupine from getting into the cave and disturbing the deposit recently—a major cause of trouble in other Borneo caves. This may also have been in earlier times of advantage to primitive man, as protection. This part of the cave is not affected appreciably by the mighty population of swiftlets and bats inside. Tests over 1954–57 show that the deposit rate of guano here is negligible—no more than surface insects and breezes can remove.

There is no flowing water *inside* the cave, no leakage through or drip from the roof, in this sector. There has been nothing apparently to cause any sort of strictly geological deposit in this mouth, for thousands of years past at least. What we have been excavating, therefore, is a broadly human and related deposit, for at least the top 72 inches, except for small-scale accretions of limestone fallen from the roof. Any such limestone is easily detected by hydrochloric acid. It forms only a small, usually negligible, part of the deposit. Larger blocks of ceiling fall are not to be mistaken for sections of the original cave floor, owing to the different lines of deposition and micro-structure within

* *With Plates M, N, O and P and two text figures. The publication of this paper, with its exceptional number of extra plates, has been generously assisted by a grant.*

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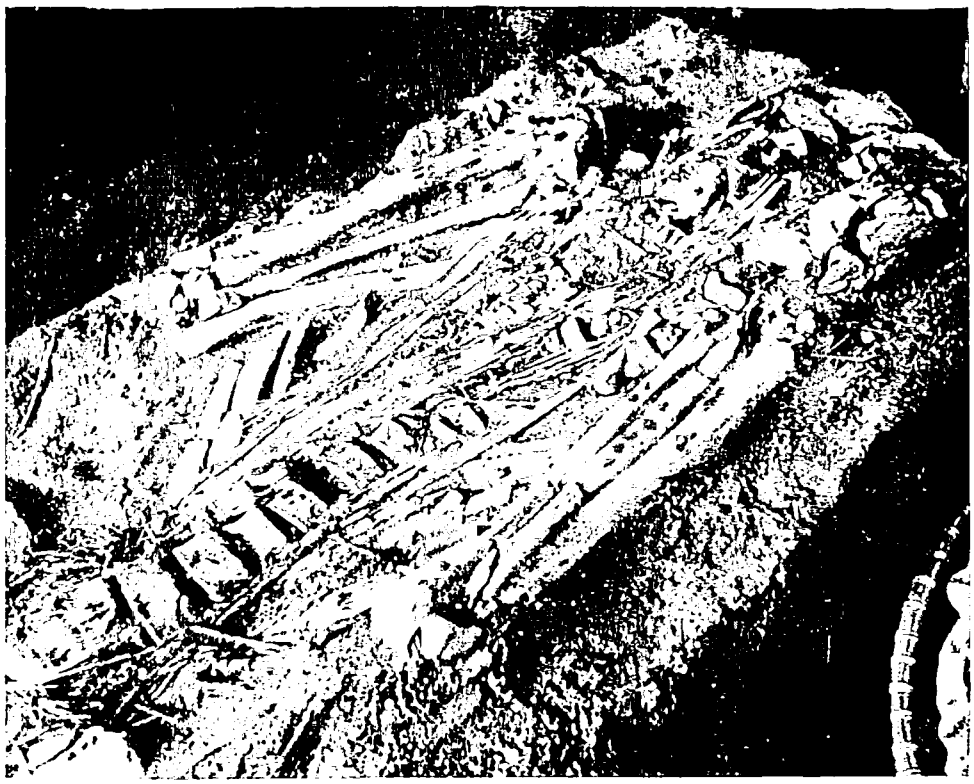
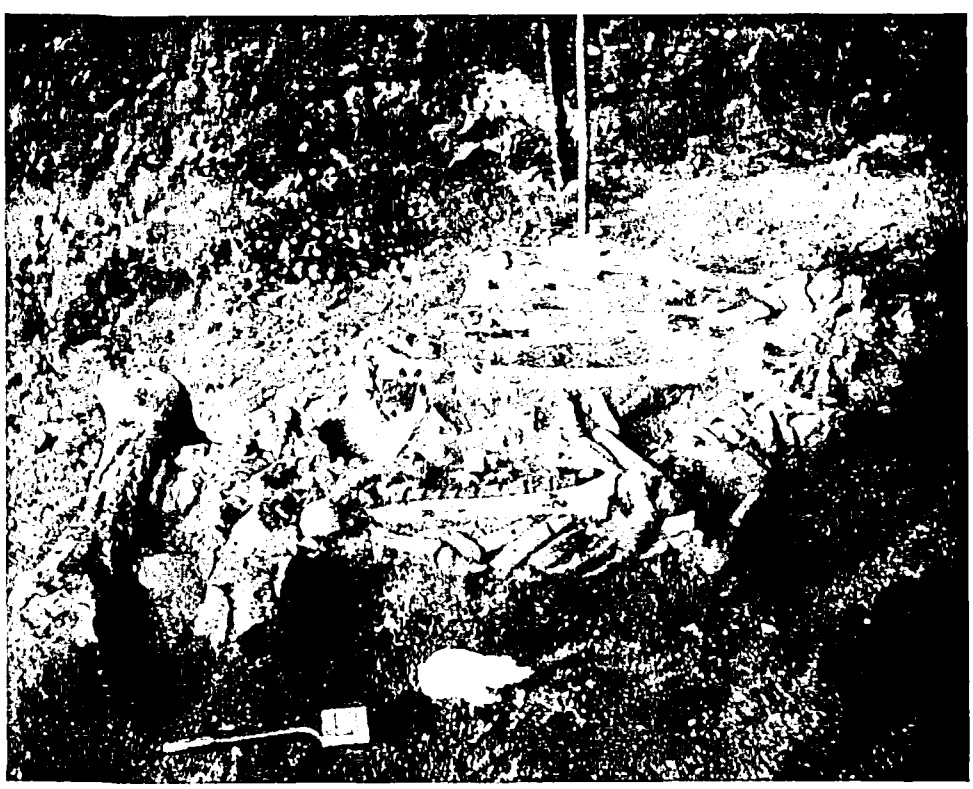


(a) *Part of typical extended burial, probably late neolithic. Leaf 'matting' around vertebræ. At depth of 6–12 inches in cemetery. Associated pottery, beads, etc.*



(b) *Deeper 'contorted' burial, at edge of cemetery. No associated artifacts, but 'pillow'—from which skull has slipped—of ? rhinoceros femur.*

INHUMATIONS IN THE GREAT CAVE, NIAH, BORNEO

this limestone. In this, we are fortunate, because Shell geologists have lately made a detailed study of this formation and drilled to nearly 10,000 feet during oil-search nearby.

Thus, excavation at this point is both complicated and facilitated in that it deals with an exceptionally uniform, fine-grained material. The principal disadvantage is that this fineness demands fine excavation technique; much of the work has to be done with brushes, sometimes by gentle blowing, and always by patient Asians (mostly trained Malays imported from our delta sites). The principal advantage is that everything hard or substantial which does *not* bubble under hydrochloric acid is practically certain to be extraneous; and under the circumstances, most probably brought in by man. This makes it relatively easy to sort pieces of stone, for instance. Moreover, the limestone in this cave is normally so soft that it cannot be confused, in the hand, with any stone hard enough for human use. In Bau Caves[7] the surrounding limestone is often harder.

Behind this habitation in the mouth, the cave slopes upwards and inwards, towards darkness. In this inner part, there is an extensive 'cemetery' of deliberate and careful burials. For present purposes, it is convenient to distinguish the outer mouth as 'habitation,' under more or less continuous occupation, and the uphill part behind as the 'cemetery'; there is, however, some overlap between the two in detail.

The depth of the human deposit decreases as we go uphill and inward. In the cemetery at about 150 feet from the outer mouth, it averages 18–30 inches. In the main habitation, the deposit of shell,[11] charcoal and bone (other than bat and swift) certainly continues below our present deepest trial (100 inches), to 150 inches (auger tests (Plate N*b*), and studies by Shell palæontologist Dr. F. van Veen, who gave much valued assistance on the spot).

Objects from the Main Habitation

The main habitation has been studied in layers, ranging in depths from 1 to 12 inches, as occasion required. Apart from shell[11] and bone, which occurred in large quantities, about 5,000 material specimens have so far been collected in this sector. The main enduring identifiable objects can be preliminarily classified as follows:

Artifacts

Earthenware—in bulk to 12 inches, only fortuitously below 24 inches; several types (*q.v.*).
Bone points and other bone 'tools'—numerous, mostly rather deep.
Antlers—in middle layers; cut and scraped (a few).
Shell scrapers—a few, including some deep-down oyster blades.
Shell ornaments—usually opercula of a large land form; bored. A shell ring and several broken shell bangles (*Trichidna*?); mother-of-pearl; belt toggles.
Quartz pebbles—fire strikers (in every layer) and one fine quartz blade.
Stone pounders, rubbers, sharpeners, hammers, firestones and potstones.
Stone tools (and cores) of several main 'styles,' made from a wide variety of extraneous stones.

Food and other remains

Animal bone—usually charred, in bulk.
Shell—in great quantities.[11]
Nuts—many, especially large 'candlenuts.'
Damar gum—tree gum (*Shorea sp.*) for light, fixative, and pottery 'glaze.'
Stone—quantities of stone and clays, unworked.
Hæmatite—rubble and powder.
Charcoal—throughout the deposit.

Charcoal—Carbon-14. Throughout the occupation deposit, charcoal occurs in pure form—and continues (according to auger tests) well below our present downward limit of 100 inches. Through the good offices of the Shell Company and the generous help and co-operation of Professor Hl. de Vries at the Physical Laboratory of the University of Groningen, Holland, two samples have now been analysed from about the middle of the main occupation, in the 'flake' layer. The upper limit of this runs at about 48 inches, the lower about 72 inches.

Professor de Vries (whom I have visited in Groningen to check various points) reports on carbon samples from approximately the upper and lower limits of this layer. The word 'approximately' has to be used here because absolute depth is not an absolute criterion in this cave. Until more of it has been excavated, it is very difficult—in this fine deposit—to correct depths from point to point exactly and give any mean validity. These two samples may for the moment be taken as primarily significant in that they were collected (by Mr. Tweedie) in the lower middle layers of the 1957 excavation, well above the present known downward lower limits of human habitation. Professor de Vries reports as follows:

GRO 1159: upper-middle limit—age 19,570 ± 190 (1957, Groningen) [17,613 B.C. ± 190.—Ed.].
GRO 1158: lower—age 32,630 ± 700 (1957, Groningen) [30,673 B.C. ± 700.—Ed.].

It is evident, whatever the margins of error, that this excavation is now well down into the Upper Palæolithic. The Mesolithic has been well documented in Indochina and Malaya; the *early* Palæolithic in Java and elsewhere. Niah may already fill a hitherto puzzling gap. Also, it gives, *in situ*, a *succession* from Upper Palæolithic, continuously upward through Mesolithic into Neolithic and above.

This '40,000 *plus* years' depth is definitely below the downward limits of the 'flake-and-blade' material. The relatively slow aging with depth here may be due to the intervening 'sterile' layer (*cf.* next section).

Stratification in Main Occupation. Niah shows a series of phases, documented exceptionally well by artifacts. Out in the main occupation mouth, the metal ages are only slightly represented; by that time the cave was used chiefly for burials. But metal-age and late neolithic pottery are found scattered outward, overlapping the occupation.

Underlying late neolithic polished quadrangular tools

(or their fragments scattered more widely) come round axes which occur right out in the occupation, and are characteristic down to about 24 inches. Below round axes, pottery disappears. The characteristic artifact is now some sort of 'pebble tool,' edge-ground. Below this, starting about 42 inches, is a wide band, rich in struck flakes of many shapes, clearly all of quartzite, small and not re-worked after initial striking. These are associated with especially large numbers of bone points.

Below 72 inches there is an apparently *barren* layer of about 12 inches to 18 inches, which may perhaps represent a period of suddenly increasing humidity and accelerated or modified decomposition. The deposit is mostly a pinkish, fine powder, devoid of carbon. But it is *not* powdered limestone or phosphate; it has so far not responded to any positive tests.

Under this seemingly sterile layer, we re-encounter shell and bone (including bone points), as well as charcoal. At this depth the material becomes more weathered, friable and difficult to take up intact. So we have only done enough to make sure that there is something worth doing more thoroughly, with chemical and technical aids, later (*cf.* tool type (*v*) below).

Typology of Stone Tools. Five reasonably distinct types of stone tool can provisionally be distinguished at Niah. The present distinctions by type relate to actual stratification in the site. (The type numbers correspond with those of the text figures kindly drawn for me by Mr. H. J. Gowers of the British Museum.)

(*i*) *Quadrangular.* Smallish adzes or chisels, finely finished; always of a black (? basaltic) stone. Much like tools of the normal Malayan neolithic.[6] No other quadrangulars have been recorded from Borneo, among the hundreds collected from native sources by Evans and myself[2, 3]; but the smallest (fig. 1*a*) has an unusual flattened top forward, reminiscent of some gouges from North Borneo and Brunei Bay.

(*ii*) *Round.* Polished tools with fairly symmetrical cross-section, tapering to the butt. Axes or adzes, ranging from the beautiful small one illustrated (fig. 1*b*), to one three times larger made from a roughly worked quartzite pebble. Never of the same stone as the quadrangulars.

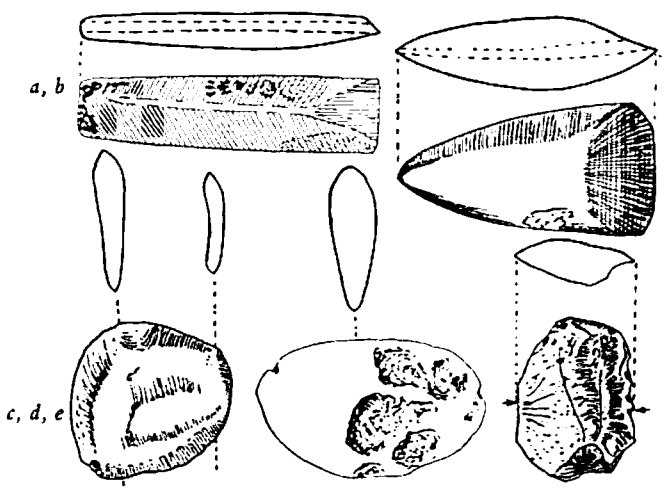


FIG. 1. STONE TOOLS FROM NIAH CAVES
(*a*) *Type* i; (*b*) *Type* ii; (*c, d, e*) *Type* iii *a, b, c; see text. Drawings by H. J. Gowers*

Similar tools are known from Java and extensively in Melanesia, but not clearly from Borneo and not in intelligible sequence from Malaya. The occurrence of both quadrangular and round in separate layers of the same site is so far unique.

(*iii*) *Pebble Tools.* More numerous and much more variable in size and shape than the previous types. The largest is a massive thing, nearly 6 inches long, roughly circular. But one of the smallest (fig. 1*c*) is almost a perfect miniature of it, with the same unusual features: one end shaped by flaking towards a point, the other very carefully edge-ground, on both sides, in a semicircle. These two and others are more or less symmetrically worked on both sides. Others again are definitely uniface; some of these are substantially re-worked struck flakes (fig. 1*e*).

There does not appear to be any distinct stratification of sub-types, as yet. These pebble tools are not nearly related to the 'Sumatran,' nor to the widely distributed 'Hoabinhian,' both of which I have examined in detail. The only close parallel may be a tool from the Japanese mesolithic, figured by Maringer,[12] which I have not examined.

(*iv*) *Flakes.* Struck flakes occur in large numbers below the pebble tools. 95 per cent. are one kind of quartzite, with much the same variety of shape and size as those illustrated (fig. 2). They show no *finesse*, re-working or other secondary features.

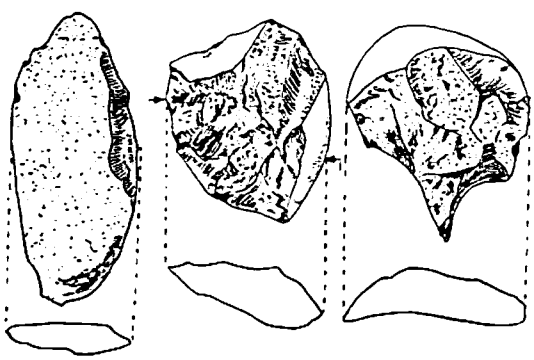


FIG. 2. STONE FLAKES FROM NIAH CAVES
Type iv; *see text*

No such tools have been found in South-East Asia in sequence before. By western analogy they have widely been regarded hereabouts as mesolithic; this seems doubtful from the Niah results, both by stratification and Carbon-14.

(*v*) *Chopper Tools.* The small amount of excavation so far undertaken below 72 inches has given us six large, clumsy stones of extraneous origin, smashed off (rather than properly struck) at one end, to give a roughly chisel or chopper effect.

These last tools (*v*) superficially do *not* appear to be

related to the Malayan *Tampan* first identified by Collings,[13] with which I am well familiar. But they do seem distinctly to parallel some from the Soan of North-West India—including a pebble chopper illustrated by Dr. Kenneth Oakley[14] from the Early Soan; and another in the British Museum of Natural History (No. G.D.E. 1178) from the Early Upper Soan, which has been compared in the hand with Niah specimens, in company with Dr. Oakley, to whom I am beholden on this account. These Soan forms show definite biface trimming; only one of the six so far obtained from Niah has this feature, the others being uniface. Soan tools date perhaps about 50,000–100,000 years back in India. There is no major inherent improbability in relating these (in time) to 'below the flake layer' and well under the *c.* 32,000-year level of our lower Carbon-14 sample from Niah in Borneo.

There are many chips and fragments from the working of extraneous stone. One finished tool, fitting none of the above categories, was found at 34 inches well out in the main occupation. It is 4 inches long, irregularly triangular in cross-section at the butt, where it is roughly flaked. The bottom side is ground flat and runs into a polished blade tip, which from the top side slopes down with a beaked effect.

Origins of Extraneous Stone. Apart from the black stone of the quadrangular tools and the flake quartzite, there is a remarkable variety of different stones used. As well as hard stone for tools, there are many well-used fire-strikers of quartz pebble, some of them with a jewel-like beauty of their own.

From the immediate vicinity, plenty of sandstone has been brought in for rubbers, pounders and mortars. From the bed of the Niah river, flat pieces of fairly hard shale have been imported, principally as sharpeners. Apart from these two softer stones, nothing is yet known of the point of origin for any one of the extraneous pieces found inside the cave. Existing geological evidence is little help. Energetic enquiries, travels up into the headwaters and elsewhere, by attached Shell geologists and Museum personnel, have so far failed to illuminate this problem. It can only be said, at this stage, that many hard stones have been brought in from far away; and that none can yet be shown to be easily available in the immediate vicinity.

The Cemetery Burials

As we come in, uphill, the whole emphasis becomes funerary. In an area 80 by 30 feet—still very incompletely studied—we have at least 70 primary (skeleton) or secondary (urns containing bones, etc.) deliberate human burials.

None of these cemetery burials belong to historical times. Smaller caves in the vicinity contain skeletons often exposed by recent disturbance, associated with ceramics and beads of sorts still in use among inland peoples. These probably represent Punan or related activity of the past few centuries.[9] Such superficial remains (also common around Bau) are probably those of which Alfred Russel Wallace heard while he was in Sarawak in 1855; and which in 1864 caused T. H. Huxley to forward the recommendation that an expedition be sent to study them.[15] No parallel remains occur in the cave mouth now under review.

The cemetery contains five fairly distinct types of burial. It would be quite unwise, at present, to separate them definitely by time or cultural association, pending fuller study—and in view of the wide variety of funerary practices carried out, even within one group, by Borneans up to the present day. We can only summarize, therefore, to date:

(*i*) *Urn burials.* Secondarily, in massive, local, earthenware urns and pots (Plate O*a*). In one of these a tiny (? ritual) knife was found; pieces of bronze in others. Small beads, usually stone or seeds, but some glass, in loose association with this and the next type.

(*ii*) *Extended burials.* Commonly laid out on coarse leaf 'matting' (Plate P*a*) with a wooden pillow, and with earthenware associated: in two cases pieces of bronze near the mouth. The heads always point uphill into the cave, *except* in the case of one double burial, where feet overlap and one head points outwards, the other in and up, at 180°. Sea shells, cowries, a bored gypsum pendant, clay fishing weights (used as beads?), etc., in association.

(*iii*) *Hæmatite burials.* Either a mass of bones (one in a rough coffin of wood) or a small cluster. Brilliant magenta, coloured from extraneous iron ore. Associated objects include one quadrangular axe, matting and netting wrapped round the bone.

(*iv*) *Flexed burials.* In the cemetery only one so far, at the upper limit, almost in the dark. But this is characteristic of several others deeper in the *habitation* area. No associated objects. Evidently 'early' by layering, and—assuming the shallow burial which seems to have been usual here—perhaps mesolithic. Laid neatly on one side, arms and legs crossed and bent, in various ways; head usually pointing outward, not inward and uphill.

(*v*) *Contorted burials.* In one group, along the edge of the rock shelf margining both the cemetery and inner habitation are four burials, within 90 square feet, and deeper than any in the cemetery. These are distinguished by extraordinary positions—face down, head crushed into the chest, arms splayed out sideways or arms clutching head. The only associated object is the hip-bone (?) of a rhinoceros, as pillow for one (Plate P*b*). It is very difficult to stratify at this point yet, but these could be earlier than (*iv*) above.

Of quadrangular, round and pebble tools recorded about the cemetery, only the first can fairly safely be regarded as deliberately associated with a burial. Struck flake and other crude, deeper-down tools, occurring below 42 inches in the habitation area, have not yet been recorded in the cemetery. Correspondingly, only burials of types (*iv*) and (*v*) have been found in the habitation area, in all cases on the inner, cemetery side of it.

Hæmatite Associations. The clusters of hæmatited bone provide a special puzzle. It has been usual to regard such funerary uses on the mainland as mesolithic. It is difficult to believe that this fully applies in Niah. Rather, the hæmatite seems to be associated with the more advanced people who used the cave, though it can hardly be acci-

dental that several of the pebble tools (including the largest, already described) are impregnated with hæmatite.

The most striking and frequent use of this vivid colour, however, is in decorating the most developed and remarkable kind of pottery at Niah. This 'three-colour ware' (which so far has no parallels elsewhere in Asia) is decorated with plain bands of vivid red, which are interspersed with (usually alternating) bands of black (from soot) and yellow (from clay). The black is often arranged in strips, lozenges and triangles, against the red background; while dynamic patterns, etched with bone points or punched with the end of a reed or bamboo mostly occur on the yellow. The execution of these pots, some of which are massive—and often associated with the later burials—is very varied, vivid and individualistic; no two pots are alike, and different parts of the same pot even may be treated quite differently.

The Cemetery as a Pottery. The three-colour ware was made at the inside edge of the cemetery, over 100 feet from the outer mouth, where it is almost windless. Such pot-making in caves has been postulated for the Malayan neolithic by Tweedie, on deductive grounds,[6] but not, I think, previously *proved* in South-East Asia. At Niah, pieces of this ware, already coloured with hæmatite and decorated, occur unbaked in association with quantities of damar gum, very small shells (too small for food, *e.g. Corbicula*), knives and spatulæ finely made from bone, scrapers and knives from the opercula of large snails. In three sections (K2–K4) sherds and these other objects form a dense accumulation, along with lumps of hæmatite, yellow clay, charcoal and wood ash.

Another striking feature in the three-colour ware and in some plain pottery at Niah is the way in which damar gum has been applied. It is commonplace, in Borneo today, for the Kelabits, Muruts and other peoples to apply damar to their pots outside, as a 'glaze.'[16] But damar has also been applied *inside* on many of the Niah sherds, including one of the large earthenware urns used in secondary burial (Plate O*a*).

Fuller excavation of the pot-making section involves problems of the utmost delicacy and has therefore been postponed. It is too soon to say what other sorts of pottery were actually made in the cave. At least six other fairly distinct types have been recognized to date:

(*i*) Finely made, with an elaborate pattern applied by a beater, reminiscent of some Dongs'on types.

(*ii*) Paddle beater designs, simple, geometrical, often 'herring-bone'—close to modern native pottery.[16]

(*iii*) Cord-marked: a uniform, thin surface pattern applied by string wound round a stick.

(*iv*) Mat pattern: applied fairly uniformly by pressure.

(*v*) Net pattern: as (*iv*).

(*vi*) Shell pattern: wavy lines deeply stamped with the edges of cockle shells (*Arca*).

Of the above, only one type (*ii*) can be paralleled in the rich Sarawak Museum collections, covering the last century. In general, the shapes are simpler and to western eyes less moving than some of the graceful pieces which characterize the Malayan neolithic. But only two pieces (Plate O) have been found practically complete; much remains to be learned by reconstruction from sherds and further study. None are wheel-made.

Conclusion

Even at this stage of excavation at the Great Cave of Niah, it is possible to learn, in unusually simple form, more about the past than has hitherto been deducible from any cave in this part of the world previously. This is partly because caves had a low reputation as archæological sites, especially for anything earlier than the Mesolithic, in tropical Asia; and especially in the Indies. As my friend Dr. von Koenigswald has put it recently, with the weight of his great authority and experience:[17]

> 'In Europe man was compelled by the cold of the Ice Age to seek shelter in caves, and so the archæologist has little difficulty in finding a place where he can successfully dig. It is different in the tropics. Here the caves are the dwellings of bats, snakes and the great monitor lizards, and of course also of evil spirits. Hence they are not generally inhabited by men, and culture levels and skeletons are found only rarely.'

Fortunately (for me) for once von Koenigswald is wrong!

Notes

[1] See *Antiquity*, Vol. XCIX, 1951; and subsequent general reports in the *Sarawak Mus. J.* (1951–57).

[2] Principal papers of this type are: I. H. N. Evans, MAN, 1913, 86; H. D. Collings, *Sarawak Mus. J.*, Vol. V, 1949, Part 1, pp. 14–22; T. Harrisson, MAN, 1951, 40 (and in general, R. Heine-Geldern, *Science and Scientists in the Netherlands Indies*, New York, 1951, pp. 129–67).

[3] T. Harrisson, *Sarawak Mus. J.*, Vol. V, 1951, Part 3, pp. 534–40. Most of the tools referred to are in the Sarawak Museum; but the Evans collection is at Cambridge and Singapore, and some from Hose at the British Museum.

[4] *Trans. Oriental Ceramic Soc.*, Vol. XXVIII, 1954, pp. 1–11, Plates I–V; also *Far Eastern Ceramic Bull.*, Vol. IV, 1952, Part 1, pp. 16ff.; and as at Note 1 above.

[5] T. and B. Harrisson, *Sarawak Mus. J.*, Vol. VII, 1956, pp. 283–319 (preliminary report on Kota Batu to date).

[6] M. W. F. Tweedie, *Journ. Malayan Br. Roy. Asiatic Soc.*, Vol. XXVI, 1953, Part 2, pp. 1–90 (the best survey of South-East Asian prehistory).

[7] T. Harrisson and M. W. F. Tweedie, *J. Polynesian Soc.*, Vol. LX, 1951, pp. 2f.

[8] G. S. Wilford, *British Borneo Geological Survey, Annual Report*, 1951 (this survey of the cave's guano deposits was not concerned with—and did not notice—the non-guanoid areas which are of interest archæologically).

[9] T. Harrisson and G. Jamuh, *Sarawak Mus. J.*, Vol. VII, 1956, pp. 453–62, for a general account of cave folklore which attributes present human knowledge of Niah to quite recent times, when nomadic Punans are supposed to have 'discovered' it—which may well be correct, as the excavation evidence also indicates this break.

[10] B.B.C. Television showing, half-hour programme, 3 November 1957.

[11] Apart from shells, everything has been preserved from the habitation sector, and is now in the Sarawak Museum, Kuching, awaiting fuller study. Shell samples were kept from several layers and places, but bulk precluded preserving all. The rest—over 2,000,000—were sorted and counted by species for each sector and depth.

[13] John Maringer, MAN, 1957, 1, especially Plate A*a* and fig. 1.
[13] H. D. Collings, *Nature*, Vol. CXLII, 1938, p. 575, *cf.* also Tweedie, *op. cit.*, pp. 9 and 73.
[14] K. P. Oakley, *Man the Tool-Maker*, London, British Museum (Natural History), 1956, 3rd ed., p. 47, fig. 20*a*.
[15] T. H. Huxley, *Natural History Review*, Vol. IV, 1864, pp. 308, 472.
[16] On techniques of primitive potmaking in Borneo, including 'paddle-beating' and damar 'glazing,' see symposium of papers by A. R. G. Morrison, I. H. N. Evans and myself in *Sarawak Mus. J.*, Vol. VI, 1955, Part 5, pp. 295–306, especially at p. 302.
[17] G. H. R. von Koenigswald, *Meeting Prehistoric Man*, London, 1956, p. 28. He repeats this statement at p. 78, 'and [tropical] man had no interest in the damp caves inhabited by snakes, bats and evil spirits.'

MARRIAGE IN MODERN MAORI SOCIETY*

by

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London

212 Every society has what may be called its own ideology of marriage—a generally accepted constellation of ideals and expectations, attitudes and value judgments about marriage: how it should be contracted, the functions it should fulfil and the circumstances under which it may be terminated. The methods used for establishing a jural marriage, whether they involve written laws and documentary records or not, are normally designed to implement at least the major tenets of this ideology. Under conditions of accelerated social change, however, there may develop a divergence between the ideology of marriage on the one hand and the legal regulations governing the contracting and termination of marriage on the other.

Modern Maori marriage is an interesting example of the way in which the introduction of an alien ideology of marriage, and more especially of legal requirements embodied in parliamentary statutes, has affected the marriage pattern of a primitive people. The problem is to assess the extent to which modern Maori society accepts the European law as the criterion of validity in marriage and what place it accords to unions which are not in conformity with that law.

In pre-European Maori society, the one requirement which was essential to the validity of any marriage was the unanimous approval of the *whanau* of bride and groom, that is, of those kinsfolk on each side who, tracing descent from a recent progenitor, constituted one residential, economic and land-holding unit. The granting of such approval meant, in effect, the granting of community approval, for the inhabitants of each village community belonged, with the exception of slaves and some spouses, to one *hapu* (subtribe), which consisted of a series of *whanau* linked by descent from a common ancestor. There was more than one method of obtaining this approval. The preferred method was for the kinsfolk to take the initiative and arrange a *taumau*, a formal meeting of the two kin groups. The *taumau* often took place before the couple had met, and sometimes, especially in the case of those of *rangatira* (aristocratic) rank, while they were still in infancy. It was the agreement reached at the *taumau* which established the jural union. Gifts and ceremonial visits might be exchanged, but usually only if the groups concerned were *rangatira* or belonged to different villages. They were not essential. If an agreement made at a *taumau* was not honoured the consequences were as serious as if the couple had begun to cohabit. If his kin failed to secure him a wife before he was of marriageable age, a man could make his own choice. He then asked his father and his kin to approach the girl's *whanau* for him through a *taumau*. Alternatively, he could take advantage of any public gathering at which both kin groups were present to make a public proposal, which had to be answered before the gathering broke up. The approval of *kinsfolk* was not, however, always obtained *before* a conjugal union was established. If opposition was feared, a couple frequently forced the issue by allowing *themselves* to be discovered sleeping together. They were parted only if the grounds for disapproval were exceptionally strong. If the union was permitted to continue, the tacit approval of the community made it as valid as those established by more conventional methods.[1]

The signing of the Treaty of Waitangi in 1840 brought the Maori people under the jurisdiction of a form of government established by Europeans on the British model. The *full* requirements of the law with regard to the observance of marriage were not imposed upon the Maori people for 110 years. Up to 1908 Maoris might take advantage of the provisions of the Marriage Act or they were entitled to marry in accordance with English common law, that is, to be married by an episcopally ordained clergyman. 'Customary marriage' was also accepted as valid by the law but only for the purposes of succession to land and personal property. It was defined by the law as 'the contract of marriage created by consent merely without any formality of celebration.' Under the Native Land Act of 1909, marriages 'in accordance with Maori custom' were still recognized as sufficient for the purposes of succession, but for other purposes a marriage had to be celebrated either in the same manner as one between Europeans or in the presence of one of the Officiating Ministers registered under the Marriage Act of 1908, though it did not have to conform to any other of the conditions and formalities laid down by that Act. The

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