THE WEST AFRICAN ARCHAEOLOGICAL NEWSLETTER

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Editorial

We had intended in this Editorial to use a little space outlining what progress, if any, had been made towards the establishment of a West African Journal of Archaeology and what further steps it was proposed to take. However, in accord with the Topsy-like character of the Newsletter itself, this idea has grown into something bigger, and constitutes the last topic in the present issue. We sincerely hope that some practical steps can be taken at the meeting proposed and that really tangible progress will be made.

Meantime there is one very welcome development to report, concerning the area to be flooded by the Niger Dam at Kainji in Nigeria. Whereas the position last year was one of despair and frustration, with the defeat of all efforts made to increase the scale of rescue operations to an adequate dimension, the tide seemed to turn with the turn of the year: there are now six archaeologists working in the area, supported by funds from eight different sources. Mr. Priddy, of the Federal Department of Antiquities, who has been working single-handed in the area for the last two years, has been joined by Mr. Francis Bassey, returned from five years training in Russia; the Institute of African Studies, University of Ibadan, was able to appoint Dr. Donald Hartle, formerly of the University of Nsukka, to a Senior Research Fellowship, specifically for this work; and Professor David Breternitz, with his two assistants Messrs. Bill Wade and Larry Leach, of the University of Colorado, managed to transfer themselves and their funds from Tunisia when unable to work there. Accordingly there can now be a confident hope that no information of value will be lost. Future numbers of the Newsletter will report on this work.

Mention of Mr. Francis Bassey reminds us that there are several others to welcome into the number of West African archaeologists since we last reviewed the ranks: John Atherton, from the University of Oregon, working in Sierra Leone; Nicholas David, of the Pennsylvania University Museum, who did an archaeological reconnaissance and some excavation in Cameroun last July and August and who hopes to return; Cyr Descamps, of the Département de Préhistoire at I.F.A.N.; Angela Fagg, appointed archaeologist in the Nigerian Federal Department of Antiquities, following in father's footsteps; James Myles, Assistant Curator in the National Museum of Ghana in Accra; and Patrick Munson, of the University of Illinois, who has been working at the Neolithic sites at Tichit in Mauretania, and on grain impressions on the pottery.

Another appointment of interest is that of Mrs. Bisi Sowunmi as a Post-doctoral Research Fellow in Palynology in the Institute of African Studies, University of Ibadan. Mrs. Sowunmi took her doctorate last June, with a thesis on 'The Pollen Morphology of the Palmae and its Bearing on Taxonomy'; she plans to work systematically on the identification of West African pollen with a view to its ultimate use in elucidating climatic history and, it is hoped, the history of West African cultigens. She hopes to work in close co-operation with M. Jean Maley, of O.R.S.T.O.M., who is doing the same kind of work in Tchad, and archaeologists may look forward to their forging useful tools of research to assist in our investigations. But we are warned not to be in too much of a hurry! We cannot forbear to quote here a piece of advice recently sent to Mrs. Sowunmi by Professor D. A. Livingstone, of Duke University, who has been very kind in the assistance he has given:

'One danger that you'll have to watch for is your archaeological colleagues. It's been my experience that archaeologists fall into two kinds: there's the unenlightened group who don't know enough to care about pollen at all, and there's the enlightened group who care about it, but perhaps too much. They want results, they want conclusions, and they want them fast. They don't always realise what a shaky factual basis all pollen conclusions have. You may find yourself under considerable pressure to produce stratigraphic results and to produce vegetational conclusions and climatic interpretations of them faster than you can really do so properly. If such a situation materialises I hope that you'll write me for aid and comfort, and I'll do what I can from this distance. The archaeologists who care about pollen are the best of the crowd, and they will listen to reason, even if they get impatient at times.'

So now we know! Verb. sap. sat.

But in contrast to the foregoing, it is sad to report that James Anquandah, who was the first student to take the Post-graduate Diploma in Archaeology at the University of Ghana and who subsequently took a B.Litt. at Oxford, (with a study of West African prehistoric pottery), has not taken up the post offered him at Legon or any other archaeological post. Perhaps he will one day change his mind.

It is with great pleasure that we publish in this issue the account of work done in the Central African Republic. Clearly this is an area of great potential importance for African archaeology, not so much by virtue of the fact that it lies almost exactly in the centre of the continent, but

because a glance at the map - especially a vegetation map - shows that it lies athwart what surely must have been a natural corridor from east to west, extending from the northern part of the Great Lakes area to the Cameroun Highlands. Such a natural route for prehistoric movement lies north of the great rain forest area, and could have either taken the line of the upper Ubangui river and its tributaries, or the line of the watershed between the Congo basin to the south and the Nile/Logone-Shari systems to the north. We have long felt the need for research in this almost untouched area, and would like to congratulate M. Bayle des Hermens on the start he has made and wish him every success for his future work in this area.

Résumé

Editorial

C'est avec grand plaisir que nous publions dans ce numéro le compte rendu des recherches dans ce pays, jusqu'ici presqu' inconnue, la République Centrafricaine qui, dans l'antiquité, a sûrement été un chemin important entre les grands Lacs et les Massifs du Cameroun.

Nous sommes également heureux de pouvoir indiquer qu'enfin des recherches archéologiques de sauvetage sont sur pied dans le pays menacé par le barrage sur le Niger au Nigéria sur un plan bien plus vaste et que maintenant il y a six archéologues qui y travaillent, les frais de leur travail sont garantis par huit fondations bénévoles.

Mme Bisi Sowunmi est nommé palynologue à l'Université d'Ibadan et espére coopérer avec M. Jean Maley d'ORSTOM dans un travail d'identification systématique des pollens de l'Ouest Africain dans le but d'éclairer eventuellement l'histoire du climat et des cultures. Avis aux archéologues: ne vous attendez pas à des résultats immédiats!

A la fin de ce numéro nous considérons de nouveau la possibilité de créer un Journal Archéologique de l'Ouest Africain.

RECHERCHES PREHISTORIQUES EN REPUBLIQUE CENTRAFRICAINE 1966 - 1967

par

R. de Bayle des Hermens

Jusqu' en 1966 la Préhistoire de République Centrafricaine était pratiquement inconnue.[1] Aucune recherche systématique n'avait jamais été entreprise. La bibliographie se réduisait à deux notes: la première de l'Abbé Breuil[2] décrivait une série d'outils préhistoriques recuillis sur le plateau de Mouka par le géologue F. Delhaye et remise au Muséum National d'Histoire Naturelle; la seconde de Félix Eboué[3] était relative à l'Ethnographie mais le premier chapitre consacré à la Préhistoire mentionnait une série d'objets appartenant surtout au Néolithique recueillis sur les chantiers miniers ou au cours de construction de ponts.

En 1955 le rapport de deux géologues des compagnies diamantifères: F. Delany et G. Berthomieux[4] signalait la présence d'objets en pierre taillée en divers points de l'Ouest de la R.C.A. Plusieurs séries étaient déposées au Musée de l'Homme à Paris ou malheureusement elles demeuraient inédites.

En 1965 la Présidence de la République Centrafricaine demandait au Muséum National d'Histoire Naturelle l'envoi d'une mission de recherches préhistoriques dans le pays. Deux missions étaient alors effectuées, l'une en 1966 et l'autre en 1967. Elles devaient apporter des résultats extrément importants et des découvertes de premier ordre dans le domaine de la Préhistoire.[5]

Régions Prospectées

Notre point de base était la Station expérimentale de La Maboké, du Muséum National d'Histoire Naturelle, située à 130 km au sud-ouest de Bangui en zone forestière. C'est à partir de là que nous avons effectué plusieurs tournées en divers points du pays. Nous indiquons sur la carte notre itinéraire et les gisements préhistoriques découverts ou visités.

A - Haute Sangha

Grâce à l'aide de tout le personnel de la Compagnie Centramines de Berbérati, nous avons pû nous rendre et travailler sur les chantiers diamantifères de ce secteur: Lopo et N'Goéré, où dans les alluvions anciennes nous avons fait d'importantes découvertes.

B - Région de Bouar

Dans les environs immédiats de Bouar et plus au nord près de Niem, nous avons pû voir plusieurs sites mégalithiques dont deux ont été fouillés par M. Pierre Vidal.[6]

C - Lobaye

L'importante couverture végétale de ce secteur n' a pas été favorable à la prospection. Nous avons dû nous cantonner aux chantiers de travaux publics et aux extractions de graviers et de sables des environs de M' Baiki, Bonkoko, La Maboké et près de l'Oubangui à la scierie de Batalimo.

D - M'Bomou

Nous avons localisé d'importants gisements préhistoriques au sud-ouest de Yalinga dans les chantiers diamantifères du N'Zako..

E - Haute Kotto

Sur le plateau de Mouka un gisement d'alluvions a été découvert au gué de la Dious. Nous avons pû voir les chantiers diamantifères de la Compagnie du Dar Challah sur la Boungou, ceux de la Société africaine des Mines à Wamdjia et nous rendre au Djebel Méla où existe un site de peintures rupestres.

F - Région de Birao

Deux stations préhistoriques ont été découvertes près de Ouanda Djallé; à Tiroungoulour quelques éléments taillés ont été recueillis.

G - Région de N'Délé

Dans le secteur de la Koumbala, à 80 km. à l'est de N'Délé, grâce au concours de M. Laboureur, Directeur de la SAFAR-AFRIC, nous avons pû découvrir plusieurs gisements préhistoriques et deux sites de peintures rupestres.

Industries Préhistoriques Rencontrées

I - 'Civilisation du Galet Aménagé'

Cette civilisation a été rencontrée en Haute Sangha sur le chantier diamantifère de N'Gusso, sur la N'Goéré. La récolte sur ce point d'une série de galets aménagés, actuellement sans autres pièces lithiques, confirme la présence

d'industries archaïques dans les alluvions profondes à elements lourds des lits fossiles des cours d'eau de l'ouest de la R.C.A.

Les galets aménagés ont également été rencontrés sur les chantiers voisins de N'Golo et de Bangué 1 et sur ceux de la Lopo près de Nola. Dans ces deux derniers points ils voisinent avec des bifaces, hachereaux, pics et éclats.

II - Acheuléen

Nous avons trouvé cette industrie dans les alluvions des chantiers diamantifères de Haute Sangha: N'Goéré et Lopo. Les gisements de la N'Goéré à N'Golo et Bangué 1 sont d'une grande richesse mais souvent les objets, bifaces, pics et hachereaux, sont très roulés et usis par suite de leur séjour dans les "marmites" où ils ont pû tourner très longtemps avant que ne se déposent les alluvions plus récentes.

Aucune stratigraphie n'est actuellement possible, seule la découverte d'un gisement sur fond lacustre non remanié apporterait des elements permettant une étude plus sûre. L'outillage de ce secteur, compte tenu uniquement de sa typologie, appartient à un Acheuléen supérieur.[7]

Les chantiers de la Lopo exploitent une plaine alluviale ancienne dont la coupe se présente de la manière suivante:

a) Mince couche de terre végétale, 0,20 m. à 0, 40.

b) alluvions gréseuses très fines, déposées par lits plus ou moins horizontaux, parfois colorées d'oxydes, 2 m. environ d'épaisseur.

c) alluvions à éléments lourds: galets de quartz et de quartzite, diamants et outils préhistoriques, d'un mètre d'épaisseur moyenne.

Les pièces rencontrées dans la couche diamantifère sont dans des états de conservation très variables et souvent les objets sont roulés et usés. Nous y avons une série de galets aménagés, bifaces, hachereaux, pics et éclats en quartzite gris bleu à grain fin: l'ensemble se classe dans un Acheuléen supérieur comme pour les chantiers précédents.

En Haute Kotto, les chantiers de la Compagnie Diamantifère du Dar Challah, établis sur la Boungou près de Ouadda, nous ont fourni quelques pièces acheuléennes qui proviennent des alluvions et des graviers actuels. Elles sont très altérées et se trouvent mêlées à des objets plus récents (haches polies).

III - Sangoen

Le Sangoen a été rencontré au M'Bomou dans les chantiers diamantifères du N'Zako. La plaine alluviale exploitée présente une coupe semblable à celle de la Lopo en Haute Sangha mais la couche à éléments lourds contenant les pièces préhistoriques a seulement une épaisseur moyenne de 0,50 m. Les objets recueillis sur ce chantier ne sont ni roulés ni usés, ils n'ont pas dû subir de transport sensible. Il semble que les populations préhistoriques aient vécu sur les berges même de la rivière, les sédiments ont ensuite "glissé" latéralement puis ont été recouverts par des alluvions plus fines.

Ce gisement est d'une richesse extraordinaire et c'est par milliers que se rencontrent dans les couches profondes les objets taillés. Les bifaces de divers types y sont abondants, les hachereaux y sont pratiquement absents (un seul exemplaire); nous y avons également des pics, quelques galets aménagés, des racloirs, des pièces discoïdes et de très nombreuses pièces bifaciales étroites comme dans tout le bassin du Congo.[8] Leur abondance et certaines formes fines et élancées laissent entrevoir une évolution du Sangoen vers des faciès plus récents du Lupembien et du Tshitolien.

Quelques traces de Sangoen ont également été remarquées sur la N'Goéré en Haute Sangha, dans les alluvions de la Bomboli près de M'Baiki en Lobaye et sur la Boungou en Haute Kotto.

IV - Néolithique

L'industrie néolithique est présente par des haches en pierre polie découvertes dans les chantiers de la S.A.M.; à Wandjia, dans les alluvions de la Boungou et à Batalimo en Lobaye.

Il semble devoir rattacher à un Néolithique ancien les industries en quartz taillé de Boukoko, La Maboké et M'Baike en Lobaye et de Ouanda Djallé dans la région de Birao. Certains gisements de surface ou d'abris de la Koumbala, environs de N'Délé, où la méthode de débitage Levallois est présente sembleraient appartenir à un pré-néolithique mais dans l'état actuel de nos recherches, nous n'avançons cette observation qu'avec de prudentes réserves.

V - Art Rupestre

Trois sites d'art rupestre ont été découverts:

1. DJEBEL MELA, à l'est de Ouadda en Haute Kotto.

Les peintures, sur les parois d'un petit abri, sont toutes traitées à l'ocre rouge: signes géometriques, triangles, cercles, ponctuations, lignes et un animal (félin?). Certains signes ont été creusés légèrement avant que la teinte rouge ne soit étalée. Dans le fond de l'abri un second groupe de signes et de ponctuations est surchargé par plusieurs personnages très stylisés traités par piquetage.

2. KOUMBALA, domaine de la Safar-Afric, Est de N'Délé.

Peintures à l'ocre rouge sur le plafond d'un petit abri: plusieurs séries de ponctuations, deux mains positives, traces impossible à identifier et deux signes formés de deux cercles et de traits.

3. ABRI DE TOULOU, Est de N'Délé, secteur de la Koumbala.

L'abri de Toulou est creusé dans une énorme "kaga" gréseuse tout près du marigot qui lui a donné son nom. Il a été occupé de la Préhistoire à nos jours. Les parois sont couvertes de graffiti et de dessins récents. Nous y avons cependant relevé des peintures anciennes: plusieurs séries de ponctuations et trois personnages très stylisés en rouge, dans un diverticule, une frise de sept personnages traités en blanc, noir et rouge.

VI - Monuments Mégalithiques de Bouar

Les monuments mégalithiques de la région de Bouar se présentent sous la forme de tumulus de dimensions variables sur lesquels sont dressés des blocs de pierre grossièrement équarris. Plusieurs dizaines de ces monuments ont été recencés par M. Pierre Vidal qui en a fouillé deux. Dans le premier cinq objets en fer et quelques tessons de céramique ont été recueillis.

Ces ensembles nous paraissent appartenir à la période protohistorique, seules les futures fouilles et le mobilier qui y sera découvert permettront une datation.

VII - Céramique Protohistorique et Historique

Les sites de République Centrafricaine fournissant de la céramique sont extrémement abondants, particulièrement dans l'Est, le Nord et le Centre du pays. Ils indiquent un

peuplement très dense à certaines époques en deux lieux actuellement inhabités.

Les procédés de fabrication de cette céramique semblent remonter à une époque fort ancienne et certainement au Néolithique.

Conclusions

Les deux missions de recherches effectuées en République Centrafricaine apportent d'importants documents pour un pays ou jusqu' alors on ne connaissait rien en Préhistoire. Une cinquantaine de gisements ont été découverts, ils permettent déjà de dresser une carte du peuplement préhistorique de cette zone. Le cheminement des civilisations rencontrées ne peut pas être fixé d'une manière certaine, il semble que les influences sahariennes soient peu sensible, il faut sans doute rechercher vers l'Afrique Centrale et même l'Afrique du Sud, l'origine du peuplement du pays et les voies de pénétration des civilisations préhistoriques.

Notes

1. BAYLE des HERMENS (R.de) - Etat actuel des connaissances préhistoriques en République Centrafricaine. Cahiers de La Maboké, t.III, 1965, pp. 97-100.

2. BREUIL (Abbé) - Pierres taillées venant du plateau de Mouka, Oubangui-Chari (Afrique Equatoriale Française). L'Anthropologie, t.XLIII, 1933, pp. 222-223.

3. EBOUE (Félix) - Les peuples de l'Oubangui-Chari - Essai d'Ethnographie, de Linguistique et d'Economie Sociale. L'Ethnographie, 1933, pp. 7-79.

4. DELANY (F.) et BERTHOMIEUX (G.) - Mission Diamant ouest-Oubangui, Novembre 1955 - Avril 1956. Direction des Mines et de la Géologie. Gouvernement Général de l'A.E.F. Rapport inédit.

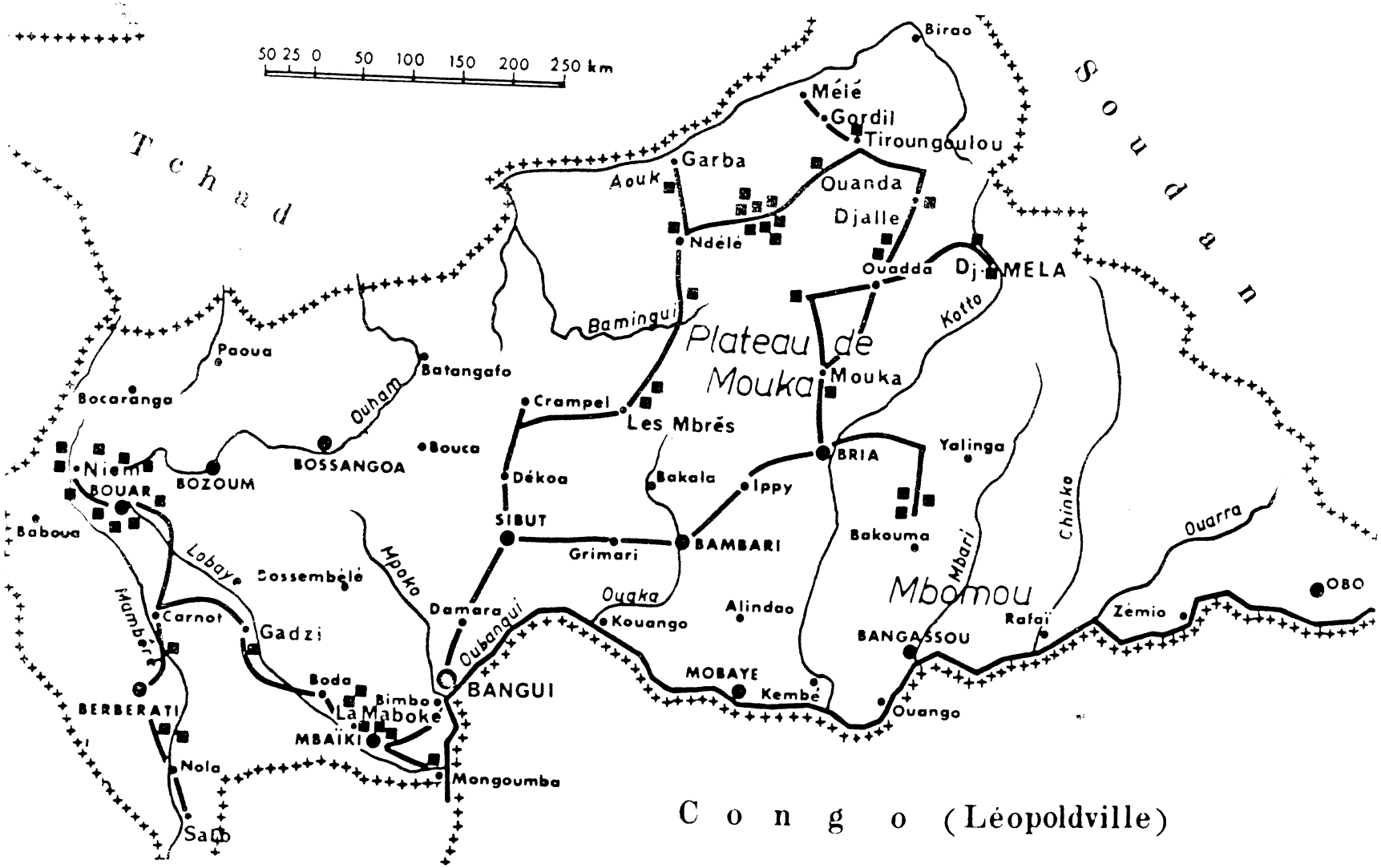
5. BAYLE des HERMENS (R. de) - Première mission de recherches préhistoriques en République Centrafricaine. Cahiers de La Maboké, t.IV, 1966, pp. 158-175. id. - Mission de recherches préhistoriques en République Centrafricaine. Note préliminaire. Bull. Soc. préhist. Franc. t.LXIII, 1966, pp. 651-666.

id. - Deuxième mission de recherches préhistoriques en République Centrafricaine (9 janvier 1967 - 11 mars 1967). Rapport. Diffusion restreinte. Muséum National d'Histoire Naturelle, Paris, Laboratoire de Préhistoire.

6. ANONYME - Découvertes archéologiques dans la région de Bouar. Terre Africaine, no. 140, 13 - 20 août 1966, pp. 1 et 2.

7. Les récoltes de 1967 du chantier de Bangué 1 été deposées au Musée d'Ethnographie de Bouar et la presque totalité de celles de N'Golo au Musée Bogando à Bangui. Nous avons enfin installé au Laboratoire des Sciences Humaines de La Maboké des collections provenant de Haute Sangha et du N'Zako.

8. ALIMEN (H.) - Préhistoire de l'Afrique - Editions Boubée, Paris, 1966, p. 295.



C o n g o (Léopoldville)

REPUBLIQUE CENTRAFRICAINE

Itinéraires des missions de 1966 et de 1967 et gisements préhistoriques découverts

Summary

Prehistoric Research in the Central African Republic

by

R. de Bayle des Hermens

Up to 1966 the prehistory of the Central African Republic was practically unknown. In 1965 the President of the Republic asked the National Museum of Natural History in Paris to send an archaeological expedition to the country. Two such expeditions carried out work in 1966 and 1967, with very important results.

Pebble tools were found in Haute Sangha in the diamond workings of N'Gusso, on the river N'Goéré, without the presence of any more advanced tool forms. They were also found in the neighbouring workings of N'Golo and Bangué on the river Lopo near Nola, but here they were accompanied by bifaces, cleavers, picks and flakes.

Rich Acheulian industries were found in the alluvial deposits of the N'Goéré and the Lopo in Haute Sangha, but no satisfactory stratigraphy was determined except at one place. Typologically these industries appear to be Late Acheulian. Sangoan material was recovered from the diamond workings of the N'Zako at M'Bomou. This site is extremely rich, and it appears that the Sangoan population must have been actually living along the banks of the river. The Neolithic is attested by ground stone axes at Wandjia and Batalimo and the flaked quartz industries in various places may belong to an early stage.

Three sites of rock art were discovered; at Djebel Mela (in red ochre; geometric designs); at Koumbala (in red ochre; dots, geometric designs, hands); and in the Toulou Shelter, covered both with recent designs and with a more ancient series of dots and three stylised human figures in red, and a frieze of seven figures in white, black and red.

There are megalithic monuments in the region of Bouar in the form of mounds on which there are roughly squared blocks; these probably belong to the protohistoric period, as iron has been found in them.

SIERRA LEONE PROBLEMS

by

Paul Ozanne

I wish to suggest that Professor Coon's naming of the culture represented at his cave-site in Sierra Leone (Newsletter 6, pp. 25-27) may lead to a misinterpretation of the nature of that culture, and possibly of the manner of use of the cave and of the true sequence of cultural development. Since my survey of the area (Newsletter 5, pp. 31-36) was commissioned for the discovery of new sites, I did not visit the cave, but in the areas near it I found evidence bearing upon the cave material, especially in the distributional relationship between soil types and early archaeological sites.

Archaeological discoveries in the chieftaincy of Kono have been dependent upon the activities of diamond miners. Diamonds were first found in the terrace gravels and sands of the banks of the Maia stream and its tributaries, around Koidu, a small village near the southern edge of Sefadu, capital of Kono. Sefadu, with its various facilities, was the centre for working the Koidu diamonds, and grew until Koidu became a small suburb. After taking the best out of these superficial deposits, Sierra Leone Selection Trust sub-conceded most of them, and also left them at the mercy of the illicit diamond collector (my head-down archaeological walking posture was misinterpreted as a genuine 'Koidu Crouch', and people wondered at my open manner!) S.L.S.T. has since concentrated on a large area to the west, where diamond-bearing gravels are to be found under ten to twenty-five feet of heavy clay. The concessions in this area, spread over ten to fifteen miles, contain Coon's site. Near the small village of Yengema, S.L.S.T. has built its wired-and-walled HQ township, where Professor Coon and I were each finely entertained; "Brown's Cave" has thus been renamed "Yengema Cave", not because it is very close to Yengema, and not that Yengema can be found on any easily-available map; but because the S.L.S.T. centre near Yengema is known all over the country by repute, and is the most convenient base for visits to the cave. These are not over-riding reasons, and there are, I believe, over-riding reasons for not calling the cultural material "Yengeman".

The area presents a nice opportunity to apply Sir Cyril Fox's ideas, as expounded in The Personality of Britain. Most archaeologists today would suppose that early societies exploited mainly the 'primary area of settlement', the light

and well-drained gravels and sands of Koidu, and only comparatively recently did people move onto the 'secondary area of settlement', the heavy clays of Yengema. I 'wasted' almosted as much time on the Yengema clays as I spent profitably on the Koidu sands and gravels, in order to establish this contrast. I found nothing on the clays except pottery, tin cans, etc., of obviously recent date. The exploitation of Yengema is, it would appear, a twentieth century phenomenon. I was at first concerned that a number of artefacts had been collected by Yengema staff, but it turned out that none of these were from the Yengema area, and all from around Koidu. On the Maia sands and gravels, I found several small sites, yielding Coon's elements A, B and C, and having seen Shaw's digest of Coon's report, and the sample of Brown's material now at Legon, I am confident that these sites represent the prime area of "Yengeman" settlement. My only other cultural group did not extend onto the clays; it has distinctive pottery styles, concentrated on hill-tops such as Tankoro within Sefadu, with farmers' pots found here and there on the stream banks. Thus Coon's culture is essentially a Maia culture; the only reason why there was an outlier of the culture within the heavy clay zone near Yengema, Coon's site, is that here was a cave in a rocky eminence. Better, therefore -- and this by coincidence accords with the Burg Wartenstein recommendation that we should use natural features in our nomenclature -- to call the 'Yengeman' Sefadu-Maia, and my other group Sefadu-Tankoro; Sefadu gives the position on almost any map of Sierra Leone to within a couple of miles, and the second name a precise location - Maia indicating the spotty distribution along the banks of the stream, and Tankoro the concentrated hill-top settlement.

I am sorry that whereas Coon's A and B elements are narrowly defined stone industries C is a mixture of stone and pottery. It would be better to segregate the pottery and to leave the alphabet for the stone industries; the pottery should be called simply Sefadu-Maia pottery and 'Sefadu-Maia industry C' should refer to the ground-celt industry. To industries A, B and C, one other industry is certainly to be added, one probably, and one perhaps; these may be called Sefadu-Maia industries D, ?E, and ??F:

Sefadu-Maia D — Selected naturally pick-like river pebbles of olivine basalt (a rock hitherto unknown in Sierra Leone to Professor Anderson), some of which were made more pick/hoe-like by flaking and in some cases grinding.

Sefadu-Maia ?E — Perforated soapstone; maceheads and crude pieces which could be either Kwes or rough-outs for maceheads have been found on the Maia banks by S.L.S.T. staff. No associations are known, but clearly it is most probable that they belong with fairly abundant material of the area, the Sefadu-Maia group.

Sefadu-Maia ??F — Flaked crescents and trapezes have been found with Sefadu-Maia material; they may represent an industry of special significance, but on the other hand they may be a low-percentage component of industry A.

Coon's sequential terms, Lower, Middle and Upper Yengeman, should not be changed into Lower, Middle and Upper Sefadu-Maia. Since the cave is an exceptional site, it is quite likely to have been used for special purposes. The sequence represented may not illustrate the general development of Sefadu-Maia industries, but only how the cave was used on various occasions. To avoid this pitfall, and in acknowledgement of the importance of Professor Coon's work, I suggest the site is referred to as Coon's Cave, and that his phases are named Sefadu-Maia, Coon's Lower Level, Sefadu-Maia, Coon's Middle Level, Sefadu-Maia, Coon's Upper Level.

Other problems of Sierra Leone are raised by the notes of Newman (Newsletter 4, pp. 19-22) and Roll (Newsletter 6, pp. 28-31). The latter kindly gave me a copy of his report, and showed me his photographs, at the beginning of my survey; and it might be noted that his Gola megaliths seemed most unlike those I had seen on the Gambia. What is not clear is whether the megaliths reported by Newman are another group, which might connect the Senegambian ones with Roll's, or whether he was referring to the latter.

A similar ambiguity shrouds Bunumbu. I was told that an underground chamber had been found, when the road-surfaced roof fell in, and that it contained steatite figures and complete Beakers, now in the Freetown museum; I gave some weight to this association. Newman describes a rock-shelter, with wall-paintings, sherds and stone implements of Palaeolithic appearance. Is this a different site?

Résumé

Les Problèmes du Sierra Leone

par

Paul Ozanne

Le périmètre de la répartition première de la civilisation trouvée dans la grotte fouillée par Professeur Carleton Coon (No. 6 du Journal p. 25-27) est situé dans la région de sable et de graviers qui entoure Koidu, et non pas sur les terrains d'argile grasse qui se trouve à Yengema. Que le gisement fouillé par Coon fût habité n'est dû qu'à l'existence de la caverne. Donc le nom 'Yengeman' ne sied pas à cette civilisation surtout que le gisement, connu antérieurement sous le nom de 'Brown's Cave', est assez éloigné d'Yengema qui, bien que le siège social du Sierra Leone Selection Trust, n'est pas indiqué sur des cartes d'utilisation courante. On suggère donc remplacer ce nom par 'Sefadu-Maia' et d'utiliser Sefadu-Maia A, B, C pour remplacer le 'Yengeman A, B, C' de Coon. En outre, d'autres éléments sont décrits qui seront indiqués par Sefadu-Maia D, E?, F??.

Les autres problèmes se réfèrent à des détails concernant le gisement de Bunumbu et il s'agit de savoir également si les mégalithes indiqués par Newman (Journal no. 4, p. 19-22) sont les mêmes que ceux indiqués par Roll (Journal no. 6, p. 28-31).

THE HUMAN SKELETON FROM ROP ROCK SHELTER, NIGERIA

by

Geoffrey Gaherty

This skeleton,* although excavated in 1944, has never before been described. The present report makes no pretence of completeness, for it is based on only four hours of study, much of which was spent in cleaning the specimen. I wish to thank Mr. Ekpo Eyo, Ag. Director of the Nigerian Antiquities Department, for bringing this skeleton to my attention and giving me the opportunity of examining it. I hope that a more detailed analysis will be possible at a later date.

The skeleton is in a very fragmentary condition although the bone itself is fairly well preserved. There are many fragments of the shafts of longbones, but only one articular area, the head of a humerus, was noted. Because reconstruction of the longbones would require a great deal of time, I decided to concentrate on the cranial remains, which were still in the matrix. A number of photographs of the uncleaned specimen were taken, since I anticipated that cleaning would be destructive, a fear which proved justified. The matrix contained most of the mandible, a small part of the maxilla, and twenty-four teeth. There was also a piece of matrix which appeared to contain part of the skull base, but cleaning was not attempted owing to lack of time and the fragility of the bone. There were a few vault fragments and part of the zygoma mixed in with the infra-cranial remains, but most of the cranium appeared to be missing.

The maxillary fragment consisted of the left incisors, canine, and first premolar, which were held together in their proper relationship more by the matrix than by the few tiny fragments of bone which survived between their roots. This lack of bony support, which was also encountered in the anterior teeth of the mandible, is suggestive of periodontal disease, a condition which is very common in modern Nigerians. The second left premolar and the canine and both premolars from the right side of the maxilla were also present.

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* Referred to in: Fagg, B. E. B., 'Preliminary Report on a Microlithic Industry at Rop Rock Shelter, Northern Nigeria', Proc. Prehist. Soc. X, 1944, pp. 68-69; and 'Carbon Dates for Nigeria', Man LXV, 8, 1965. Ed.

The mandible is much more complete than the maxilla, but is poorly preserved in comparison with the longbones. The inner cancellous parts of the bone are gone, leaving only a thin shell of compact bone which has been filled by earth. The body of the mandible has been broken into two or possibly three fragments, probably by earth pressure after burial. The left side is broken between the incisors and the canine, and has been displaced medially so that it rests against the right side of the body. The right side also appears to have been broken at about the same point, but with little displacement. The posterior part of the right mental foramen is well preserved and it is quite large. The second and third right molars are still in their sockets, which exhibit severe abscesses. The chin appears to be slightly pointed. All the other mandibular tooth sockets were either missing to start with or disintegrated when the matrix was removed. All sixteen mandibular teeth are present, some of them being loose in the matrix rather than in situ. Both the ascending rami are broken, but many of the fragments are present.

The teeth are very well preserved and allow some conclusions to be drawn. All twenty-four show signs of extreme wear, implying either an advanced age for the individual or an abrasive diet, or both. The molars and premolars are worn obliquely, indicating that some teeth were lost before death. The anterior teeth are worn down evenly in the occlusal plane. Three molars, including the lower right second molar, have severe approximal caries. Dental caries are commoner among people whose diet consists primarily of starchy vegetable foods than they are among those who depend largely on meat. The dental evidence thus suggests an agricultural rather than a hunting economy.

Thus one can conclude tentatively that the individual from Rop was fairly advanced in years and had lived on a starchy diet, but little more can be said without further study and comparison with skeletal material from other sites in West Africa.

Résumé

Le Squelette Humain de Rop Rock Shelter, Nigeria.

par

Geoffrey Gaherty

Jusqu'ici il n'y a pas de description de ce squelette. Un examen révèle que l'homme était d'une âge avancée et se nourrit d'aliments féculents ce qui implique une économie agricole plutôt que celle d'un chasseur.

"THE QUATERNARY IN THE COASTLANDS OF GUINEA"
by Oliver Davies. Glasgow, 1964, Jackson, Son & Co.
pp. 276, 8 plates, 120 text figures. £6. 6. 0.

REVIEW by Pierre Biberson

In this important volume Professor Davies gives a very comprehensive picture of the Quaternary in the coastlands of Guinea. The prehistoric industries are described in their stratigraphical and chronological setting, which is defined as precisely as possible.

The book contains nine chapters, of which only the last three (Chap. 7: "Palaeolithic Industries"; Chap. 8: "The Mesolithic"; Chap. 9: "The Neolithic") deal with the prehistoric archaeology of the Guinea coastlands. The first six chapters are more general and cover the whole of West Africa, with frequent comparisons with North Africa, the Sahara, other parts of Africa and even Europe and America. They are entitled: Chap. 1: "The Chronological Frame"; Chap. 2: "The Pluvial Sequence in Africa"; Chap. 3: "Raised Beaches"; Chap. 4: "West-African River-Terraces"; Chap. 5: "Soil-Profiles and Laterisation"; Chap. 6: "Tentative Scheme of Absolute Chronology".

The most important additions to our knowledge come from the large amount of information brought to light by the author's own studies and from his synthesis of the work of his predecessors and present colleagues in the various branches of quaternary research. It is an excellent up-to-date review of what was known in this part of Africa up to 1960.

Such a huge compilation is based on numerous references and these may be found easily, thanks to topographical and subject indexes printed at the end of the book. We must regret that these are not followed by a systematic bibliography. Important notes and some valuable bibliographical references are given at the end of each chapter, but it is not always easy to make use of information in this form. Moreover, out of about a thousand notes, only six refer to work published in 1961, and three of these seem to have been added in proof: we read that the preface was written in 1960, so that we are deprived of the results of a number of recent works in various fields dealing with problems which were unsolved in 1960, but had been partially clarified by 1964.

It is a pity that when a book is published it should already be out of date on account of long delays in printing (four years in the present case). This explains a number of

inaccuracies, which, as we shall see later, disfigure to a certain extent some parts of this work.

It is impossible in so short a review to give an exact account of the many very valuable ideas which the author puts forward; we shall only briefly examine the contents of the various chapters and discuss the most important conclusions.

Chapter 1 deals with "The Chronological Frame". The author discusses the difficulty of dating and explains clearly the difference between absolute and relative dating. He discusses the reliability of radiocarbon and other isotopic dating methods and also the possibilities of the analysis of deep sea cores, while convincingly showing the uncertainty of astronomical methods.

Chapter 2, on the "Pluvial Sequence in Africa", begins with a review of the classical ideas on the Northern glaciations. The author seems to accept Opik's theory which tentatively explains their extra-terrestrial origins, but what he regards as more important to the prehistorian are the following four groups of phenomena:- 1. A number of glacial advances in high and middle northern latitudes; 2. An Antarctica continuously glaciated for at least most of the Pleistocene; 3. An unknown number of glacial fluctuations in middle southern latitudes; 4. Pluvial fluctuations in Africa and probably in other tropical lands. It is not however proved whether any of these phenomena are in phase with each other.

The author recounts and discusses the most likely traditional theories which explain such phenomena: orogeny, changes in the composition of the atmosphere, variations in solar radiation, etc. He concludes that each of these suggested causes would produce meteorological effects, but that some of them would have caused greater fluctuations than are actually observed.

Speaking of African pluvials he says that the terms pluvial and interpluvial are taken to imply more or less humidity, without necessarily implying that annual precipitation was greatly increased, or even that it was increased at all. Some of the pedological evidence could be accounted for by a different distribution of rainfall, and perhaps by decreased evaporation.

Pleistocene climatic variations in Africa are chiefly noticeable in those parts of the continent comparatively far

from the equator and we do not know whether the pluvial sequence is in phase in different parts of the continent or with the northern glaciations.

Bernard's theory would deny contemporaneity. Balout has suggested that a pluvial south of the Sahara must be contemporary with an interglacial, but this is denied by Büdel, who wishes to contract the dry zone from both sides during a glacial-pluvial.

According to Davies, in the absence of radio-carbon dates, the only means of correlation is by raised beaches. On some points relatively little doubt remains: (a) The last pluvial south of the Sahara is neolithic. (b) At the mouth of the river Senegal two interpluvials coincide with eustatic lows, and a wetter period with a raised beach. (I must confess that, on this subsident coast, I am not sure that changes in sea-level are authentically 'eustatic'.) (c) The dunes in Bechuanaland are fossil and have been relatively fixed by vegetation since Sangoan times. (d) The passage from glacial to pluvial deposits is nowhere proved in East Africa. (e) The date from the Kalambo Falls (about 43,000 B.P.) for the Sangoan, interpreted as contemporary with the onset of the Gamblian pluvial, coincides neither with a glacial nor with a stadial, but with the Göttweig interstadial.

The rather scanty evidence suggests a partial correlation of recent pluvials and interpluvials throughout tropical Africa, excluding the Mediterranean coast and the Cape, and at present without reference to East Africa. The following sequence seems discernible: (a) Pluvial, contemporary with the Late Acheulian; (b) Severe interpluvial, contemporary with the early Sangoan, between Beaches IV and V; (c) Pluvial; (d) Interpluvial, severe north of the equator, contemporary with later M.S.A. industries; (e) Pluvial, decreasing southward, and uncertain far south of the equator.

For the Holocene Davies prefers to use Butzer's terminology as there seems to be a fair correspondence between North-East Africa, the Sahara and West Africa.

For comparative purposes the author summarises the question of "Pluvials in North Africa", which he considers to be probably in phase with the glaciations in Europe. We must, however, take account of variations in precipitation within each glaciation, for glaciations are not in phase with precipitation maxima, and rainfall must have varied to produce the complex stadial pattern. The author's statement that little has been published

in detail about the Moroccan Villafranchian seems to me to show a lack of recent information. He takes the calcareous crusts which are widespread in North Africa to be indicators of aridity, although a number of scholars do not agree with such an interpretation. Pedologists interpret them rather as the result of strong evaporation, which implies not only high insolation (at least seasonally) but also heavy rainfall (i.e. a peculiar distribution of rainfall rather than a decrease). Moreover he cites certain red loams as indicating wet periods, but does not follow Antoine in distinguishing between "autochthonous red loams" and "allochthonous red loams", an omission which partly falsifies his conclusions.

In the Sahara, he says that accumulations of gravel can be due to a single violent storm in the desert and do not indicate a pluvial. I think, indeed, that if we restrict the term "pluvial" to mean a period of high rainfall of the same kind as in Equatorial areas, we cannot apply it to the Saharan Quaternary; but the increase in seasonal storms and the alternate incision and aggradation of wadi terraces indicate true climatic variations which must be taken into account. He maintains that most of the Sahara is or has been watered from the south and so falls within the tropical rainfall zone. This is a superficial explanation, and the work of Dubief, which is not cited by Davies, shows conclusively that the meteorological phenomena in this wide region are much more complex.

Speaking of the Hoggar, Davies emphasises the evidence for climatic influences coming from the south, but gives little weight to that showing northern influences. He says that there is no evidence for dating the transgressions of Lake Chad, but he was writing before Faure's publications (1964-1966).

In the present wooded savannah it has been possible to demonstrate a satisfactory geological and climatic sequence in Ghana, the detailed evidence for which is given in Chapter 5. In the highlands of Fouta Djalon there are only poor indications. Davies could not in 1960 make use of Michel's studies on the Upper Senegal and Gambia rivers (1961).

In the Senegal delta a lateritic crust was formed during a marine regression and was covered by dunes. But it seems clear to me that we must wait for the conclusions of work presently being carried out by ASEQUA geologists before making definitive correlations.

Absence of research in the wide equatorial belt hinders correlation of climatic sequences north and south of the equator. There is some dispute about the validity of the East African sequence. As a consequence of tectonic movements in South Africa, until a deep sequence of beds is discovered in a stable area, we have little chance of learning much about the evolution of the Quaternary palaeo-climate.

Chapter 3, devoted to "Raised Beaches", begins with an account of classical glacio-eustatic theory which needs no comment. A provisional table would help in the identification of the various sea-levels mentioned in the text. Unfortunately the author had no opportunity of using recent studies published after 1960. His tentative correlation with the Moroccan sequence for example is based on Gigout's 1958 scheme, which mixed Mediterranean and Atlantic terminologies, so that we are driven to a priori correlations which are still in dispute since the exact chronological place of the Mediterranean raised beaches is unknown.

At the start of his account of "The raised beaches in Ghana and other parts of West Africa", Davies notes the difficulty of such research. The ancient shorelines, particularly in Togo and Dahomey, are covered by free sands and the terrain is unsuitable for the preservation of raised beaches.

In Senegal raised beaches are known, but the lack of associated implements makes it difficult to place them, while around Dakar local vulcanism has upset their levels.

The only good series of raised beaches in West Africa, says Davies, is along the rocky coast of Ghana.

Although the forms of the drowned valleys indicate sea-levels lower than the present, positive evidence for regression has been secured in only a few cases. The log of a bore-hole at Keta seems to indicate two or three low-level beach deposits, the lowest at about -80 m. S.L.

The raised beaches indicate a series of six classical ancient shore-lines numbered from I to VI, but we must note the absence of Beach II. The identification of ancient beaches rests on the associated prehistoric industries. This method is not entirely convincing since tools are generally very scarce and only few of them are typical.

The author then discusses "West African beaches compared with those elsewhere". The only one about which there is

little doubt is 'Beach VI' at +2 to +3 m., which has been dated by C^{14} to 5570 ± 70 B.P. and corresponds to the European Flandrian. For the higher beaches comparisons are made on the basis of artifacts, for they are the only data which occur.

The best series of beaches in Africa are in Morocco and to a lesser extent in South Africa. There is much warping in South Africa, where the beaches have been classified into the Major and Minor Emergence. In fact, the Major Emergence seems to have been a period of rapid tectonic uplift in the southern Cape and Natal which has tilted the older beaches on the east coast and has left several beaches belonging to the same transgression; all of these contain a Chelles-Acheul II or possibly a Late Chelles-Acheul I industry.

Two former beaches are identifiable in Natal and two estuarine gravels at Riversdale on the South Coast. On the west coast tilting has apparently submerged all the older beaches, except a very early regression-beach with two stages, in the gravels of which rolled pebble tools were collected. There is no good evidence for any of these beaches north of Walvis Bay as far as the mouth of the Niger. The "Tyrrhenian" beach has been claimed in Angola, but Davies is of the opinion that it is pre-pleistocene, for the occurrence on it of unrolled Late Acheulian is not a proof of its age. The formation of submarine canyons is a matter of dispute, but the Congo canyon may have started sub-aerially in a period of eustatic low-level and tectonic uplift, and have subsequently foundered.

The later pleistocene beaches are well represented on the south and west coasts of Africa. It seems that the middle pleistocene tilting had ceased and that the coast has since been relatively stable. They are less easy to interpret in Natal where further tectonic movements probably took place in the early part of the late pleistocene. Davies suggests that these are to be associated with the East African rifting.

As I have already said, the author's documentation concerning Morocco is now out of date in a number of cases. Essentially he uses the synthesis of Balout and Vaufrey (1955). Referring to a paper by Gigout (1958), he notes that although there is a remarkable series of raised beaches in Morocco they appear to be warped. This warping cannot be denied for the coastal regions affected by the Western Atlas orogeny between Mogador and Agadir, or by the subsidence of the Rharb-plain, south of the Rif Mountains. This is not, however, the case with the Moroccan Meseta, the morphological and stratigraphical sequence of which has been employed to establish the Pleistocene

Chronology of Atlantic Morocco. While there may have been some very local accidents due to ancient faults which were renewed during the Quaternary, the sequence in the main part of this coast is much more likely, according to Lecointre, to be the result of an extended uplift of the continent as a bloc. This very slow and persistent uplift (either epirogenic or isostatic in origin) raised the ancient shore-lines to such an altitude that later eustatic transgressions could not reach the sea-shores of the preceding maxima, so that the successive fossil cliffs and the marine sedimentary aggradations at the cliff-foot were fortunately preserved. Contrary to what the author says, this is especially the case with the Maarifian (Beach II), at an altitude of + 55 to + 60 m., as I demonstrated in 1961. One other argument which is to be absolutely rejected: Davies writes that some slightly rolled tools from Sidi Abderrahman G are "markedly of Sangoan type", and a small hand-axe, from the upper part of Bed E "could be described as advanced Sangoan". I must assert, after thirty years of research on Moroccan prehistoric cultures that, in the present state of our knowledge, there is no trace of Sangoan in Atlantic Morocco.

Speaking of Europe, the author takes into account a number of studies in England, in France (in the Somme Valley) and in Portugal (in the Atlantic coastlands) to state a sequence very similar to Zeuner's chronology. Then he attempts to place the African raised beaches in this framework by typological comparison of industries. Such an attempt is worthy of detailed discussion for which there is no room here. The only thing I may say here is that, for certain Moroccan evidence, this attempt is at variance with information of which the author was not aware, and is not at all convincing.

It seems very likely that the up-to-date new methods of dating by isotopic analysis will allow a better interpretation of the facts in the near future. This is the case with the Th^{230}/U^{234} dates of fossil marine shells, published by Stearns and Thurber in 1965, from Mediterranean and Moroccan beaches, which, in Davies's terminology, gave the following results: "Beach III" = more than 300,000 B.P.; "Beach IV" = from 140,000 to 115,000 B.P.; "Beach V" = 90,000 to 70,000 B.P. Thus these dates provide the complete answers to some questions discussed by Davies in the conclusion of his chapter, and invalidate most of his hypothetical correlations with the North African sequence.

Chapter 4 is devoted to "West African river-terraces". It begins with a review of general ideas on river terraces in the periglacial and glacial regions of the northern temperate zone.

A similar cycle may be observed under the milder conditions of tropical pluvials, but rock-bars seem to have played an important role by dividing rivers into sections. Near the mouth, incision and aggradation are direct consequences of fluctuations in sea level, but far in the interior terrace sequences become telescoped. The author says that in the arid climate of the Sahara there would seldom be vegetation to resist erosion, which could take place after every storm and not merely at the beginning of a pluvial. He cites the example of the Saoura valley, but here again his interpretation of the various data is at variance with the exhaustive work of Chavaillon (1964).

In Ghana, on the other hand, the mat of vegetation inhibits erosion, so incision can take place only at the end of an interpluvial. The most complete series of terraces is on the middle and lower Birim, which has been explored by the diamond companies. This series, with its associated tools, is described in detail.

No suitable information is available on river-terraces in Guinée, and very little from the Ivory Coast. In the Volta basin it is extremely difficult to distinguish the Middle from the High Terrace; nevertheless a number of implementiferous sites are described.

The Niger in Nigeria flows mainly over soft cretaceous deposits, on which terraces are poorly preserved.

It is not possible, says the author, to make more than a superficial comparison of the river-terraces of Guinea with those of other parts of Africa. East Africa must, for the present, be omitted because of its tectonic instability. The Nile in Egypt is in part eustatically controlled. In the southern sub-continent, areas exposed to blanketing by the extended Kalahari can offer no comparison, because all older terraces have been smothered. In the Katanga several terraces are reported, but in the Lower Congo, Mortelmans has usually been unable to distinguish more than one terrace. Above the Victoria Falls, a series of terraces has been described on the Upper Zambezi, but the falls area is complicated by a deep incision.

The author offers tentative correlations which, being based on cultures, remain very hazardous, and, in conclusion, taking radiocarbon dates into account, he suggests a lack of correspondence between the two hemispheres in the post-Gamblian interpluvial, which was not only less severe south of the Equator, but also shorter than around the Sahara.

Chapter 5 is very short and deals with "Soil-profiles and laterisation". It is only a compilation of the researches of pedologists in West Africa and presents no revolutionary data. According to this analysis it appears that each soil-cycle starts with a stone-line which marks an arid period when all loose overlying soil was apparently eroded. Only soils which had been consolidated resisted erosion.

Hardly any soils in West Africa are older than the pre-Gamblian interpluvial and many are younger.

There are three interpluvials which may have created stone-lines: (a) the pre-Gamblian, (b) the post-Gamblian (Post-pluvial I) and (c) Post-pluvial III. According to the author the pre-Gamblian interpluvial seems to have been so severe that it swept the continent bare; thus its remains in West Africa are confined to fluviatile and marine gravels. Later soils, says the author, can only be dated by prehistoric industries, but since, for this dating, he employs a so-called "Guinea Aterian" (which, there is now no doubt, has nothing in common with North African Aterian) placed in the post-Gamblian, one may remain sceptical.

Problems of laterisation are so complex that they must be left to the pedologists. It seems that ferruginous concretions can be formed only under moderately high rainfall with sharp seasonal contrasts. Most West African lateritic crusts are not older than the late quaternary.

Chapter 6, entitled "Tentative scheme of absolute chronology" is in fact a summary of the main conclusions of the first five chapters. Davies principally uses such radiocarbon dates as were known in 1960. Unfortunately this method of dating is still not widespread in Africa and it was only in 1966 that Van Zinderen Baker published his "Palaeo-ecology of Africa" which gives an up-to-date review of all the presently known dates.

It is a pity that the results enumerated by Davies are not presented in the form of a synthetic table which would give an easy overall view of the various stratigraphical sequences and their proposed correlations.

As I have said at the beginning of this review, the last three chapters are devoted specifically to prehistory. First I shall put forward some general comments.

It is to be regretted that the descriptions of sites and assemblages, especially for the lowest stages of the

Palaeolithic, do not give more information both about the conditions of discovery and about the stratigraphical details of the various sites. For the most part there is a lack of good section drawings to illustrate and complete the text. It is, however, true that the author makes use of surface collections gathered by non-specialists.

Above all, the prehistorian finds considerable difficulty when faced with the illustrations of artifacts, which are very dissimilar both in the quality of the drawing and in their lay-out. There is unity neither in the scale nor in the orientation of implements. For example, the hand-axes are presented with their point sometimes upward, sometimes downward; the shadow is sometimes to the left, sometimes to the right.

Despite these imperfections in presentation, chapters 7 to 9 are of the greatest interest, synthesising archaeological documents, often unpublished or out of print, and providing the reader with a summary of archaeological discoveries in West Africa and particularly in Ghana, up until 1960.

Chapter 7, in 67 pages, covers what is known about "Palaeolithic industries". In the first part, the author deals with pebble-tools and the pre-Chellean from a general point of view. Then he cites some occurrences of pebble-tools in West Africa, especially in the High Terrace of rivers. He compares these with certain North African and Saharan discoveries, though here his opinions may occasionally appear surprising. Such is the case, for example, with the Algerian industry of Aïn Hanech. As for Moroccan pre-Acheulian industries, he thinks that "there are probably true pre-Chellean pebble-tools, though the methods of attribution used in that country are unsatisfactory, for too many of the Moroccan pebble-tools are unrolled (sic), and are either unconvincing as artefacts, or have not been illustrated", etc. A fuller description was required and I hope that my two much expanded memoirs of 1961, which answer his concern, have now swept away his doubts.

Passing to "Early Chellco-Acheulian", he notes that Chellean sites are extremely rare in West Africa compared to other parts of the continent. In Ghana such industries are found rolled in the sediments of the Middle Terrace, and belong, according to the author, to the end of the Inter-Kamasian Interpluvial I-II, and also in the Low Terrace where they are derived from more ancient beds.

Davies deduces the age of the Middle Acheulian from the fact that the Late Acheulian is found in the Middle Terrace, which belongs to the Inter-Kamasian I-II interpluvial; so the Acheulian proper must cover the Kamasian II pluvial and part of the pre-Gamblian interpluvial. Then follows the enumeration of a number of finds in the desert and savannah which indicate that the Acheulian of the south is later than that of the north.

Moreover, the discoveries of Late Acheulian in Togo and eastern Ghana, especially along the Atacora Mountains, are constantly associated with Early Sangoan, and it seems to me very difficult to separate them simply on the basis of the presence or absence of the cleaver.

The most characteristic tool of the Sangoan culture is the heavy pick, bifacial or less commonly unifacial, made preferably on a large pebble. It appears at the end of the Kanjeran pluvial. The author discusses its ecological significance and the Congo variety formerly called Kalinian; he thinks that it is a mistake to treat the two cultures as one. Some other varieties exist in South Africa. In Ghana, the Sangoan must belong to the pre-Gamblian dry period, since Early Sangoan occurs in the regression between Beaches IV and V, but large sites have not been excavated to provide statistics.

Comparing it with "The Sangoid cultures of North-West Africa", Davies discusses the Acheulian trihedral tools of Atlantic Morocco which are likened to the Sangoan picks. I have already said that this is a serious error of interpretation. The industry from the "Carrière Martin" which is in question belongs to his "Beach III", not to "Beach IV"; it is contemporary with Holstein, not with Dem. This confusion drives him to wrong conclusions. As for his interpretation of the Portuguese "Languedocian", called "an impoverished Sangoan culture", this is an unsupported hypothesis and it is doubtful whether many prehistorians would agree with it.

In the Congo the Kalinian and Lupemban cultures form a continuous series before and through the Gamblian pluvial. In Ghana they are probably contemporary with the peak of the Gamblian pluvial, and in North Angola the Upper Lupemban is dated to 14,503 ± 560 B.P.

For Senegal, Davies gives his own opinion on the industries of Cap Manuel at Dakar. I think that the recent study by Hugot (1965) has definitively solved the problem raised by the author.

A new culture, the so-called "Guinea Aterian", seems to appear before the peak of the early holocene arid period (Post-pluvial I). There occur some tanged tools which lead Davies to think that it is a question of a kind of impoverished North African Aterian. Recent typological studies by Tixier (1959) have greatly increased our knowledge of the characteristics of the Maughrebian Aterian, and it is now clear, without a doubt, that the so-called "Guinea Aterian" has nothing in common with it. Furthermore Hugot has recently established the southernmost frontiers of this North African culture along an ancient shore of Lake Chad (1963) and in Mauritania (1965).

The term "Middle Stone Age", which covered a number of varied industries south of the Sahara, has now been completely discarded by the majority of prehistorians working in Africa, following the 5th Panafrican Congress at Tenerife in 1963.

In 1960 Davies still uses it extensively to denote a number of typically impoverished flake industries, which he says are stratigraphically pre-Mesolithic but older than Post-pluvial III.

This chapter on the Palaeolithic ends with a very interesting appendix on "the Asokrochona railway-cutting" - the most valuable section-drawing in the chapter - where Late Acheulian, Sangoan and "M.S.A." implements have been found stratified in sequence.

Chapter 8, which is 34 pages long, deals with a complex of microlithic industries called "The Mesolithic", dated to Post-pluvial III. In contrast to the preceding chapter, which is illustrated with only one map (showing the distribution of the Kalinian-Lupemban in Ghana), the author gives two maps for the "Mesolithic". The first covers the whole of West Africa, the second, which is more detailed, is devoted to Ghana and Togo. Numerous sites are described with their stratigraphical contexts. One of them, at Manprobi, on the Atlantic coast near Accra, has yielded fossil wood dated by C^{14} analysis to 5570 $\pm$ 70 B.P., but the more or less associated tools seem to be very atypical.

Various assemblages of pre-neolithic artifacts were found in the northern savannah, but these are difficult to date. According to Davies the type-site of this industry is Tiemassas, in Senegal. He suggests that this culture dates from Post-pluvial III, or perhaps a little earlier (? 1500 - 1200 B.C.)

The "Mesolithic" in the south differs from the final Middle Stone Age in the regular use of small quartz pebbles. Though there are many geometric microliths, the true micro-burin technique for breaking blades, while known in North and East Africa, may have been unknown in West Africa.

Certain sites yielded important assemblages of tools - for example, in Ghana, an open site beside the Okudaw stream near Adwuku, 48 km. north-east of Accra. Material from several sites is illustrated, but as I have already mentioned, the quality of the drawings is not completely satisfactory.

In conclusion, Davies discusses the origin of the "Mesolithic" and its relation to the "Neolithic". He has the impression that the "Mesolithic" arrived as a pure microlithic culture, without neolithic elements, and, especially in Southern Ghana, fused with remnants of the degenerate Middle Stone Age, which had already picked up a few mesolithic ideas. The Guinea mesolithic is sharply distinguished from the Saharan and cannot have come from north of about Lat. 14°.

Neither stratigraphically nor typologically is it easy to distinguish between mesolithic and neolithic microliths. Sites with neolithic elements - pottery, celts, hoes, pounders and perforated quartz pebbles - are classed as neolithic; other sites, like Adwuku, yielded nothing but microliths.

On the stratigraphical side, the pure neolithic might be expected to occur at the unconformity marking Post-pluvial III, and neolithic elements should lie in the soil above this unconformity. But at many sites, perhaps because of erosion, an accidental mixture of the two cultures occurs.

To the "Neolithic" is devoted the longest chapter of the memoir (chapter 9 - 74 pages). This chapter alone would call for the extensive comments of a specialist. The reader will find much general information and further detailed descriptions of prehistoric assemblages which are impossible to enumerate here. I shall confine my comments to some of the principal subjects which are discussed in this chapter.

First, the very definition of "The Neolithic": the stage when man began to acquire mastery over his environment thanks to agriculture and the domestication of animals; when habitations became fixed, and, in Europe and Asia, cereal grains and glumes are occasionally found charred on ancient sites.

In tropical Africa the criteria applied in the Old World require some modifications; the most important criterion is agriculture, indicated by specialised tools.

The author then discusses the difficult problem of polished axes or celts. These continue into the iron age and are still used today as fetishes, so that their presence is a poor criterion.

The perforated pebbles are extremely common, but are also a poor indicator. The weighted digging-stick seems unknown as an agricultural tool in West Africa. In the Congo, perforated weights or kwes are common. It seems that such weighted sticks could be used not only for digging but also as knobkerries, or for throwing.

The introduction of pottery is next studied. It is not necessarily indicative of a changed economy and is not a sure criterion. One sees the difficulty of a definition of "The Neolithic" in Africa; so amongst the proposals of a symposium recently held to prepare recommendations for the next Panafrican Congress on Prehistory, it was suggested that the term "Neolithic" be discontinued in Africa south of the Sahara. Davies, in 1960, was well aware of these difficulties, and discusses the problem first in North Africa and the Sahara, then in West Africa, with special reference to pottery with square-toothed impressions.

Some lines are devoted to rock-art which did not penetrate early to the wooded savannah and the Guinea forest.

More important are the following pages, which describe the Neolithic assemblages of West Africa. The first is the "Forest Hoe-culture" (formerly Tumbian) which was defined by Menghin and named from the site of Tumba in the Lower Congo. The name "Tumbian" was abolished in 1947. Several assemblages are illustrated and discussed. In concluding this study, which cannot be summarised in a few words, Davies opposes the interpretation of the stone hoes as unfinished celts which have not yet been polished. He claims that they are true agricultural implements. The "limande-hoe" is apparently peculiar to Ghana. The finest are not unlike Late Acheulian limandes, but they are much more recent, though they are infrequently associated with pottery or celts.

The "Black Volta Culture" shows a peculiar facies. All the collections have been made on the surface and at no site is the material sealed. Some concentrations suggest habitations.

The author is inclined to classify all pottery-bearing sites of this region as Iron Age.

Another special facies in northern West Africa is the so-called "Neolithic of Capsian tradition". Current studies by Hugot will certainly revise this whole matter.

Lastly, a curious culture called the Kintampo Culture is practically confined to the lower valley of the Black Volta and its tributaries, and to the Accra plains, though its most characteristic artifacts, the scored cigar-shaped terracottas, were widely transported in late times, probably as magical objects. It seems that grooved stones are sometimes associated with "cigars" and Davies thinks that these could have been used for smoothing arrow-shafts or bow-staves rather than for grinding celts.

The last part of the chapter deals rapidly with the transition to the Iron Age, which is not easy to discern. Davies proposes for this cultural revolution a date about the beginning of the Christian era.

This ends the memoir, which contains such a wealth of material that this brief review can give only a rough idea of it. We must be very grateful to Professor Davies for such an important contribution to our knowledge of West African prehistory and especially that of Ghana. The slight imperfections in the illustrations, which I have already noted in passing, are redeemed by the quality of the edition, which makes reading very pleasant.

The lack of recent documentation is essentially due to the long delay in printing and cannot be laid to the author's charge. The terminology is today out of date, but this only goes to show that if the next Panafrican Congress on Prehistory accepts the recommendations of the "Symposium 29" of the Wenner-Gren Foundation for Anthropological Research which occurred in 1965, the adoption of a unified terminology for the whole of African prehistory and the accelerated publication of the "Fiches Typologiques Africaines" will contribute greatly towards a better understanding of prehistoric studies. Then, obviously, Professor Davies must give us an up-to-date revised edition of his magnificent work.

Bibliography of the Post-1960 Publications cited in my comments.

BIBERSON, P. Le cadre paléogéographique de la préhistoire du Maroc atlantique. Publ. du Serv. des Antiqu. du Maroc, mémoire no. 16, EDITA, Rabat, 1961.

id. Le Paléolithique inférieur du Maroc atlantique. Publ. du Serv. des Antiqu. du Maroc, mémoire no. 17, EDITA, Rabat, 1961.

CHAVAILLON, J. Les formations quaternaires du Sahara nord-occidental. Publ. du C.N.R.S., série Géologie, no. 5, Paris, 1964.

FAURE, H. Reconnaissance géologique des formations sédimentaires post-paléozoïques du Niger oriental. Thèse, 1962, Publ. du Serv. Géol. du Niger, B.R.G.M., Paris, 1966.

HUGOT, H. Limites méridionales de l'Atérien. Actes du Vo. Congrès Panafr. de Préhist., t. II, pp. 95-108, Tenerife, 1963 (1966).

id. Présence d'un faciès archaïque du Paléolithique inférieur à Dakar. Bull. de l'IFAN, t. XXVIII, série A, no. 1, pp. 415-416, 1966.

id. Le Paléolithique terminal dans l'Afrique de l'Ouest. in "Background to Evolution in Africa", Chicago University Press, Chicago, 1967.

LECOINTRE, G. Les relations du Quaternaire marin de la Mauritanie avec celui des régions avoisinantes. Bull. du B.R.G.M., no. 2, pp. 91-109, Paris, 1964.

MICHEL, P. L'évolution géomorphologique des bassins du Sénégal et de la Haute-Gambie. Ses rapports avec la prospection minière. Revue de géomorph. dyn., X, no. 5-12, pp. 117-143, Paris, 1959 (1961).

id. Le Quaternaire dans les bassins des fleuves Sénégal et Gambie. Bull. de l'IFAN, t. XXVIII, série A, no. 1, pp. 416-420, Dakar, 1966.

MICHEL, P., ELOUARD, P. et FAURE, H. Nouvelles recherches sur le Quaternaire récent de la région de Saint-Louis (Sénégal). Rapport no. 17, Labor. de géol. de la Fac. des Sc. de Dakar, mars 1967.

STEARNS, C. E. and THURBER, D. L. Th^{230}/U^{234} dates of the Late Pleistocene marine fossils from Mediterranean and Moroccan littorals. Quaternaria, t. VII, pp. 29-42, Roma, 1965.

TIXIER, J. Les pièces pédonculées de l'Atérien. Libya, t. VI-VII, pp. 127-158, Alger, 1960 (1960).

VAN CAMPO, M., AYMONIN, G., GUINET, Ph. et ROGNON, P. Contribution à l'étude du peuplement végétal quaternaire des montagnes sahariennes: l'Atakor. Pollen & Spores, vol. VI, no. 1, pp. 169-194, Paris, 1964.

VAN CAMPO, M., COHEN, J., GUINET, Ph. et ROGNON, P. Contribution à l'étude du peuplement végétal quaternaire des montagnes sahariennes: II. - Flore contemporaine d'un gisement de Mammifères tropicaux dans l'Akator. Pollen & Spores, vol. VIII, no. 2, pp. 361-371, Paris, 1965.

VAN ZINDEREN BAKKER, E. M. Palaeoecology of Africa - 1950-1963 - I. A.A. BALKEMA, Cape Town/Amsterdam/1966.

Symposia of the Wenner-Gren Foundation for Anthropological Research:

a) Symposium no. 3, 1960. Early Man and Pleistocene stratigraphy in the Circum-Mediterranean Regions. Quaternaria, t. VI, Roma, 1962.

b) Symposium no. 15, 1961. African Ecology and Human Evolution. Viking Fund Publications in Anthropology, no. 36, Aldine Publishing Co., Chicago, 1963.

c) Symposium no. 29, 1965. Systematic investigation of the African Later Tertiary and Quaternary. Published under the title: Background to Evolution in Africa. Chicago University Press, Chicago, 1967.

REVIEW - by Desmond Clark

West Africa has been the poor relation compared with other parts of the continent where it comes to a comprehensive synthesis of the prehistoric archaeology. In the past this has been due to the paucity of systematically excavated stratified sites. The absence of significant faunal assemblages dating to the earlier Pleistocene has also been a contributory cause since, without such assemblages or a stratified pollen sequence in lieu, a relative chronology is difficult to establish. West Africa has no deep exposures of lake sediments such as exist in the East African Rift Valley and no bone breccias like those that have yielded the earliest evidence of man in southern Africa. Mostly, therefore, for the earlier periods, the sequence has had to be constructed using the results obtained from a study of the morphological history of marine strandlines and river terraces, while for the later prehistoric periods the stratigraphic relationship of lithic aggregates (the later ones with pottery) within rockshelters or on open sites, provides the evidence. In addition, there exist a few - though, fortunately, a rapidly increasing number - radiocarbon dates that serve as pegs on which to construct a more exact chronological framework for prehistoric times in this more humid, tropical, and most heavily populated part of the African continent which the author of this volume under review calls the "Coastlands of Guinea". For him this area embraces the whole of western Africa from Senegal to the Congo and from the Guinea coast to the borders of the Sahara and so includes several very different ecological regions.

This is the first time that anyone has attempted the formidable task of a detailed survey of the archaeological sites and collections of West Africa, collating the evidence from all the countries included within the scope of the present volume. Working for the most part single handed and covering considerable distances, the author has visited a large number of the sites he refers to and has examined all the important collections; only thus, by his personal survey and study, has this synthesis been made possible.

The core of the research lies in Dr. Davies' work in Ghana where, before his retirement, he recorded some 5000 sites and excavated a small but selected number of these. Against the knowledge gained from this survey and others in the Congo Basin, the lithic industries of prehistoric West Africa are reviewed. The lithic material is described in the context of the geological and other evidence by which it is dated and in relation to the

less satisfactory climatic interpretation of Quaternary sediments and erosion phases.

Ghana has produced the only good series of raised marine platforms and beaches; five such are recorded and are correlated with the Mediterranean and Atlantic sequence. Stone tools have been found in association with all of them except the highest and these range from "late Chellean" to late "Middle Stone Age". Perhaps the most informative site is the Asokrochona railway cutting where fresh Sangoan and abraded Acheulian artifacts are found associated with Beach IV; sections and a range of artifacts are illustrated. The river terrace sequence is best seen in the Birim valley, where good sections exist from diamond mining. Three main terrace formations have been traced at ± 35m., ± 22m. and ± 10m. Artifacts of Acheulian and Sangoan type are associated with the middle and lower terraces in many of the valleys investigated. The Sangoan and "Middle Stone Age" are also found in relation to two stonelines well seen in a number of soil profiles studied.

The first six chapters of the book set out the geological evidence on which the chronology of the West African industries is based. The succeeding three chapters comprise the greater part of the volume and deal respectively with the Palaeolithic, the "Mesolithic" and "Neolithic" industries. "Pebble tool" and early "Chelles-Acheul" aggregates are described respectively from the high and middle river terraces. The increasing scarcity of Acheulian sites as one proceeds south from the Sahara is commented on and the author believes the Acheulian in southern Guinea to be later than that in the savanna to the north. The late Acheulian can rarely be separated stratigraphically from the Sangoan, a situation that is duplicated in many localities in southern Africa and, of course, on a typological basis alone, there is not always good justification for separating them. Two sites from the northern savanna are described as Kalinian and ten or so that extend down into the rainforest are typologically differentiated as Lupemban on the basis of bifacial, lanceolate point forms. The Lupemban is succeeded by a rather nondescript industry of general "Middle Stone Age" affinities. That in the northern part of Ghana is considered to represent a degenerate Aterian though, to this reviewer, there is nothing illustrated that readily leads one to this conclusion.

It can be stratigraphically demonstrated (e.g. Manprobi Cliff, Accra) that these aggregates are followed through an "Ultimate Middle Stone Age" by microlithic industries of "Meso-neolithic" affinities and one of the rare C14 dates

(from the ± 2m. beach at Takoradi) enables the author to date the appearance of a full "Mesolithic" in southern Ghana to within two to three centuries of 1000 B.C. Since neither stratigraphically nor typologically was it easy to distinguish "mesolithic" from "neolithic" industries, those sites with pottery, ground stone, perforated quartz pebbles, hoes etc. are described as "neolithic" and those without such elements as "Mesolithic". Already a few sites exist (e.g. Kourounkoro-kale, Rop I, Iwo Ileru) where the two phases are stratified and, the author states, "we have enough non-neolithic assemblages to show that the neolithic was a number of techniques fertilising an already established culture".

For the "Neolithic" several variants or facies are isolated - the Kintampo culture in the woodland savanna and "Forest Hoe Cultures" (the "Guinea Neolithic" of French authors) being the two most distinctive. Probably the most important of the later sites in Ghana is N'tereso which the author excavated and has dealt with more fully in later works. This demonstrates how stone and bone tools in a basically "neolithic" Kintampo aggregate were gradually replaced by iron implements as early, it would appear from recent radiocarbon dating, as the 2nd millennium B.C. A similar process can be seen in Chad and northeastern Nigeria though here the dates point to the first half of the first millennium B.C. for this technical transition.

One of the main features exhibited by the Pleistocene West African lithic industries in the savanna and forest zones is their general unfinished and "rough" nature. There is a parallel here with the Congo Basin, so far as the earlier part of the sequence is concerned. The earlier Acheulian (formerly "Chelles-Acheul"), the later Acheulian and the Sangoan all exhibit a preponderance of "Heavy Duty Tools" and refined handaxe and cleaver forms are conspicuous by their scarcity or absence from these high rainfall, more heavily vegetation-covered regions. There is, however, little in West Africa to compare with the fine stone work and specialised equipment found with the Lupemban in the Congo. In part this may be due to the superiority of grès polymorphe over quartz and quartzite as raw material but possibly the reason may lie also in the different ecological conditions that pertained in the later part of the Pleistocene in the two regions. The climatic effects of the more northerly shift of the Benguella current, the lowered temperatures and the rapidly drained Kalahari soils of the Congo all combined to produce the specialised tool-kit of the Lupemban hunters. The "Heavy Duty Tools" of the West African aggregates might be interpreted as indicating

a greater reliance on hunting and gathering equipment made from perishable materials no longer preserved in a "forest" environment. The first effective movement of human population into the West African forest zones appears to have taken place at about the same time as it did in the Congo - at the end of the Acheulian - while systematic exploitation of and human settlement in the forest zones was not stepped up until "meso-neolithic" times.

It is easy to criticise a work of this kind. On the whole the illustrations are satisfactory though some, especially for the later material, are inadequate. Nowhere does the author really summarise the data, often considerable, that he presents in each of the main chapters. There is a dearth of stratigraphic sections. Site lists by industries would facilitate reference and only for some industries are provenance maps provided. Detailed analyses of artifact aggregates are not included so that comparisons between aggregates are not usually possible. The use of surface collections to define aggregates presents many difficulties not yet overcome. On the other hand, map references are given in the margins for all sites referred to in the text and there are some excellent industrial distribution maps. Very full notes are provided for each chapter and there is a good bibliography at the end of the book. The author is to be congratulated on having produced a pioneer corpus of information that will be a most valuable source of reference for the future and it is likely that there will be few today with the energy or opportunity to emulate such a comprehensive survey. The more extensive excavation of selected sites and the detailed analysis of their contents is for those who follow to take up and for them Dr. Davies' volume will be an indispensable source of information.

REVIEW - by Horst Folster

The archaeologist in the tropics who has to describe and classify (for the purpose of correlation) the soils, soil layers or horizons embedding his finds is certainly not to be envied. Pedologists are well acquainted with the effect that - because of the multitude of phenomena to be recorded - communication of pedomorphological phenomena is more or less strongly coloured by the concepts of soil formation of both the recorder and the recipient. Communication succeeds if the concepts concur and fails if they differ. As no generally acceptable concept of pedogenesis exists - even for the

limited area of West Africa - discord is likely to persist at least for some time. Under such conditions, any archaeologist would be tempted to use his own terminology and develop his own concept of soil formation, as Davies has done in 'The Quaternary in the Coastlands of Guinea'. As this is so far the most comprehensive attempt to correlate archaeological horizons and pedological (and geomorphological) phenomena in West Africa, I would like to make some critical remarks and stress some basic principles that have to be observed in analysing and evaluating pedological phenomena. This criticism is called for in order to put the growing interdisciplinary communication between archaeology and soil science on a sound footing.

My remarks are confined to archaeological horizons within slope or pediment deposits (Stone line, slope gravel and hillwash) covering the in-situ-soil (weathering rock). Though their local occurrence was mentioned rather early, their widespread, in fact, almost omnipresent existence is being fully acknowledged only in recent years. They have to be regarded as more or less well sorted parts of the present layers or a former soil cover transported on the slope during erosional phases:

Stone line (st.l.de type éluvionaire)	- not or hardly transported coarse material in a thin layer characterizing the basal plane of erosion (new erosion surface) 1,4, onto which may be deposited the detrital parts (quartz,
slope gravel (stone line de type alluv. et colluvionaire)	- pisolites, rock) of medium size derived from the former soil cover, ill-sorted (i.e. containing various amounts of fine material) during the transport downslope 3,4.
hillwash	- a deposit of fine material (<2mm) covering the former deposits with varying thickness.

Stone line and slope gravel are directly linked with one and the same erosion process. The present pattern of vertical and horizontal distribution of these deposits is sufficiently repetitive to justify correlation with erosional and climatic cycles, 1,5.

This connection is recognized by Davies only for the stone line, which he - correctly, I think - considers to mark the onset of a new soil-cycle during an arid phase, though without any but a vague notion as to the mechanism of its formation. That is probably why he does not hesitate to place the deposition of the overlying gravel (identified only in the

forest region of Ghana, p. 75) into the following pluvial, although deposition on the slope implies erosion upslope, disturbance of the older stone line and formation of a new one on parts of the slope, i.e. a new erosion phase, but this time in a wet period. The same wet period is, on the other hand, considered to be a time of laterite formation, and this certainly implies a rather stable soil cover.

Davies recognizes two stone lines (upper and lower) of stratigraphic significance (pre- and post-Gamblian). More than two have locally been identified in S.W. Nigeria, and Davies himself mentions subsidiary stonelines. Two stonelines may indeed belong to the same erosion phase, and evidence of soil formation within the enclosed deposit that was terminated by the deposition of the upper stoneline is needed in order to assign them to different cycles.

Because of their climatic implications, the establishment of the functional types of deposit must be regarded as essential information, while their morphology rates second, as it varies considerably with the kind and origin of the material and the type of post-sedimentary soil formation processes. Davies's terms Nodular Laterite, Block Laterite, Biscuity Laterite, rubble, quartz gravel and soil (a most unfortunate use of this word to describe loose, fine-grained material - probably in most cases hillwash) are, however, morphological terms and as such do not convey any stratigraphic significance. Even if one follows Davies's concept of soil formation, which regards pedogenetic phenomena like ferruginous cementation, pisolite formation, mottling, etc. as post-depositional, the different forms of laterite would only signify later events and not those synchronous with the deposition of archaeological finds. There are, however, two more important objections to be made against both the type of morphological characterization and the concept:

1) Pedogenetic phenomena can be pre- as well as post-sedimentary. Pisolites are in fact generally predepositional. They form in the uppermost horizon of the in-situ-soil (weathered rock). In the gravel, they are relicts of a former soil cover. The same applies to isolated boulders of ferruginous crust [1,3,5], while continuous cementation, mottling, or the formation of manganiferous concretions occurs postsedimentary. When Davies uses the term Nodular Laterite - for a deposit above the stone line - it may stand for a gravel with derived pisolites or a hillwash, in which manganese concretions formed postsedimentary at the capillary fringe of a high groundwater table. If such a layer is described as

being covered by fine material (hillwash), it remains inconclusive whether there is any discontinuity between the two materials or not. Similarly can Block or Biscuity Laterite conceal either a gravel or a hillwash altered after deposition. Considering the fact that we already differentiate between both gravel and hillwash deposits of various ages, we thus lose a quite important information.

2) The constellation of soil forming factors varies within the soil cover, and so do the pedogenetic phenomena. The same hillwash deposit may contain a band of manganese concretions on ill drained sites, while it is free of them elsewhere. A gravel deposit - loose and well drained upslope - may be cemented into a 1 m. thick hard, massive ferruginous crust near the valley. Soil forming processes have to be considered in their horizontal context, and this holds equally true for attempts at climatic interpretation of pedogenetic phenomena. Climatic correlation should only be made when the full sequence of geomorphological and pedogenetic events is known.

It is regrettable that incautious explanation of insufficiently described soil phenomena renders much of Davies's pedological material uninformative, and I would venture to say that a similar criticism could be brought forth by the geomorphologist, e.g. in regard to the treatment of river terraces. Some of the criteria used - like breaks of slope or pebbles found in slope gravel - are certainly not just 'less reliable', but unreliable. In his geographical account of terrace sites, it is hardly ever mentioned whether reliable or unreliable criteria were used to identify a terrace, and whether the term gravel stands for a pebble gravel or a slope gravel exposed at a rejuvenation point.

Finally, I would like to mention that slope deposits of different age, i.e. connected with different erosion cycles, have been found. In many localities [1,4] a younger gravel fills erosion channels cut into a cemented older gravel signifying two erosion periods that are separated by a period of soil formation (cementation). Where, however, only one gravel deposit exists, its morphology does not necessarily indicate to which erosion cycle it has to be credited (see points 1 and 2 above). This may only be revealed by an intensive study of the stratigraphy of deposits, not in one pit, but along the whole slope, and possibly adjoining slopes, too. Davies, of course, is less concerned with actual stratigraphy. Stratigraphic and chronological evidence for him rests mainly in the artifact content of a deposit. As this could provide very important and helpful information

for the geomorphologist and the pedologist, the question arises whether the knowledge of industries in West Africa, their relative and absolute chronology, the degree of their overlapping, and the certainty with which their respective artifacts can be identified, is sufficiently well established for this purpose. Many archaeologists appear to be less certain and seem to favour a more cautious approach than Davies.

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1. Folster, H. The distribution and stratification of slope deposits in Western Nigeria. West African Journ. Sci. (in print).

2. Ruhe, R. V. 1954. Erosion surfaces of Central African Interior High Plateaux. Publ. INEAC, ser. scient. No. 59.

3. Vincent, P. L. 1966: Les formations meubles superficielles au sud du Congo et au Gabon. Bull. du BRGM, No. 4, 53-109 (Bureau de Recherches Geol. et Min.)

4. Folster, H. 1964: Morphogenese der Sudsudanesischen Peneplane. Ann. of Geomorphology, 8,393-423.

5. Bruckner, W. 1957: Laterite and Bauxite profiles of West Africa as an index of rythmical climatic variations in the tropical belt. Eclogae Geol. Helv., 50, 239-256.

REPLY TO THE THREE REVIEWS

by

Oliver Davies

I would like to thank Professor Shaw for the trouble he has taken in arranging these reviews of my book, and the three reviewers for their courtesy and tolerance.

Mention was made of the usual exasperating delays of publication. To the period between the delivery of one's MS. and the date of publication must be added one or two years needed for writing a book, as it is difficult, once a section is on paper, to revise it drastically. Until printers are prepared to use methods employed in daily newspapers, it will be impossible to prevent a scientific book being out of date when it is published. I am fully conscious that my second book also was out of date last September, when it saw the light, though in that case the delay had not been more than two years, and there was an opportunity of making small corrections not more than one year before the book appeared.

We suffered also in Ghana from the difficulty of obtaining other scholars' latest works, or often even of hearing of them. This applied especially to technical French reports, especially those roneoed. It appears that the scientists in Dakar are yearly becoming much more obliging in distributing their latest reports; but there is still room for great improvement in Paris.

I have no comments to make on Professor Clark's review.

Regarding Professor Biberson, I would point out one or two errors, probably due to misreading my text, and would make a few more general remarks:

1) Ancient shorelines in Togo and Dahomey are not necessarily masked by loose sand; but unconsolidated sands do not preserve shorelines well owing to gulleying and erosion. Furthermore, if there is no beach-rock or pebbles, there is nothing to mark the shoreline.

2) The Late Acheulian is never found rolled in the Middle river-terrace in Ghana.

3) The date 5570 ± 70 was obtained at Takoradi, not at Manprobi.

Regarding shorelines in southern Africa: The earliest pleistocene beach has recently been found by prospectors just north of Walvis Bay. It has been shewn a few years ago that the same beach (and not a pre-pleistocene beach) occurs at Luanda, and probably therefore at Lobito. The South African Major Emergence is really a Late Pleistocene beach, almost certainly later than the Holstein interglacial; so Krige's series is very incomplete.

As to river-terraces in Ghana, it has recently been possible on the Volta to distinguish the Middle and High Terraces and to identify an ultra-High Terrace. This gives good correlation with Vogt's work farther north. The terraces in Ghana can be correlated with those in South Africa beyond the sand-belt, but the erosional system is different; in Ghana the basal gravels are post-Gamblian, in South Africa one stage older.

It is usually impossible to distinguish the Late Acheulian and the Sangoan in Ghana; I think that the second wave very closely followed the first. At a few sites there are criteria for distinguishing other than the cleaver.

Grooved stones in the Kintampo-neolithic were probably used for smoothing arrow-shafts; but also, as appeared at Ntereso since 1960, for shaping shell beads and bone points. It must be remembered that all the dates for the neolithic and early iron age in Ghana must be pushed back, as a result of recently received radiocarbon-tests. In 1960 a short chronology was defensible; in 1967, it is clear that we must adopt in Ghana a long chronology.

Both Biberson and Clark have criticised the technique of my drawings. I would say in excuse that up to 1960 there was no drawing-office at Legon, and drawing had to be done on tables placed anywhere without regard to light. It is however unwise to make a fetish of technicalities and standardisation of drawings; sometimes special features of an artifact shew up better one way up than the other, or with some particular lighting; and the positions of some drawings were chosen with this in mind.

I have more to answer to Dr. Folster. It is true that I myself worked out nearly the whole of my pedological system. I got no help from soil-scientists, only a certain amount of argument with Brückner, who is not a pedologist. I have in several papers given reasons for disagreeing with nearly all his conclusions. I notice that according to Biberson, my

observations concord closely with those of professional pedologists.

Much of Folster's criticism depends on my failure to observe the difference between stone-lines and slope-gravels. I made hardly any observations on slope-gravels; in nearly all cases the surface was level or at so gentle a slope that material would hardly have moved on it. I did make observations in Togoland near the foot of a steep slope, where some material from the slope was undoubtedly incorporated in a nearly level stone-line. Secondly, I always use the terms "pebble" and "gravel" for water-rolled material, "boulder" and "rubble" for unrolled; I believe that geologists are often not particular in making this distinction. I therefore consider that a break of slope with "pebbles" at it or extending down from it is good evidence for rejuvenation from a pebble-covered valley-floor.

The soils or "weathered rock" which I observed were probably seldom hill-wash, more frequently degraded termite-deposits, especially in the wooded savannah. Folster does not take such types of "soil" into consideration.

I disagree in many points with Folster's remarks about lateritisation. It would take too long to argue all the points, and I have set out my views in other papers (some not yet published). I consider that lateritisation characterises not a wet period, but a displuvial at the end of one; and it is found in the wooded savannah but rarely in the forest. Soil-cementation does date the deposit of archaeological finds in the place where they were found. They would probably have been scattered in the uncemented soil above, which was eroded in a dry period. They are therefore earlier than the stone-line in which today they occur, but less than a whole climatic cycle earlier. They are later than the cemented soil, because they originally lay in the overlying uncemented soil. The cementation takes place at some depth. The artifacts do not exactly date a stone-line; but they give a rough approximation, which is of especial value if there is reason to think that there are gaps in the archaeological record due to man's emigration, perhaps in a wet period with spread of forest. I made some attempt to work out the relation of the find-spots of artifacts to stone-lines and phenomena of lateritisation in my report on excavations in Legon Botanic Gardens, which is due to be published later this year.

Résumé

The Quaternary in the Coastlands of Guinea:

Oliver Davies, Glasgow, Jackson, Son Co., 1964. 6. 6. 0

Critique
par Pierre Biberson

On ne peut pas oritiquer l'auteur de fait qu'il n'a pas utilisé les publications pertinentes postérieures à 1960, mais que la parution de son livre soit si retardée est à regretter.

On dispute l'exactitude le l'appelation 'eustatique' donnée aux variations dans les changements du niveau de la mer sur la côte effondrée du Sénégal.

On nie qu'il n'y a que peu de publications sur le Villafranchain marocain. L'intéprétation des croûtes calcaires comme indices de l'aridité donnée par Davies est contestable. La plupart des pédologues les prend comme indices d'une forte vaporisation (insolation élevée et pluviosité élevée). Les torchis rouges ne peuvent être pris invariablement comme indices des périodes pluvieuses puisque Davies ne suit pas Antoine en faisant une distinction entre les variétés autochthones et allochthones.

On dispute également l'opinion que le Sahara n'est abreuvé que du Sud. Comme l'a démontré Dubief, le problème est beaucoup plus compliqué.

La méthode d'assigner des dates basées sur un petit nombre d'outils connexes, dont peu sont des types caractérisques, ne fournit pas de preuves convaincantes. De toute façon, les dates assignées rendent nulle la plupart des corrélations hypothétiques de Davies.

On nie absolument aucun vestige de Sangoan au Maroc atlantique.

L'interprétation des phénomènes d'érosion au Sahara donnée par Davies est en contradiction avec l'oeuvre de Chavaillon et son 'Guinea Atérien' n'a rien à voir avec l'Atérien de l'Afrique du nord. Son utilisation pour dater les sols est, alors, suspecte. Davies a tort de comparer les outils Acheuléens trièdres de la Carrière Martin aux pioches Sangoan puisque l'industrie appartient à sa Plage III (Holstein) et non à la Plage IV (Eem).

Il est à regretter qu'il n'y a pas d'avantage d'information concernant la stratigraphie et les conditions dans lesquelles les découvertes ont été faites dans la description des gisements et assemblages préhistoriques. Il manque des dessins statigraphiques pour compléter le texte. Les dessins des produits ouvrés laissent beaucoup à désirer.

La terminologie est démodée mais il est à espérer que le Professeur Davies publiera une édition révisée et modernisée de son excellent ouvrage après l'adoption d'une terminologie unifiée pour toute la préhistoire de l'Afrique.

Critique

par J. Desmond Clark

Il est facile de critiquer un ouvrage pareil. Pour la plupart les illustrations sont de bonne qualité, bien que quelques uns, surtout vers la fin, sont bien inférieures. Nulle part, on ne trouve un sommaire des éléments, souvent nombreux, mentionés dans les chapitres les plus importants. Il manque des sections stratigraphiques. Des listes de gisements par industries auraient aidés à donner des repères. Seulement dans quelques cas des cartes de la répartition des industries sont données. Il n'y a pas d'analyses détaillées des agrégats des produits ouvrés, ce qui rend presqu'impossible des comparaisons entre agrégats. L'utilisation des relèvements à la surface pour trouver les agrègats n'est pas, d'habitude, possible; il reste à surmonter beaucoup de difficultés dans ce domaine. D'autre part les renvois cartographiques sont donnés en marge pour tous les gisements cités dans le texte et il y a de très bonnes cartes de la répartition industrielle. Les notes à la fin de chaque chapitre sont nourries et il y a une très bonne bibliographie à la fin du livre. Ou doit féliciter l'auteur d'avoir frayé le chemin avec cet ouvrage qui sera un précieuse source d'information dans l'avenir et il est peu probable qu'un autre aujourd'hui aurait les forces ou l'occasion d'émuler un exposé aussi étendu. Les fouilles plus poussées de quelques gisements selectionnés et les analyses détaillés de leur contenu est à la charge de ses successeurs et, pour aux, l'ouvrage de Dr. Davies sera une source indispendable d'information.

Critique

par Horst Folster

Les descriptions données par Davies des lignes de pierres semblent trop simplifier un problème beaucoup plus complexe et l'utilisation de l'appelation 'sol' pour indiquer une matière à graines fines qui est, en toute probablité "hill wash", semble malheureuse. On suggère également que l'utilisation par Davies des appelations Nodular, Block et 'Biscuity' + Latérite cache les ambiguités de leur origine pédogène. Les phénomenes de la formation du sol doivent être considérés dans leur contexte horizontal, et une corrélation climatique n'est à faire que quand toute la séquence d'occurences géomophologique et pédogènes est connu. Il y a des critères utilisés en traitant des terrasses des rivières qui sont inexactes. On peut douter qu'il y ait dans les méthodes de dater les outils en Afrique occidentale encore assex d'exactitude pour permettre la confiance dont fait preuve Davies pour dater les dépôts.

Réponse d'Oliver Davies

On admet facilement qu'à cause des retards dans la publication d'un livre scientifique, il est démodé avant sa parution, mais il y avait, au Ghana, des difficultés d'un ordre tout particulier, qui permettaient difficilement d'obtenir d'autres oeuvres scientifiques et même, d'en entendre parler! Ceci s'appliquait surtout aux ouvrages provenent de Dakar et même plus à ceux qui venaient de Paris.

En réponse au Professeur Biberson on peut affirmer 1) les lignes de rivage au Togo et au Dahomey ne sont pas nécessairement recouvertes de sable libre 2) le dernier (époque) Acheuléen ne se trouve jamais roulé dans la terrasse moyenne au Ghana. 3) La date 5570 fut obtenue à Takoradi et non à Manprobi.

Il a été récemment possible de distinguer les terrasses haute et mitoyenne sur la Volta et d'identifier une terrasse ultra-haute. D'habitude, il est impossible de distinguer entre le dernier Acheuléen et le Sangoen au Ghana. Toutes les dates pour l'ère néolithique et l'âge de fer au Ghana doivent être reculées par conséquent des résultats récents des tests radio-carbone.

Les dessins dont la technique est critiquée par Biberson et Clark, sont à pardonner parce qu'il n'y avait pas de salle de dessin à Legon:- mais, de toute façon, on considère mal avisé celui qui a le culte des détails techniques et de l'uniformation des dessins.

Pour répondre au Dr. Folster, il est vrai que moi-même, j'ai établi presque tout mon système pedologique. Je n'ai guère observé les graviers des pentes puisque dans tous les cas la surface était plate ou presque. Les sols ou 'roche désagrégée' que j'ai observés n'était que très peu probablement "hill wash" mais le plus souvent des dépôts altérés des termitières. Je ne suis pas de la même opinion que Folster sur la laterisation.

NOTE SUR UNE METHODE DE CLASSEMENT DES HACHES NEOLITHIQUES D'AFRIQUE DU NORD

par

Georges Souville

Les haches néolithiques sont généralement peu nombreuses au Maghreb; on n'en compte que quelques exemplaires dans la plupart des gisements ou en surface. Toutefois, elles sont beaucoup plus répandues au Maroc et, sur certains sites, on en a recueilli plusieurs centaines; ainsi 587 aux environs de la ville de Mazagan (côte atlantique du Maroc) et 807 dans plusieurs stations de l'oued Beth (entre Rabat et Meknès).

Devant l'abondance de ce matériel, j'ai tenté de mettre au point quelques principes de classification, qui peuvent être groupés dans le tableau ci-dessous;

On indiquera successivement:

- les numéros d'inventaire de l'objet;
- les dimensions: longueur (maximum), longueur du tranchant (prise à l'aro de cercle, s'il s'agit d'une hache à tranchant curviligne), épaisseur moyenne, épaisseur maximum, poids;

	DIMENSIONS					FORME					
No.	long.	long. tran	ép. moyen	ép. maxim	poids	trian-gul.	bou-din	rect. trap.	ép.	pl.	

- la forme générale : triangulaire, rectangulaire ou trapézoïdale, "en boudin" (c'est à dire grossièrement cylindrique, approximativement aussi épaisse que large); pour les premières catégories on distinguera les haches plates, des haches épaisses;

- caractéristiques du tranchant : il est formé par deux surfaces se recoupant, déterminant un biseau symétrique ou asymétrique, les erminettes constituant un group particulier. Le tranchant est lui-même rectiligne ou curviligne; il devient parfois épais, pouvant atteindre un centimètre d'épaisseur et même davantage; cet élargissement est sans doute intentionnel mais a pu être accentué par l'usage. Enfin quelques haches ont un tranchant débordant, dégagé par deux épaulements, rappelant la forme de certaines haches en métal.

- la technique sera indiquée ensuite; certaines haches nord-africaines sont obtenues par bouchardage (ou piquetage) complet, plus ou moins fin mais toujours continu et généralement régulier. D'autres haches sont entièrement polies mais le plus grand nombre est mixte: le corps même de la hache a été bouchardé, seule la partie voisine du tranchant a été polie.

Une dernière colonne (divers) permet de noter les observations de détail ainsi que la roche d'où a été extrait l'objet.

TRANCHANT							TECHNIQUE			DIVERS
symé-triq.	As.	er.	R.	C.	ép.	Mét-al	B.	B/P	P.	

Summary

A Method of Classifying North African Ground Stone Axes

by

Georges Souville

The following characteristics are successively noted: number of the specimen; maximum length, length of the cutting edge, average and maximum thickness, weight; general form (triangular, rectangular, trapezoidal - flat or thick - 'sausage-shaped'); cutting edge placed symmetrically or asymmetrically, straight or curved, thickened, expanded; pecked, partially or completely ground; type of stone.

WATER STORAGE PROPERTIES OF ADANSONIA DIGITATA (BAOBAB)

by

John Owen

Baobabs are widely distributed throughout Africa, having a predilection for the drier parts of the continent and stony sandy soils. One of the many interesting characteristics of these trees is their water storage properties. Contributors to Sudan Notes and Records in the nineteen-twenties described the importance of the Tebeldi (as it is known in Arabic) in Western Sudan where, on account of this useful property, it forms the basis of village life and often features in boundary disputes. Blunt (1923) gave a figure of 30,000 water-holding Tebeldi in Western Kordofan Province. This represents a total water storage capacity of 7½ million gallons i.e. one third of a gallon per day per head of the population. Trees are individually named and listed in the Merkaz registers. Many names are associated with water e.g. 'Um Asiha' (the flowing), 'Um Dhirafa' (the tearful). 'Um Laqai' refers to those trees which, by the configuration of their upper branches, are self-filling.

Opinion differs on the extent to which the trunk of the baobab is artificially hollowed out to provide space for water storage. There is a tendency for the older trees to become hollow and it is likely that this natural course of events is aided by human endeavour. Although a few trees are self-filling during the rains, in most cases, water, collected in a trench at the base of the trunk, is transferred manually to the hollow interior.

The water storage property of the baobab seems to be little known in West Africa, although the great Moslem traveller, Ibn Batuta, on his journey across the Sahara from Morocco to Nigeria in 1352, refers to this feature of the trees he saw growing in the Niger basin. It is only comparatively recently that deep wells and bore holes have eased the lot of the nomad in the drier parts of West Africa and I should be interested to learn from readers of the Newsletter whether or not the baobabs of Senegal, Ghana, Niger and Northern Nigeria have, in living memory, been put to a similar use as those in Western Sudan.*

Another feature of the tree, over which fierce arguments have raged in the past, is its reputed longevity. Estimates of

2 - 3,000 years have been made for the age of the larger trees (40'-60' circumference) but I only know of one reference to radio-carbon dating. This concerns a 45' circumference tree near Lake Kariba which was shown to have an age of 1010 ± 100 years (Swart).

Should further dating of trees establish ages greater than 1,000 years, the implications for archaeological research are clear. Europe has the yew and North America the sequoia - trees which, on account of their longevity, are of interest to archaeologists. One is tempted to believe that certain aspects of African history may be revealed by a closer study of the baobab.

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1. Blunt, H. S. "Tebeldis - a note". Sudan Notes and Records (1923), Vol. 6, 1, 114.

2. Swart, E. R. "Age of the Baobab Tree". Nature (1963), 198, 708.

* The author's present address is: Professor John Owen, M.D., D.P.H., Department of Social and Preventive Medicine, University of Saskatchewan, Saskatoon, Canada. Ed.

Résumé

Adansonia digitata (Calabassier du Sénégal) comme Reservoirs de l'Eau

par

John Owen

Le tronc creux de l'Adansonia Digitata (baobab, pain de singe, tebeldi) est un reservoir qui sert de puits pendant la sécheresse dans certaines parties d'Afrique, surtout dans le Soudan occidental.

L'auteur de cet article serait heureux d'apprendre si le baobab est ultilisé aux même fins en Afrique occidentale.

Une autre proprieté caracteristique de cet arbre est sa longévité et des renseignements dignes de foi au sujet de l'age d'arbres ayant 15 a 20 métres de circonference sont ici sollicités.

SITE IDENTIFICATION MARKS

by

Paul Ozanne

The marking of excavated objects should, according to Atkinson, contain 'first, a capital letter or letters to indicate the site'. This is standard practice; but recently David Calvocoressi's compilation of an index of excavations in Ghana, and their marking codes, focussed attention upon the disadvantages of the method.

It is more important in tropical Africa than in Europe that codes are easily interpreted with surety, because objects can go astray far more easily. Wooden or cardboard containers are damaged by insects, and none of us - I believe - have the resources to prevent this. We cannot meet the cost of insect-proof store-rooms, or insect-proof containers for all finds, or for regular inspection of the large quantities of material which are accumulating.

The danger of duplication of codes is of course high in the capital abbreviation system. If one tries to abbreviate in such a way that is very improbable that a duplicate marking will occur, the chances are that code letters will be of obscure meaning, and more difficult of interpretation than a 'natural' manner of abbreviation - first two letters of a monosyllable, initials of syllables in a longer word. Coding is of course necessary, because the inscribable area of so many finds is too small for explicit marking.

Atkinson wrote 'throughout with reference to work within the British Isles', a territory which lacks a perfect coding system which is available to us. In West Africa, one usually has to get a government permit to conduct any excavation. Even though Legon, for instance, has a general licence, it has been customary for specific permits to be requested, as a courtesy and for the record, except of course when the work is directly sponsored by the government, and reports and plans have to be regularly sent in, in any case.

I propose, therefore, to mark all finds from my excavations in future with the reference number of my permit to excavate. This system will be unique and easy in interpretation, except in two circumstances: first, that someone else in the same country uses a numerical system which

chances to coincide; second, when material is exchanged between countries, without being marked with its country of origin.

At present, this system will give a two-figure code in any West African country. Some will soon be in three figures, but the days of four are far ahead.

Résumé

Pour Indiquer les Sources des Trouvailles

par

Paul Ozanne

Pour indiquer précisement les sources des trouvailles, je vais marquer chacun de mes objets creusés avec le nombre du permis légal de l'excavation.

ARCHAEOLOGICAL SITES IN THE NORTHERN IVORY COAST

by

Jack Goody

I would like to draw the attention of archaeologists to a promising site mentioned by M. Delafosse in an article entitled 'Sur des traces probables de civilisation égyptienne et d'hommes de race blanche à la Cote d'Ivoire', L'Anthropologie, 11 (1900), 431-451, 543-568, 677-690.

This site is near the "Ouarébo" village of Guiangomênou (in Baule country), about thirty kilometers north of Toumadi in the Bokabo massif, on a hill known as Afré-Boka (the Hill of Beads) or Ouoryé Boka (the Hill of Ouoryé). It is from here that people dug up the glass beads they sold at 30 francs the piece, and which Delafosse called aggrey beads. The author also reproduces a photograph of a three legged bronze vessel with Moorish designs (Fig. 19, p. 683). He goes on to mention a similar burial ground in the hill of Sahué in the Tano basin on the border between the Ivory Coast and Ghana.

Résumé

Les Emplacements archéologique dans le Nord de la Côte d'Ivoire

par

Jack Goody

J'aimerais faire remarquer aux archéologues l'emplacement d'Afré-Boka (ou Ouoyé-Boka), quelques 30 km. au nord de Toumadi en Côte d'Ivoire que Delafosse a noté dans son article: 'Sur des traces probables de civilisation égyptienne et d'hommes de race blanche à la Côte d'Ivoire' dans Anthropologie 11, 1900. Il fait mention également d'un cimetière sur la colline de Sahué dans le bassin de Tano sur la frontière entre la Côte d'Ivoire et le Ghana.

PROGRESS REPORT ON THE INVENTARIA ARCHAEOLOGI[C]A AFRICANA

by

Jacques Nenquin

A short while ago, the creation of the Inventaria Archaeologica Africana cards was announced in a number of scientific periodicals. The decision to publish closed finds of pre- and protohistoric material from Africa followed a resolution of the Panafrican Congress on Prehistory and Quaternary Studies, held at Santa Cruz de Tenerife, in 1963. The series is sponsored by the Congress, and published by the Patrimoine du Musée royal de l'Afrique centrale, at Tervuren (Belgium).

During talks held at the last meeting of the Panafrican Congress (Dakar, November 1967), it became apparent that many delegates wished to be more regularly informed of the publication of new volumes of the Inventaria. It is intended therefore from now on to announce each new set in the periodical literature. The following sets are now available:

Congo (Léopoldville = Kinshasa):

CL 1 - CL 5 : Kisale ware from Sanga.

CL 6 - CL 9 : Mulongo ware from Sanga.

CL 10 - CL 11 : Red Slip ware from Sanga.

Author: J. Nenquin.

Price: 161,- Belgian francs.

Republic of South Africa:

SA 1 - SA 5 : Excavations at Gordon's Bay.

Author: F. Van Noten.

Price: 108,- Belgian francs.

Tanzania:

TA 1 : Ivuna.

Author: B. Fagan and J. Yellen.

Price: 99,- Belgian francs.

Zambia:

Z 1 : Isamu Pati.

Z 2 : Ingombe Ilede.

Z 3 : K·ngila.

Z 4 : [illegible]undu.

Author: B. Fagan.

Price: 35l,- Belgian francs.

All cards (separate sets or the complete series) may be obtained from the patrimoine du Musée royal de l'Afrique centrale, Tervuren (Belgium) at the specified price, payable either to the Banque de Bruxelles, account no. A 55/451 or the Banque de la Société Générale, Bruxelles, account no. 22.783. One shilling sterling works out at approx. 6,- Belgian francs.

The next set which is now being printed (February 1968) is by D. W. Phillipson, and will be

Zambia Z 5 : Kapwirimbwe.

Other sets now being prepared, are:

J. D. Clark: Kalambo Falls.

G. Connah: Daima.

H. J. Deacon: Howieson's Poort.

H. J. Deacon: Wilton site.

S. Miller: Nachikufu sites.

H. Sassoon: Engaruka.

R. Soper: Kwale.

Apart from these, several other sets have been promised: H. Hugot, C. Roubet and T. Shaw, on material from sites from North and West Africa.

If more information is desired, please write to the General Editor of the Inventaria: J. Nenquin, Seminarie voor Archaeologie, Blandijnberg 2, Rijksuniversiteit, Gent (Belgium).

Résumé

Rapport sur le travail en voie pour l'Inventaria Archaeologica Africana

par

Jacques Nenquin

Les ouvrages ci-dessous ont paru:

Kisale ware from Songa, Mulongo ware from Songa, Red Slip ware from Songa, de J. Nenquin. Excavations at Gordon's Bay, de F. van Noten; Ivuna, de B. Fagan et J. Yellen: Isamu Pati, Ingombe Ilede, Kangila, Kalundu, de B. Fagan. Tous peuvent être obtenus de la 'Patrimoine du Musée royal de l'Afrique centrale', Tervuren, Belgique. Il y a encore huit collections en préparation et d'autres sont promises.

A WEST AFRICAN ARCHAEOLOGICAL JOURNAL: The Necessity and the Possibilities.

by

Graham Connah

'A discovery', wrote Pitt Rivers, 'dates only from the time of the record of it, and not from the time of its being found in the soil'. If we were to apply this dictum to West African archaeology, much of the achievement of the last thirty years would be non-existent. A great deal of important information is still tied up in unpublished material. None of us are guiltless.

In the English-speaking parts of West Africa archaeology is barely three decades old. The earliest professional work was that of Thurstan Shaw in Ghana and of Bernard Fagg in Nigeria. It is noticeable, if one reviews their earlier work, that their publication outlets were the Proceedings of the Prehistoric Society and Man, both periodicals whose publication and circulation were much displaced from the West African scene but whose international acceptance guaranteed a wide dissemination of published information. The French-speaking areas were more fortunate perhaps. Their endeavours in the field began at an earlier date and for a very long time, in one form or another, archaeological material had a publication outlet through the productions of I.F.A.N. at Dakar. Most of the reflections in this paper will therefore refer to the English-speaking parts of West Africa. It is nevertheless the intention of those concerned with the launching of the West African Archaeological Journal that it should be completely bi-lingual in its publications - printing in each writer's own language and providing editorial summaries in the other language. It is their conviction that in a rapidly shrinking world scholarship should show a lead in that internationalism which has been the hope of the past but is the necessity of the future.

Since 1960 there has been an explosive expansion of archaeological endeavour in English-speaking West Africa, especially in Ghana and Nigeria. The appointment of a selection of generally young and energetic expatriates and the entry into the subject of an increasing number of West Africans has produced a ferment of activity. Yet West Africa is an enormous area and contact between these workers in the period 1960-1964 was virtually non-existant. A turning point came with the

Annual Congress of the Nigerian Historical Society meeting at Nsukka in December 1963. For some reason there was that year a strong archaeological flavour to the congress, which was also attended by a delegation from the Ghana Historical Society. Archaeological papers were read by Thurstan Shaw, Robert Soper, Paul Ozanne, the late Oliver Myers and the present writer. Also present were Ekpo Eyo and Donald Hartle. It was Paul Ozanne and the present writer talking discursively (and with increasing animation), glass in hand, who fell upon the idea of the West African Archaeological Newsletter and it was Thurstan Shaw who actually did something and got it going. The original idea of that production was as a sort of non-publication. It was to keep one informed of what other people were doing. In order to dispel that enchanting but in time irksome disinclination of archaeologists to express themselves in print, it was stipulated from the very beginning that there must be only a private circulation and no quotation without permission of the contributor. Thurstan Shaw, with his extensive contacts in French-speaking West African archaeology, was able to give the Newsletter an internationalism which far outstripped the greatest hopes of the original idea. The Institute of African Studies at Ibadan University financed the production in such a way that it could be distributed without charge - and here of course lay one of the real reasons for its subsequent success. It is not the cost of the Journals that matters so much but the cost in time and memory for the subscriber to pay in two dozen directions at once and more especially for the editors to harry people (like the present writer) who with no particular criminal instincts always forget to pay on time! However the Newsletter was free - but there was something else. It quickly became apparent that there was a demand for this yellow peril of a production, issues disappeared like whisky at a drinks party, the presses at the Institute overheated themselves with exertion, and copy after copy travelled to Europe, to Britain, to America, and to half the countries of Africa.

As it seems to the present writer, the next important event after Nsukka in 1963 was the Freetown conference of June 1966. On this occasion a far wider selection of archaeologists working in West Africa was called together. The success of the Newsletter was widely discussed. To everyone it meant one thing, that there was a market for a more formal publication. It was openly agreed also that there was a necessity for it - principally as a vehicle of publication for full length excavation and fieldwork reports which could be carried nowhere else. To these discussions Peter Shinnie was able to contribute his own experiences of the early days of Kush and it was generally

agreed that with £3000 it would be possible to float the first few numbers - until the production began to pay for itself. The question remained, how to get the money and perhaps even more problematical how to find a suitable publisher. A committee headed by Thurstan Shaw was set up to consider these matters.

This is an appropriate stage to consider the statement just made that there was the necessity for a vehicle of publication for full length reports. It has already been stated that at one time the Proceedings of the Prehistoric Society and Man were used in this way. Yet times had changed. Both of these productions had such heavy commitments in other directions - both geographic and subject-wise - that they could hardly be expected to publish more than a very little of the efforts of West African archaeology. The Journal of African History along with other international Journals welcomed archaeological articles - but there again they were not the place in which to put an excavation report. Neither were the publications of the Historical Societies of Sierra Leone, Ghana, or Nigeria suitable for this purpose. No historian wants to find perhaps 100 out of 150 pages of an historical journal taken up with a detailed technical report nor can the producers of such publications stand the cost of perhaps a dozen plates and twenty line blocks. The result is that we are now in a position where excavation reports in particular can only be published if there is the money and the organisation to produce them as a special monograph. The Dawu report is one example, the Igbo-Ukwu report will be another, so will that on Benin, and that on Daima, so will that on the Volta River Research Scheme and the Kainji Rescue Scheme. This situation is clearly detrimental to speedy publication. It must be remedied.

In June 1967 most of the delegates who had been at Freetown met again at Ibadan. Some of them in the meantime had had a good opportunity to talk with French colleagues at the Fort Lamy conference of December 1966. The principal subject of discussion at both Freetown and Ibadan was not the Journal, but this was again a subject which excited interest. The efforts of the committee in the meantime had not met with success. Thurstan Shaw had approached one publishing house in the U.K. already handling two comparable journals, but received little help and encouragement. It was agreed that further investigations should be made.

The same people and others met privately during the Dakar conference of December 1967 and agreed that the problem

was becoming urgent. In the meantime the increasing circulation of the Newsletter had defeated the efforts made to restrict its growth in order to continue to distribute it without charge. Libraries, Universities and other institutions well able to pay were asking for it and a charge had to be instituted. In discussion some felt that the insistence at Freetown that the launching of a Journal must not mean the extinction of the Newsletter was bad policy. Better to let the Newsletter grow into a Journal. Firstly make a charge - this had already happened, secondly remove the "private circulation only" restriction (which had anyway become largely disregarded and would become completely unreal now that a charge was being made), thirdly remove the "no quotation without author's permission" rule except where a writer insisted on it as a condition of publication. All these things could be done immediately. Next, the Newsletter must be given a free head, it must be allowed to grow, the foot must be taken off the brake. Lastly, the production must be properly printed - not merely duplicated - and at the same time adequate illustration must be introduced, the name must be changed and the price must be raised to something realistic.

The present writer would now like to suggest a more detailed plan of campaign which in parts at least those who have participated in the various discussions either already agree with or have already suggested. There has been some separate discussion of the possibility of forming a professional association of West African archaeologists. It is now proposed that this be done. It would have three conditions of entry.

(1) The member should be in employment, or be retired from employment, as an archaeologist. There would be no university qualification "bar". The test would be to be able to earn one's living in the profession.

(2) The member should either belong to West Africa, or be working in West Africa, or have worked in West Africa, or be in employment in another country by virtue of his or her knowledge of West African archaeology. (In (1) and (2) it is implied that students, including post-graduate students should not be admitted.).

(3) The member should contribute £10 to a guarantor fund to help float the Journal. It is possible that by this means perhaps £200 could be raised.

The plan should be to use this association as a launching body for the Journal. The Newsletter should in the meantime have been used as a vehicle to attract membership to the association and once the latter was in existence it should become the producers of the Newsletter. By that time it would perhaps be feasible to consider the possibility of approaching institutions which have a direct interest in the launching of a production that could be a vehicle of publication for their own research projects. As institutional members of the association they might well be asked to contribute £50 or £100 to the guarantor fund. By this system of individual and institutional guarantors it is possible that approximately £1000 could be raised. The association would then be in a better position to approach one of the international foundations and ask for a further £2000. The concensus of opinion in the most recent discussions seemed to be that £3000 would be needed to support the first two issues of such a Journal. Opinions vary over the time needed for it to pay for itself - the chance that it could do so over the first two issues seems slender. By nature of the guarantor system the aim would be to return to the original contributors the sums of money advanced - although this might take a considerable time to do. In the meantime it might prove necessary to get further financial backing to support the publication through a third and fourth number.

In practical production terms, the present writer would suggest that the Journal could be edited by an editorial board elected from amongst the association by common consent who should appoint one of their number as senior editor. This step should be taken in the near future in order to cope with the planned expansion of the Newsletter.

The essential safeguard should be that all the time we actually have the Newsletter, growing in size, being sold and increasing its own market and being steadily moved to a point where it can make the most difficult and expensive part of its transition - into the printed, illustrated Journal. The Newsletter must be used to develop the demand for a Journal.

The present writer would welcome any correspondence about the proposed Journal or the proposed association especially from people who would like to contribute constructive ideas.

Résumé

Un Journal Archéologique de l'Ouest Africain: la nécessité et les possibilités.

par

Graham Connah

Depuis 1960 a eu lieu un foisonnement remarquable dans les travaux archéologiques en Afrique occidentale, et, avec la réunion de la Nigerian Historical Society à Nsukka en Décembre 1963, nous sommes arrivés à un tournant décisif avec la participation de sept archéologues de l'Ouest Africain. A cette réunion est né le 'West African Archaeological Newsletter', dont la tache était d'essayer de répondre au besoin de communiquer à travers les frontières nationales. Le 'Newsletter' a eu un succès inattendu et à la réunion des archéologues de l'Ouest Africain à Freetown en Juin 1965 était exprimé le souhait commun de voir l'établissement d'un Journal d'un étendu plus grand capable de publier des rapports des fouilles in extenso. Il y a eu d'autres réunions des intéressés à Ibadan en Juin 1967 et à Dakar en Décembre 1967.

On considère que £3000 (34,200 NF) seront nécessaires pour fonder le journal et les moyens d'obtenir cette somme sont délibérés; qui comprennent entre autre la formation d'une Association Archéologique de l'Ouest Africain.

INSTITUTE OF AFRICAN STUDIES
UNIVERSITY OF IBADAN
NIGERIA.

25th February, 1968.

Dear

Proposal for a "West African Archaeological Journal"

In order to try to do something effective about the proposal for a West African Archaeological Journal, under discussion among West African archaeologists for the past two years, I am suggesting calling a meeting of those who might be interested and be able to offer practical help. In order that such a meeting could save time, I asked Mr. Connah to write a short paper outlining the needs for such a journal and the history of the project so far. This he has kindly done, and it is enclosed.

My only comments on it are:

1. As a result of experience with the Newsletter, I am not convinced that the enormous labour of producing other-language summaries is justified; surely most of the people reading such a journal will have sufficient reading knowledge of the other language to make these summaries superfluous?

2. The formation of a professional (and should it be confined to professionals?) association of West African Archaeologists as a foundation for the Journal is an attractive idea, and has good precedent and analogy in the West African Languages Association and the Journal of West African Languages. However, it means setting up another organisation with its own Secretariat; is there anyone willing to run this? It would take a lot of time and energy. (The argument put forward at the Fort Lamy Conference that the formation of such an association would enable West African archaeologists to apply to such international bodies as UNESCO for conference funds, has been partly met by the decision of the Pan-African Congress on Prehistory to affiliate to the International Congress of Pre- and Proto-historic Sciences, which should go some way to achieving the same object.)

Accordingly if other ways can be found of overcoming the financial and legal obstacles to launching a Journal, I would have thought it better not to complicate the issue with the formation of a West African Archaeological Association.

In getting such a Journal started, there seem five areas for consideration:

1. The demonstration of the demand; with which is allied an estimate of the supply of material to be published.
2. Editing.
3. Financial support.
4. Legal position.
5. Choice of press.

Considering these in order:

1. Demand, and Supply of Material.

Mr. Connah's paper surely demonstrates adequately the demand, and that there is likely to be no lack of supply of publishable material. It has been necessary to run off 500 copies of the last two numbers of the Newsletter; there are at present nearly a hundred paid-up subscribers, but this number is rising all the time and is expected to rise still further when for the first time issue No. 9 will not be sent to those who have not paid. No drive has ever been made to increase the number of subscribers. Once a firm decision had been taken to launch the Journal, the Editor would immediately write round to all potential contributors to ask what material they had in preparation for publication and the different dates when this might be expected to be ready. The Department of Archaeology, University of Ghana, has already announced a list of proposed forthcoming publications, with dates, some of which, it is understood, they would be quite glad to have published in a Journal if it were in existence.

2. Editing

At the Freetown meeting, I was asked to edit such a Journal. I am prepared to do this provided (a) I no longer have to edit a Newsletter (b) I have two Assistant Editors of my own choosing (c) I am in no way concerned with the business side of the venture.

Mr. Connah's proposal that the Newsletter should grow into a Journal, with which I agree, solves (a). Two assistant editors have already agreed to serve, which solves (b). This only leaves (c) to be solved.

3. Financial Support

This is the crux of the matter, which I hope the proposed meeting will go a long way to solve. I hope those attending will come ready with their suggestions. Mr. Connah has estimated that we need to see £3,000 to start.

Whatever is decided about this, I would suggest the appointment of a Business Manager at once, to handle both questions of finance and of legal responsibility. This would also solve 2(c).

4. Legal Position

If a Journal is not to arise out of an Association, who are to be the legal owners of it? (i.e. who is liable to prosecution either for libel or for debt recovery?)

5. Choice of Press

It should not be difficult to reach a decision on this as soon as questions 3 and 4 have been settled.

In order to discuss the above matters, I am writing to invite you to a meeting at 11 a.m. on Saturday May 18th at the Institute of African Studies, University of Ibadan. This may seem a long time ahead, but it is in order to allow those outside Nigeria to see whether they will be able to attend, and if not, to give them time to send in beforehand any written observations they would like the meeting to consider.

Could you please let me know whether you intend to be present?

Yours sincerely,

THURSTAN SHAW

To: _____

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Résumé

Copie d'une Invitation à une Réunion pour Considérer la Création d'Un Journal Archéologique de l'Ouest Africain

par

Thurstan Shaw

Pour commencer la préparation de la fondation d'un Journal Archéologique de l'Ouest Africain, je convoque une réunion des intéressés qui peuvent nous aider, et j'ai demandé à M. Connah de préparer un rapport sur ce sujet qui servira de base de débat.

En fondant un tel journal, il y a cinq considérations:

1° La demande: la provision d'articles à publier

2° La rédaction

3° Le soutien financier

4° La situation juridique

5° Le choix d'un imprimeur

Les nos. 1 et 2 sont presque résolues; les nos. 3 et 4 sont les plus importantes considérations. On espère que la réunion du 18 mai aidera beaucoup à les résoudre surtout si nous réussissons à nommer un directeur commercial. Ensuite le no. 5 n'offrira pas trop de difficultés.

STOP PRESS

Radiocarbon Dates

News has just been received of the following radiocarbon dates:

1. From Dr. Donald Hartle's excavation at the Ukpa rock shelter near Afikpo, eastern Nigeria:

		B.P.	
GX 0938	At a depth of 120-126 ins.	4885 ± 140	2935 B.C.
GX 0937	At a depth of 108-114 ins.	3350 ± 95	1400 B.C.
GX 0936	At a depth of 102-108 ins.	3930 ± 80	1980 B.C.
GX 0941	At a depth of 96-102 ins.	3125 ± 95	1175 B.C.
GX 0940	At a depth of 84-90 ins.	2935 ± 85	985 B.C.
GX 0935	At a depth of 78-84 ins.	2860 ± 65	910 B.C.
GX 0934	At a depth of 66-72 ins.	2620 ± 380	670 B.C.
GX 0939	At a depth of 60-66 ins.	1935 ± 80	A.D. 15
GX 0933	At a depth of 42-48 ins.	2055 ± 85	105 B.C.
GX 0932	At a depth of 18-24 ins.	2045 ± 95	95 B.C.

2. From Mr. Priddy's excavation at site RS 63/32 near Yelwa, west central Nigeria:

N-361	A 11, Layer 4/5 interface	1850 ± 115	A.D. 100
N-364	A 16, Layer 6	1750 ± 115	A.D. 200
N-363	A 16, Layer 4	1250 ± 105	A.D. 700
N-362	A 16, Layer 3	1490 ± 115	A.D. 460

3. From Professor Willett's excavations at Ife, western Nigeria:

BM-261	Ita Yemoo, below potsherd pavement 1.	990 ± 130	A.D. 960
BM-262	Ita Yemoo, terracotta layer	890 ± 130	A.D. 1060
BM-259	Ita Yemoo, below potsherd pavement 4.	790 ± 130	A.D. 1160
BM-265	Orun Oba Ado, burial pit 11	1390 ± 130	A.D. 560
BM-264	Orun Oba Ado, burial pit 6	960 ± 130	A.D. 990

4. From Dr. Hartle's excavation at the Ifeka Garden site, eastern Nigeria:

GX 0942	Depth 18-24 ins.	455 ± 95	A.D. 1495