# THE WEST AFRICAN ARCHAEOLOGICAL NEWSLETTER

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Note It is expected that issue 12 will be the last number, and that thereafter material will be absorbed into the West African Journal of Archaeology.

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## Editorial

It is with extreme pleasure that in this number we are able to announce a definite commitment to transform the West African Archaeological Newsletter into the West African Journal of Archaeology. The new journal will have as its main purpose the publication of excavation reports and other records of primary archaeological data, as well as articles of archaeological synthesis of larger conception than have been appropriate to the Newsletter. West African material will have priority, but this will not exclude items relating to other parts of Africa or papers of general relevance.

In addition to the promises of financial support for the Journal, now confirmed, from the Universities of Ghana, Ibadan and Ife, the Ghana Museum and Monuments Board has voted N₵ 1000.00 over the next two years and the University College of Cape Coast a sum of N₵ 250.00 per annum. To both of these bodies we should like to express our gratitude for their encouraging support.

The following have agreed to serve on the Editorial Board:

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Professor F. Willett, Northwestern University, U.S.A.

Thurstan Shaw has undertaken to act as editor, with Graham Connah and Paul Ozanne as assistant editors; Oxford University Press have agreed to be the publishers.

In order to assess the material likely to be available for the first two issues of the journal, all potential contributors are asked to let the editor know as soon as possible whether they have any manuscripts

1. Immediately available
2. In preparation and available in 3 months' time
3. In preparation and available in 6 months' time
4. In preparation and available in 12 months' time
5. Projected and available after a year's time (or more).

For each manuscript the following particulars are asked for: title, rough estimate of number of words, number of pages (quarto size) of line-drawings, number of pages of photographs. Manuscripts will be accepted written in English or French.

Please continue to send in newsletter type material, because there will be one more number of the West African Archaeological Newsletter before the first issue of the Journal, and the latter will have a 'Notes and News' section in order to be able to continue to carry this kind of matter. It is hoped to produce the first issue of the Journal some time during 1970.

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Professor Posnansky has asked us to announce that it is planned to hold the third conference of West African archaeologists at Legon during the last week of June 1969. It is suggested that the theme should be "The Chronology of the West African Iron Age", with separate sessions devoted to 'The Teaching of Archaeology' and to 'Technical Cooperation'.

# COPYING POTTERY DECORATION BY MEANS OF INK-SQUEEZE RUBBINGS

by

Gordon W. Hewes

Much West African pottery from archaeological sites, and also of recent but traditional manufacture, is decorated with incised lines, cord-marking, comb-marking, roulette-stamping, and similar techniques. Such pottery, in a general way, resembles the ancient pottery of northern Eurasia and northern North America. For many years Japanese archaeologists have recorded the designs on prehistoric pottery of the Jōmon (cord-decorated) Period by means of ink-squeeze rubbings. The same process has been used in China to copy stone inscriptions and low-relief carvings, and the intricately decorated surfaces of bronze vessels of the Shang, Chou, and Han dynasties. English funerary brasses are also copied in analogous fashion. In West Africa, designs on carved wooden stools and other wooden objects have been copied by means of rubbings.[1]

Preparation of careful drawings of decorated sherds or whole pots is justifiable in terms of skilled labour and expense only for the purpose of illustrating publications. For their notebooks, many archaeologists develop a kind of short-hand style for sketching potsherds, but these conventionalized drawings are not very accurate as scientific records and are apt to mislead anyone not familiar with the conventions adopted by the original maker of the sketches. Photographs provide reliable records of pottery designs and can be made very quickly, although proper lighting can be a problem if the pottery surfaces are dark or uneven in colour, or have polished surfaces capable of reflecting bright highlights. However, photographs are of little use until prints are made from the negatives, and this usually involves enlargement. This is not a serious matter if a few pictures are needed to illustrate an article or a monograph, but the cost can be prohibitively high if the pictures are in the hundreds - or thousands, in an archive or documentation centre. Paper ink-squeeze rubbings are cheap enough in both labour and materials to permit their use in the recording of a very large corpus of pottery designs. The rubbings can be mounted easily on record sheets or cards, for storage in files, for sorting and comparison, or if need be, for transmission to distant documentation centres. Because the rubbings are of maximum contrast (i.e., black or white, without intermediate greys) they lend themselves to inexpensive subsequent reproduction on copying machines, like pen-and-ink line-drawings.

The rubbing can also serve as a base for making a tracing in case a pen-and-ink drawing is needed for illustration purposes. If a light-table is available, this should be faster and more accurate than the usual free-hand drawing which has to be repeatedly checked against the original sherd with dividers to be sure of the dimensions of the design.

Faced with the task of documenting a large part of a collection of some 22,000 sherds from sites in the Kainji Rescue Archaeology Project, on the middle Niger in western Nigeria, the writer decided to try making ink-squeeze rubbings. The few painted sherds were sketched by hand, and the whole or nearly whole pots had already been photographed in the field. For further information on the excavations which yielded this pottery, the reader is referred to an article in an earlier issue of this newsletter.[2]

Initially I did not have access in Ibadan to specific information on the Japanese ink-squeeze rubbing procedure; I was only familiar with the finished products, exhibited at Japanese prehistory meetings, and as illustrations in Japanese archaeological publications. I therefore worked by trial and error, but was pleased to learn, some weeks later, from Prof. J. Edward Kidder, Jr., a specialist on Far Eastern prehistory[3], that I had more or less successfully imitated the Japanese process. Professor Kidder very kindly sent me a sample of the paper used for making rubbings in Japan, as well as some of the ink-paste and an ink pad or swab. Since readers in West Africa may not find it easy to acquire Japanese paper and ink, I shall describe the materials which I found in Ibadan, and which are likely to be obtainable in most other West African urban centres.

1. Soft white paper table napkins were quite suitable for making rubbings, although the Japanese paper is stronger and less given to wrinkling when wet. Such paper napkins cost a few shillings for a packet of 100, which is enough to make copies of several hundred sherd designs. Doubtless there are papers manufactured outside of Japan which would be nearly identical in quality to the Japanese product.

2. An ink pad can be made very simply by enclosing a small wad of cotton-wool about 2 inches (5 cm.) in diameter, and 1 inch (2.5 cm.) thick, in a small piece of smooth, finely woven cloth. The cloth can be gathered at the top of the pad and tied with string or wound with wire.

3. The Japanese use a paste-like ink, which comes in a shallow covered container. We found that printer's ink is also

effective. The printer's ink can be spread thinly on the inside of the tin top in which the ink is usually supplied; it can then be applied to the under-surface of the pad or swab, but one should avoid having too much ink on the pad. If printer's ink is unavailable, ordinary Indian ink (liquid) can be used, but it tends to blur more easily.

4. A sponge, preferably plastic or synthetic, is used to press or squeeze the paper against the surface of the potsherd or pot being copied. The sponge should be moist, but not too wet. To re-moisten the sponge one needs a tin or dish of water. For experimenting with the method the sponge can be dispensed with, and the bare hand, suitably moistened, can be used to press the paper against the pottery surface.[4]

5. Scissors are needed to trim the finished rubbings of excess white paper, prior to mounting them or otherwise storing them. If several separate rubbings have been made to copy the design on a whole vessel, scissors can be used to cut them into segments which can then be assembled to represent the originally curved surface on a flat sheet of paper.

6. Library paste or some other adhesive will be needed to stick the rubbings down on record-sheets, file-cards, or into note-books.

7. If large numbers of rubbings are involved, it will be useful to prepare record-sheets or file-cards with blank spaces for such information as site number or name, depth or other excavation particulars, sherd-thickness, colour, catalogue-number, etc. The remaining space around the pasted-up rubbing may be used for annotations indicating features which the rubbing cannot illustrate, such as areas of high polish, painted bands or lines, etc., and for the usual profile or section of the rim, shoulder, and body of the vessel if enough of the sherd is present.

Procedure

With the above materials, and a work-table, one begins by laying out the sherds with their decorated sides uppermost. The sherds should be as clean as possible; soil or soot particles will otherwise be picked up by the moist paper, and may discolour the rubbings. The paper can then be spread to cover several sherds at one time (8 to 10 at a maximum). The slightly moist sponge is squeezed or pressed against the pottery design to bring out the impression of its incised or otherwise depressed lines, punctations, etc. The paper is

then left to dry almost completely, although if too dry it may slip off the sherd when the ink is being applied. In fact this is the only critical point in the whole process, and a little practise will enable one to judge the proper time to apply the ink. The inked pad or swab, not too heavily inked, is then patted on the paper. Although called "rubbings", the action employed is actually a gentle patting. The image comes out, of course, with incised lines, punctations, stamped designs, etc. as white, and the background is left black, so that it is in effect a negative. The rubbings dry quickly, and can then be trimmed with the scissors for mounting. The operator need not be idle while waiting for the paper to dry, but can be preparing already finished rubbings on record-sheets, filling in blanks on the forms, or he can number or label sherds if they have not been already numbered in the field.

If very large numbers of rubbings are to be mounted on data sheets, it will be well to stagger their positions on the successive sheets so that an unseemly central bulge will not result from having them all piled up in the middle.

In Japan, where making rubbings has become something of a fine art, there are special inks and kits for the professional. Those wishing to pursue this technique into its higher realms, and who might wish to make rubbings not only of potsherds, but of brasses and carved calabashes, are advised to consult the masters of the art in Japan, where there are even experts in making rubbing facsimiles of fish, accurate down to the last tiny scale and fin.

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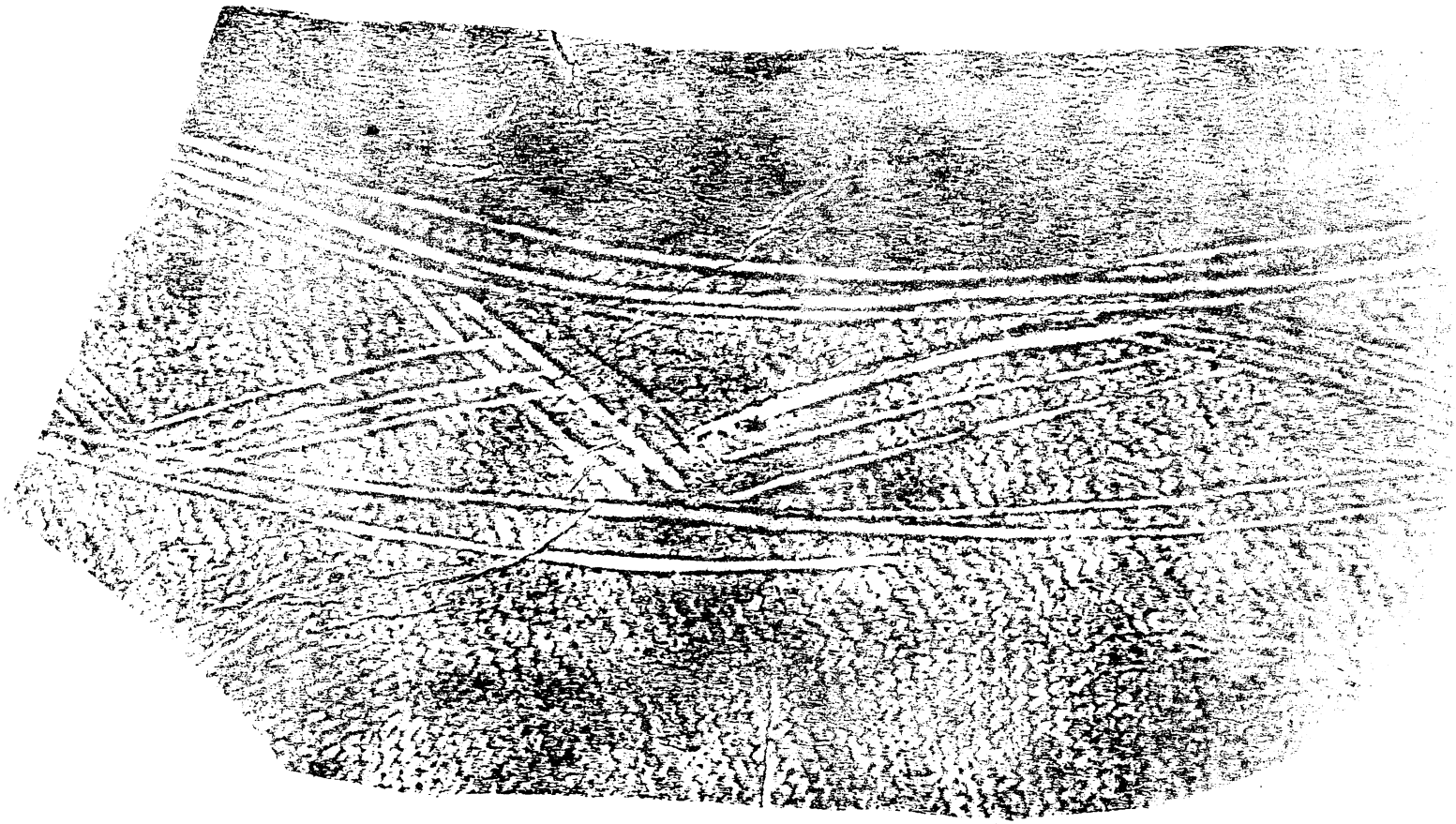
## Notes

1. Cf. Phillips Stevens, "Nupe Wood Carving", Nigeria Magazine, No. 88, March, 1966: 21-35 (illustration on p. 26).
2. D. A. Breternitz, "Interim Report of the University of Colorado - Kainji Rescue Archaeology Project, 1968", The West African Archaeological Newsletter, No. 10, 1968, pp. 31-42.
3. Chairman of the Humanities Division, International Christian University, Mitaka, Tokyo, Japan.
4. A felt blackboard eraser is useful to complete the pressing of the moistened paper against the decorated sherd surfaces.



An example of pottery decoration copied by means of ink-squeeze rubbing

Taken by Diran Oguntade.

# ATMOSPHERIC RADIOCARBON

by

Paul Ozanne

Our editor recently wrote that "Radioactive carbon originates in the upper atmosphere as the result of the bombardment of nitrogen by cosmic rays".[1] This is the concensus of opinion amongst terrestrial scientists, from Libby onwards. The most important inference is made, that any inequalities in the distribution of the formation of C14 will be evened out by the meteorological currents of the upper atmosphere, so we may assume that the atmospheric reservoir is homogeneous. From this inference it is clear that the term "upper atmosphere" - or, by Libby, "high altitudes" - is used in a normal sense, taking as a boundary the ozone layer which separates the relatively local meteorological systems of the lower atmosphere from the large-scale ones above, at the low height - atmospherically - of 20-30 miles.

The statement, and therefore the inference, is untrue. "The [primary] cosmic rays are very penetrating because of their very great energy [and] they are able, on average, to penetrate within 10 miles of the earth's surface before interacting with the nuclei of atmospheric atoms and molecules."[2] From such interactions come most of the energised neutrons which, through secondary collisions, convert N14 into C14. Most C14 must therefore be produced in the lower atmosphere.

Unfortunately, students of the upper atmosphere talk in tens of miles or kilometres, and the meteorologists who talk in thousands of feet do not concern themselves with cosmic rays; therefore the vertical distribution of primary cosmic ray collisions, from which that of C14 creation may be deduced, is only vaguely described. Odd facts are suggestive of a very steep gradient: the average primary particle penetrates to within 52,000 feet without colliding; some reach sea level unscathed; and the mean height of an atmospheric particle is only 18,000 feet. If all winds were stilled, C14: C12 ratios - and so radiocarbon age estimates - would vary with site altitude. It is fair to assume that around Mt Cameroon, directly exposed to Atlantic winds, this effect is obliterated. But it would be rash to believe that meteorological mixing is perfect between the oceans and such inland plateaus as Zambia and the Central Sahara, and, one might suspect, the Jos uplands.

Accounts are usually written as if carbon fourteen dioxide were spontaneously created, and easily breathed by plants. For our purposes, all atmospheric nitrogen atoms are paired with another atom of mass 14 (the error in this statement could not distort our date estimates by more than a few weeks). When radiocarbon is created, cyanogen is formed - a gas which has been observed in the atmosphere. In biochemistry, cyanogen is most important as a radical from which both vital chain-molecules and lethal cyanides may be formed, and the life history of cyanogenic carbon will certainly differ to some extent from that of dioxidised carbon. Meteorology makes this an interesting point. There are few records of West African lapse rates, but it is clear that, because of the heat of the sun, these diverge greatly from 'normal' adiabatic ones. Water may be liquid, though super-cooled, up to a height of 30,000 feet; and certainly in coastal West Africa it is rare even in the dry season to see a halo in cirrus around the moon, indicating that the water is frozen. In these parts, of course, the humidity is very high indeed. In contrast to Europe, at least one third of the C14 atoms created over coastal West Africa are threatened with imminent wash-out, before winds have carried them far.

It is a commonplace that the paths and penetrating powers of cosmic rays, and therefore the geographical distribution of C14 creations, are very strongly influenced by the geomagnetic field. No significance is attached to this, because of the mistaken belief that most C14 originates at such high altitudes that the variation will be obliterated by meteorological mixing. But it must be taken into account. Of particular importance to us is the fact that the geomagnetic equator passes roughly through Sierra Leone, Ghana, Nigeria, and across to Ethiopia. The definition of this equator is not that it is half way between the poles, but that over it the magnetic field is perfectly horizontal. The perpendicularity of other forces causes a powerful narrow current, the equatorial electrojet, to flow along the line in the upper atmosphere, and this is known to protect the equator from cosmic rays. The solar flare of 19 November 1949 caused increases in cosmic ray observations of 7½% and even 40% in medium geomagnetic latitudes, but on the geomagnetic equator at Huancayo in Peru there was no measurable change.[3] A 40% difference in C14 content would suggest an age difference of four millenia. The beauty of this idea is that it could explain why many West African C14 dates are very right, but a surprisingly large number, from nearby sites and times, very wrong. To each particular latitude would belong a particular periodic century of bad dates, as the geomagnetic equator passed through. I suspect, from the available C14 dates, a

1500-year period or half-period, the latest cycle giving bad dates at Old Buipe in the 14th century, Ife in the 16th, and Igbo-Ukwu in the 18th - dates from the previous and subsequent 14 centuries at each latitude being reasonably accurate.

There are other factors which could possibly cause complexity in C14 dating in West Africa, but the ones mentioned here are the most interesting. From the practical point of view, it is especially important that the points are of interest in physics. One of the finest pieces of research done, and being done, in West Africa is the study of atmospheric physics at the University of Ghana over the last six to ten years, and I have naturally asked Professor May and his colleagues to consider the relevance of this work to archaeology. The University of Ife possesses a C14 kit, and Professor Ojo and Dr. Williams contemplate using it to measure variations in C14 concentration which are independent of decay in time. Before this note is circulated, it is hoped that, with the assistance of members of other institutions, the University of Ife will have been able to plan observational experiments on a sound theoretical and practical basis, and will have started to collect samples. In the collection, the help of every one interested would be invaluable. At present, we do not know what sort of sample to tackle first. One possibility is baobab, the only common long-living tree which can be found from the coast to the edge of the Sahara. Drilling it is out of the question, except perhaps for a few test-samples. Mr. Peter Van Meer, of the Forestry Department, University of Ibadan, advises that a 9-12 inch branch will date from pre-atom bomb times, and colleagues might be kind enough to saw sections for us from all over West Africa; also, one occasionally sees a baobab being cut down, and a plank from across its middle would be extremely useful material. But first the physicists must decide what, if anything, is most worth while.

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1. Shaw, Thurstan, "Radiocarbon dates from Nigeria", Journal of the Historical Society of Nigeria III, No. 4, 1967, and, more up to date, Univ. Ibadan Press, July 1968, para. 4.

2. Massey and Bond, The Upper Atmosphere, London 1958, p. 46.

3. Ibid. p. 285; for equatorial electrojet, see chap. 10.2.

# ARCHAEOLOGICAL FIELDWORK IN SIERRA LEONE, 1967-1968[1]

by

Matthew H. Hill

This paper is a preliminary report of research carried out in Sierra Leone between November 1967 and June 1968. This work was partially financed by the National Science Foundation (U.S.A.) and was under the auspices of the Sierra Leone Monuments and Relics Commission and the Institute of African Studies, Fourah Bay College.

During parts of the months of November 1967 through February 1968 I undertook a wide ranging archaeological reconnaissance of portions of the Eastern and Southern Provinces of Sierra Leone, primarily in Bo, Kenema, Kailahun and Kono districts, locating approximately thirty sites. This relatively low return for time was due largely to the short periods spent in any one area and the relatively high proportion of time spent in travel, especially during the initial stage when I was without private transport.

Of particular interest among the sites located in this first phase of the research are the second rock gong reported for Sierra Leone (SL49/2)[2] near the Guinea border, in Lei Chiefdom, and a unique stone house ruin (SL69/2) near Bonabu in Gorama Kono Chiefdom. It was unfortunately impossible for me to make a planned second visit to the latter site and record fuller details. It appeared, however, to be the ruins of a round house, constructed of dry laid stones, approximately 15 meters in diameter. The interior is subdivided by stone walls still standing to a height of about 1.5 meters. Around the house is a ditch preserved to a depth of about 1.5 meters and perhaps 20-25 meters in diameter. The site is said locally to have been built in the days of the tribal wars[3] by a warrior as a place for the safekeeping of his wives and slaves. I am not aware of any prehistoric stone structure of equivalent size within the forest zone of West Africa.

Following the broad scale reconnaissance described above, and on the basis of the findings made, I selected an area in the North-Eastern Bo District for intensive survey, carried out from early March to late May, 1968. Work during this period was concentrated in Komboya and Bagbe Chiefdoms.

This is an area of transition, including parts of the "Interior Plains" region, the "intermediate foothill zone" and

the "Kono Plateau" of Williams (1966). The area is marked by alternation of grassland, mainly elephant grass, and farm bush, with small patches of high bush mainly on slopes too steep for the Mende to plant rice. Such slopes are precipitous indeed! There are frequent, sometimes extensive, areas of exposed granite, either bare or sparsely covered with a sort of sedge.

During my three months of intensive work and two earlier short visits to this area I recorded a total of over 100 sites. These include contemporary villages with archaeological materials (mainly in the form of sherds of native pottery, production of which stopped in this area about the time of the First World War, or remains of encircling palisades and ditches). Other sites include areas of bedrock grinding grooves, generally located where a major trail crosses a stream on bare rock, and caves or rock shelters. The most common type of site recorded consists of scatterings of pottery and/or worked stone encountered on paths, or lorry roads, or in farm clearings. The actual number of such sites probably many times exceeds those recorded, since farm bush in this area may be left fallow for periods up to 18 years and as a result only a small proportion of the area could be thoroughly examined. From these sites surface collections were made, either of the total area exposed or, in the case of large sites, of several areas within the site. Collections from over 60 of these sites are considered adequate in size for possible inclusion in analysis.

Since my work was conceived primarily as survey I carried out excavations in only two sites. Near Manc-Pendobu, in Bagbe Chiefdom, I excavated a three meter square on the side of a small mound (SL79/54). Preliminarily it may be suggested that this site represents a ritual deposit of pottery placed on top of a termite hill. A large number of pots are involved, several of which were recovered virtually intact. I estimate that at least two dozen essentially whole pots can be restored from the excavated materials from this site. It thus will compose a valuable corpus of complete pots from a single, presumably short, time span.

The second tested site, Joya rock shelter (SL79/27), is a small shelter beneath a large granite boulder on a bare spur running south-east from the hill called Joya (or Jova) near Gbaama, Bagbe. A very limited number of stone and pottery artifacts were recovered, suggesting only occasional and limited occupation.

The analysis of the materials collected during this research has only begun, but I would like to put on record

several observations of general interest. I was unable to locate any site lacking ceramics which yielded materials adequate to suggest a date. Purely lithic sites are certainly present in the area but artifacts were neither plentiful nor distinctive on the sites which I found. Contrary to the observation of Ozanne (1966, p. 32) in none of the areas which I visited did quartz seem to be rare, though more tractable stone is everywhere at a premium. I observed numerous locations where quartz chunks in the hundreds could have been picked up within a very small compass. At few of these was there anything which might have been suspected of being an artifact and at no site could more than a few stone artifacts be found. I found only two ground stone "axes", both very small, one of them with no associations. Although no site had many stone tools, a number of sites yielded one or two. Among these were sites with smoking pipes and evidences of iron furnaces. Although there seems to be no use or knowledge of stone tools among Mende today (except for sharpening tools, grinding "medicine" and cracking palm kernels) the use of chipped stone appears to have persisted into recent centuries alongside the use of iron.

Clay pipes, of indigenous manufacture, in styles reported from Ghana and Mali occur at a number of sites. These pipes appear to be of somewhat finer fabric and more careful manufacture than the pottery from the same sites. Petrographic studies should determine whether one or more clay sources are involved and whether these are different to those of the pottery from the same sites.

A minority of the pottery collected has surface treatment produced by impressing the still plastic clay with maize ears or cobs. Analysis of these impressions may shed some light on the varieties of maize cultivated and on the date of the introduction of new world cultigens.

A number of currently occupied towns and many recently abandoned sites retain traces of encircling fortifications. These were, with two exceptions, apparently of the ditch and log-fence pattern described for Mende war towns by Little (1951, p. 33). I found evidence of a thick mud wall (dadei) as described by Malcom (1939, p. 48) at only two sites. The best preserved of these is at Teibo in Komboya Chiefdom (SL79/59). The present town of Teibo is said to have been formed by the drawing together of five separate villages in the immediate vicinity. One of these, Bape, said to have been a Muslim community, was located at a site now occupied by the mission school at the immediate edge of the town. The wall of

Bape is still well preserved at several places. This wall was of mud brick with the ditch on the interior rather than the exterior as described by Malcom. The "bricks" apparently result from the placing of mud on the wall in double handfuls, much as mud is used to fill in a stick framework in Mende construction today. The Bape walls were, of course, much thicker (over a meter) than house walls and were apparently wholly made of mud.

At the town of Sahn in Niawa Lenga Chiefdom (adjacent to Bagbe on the west) a collection of Myafei (Nyafei, Mahei Yafei) used for "swears" (oaths) was shown to me. This is said to be the remnant of a much larger collection, many of which have been stolen. They are well known in the area and are on occasion carried to other towns for important "swears". The collection includes a variety of objects; stone and iron rings, an iron hoe blade, and a cast brass bracelet similar to one in the Sierra Leone Museum (catalogue number 66.9.2) from the Mokanji hills, as well as fragments of carved steatite figures of types commonly called nomoli. I expect to publish in the near future a more detailed description of this group of objects.

In the town of Komboya (SL79/1) which gives its name to the chiefdom, I observed another hoard of brass (sensu lato) bracelets. These were apparently beaten from brass rod. Most were plain or longitudinally faceted, one only having incised decorations and inset chips of stone or glass. They were taken from beneath a boulder in the village, where they are said to appear and disappear at irregular intervals in numbers up to 40. At the time of my visit only 14 were present. They may be borrowed to decorate poro initiates and it is claimed that if they are not returned by the borrower they will magically disappear and return to their place beneath the boulder.

Massie-Taylor (1958) reports an investigation of the legend of figures of poro boys who were turned to stone near Bandajuma in Yawei chiefdom. I received four independent reports of these figures which correspond in many details to Massie-Taylor's information. Two of my informants, both Mende, claim actually to have seen them. Such stone figures which, it is said, cannot be found if they are deliberately sought, also occur elsewhere in Mendeland. In the area in which I principally worked they are called Nfagɔtui (devil or spirit stone). Near Njawor, in Komboya chiefdom, I was taken to a wholly natural boulder which has lost its power of illusiveness but which "long ago" could not have been reached if it were deliberately sought. Near Talia, some 13 miles from the end

of the motorable road at Njala, Komboya, I was taken in search of a Nfagɔtui, described as being in the shape of a man, which demonstrated its power by stubbornly refusing to be found. The area in which we might have encountered it, had we not been looking, was apparently an abandoned village; house mounds and a section of wall and ditch were visible in the dense underbrush. My guides were apparently not aware of the existence of this tombui (deserted village).

The term tombui is used in Kpa Mende for both a deserted village and a forest. Many old village sites are, in fact, marked by groves of large trees and as a result are frequently planted to shade-loving coffee and cacao. The term tombuisia (sing. tombui) is given by Little (1951, p. 225) as referring to a race of dwarfs who are said to have inhabited Mendeland before the coming of the Mende. This usage of the term was not familiar to anyone I queried, nor was it admitted that anyone but Mende had ever lived there.

I would like to take this opportunity to comment on some of the questions raised in Ozanne's (1968) paper "Sierra Leone Problems" published in this journal.

1. The two sites sharing the common name Bunumbu, referred to by Ozanne, are not the same.

Newman's Bunumbu cave is located in the Northern Province, not far from the Guinea Border. The site of Bunumbu from which Ozanne's "beaker ware" was reported is located in the Eastern Province, about 30 miles northeast of Kenema. Bunumbu is a common Mende place name signifying "under the Bunu tree" (gbɔnɔ? Ficus Mucuso (Deighton 1957). (The town of Bonabu, mentioned above is the same but in Kono, also a Mende language. It is in fact shown on some maps as Bunumbu. How Newman's site, in Limba territory where a language of a completely different family is spoken, got the name I cannot explain.) The "beaker ware" in the Sierra Leone Museum comes from several different sites. The site at Bunumbu itself and a second site between Manjoru and Glima a few miles to the southeast of Bunumbu both produced "beaker ware" from artificial cavities revealed by the collapse of roads (Schulze 1963).

There is nothing in Schulze's report or in the files of the Sierra Leone Museum to indicate any association of nomoli with either of these two "beaker ware" sites. Ozanne's informant may have been referring to a so-called Chief's Devil, a steatite head, and associated pottery, found at Jimmi Bagbo in the Southern Province, which was presented to the museum not

long after the Bunumbu-Glima finds. It was unfortunately impossible to locate the pottery concerned in the museum collections during my work so I cannot say whether it might be "beaker ware". This is, to my knowledge, the only find of a steatite carving with associations.[4]

2. Ozanne's suggestions for a revision of the nomenclature used by Coon and his interpretation of the relations between his and Coon's material seems to me to have little merit. Coon's terms Early Yengeman, Middle Yengeman and Upper Yengeman have precedence, having appeared in print in the spring of 1967 (Coon 1967), and thus should be accepted unless there is strong reason to contradict his findings.

All of Ozanne's Sefadu-Maia sites apparently yielded pottery (Ozanne 1966, p. 32) and so seemingly represent only the Upper Yengeman, pottery being absent from the two earlier periods of the cave occupation. Thus Ozanne would seem to argue that the entire sequence should be included in its latest part, which would be unacceptable on purely logical grounds.

Ozanne's argument for the precedence of the occupation of the Sefadu area is interesting but cannot be considered more than conjecture. The Sefadu-Maia sites are assumed to be earlier than the cave occupation because of the paucity of material found on the surface of the Yengema clays. Yet we have no idea of the date of the deposition of these clays. It is my impression that they, in places, overlay diamondiferous gravels. In the Sierra Leone Museum there are numerous artifacts, including pottery, recovered in the exploitation of those gravels. The lack of surface sites of the Yengeman (Early, Middle, or Upper) in the Yengema area may thus be due to burial beneath recent alluvium.

## Notes

1. During this fieldwork assistance was given by Loretta R. Hill, Peter F. John, and Aloysious Smart. Mrs. Loretta Weaver Reinhardt helped with typing.

2. Sites located were given numbers in the order of discovery within map quadrangles of the current 1/50,000 scale map series issued by the Department of Overseas Surveys and the Sierra Leone Department of Lands and Surveys. Thus

SL 49/2 is the second site located on quadrangle number 49 (Saiama). Site report forms with location and details of all sites are on file with the Sierra Leone Monuments and Relics Commission.

3. I.e. before the establishment of the British Protectorate in 1893.

4. The cooperation of the staff of the Sierra Leone Museum, especially Miss Dorothy Van Amsterdam and Mr. Hashim Cole, is gratefully acknowledged.

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# ARCHAEOLOGY IN LIBERIA: PROBLEMS AND POSSIBILITIES

by

John H. Atherton

During May of 1968, I was able to take a short break from my archaeological work in Sierra Leone and make a brief reconnaissance of the Republic of Liberia. While not having a chance to carry out a rigorous archaeological survey, I did have the opportunity to visit a few sites and learned of many more.

Liberia is on the border of two different climatic zones, the North and West having a single rainy season and the Southeast a double one. The entire country is covered by dense vegetation. Both the extremely dense, mostly secondary, growth in the North and West and the typical "rainforest" vegetation in the Southeast are hindrances to archaeological exploration of the country. As a result, most of the sites which are known are either on the coast or are "roadcut" sites.

Another problem, which can easily be seen by glancing at a map, is the paucity of roads. Most of the roads that do exist are double-laned and usually quite well maintained, but during the rains are marred by flooding and deep ruts.

Liberia appears to have been occupied at an early date, since an apparently Sangoan site was found deep in the rainforest zone of the country. This site was brought to my attention by Mr. Harry Gillmore, the director of President Tubman's zoo at Totota, who found a worked piece of metamorphic quartzite near a roadcut and later sent it to me in Sierra Leone. I visited the site, which is located on a logging road about 11 miles west of Zleh Town, and made a surface collection over about a two-mile stretch of road with the assistance of Mr. James Riddell and some residents of the area.

The tools we found were heavily patinated, but the flake scars were still very clear since the pieces had been subjected to no extreme wear by water or soil action. A few of the pieces found are illustrated here. Figure 1 is a "handaxe-chopper" (see Clark 1963, p. 52) of metamorphic quartzite. This piece is 12.5 cm. long, 9.5 cm. wide and 3.6 cm. thick. It is bifacially worked and has a relatively straight working edge. The piece is quite well made but on account of the nature of the material many of the flakes are "stepped" or abruptly terminated. Figure 2 is of a pick of the same

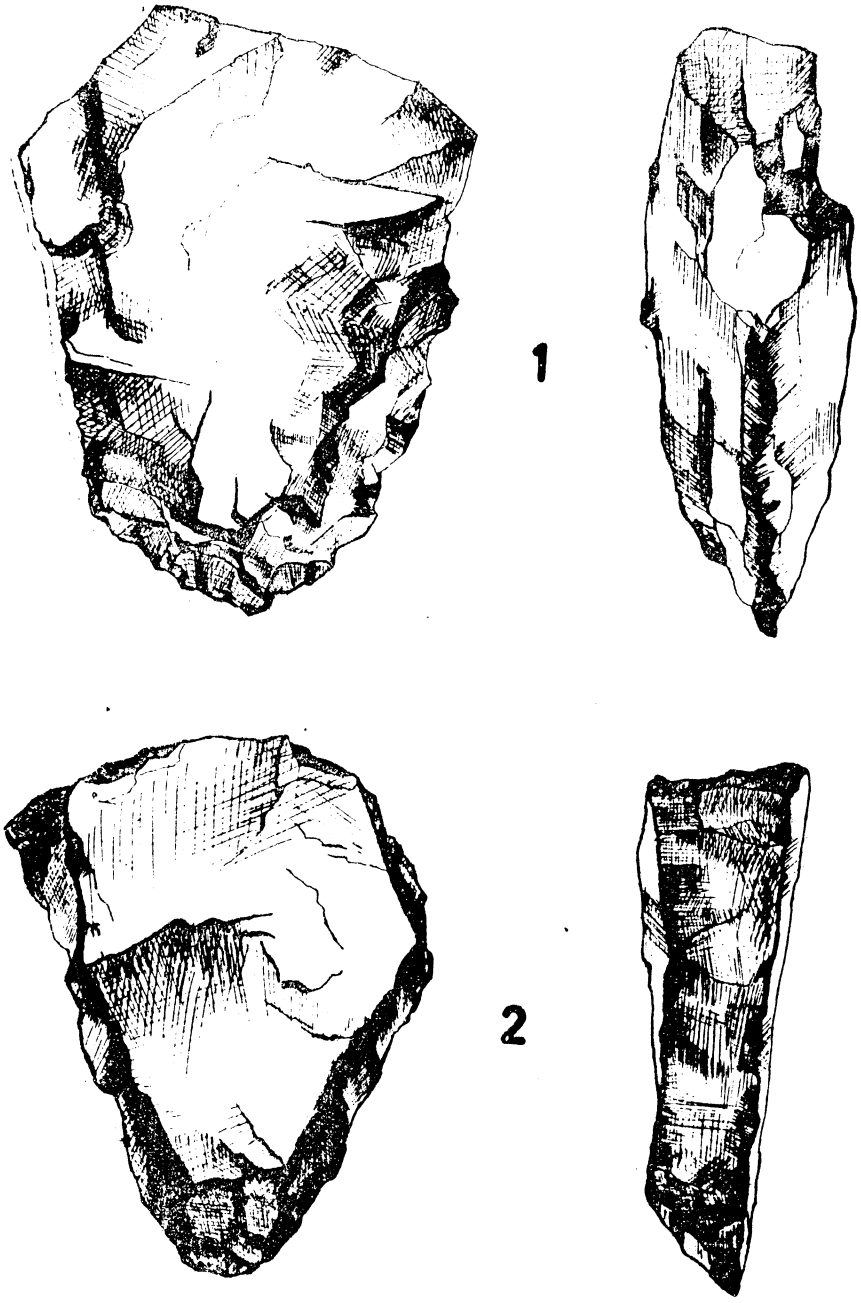
material. This piece seems to have been manufactured out of a flat piece of rock and is only worked on one face. Its maximum dimensions are 11.2 cm., 9.10 cm. and 3.5 cm. The tool seems to have been formed by the striking of relatively few flakes using the now unworked surface as a striking platform. Its function could very well have been the same as that of the handaxe-chopper described above.

The multi-faceted spherical stone shown in figure 3 is of vein quartz. Its use is unknown, but it appears to have been subjected to heavy wear by battering. Its maximum dimension is 6 cm. Figure 4 illustrates a bifacially worked piece of quartzite. This might have been used as a heavy duty chopping tool - one edge appears to have been damaged through use - but as with the other tools at this site, the nature of the material and the heavy patination makes use-damage quite difficult to discern. The maximum dimensions of this piece are 9.6 cm., 9.4 cm. and 5.4 cm.

One of my main purposes for visiting Liberia was to search for Late Stone Age sites. I found none. Nor did I discover in the collections of museums, miners or missionaries any indication that there were any. There has been some ethnographic evidence of the ritual use of stone celts, such as those found in Late Stone Age contexts in Sierra Leone and Guinea, but in an iron age context in Liberia (see Holas 1952:1344, footnote 2). It is interesting to note that many of the peoples of Liberia have traditions of recent migration from the north and the Mano, for instance, say that the area was inhabited only by chimpanzees when they arrived - but statements such as this often mean that the region was not densely populated.

Probably the most likely places to find traces of Late Stone Age materials would be along the northern and north-western borders. Several people have told me of caves which are in the hills between Voinjama and Cape Mount. I have been assured that many of these caves have pottery on the surface of a type not recognized by the present inhabitants of the area (clay vessels are still being manufactured in many parts of Liberia). I have also heard from several sources that there was a two foot stone figure found at the mouth of a cave in this area discovered during "brushing" operations. From what I can discover, this is the area from which come the few nomoli that have been found in Liberia.

It is interesting that the extensive iron mining carried on in the Nimba Mountains by LAMCO has not turned up any stone age implements.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Many iron age sites, of course, can be found. Evidence of early European contacts have been found near Cape Mount in the north, in a midden excavated by a missionary there, and near Harper in the south, at a burial site excavated by a local teacher.

Deserted village sites abound and often these can be linked to specific tribal groups by oral histories. Recent air photos taken by mapping crews have revealed many of these since they were often surrounded by high mud-brick walls (as some still are today). Others can be found by asking knowledgeable villagers.

What appears to be a ritual deposit of pottery and other artifacts was discovered about 13 miles north of Zorzor near the Zorzor - Voinjama road. It had been partially excavated by local missionaries but I was able to find a few pieces in situ and was able to examine the collections made from the site. The pottery is very much like a type found in Sierra Leone and will be discussed in a separate paper.

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# PAINTED POTTERY IN THE VOLTA BASIN

by

O. Davies

I would like to make two points in amplification of Mathewson's article;[1] I have been unable to write earlier, owing to the long delay before this number of W.A.A.N. reached me:

1. What Mathewson calls the Krachi type of painted pottery with "red painted lineal designs over an incised or impressed decoration" is not confined to the Krachi area. I have found sherds of this type at Tankomia, three miles downstream from Bui. It was probably due to the impact of painted on impressed ornament. When we know more about the southern fringe of the painted-pottery area, we may be able to distinguish several local styles of "paint on impressions".

2. While I agree with Mathewson that the introduction of pottery-painting into Gonja was due to Mande infiltration about the XV century, we may consider the question from a wider point of view. Bands of paint (but not painted patterns) appear in combination with bands of impression at Ntereso (XIII century B.C.).[2] I know no dated painted pottery from the Niger bend as early as this, though most of the sites there have been poorly and superficially excavated. There does however appear to be a parallel of roughly similar date in northern Tibesti.[3] Thus it seems that there was a Sudanic reservoir of painted-pottery users; from time to time, when they intruded into Ghana, they brought their pottery-style with them. When other West African territories are better explored, we may be able to trace similar intrusions by the appearance of painted pots.

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1. W.A.A.N., 8 (1968), p. 24.

2. Davies, Man 2 (1967), p. 116.

3. Vita-Finzi and Kennedy, Jour. Royal Anthropological Institute, 95 (1965), p. 195.

# NEW RADIOCARBON DATES FROM IFE

by

Frank Willett

| | | | | |
|---|---|---|---|---|
| M-2114 | Pit III | Orun Oba Ado | 1150 ± 120: | A.D. 800 |
| M-2115 | Pit V | Orun Oba Ado | 1150 ± 120: | A.D. 800 |
| M-2116 | Pit VI | Orun Oba Ado | 1010 ± 150: | A.D. 940 |

Location: Orun Oba Ado: in the centre of Ife, Nigeria

$4^{\circ}$ 32' E, $7^{\circ}$ 28' N

This is the site in the middle of Ife to which the heads of the Kings of Benin were sent for burial, since it was from here that Oronmiyon set out to found the Yoruba dynasty there. In exchange, bronze heads are said to have been sent to Benin from Ife, before bronze casting was introduced there from Ife towards the end of the fourteenth century A.D., according to the oral traditions.

A number of pits were located, mostly deep tubular shafts which appeared to be burial pits for the heads. Pits V and VI were of this type. Pit VI has already been dated BM-264: 960 ± 130/ A.D. 990 which confirms M-2116.

Pit III was large, irregular and relatively shallow, and is unlikely to be a grave pit. The date M-2114 was obtained from charcoal recovered from a depth of 2'6".

No other date has been obtained from Pits III and V, though Pit XI gave the date BM-265: 1390 ± 130/ A.D. 560. This date is still isolated but M-2114 and M-2115 partly fill in the gap between the two radiocarbon dates obtained previously.

Taken together, these dates confirm that the site of Ife itself was occupied during the later part of the first millennium A.D. which is earlier than cautious scholars had been prepared to suggest and earlier than the generally accepted date for the beginning of the Yoruba Dynasty in Benin. Although there is no evidence of bronze-casting in Ife at this period, it is interesting to compare these dates with

those obtained in Shaw's excavations at Igbo-Ukwu in Eastern Nigeria, in association with bronze objects:

I-1784: 1110 ± 145/ A.D. 840

I-2008: 1100 ± 120/ A.D. 850

## FURTHER RADIOCARBON DATES FROM IFE

Ita Yemoo

M-2117: 480 ± 100: A.D. 1470

This comes from Trench XIV, layers 4 and 5, beneath potsherd pavement no. 1. At a greater depth was the charcoal which gave the date BM 261: A.D. 960 ± 130. The difference between these dates is roughly three times the combined Standard Deviation (c. 160 yrs.) and is thus significant.

M-2118 from layer 4, beneath pavement no. 7 was an inadequate sample.

M-2119: 800 ± 200 = A.D. 1150

This was a very small sample, though it contained charcoal from layer 2, in squares 7D, 4E and 6B, all overlying pavement 7, and corresponding to BM 262: A.D. 1060 ± 130. The difference in date is not significant.

M-2120: 600 ± 100 = A.D. 1350

This sample came from the lower part (more than 7'7" below the surface) of the filling of feature 9, a deep pit outside the town wall.

M-2121: 1100 ± 120 = A.D. 850

This sample came from the upper part (down to 6'6" below the surface) of a well which was excavated down to 15'1" below the surface of the natural bedrock. The well had been sunk from the old land surface buried below the material cleaned out of the ditch of the town wall, and provides a *terminus post quem* for the building of the town wall.

SUMMARY OF DATES FROM IFE:

Orun Oba Ado

| | | |
|---|---|---|
| Pit XI | BM - 265: | A.D. 560 ± 130 |
| Pit III | M - 2114: | A.D. 800 ± 120 |
| Pit V | M - 2115: | A.D. 800 ± 120 |
| Pit VI | M - 2116: | A.D. 940 ± 150 |
| Pit VI | BM - 264: | A.D. 990 ± 130 |

Ita Yemoo

| | | |
|---|---|---|
| Old Well | M - 2121: | A.D. 850 ± 120 |
| Beneath pavement 1 | BM - 261: | A.D. 960 ± 130 |
| Beneath pavement 1 | M - 2117: | A.D. 1470 ± 100 |
| Over pavement 7 | BM - 262: | A.D. 1060 ± 130 |
| Over pavement 7 | M - 2119: | A.D. 1150 ± 200 |
| Beneath pavement 4 | BM - 259: | A.D. 1160 ± 130 |
| Pit outside town wall | M - 2120: | A.D. 1350 ± 100 |

# FORMER HILL AND INSELBERG SETTLEMENTS IN THE ZARIA DISTRICT

by

Jack Leggett

Most hills in the north of Nigeria give some token or other of past human occupation: historical, ancient or both. The object of these notes is to record the findings of the writer, in the hopes that the information may be equated with that of other workers and in some small measure add to our total knowledge. Working in the Zaria district I have covered several hills, as follows:

Mile 8/40 from Zaria City Gate on the right hand side going towards Kaduna are three rocky outcrops. The first one is singularly meagre of occupation signs. There are grinding hollows, but I could find no sherds.

The second outcrop is best approached from the back. Over most of the surface are grinding hollows and one gains the impression of a very long habitation. In one position is a hollow in a good state of preservation but in an impossible position in which no woman could grind corn, for a fallen rock almost covers it. Not far away are other hollows eroded by weathering. Several of them are unusually deep, but the rock in which they were originally made has exfoliated, leaving only half a hollow. Under these circumstances I feel this site must be very old.

On the western side of this hill are some tumbled rocks which have been used as shelters. There are numerous pot-sherds scattered here, and I salvaged two, each from different pots. One was part of a pot of about 10 inches diameter with a flared neck and rim. The second appeared to have been of some 16 inches diameter, also with a flared rim. The pottery of the latter was more crude than that of the other. Round the neck, where the flare started, the potter had left a proud ring of clay. This was decorated by pressing into it at 3/8 of an inch intervals a piece of rectangular sectioned stick. These impressions, 1/8 of an inch wide, were made obliquely.

The third outcrop contains fewer platforms or living spaces than the other two. On the other hand climbing is more difficult, and tumbled rocks are more profuse. There are at least four shelters in which remains are located. Some of the sherds are deeply embedded. There are numerous grinding

hollows. As with the second outcrop there is at least one hollow, deepened and roughened by time, which has been split in half by exfoliation. From one of the rock-shelters I salvaged a few sherds, chiefly for recording their decoration. One had three definite lines round the pot, applied with a piece of sharp stick. Another was decorated with incised lines and oblique hatching. A third was a weathered body sherd with rouletted decoration. Another badly weathered sherd had been decorated with rouletting and dot impressions. The clay from which these sherds were made was the same as that from the second outcrop.

In the same shelter from which the above fragments were salvaged I found two or three pieces of pot made from a different and finer clay. This material is grey in colour with scarcely any grit. The potter must have wiped the inside and outside with a leaf or cloth and the finer particles therefore have formed a smooth finish.

An interesting feature is the occurrence of ring-based pots. I salvaged an example from this site. These ring-based vessels seem to occur very frequently in these sites, far more often than they do today. One may conclude, perhaps, that this trait was a result of the people's environment, in so far as they occupied hills of rock, having no sand in which they could stand spherical pots. But on the other hand similar vessels have been located at Bakura, a village 25 miles from Talata Mafara. These came from 3 feet down in agricultural soil and were discovered by Klaus Jesperson, an agricultural officer with U.N.O. Similar too, were the huge urns found by Thurstan Shaw at a cutting on the Bida-Zungeru road. This trait of flat bottomed pots appears to have been very widespread.

Also from this rock shelter came a portion of an arm bangle of stone. A rough projection puts this at approximately 2⅝ inches diameter inside.

At the time of my visit to these outcrops, the grass had not been burned. At the third one were two flat areas below, which could perhaps have yielded some finds if cleared.

Mile 16/10 from Zaria City Gate. Proceeding towards Kaduna there is a turn-off onto the old road, and immediately confronting one, are three large inselbergs. One hundred yards or so along the old road, is a farmer's track leading to the first one. There is quite a good rock-shelter here, with numerous rubbing hollows in the surrounding rock. From inside

the shelter I salvaged three portions of granite rubbing stones, two hammer stones and another portion of flat rubbing stone which was more like carborundum than anything else. In addition there were four sherds. One from a flared vessel had beneath the flare a line of impressed decoration resembling stitching. The second sherd had a similar decoration. The third had a decoration of impressed dots, and the fourth was a weathered sherd from a flat-bottomed vessel.

On the floor of this shelter I found what looked very much like a tool. This was a flake from a piece of exotic rock. One edge had what appeared to be secondary working.

The most interesting discovery here was located some 50 yards away from the shelter on an area of flat rock. It consisted of a series of some 40 grooves in the rock. (Figures 1 and 2). These varied in length and direction, while widths fell between 3/8 and 7/8 of an inch. This original and peculiar find in this area is puzzling as regards its purpose. The grooves could perhaps have been used for whetting stone tools of circular section. The writer has found such tools of superb finish in Ghana, although none such have been discovered in this area. Another possible use could have been the finishing of arm bangles. Having finished the inside of the bangle, a piece of shaped wood could have been inserted and gripped on either side by both hands. The rubbing down could then have proceeded by continually turning the wood while pushing the bangle along the groove.

The second inselberg is reached by driving further along the old road to where a quarry is situated. The crushing plant is easily seen. The side of the hill is steep but negotiable. About three quarters of the way up on the steep side is, for want of a better term, an "altar". This is a large piece of flat rock some four feet long by three feet wide and nine inches thick. It has been made to lie level by having placed beneath it three stones. Further up, almost on the summit of the hill is a similar "altar". (Figure 3). These were discovered by the writer ten years ago, but a more recent visit has revealed the presence of three more similar erections. (Figure 4 shows one of these). Proceeding over the top of this hill one comes across dry-stone defence walls. There is little sign of habitation, and one wonders what urge impelled the occupiers to the laborious task of positioning these large lumps of rock; some must weigh at least 7 cwt. or more. I gained the impression that this hill must have had some ritual purpose on account of the five altars and being so well defended. A more detailed examination of this site

Figure 1

Figure 2

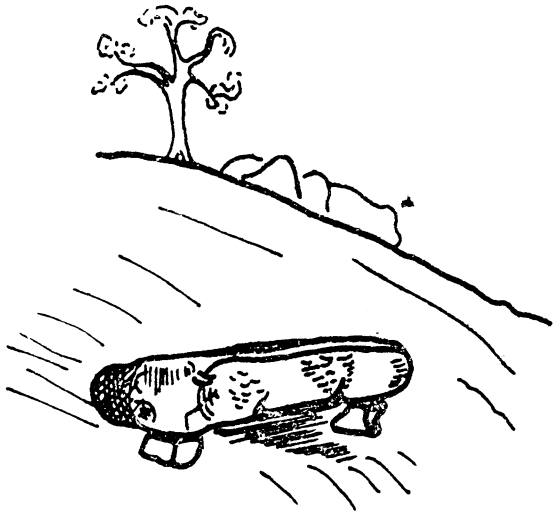


Figure 3

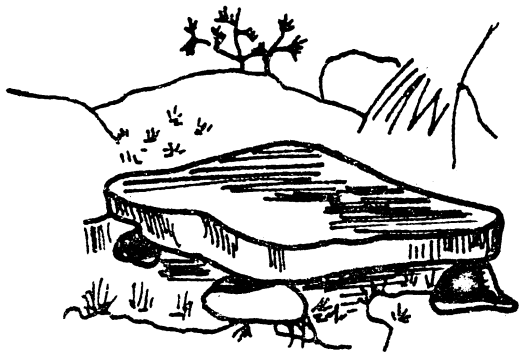


Figure 4

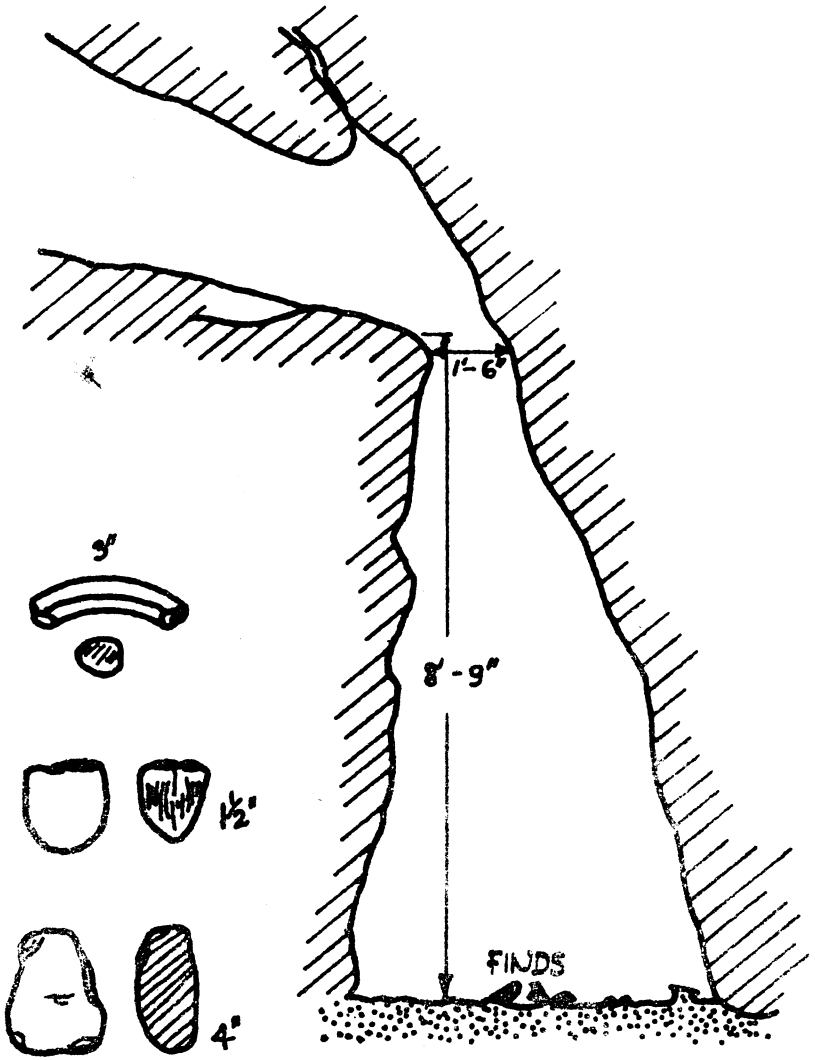



Figure 5

would, most likely, be well worth while, for both of my visits were limited.

Outcrops at Zaria Leper Hospital. There are several of these scattered near the hospital, two of which the writer has partially explored. The first of these was the second one on the right hand side of the road proceeding towards Kaduna. One passes the entrance drive to the hospital and drives on for some 400 yards until an old water tank tower is seen in the bush on the right. There is a track here, leading across farm land to the hill. There are numerous rock-shelters on this outcrop, most of them dry, and showing signs of former occupation. In some instances it is necessary to crawl to be able to get inside.

The few potsherds salvaged are similar to those from the sites already mentioned and here again one finds two wares. The sherds of the first are thick, heavy and made of coarse clay, whilst those of the second are much thinner, light grey in colour and have finer tempering material.

Over the top of the front section of the outcrop and somewhat downwards are several shelters and what appear to have been living platforms. In one shelter, is a platform which projects towards a rock-face, leaving about an 18 inch gap. This immediately opens into a pit some 8 feet deep and 4 feet wide. (Figure 5). At the bottom I noticed a polished stone axe and, dropping down, discovered next to it the tip of another smaller one. This latter had been beautifully polished. The first showed signs of much handling and at a later date had been used as a polishing or grinding stone. In the same spot were several sherds, one of which had the remains of a lug. Also at the same spot were found three hammerstones, one of which had also been used as a grinding stone, and a portion of a stone arm bangle. This was heavy and was elliptical in section. When projected, the outside diameter was $4\frac{1}{2}$ inches and the inside $2\frac{1}{2}$ inches. The rest of the floor area showed no signs of occupation; and I feel that these articles had been thrown down here from the platform above, in so far as they were all collected together in this one spot. There is no convenient entrance to this lower floor because of tumbled rocks and it is necessary to squeeze through a man-sized hole. In view of the fact that no further items were located here, it is possible that this entrance was already blocked at the time of occupation of the platform above. This seems to have been a profitable site so far and it is intended to make a complete survey at a later date.

In this same area is another outcrop which has proved profitable. Passing the entrance to the hospital one proceeds towards Kaduna, past the water tank on the right and continuing for a few hundred yards until the stall of a petty trader is met beneath a shade tree. Immediately on the left is a track, motorable, which goes through cultivated land. This should be followed until one meets an R.W.S. well. From this point is a foot-path leading directly to a picturesque rock outcrop. Following this, one emerges into a small cultivated area surrounded by rocks. On the right is an immense, balanced boulder and, keeping this on the right, one continues to advance towards the rocks. It will be found that rock-shelter and cave entrances are quite easily located here. In fact it is possible to scramble underground until one emerges on the other side of the hill. The floors of most of the shelters are dry. Potsherds of differing types and various decoration abound and one concludes from the signs that this site, although a small one, was once fairly heavily occupied.

There are no defence walls but inside one shelter occupants erected a dry-stone wall, either to make entrance difficult or to baffle the draught blowing through. On the floor of this particular shelter two very crude terracotta heads were found. One of these, the smaller, is scarcely recognisable as a head at first sight. This specimen is $1\frac{1}{2}$ inches high and about $\frac{3}{4}$ of an inch wide. It has an aquiline nose and rather narrow face. The chin is quite definite. The second has a crude face characterized by a disproportionate mouth. The mouth is $\frac{5}{8}$ of an inch in diameter but this decreases until it emerges at the back of the head as two small holes. There is no nose to this figure, but it has two clearly-defined eyes. Unfortunately the left eye is damaged, as is the left side of the face. The forehead is clearly defined. The stylization of this figure is such that it is difficult to interpret it; it could be the face of a human or that of an animal. Several other pieces of terracotta were found, one of which was perhaps a limb.

The last find at this outcrop was a polished stone axe, 3 inches long and $1\frac{1}{4}$ inches wide. It was found partially buried in rain-washed soil in a gulley approaching a shelter.

Zaria. Leaving Zaria, one should take the main Funtua road towards Ahmadu Bello University. After a few hundred yards a bush road is found leading off on the left hand side. This leads to a rocky hill immediately in front and about $\frac{1}{2}$ of a mile distant. While taking this bush road, the rocky hill of "Rock Road" in the Zaria G.R.A. is on the left hand side. The hill in

front is identified by the proximity of an old rifle range and present day stone breaking contractors. The archaeological finds on this site have proved exceptionally interesting. Their nature leads one to conclude that this hill was once occupied by a people who were very clever at fashioning stone implements, had an eye for the selection of good material for this craft, and were exceptionally good at producing terra-cotta figurines both stylized and naturalistic. They also knew and worked iron. Although there are several rock shelters, the indications are that these people lived in the open on top of the rocks and the level ground.

On the top of this hill are to be found numerous grinding hollows. Most of these have smooth edges while a few inches down in the hollows these give way to rougher surfaces where chemical action has taken place because of trapped rain water. Some of the rocks on which these grinding hollows were made have long since exfoliated. Standing amongst these hollows is a rock gong with four or five small depressions on its top surface where it was beaten. Below this point are a few shelters whose floors are littered with potsherds of various decorations including a very pronounced "dog tooth" pattern. It was here too, that an iron arrowhead was found. From the position of these potsherds it seems as though they were discarded by the people living above and have since become washed into these shelters. They also occur in various positions leading to the top of the rocks, i.e. in crevasses and corners.

At the north west corner of this hill, in dry grass between rocks and partially covered with soil, were found a white quartz hammer-stone; a smooth, rounded pebble as used by contemporary traditional potters; two parts of the torso of a terra-cotta figurine; the eroded neck and shoulders of a terra-cotta animal; and what appears to have been the neck of a ceremonial vessel. This last item was made by the coiling method but, instead of first making "ropes" of clay, the potter made somewhat flattened strips.

Approaching this hill from the position where the labourers are breaking rock, one proceeds to the centre and then bears towards the south west corner. It was here, between two rocks, that an area of $1\frac{1}{2}$ square yards of soil covered with turf yielded the most interesting find. Against a rock and almost completely exposed, was a piece of terra-cotta $2\frac{1}{2}$ inches in diameter and 7 inches long. Both ends have been broken off at some previous date but one end bears the lower half of a stylized face. There is an open mouth with protruding under-lip

and a beard. On the left hand side of the torso is a hollow. Where the navel is usually located is a series of raised lines. This in fact is not a navel decoration but the remains of the fingers of a hand so placed in this position, the arm once having fitted into the hollow of the torso. Later, we found a left arm bent at the elbow which almost fitted this figure except the fingers did not match. In fact it belonged to another torso never located. (Figure 7).

Scraping away topsoil I found at least thirteen terra-cotta limbs including arms bent at the elbow, legs and a small foot with an anklet. There were also many other parts which are probably limbs, including hands with spread fingers. A second torso came to light. It has an indentation where an arm fitted and indications on the navel where a hand rested. Together with these came a pedestal. This was about $2\frac{1}{2}$ inches in diameter at the base and tapered through 7 inches to 2 inches in diameter at the top, which terminated in a flared end bearing hemispherical indentations. There were three such indentations evenly spaced round the edge; the rest of the top surface being broken or cracked. This pedestal was of solid terra-cotta and the base bore on its underside an indentation resembling the inside of an egg-cup. There were also several other pieces of terra-cotta, about 5/8 of an inch thick, of various shapes. These were later found to fit together and were reconstructed as some form of base. Later on, a smaller torso came to light, some $1\frac{1}{4}$ inches in diameter and 3 inches long. It terminates in the lower half of a face. The top half unfortunately was never recovered from this site. This face is characterized by a wide, stylized mouth. It is in fact a rectangle, long and narrow. Below this is a well defined beard.

Among these finds was located a most spectacular series of terra-cotta figurines. There are ten in all. Of these, five are stylized. Of the five, three are complete while the remaining two are heads only. (Figure 8). The predominant feature is the pronounced nose leading down from an equally pronounced supra-orbital ridge. The mouth is a straight line, while the ears are represented by definite holes. The eyes are oblique slits which slant down from the top of the nose. The lips are well formed and each figurine sports a well defined beard. They are made in a crouched position with the knees raised. Over the knees are the arms and hands, these being represented by a complete band of clay. The fingers are well defined, likewise the toes. The hair is plaited and brought back over the head to terminate in a point at the base of the neck. One curious feature about these three figurines

Figure 6

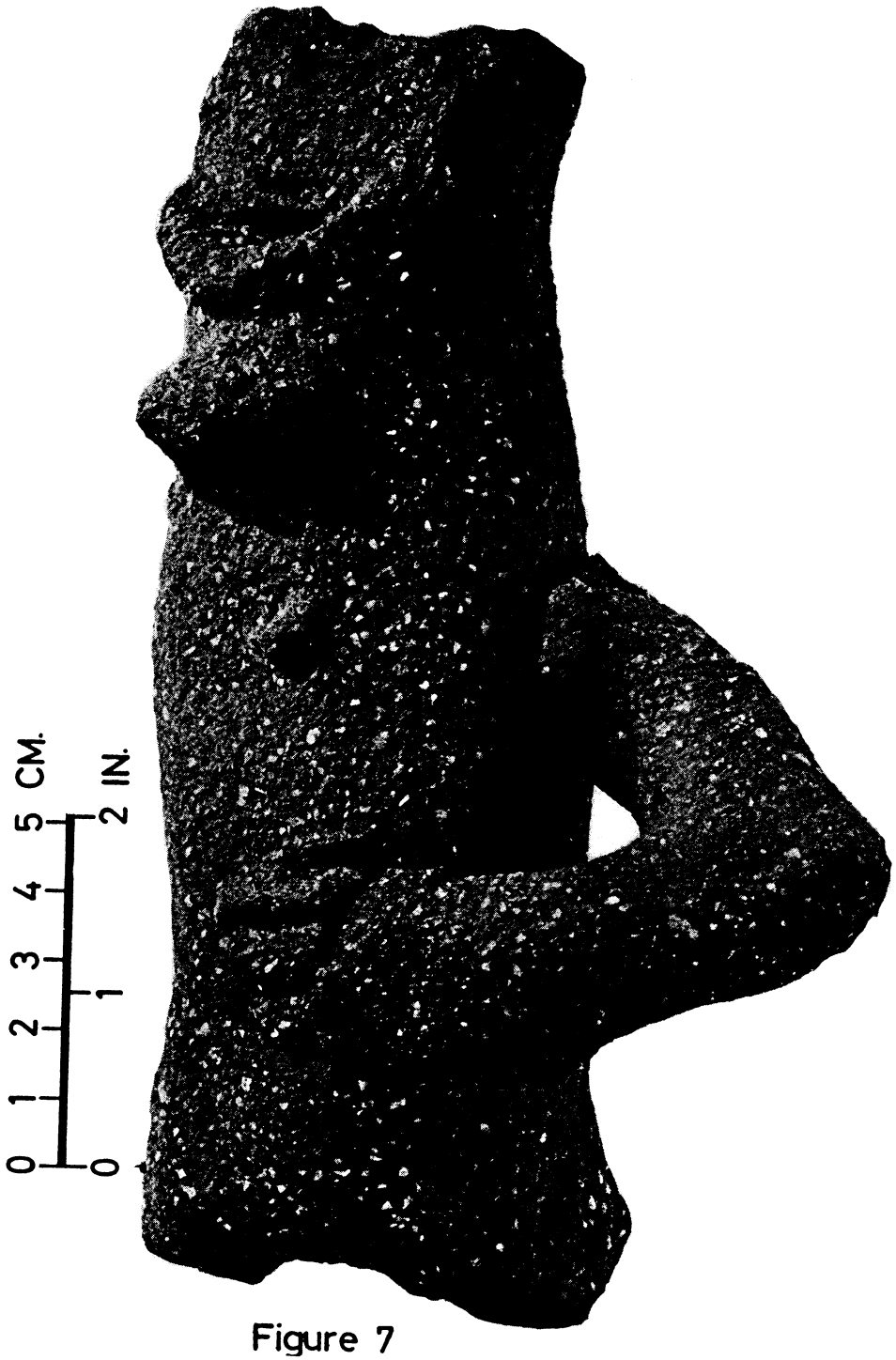



Figure 7

*The arm shown joined to Figure 7 does not in fact belong to this terra-cotta. It has been attached merely to show the manner in which the missing arm would have joined on.*

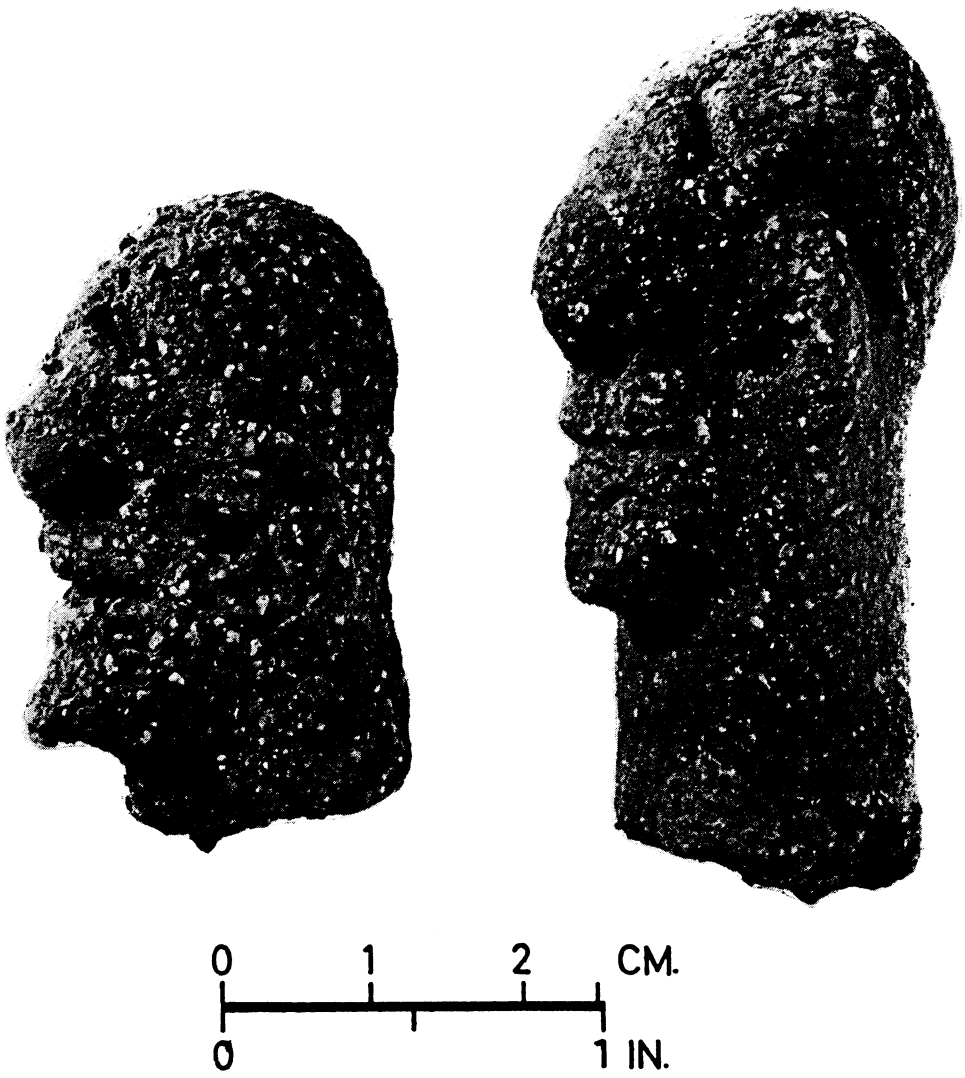



Figure 8

is that each has a hemispherical base. It was found that these fitted accurately into the identations on the top of the 7" pedestal and moreover, each figurine had had attached to it, a small portion of the flared top of the pedestal. Figure 6 shows the resultant object. There is space enough on the top of the pedestal to accommodate two other figurines.

Of the remaining five figurines two are very much the worse for wear but all five are more inclined to portraiture. One is of the face and head of a fat, old man whose open mouth and folds of facial flesh either side of a wide nose give an expression of incredulity. The second most natural representation is the terra-cotta face of what appears to be an ape. This is more mask-like and the eye sockets penetrate it. The nose is very wide and the nostrils very deliberate. The third figurine is a face upon a long and narrow neck. The face is rather worn, denying us clear definition of the features. It appears to have had long ears; the remains of a mouth are to be seen, also a nose and two eyes. The chin has completely disappeared. From what remains of this figurine, it seems as though the face was looking upwards. The fourth figurine seems to be the representation of a person with an unusual hair-style. The crown of the head is high, indicating that the hair has been pulled back and bunched: this is represented by the clay being stabbed. The eyes of this figurine are quite definite and there are indications that the mouth was large and round. The final figurine is a complete head with part of the neck and breast. The mouth is rendered disproportionately large on account of very full lips. There is not much left, if anything, of the nose, but the eyes are well defined. Again we see the hair made up into a coiffure.

Intermingled with these remains were numerous potsherds and small pieces of broken terra-cotta. One of the sherds was from a small vessel, probably a bowl, whose rather thin sides terminated in a thick rim. The sherd had been bored with two small holes 1/10 of an inch in diameter and $\frac{3}{8}$ of an inch apart.

A few yards from this very profitable $1\frac{1}{2}$ square yards I found three polished stone axes partially buried in soil, 18 inches from the side of a rock. Also scattered around in the vicinity were numerous rubbing stones and hammer-stones. The latter in particular indicate that the people were very discriminating in their choice of materials.

Still in the same vicinity but 40 yards from the figurine site, the terra-cotta representation of the head and neck of a tortoise came to light. The neck is about $1\frac{1}{2}$ inches thick

and 4 inches long. Also the rearing neck and head of an unidentified terra-cotta animal was found. The rounded head is clearly defined and bears numerous stabs representing hair. Beneath this are two rather widely separated eyes, two nostrils and a wide mouth. In line with the mouth are two more stabs representing the ears.

Altogether, this is a site well worth detailed excavation. The craftsmen were extremely skilled in stylization and portraiture. They knew iron because we found a spear-head and an arrow-head. They had a unique aptitude for displaying in clay what they saw around them in nature. Although this site is outside the Nok figurine area further study and further finds may link the two. At the moment all the finds dealt with above are in the Institute of African Studies, University of Ibadan, being appraised by Professor Thurstan Shaw to whom I am indebted for much encouragement and interest shown.

# AN ARCHAEOLOGICAL SURVEY IN THE WEST CAMEROON

by

D. D. Hartle

In the latter part of 1968 I conducted a brief archaeological survey of the Bamenda ringroad area of the West Cameroon. This expedition was called the "National Geographic Society - University of Nigeria Archaeological Survey in the Cameroun". The grant was provided by the National Geographic Society of America. My aim was to obtain comparative data for stone tools excavated in Afikpo, Nigeria, in 1966. These excavations were under the auspices of the University of Nigeria at Nsukka and further supported by a National Science Foundation Grant from Washington, D.C., United States of America, given in November, 1964.

The Ezi Ukpa Rock Shelter in Afikpo was excavated in 1966. It contained pottery sherds and worked stone to a depth of nearly thirteen feet. Nine radiocarbon dates recently determined by Geochron Laboratories, Inc., range from A.D. 15 to B.C. 2935.[1] This is the earliest determined date for pottery thus far in the area. I believe that this date corroborates a date of B.C. 2555 ± 130 for the pottery at the Nsukka Farm site.[2] Some of the stone artifacts found in association with the pottery appear to be rare in West Africa. Details of the stone industry were presented at a meeting of West African archaeologists in Freetown, Sierra Leone, in July, 1966.[3] The Nigerian Field published photographs of similar stone artifacts, surface finds, collected some years ago by M. D. W. Jeffreys in the Bamenda area of the Cameroon.[4] The lithic industry found during excavations at the Ezi Ukpa Rock Shelter in Afikpo and in surface finds along the escarpment north of Afikpo on the Afikpo-Abakaliki road suggested the possibility of similar tools extending from there to the Bamenda area. The proposed Cameroon survey originally formed a part of my extended plans for archaeological research because Eastern Nigeria and West Cameroon are in a common geographic area. Since the civil war made it impossible for me to return to Nsukka it seemed an opportune time to investigate that phase of the research.

The initial survey was begun in Mamfe but because of excessive rain and overgrown forest conditions I decided to move further east. I therefore moved on to Bamenda, some 160 kilometers east, and used that town as a base of operations.

The Bamenda ringroad is located in the northern part of the West Cameroon, beginning in the west at Bamenda, east to Kumbo, north to Nkame, west to Wum and south to Bamenda again. Because of the weather I was unable to get to Wum from Bamenda and was unable to get north and west beyond Kumbo. Therefore my work was confined for the most part to the area between Bamenda and Kumbo although we did attempt, without success, to survey some of the area northward toward Njinekom.

The comparative material for the Afikpo material was located eastward and beyond the Ndop Plains in the grasslands. Although three specific sites were recorded (see map) I believe that these three sites are an extension of a single area. Site number 1 is one kilometer east of Sagba village and was located due to recent bulldozing operations for a new road. The rain also helped to expose many specimens here. Site number 2 is by a small stream at the bottom of a hill four kilometers east of site number 1. Site number 3 is four kilometers west of Sagba village on both sides of the road. All finds were from the grasslands, along cow trails, at water holes, and at erosion areas; none came from forests. One informant, who had worked with Jeffreys many years ago, claimed that these were "grassland" tools, and would not be found in the forest. However, Jeffreys apparently found these implements at every level of elevation from the grasslands to the rain forests.[5] This was not checked because, as stated earlier, I was unable to survey in the forest area. As I have indicated these tools were surface finds and there was no indication of any habitation area. In fact it appears that they might simply have been discarded or dropped in the grasslands. Most of the specimens at site number 3 had been "kicked out" by cattle walking along a trail - and the tools had remained in the depression of the trail. These artifacts have not been compared to the Afikpo artifacts. Although the initial processing of the Afikpo materials had been completed the civil war interrupted the analysis of the artifacts.

Many of these tools collected by Jeffreys are in the Bamenda museum, but at the time of independence the files were "relocated" and the data was lost. The material is without any provenience although most of it apparently came from the ringroad or south of Sagba in the Nsi salt area.[6] I collected specimens from the museum which seemed to characterize or represent different "types" of tools and included them with the artifacts collected during the survey.

I recovered some sixty-five artifacts in addition to ten specimens from the Bamenda museum. Most of them are made of a

fine, sandy-textured basalt, and are of a light grey colour. Some, however, are made from larger grained materials which I could not identify. None of the tools were made of quartz or of a good siliceous material although such raw material was available in the area. Primary flaking is obvious, but because the tools are very well worn, weathered and rolled, it is difficult if not impossible to determine if secondary flaking is present. What polish is present, with one exception appears to be the result of use rather than of intent.

Fifteen groups with some subdivisions were tentatively identified. I have purposely avoided the use of "type", since in some instances only one or two specimens represent a group. The final report is now in preparation and some of the tools can be described as:

large, heavy cores
axes, some of which may have been hafted
blades, which may be axes
cleaver-like objects
cutting tools
side edge knives
discoidal flakes
hoes
pick-like objects
grubbing tools (?)
polished tools (?)

Jeffreys believed his stone industry to be Neolithic because he found polished and unpolished tools associated. He further thought they were agricultural implements.[7] The tools from Afikpo would tend to bear this out since pottery was present throughout and many of the stone implements were polished.

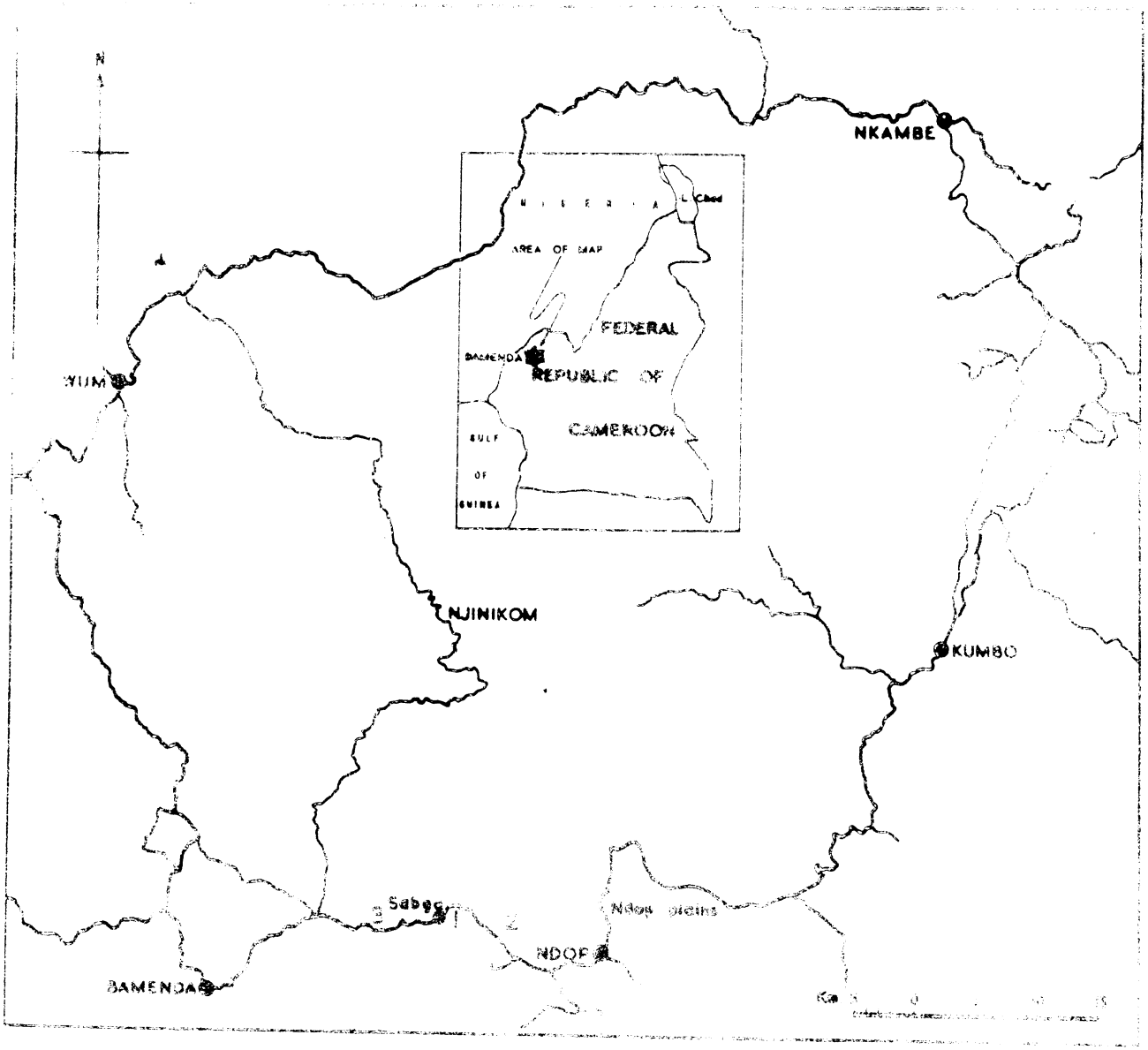
One specimen which appears to be similar to my Group II was recovered from the lower levels of the Iwo Eleru site in the Western State of Nigeria.[8] Davies also illustrates comparable materials from Niger[9] and Ghana[10] as well as from Bamenda.[11] These he calls "waisted axes". Thus indications are that these artifacts may be widespread throughout West Africa even though reported occurrences have been rare.

The Sagba area of the West Cameroon should be more intensively investigated so that a stratified site containing the various groups of tools might be located and excavated. This would provide us with a good control for a chronological yardstick.

Before I conducted this survey in West Cameroon I considered the possibility that these stone tools were derived from the south, perhaps the Congo area, and spread throughout the forest into West Africa. I still consider this a valid possibility which warrants future investigation, Jeffreys suggests that these implements made their way down the Cross River valley.[12] This is a good possibility and could in fact complement my suggestion. I hope soon to conduct an intensive survey from Calabar to and beyond Afikpo not only to determine if these tools are present in the Cross River valley, but also to locate other sites, similar to the Ezi Ukpa Rock Shelter in Afikpo, which would repay intensive excavation.

## Notes


1. Donald Hartle: The West African Archaeological Newsletter, No. 9, May 1968, p. 73.
2. Donald Hartle: "Archaeology in Eastern Nigeria", The West African Archaeological Newsletter, No. 5, Nov. 1966, pp. 13-17.
3. Thurstan Shaw, ed.: The West African Archaeological Newsletter, No. 5, Nov. 1966.
4. M. D. W. Jeffreys: "Notes on the Neolithic Stone Age Culture of Bamenda", The Nigerian Field, Vol. XXIX, No. 1, January 1964, pp. 38-41.
5. M. D. W. Jeffreys: "Neolithic Stone Implements (Bamenda, British Cameroons)", Bull. de I.F.A.N., 13, 1951, p. 1203. ff 2.
6. ibid.
7. ibid.
8. S. G. H. Daniels: personal communication.
9. Oliver Davies, West Africa Before the Europeans, 1967, p. 157.
10. ibid. p. 207.
11. ibid. p. 206.
12. Jeffreys: op. cit.




THE RINGROAD WEST CAMEROON