

Published in The International Journal of African Historical Studies, Vol. 5, No. 2, pp. 265-70 (1972).

AN ANALYSIS AND EVALUATION OF THE YAPEI PEBBLE TOOL INDUSTRY, GHANA¹

By B. K. Swartz, Jr. from [Selected Writings](#)

INTRODUCTION

Claims for the presence of a “Kageran-Kamasian” interpluvial pebble tool horizon in West Africa have been put forth by Oliver Davies,² although he now believes it is “much later” than the Earlier Pleistocene.³ The purpose of this study is to examine the evidence by analyzing and evaluating an assemblage of pebble tools from Yapei, Ghana, considered by Davies to be the most promising and productive pebble tool locality encountered in his surveys of West Africa. I did not visit the site, and will therefore attempt no judgments of geochronological interpretation. Quantitative measurements are also impossible, since the assemblage was amassed selectively by surface collecting and testpitting. All generalizations and conclusions will be based on the lithic remains alone.

THE SITE

Yapei (also known as Tamale Port) is located on the White Volta River, twenty-eight miles southwest of the town of Tamale, Northern Region, Ghana. It is described by Davies⁴ as follows:

On left [east] bank of the White Volta there is a gradual rise from the silt-terrace to MS 26 [a marker] at the top of the ridge at 75' 1. w. [low water]. On the ridge are pits yielding well rolled gravel mixed in depth with medium pebbles. A large number of roiled flaked pebbles were collected on various occasions [including all of what the writer considers to be potential tools except specimen IIB1a, see below, which was collected on the 60-foot terrace in this area], though it was impossible to watch the digging of the pits. As the pits extended some way west of the road, they seem to have got out [*sic*] of coarse gravel. ...It was not possible to take the sections of pits west of the road [wording transposed]. A smaller pit east of the road exhibits a clear section of the terrace-gravel.

ANALYSIS

The procedure followed was to select all potential pebble tools from the assemblage (fig. 1), inductively proceeding to sort these into classes,⁵ sort the entire assemblage into the classes proposed by C. van Riet Lowe⁶ for Kafuan materials, and compare the classifications proposed by the writer, van Riet Lowe, and Davies.

Davies considers that there are twenty-nine “more or less convincing rolled pebble-tools,”⁷ but I cannot accept more than eight of the sixty-nine specimens that comprise the assemblage as possibly being modified in any detectable way by man. These eight examples are classed as follows:

- I. Flaked pebbles
 - A. Straight edge on rectanguloid pebbles
 - 1. Unifacial
 - 2. Bifacial
 - B. Straight edge on circular pebble, bifacial
 - 1. Opposed flaking (a-b, 2 specimens)
 - 2. Indeterminate flaking
 - C. Oblique edge, alternate bifacial flaking
- II. Cores — transverse parallel flaked surfaces
 - A. Square
 - B. Pointed

Sorting the pebbles into van Riet Lowe’s classification is difficult as the materials seem not to fit his classes. This may be a reflection of different collecting criteria used by Wayland and van Riet Lowe in contrast to Davies. The Yapei pebbles are considerably larger than the Kafuan examples.

<i>VanRL</i> Class no.	<i>no. of Yapei</i> <i>specimens</i>
1	4
3	1
5	5
7	1
9	1
10	1
11	2
12	3
13	2
14	3
15	1
16	1
17	5
22	1
unifaced pebbles that do not fit any class	6
bifacially flaked pebbles (not included in classification scheme)	8
unflaked pebbles	13
freshly flaked pebbles (i.e. not valid context)	1
non-pebbles—cores	7
non-pebbles—flakes (freshly flaked)	3
Total	69

The following equivalent classes proposed here, by van Riet Lowe and by Davies, are:

<i>Swartz</i>	<i>van R L</i>	<i>Davies</i>
IA1	11	deep-nosed uniface
IIA	...	biface chopper

Davies' descriptive terms are erroneous. He states⁸ that his steep-nosed uniface is what Movius calls a chopping tool. Movius⁹ defines a chopping tool as a pebble (or core) that is bifacially flaked with alternating blows. Davies' term is more comparable to Movius'¹⁰ adze. The class IIA specimen is too thick and blunt to be called a chopper.

EVALUATION

Ignoring factors of context, none of the specimens selected from the Yapei assemblage can unquestionably be considered man-made. Specimen IB1a has a well-trimmed edge. One flake surface is well worn and probably naturally formed. The opposed flake is freshly detached, as is the retouch (or natural battering?) along the edge. Possibly this specimen is man-made, but the freshness of the crucial flaking strongly suggests it is an intrusive. Specimen IC is the most convincing piece. It displays an alternating three flake edge, which is worn. The central flake is quite flat, however, and looks as if it was detached accidentally. The "cores" display no flake surface that could not have been formed by natural agencies. Realizing that the specimens being considered are the distillate of several intensive sorting processes, more must be demanded to establish the presence of human stone knapping.

Although Davies illustrates ten examples,¹¹ this writer considers none of the 1964 illustrations as artifacts, and only two of the 1955 illustrations as possibilities. Considering the refutation of the Kafuan materials' in East Africa,¹² it is the opinion of this' writer that the presence of a pre-handax pebble tool complex in West Africa cannot be demonstrated at this time.

ENDNOTES

1 The research and writing of this paper were done while serving as visiting Senior Lecturer at the University of Ghana, Legon. I am grateful for the cooperation given to me by Merrick Posnansky in making the Yapei collection available for study. Defrayment of travel expenses was made possible by a Ball State University Alumni Association Study Abroad Grant.

2 "Pebble-Tools in Ghana, (1955) in Oliver Davies, *Archaeology in Ghana* (Edinburgh, 1961), 1-4, and *The Quaternary in the Coastland of Guinea* (Glasgow, 1964), 83-85.

3 Letter to writer, 23 January 1971.

4 Davies, "Ghana Field Notes. Part 2: Northern Ghana," mimeograph (Legon, 1970), 169.

5 Many archaeologists call what is here referred to as a class a type. A class must have temporal or spatial validity to be so termed. See B. K. Swartz, Jr., "A Logical Sequence of Archaeological Objectives," *American Antiquity*, 32 (1967), 490.

6 C. van Riet Lowe, "The Pleistocene Geology and Prehistory of Uganda. Part II — Prehistory," *Geological Survey of Uganda Memoirs*, IV (1952), 22-23, plate I.

7 Davies, "Pebble-Tools in Ghana," 1.

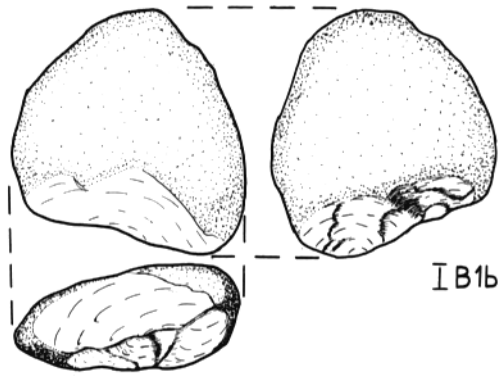
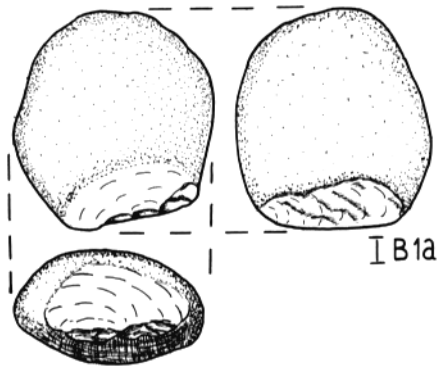
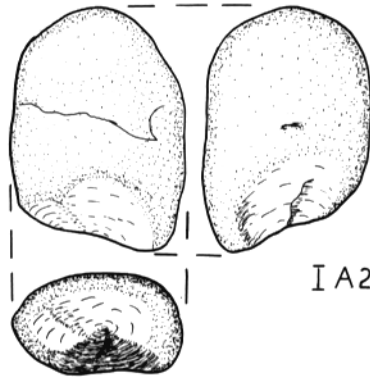
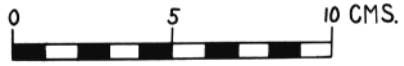
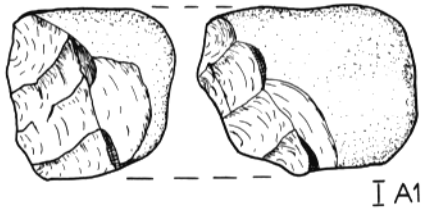
8 *Ibid.*

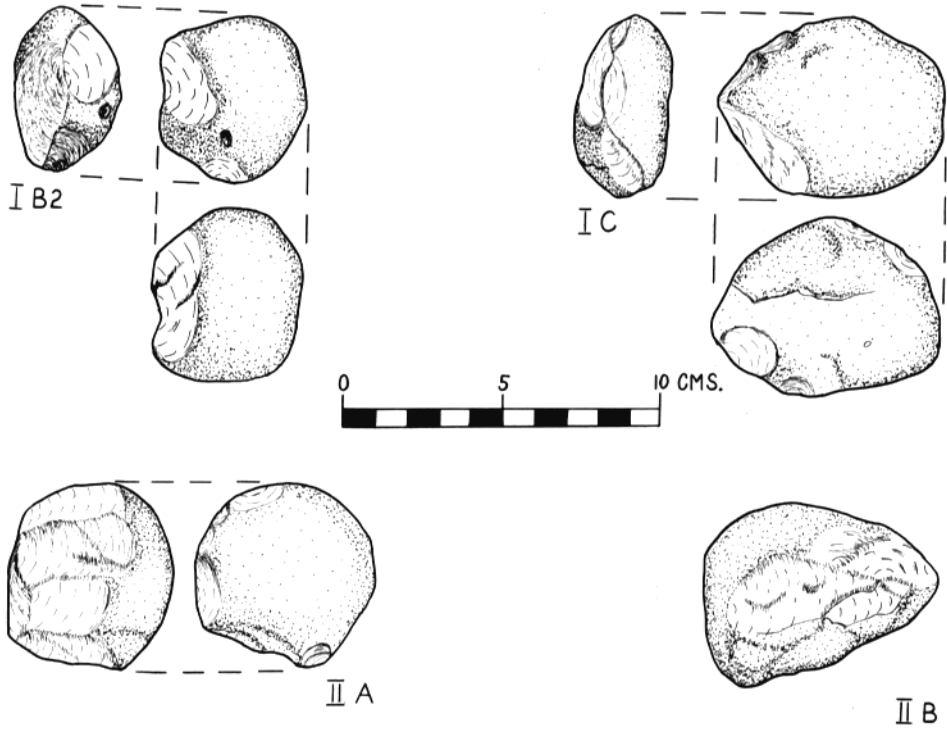
9 Hallam L. Movius, Jr., "The Lower Paleolithic Cultures of Southern and Eastern Asia," *Transactions of the American Philosophical Society*, n.s. 38 (1948), 350.

10 *Ibid.*

11 Davies, "Pebble-Tools in Ghana," fig. 1, nos. 1-5 and *Quaternary*, fig. 22, nos. 1, 8-10, 16.

12 J. Desmond Clark, "The Natural Fracture of Pebbles from Batoka Gorge, Northern Rhodesia, and its Bearing on the Kafuan Industries of Africa," *Proceedings of the Prehistoric Society*, 24 (1958), 64-77; W. W. Bishop, "Kafu Stratigraphy and Kafuan Artifacts," *South African Journal of Science*, 55 (1959), 117-122.





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