

Fossil Coral Artifact from Niah Cave

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DURING April 1973, I received a characteristic letter from Tom Harrisson, handwritten on the 11th, from the Mass-Observation Archive, c/o the Library, University of Sussex. It read as follows:

Dear Kenneth,

I got off the big Palaeolithic paper for Montreal. Your *ANTIQUITY* piece — I have a huge FOSSIL coral as a hand axe* from Niah. Are you interested?

ever

Tom H

* a cast, very good

Of course I was greatly interested, and replied immediately to that effect. The "piece" in *Antiquity* (no. 185: 59) was a note accompanied by a plate illustrating an Acheulian hand-axe from Norfolk, which was remarkable because the center of one side was occupied by a fossil bivalve mollusc shell (*Spondylus*) with fine ribs converging on the umbo. In writing this note I had taken the opportunity to announce that I was making a survey of fossils used as decoration during Palaeolithic and later times. I have published the first part of this survey on vertebrate fossils (Oakley 1975). I am now preparing for publication a second paper for the Pitt Rivers Museum, dealing with "Selected Groups of Fossil Invertebrates."

In answer to my letter expressing interest in the fossil coral artifact from Niah, Tom wrote again from the Mass-Observation Archive. The letter was typed and dated 16 May, 1973, and ran as follows:

Kenneth P. Oakley, a Fellow of the British Academy, is retired from the staff of the British Museum (Nat. Hist.).

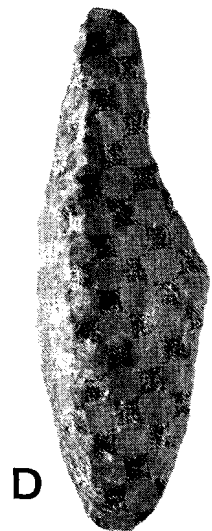
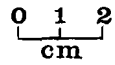
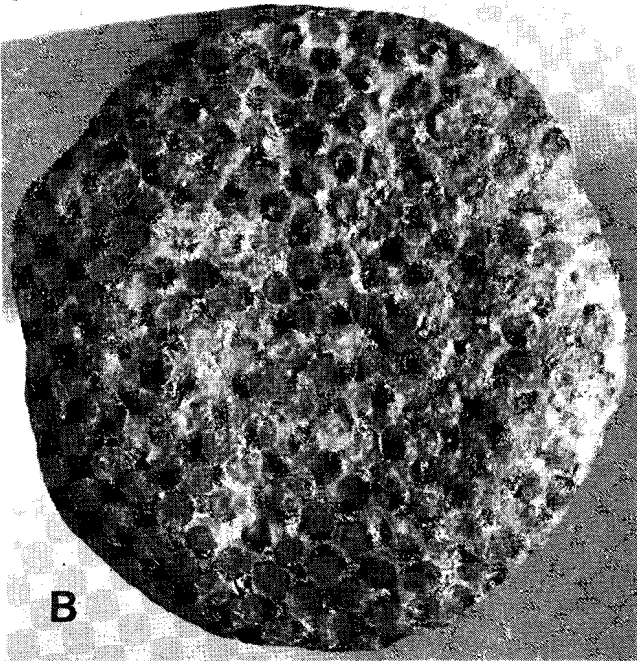
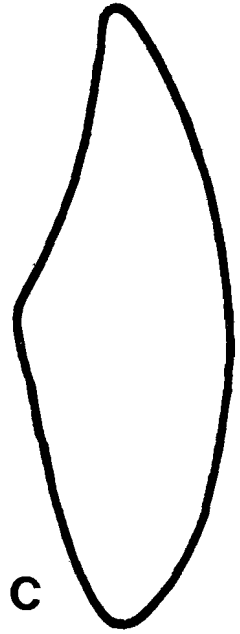
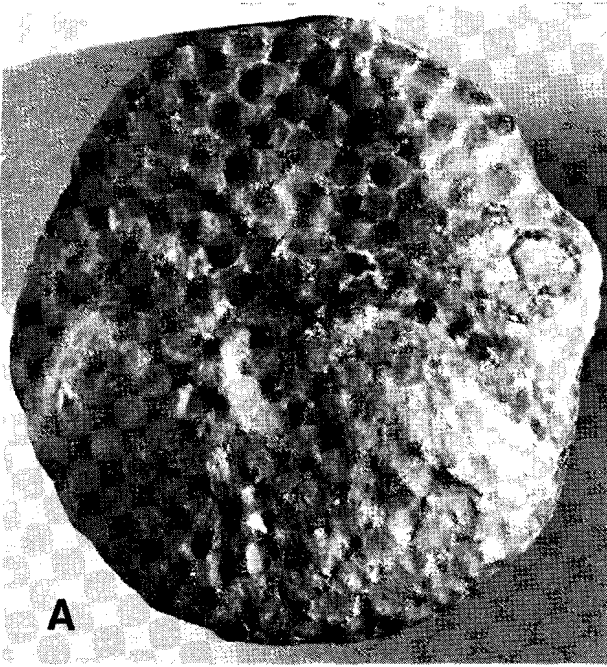


Plate I Fossil coral artifact from Niah.

My dear Kenneth,

I left the cast of the fossil coral with Rosemary Powers on my way back from the Continent on Monday. It is a very accurate cast but getting a bit chipped. No doubt you will treat it with love!

It is the only thing of its kind from Niah. Although different from the ordinary pebble-tools, it has curiously the same beaked effect and general 'character' as all other Niah choppers. It was excavated from well down in the palaeolithic deposit in the West Mouth of the Great Cave along with most of the others.

Yours sincerely,

Signed Tom H
Tom Harrisson

On my next visit to the British Museum (Nat. Hist.), from the staff of which I had now retired, I found the cast of the Niah "chopper" waiting for me in Room E/3 of the SubDepartment of Anthropology. Rosemary Powers had prepared a drawing of the artifact and at my request she had obtained a memorandum on the coral itself from B. R. Rosen. Her drawing (held in reserve) is to my mind valuably supplemented by her remark, in an accompanying memo, that the artifact is flattish "like an English bap"!

It is not easy to define the implement using the strict terminology of lithic technology. It is an oval slab, one surface of which is a fairly uniform fracture-plane (Plate *IB*), cutting across the corallites of the coral; the other surface is partly weathered but cut into by a deep-biting flake-scar which transects the corallites (Plate *IA*). The longitudinal cross-section (Plate *IC*) shows that the "beaked effect" commented on by Tom Harrisson is due to this flake-scar meeting the opposing surface along the upper edge of the tool. Thus, although technically bifacial, the tool looks more like a chopper than a chopping-tool.

The dimensions of the fossil-coral artifact are as follows: length 18.9 cm, width 14.2 cm, maximum thickness 5 cm.

When I submitted the cast of the artifact to B. R. Rosen, the British Museum (Nat. Hist.) specialist on this group, he naturally reminded me that "In order to determine the coral properly we should have to see the original, and then, probably take a slice of it." However, I pointed out that the original specimen was in the Sarawak Museum and all we had to go on was this excellent cast. The accuracy of the casting is almost unbelievable. Several of the corallites represented on the more uniform face (Plate *IB*) show septa meeting at a central columella. I asked Rosen if this did not enable him to suggest what generic group or family of corals this specimen represented. He replied very helpfully, saying that "it most closely resembles the sclerachnian genus *Montastraea* (range Jurassic to Recent), or a close relative like *Plesiastraea* (range Miocene to Recent)."

The collections at the British Museum (Nat. Hist.) include montastreid corals possibly from the Miocene of Sarawak, and this is the most likely source of the coral from which the Niah artifact was made. I interpret the circular shape of the fossil coral artifact as having been formed by striking off the head of a domed corallum that had weathered out as a spectacular eminence.

The present note cannot give a definitive account of this specimen from any point of view, for the simple reason that we have only had the cast on which to form judgments. We did not know the mineral matter of which it was composed. It may be unaltered coral (that is, calcium carbonate in the form of aragonite or calcite). On the other hand, it may have been silicified by geological processes. I hold the view that it is not likely to be an example of silicified coral. Why? If silicified coral occurred within easy access of a stone age hunter's occupation site, it would have been eagerly sought, because any siliceous rock is ideal raw material for making cutting tools. Yet Tom Harrisson observed about this tool: "It is the only thing of its kind from Niah." I am therefore convinced that this "chopper" was made in fossil coral because the *pattern* endowed the tool with magical power. I have shown elsewhere (Oakley 1971) that fossil coral in chert was apparently collected by the Acheulian hand-axe makers of Swanscombe at a site in Wiltshire, and carried to their gathering ground 120 miles away. The reason for their choice of this material cannot have been that it was good-quality raw material for tools, for at Swanscombe flint is in abundant supply, and there is no stone which is superior to flint for its cutting properties.

The last point to consider is the locus of the fossil coral artifact in the Niah excavations. Tom told me that it was "well down in the palaeolithic deposit in the West Mouth of the Great Cave" (Figs. 1, 2). The specimen was marked "NIAH Y/Z-1 at 57".

I have corresponded with Barbara Harrisson about how this can be interpreted. She tells me that it means the tool was excavated from trench Y/Z-1, at a depth of 57 inches, but without access to the notebooks kept by the members of the staff of the Sarawak Museum, who carried out the excavation, it is impossible to identify the locus precisely. She thinks that the trench in question was close to the wall of the cave, but as the cast-maker has colored the cast yellowish-buff with some "black smudges," it is very probable that it was in the "swamp" deposit shown in Figure 2 (south side of the West Mouth), rather than in the main stratified archaeological deposit. As I did not have an opportunity to visit the Niah Cave excavations,

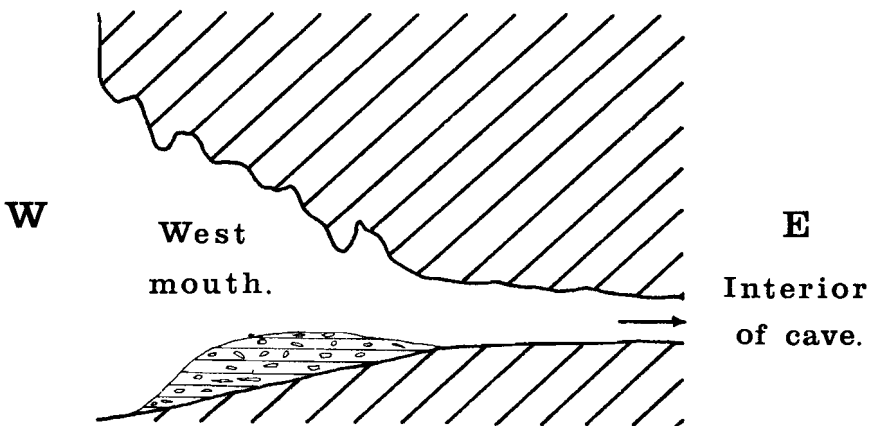


Fig. 1 Diagrammatic section through Great Cave, Niah: west to east. Scale approximately as in Figure 2.

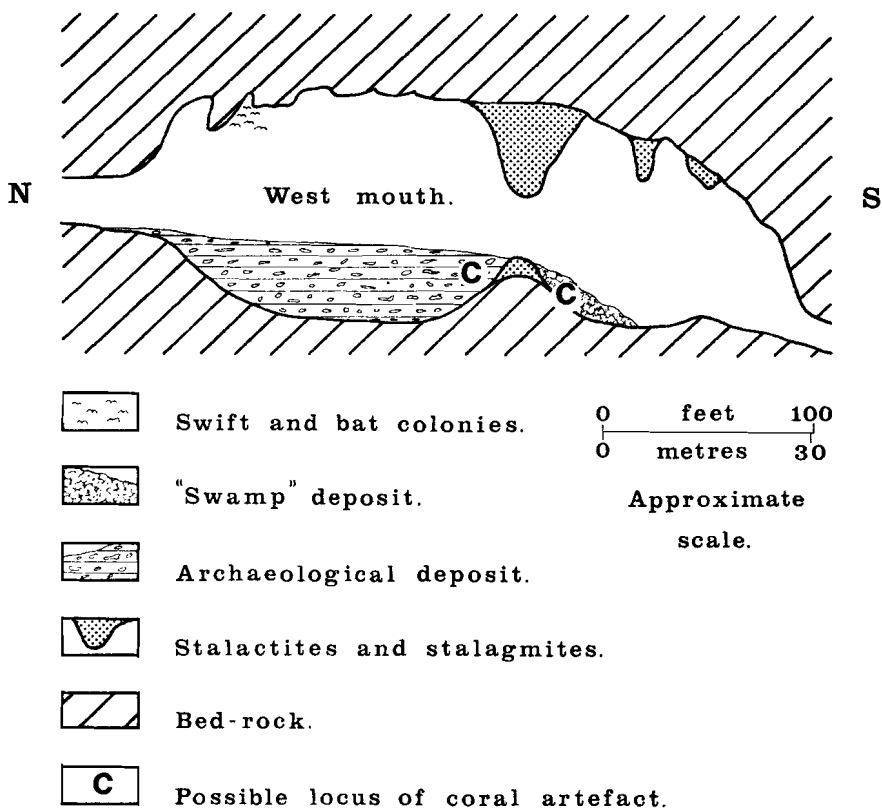


Fig. 2 Diagrammatic section through West Mouth of Great Cave, Niah, north to south. Drawn on basis of "guide-lines" indicated by Barbara Harrison in letter written in May 1977. The large stalactites (with corresponding stalagmites below) indicate lines of active drainage at present day. Old ("dead") stalactites are not indicated.

I do not believe that I can do more than quote this view. I hope that by the time I am completing the fuller account of the Niah fossil-coral artifact for the proposed Occasional Papers of the Pitt Rivers Museum (Oxford), this question will have been settled by examination of the records of the Niah Cave excavations.

ACKNOWLEDGMENTS

I wish to record my gratitude to B. R. Rosen, British Museum (Nat. Hist.), for his patience in answering my questions so far as possible about the coral, to Christine Court, Anatomy Department, Oxford University, and Rosemary Powers, British Museum (Nat. Hist.), for their drawings of the artifact; to Peter Narracott, photographer at the Pitt Rivers Museum, for taking photographs of the cast under skimming light to reveal minutiae of the coral structures in the cast; to Lucas Chin, Curator of the Sarawak Museum, for the side view of the original artifact (Plate ID); to John Todd for preparing diagrammatic cross-sections of the Niah Cave on the basis of Barbara Harrison's recollections of how the archaeological deposits lay in

relation to the main features of the West Mouth of the Great Cave. Barbara Harrisson, in her letter to me dated June 1977, emphasized that she was only supplying "guide-lines" to help whomsoever was drawing the diagrams. The support she has given me in writing this note is very much appreciated.

POSTSCRIPT

While this paper was awaiting publication, Lucas Chin, Curator of the Sarawak Museum, had the mineralogy of the fossil coral artifact (catalog no. 78/87) tested to some extent in the Geological Survey Department. Its hardness on Mohs' Scale proved to be 3-3.5, and a sample of it effervesced easily in cold dilute hydrochloric acid, indicating that it is calcareous and not silicified.

REFERENCES

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