



EDITORIAL

At the risk of imitating Ebenezer Scrooge, I am obliged to begin this editorial with news of some belt-tightening measures affecting *Nyame Akuma* subscriptions. Unfortunately, the effects of these stringencies will be felt mainly by non-U.S. subscribers, especially those who lack access to "hard" currency, which of course includes subscribers in many African nations. It has been SAfA policy from the outset to provide subscriptions at no charge to people in such circumstances upon written request from them. This policy was discussed during the business session of the SAfA meetings in Gainesville earlier this year and was strongly endorsed by the membership. However, because of the rapidly mounting (and disproportionate) costs of air-mail delivery of such subscriptions, it has reluctantly been decided that, beginning with this issue, free subscriptions to individuals or institutions in countries with "hard" currency difficulties will be sent surface mail. We realize that the slow delivery involved defeats one of the purposes of *Nyame Akuma*, which is rapid dissemination of research news, but this sacrifice is necessary if we are to continue providing free subscriptions in countries that have "hard" currency problems without substantially increasing the rates paid by subscribers elsewhere.

The other item of financial bad news is that *Nyame Akuma* can no longer accept subscription payments in non-U.S. currency by wire transfer or personal check. As reflected in new instructions regarding payment for subscriptions (see facing page), fees must be paid in U.S. funds, either by a personal check on an account in U.S. dollars, by credit card, or by a bank draft in U.S. dollars. This change is necessary because of the inordinately expensive bank fees for exchanging currency.

While I am on the subject of changes on the inside cover, I would like to call attention to a minor change in the deadlines for submitting contributions. The intention

of the change is to tighten the bulletin's publication schedule a bit with the hope that this will encourage the submission of contributions (especially in northern hemisphere autumn) that otherwise might be deferred. I would like to add that, although I do not feel obliged to accept contributions for a particular number beyond its deadline, I am entirely willing to discuss such a possibility with anyone who has reasonable grounds for requesting a waiver on a given deadline.

The last issue of *Nyame Akuma* (No. 33) contains the by-laws for the Society of African Archaeologists that were established at the Gainesville meetings. As I indicated in my last editorial, the by-laws need some fine tuning; in particular, the election of at-large members of the Executive Board (Article VII, section 1) and the terms of office of the other members of the Executive Board (Article VI, section 2a) need to be spelled out. For the record, here is the composition of the Executive Board as of the Gainesville meetings:

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ARTICLES

■ BOTSWANA

Excavations at the White Paintings Rock-Shelter, Tsodilo Hills

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This is a preliminary report on excavations carried out in the western Kalahari by L. H. Robbins and A. C. Campbell at the Tsodilo Hills White Paintings site (Robbins and Campbell, 1989a).¹ This site is one of the largest shelters at Tsodilo, a national monument, well-known for its hundreds of rock paintings (Campbell and Coulson 1988). The shelter wall contains about seventy white paintings and several in red. Prominent white paintings include an elephant, humans with hands on their hips, and numerous schematic designs such as circles and gridlike patterns. Interestingly, several of the paintings depict people either leading or riding animals that resemble horses or donkeys.

The White Paintings site is unique because it is one of the few rock-shelters in southern Africa where it has been possible to record oral traditions about the actual use of the site. The shelter was last used by local Basarwa (San) as a rainy season camp about fifty to sixty years ago. At that time a relatively large group, estimated to have been at least fifty, used the site. According to the elder (age 71/72) we interviewed who had lived at the site as a youth, the group was larger than the present one that lives in a small village less than one kilometer from the shelter. He reported that they "filled up the cave (the protected area under the

overhang which projects out for about six meters) and slept family after family and fire after fire."²

In August, 1989 we opened up nine m² of the site. We did not reach the bottom of the deposits due to time constraints. The deepest unit, square 9, revealed 2 meters of deposits. Artifacts and faunal remains were found throughout. The deposits thus far exposed contain about one meter of grey/brown soil capping a red/yellow sand. Schist layers resulting from roof spalling are evident in the deposits, while overlapping ashy hearths are common in the uppermost levels. These hearths are consistent with oral traditions provided about site use. Sediment samples are currently under study by G. Brook, a geomorphologist at the University of Georgia. Preliminary results (Brook, personal communication) suggest correlations with the sedimentary sequence at the Tsodilo Depression site. Radiocarbon dates based on charcoal follow.

Central area, squares 1-4, depth = 62 cm, overlying a massive boulder marking the base of squares 1-4: 500 ± 60 B.P. (Beta 33052). This date may be too recent, given the dates listed below. However, there may be localized stratigraphic differences in accumulation related to the underlying massive boulder floor which was not encountered in the excavation of the other squares.

Square 9, 40-50 cm: 1,080 ± 100 B.P. (Beta 33056)

Square 5, depth = 77 cm: 2,640 ± 130 B.P. (Beta 33681)

Square 6, 90-100 cm: 3,700 ± 100 B.P. (Beta 33053)

The cultural sequence thus far exposed extends from about fifty years ago to the period when LSA peoples overlapped with early Iron Age village peoples (between approximately 40-70 cm) and into pre-Iron Age, LSA times (below about 70 cm). An overview of the finds follows: LSA lithic materials occur throughout the deposits, though there are changes in artifact frequencies. Typical retouched pieces include crescents (segments) and backed pieces as well as small scrapers. Pieces of edge ground mica schist were frequent finds

as were bone points and ostrich egg shell beads. Iron beads were occasional finds, mainly occurring in the upper 20 cm and some glass trade beads were also found in the upper 20 cm. Pottery was not abundant and was predominantly recovered in the upper 60 cm. However, a few sherds were found below this depth. While most of the sherds are not decorated, several of the decorated sherds are similar to those found in abundance at the nearby Tsodilo early Iron Age village site of Divuyu (J. Denbow, personal communication, Denbow and Wilmsen 1986). Lumps of white pigment identified as calcrete by D. F. Sibley (personal communication) of the Geology Department at Michigan State University have been found in several levels directly beneath heavily painted areas on the shelter wall. The pigment used for the white paint on the wall has also been identified as calcrete.

The fauna includes birds, fish, river mussel, reptiles such as snakes and monitor lizards and numerous mammal bone fragments. Mammals, identified by R. G. Klein (personal communication) are presented in Table 1. In addition, elephant tusk fragments, identified by J. A. Holman of the Michigan State University Museum (personal communication), were found in the 20–30 cm level. It is interesting to note that there were no domesticated animals among the identifiable bones, although some of the unidentifiable small-medium bovid bones could be from either sheep or grey duiker, while the unidentifiable large bovid could be either cow (*Bos taurus*) or buffalo (Klein, personal communication). It is also significant to point out that the fish and mussel shell indicates relationships with the Okavango river system. The nearest locality reported by local people to have had fish during the rainy season, resulting from the flooding of the Okavango, is at Xeidum, about 17 km from the site, whereas the Okavango itself is about 70 km to the east of Tsodilo.

While fish remains were not abundant, they were found in most levels including the base of the exposed deposits at two meters and, therefore, demonstrate long-standing relationships with the Okavango drainage.

Denbow and Wilmsen (1986) have emphasized that these connections existed during the early Iron Age. The new data from the White Paintings site shows that these relationships actually began substantially before the advent of the early Iron Age.

Mongongo nut shell fragments were found all the way from the surface to a depth of 125 cm. Mongongo nuts are a staple food of the !Kung San as well as other groups (Lee 1979). At Tsodilo, they are currently exploited by both the San and Hambukushu. The nut shells from the White Paintings site supplement evidence recovered from the Tsodilo Depression site documenting that use of mongongos in the western Kalahari extends through much of the Holocene (Robbins and Campbell 1989b, Robbins in press). An ear of maize recovered in square 3 between 10–20 cm is of special interest. The maize, identified by Kathryn Egan (personal communication), a paleoethnobotanist, is a mid-shaft segment with twelve rows. It is comparable to modern maize with twelve rows, which is currently grown within one kilometer of the site by both the San and Hambukushu. The maize, which is probably less than 300 years old, is the first archaeological specimen from Botswana. We also recovered what is most likely a carbonized cow pea from square 4, 20–30 cm (R. D. Freed, Crop and Soil Science, Michigan State University, personal communication).

Future work is planned for the White Paintings shelter. We want to enlarge the excavated area and explore the unexcavated deeper deposits. The results of this work should produce a wealth of new information on paleoenvironments and human prehistory in the western Kalahari desert.

Acknowledgements

This work was funded by the National Geographic Society. I thank A. C. Campbell and the National Museum of Botswana for making this research possible. I am grateful to N. Campbell for work as an interpreter, and I am especially grateful to R. G. Klein of the University of Chicago for identifying the mammal bones.

Table 1. White Paintings Mammals—NISP/MNI

	0-40	40-80	80-200
<i>Lepus</i> sp., hare	2/1	1/1	0/0
<i>Pedetes capensis</i> , springhare	48/2	27/1	76/4
<i>Hystrix africaeaustralis</i> , porcupine	1/1	3/1	3/1
Viverridae gen. et sp. indet., mongoose	22/3	3/1	1/1
Hyaenidae gen. et sp. indet., hyena	0/0	1/1	1/1
<i>Felis</i> cf. <i>caracal</i> , caracal (or ?serval)	0/0	3/1	0/0
<i>Orycteropus afer</i> , aardvark	0/0	1/1	0/0
<i>Equus burchelli</i> , zebra	0/0	5/1	2/1
Rhinocerotidae gen. et sp. indet., rhinoceros	0/0	0/0	3/1
<i>Phacochoerus aethiopicus</i> , warthog	0/0	1/1	7/1
<i>Redunca</i> cf. <i>arundinum</i> , reedbuck	0/0	1/1	1/1
Alcelaphini gen. et sp. indet., ?hartebeest	0/0	0/0	1/1
<i>Sylvicapra grimmia</i> , grey duiker	3/1	1/1	2/1
<i>Raphicerus campestris</i> , steenbok	1/1	0/0	1/1
Bovini ge. et sp. indet., ?cape buffalo	0/0	0/0	1/1
Small bovid	52/2	108/5	22/1
Small-medium bovid	9/1	11/1	7/1
Large-medium bovid	6/1	18/2	1/1
Large bovid	3/1	8/1	1/1

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■ CAMEROON

Rock-Shelters and a Greater History of the Bamenda Grassfields, Cameroon

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This paper reports on the results of an archaeological reconnaissance jointly conducted by the authors in Fundong Subdivision of Northwestern Province, Cameroon (Fig. 1) during June and July of 1990. Part of the survey focused on rock-shelters and open-air lithic sites; this component of the survey was under the direction of Asombang, who has previously conducted excavations of three rock-shelter sites in the northwest (Asombang 1988).

Our knowledge of the Northwestern Province of Cameroon is sketchy at best. Some areas have been surveyed for more recent ironworking sites (Warnier 1986), and several parts of Fundong have also been examined by Warnier for evidence of iron metallurgy. However, most of Fundong is archaeologically virgin land, and like the entire northwest has never been the focus of a systematic archaeological field survey.

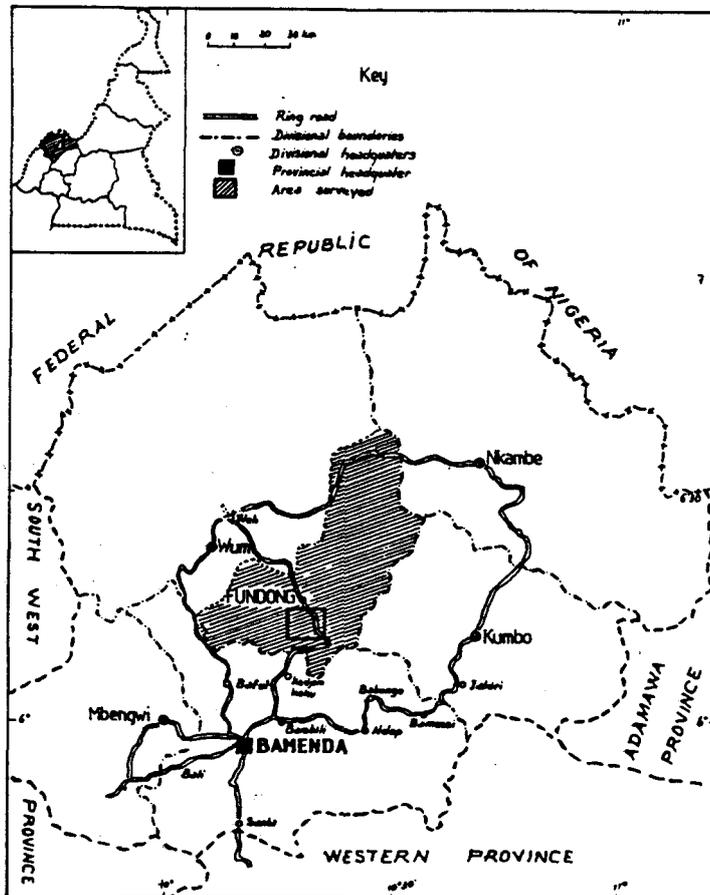


Fig. 1. Study Area in Northwestern Cameroon. Stippled part marks Kom culture area.

Our research was designed to carry out an extensive and intensive survey, e.g., regular transects through cultivated fields, random transects run while walking to specific sites mentioned by informants and specific rock-shelters mentioned in interviews.

In this part of our report of the survey, we will discuss only several categories of sites amongst those located, namely rock-shelters and open-air lithic concentrations. We also encountered a number of megalithic sites outside of Fundong Subdivision, but these are complex phenomena which must await discussion in a subsequent publication. We take particular note here of the stone artifacts associated with rock-shelters, as well as with open-air sites. Approximately 95% of the lithics discussed here come from surface collections, with the remainder from auger holes (6" bucket auger) and limited test excavations in open-air sites.

Previous archaeological survey for Stone Age sites has focused exclusively on rock-shelters. This survey differed from that previous orientation in its attempt to locate open-air lithic sites. Our surveys centered mostly on the Megof and Belo valleys and their adjoining hillsides and ridges. Several of the rock-shelters that we discuss here were reported to us and others we spotted from a distance. It was not always possible to follow-up on the latter because of bad weather and limited time. However, it is accurate to say that we have just begun to locate rock-shelters with archaeological deposits.

The first rock-shelter investigated is located one kilometer below the Catholic Mission Hospital at Njinikom. It is situated west of the mission on the same hillside approximately 200 meters lower in altitude. Twenty-six meters wide, 9 meters deep, with a ceiling that is 2 meters high at the dripline, this shelter has two distinct platforms—one in the center and another in the right rear as one looks into the opening. A crack in the overhanging rock has created a water passage, so that a secondary drip line has developed over the inclined floor (dropping 4.5 m from south to north), creating an erosion channel across the shelter floor. A

number of artifacts had collected at the base of this small channel.

Artifacts collected from the surface include a plain sherd, eight basalt flakes, two possible cores, and 2 nondescript stones, one of which exhibits possible porcupine gnaw marks. Similar marks also appear on one of the eight basalt flakes (Fig. 2i). Porcupines and other small rodents are known to sharpen their teeth by gnawing on hard surfaces such as stones, possibly the phenomenon that we are witnessing in this instance. Another possibility is that the gnawed rock contains a mineral needed by an animal. Whatever the case, an analysis of the rocks' mineralogy is required, along with studies of the dietary habits of animals such as the porcupine and cane rat that populate such places.

Of the two putative cores, one is triangular in shape and bears a single negative flake scar. It also looks as if it was truncated, but the spall continued down the whole length of one side. The other core is rounded and has three Levallois-type flake scars on one surface only (Fig. 2a), whereas the other surface is natural. The flakes are various shapes, with lengths that vary between 10.5 and 6.5 cm, widths between 6.5 and 4 cm, and thicknesses between 3.0 and 1.2 cm. The edges are straight/convex converging (Fig. 2b), double straight convex (Fig. 2c), convex/concave, or double straight diverging (Fig. 2d). Only four of the flakes show definite signs of intentional fracture, i.e., a clear bulb, platform, and/or use-wear or possible retouch. The Levallois technique is also evident (Figs. 2e and 2f). The presence of such flakes and the use of the Levallois technique bear resemblances to the industries that Asombang has earlier defined at several other northwestern rock-shelters, including the Mbi Crater rock-shelter (Asombang 1988), approximately 10 km to the SSE. There the industry has great longevity, and continues as the dominant form until the beginning of the Iron Age.

The second rock-shelter is located at Baingo, approximately .7 km NNW of the Baingo Primary School, and overlooking a stream. This shelter is 8 m high at the dripline and 8 m deep. The overhang is a

very friable rock which continues to fall. The floor is filled with general organic debris, including remains from recent occupation. The large amount of rockfall leaves little if any room for excavations. Cultural material collected here includes forty-five sherds, one fragmented basalt bifacial piece, and one basalt flake (Figs. 2g and 2h). The flake is flat and triangular in shape. Three flake scars on the dorsal surface are indicative of Levallois preparation. There is no evidence for secondary modification. The broken biface looks as if the once whole piece may have been a hafted axe, comparable to some of the heavy duty tools excavated from Mbi Crater (Asombang 1988).

The third and last rock-shelter we visited is called Kembui, located high in the mountains above Muloin in a still extant forest at 2200 m. It is situated behind a spectacular waterfall, with a 10-12 m overhang, a 70 m wide mouth, and a ceiling about 18 m from the ceiling to the concave surface that forms the dripline. The floor has four clear platforms with large concentrations of ash from recent use; one platform has a log bed, many broken pots, and a "sacred calabash" sent to the site by the Fon of Kom. We discovered that this site, though in frequent use, is considered a

sacred place; for example, no rocks could be dislodged and allowed to roll beyond the Nkeng trees along the dripline. Widely used as boundary markers in Africa, this species in the Bamenda grassfields is associated with twins and traditional doctors.

Thirty-nine sherds and 15 stone artifacts were collected at Kembui. One lithic piece is pick-shaped (Fig. 3d) and fourteen are basalt flakes. Only five of the flakes show clear evidence for intentional fracture. One other piece (Fig 3a) has been notched and there is some damage on the edge, which possibly resulted from use. The shape and length of this particular piece suggests a cautious attempt to prepare the core before detaching the flakes. There is little of note in the remaining, mostly broken flakes. Some damage on the edges deserves closer microscopic observation for possible use wear.

It is important to note the presence of the Levallois technique in all three rock-shelters. A majority of the stone artifacts are flakes, with a number that have a morphology which suggests that they were detached from well-prepared cores. Asombang (1988) has suggested that flakes of this nature were probably meant to be used without retouch or with only a minimal amount.

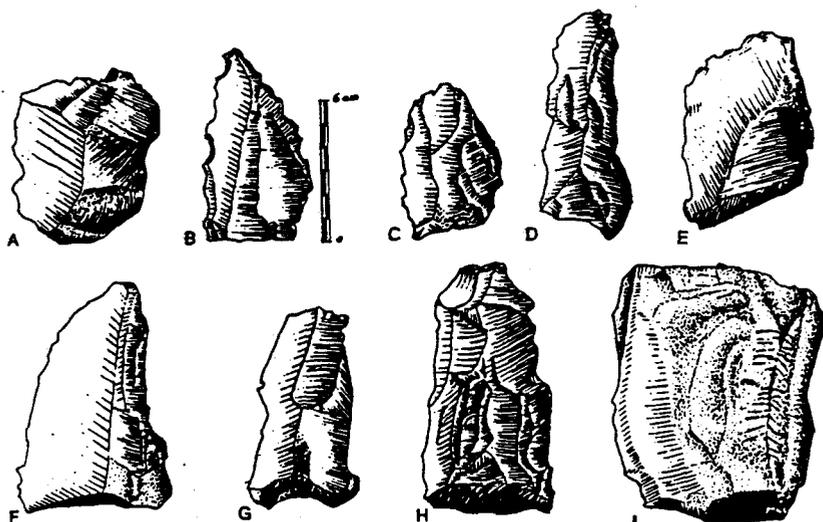


Fig. 2. Lithics from Njinikom (Catholic mission) and Baingo rock-shelters.

Open-Air Sites

We will, for the sake of brevity, provide a summary here of the most significant observations germane to open-air sites. One goal was to try to find other sites of the same complex that characterizes the Late Stone Age at Mbi Crater. This survey did not yield definitive assemblages, yet several sites deserve mention. The NK 5 site, located in the upper cattle pasture of the Catholic Mission Hospital at Njinikom, yielded fourteen basalt flakes in what appears to be a chipping station, as well as a bifacial axe/adze (Fig. 3e) similar in shape and size to those described by Jeffreys (1951, 1970, 1972) from Bamessing salt springs in the Ndog Plain to the south. These tools are found all over the Grassfields and as far

north as the Mandara Mts. (Hartle 1969, Marliac 1973, Migeod 1925)

The most noteworthy of the lithic material collected from non-rock-shelter contexts include bifaces such as a well-made, small triangular quartz biface (Fig. 3b) and a basalt chopping tool (Fig. 3c) found in a cornfield on the Sabal plateau (Njinikom 11).

This initial survey in Fundong has resulted in only very tentative results insofar as open-air sites are concerned. However, artifacts from both rock-shelters and open-air sites are made from coarse-grained local raw materials, dominated by basalt. Bifaces/picks and cores are represented in small numbers, and flakes dominate. All the flakes are secondary flakes, suggesting that

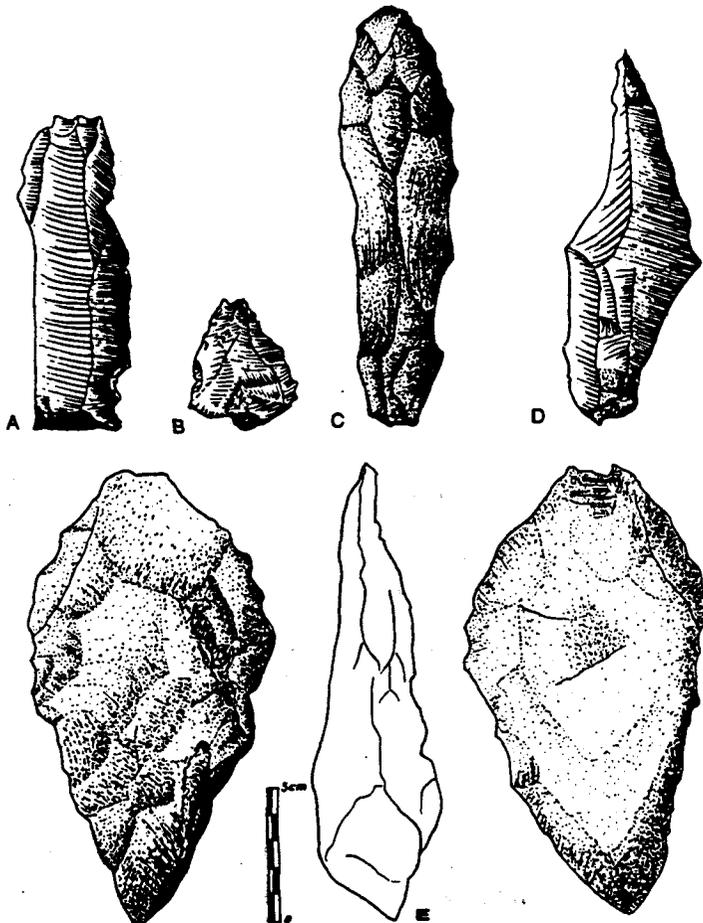


Fig. 3. Lithics from Kembui rock-shelter and from Njinikom 5 (Catholic mission) open-air site.

the primary knapping sites were elsewhere. The flakes were detached by direct percussion using a hard hammer. The general tendency is to produce flakes with lateral edges converging at the distal end. The Levallois technique is also present.

Similar collections have been reported from several localities in North Cameroon (Digara 1988, Marliac 1987, Marliac and Delneuf 1984, Marliac et al. 1983) and the forest and savanna regions of the south (Hori 1977, Omi 1977, Omi and Kato 1982, Omi et al. 1984). Chronological attributions are clearly a problem with collections of this sort. There is a real weakness in using typology as the chronological marker (Marliac 1987: 523), but we are left with an undeniable technological relationship in the presence of the Levallois technique and the bifacial axes/adzes, both present at Mbi Crater.

Collections of the kind reported here are not useful for defining assemblage characteristics, but rather they are good indicators for possible areas where more complex subsurface sites may be located. This endeavor is only an initial step in the study of the later prehistory of northwestern Cameroon. Certainly, at least one of the rock-shelters investigated holds significant potential for excavations, while others observed in the region and as yet unrecorded also suggest many excellent possibilities for future archaeological inquiry.

Acknowledgements

Many people made it possible for this project to succeed. The administrative authorities of Bamenda and Fundong greatly assisted, as did traditional authorities in Fundong. Our thanks go to MESIRES for the research permit and to Dr. Paul Nkwi for his many kindnesses and assistance. The project would not have been possible without the help of the Director of the Institute of Human Sciences who provided a vehicle.

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Archaeological Survey in Northwestern Cameroon

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During June and July of 1990, the University of Florida and the Institute of Human Sciences (Ministry of Higher Education, Science, Information and Research), in Yaounde, Cameroon, mounted a joint archaeological research project in Northwest Province of Cameroon. One of the goals of the project was to conduct archaeological survey for open-air sites in a zone that heretofore has not been the focus of systematic archaeological survey. Though the Grassfields of Cameroon has attracted much attention from linguists and historians interested in the early Bin or Proto-Bantu speakers, it has received surprisingly little study from archaeologists. It was the intent of this project to begin to correct the long absence of extensive and

intensive archaeological research by laying an initial foundation for a skeletal culture history and a comparative framework whereby the material culture of the sub-region can be placed into a larger regional context.

The Northwest Province has for some time been known as an area with a high incidence of Later Stone Age sites characterized by bifacial axes/adzes, originally collected and described by Jeffreys (1951, 1972). Such sites are clustered along the northern part of the Ndop Plain, at the break to the highlands, and have been defined as "Neolithic." Leaving the matter of the "Neolithic" designation aside, it is important to note that no follow-up work to

Jeffreys' early collections occurred until Pierre de Maret (1980) conducted a survey for rock-shelter sites, as well as several limited test excavations. This was followed by Warnier's and Asombang's limited survey (1982) and Asombang's (1988) more comprehensive excavations in three rock-shelters in the same area. Sites dating to the later Iron Age have been the focus of a series of surveys conducted in the region during the 1970s and early 1980s by Jean-Pierre Warnier (1979, 1986).

Our purpose in this paper is to discuss one category of sites discovered in the Kom culture area (see Fig. 1, Asombang and Schmidt, this issue) in Fundong subdivision during the course of the survey. One of the

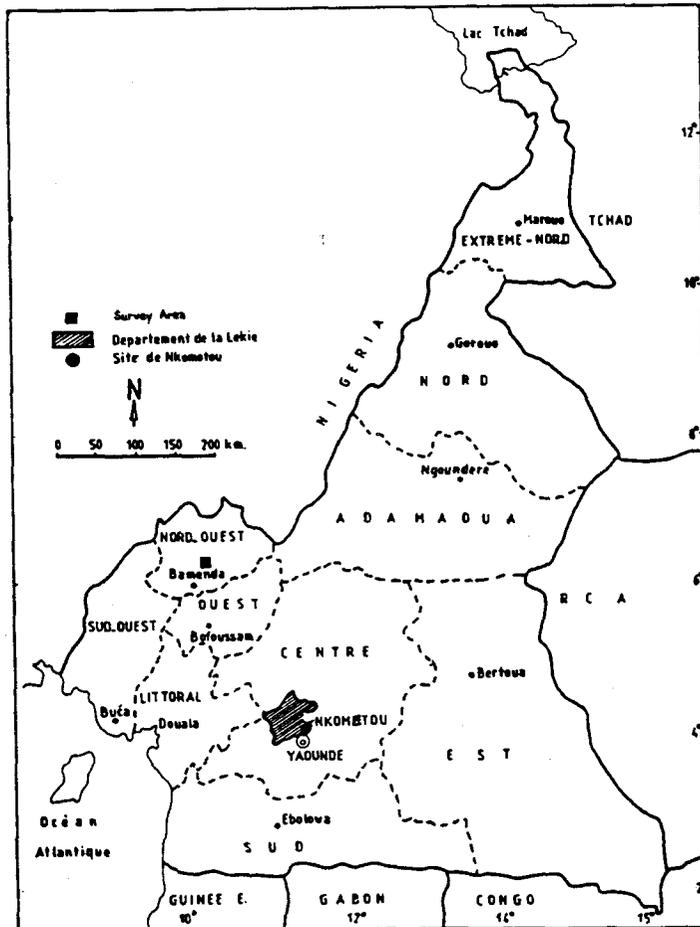


Fig. 1. Location of study area in Northwest Province and location of Nkommetou site and zone with known early ceramics in the Yaounde area.

survey goals was to discern the variable distribution of early settlement sites in the survey zone, approximately an 8 by 12 km area in central Kom (Fig. 1). The sites that we discuss here are marked by the presence of ceramics that bear strong affinities to pottery excavated from pit features at the Obobogo and Ndindan sites in Yaounde and at the Nkometou site north of Yaounde. These ceramics are characterized by design elements such as parallel grooving, concentric grooved designs, cross hatching—sometimes bordered by punctates, bands of herringbone hatching, etc. (Fig. 2). Dating of such ceramics (de Maret 1985, Mbida 1986) suggests that this tradition belongs to the first millennium B.C., though increasingly it appears that the dates cluster in the latter part of the first millennium B.C.

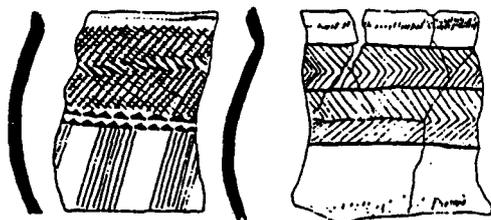


Fig. 2. Early ceramics from the Ndindan site, Yaounde; C14 dated to both first millennium B.C. and first millennium A.D. After Mbida 1986.

Pierre de Maret (1985) has suggested that the presence of such physical structures as pit features, along with artifacts such as grindstones, associated with such ceramics points to a settled agriculture way of life. While we await better direct evidence to affirm this interpretation, it is reasonable to suggest that settled populations probably constructed these large pits, the function of which is still a matter of dispute. Similar ceramics were found in the northwest by Asombang in the first ceramic phases in his

excavations at Mbi Crater and Fiye Nkwi rock-shelters (Fig. 3). The ceramics illustrated in Fig. 3 all come from the basal layer at Fiye Nkwi and date to 2510 ± 50 B.P. (uncorrected) (Asombang 1988: 154). Thus, early ceramics in the same region and in the Yaounde area both provide a chronological baseline from which we can measure the presence of early communities on the landscape, possibly first millennium B.C. in date.

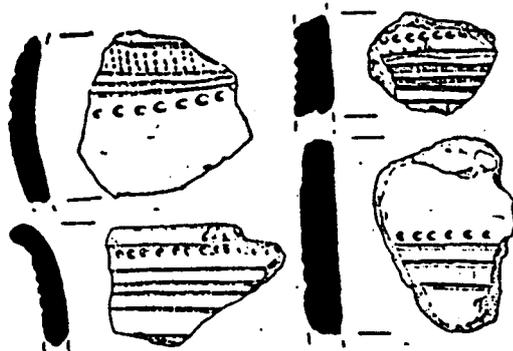


Fig. 3. Early ceramics from basal level of Fiye Nkwi rock-shelter dated in mid first millenium B.C. After Asombang 1988.

Our discussion here focuses only on sites that are marked by the presence of ceramics that belong to this early phase. Other and later components, including more recent ironworking sites will be reported elsewhere.

We examined three major topographic zones during the Kom survey: (1) hilltops; (2) hillsides; and (3) river valleys and terraces. After a number of transects along hillsides in Wombong (a subdivision of Njinikom village) it became apparent that this zone had not supported prehistoric settlements. This observation was later confirmed in several other contexts, though systematic transects are needed throughout the region to confirm this observation. Survey thereafter concentrated on the hilltops, which in some areas are no more than narrow ridges, and in the river valleys. Three ridge systems were investigated—

Njinikom, Kikfuini, and Njinikejem—mostly east-west ridges with intervening valleys.

On the hilltops we ran a series of 5 m spaced parallel transects with three surveyors along the ridge crest for 100–200 meters, until the slopes of the hill (above 15%) were encountered. This approach covered most of the Nkinikom ridge; as well it was applied to the first 400 m of the Kikfuini ridge west of the Fundong road, and thereafter to a 100 m survey zone every km for 6 km to the west; and it was applied to a 200 m zone on the Njinikejem ridge west of the Fundong road. Valley survey focused on Baingo, immediately to the south of Nkinikejem, and the Mugof valley area southwest of Njinikom. In the latter zone we inspected the river terrace for 500 meters west of the Fundong road and then ran transects on a large plateau/river terrace near the intersection of the Nkoneye and Lumugof rivers.

The result of this pilot field survey are most encouraging. It is apparent that there are extensive indications for settlements on hilltops and in valleys dating to the early ceramic phase referred to above. We will quickly review the evidence for the early phase sites, starting with the northern-most ridge, Njinikom.

Njinikom

1. Njinikom 3 (NJ 3): This is a site with early ceramics in two different loci, both south and north of the contemporary Credit Union in Njinikom. We observed both parallel grooved and incised sherds.

2. Njinikom 14 (NJ 14): A site defined by a concentration of parallel grooved sherds found eroding out of the subsoil. The sherds belong to the same yellowish red pot. This site is seventy-five meters northeast of the Credit Union and five meters south of a store owned by a Mr. Silvestri Mbanga.

3. Njinikom 5 (NJ 5): A possible early phase site, with undecorated ceramics with paste and texture similar to other early ceramics in the area.

4. Njinikom 7 (NJ 7): Located in a large cornfield 200 meters west of the Georgian City academy on a slight slope above the river terrace of Mugof valley and defined by the presence of sherds with grooving bordered by punctates.

5. Njinikom 8 (NJ 8): Located on a lower slope immediately above the Mugof valley terrace, 1 km west of Fundong road .

6. Njinikom 9 (NJ 9): 400 meters further west than NJ 8, this site was defined by early ceramics within a contemporary sweet potato patch contiguous to a motorable track.

7. Njinikom 10 (NJ 10): This site is located at the western end of Sabal plateau, 400 m east of where the Nkoneye and Lumugof rivers meet. The entire plateau/terrace is under intensive cultivation and no residential structures are present. In this area we used 2 m spaced transects in a 150 x 250 m zone, and defined two loci with ceramics bearing design elements such as herringbone grooving, parallel incising, parallel grooving (Fig. 4a), and diagonal incising bordered by a groove.

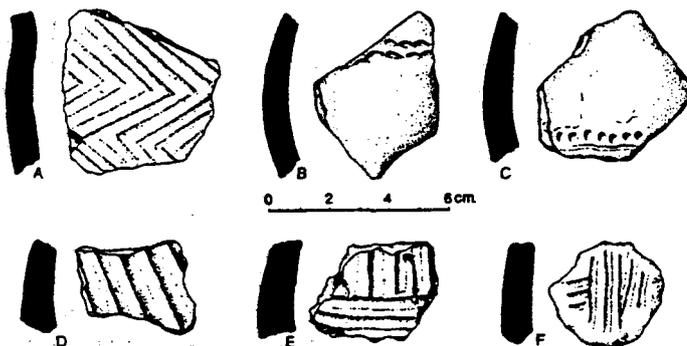


Fig. 4. Early ceramics from Njinikom, Kikfuini, and Baingo.

8. Njinikom 11 (NJ 11): Located in the middle of the Sabal plateau, this site has undecorated ceramics that bear affinities to the early phase sherds of the region.

9. Njinikom 12 (NJ 12): This is a rich site, located on the eastern end at the edge of the Sabal plateau/terrace. Many early phase sherds with perpendicular and parallel grooving, herringbone incising, curved grooving, and other combinations of these design elements were observed on this 60 x 50 m exposure in a recently cultivated sweet potato field.

The variety and density of early phase ceramics on the Sabal plateau/terrace suggests that this area was a focus of intense prehistoric activity, if not settlement, possibly during the first millennium B.C. The potential for further archaeological research on this large valley terrace is significant. The cluster of evidence around the Credit Union in Njinikom proper is at the highest point of the ridge east of the Catholic mission. More intense survey combined with remote sensing may turn up more complete evidence for early phase settlement.

Kikfuini

Kikfuini ridge south of Njinikom was another survey focus, with survey starting immediately west of the Baptist church next to the Fundong road.

1. Kikfuini 1 (KI 1): There are two early phase loci within 40 meters radius of the Baptist church, both defined by ceramics with parallel grooves. In one instance a sherd was found in a redeposited context lying on exposed subsurface soil contiguous to a dark, charcoal-mottled pit. Subsequent exploratory excavation of the pit (Feature 2, Kikfuini) revealed a structure that was rectangular in configuration with ceramics that were grooved, including rows of punctates (Fig. 4b), and parallel grooving bordered by a row of punctates (Fig. 4c), suggestive of some of the early ceramics at Fiye Nkwi (Fig. 3). The location of the feature and time constraints did not allow complete definition of its borders.

2. Kikfuini 5 (KI 5): 400 meters west of KI 1, this site was first seen because a pit

feature had been exposed in profile in an embankment next to a house platform. Several dozen sherds were excavated from the base of this feature; parallel grooving predominates (Fig. 4d), along with parallel incising bordered by a groove, and perpendicularly arranged grooves (Fig. 4e).

3. Kikfuini 2 (KI 2): This site is situated on a 30 meter wide portion of the ridge 2.5 km west of KI 1 in a contemporary experimental agricultural plot; an early parallel grooved sherd, as well as undecorated early sherds were present.

It is clear that the ridge on which the contemporary village of Kikfuini sits bears plentiful evidence for an early phase occupation. As the ridge narrows after several kilometers to the west, the soil becomes poorer, and evidence for early settlement trails off.

Njinikejem

Approximately four kilometers south of Kikfuini is another ridge on which the village of Njinikejem is located. Our survey initially took us into the area west of the Fundong road along the ridge crest until it fell off precipitously 200 meters west of the road.

Njinikejem 1 (NK 1): Locus A of this site was found five meters north of a store bordering the west side of the Fundong road. Eighty meters west of the Fundong Road is Locus B, located in the compound of a university lecturer; there we observed a concentration of pottery immediately in front of an old compound building. The pottery was *in situ* and slightly protruding from the dark red subsoil that made up the compound floor. Initial cleaning revealed a dense cluster of early sherds, later designated as Feature 1, Njinikejem.

Njinikejem 2 (NK 2): Located 160 meters from the Fundong road on the western end of the ridge, this site has two loci—both of which were found in recently cultivated fields and defined by the presence of early phase sherds, amongst which is a sherd with parallel grooves bordered with thumb-nail punctates.

Clearly the most important find during the survey of Kom is a pit filled with

ceramics found at Locus B of NK 1. Excavation of this feature was impeded by heavy rains, but a sufficient sample of pottery was recovered to reveal the presence of a minimum of fourteen pots. The feature was not completely excavated, as it appeared to extend under a contiguous house, and heavy rains prevented further investigation. However, the ceramics recovered show strong affinities to the early Yaounde and Nkometou ceramics, as well as those excavated by Asombang in rock-shelters in the same region. The most common design motifs in evidence are parallel grooving, including perpendicular

motifs (Fig. 5e), incised herringbone (Fig. 5a and 5d), and parallel hemispherical grooving (Fig. 5c). Comb incising seems to be the most popular decorative technique, and smaller globular pots (Fig. 5a and 5b) are plentiful. Several of the vessels found (e.g., 5e) were very large, on the order of 45–60 cm in diameter, but their reconstruction is inhibited by the extremely friable nature of the fired clay.

It is clear from the evidence obtained at Njinikejem 1, (feature 1) that the early phase ceramics of central Kom are closely related as a co-tradition to the ceramics of Nkometou, Ndidan and Obobogo.

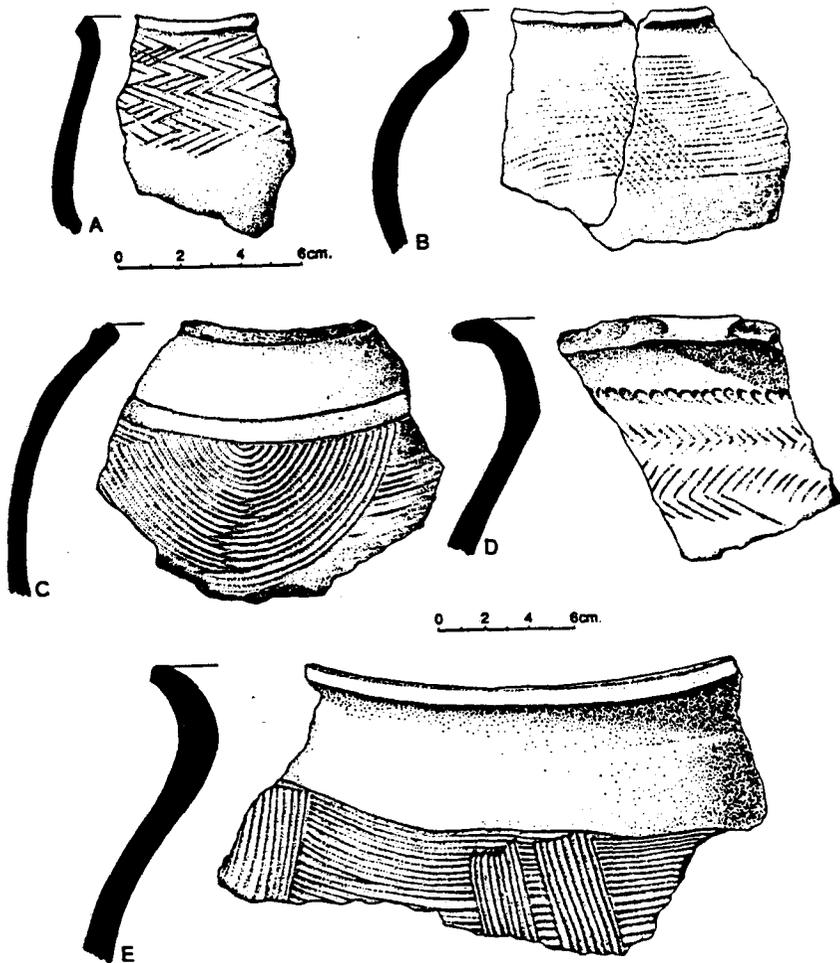


Fig. 5. Ceramics from a pit feature in Njinikejem 1.

Baingo

Immediately south of Njinikejem and down the ridge is a valley that supports intensive agriculture on a fairly level landscape. Limited survey was conducted on several 100 x 100 m plots.

1. Baingo 1 (BA 1): Immediately in front of a large inselberg across the Fundong road from the government primary school, we observed numerous sherds of early ceramics in a 50 x 40 m sweet potato field.

2 Baingo 3 (BA 3): Located in the same flat valley as BA 1, this site is situated above the BA 2 site reported in the Asombang and Schmidt article (this issue) and is approximately 110 m ENE of the government primary school. As at BA 1, the site has numerous grooved sherds, some with a perpendicular motif (Fig. 4f).

Distance and time did not allow for further exploration of the valley in which Baingo is located. However, given the ease with which the two sites were found, there is a high probability for many other localities in this valley, as well as the Bello valley to the north of Njinikejem. Clearly, the northwest holds great promise for a more detailed understanding of early settled communities in the Grassfields zone of Cameroon.

Acknowledgements

We are grateful to all the traditional and administrative authorities in Bamenda and Fundong who made this research possible. Special thanks go to Prof. Paul Nkwi who helped with lodging and who assisted with the permit in MESIRES. Local informants were many, and their cooperation was essential to the project's success. Special thanks go to Peter Kube, Peter Nkwi, and John Tubuo. Finally, we are indebted to the Institute of Human Sciences, which made a vehicle available.

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■ CENTRAL AFRICAN REPUBLIC

New Perspectives on Megaliths from the Northwestern Part of the Central African Republic

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Introduction

Since the 1950s, numerous monuments have been discovered in the northwestern part of the Central African Republic (D'Arbaumont 1957), an area situated between 5° to 7° north latitude and 15° to 15°50' east longitude, along the ridge line between the Meiganga-Bouar and Lim-Borcaranga plateaus. The area is also the divide between the two major drainage basins of northern Central Africa: the Chad basin in the north and the Congo basin in the south. Consequently, as far as vegetation is concerned, this area shares the general characteristics of both tropical and equatorial biogeographical zones—a mosaic of savanna and forest.

Research Perspectives

Our current archaeological research is focused on the megaliths distributed in this relatively large area with its environmental diversity. We seek to understand the mutual interaction between the environmental setting which varied in time and space and the social dynamics of the past communities who have built these megaliths. Previous researchers have studied some of the megaliths monuments from different perspectives (David 1982; David and Vidal 1977; Vidal 1969, 1982).

In 1961 Vidal, who was engaged in ethnographic fieldwork on the Gbaya-Kara, heard of the Tazunu (erected stone

structures) and one year later, decided to undertake a survey in the region located between Bouar and Niem. He noticed a relatively high density of megaliths and strong formal similarities among them. According to him, "these monuments were built during the same period, by the same people, belonging to the same civilization." (Translation mine) (Vidal 1969: 21). A few years later, he initiated a series of excavations to learn more about the architecture and chronology of these monuments.

David (1982) initiated a new research program in 1975 in order to clarify both the internal organization of two megaliths and their stratigraphic sequences.

Both studies provided charcoal samples and radiocarbon datings (Bayle des Hermens 1975). According to the chronology proposed by Vidal (1982: 78), the so-called Tazunu civilisation lasted from 1100 B.C. to 700 B.C. After establishing a closer contextual control of dated samples and obtaining new dates from recent excavations, preliminary results of our research show that "the megalithic monuments of our study area were built between 800 B.C. and A.D. 1900, and that there is no megalithic monument before 800 B.C., which appears to be the *terminus post quem*" (Zangato, in press). Contrary to the conclusions of former studies, which implied that the megaliths were built by Late Stone Age communities without knowledge of iron metallurgy, it is now certain that the practice of building megalithic monuments lasted up to the end of the nineteenth century. This makes sense of the frequent occurrences of iron items (slags, artefacts) uncovered in almost all megalithic monuments excavated, items which were previously interpreted as intrusive. Our research project aims to understand the social mechanisms which generated the concentration of megalithic monuments in the northwestern part of the Central African Republic. In order to achieve this aim, a program of intensive survey was carried out, selected sites were excavated and a spatial analysis of several series of data was initiated.

Survey and Spatial Analysis

The systematic survey program focused on a study area situated between Ndio and Moni, localities which are in the northwest of Bouar. A total of fifty-eight archaeological sites was discovered and mapped. In this sample there are forty-four megalithic monuments which are always located at or a few hundred meters from the heads of water courses, seven sites of villages composed of one or several low mounds and seven ironsmelting sites.

Spatial analysis of all these archaeological sites shows a recurrent pattern of settlement. It appears that the three kinds of sites recorded are distributed in clusters according to topographic units identified by Boulvert (1985: 302); the valleys, the Bouar-Baboua unit (900-1000 m) and the Lim-Bocanranga unit (> 1100 m). Each site cluster is composed of one village site, one to many megalithic monuments and one iron smelting site. This pattern suggests the existence of a specific site location strategy which has yet to be understood.

Archaeological Excavation

In the Ndio sub-area, ten sites were excavated, among which were four megalithic monuments: Tazunu Balimbé 2 (Site 21), Tazunu Balimbé 9 and 8 (Site 32) and Tazunu Dokoko (Site 22); three village sites: Bouboun-kpogbèrè (Site 57), Bouboun (Site 58), and Mbili 1 (Site 55); and three iron smelting sites: Balimbé (Site 48), Bezongo (Site 50), and Mbili 2 (Site 64).

In the Moni subarea, one megalithic monument, Tazunu Gbayoyo (Site 39), and one village site, Nana-Modé (Site 54), were tested.

These excavations allowed a better understanding of the whole building process of megalithic monuments, including the variability of techniques used for the preparation of stones, and may shed some light on social variables such as organisation of labour, division of labour, tasks groups etc. It now appears that there are two main types of megalithic structures: one type consists of monuments built with stones standing in straight lines and the other

consists of erect stones defining concentric circles, the center being empty of stones.

Conclusion

The research summarised in this report is still in progress, but the preliminary results already achieved concern the chronology of the megalithic monuments from the northwestern Central African Republic and the development of an exploratory model based on the dynamics of social systems and their mutual interaction with the environment. It is now almost certain that the Central African megalithic monuments are no longer to be seen as strange objects in the middle of nowhere; they are connected to the development of specific site location strategies and settlement systems of Late Stone Age and iron-using societies. Consequently, they are amenable to normal archaeological investigation. Theoretically, one might argue that these megalithic monuments were part of a wider strategy for the control of land by kin-based communities and were used to reinforce both the cohesion of the group and the emergent power of groups of elders.

Acknowledgements

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■ GHANA

Origins of the Asante Research Project: 1989-90 Excavations at Asantemanso

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From November 1989 through to the end of February 1990 a team from the University of Calgary, headed by Peter Shinnie, in association with volunteers from the Earthwatch Foundation, participated in excavations at the site of Asantemanso, in the Asante Region of Ghana (Fig. 1). On the basis of Asante oral traditions, the village of Asantemanso was selected as a location to begin an investigation into the nature of the material culture of the Asante prior to the founding of the Asante state in A.D. 1699. Two previous seasons of testing and trial excavations dated occupations at the settlement back to the twelfth century A.D., and established a sequence for the associated ceramics (Shinnie 1987, 1988). Building on these findings, the 1989-90 season was planned to investigate further the residential and subsistence patterns of the pre-Asante state occupations at Asantemanso. Specifically, the aims of the research were to define the extent of the site of Asantemanso, determine changes in the size and structure of the village through time and identify variations in material culture within the site area that may have reflected different activities. In addressing these goals field activities involved digging a combination of test pits and more extensive trench excavations across the site area, the collection of a large representative sample of ceramics and detailed mapping of the entire site.

The excavation of 113 m² was carried out in two phases. Phase one of the

excavations was designed to establish the extent of the site and to identify specific locations of interest. A series of shovel tests (50 x 50 cm) and 1 x 1 m units were placed across the site. Results from this programme indicate that the site of Asantemanso covers an area of approximately 1300 m² trending east west along a low ridge. It is apparent that the village has gone through several periods of growth and dispersal. It appears that a period of

florescence was reached between A.D. 1200 and 1700, after which the village declined in size and importance.

Following up on the results of the shovel test program, trenches were laid out for excavation with an emphasis on collecting a representative sample of ceramics and material for dating. Excavations were expanded in various areas with cultural features representative of different village activities.

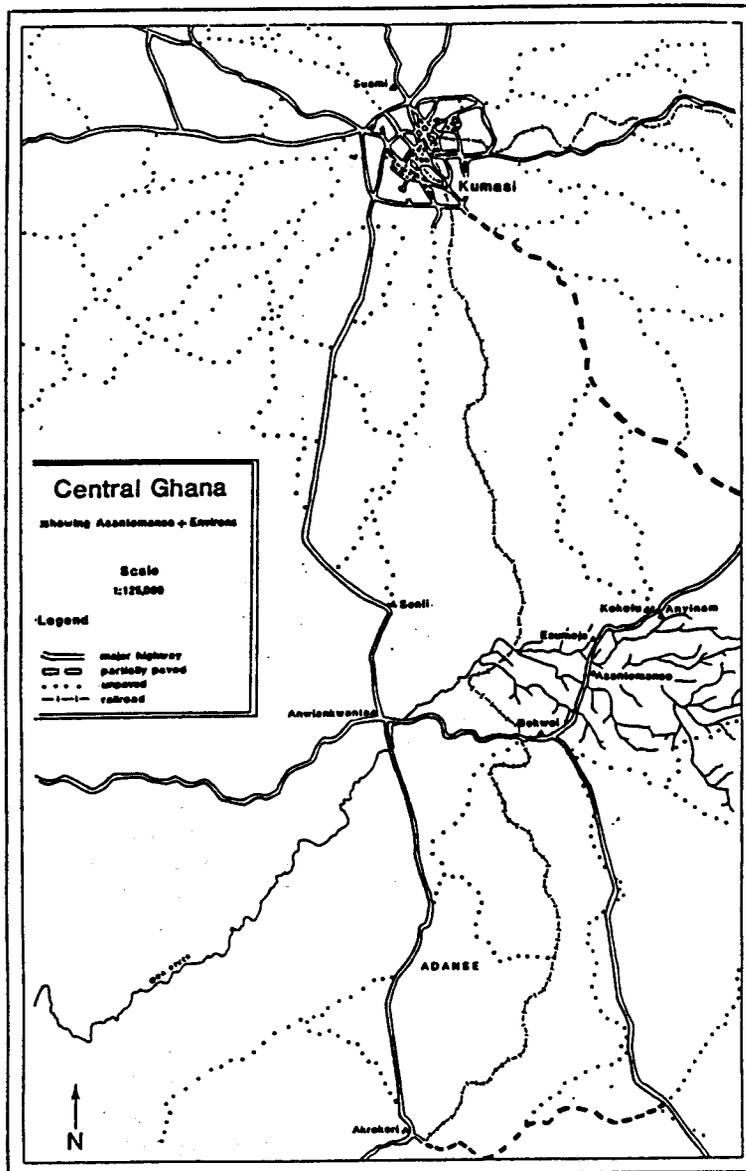


Fig. 1. Central Ghana: Showing Asantemanso and Environs.

Although still in a preliminary stage of analysis, ceramics from the site can be separated into two distinct periods characterized by different forms and design elements. The early period is defined by the presence of thin walled red wares and Earthworks ware (first identified and defined in the Birim Valley by Kiyaga-Mulindwa [1978]), easily recognized by their elaborate design elements and folded rims. Although yet to be dated on the site, earthworks wares were found to predominate in the lower levels of excavations.

Period two is characterized by standard vessel forms with wide flaring rims and rather simple design elements. The predominant occurrence of black slips and black polish in period two ceramics suggests they may be directly antecedent to modern Akan wares. It is curious that the period two ceramics exhibit so little influence from the forms and designs associated with period one. This clear break in the ceramic sequence has been previously noted throughout the Akan linguistic area, but remains open to interpretation (Kiyaga-Mulindwa 1982, Bellis 1987).

The widespread occurrence of iron slag, found in trace amounts in excavations across the site, indicates ironworking may have occurred throughout the occupational sequence of Asantemanso. A particularly large concentration of slag in trench AS8 was originally thought to be associated with a furnace. However, further excavations failed to reveal any furnace structure. It is perhaps more likely that the pile of slag was refuse from smithing activities.

Various other features provided indications of rather complex ritualized behaviour. Notable was the discovery of a well preserved human skull in a 2 m deep bell-shaped cistern in trench AS6. The inclusion of the skull, that of a mature individual which had been perfectly sliced in half along the sagittal suture, is suggestive of some type of sacrificial offering. A second occurrence of human remains, those of a juvenile individual, was uncovered in trench AS11. The presence of these human remains is rather curious, as the village of Asantemanso is considered to

be a place of life, and objects or activities associated with death are generally not found within the village.

A large cache of pots has shed further light on the development of ceremonial behaviour associated with Akan culture. This cache was found at the west end of the site, approximately 1 km. from the current village location. The cache was found to consist of nothing but pots, bowls, and cups stacked inside each other or piled up on top of one another, creating a mound 60 cm high, measuring 12 x 16 m in width and length. Apart from the vessels, only a few other small items, including five Nyame Akumas (ground stone axes often associated with ceremonial rituals) and a metal bracelet were found at the cache site. All of the vessels from the mound are similar in form to those found in excavations dating to between 1400-1600 A.D. There is no evidence of recent inclusions within the mound assemblage. Although there is no visible sign of intensive use on any of the vessels, many of the pots have had a hole intentionally punched in the bottom.

It is of interest that Rattray (1923) made no mention of this cache of pots in his original ethnographic survey. The local residents of the village certainly were aware of the feature, and consider it to be of high ceremonial significance. Oral traditions collected from local residents relate two myths related to the mound's existence.

Plans are being made for further investigations throughout the Amansie East and Adanse regions in 1991, both archaeological work and the collection of local oral traditions. The survey and excavation of further sites associated with the formation of the Asante state will assist in placing the findings from Asantemanso in a regional context.

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The rock-shelter Fanfannyegene I (13°45'39" N/9°14'05" W) is formed of a monolithic block of sandstone, undercut by erosion to such an extent that today it is supported by three pillars, thus providing a covered living area of around 381 m². The excavation (a rectangular area of 3 m²) by levels of an arbitrary thickness of 5 cm, revealed a stratigraphy of seven distinct layers and yielded very abundant archaeological material, 1296 potsherds, 2813 stone artefacts and 114094 stone flakes. The reassembly of stone material made it possible to determine the reduction process in some layers.

The stone artefacts, mostly fashioned from a siliceous raw material, include five groups of principal tools :

Geometric stone industry (26.3%; Fig. 1, #2 to 12), of varied shapes (twenty-five types recognized) characterized mainly by lunates with continuous backed retouch either direct (18.7%) or bifacial (2.4%) as well as triangles with continuous backed direct retouch (1.1%).

Retouched flakes of different types (20.8%; Fig. 1, #16)

Various tools obtained by laminary reduction (16.4%) which can be subdivided into bladelets (8%; Fig. 1, #15), blades (4.4%; Fig. 1, #14) and micro-bladelets (4%; Fig. 1, #20).

Krukowski microburins (8.1%; Fig. 1, #25) whose significance is still debatable, associated with spalls of bladelets with straight oblique truncation (1%; Fig. 1, #23).

"Mèches de foret" (2.2%; Fig. 1, #17, 21) single or double and borers (1.2%; Fig. 1, #22).

Besides these five major groups, four types of tools are represented at less than 1%:

Transversal arrowhead (0.6%; Fig. 1, #18); microtranchets (0.6%; Fig. 1, #26); scrapers (0.4%; Fig. 1, #13); burins (0.2%; Fig. 1, #24).

Three final types occur rarely, under 0.2%: celts (four examples); an unusual

■ MALI

The Neolithic Facies of the Baoule, Mali

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The research undertaken in Mali from 1984 to 1987, as part of the "project for archaeological research in Baoule," had for its aims, other than conducting a survey in the "Parc national de la Boucle du Baoul," the excavation of a rock-shelter named Fanfannyegene I. This expedition, financed by the cultural section of the German Federal Republics' Foreign Ministry, was conducted under the supervision of the Frobenius Institute at Frankfurt.

point made up of bladelets finely sharpened by retouch totally or partially bifacial (four examples; Fig. 1, #19); microburins (two examples).

Several handstones and fragments of milling stones were discovered, as well as a mortar.

The total lack of sharp-pointed arrow-heads is noteworthy. Considering the quantity of tools discovered at Fanfannyegene I, as on all neighbouring sites, and taking into account the bone

remains that imply hunting, it can be suggested that this lack cannot be explained on functional grounds but is a significant cultural feature.

It should also be noted that many small polished and shaped sticks of hematite were found. These may have been used to produce the numerous rock paintings found in the shelter, representing primarily saurians and geometrical patterns. The paintings are superimposed by hammered rock-drawings showing stylised animals.

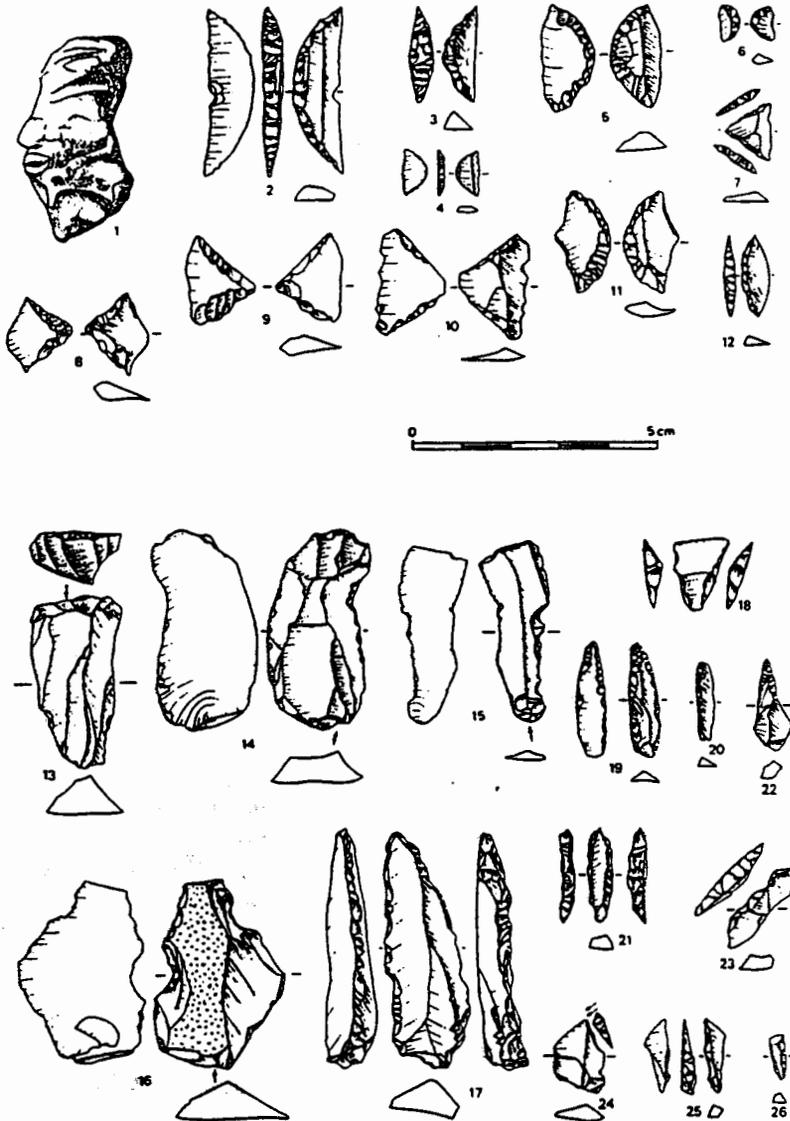


Fig. 1. Stone industry and terracotta head from Fanfannyegene I.

The ceramics are quite homogeneous: the vessels have simple forms, spherical bodies, and bases which were very probably rounded. The lips are barely pronounced. Certain potsherds have holes made after firing which could have been used to suspend the vessels.

Of the potsherds, 65.8% are decorated. In most cases, this decoration was obtained by impressions with a "walking comb" (70%). The use of the roulette seems frequent, with the aid of either a carved roulette (11%) or a "peigne filet souple" (5.3%). This last tool was also used to produce a parallel imprint (4.6%). Stabbed patterns are also well represented (5.5%). Traces of burnishing or polishing (18% of potsherds) suggest a relatively careful finishing. Evidence of coils is present.

Finally a highly stylised statuette bears witness to a certain form of plastic art (Fig. 1, #1).

The composition of this material does not seem to have been constant through time. The study of archaeological material in different levels shows, in fact, an evolution in the ratio of certain key objects. This progression is gradual and without breaks. This suggests a partial and gradual change of culture as witnessed by its artefacts, rather than a series of distinct traditions. Thus, for example in the case of the stone artefacts, a very clear change can be observed in the ratio geometric stone took laminary forms which evolve from 0%/100% at the lowest level to 90.9%/9.1% at the surface.

With regard to the nature of human use of the rock-shelter, the abundance of archaeological material and the absence of barren levels in the stratigraphy confirm its regular usage. However the flooding of the dig after a rain suggests that the occupation was probably interrupted during the rainy season. In addition, the large number of potsherds, which implies an extensive use of ceramics contrary to the habits of present day hunters or nomads, suggests a relatively sedentary way of life. The semi-sedentary nature of the occupation is supported by the high number of handstones and fragments of lower milling stones, utensils which are difficult to transport. Bowl-shaped

fireplaces of 50 to 60 cm in diameter were scraped out and sometimes enclosed with stone blocks. One of these occurs near a rubbish heap. The above-mentioned mortar was installed on the edge of one of these fireplaces by means of locking stones.

Finally, areas with stones of irregular slope indicate corridors.

Besides the grinding of gathered foodstuffs (no direct proof for agriculture was unearthed), one of the principal economic activities would seem to have been the manufacture of stone artefacts. The raw materials for these stone tools were brought from quite far. Two possible sources were located during the survey at 28 and 27 km from Fanfannyegne I. It seems, however, that the majority of rocks used came from veins even further away and as yet undiscovered.

Evidence of hunting appears at all levels. The habitual prey appeared to be small ruminants, but the remains of a very young elephant and of large ruminants implies the hunting of larger animals. No evidence of livestock herding was found.

One of the levels yielded a radiocarbon date of 2680 ± 120 B.P., provisionally situating this culture in the first half of the first millennium B.C.

Palynological evidence suggests a sudanese savana landscape similar to that of the present day. Tools stuck in fissures of the bedrock indicate that the populations moved in while the rock was still totally or partially clear of sediments, but the period of occupation, on the other hand, corresponds to a phase of intense sedimentation. Although the sediments have not yet been analysed, it seems very probable that they are of windblown origin; this would correspond to a relatively arid climatic phase. The end of this sedimentation appears to coincide with the end of the neolithic occupation. Taking into account the carbon 14 date mentioned above, the neolithic occupation could correspond to the beginning of the present arid period.

The site of Fanfannyegne I does not appear to be unique. Indeed, during the survey in the National Park, numerous

surface sites with similar archaeological material were found, generally rock-shelters but also sites on the edge of springs and on the plain. At the present stage of research, the culture at the site of Fanfannyegene I seems to be well represented in the area of the "Parc National de la boucle du Baoulé"; however to the present day, in the region surrounding the park, only the rock-shelter of Kouroukorokale (Szumowski 1956) has so far been found to contain similar material.

To our knowledge, this cultural facies has no similarities with the neighbouring groups of "guinean neolithic" nor the "civilisation of dhar Tichitt-Oualata," and, except for several isolated elements, there is no basis for comparison with the different subsaharan neolithic remains, nor those of Tenere, nor those of Tilemsi.

On the other hand, despite differences in ceramic tradition, the stone artefacts suggest a relationship towards the west with the "dune neolithic" of the Cape Vert peninsula, dated between the beginning of the third and the middle of the first millennium B.C. (Lame, 1981). The ceramic material calls to mind the lacustrine neolithic as observed to the northeast on the banks of the Malian palaeolakes. This relatively ancient culture evolved between the end of the seventh and the beginning of the second millennium B.C. (Raimbault 1983, Commelin 1983).

Thus our studies indicate that the cultural facies of Fanfannyegene I is quite original in West Africa; consequently, we named it "neolithic facies of the Baoule." With all the usual reservations we can suggest that the probable origin of this cultural facies may be certain neolithic groups who a millennium before were still living on the banks of the Malian palaeolakes; a possible cause for this migration would have been the start of the present arid period.

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■ SUDAN

The Archaeological Mission of the University of Geneva to Kerma (Sudan): Final Report of the 1989-90 Season

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Excavations at Kerma by the Swiss Archaeological Mission to the Sudan took place between 10 December 1989 and 18 January 1990, with research and final measurements continuing until 28 January. Between fifty and eighty workmen were employed under the direction of the rais Gad Abdullah and Saleh Melish.

Because of plans for an exhibition in Geneva in the second half of 1990, particular attention was given to the site of the ancient town. We considerably widened our knowledge of the town through extensive area excavations and the investigation of part of the northern defensive ditches. New building activities in the modern town forced us to take urgent action. Particularly interesting was the discovery of a Classic Kerma temple (c. 1600 B.C.) and a secondary building. It was possible to protect the temple and a Meroitic cemetery found in the same area as an archaeological site. A Meroitic communal tomb, with a burial chamber six m long, was also excavated in the ancient town. This was the first time that a well preserved example of such a tomb had been found at Kerma, and it gave us the opportunity to increase our knowledge of the late cemeteries. Further information was provided by the remains of a pyramid, built of mud brick, which was discovered very close by.

The Ancient Town

On the northern edge of town, traces of dry ditches mark the site of one of the entrances, with a large rectangular ditch, 3-5 m deep, extending into the town. Brick and stone foundations indicate the approximate position of part of the fortification walls which surrounded the ditch. Hundreds of post holes were found in the southwest corner of an area of sloping ground that represents the remains of a system built to protect the base of the walls. In the fill that had gradually built up within the ditch were considerable quantities of clay stoppers, used to seal wooden or pottery containers. Unfortunately, poor preservation hindered their study; on only a few of them could the traces of a seal still be made out.

Twelve houses were excavated. Even though they were built over a relatively short period (final Middle Kerma period, c. 1800 B.C./early Classic Kerma period, c. 1700 B.C.), they had very diverse plans. We now understand better the organization of the quarter situated to the north of the religious centre. The access roads are irregular, avoiding the inhabitants and their yards. Particularly interesting is the

presence of a chapel with an annex that was attached to a house. Access from the house led directly into the courtyard of the cult building, which seems to have been a private one.

The Southern Temple

Fifteen years ago, the remains of an extraordinary circular stone structure of the Final Kerma period were found to the south of the modern town of Kerma. In the area around this building, many ancient remains have been preserved under rubbish dumps and old houses. The site of one of the highest mounds was going to be used to build new houses and so it was necessary to clear the area in order to reveal the nature of archaeological remains covered by the mound.

We established the plan of the foundations of a temple which had an elongated sanctuary with two annexes of similar shape, one on each side. The monument had a north-south axis and was entered on the southern side through a sort of pylon, marked by the traces of a floor of large stone blocks. A transverse vestibule gave access to the holy of holies. At the back of the building narrow areas were perhaps reserved for a staircase or storerooms. The general proportions of the building, which was mainly constructed from mud brick, were like those of the Egyptian temples of the New Empire, and not like those of the Kerma cult buildings. However, the walls were decorated with pieces of faience identical to those found on the western *Deffufa*.

A few metres away was found what seemed to be a small cult building, again of elongated shape and with a mud brick floor. A wooden structure of similar shape was located outside it.

Several Meroitic tombs and a later tomb had been dug into the same mound but were not excavated. Authorization was obtained for the creation of a protected site, and a wall was built to isolate the remains.

The Meroitic Cemetery

A careful excavation was made of a long burial vault. This type of tomb was

previously unknown in the region where the vaults are generally only two or three metres long. The tomb had only been slightly disturbed and the position of eight of the total of thirteen burials could be verified. The grave goods were of the Meroitic period: a bronze bowl, a faience amulet representing Bes, a chalice-shaped pottery vessel and carnelian and glass beads.

The superstructure of the narrow burial vault was reconstructed as a pyramid with nine-metre sides. Potsherds found in pillagers holes were dated to the first century A.D. We assume that many of the tombs of the Meroitic cemetery were surmounted by mud brick pyramids. The latest finds, which extend the known area of the tombs by 2 kilometres, indicate that the cemeteries spread over vast areas.

Late Neolithic Pottery in the Gezira, Sudan

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The second author is preparing a Ph.D. thesis in the regional Geography Department of the Ghent State University dealing with the Late Quaternary palaeochannels of the Gezira, Central Sudan, including mapping with the aid of remote sensing. Mapping is done essentially on the basis of MSS images row 50, path 173 as produced by the fifth satellite. Ground truth investigation was carried out during a field season lasting from November 1986 to January 1987. During this period samples from mineralogical and pedological analyses was collected in the Gezira. Various archaeological occurrences were also noted and a restricted number of artefacts were collected including grinding stones, bored stones, beads, lip plugs, and ceramics.

The latter were submitted for preliminary analysis to the first author. The objects collected could be broadly related to Mesolithic "dotted wavy line" cultures, to entities dated in the region to the third millennium B.C. and to the Meroitic Medieval and later periods. The cultural and chronological attribution of these materials was done on the basis of previous work in the region, namely, the excavations at Rabak (Haaland 1987), Jebel Tomat (Clark 1984: 122) and Jebel Moya (Addison 1949), as well as the recent re-examination of the prehistoric material from Jebel Moya by Caneva (in press b) and some new chronometric information from the same site (Zoheir H. Babiker personal communication).

The third millennium occurrences deserve our special attention since no cultural remains of this period have been found in the Nile Valley north of Khartoum and not much is known about the distribution of this culture in the Gezira region. The materials were collected on the left bank of the palaeochannel system, which runs north of the Managil Ridge through Nueila El Ugda, Goz Sheikh Mansour, and joins the White Nile at El Gutena, Garasa, and Wad El Zaki. The exact locations are indicated in Fig. 1 by the numbers 1 and 2. The potsherds seem to belong to what is called the "Jebel Moya tradition" (Haaland 1987: 46-47). They are slightly burnished and decorated with impressed patterns using both simple comb impression and rocker techniques (Fig. 2).

The same type of pottery was found in several other sites in the Gezira, all consistently dated to the third millennium B.C. This type of pottery shows close similarities with pottery from the so-called Atbai tradition in the Butana regions (A. E. Marks personal communication), dated, there too, to the third-second millennium B.C. (Fattovich et al. 1984).

These findings are considered by Haaland to support her original hypothesis that climatic deterioration during the fourth millennium B.C. had seriously altered the environment in the Khartoum area, forcing the agro-pastoral populations to migrate to wetter areas (1987: 34). This model was later

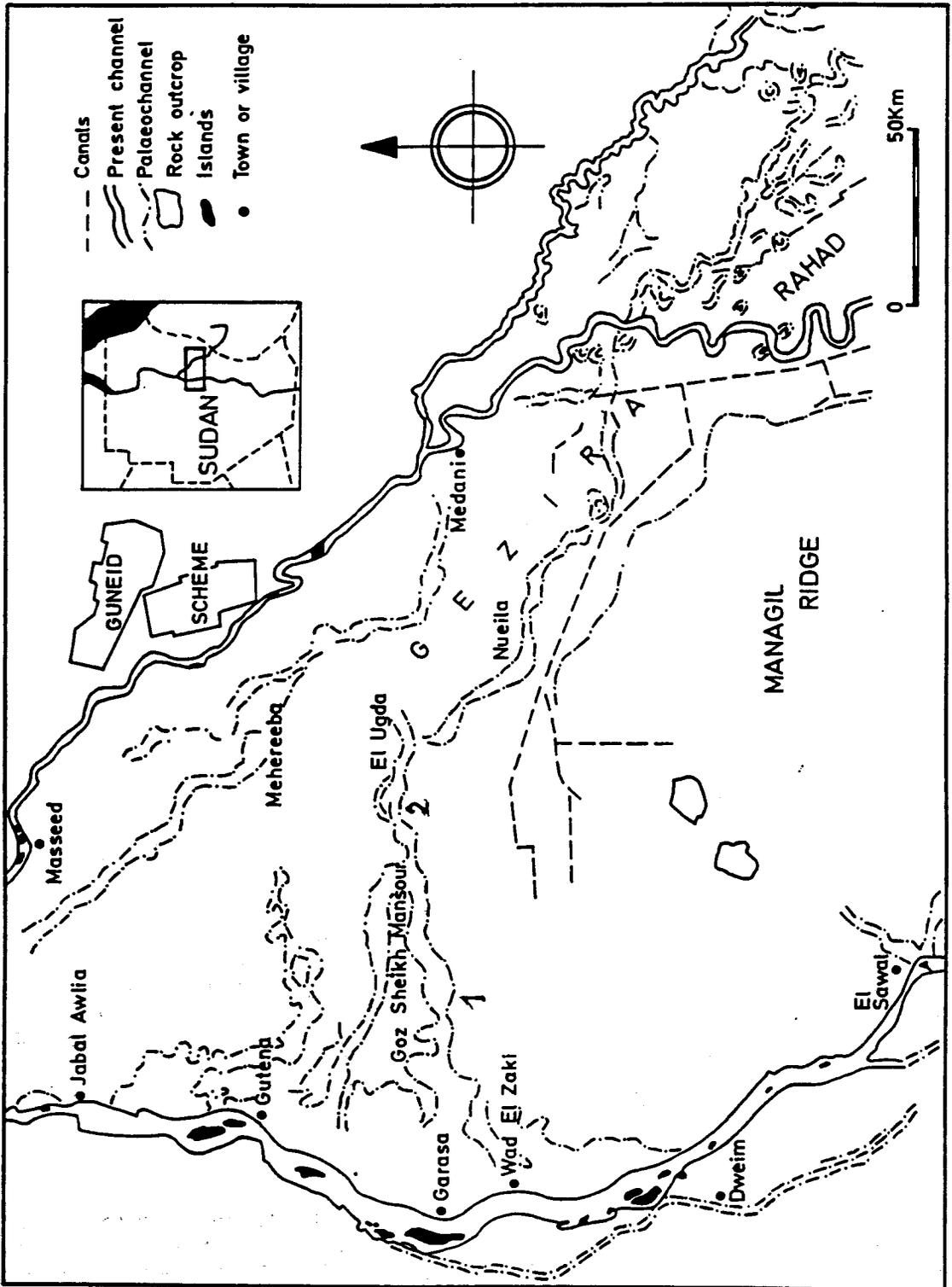


Fig. 1. The Gezira plain, south of Khartoum (Sudan).

modified by its author, who presumes that new populations, speaking Cushitic languages and practising specialized pastoralism, converged on the Nile, competing for land with the local, Nilo-Sharan language speakers. The latter were then pushed southwards, to wetter lands, less favourable for pastoralism, while few archaeological traces are left of the nomadic occupation of the Cushitic speaking people along the Nile (Haaland 1987: 229-30). Although the model is fascinating, there is still no archaeological evidence of it, except for the fact that a strong cultural influence from the Sahara is shown in the Nile Valley at the end of the fifth millennium B.C. (Caneva in press a). What can be said for the moment is that there is more marked regionalism than previously noticed in the pastoral cultures of the Sudan and that these cultures seem to be less linked to the Nile than to the desert people (Caneva and Marks 1990). This is probably due to a different socio-economic structure, which leads people to live in a wider territory, with different kinds of relationships. This, however, does not necessarily imply that different ethnic groups were involved and even less that they were in competition for land.



Fig. 2. Prehistoric potsherd (third millenium) from the Gezira plain.

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■ TANZANIA

Stone Age Archaeology in Mbeya and Rukwa Regions, Southwestern Tanzania

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Introduction

"New discoveries combine to indicate that all the major steps in human evolution took place in Africa," writes Elwyn Simons (1989: 1343). Long known for its role in early human evolution, Africa is now proposed as the centre of origin for anatomically modern humans. In the last three years both human geneticists (Cann et. al. 1987) and hominid palaeontologists (Stringer and Andrews 1988) have suggested that this event may have occurred between 100,000 and 200,000 years ago, rather than 40,000 years ago as previously believed. From this centre, modern humans spread to populate the rest of the known world. This "out of Africa" or "mitochondrial DNA" model is supported by both fossil data from Europe, the Near East, and Africa, and by molecular biology of living people worldwide (see the papers in Mellars and Stringer 1989 for a discussion of these issues). However, the evidence from East Asia is much more controversial, and is said to support an in situ transition there which would be similar to that seen in Africa (Pope 1988: 62-63; Wolpoff et. al. 1988). If the "out of Africa" model has any validity, then East Africa becomes as important for Upper Pleistocene human physical and cultural evolution as for the events of the Plio-Pleistocene.

My interest concentrates on sites belonging to the Acheulean and Middle Stone Age (MSA) in East Africa, and the mechanisms of change from one to the other. The Acheulean spans over a million

years in Africa, and its stone tool types appear not to have changed significantly until around 200,000 or 300,000 years ago (Willoughby n.d.). In the succeeding MSA which lasted until around 30,000 years ago, one sees the start of regional or geographic variation in lithic assemblages, possibly evidence of the first real cultural differences amongst human groups. The transition is marked by the loss of large bifacial tools and by the appearance or refinement of prepared core techniques of flake and blade manufacture (Clark 1988: 237-38). Since the MSA is not well documented for East Africa (Bower et. al. 1980: 41) but corresponds exactly to the time proposed for the appearance of modern humans, it requires intensive re-examination. This paper reports the results of a pilot study conducted in the summer of 1989 to test the feasibility of archaeological work in southwestern Tanzania aimed at assessing the emergence of technological traditions associated with early *Homo sapiens*.

Origin of Anatomically Modern Humans

In a recent article Stringer and Andrews (1988) compare two alternative models for the origin of *Homo sapiens sapiens*. One proposes regional continuity: populations on a wide front in the Old World all gradually changed into anatomically modern humans through gene flow and genetic drift. The other argues that a single centre gave rise to an ancestral modern group, whose descendants replaced pre-existing populations elsewhere. From studies of mitochondrial DNA, Rebecca Cann proposed that the ancestral African population existed somewhere between 140,000 and 290,000 years ago (Cann et. al. 1987: 34). This time range corresponds exactly with the transition from the Acheulean to the MSA. Whatever one thinks of the "out of Africa" model, the investigation of prehistoric sites between 500,000 and 100,000 years ago in Africa becomes imperative. The mitochondrial DNA model also has important implications for the explanation of cultural diversity and evolution by Palaeolithic archaeologists. They have long used Europe, and especially Western Europe, as the cornerstone for

constructing culture historical frameworks and explanations of culture process. But Cann's model argues that Europe was a backwater, receiving changes and populations migrating from elsewhere. So it is clear that prehistorians should not take models about the adaptations of *Homo sapiens sapiens* in Western Europe and apply them to African sites belonging to the MSA.

The Acheulean and Middle Stone Age in East Africa

There is an overall similarity in African Acheulean assemblages, and they can generally be segregated into two time-successive groups: Early and Upper Acheulean. The Upper Acheulean is distinguished by the appearance of prepared core techniques (including Levallois) for flake and blade production. Otherwise the general pattern of bifacially flaked handaxes, cleavers, and picks, along with various flake tools, that characterizes the African Acheulean lithic artifacts remains constant during the entity's 1.3 million years of existence.

The Middle Stone Age begins between 100,000 and 200,000 years ago, and lasts until the appearance of microlithic tool industries of the Later Stone Age. It is marked by a decrease in numbers or complete elimination of large bifacial cutting tools, and the appearance or refinement of Levallois and disc core flake production techniques (Clark 1988: 237). From previous work, it seems that in Tanzania there are two kinds of MSA. One has a significant number of flake tools produced using prepared core techniques, while the other has a number of heavy duty tools such as core axes, core scrapers, and picks. While in parts of East Africa this period remains poorly known, (Bower et. al. 1980: 41), the formulation of the mitochondrial DNA model has given a major incentive for conducting research on the MSA.

Despite a limited number of sites and serious chronological problems with the MSA itself, archaeologists can still say something about patterns of change between the Acheulean and later industries. The transition is marked by the loss of large

bifacial tools and by the appearance or refinement of prepared core techniques of flake and blade manufacture (Clark 1988: 237-38). However, small flake or light duty tools are identical to those seen in the Acheulean. Change "is manifest in the disappearance of archaic forms and their replacement by new ones, rather than by any fundamental technological break" (Clark 1982: 248). There is also a basic qualitative shift. The Acheulean is similar in time and space over widely separated areas for over a million years; the MSA, on the other hand, has a number of regional forms. MSA variation generally follows the pattern expected for later prehistoric industries in expressing stylistic differences; this is what allows time/space systematics to be used to create culture history. If this industrial variation begins with the MSA, it lends indirect support for the model of *Homo sapiens* appearing at this time. Whatever else it signifies, there is clearly some fundamental change in assemblages away from conservatism towards considerable regional variation.

Stone Age Archaeology in Southern Tanzania

Stone age archaeological work was first carried out in southern Tanzania twenty to thirty years ago at Isimila (Howell et. al. 1962). In addition, a brief visit was made by Desmond Clark to Lake Rukwa in the 1960s (Clark 1970, Haynes 1970). Isimila is a site complex dating between 200,000 and 300,000 years ago found along the main highway from Zambia to Dar es Salaam twenty kilometres southwest of Iringa. A research team directed by F. C. Howell worked here in 1957 and 1958 (Howell et. al. 1962, Cole and Kleindienst 1964), followed by Hansen and Keller (1971) in 1969. Just across the border in Zambia is Kalambo Falls, which has an extensive sequence of Stone and Iron Age deposits beginning with the Acheulean (Clark 1969, 1974). Isimila and Kalambo Falls together provide a yardstick for a culture history of the Rukwa and Mbeya Regions.

In 1965 and 1966 J. Desmond Clark conducted a survey in Malawi and took advantage of the opportunity to visit the

Mbeya Region (Clark 1970, Haynes 1970). Among other things, he identified over thirty metres of lake sediments exposed in the Northern Songwe river valley south and west of Galula (Clark 1970: 350). East of Galula some abraded quartz flakes and one discoidal core were recovered, and Clark stated that "the cultural and faunal remains we were able to recover in the very limited time at our disposal are a clear indication that further survey of this basin would result in important discoveries of habitation sites with associated fauna" (Clark 1970: 350). Sally McBrearty, Thomas Wynn, and S. A. C. Waane also visited Mbeya Region in 1976 for a survey (McBrearty et. al. 1982, 1984). They concentrated on the Kiwira and Southern Songwe Rivers flowing into Lake Nyasa. But they also visited the Northern Songwe River of the Lake Rukwa drainage and recovered both MSA and LSA material. They suggest that the Northern Songwe was initially occupied by MSA peoples (McBrearty et. al. 1984: 130-131). From this previous work, it is clear that the Western Rift in Tanzania probably contains informative sites spanning the Acheulean/MSA transition.

1989 Pilot Field Study

The Tanzanian Department of Antiquities has produced a list of known prehistoric and historic sites (United Republic of Tanzania 1980). From this and other information obtained during an initial visit in 1988, I plotted the distribution of sites older than 30,000 B.P. Among the clusters identified was one in the southwestern part of the country, in Mbeya and Rukwa Regions, lying in the Western or Albertine Rift Valley (Fig. 1). At the suggestion of the Antiquities Department, I visited this area in July and August 1989 to assess its archaeological potential. I was accompanied by Benedikt Hallgrímsson, now a graduate student at the University of Chicago, and by P. J. Mpangala, an Antiquities Officer from Dar es Salaam. We made brief visits to a number of places where sites have been recorded in the past and to other Quaternary-age outcrops which have not been previously examined. A

number of likely areas were identified for further examination.

Geological maps reveal that the Rukwa Rift Valley contains extensive Quaternary sediments. Lake Rukwa is bounded by two long faults on both the north and south sides, trending northwest to southeast, and the Quaternary deposits are on its southern and northwest margins. It is a shallow, internally drained, slightly alkaline lake that is more similar to those of the Eastern Rift than to Lakes Tanganyika and Nyasa which border it to the west and south respectively. Based on our experience, the area southeast of Lake Rukwa is much more accessible by road and has less forest cover than the northwest; both features make it more amenable to fieldwork. Prehistoric sites of all ages were recorded on 1:50,000 scale topographic maps, were given SASES numbers (Nelson 1971), then photographs were taken and artifacts samples were collected.

Brief visits were made to the following areas: (a) Iringa, to see Isimila, and to examine a previously unreported MSA site within the city itself; (b) Igurusi, where volcanic deposits are found along the main highway, and nearby stream channels expose stone artifacts; (c) near Mbeya where there are exposures along the Songwe and Nyara rivers; (d) Mbeya not far from Galula, where there are extensive Pleistocene lacustrine and alluvial deposits containing fossil plant remains and possible artifacts; (e) Mkamba and Mtowisa in the Rukwa rift valley northeast of the regional capital of Sumbawanga, where Iron Age materials were recovered; and (f) Milanzi rock-shelter just outside of Sumbawanga, where deep Late Stone Age deposits were sampled through test excavation. Each of these localities will be discussed in turn.

(a) En route to southwestern Tanzania, we stopped at Iringa to see Isimila, and to record a new MSA site within the city itself. It is clear that there are a significant number of artifact-bearing deposits still remaining at Isimila. In addition, fossilized animal bones are eroding out on the eastern rim of the northern korongo, in an area identical to where faunal remains were located in the 1950s (Glen Cole, personal communication).

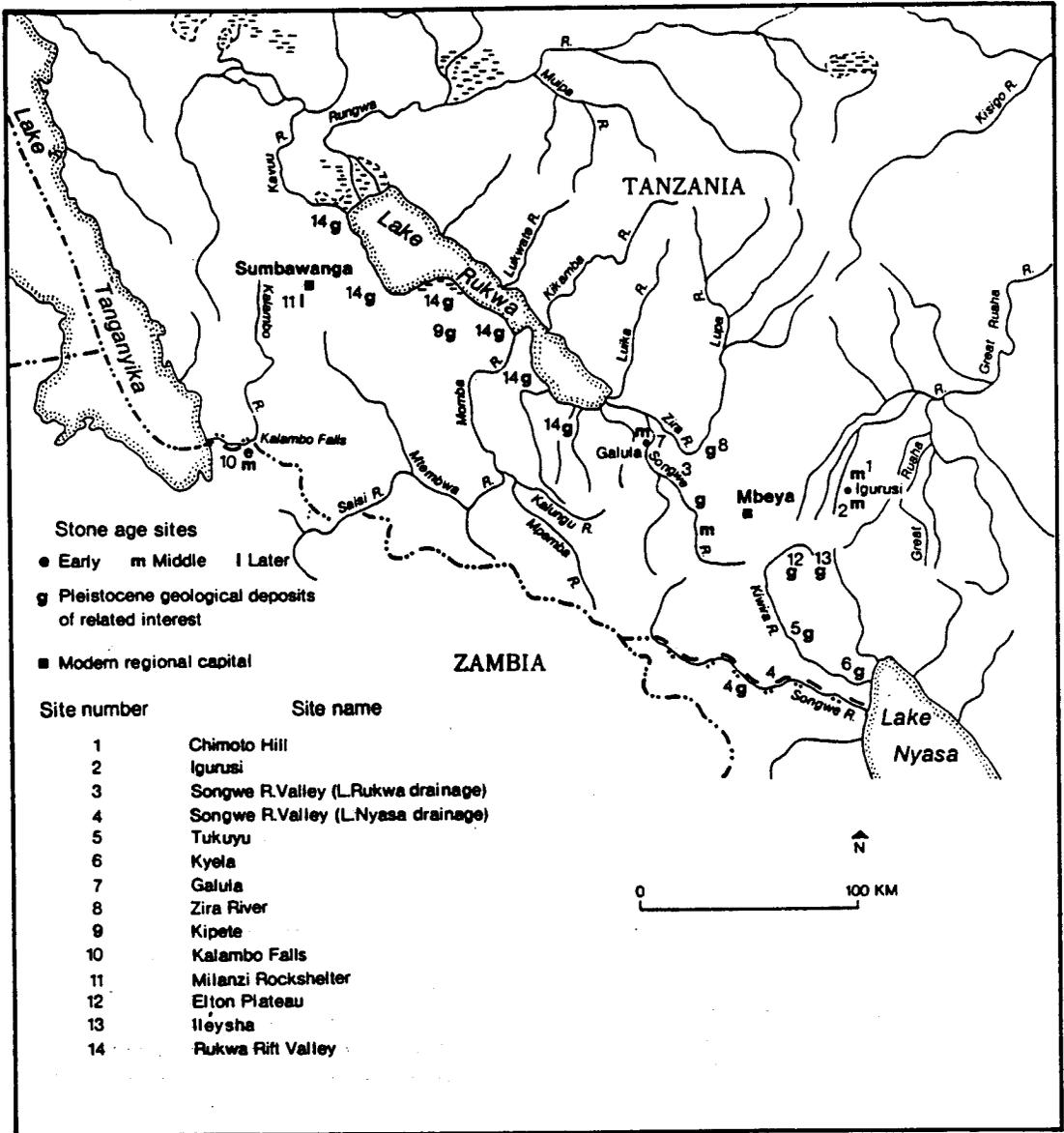


Fig. 1. Map of Pleistocene localities and stone age sites in Mbeya and Rukwa regions, southwestern Tanzania.

Their presence was noted and photographs were taken. The bones are very important since few (and only fragmentary) ones were recovered during previous excavations, so it is essential to collect samples to obtain another date. In addition, a possible MSA site was recorded in and around the numerous koppies or rock outcrops, located in between the Iringa Girl's Secondary School and an Assemblies of God Church on the east end of the city. So the Iringa area remains of major importance for stone age research in southern Tanzania.

(b) At Igurusi, east of Mbeya, volcanic deposits are found along the main highway, and nearby stream channels expose stone artifacts. In 1959, E. G. Haldemann reported seeing small chert cores and crude stone artifacts (volcanic cores and trimmed cobbles) at Chimoto Hill north of Igurusi, as well as bone beds four miles east of the town (United Republic of Tanzania 1980: 29). An attempt to see these sites one afternoon while on the way to Mbeya failed, as we discovered that Igurusi has changed location three times since 1959, due to ujamaa village reorganization. A few days will be taken in the next field season in order to relocate the sites. Geological sections with volcanic tuffs are exposed on the south side of the main highway, and some stone artifacts were found in stream beds nearby.

(c) Two cultural horizons were located by Clark (1970: 350) at the Nyara River west of the Mbeya cement works. The older was located at stream level and in the lowest 1 to 1.5 metres of marl and gravelly sediment above this. He recovered a range of forms: core axes, choppers, cleaver flakes, core scrapers, proto-handaxes, polyhedral stones and several small tools made on flakes, fragments and chunks (Clark 1970: 350). Some pieces show multidirectional flaking on their dorsal face and faceted striking platforms, similar to those produced from Levallois cores. Most large pieces were made of gneiss, but quartzite cobbles, quartz pebbles, and chalcedony also provided raw materials (Clark 1970: 350). The second assemblage came from six metres above the first and is made up of quartz MSA artifacts. It was stratified beneath a marl radiocarbon dated at $32,000 \pm 3000$ B.P. (Clark 1970: 350).

We were able to identify Pleistocene deposits along the Nyara and Songwe rivers (of the Lake Rukwa drainage) west of Mbeya, and feel that this area also shows promise.

(d) Northwest of Mbeya, but still in the same Songwe River drainage system, is Galula where Clark (1970: 350) noted extensive Pleistocene lacustrine and alluvial deposits in terraces formed by Lake Rukwa. Except for McBrearty et. al. (1984: 130), there is no other record of artifacts ever being found here (United Republic of Tanzania 1980). We sampled and recorded a geological section at a bridge crossing the Zira River, and photographed exposures around Galula (see Fig. 2). We also walked down one tributary to the Songwe river, seeing fossilized plant remains (root casts) and concretions, and some LSA and Iron Age artifacts were collected from the modern ground surface. The size and nature of the exposures, along with relative ease of access, make the Galula area the most logical base for a intensive archaeological survey in 1990.

(e) In the Rukwa Region, we were only able to visit a couple of localities in the southernmost Sumbawanga district. We descended the Ufipa escarpment to examine deposits around villages at the bottom which are part of the Rukwa Rift Valley. Just above the valley bottom is an old settlement, marked on the topographic maps as "ruins" (site #Hwlo-1), where one can still see two or three buildings and one well. We visited Mkamba and Mtowisa villages; near Mkamba, Iron Age materials were recovered from deposits cut by the Sonfwa River, including one almost complete pot (#Hxlo-1), and similar potsherds were found nearby in a section 2.5 metres below the present surface. In what was described as an unusually wet year, it was difficult to travel near the lake on the few tracks available. Vegetation cover is extensive and masks the presence of any exposures quite effectively. A future visit must wait until September or October when the area is drier. Elsewhere in the rift valley, there are reports of fish fossils in Pleistocene lacustrine deposits at Kipete (United Republic of Tanzania 1980: 32) which should be examined.



Fig. 2. Pleistocene lacustrine deposits near Galula, Mbeya Region.



Fig. 3. Modern altar and test pit into undisturbed LSA deposits at Milanzi rock-shelter near Sumbawanga, Rukwa Region.

(f) At the Milanzi rock-shelter (#Iola-3) just southwest of Sumbawanga, deep LSA deposits were recorded in the Antiquities report (United Republic of Tanzania 1980) and we sampled them through test excavation. In addition to the LSA occupation, it was discovered that the site continues in use today as an ancestor shrine and contains a stone altar (Fig. 3). Messages, graffiti, and abstract figures are painted above the altar. Caves and rock-shelters appear to have important symbolic roles in the traditional belief system of the Wafipa of the Escarpment and probably other Tanzanian groups, something which would be worthy of ethnographic study. Surface collections of LSA quartz artifacts, small bones, one shell bead, and other shell fragments were made. A small (50 cm square) test pit was dug in the midden between the shrine and the drip line, and was excavated in 10 cm arbitrary levels to 40 cm in depth. The deposits here may be quite deep, are undisturbed, and faunal remains are well preserved. Three charcoal samples were submitted to the Isotracer accelerator mass spectrometry laboratory in Toronto for dating. A sample from 18 cm below the surface was dated to 8590 ± 80 B.P. (TO-1770), one from around 30 cm depth 9450 ± 90 B.P. (TO-1771), and the third at 40 cm deep is 9670 ± 80 B.P. (TO-1772). This is an important LSA site which could contain MSA deposits underneath, and is worthy of a closer look.

Future Plans

In our four-week tour of Southwestern Tanzania, it was possible to visit quite a number of localities, but there was not enough time to spend in any one of them. All things being equal, it is clear that the Songwe drainage and Galula offer the best chance of finding stone age sites in Mbeya Region, and it is here that our research team will initially concentrate in 1990.

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■ UGANDA

Archaeology in Western Uganda, 1990

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In *Nyame Akuma* 32 the writer reported on an archaeological reconnaissance that was carried out in Uganda early in 1989 (Connah 1989). In that paper it was stated that the fieldwork discussed was intended as a preliminary for more substantial research over a longer period in 1990. In particular, it was indicated that more extensive excavations than those of 1989 or those of 1957 (Hiernaux and Maquet 1968) would be undertaken at the well known site of Kibiro on the eastern side of Lake Albert. The purpose of the present paper is to report on this further work which has now been completed.

As in 1989, the 1990 project was directed by the writer as part of the Interlacustrine Research Programme, which has been organised by the Nairobi-based British Institute in Eastern Africa in recent years (Robertshaw 1988, Sutton 1987). The writer's participation in this programme was made possible by the provision of twelve months study leave by the University of New England and by the hospitality of the British Institute in Eastern Africa, the Ugandan Department of Antiquities and Museums, and the African Studies Centre at the University of Cambridge. The 1990 project was funded by both the British Institute and the Australian Research Council, and both the British Institute and the Ugandan Department of Antiquities and Museums provided facilities, personnel and equipment. The project was fully approved by the Ugandan National Research Council and by the Office of the President of Uganda.

The project team consisted of the writer, Beryl Connah, and Christine Burke, the latter specially responsible for faunal analysis. To this group were added for lengthy periods: Pamela Grace, with a particular interest in pottery; Ephraim Kamuhangire (Senior Conservator, Department of Antiquities and Museums, Kampala), with an extensive knowledge of the history and ethnography of Western Uganda; and Peter Bisaso (Assistant Conservator, Department of Antiquities and Museums, Kampala), with a special interest in archaeological excavation. Also part of the team for substantial periods were Thaddayo Owuora (Driver/Mechanic) and Gilbert Oteyo (Cartographer/Draughtsman), both of the British Institute in Eastern Africa. Last but by no means least was long-wheel-base Land Rover KWB 490, a veteran of many British Institute projects.

The overall purpose of the 1990 project was to throw more light on some aspects of the origins and development of the Interlacustrine Kingdoms of Western Uganda, specifically to investigate the archaeology of parts of the Western Rift over the period of the last millennium. The 1989 work had sampled the extensive and deep deposits at Kibiro and suggested that they might yield a chronological sequence over the last 500–700 years, which could provide a key to later prehistoric material culture and subsistence in part of the area that became the Kingdom of Bunyoro. In particular, the further investigation of Kibiro's archaeology seemed warranted by the important contribution that the salt and dried salted fish of this place apparently made to the economy of the Kingdom of Bunyoro. With these things in mind, the 1990 work concentrated on a substantial excavation at Kibiro, while carrying out associated archaeological survey in the surrounding region and ethnographic recording in both Kibiro and Kigorobya, the latter place having, as previously explained (Connah 1989), a symbiotic economic and social relationship with Kibiro. In addition, surface archaeological survey was also conducted in parts of the Western Rift southwest of Lake Albert. The objective here was to see how far aspects of the Kibiro

pottery tradition could be traced in this direction.

Bearing in mind the prevalence of incomplete analysis in archaeological research, the 1990 project was planned so as to integrate periods of fieldwork and analysis. The aim was to complete the primary analysis of field data in Uganda itself, with only minimal amounts of archaeological material being removed temporarily to Nairobi for comparative work and only laboratory samples being taken overseas for further investigation. In all, eight months were spent in East Africa with the remainder of the year spent in Cambridge doing follow-up research and writing up the project for publication. Of these eight months, three were spent on fieldwork and five on analysis. The alternation of fieldwork and analysis was planned so that, as far as possible, the project team was in the field during periods that are relatively dry in Western Uganda and conducting analysis in Kampala during the wetter months. The analysis was carried out at the Uganda Museum, where the Curator, Charles Sekintu, generously made space and facilities available. The excavated material and surface collections were finally deposited in the Uganda Museum.

The 1989 test excavation at Kibiro was designated Cutting I. In 1990 three more cuttings were excavated, designated Cuttings II, III and IV. The areas of these four cuttings were respectively 2.25 m² (not 1.5 m² as erroneously given in Connah 1989: 51), 15 m², 9 m², and 3 m². They were positioned so as to sample the extensive Kibiro deposits in three rather dissimilar areas (Cuttings I and III were close together). It was desired to excavate the 1990 cuttings by true stratigraphic units, not by means of arbitrary spits as was done in both 1989 and 1957 (Connah 1989, Hiernaux and Maquet 1968). It was known from the 1989 work, however, that the stratification of the site was quite complex and that stratigraphic changes were relatively difficult to see, particularly in plan. Therefore, selected blocks of deposit were rapidly excavated and discarded in each of the three 1990 cuttings, in order to expose control sections that would allow us to

preview the stratification. Using these sections as a guide, immediately adjacent blocks of deposit were then stratigraphically excavated, dry sieving the entire deposit and retaining all cultural and biological material. This excavation strategy is a variation on the transect excavation method described by Flannery (1976), the aim being similarly to preview and identify stratigraphic units *before* their excavation is commenced.

Cutting II was located at the edge of what seemed to be the deepest archaeological deposits at Kibiro, which are situated at the eastern side of the village, near the base of the escarpment. This was close to the location of the 1957 Cutting I (Hiernaux and Maquet 1968: Fig. 2). The down-slope part of the cutting revealed deposits that were tilted too steeply to provide a good vertical sequence and a large part of those deposits consisted of medium to heavy rock rubble that was unstable and unsafe for deep sectioning. Stratigraphic excavation was therefore confined to the deposits of the upper part of the slope. These proved to be a little under three metres deep and to give broad confirmation of the pottery sequence observed in Cutting I, for which radiocarbon dates have suggested a duration of 500–700 years terminating in recent times (Connah 1989). However, the later part of this sequence seemed to be better represented in Cutting II than the earlier part. It also appeared that much of the deposits sectioned in Cutting II originated from industrial rather than domestic activities. In particular, the tilted down-slope rubble deposits seemed likely to have resulted mainly from the practice of removing stones from the adjacent salt gardens and heaping them out of the way. This is still being done in some of the Kibiro salt gardens and would seem a more likely explanation of most of the down-slope rubble than merely assuming that it originated from the nearby escarpment, although some of it may well have done. If the rubble did come from the salt gardens, then it might indicate a considerable increase in salt-production in recent centuries, for it is significant that smoking pipe fragments were found low in this down-slope rubble.

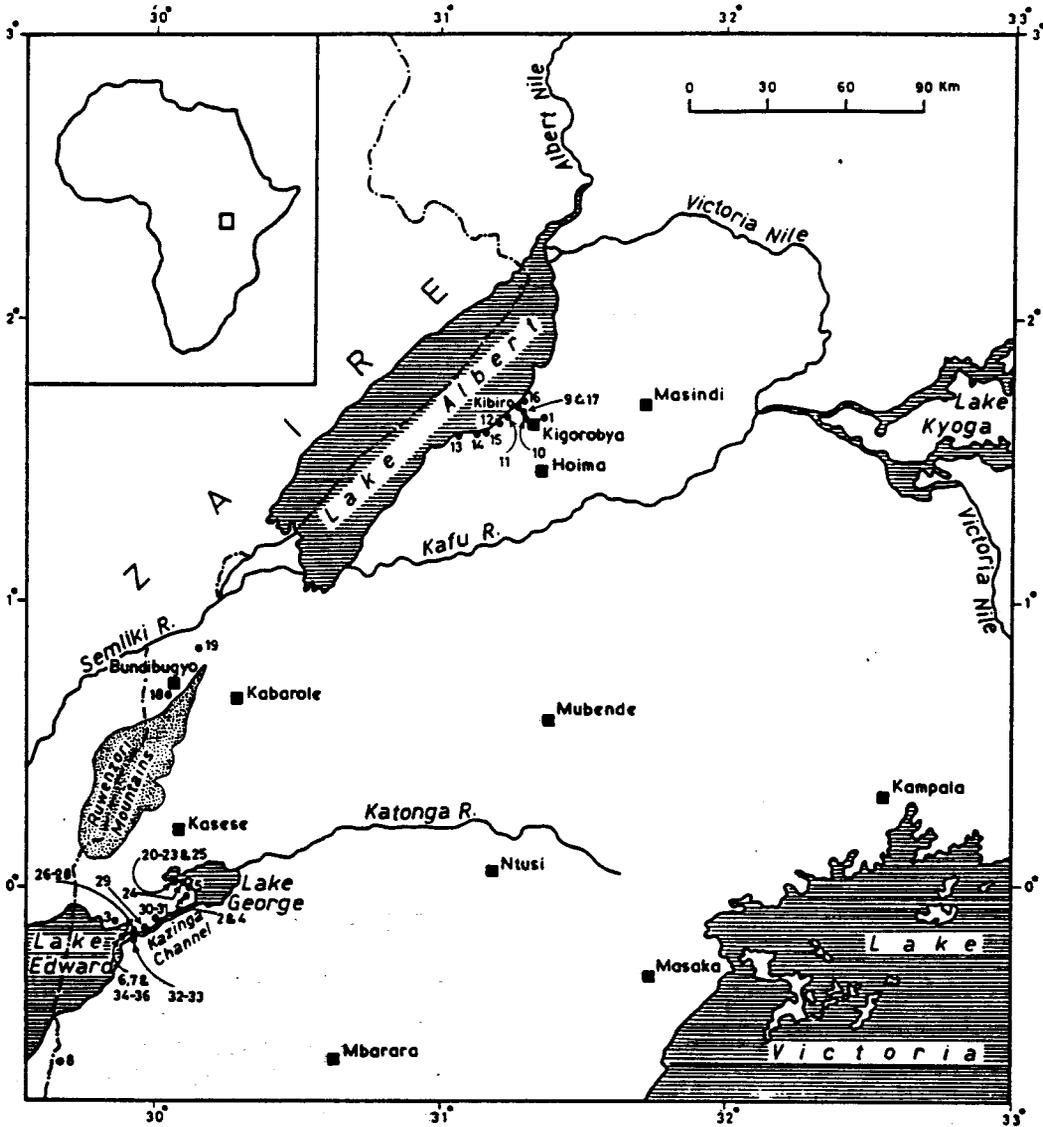


Fig. 3. Western Uganda showing archaeological sites investigated during the 1989-90 work. Modern settlements are indicated by squares and archaeological sites by numbered circles. Numbers are as follows: 1 = Kigorobya. 2 = Lake Bunyampaka. 3 = Katwe. 4-5 = Kasenyi sites. 6-7 = Mweya sites. 8 = Ishasha. 9 = Kitana Fort. 10 = Kigorobya. 11 = Nyangi. 12 = Hoimo. 13 = Tonya. 14 = Kiryamboga. 15 = Nana. 16 = Kyamwana. 17 = Kitana. 18 = Kaleba. 19 = Sempaya. 20-23 = Hamukungu sites. 24 = Irangara Island. 25 = Hamukungu. 26-31 = Channel Track sites. 32-33 = Kazinga Channel south sites. 34-36 = Mweya sites.

Cutting III was situated in a more central part of the archaeological deposits, close to the site of Cutting I excavated in 1989. Although the deposits seemed of less depth in this area than at the location of Cutting II, the excavation of Cutting I had failed to reach their base at three metres below present ground level. Cutting III reached natural soil at a depth of approximately 2.6 metres, however, suggesting that the narrow test-excavation of Cutting I had not provided a typical sample of the deposits in this area, and that its lower part had almost certainly cut into a pit-fill of some kind. Nevertheless, Cutting III provided a better stratified sequence than Cutting II: the stratigraphic units were more nearly horizontal and they seemed to provide a more complete chronological sample of the pottery typology, with both the later part of the sequence and the earlier part well represented. However, the lower part of the stratigraphy of Cutting III was complicated by a grave that had been cut from a higher level. The burial within it proved informative, nevertheless, being an extended inhumation (compare Roscoe 1968 [1923]: 292, 296) where contracted inhumation is claimed as having been the Banyoro practice). It appeared to be an adult male but was accompanied by iron bracelets, a copper-based alloy earring, glass beads, and beads of freshwater shell. Much of the deposits sectioned in Cutting III seemed to have originated from domestic rather than industrial activities (for example, four hearths were uncovered in Cutting III), thus contrasting with Cutting II. The presence of the grave would not necessarily conflict with such an interpretation, as the practice at Kibiro appears to have been (and still is) to bury the dead adjacent to the houses of the living.

Cutting IV was located near seasonally abandoned salt gardens in an area of shallow archaeological deposits near the edge of Lake Albert. Its location was comparable with that of Hiernaux and Maquet's 1957 Cutting 2 (Hiernaux and Maquet 1968: Fig. 2) but the exact position of their cutting could no longer be found and local opinion was that its site had been destroyed by saltworking. The deposits

sectioned by Cutting IV were roughly horizontal and seemed to belong in the main to the earlier part of the Kibiro sequence and to be industrial rather than domestic in origin. Natural sediment was found at approximately 1.2 metres and, a little below this level, groundwater flooded the cutting.

After the excavations had been completed, all the cuttings were backfilled and were blanketed with a layer of heavy stones to prevent future erosion. This latter precaution was thought necessary in view of the gulying that has taken place at the location of the 1957 Cutting 1. The writer would, indeed, take this opportunity to remind excavators working in tropical environments that far more care is necessary in backfilling than has sometimes been taken in the past.

The most common decorations on the Kibiro pottery are knotted strip roulette and carved roulette, whereas twisted string roulette is virtually absent (Soper 1985). Also fairly common is incised decoration but punctated decoration and finger impressions occur less frequently. In addition there is a lot of nondiagnostic roulette, that is to say rouletting that is on sherds that are too weathered or too small to enable one to identify the roulette with certainty. This assemblage of decorations was present throughout the occupation of the site, although the frequency of individual decorations did vary with time. Also, the carved roulette motifs, which have great diversity, show some chronological variation. Seemingly more significant for the establishment of a pottery sequence, however, is variation in pottery form. Thus the most common pot shapes did change as time went on: for example, a very large bowl with a flared rim gave way to a spherical narrow-mouthed pot with incurving shoulders and no distinct rim. In general outline, the pottery sequence provided by the 1989 and 1990 excavations agrees with that presented by Hiernaux and Maquet (1968) on the basis of their limited test-excavations of 1957 but in matters of detail it is likely that it will amplify and amend their findings. Thirty years ago, Posnansky (1961: 193) wrote that "one drawback of the Kibiro sequence is that it is largely concerned with

industrial wares" but that "the stratification will eventually provide a sound relative chronology." Although the specifically "industrial" character of the pottery remains open to question, he was right to be optimistic about the chronological possibilities, except that now we can begin to put dates on the sequence.

Other cultural materials from the 1990 excavations included items of iron that were found throughout the deposits, and fragments of smoking pipes that were usually absent from earlier contexts. Beads were also common, mostly disc beads of freshwater shell, with a few ivory beads in later contexts, and rare glass beads. Grinder/pounders and fragments of grindstone occurred mainly in the later deposits. There was, however, a noticeable dearth of exotic items, with the exception of a few cowry shells in late contexts and the rare glass beads.

Christine Burke has found that animal bones were plentiful and reasonably well preserved, although mostly too fragmented to be diagnostic. They indicated a reliance on fish, in particular *Cilchidae* (*Tilapia*), and on domesticated animals such as cows, goats, and/or sheep. Both fish and cattle and small stock were found throughout the deposits; this suggests little change in subsistence patterns through time. Included in the faunal assemblage were some wild fauna, mainly smaller species, which may have been used to supplement the diet. Some mollusca were also recovered from the deposits. These were found in generally small quantities and consisted of freshwater species and one type of land snail. A little carbonized grain was recovered from the excavations but has yet to be identified.

Amongst the hearths excavated, at least one had been used for salt boiling and the general occurrence, in the excavated deposits, of ash, burnt earth and widely dispersed charcoal suggested that the production of salt had been practised intensively for a substantial time. A similar impression was given by the presence of considerable landscape modification in and around the active salt garden areas of Kibiro.

Apart from the hearths, the only other structural evidence consisted of lumps of mud daub that had been burnt. Although some of these seemed to have originated from destroyed hearths, many of them appeared to be from the walls of buildings and to have been unintentionally burnt. These showed impressions of reeds (probably papyrus) and other vegetation (sometimes tied in bundles) on one side, and a smoothed surface on the other side. They would appear to have come from buildings constructed in the same manner as that still used in Kibiro, in which a mixture of earth and cow dung is plastered on both sides of a light structure of saplings, reeds, and brushwood. However, houses in Kibiro are now rectangular in plan, whereas they were formerly circular (Colville 1895: 157).

At present the chronology of the deposits excavated at Kibiro has to rely on the eleven radiocarbon dates from Cutting I that have already been published (Connah 1989: 51, 53). However, these were derived from wood charcoal samples recovered during the excavation of arbitrary spits, and it is intended to supplement them with further dates for both wood charcoal and bone samples recovered during the 1990 stratigraphic excavation of Cuttings II, III, and IV.

During and after the 1990 excavations at Kibiro, time was spent conducting a tacheometry and compass survey of a substantial area in and around the present village. This enabled us to draw a map both of the archaeological features and of the areas where salt is still being worked.

Ethnographic investigations were also conducted at Kibiro, particularly into the production of salt. Ephraim Kamuhangire and Andrew Piper had collaborated on these enquiries during the 1989 season when the latter was part of the research team, and during the 1990 season this work was continued by Ephraim Kamuhangire and the writer. All three have since cooperated in the joint authorship of a paper which examines the subject of salt production at Kibiro (Connah et al. in press). Included in this paper will be a copy of the map of Kibiro referred to above.

Further ethnographic investigations were also carried out in the Kigorobyia area, where Pamela Grace and Peter Bisaso enquired into the making of pottery. One aspect of the present symbiotic relationship of Kibiro and Kigorobyia is that pottery in use at Kibiro is obtained from the potters of the Kigorobyia area, and it is probable that in the past also the people of Kibiro obtained pottery by trade from outside of their immediate locality. A number of potters in the neighbourhood of Kigorobyia were visited during our investigations, and although they now produce only a limited range of forms, these are generally similar to some of those from late stratigraphic contexts at Kibiro. In addition, the decoration of the Kigorobyia pots includes knotted strip roulette and carved roulette, the two most common decorations at Kibiro. Also at Kigorobyia, sources of clay, temper, and graphite were located and samples taken from them. It is hoped that these can be used to carry out mineralogical comparisons with the pottery excavated from Kibiro.

In an effort to set the Kibiro evidence in its regional context, archaeological surveys were carried out in several areas. First, a search was made by boat for later prehistoric sites along the shore of Lake Albert to the southwest of Kibiro and on foot for similar sites on the shore to the northeast of Kibiro. Surface collections of sherds were made at five locations to the southwest and one location to the northeast. In this way, a superficial investigation was made of the coast from Tonya in the southwest to about four kilometres northeast of Kibiro. Second, a search was made for later prehistoric sites around Kigorobyia, but both the vegetation cover and the relatively intensive cultivation of this area made site location difficult and only three surface collections were obtained. Another site had already been found near Kigorobyia in 1989 (Connah 1989: 49). Several attributes of the Kibiro pottery assemblage were found to occur amongst these various sites in these two localities.

Archaeological survey was also conducted further afield, in Bundibugyo District and in Kasese District, both in the

Western Rift to the southwest of Lake Albert. In the first of these areas, a substantial surface collection of sherds was made from a site at Kaleba and weathered sherds were found at the Sempaya Hot Springs. In the second area, a search for later prehistoric sites was made in two contrasting parts of the Queen Elizabeth National Park: around Hamukungu on the western side of Lake George, just north of Kasenyi where sites were found in 1989 (Connah 1989: 49), and along the northern side of the Kazinga Channel from Mweya to Katunguru and to a lesser extent on the southern side of the Kazinga Channel near Mweya. In all, we located seventeen sites, six in the Hamukungu area and eleven along the Kazinga Channel. These were all sites probably belonging to the present millennium, although a number of them also had residual Late Stone Age lithic material scattered on them. On most there was abundant pottery, the decoration of which was commonly knotted strip roulette and twisted string roulette (Soper 1985) but carved roulette was rare. In comparison, at Kibiro knotted strip roulette and carved roulette were common but twisted string roulette was virtually absent. There was some difference in pottery forms also, although because of the fragmented surface material it is difficult to comment on this. Certainly, flat-based pots were present but were virtually unknown at Kibiro. It is perhaps relevant that the Hamukungu-Kazinga area was part of the Kingdom of Toro, whereas Kibiro was in the Kingdom of Bunyoro. However, prior to the early nineteenth century Toro had been a part of Bunyoro (Ingham 1975), and therefore it should be no surprise to find both similarities and differences between cultural material from these two areas.

In conclusion, the excavations at Kibiro provide a dated cultural sequence for a settlement that played a fundamental role in the economy of the Kingdom of Bunyoro. Furthermore, the material culture of Kibiro can now be compared not only with assemblages from Bweyore, Ntusi, Bigo, Mubende, Munsa, and Kibengo but also with surface collections from thirty-six other sites in and around the Western Rift,

stretching from the eastern shore of Lake Albert to the Ishasha River near Lake Edward. However, the Kibiro pottery also suggests northern connections, some of the varied carved roulette motifs comparing closely with some of those from the Kabarega (formerly Murchison Falls) National Park (Soper 1971). Indeed, the popularity of carved roulette decoration at Kibiro might suggest general affinities with the southern Sudan (David 1982: 53), rather than with the area to the southwest along the Uganda portion of the Western Rift, where carved roulette is rare (although it should be noted that it is present at Mubende and other sites to the east). It is even possible that the incidence of carved roulette was associated with the Lwoo invasion of Bunyoro, which Crazzolara (1950) seemed to think was an important contributory factor in the development of that Kingdom. However, the whole subject of carved roulette and its cultural implications is one that needs far more attention than it has yet been accorded.

Some work still remains to be done on the assessment of the analytical results from the recent fieldwork in Western Uganda. When this is completed, substantive publication will follow.

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Two new publications have been received by the editor and are available for review:

Archaeology of Gonja, Ghana: Excavations at Daboya. (1989, P. L. Shinnie and F. J. Kense). Calgary: University of Calgary Press.

A History of African Archaeology, (1990, P. Robertshaw, ed.). Portsmouth: Heinemann Educational Books, Inc.

In addition, two previously received books have yet to be requested for review:

Pottery from the Begho-B2 Site, Ghana (1989, L. B. Crossland). Calgary: University of Calgary Press.

Oura, Ville Perdue (Tchad) (1989, J.-P. Lebeuf et J. H. Immo Kirsch). Paris: Editions Recherches sur les Civilisations.

If you are interested in reviewing any of these books, please contact the editor.

New Publications

Two new publications may be of interest to readers of *Nyame Akuma*:

1. *Ice on the Equator* (1990), by William C. Mahaney, summarizes fifteen years of research on the Quaternary geology, chronology, paleoclimatology and paleoecology of Mt. Kenya. The book, which lists for \$65 (U.S.), can be purchased either directly from the author or from the publisher, whose addresses follow:

Professor William C. Mahaney
 Geomorphology and Pedology Labs
 Atkinson College
 4700 Keele Street
 North York, Ontario
 Canada M3J 1P3

Wm. Caxton, Ltd.
 Box 7092
 Smith Drive & Highway 57
 Sister Bay, WI 54234
 U.S.A.

2. New Scholarship on the French and North African Paleolithic Collections of the Logan Museum of Anthropology, *Logan Museum Bulletin*, Vol. 1, new series (1990), R. White and L. B. Breitborde (eds.). The volume comes in two parts: Part I contains papers from the 1985 Beloit College Symposium on Alonzo Pond and the 1930 Logan Museum Expedition to North Africa, while Part II contains a series of papers describing the French Paleolithic collections in the Logan Museum. Part I sells for \$15, Part II for \$35, while both parts together are discounted at \$40 (all U.S.). Orders may be sent to:

Logan Museum Bulletin
 Beloit College Museums
 Beloit College
 700 College Street
 Beloit, WI 53511 U.S.A.

In addition, there are two new periodicals that should be known to *Nyame Akuma* subscribers:

1. *Archéo-Nil: Bulletin de la Société des Cultures Prépharaoniques de la Vallée du Nil*. The bulletin will be published twice yearly, the first issue (No. 0) having been published in October, 1990. Inquires may be addressed to:

M. Camille Aubaud
 Société pour l'Étude des Cultures
 Prépharaoniques de la Vallée du Nil
 40 Cabinet d'Égyptologie
 Collège de France
 Place Marcelin Berthelot
 F-75005 Paris
 France

2. *The Holocene*, an interdisciplinary journal focusing on recent environmental change and published by Cambridge University Press. Included among the disciplines to be represented in the journal are anthropology, archaeology, geology, paleoecology, and paleontology. The first issue is scheduled for March, 1991; detailed notes for contributors may be obtained from the editor, Dr. John A. Matthews, Department of Geology, University of Wales, College of Cardiff, P. O. Box 914, Cardiff CF1 34E, U.K.