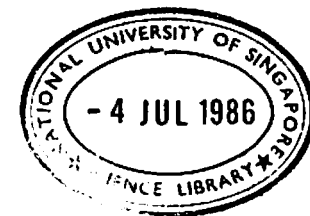
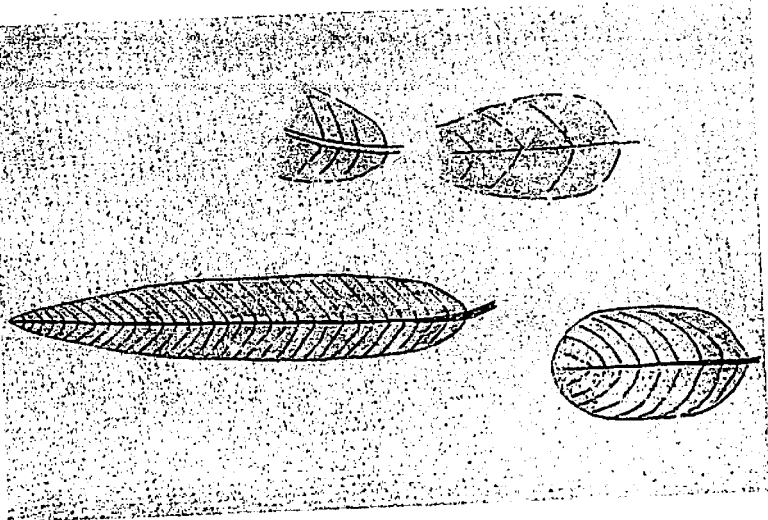


NATURE CONSERVATION
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WESTERN MALAYSIA, 1961

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TWENTY-FIRST ANNIVERSARY
of the founding of the
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C. R. Jones
Tertiary fossil plants from the Enggor
Coal Beds, Perak (approx. x 0.6)



C. R. Jones
Closely folded Lower Silurian flag-stones containing
graptolites, Pulau Tanjung Tembus Dendang, Lang-
kawi Islands.

PREHISTORIC FAUNA CHANGES AND LOSSES IN BORNEO

By

TOM HARRISSON*

We are well below and beyond the normal limits of radio-carbon (C-14) dating—about 50,000 years—in excavations at the Niah Caves in Sarawak (archaeological results are reported regularly in *Sarawak Museum Journal*, including special supplements in Nos. 12-13, now in Press). Down to this level and beyond, the teeth and bones of mammals, birds, fish, reptiles occur in quantity as the food remains of prehistoric stone-age men, who occupied this enormous cave system from before 50,000 B.C. until quite recent times. Indeed for four months in the year colonies of Malay and Punan birds' nest collectors still live in permanent cave dwellings to this day, while gathering the *Collocalia* swiftlet material for Birds' Nest Soup.

All excavated food remains are carefully preserved, identified, packed and sent to experts in Europe and America for specialist study when necessary. Work on birds, fish and reptiles is still developing, mainly at the Chicago Natural History Museum, which makes a generous annual grant to the Niah project to promote this aspect. Mammal bone has been the subject of exhaustive study by our colleague, Lord Medway, at the University of Birmingham in England; he has also actively participated in three seasons' diggings at Niah. Certain mammal bone has also been studied by the Earl of Cranbrook (bats), Dr. Edwards Hill of the British Museum (squirrels), Prof. G. H. R. von Koenigswald (teeth) at Utrecht and Dr. D. A. Hooijer (deep old material) at Leiden in Holland.

With this help, plus my own general observations as regular controller of the excavations and the work of Sarawak Museum collectors (an Iban Dayak, a Kelabit and a Malay) in compiling reference collections of the living local fauna for comparison, we are beginning to get a picture—however incomplete—of the "natural" changes in at least the edible and catchable past fauna of West Borneo.

* * * * *

Several major impressions so far received from this side of the cave work may be briefly stated here.

1. The Upper Pleistocene (archaeologically late Palaeolithic) fauna is very much more similar in general to present day than has often been

* Curator of the Sarawak Museum, Kuching.

supposed. Most species are the same, except for those clearly hunted to extinction as indicated below.

2. *But* many examples of existing species at deep (= old) Niah levels tend to run *larger* than any living examples. Some of those may deserve subspecific distinction.

3. On the other hand, there have been some surprising *changes* in the *quantitative components* of the local fauna—including even the bats living in the caves (some forms very common in the past are now scarce or locally absent and vice-versa).

4. At least three and probably four large animals all stated to occur in Dayak folklore and still found in Malaya are now proved in Borneo from stone-age levels at Niah.

5. Other large animals found abundantly as stone-age food do not now normally occur within hundreds of miles of Niah—notably orang utans.

6. Below 50,000 years the fauna is *still* overwhelmingly akin to modern with one tremendous exception—a Giant Pangolin hitherto only known from the Middle Pleistocene fossil beds of Java (a single specimen) and at Niah represented by true, non-fossil bone.

It will be clear that the last four of the above conditions could each be attributed to human influence; while the second, size change, could also be in some cases due partly to constant hunting out of larger forms by man. Indeed, as the Niah story unfolds, in this and in many other ways one feels that man began to *exercise major and often decimating influences on the local fauna very long ago*. That is to say: that he was more numerous and powerful—at least in Borneo—than has usually been supposed. And that he in fact needed then, almost as now, Wardens and a Conservation Service to protect big game and his descendants against his own skills as a hunter and greed as a protein-eater.

These are animals definitely identified in stone-age levels at Niah and certainly now no longer to be found anywhere within conceivable hunting range thereof:

- (i) Giant Pangolin—extinct in Pleistocene (see below).
- (ii) ? Elephant—nearest now are fertile herds 300 miles to the north-east.
- (iii) Tapir—extinct in Borneo before historic times.
- (iv) Sumatran Rhinoceros—probably none left in Sarawak and only a handful in all Borneo; used as charms and in one case

as a middle stone-age burial *pillow*, as well as in ordinary food remains in these caves.

- (v) Tiger—extinct in Borneo before historic times.
- (vi) Wild Buffalo—previously doubted as part of the endemic fauna; no longer extant.
- (vii) Orang-Utang—clearly once abundant; nearest now 200 miles.

I should add that all these, except the rhino, were finished locally long *before* the Brookes and shotguns came into nineteenth century history; and that for some centuries before then the Niah area was only inhabited by wandering nomads, for reasons which need not detain us here—but which gave the local large fauna an optimal chance of survival or recovery. (The Wild Ox or Seladang alone remains quite numerous; and this is one of the few places where it is so in Borneo today).

* * * *

There are certain ironic undertones or odd associations about some of these stone-age extinctions round Niah. For instance, there is no acceptable record of a tapir in Borneo in the past few hundred years, and at Niah none occur higher up in the deposit than late stone-age (i.e. c. 2,500 + years ago). All the same, the many harsh things that have been said—by me included—about the government of North Borneo showing tapir on a popular postage stamp issue ring a little hollowly prophetic (in reverse) now.

There are some indications that big oranges may have been kept as pets or for sacrifice inside the caves as long as 20,000 B.C. And it is possible that they were brought from long distances to Niah, just as Cassowaries are walked up from the coast right into Central New Guinea for similar reasons today. Also much earlier, around 50,000 B.C., was the Giant Pangolin perhaps similarly kept?

This Giant Pangolin, *Manis palaeo-javanica*, was hitherto known from a single fossil specimen described by Dubois from a geological horizon supposed to be c. 500,000 B.C. in Java, and linked indirectly to his Java Man (*Pithecanthropus*). It was three times larger than any living pangolin. Now Dr. D. A. Hooijer, keeper of the Dubois collection at Leiden, identifies identical bone but NOT fossilised, from the early stone-age depths in Niah.

This pangolin is a huge relation of the common Scaly Ant-eater (Malay *tenggiling*) still numerous in Borneo, Java and Malaya. Curiously enough, there is evidence that a not too distant relation and another

giant extinct form, the Giant Sloth of South America, was kept in captivity by stone-age men in some Patagonian caves on that continent!

For it is alas often the case that when men learn to *love* certain animals, they may *kill* them with kindness by capturing too many, almost as readily as with cruelty in traps. That is precisely why the few remaining orang in Borneo and Sumatra (only) are today threatened with extinction. No one kills them as food. But far too many people—mainly in Indonesian territory—kill the parents in order to collect the babies for sale as pets. Some seventy-five per cent of the babies, too, die from bad feeding and neglect *before* they ever reach a buyer.

Even odder, in this respect, is the case of Borneo's *stone-age dog*. The expert on stone-age dogs is Dr. Juliet Clutton-Brock at the Institute of Archaeology, London. She has now shown that in the late stone-age at Niah, and at another of our cave sites near Kuching four hundred miles further west, men had domestic dogs. Moreover, these bear no resemblance to the *pye* dogs which dominate the whole island today. These were little, delicate pet dogs — not lousy, big pig-hunters. The nearest relation known is the also extinct stone-age dog of Japan. Both have vanished, leaving no trace of their breed in modern types.

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I have touched on a few aspects only, from the marvellous wealth of our Niah and other cave results since we began this work at the Sarawak Museum—greatly aided at first by Mr. Michael Tweedie, then Director of the Raffles Museum. I have indicated that problems of conservation are not only pressing but also intricate; and that they are not merely the results of modern development, but concomitant *with the whole process of man's evolution*—and the world's? This is not for a moment to suggest any defeatist or negative attitude. But it is as well, perhaps, in facing the grave problems before us in the second half of the present century, to have this mild corrective of perspective from centuries and millenia out of man's often rather shoddy and still very shadowy past.

PART III

NATIONAL PARKS