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THE WEST AFRICAN ARCHAEOLOGICAL NEWSLETTER

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Editorial

The present issue is entirely devoted to a report of a three day meeting of West African archaeologists which took place at Fourah Bay College, Freetown, from 28th-30th June 1966. The meeting was initiated and sponsored by the Institute of African Studies of the University College of Sierra Leone, under its Director, Mr. Michael Crowder. It was timed to take advantage of a visit there, for another purpose, of Professor Desmond Clark of the University of California, making possible consultations among archaeologists from West Africa concerning the terminology revisions for African archaeology proposed at the Wenner-Gren Symposium held at Burg Wartenstein the previous August.

As another purpose of the meeting was to exchange news of recent work - which has also been the main reason for the existence of the West African Archaeological Newsletter - these reports are also included in this issue.

Proceedings were kept informal and all those who attended the conference felt it had been extremely worth while. Much gratitude was felt to the authorities of Fourah Bay College for holding the conference and providing hospitality, and in particular to the Director of the Institute of African Studies, Mr. Michael Crowder, and the Secretary, Mr. Jonathan Hyde.

We must particularly express our gratitude to Mrs. Betty Clark for acting as recorder of the conference and for making typed copies of the proceedings. It was originally intended that the individual contributions should be checked by their authors, but because of postal and other delays, it was decided not to do this. Instead, the opportunity was taken at the VII International Congress of Prehistoric and Proto-historic Sciences in Prague to submit the whole typescript for verification to three participants who attended the Sierra Leone meeting. It is regretted that various circumstances outside our control have subsequently delayed publication for a longer period than we would have wished.

We apologise to our francophone readers that on account of the size of the present issue it has not been possible to include the usual summaries in French.

Editorial

(Résumé)

Ce bulletin est consacré entièrement à un compte rendu d'une réunion des archéologues de l'Ouest africain qui a eu lieu à Fourah Bay College, Freetown de 28-30 Juin, 1966. Pour nos lecteurs francophones nous regrettons que nous ne pouvons pas donner les résumés habituels en langue française à cause du volume de ce fascicule.

CONFERENCE OF WEST AFRICAN ARCHAEOLOGISTS

28th - 30th June, 1966.

Institute of African Studies
Fourah Bay College, Sierra Leone.

P A R T I C I P A N T S

Ghana

David Calvocoressi, Department of Archaeology, University of
Ghana.
Paul Ozanne, Institute of African Studies, University of
Ghana.
P. L. Shinnie, Department of Archaeology, University of
Ghana.
R. N. York, Volta Basin Research Project, University of
Ghana.

Niger

Guy de Beauchêne, I.F.A.N.-C.N.R.S., Niamey.

Nigeria

Graham Connah, Institute of African Studies, University of
Ibadan,
S. G. H. Daniels, Institute of African Studies, University
of Ibadan.
Ekpo Eyo, Department of Antiquities, Lagos.
Donald Hartle, University of Nigeria, Nsukka.
Thurstan Shaw, Institute of African Studies, University of
Ibadan.
Frank Willett, Northwestern University, Evanston, Illinois.

Senegal

Henri J. Hugot, I.F.A.N., Dakar.

Sierra Leone

Michael Crowder, Institute of African Studies, Fourah Bay
College.

Chairman

J. Desmond Clark, University of California, Berkeley.

First, Second and Third Sessions - 28th and 29th June.

Opening Remarks:

The Chairman expressed great pleasure at the number of archaeologists who had been able to attend at short notice and conveyed the thanks of the participants to Fourah Bay College for their hospitality.

The aims of the seminar were described as:-

- (1) to exchange news of recent work and to discuss its significance;
- (2) to consider the recommendations for the revision of terminology made at the Wenner-Gren Conference of 1965, to assess their value for West Africa and to prepare united views for presentation at the next Pan-African Congress to be held in Dakar in December, 1967;
- (3) to explore the possibility of future regular meetings of West African archaeologists; and
- (4) to help as far as possible towards the appointment of a permanent archaeologist in Sierra Leone and the improvement of Museum facilities there.

ACCOUNTS OF RECENT WORK

The session continued with summaries from each participant of recent archaeological work in his area. Each participant supplied a written version of what he had said and references to published work where applicable. These summaries are given below with the discussions that followed:-

- (1) Guy de Beauchêne. Prehistory and Archaeology in Niger (and Togo, Upper Volta, Dahomey and the Ivory Coast).

In these regions, apart from the work of Hugot, Hólas, Lhote, Mauny and the writer, finds have most often been accidental and made by travellers, military officials, and others.

In 1949, Mauny published a paper on "The present state of our knowledge of the prehistory of the Colony of Niger"¹. H. Alimen devotes two short chapters of her book The Prehistory of Africa² to the prehistory of West Africa.

Rock art has been studied by R. Mauny³. For Niger we have the publications of H. Lhote⁴; and of H. Lhote and P. Huard jointly.⁵

We will begin by considering the prehistory of Togo, Dahomey, Upper Volta and the Ivory Coast. In Togo, Dahomey and Upper Volta sporadic discoveries of Neolithic material have been reported - polished axes, bored stones, etc. Large polished axes are known from the Ivory Coast and constitute a special facies of the Neolithic from this area.⁶

The prehistory of the Republic of Niger is better known but the northern part of the country which has a Saharan and sub-Saharan climate must be considered separately from the southern part which is sahelian. The approximate limit between the two zones is roughly the 15th parallel.

In the southern zone only four sites are known. One "immediately to the east of Niamey"¹ not located by the writer, consisted of an atypical industry in quartz. The second at Tondibia (15km. northwest of Niamey) is considered by Oliver Davies to be Sangoan. The other two sites were found by the writer. The one, north of the Yatakala swamp in the Gorwol, has yielded coarse flakes of quartzite and

the other, in the river gravels at Niamey itself, produced numerous flakes and blades with a glossy patina, probably Neolithic.

The northern part of the country, much greater in area, is better known and the prehistoric sites there are much more numerous. In the northeast a "Pebble Culture" has been recognised at several points on the Algerian frontier. Throughout the whole zone classic Acheulian has been recorded, with handaxes, cleavers, bolas stones, etc. exactly comparable to that of the principal Saharan sites.

The Aterian is equally well represented and seems to have persisted up to the period of the maximum extension of Chad, about 7000-5000 B.C. (Hugot).

Neolithic material is very abundant; in the northeast this includes haches à gorge. The Ténéréen, described particularly from Adrar Bous (Delcroix and Vaufrey, Hugot) covers a great part of Ténéré and Taffassasset. In the northwest the Azaouak facies is known particularly from the sites of Taferjit and Tamaya Mellet. These are villages of fishers on the edge of ancient lakes, which have yielded bone fishhooks and harpoons and a rich fauna of hippopotamus, crocodile, fish etc.

The two principal groups of rock paintings and engravings are those of the Aïr massif and of Djado-Kawar. In the southern part the only engravings known at present are the late ones of Labezenga and Kourki.

Iron Age material has been found in Aïr and at Djado-Kawar. Other sites are still unpublished.

Recent studies (Faure, Greigert) on the Quaternary geology are beginning to provide interesting data, in particular for the east of Niger.

Recent archaeological sites, probably mediaeval, have been studied by the writer in the southwest of the country and near to the Mali frontier. Two of these were mentioned in an old Arab manuscript. All these sites have yielded pottery, grindstones, bracelets of stone and baked clay, stone beads, iron arrowheads, etc. Segmented beads of baked clay, very finely made, are characteristic and seem to be peculiar to the sites located at places along the boundary with Mali. From the site of Bossi in the Dallol Bossou have come interesting bronze bracelets.

One problem still remaining to be solved is that of the possible existence of a flake industry, earlier than the Neolithic, the exact position of which has not yet been determined.

The writer's own projects for the coming year are to carry out research in Azaouak, the Termit region and the east of the country and also to survey the two banks of the river above and below Niamey.

The question of a revised law to deal with the protection of sites and monuments is under consideration.

Three questionnaires have been prepared on: archaeological sites, modern pottery and present day ornaments.

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1. R. Mauny - "Etat actuel de nos connaissances sur la préhistoire de la Colonie du Niger, Bull. d'I.F.A.N., Vol. 11, 1949.
 2. H. Alimen - Préhistoire de l'Afrique, Paris, 1955.
 3. R. Mauny - "Gravures, peintures et inscriptions rupestres de l'Ouest africain", Initiations africaines, No. XI, 1954.
 4. H. Lhote - "Gravures, peintures et inscriptions rupestres du Kaouar, de l'Air et de l'Adrar des Iforas", Bull. d'I.F.A.N., Vol. 14, 1952.
 5. H. Lhote et P. Huard - "Gravures rupestres de l'Air, Bull. d'I.F.A.N., Vol. 27, 1965.
 6. B. Holas - "Deux haches polies de grande taille de la Basse Côte d'Ivoire", Bull. d'I.F.A.N., Vol. 13, 1951.
- R. Mauny - "Une hache polie à bandes peintes du Soudan français", Notes africaines, No. 46, 1950.

Discussion.

The Chairman said that it seemed clear from the summary that a great many sites were known from Niger but that large scale excavations, indeed excavations on any scale, were still badly needed, as the area is of great importance. One difficulty seemed to be the lack of precise map or navigational references to enable subsequent workers to locate previously discovered sites.

A fragment of a recent glass bangle from Niamey, produced for inspection, led York to mention that he had found a glass bangle in a stratified position in Buipe. There was a suggestion that such glass might be a by-product of iron working. Shaw pointed out that similar bangles were now sometimes made from bottle glass. Ozanne referred to work being done on glass beads from his 17th Century site in Ghana, where it was hoped, by analysis of flow structure, to be able to trace the method and thus the area of manufacture.

There was general agreement that the Sahara desert was not an insuperable barrier to movement at all periods during the past and that at times it provided a favourable habitat for human occupation.

There was agreement that the Aterian culture was north-west African in origin and unlikely to be found in savannah country south of the Sahara. Clark said that French archaeologists also do not agree with the suggestion that there is much evidence of Aterian culture in the Niger savannah country.

(2) Thurstan Shaw. Recent Archaeological Work in Nigeria.

The following remarks on recent archaeological work in Nigeria have as their background the writer's "Field Research in Nigerian Archaeology" (J. Hist. Soc. Nig. II, No.4, pp. 449-64). This paper gives a brief summary of archaeological knowledge in Nigeria at the time it was published three years ago and the present remarks will largely be a summary of that in the light of more recent work. Nothing will be said about Benin and Bornu, Ife, Ibadan, Eastern Nigeria, or about the statistical work which has recently been done, as these will be dealt with by other speakers.

With regard to the Earlier Stone Age the question of a Pebble Culture is still undecided. It is a great pity that Soper left after doing his surveys which could be regarded as preliminary to what is now needed, namely more intensive work on the Quaternary geology, river terraces, etc., and the excavation, if possible, of living floors. There is a great need for palynological work but so far attempts to get such a post created at Ibadan have been unsuccessful. Contact has been made with van Zinderen Bakker.

There is some very fine late Acheulian material from the basal fill of Gamblian valleys on the Jos Plateau. The climatic history has not yet been satisfactorily worked out. Some good Sangoan material has been collected around Jebba. It is believed that there is no true Aterian in Nigeria.

The Middle Stone Age certainly exists but much more work needs to be done on it. The Zenebi radiocarbon date of B.C. 3,485 \pm 110 is not satisfactory.

The Iwo Eleru rock-shelter was chosen for excavation as it is in a rainforest area. It has yielded an industry of quartz with a percentage of chert that varies from 2% at the bottom to 25-30% at the top. Transverse arrowheads occur; microliths are rare. The skeleton found on the platform under the rock overhang probably belongs with the Stone Age material. Charcoal from round it dates to B.C. 9,250 \pm 200 and other charcoal nearby to B.C. 7,200 \pm 150.

The terms "Guinea Neolithic" and "Kintampo Neolithic" are not favoured, but this will come into the discussion on terminology. Work is being done on the classification of ground stone axes and on grinding hollows.

With reference to Nok, there is still some question as to what the culture consists of and it is hoped that Bernard Fagg's excavations at Taruga will help to settle this. It is disappointing that these excavations were not completed; the information available seems to suggest that the industry concerned was fully iron-using (C 14 date of B.C. 280 \pm 120).

The full publication of all the Igbo-Ukwu findings is well on the way. There are two radiocarbon dates: (1) from charcoal from a pit, A.D. 840 \pm 145; (2) from wood from the stool in the burial chamber A.D. 850 \pm 120.

Analysis of the bronzes at Igbo has shown that they divide themselves into those composed of almost pure copper and those made of a leaded tin bronze; unlike Benin, there are no brasses and virtually no zinc content at all. The copper objects were made by smithing, chasing and wire-twisting techniques, the leaded bronzes by cire perdue casting. The associated pottery is highly decorated but shows no use of the roulette.

It is disappointing that more has not been done in the way of rescue archaeology in the area of the Niger dam. Nevertheless, an excavation has been carried out near Yelwa by Tony Priddy, of the Department of Antiquities.

The annual meetings of archaeologists working in Nigeria, held at the suggestion of the Antiquities Commission, has been felt by all participants to be most valuable.

Work has been going on at Ibadan for two years to prepare a register of archaeological sites and find places which it is intended should be organised on a punched card system.

A bibliography of Nigerian archaeology has been compiled and the draft will be circulated as a copy of the Newsletter for other people to make corrections and additions.

We are still some way off achieving for the whole or any particular area of Nigeria a satisfactory chronological framework and a cultural succession. Progress is, however, being made towards this and, whereas a year ago there were considerably less than ten radiocarbon dates for the country, there are now over twenty. Nigeria is a large country and has fewer archaeologists to the square mile than Ghana.

(3) Ekpo Eyo. (a) Rop Rock Shelter, Nigeria.

Rop rock shelter is situated thirty miles southeast of Jos. The back and left sector of the shelter were excavated in 1944 by Bernard Fagg and this produced an enormous quantity of microliths (lunates, backed blades, points, scrapers, cores, flakes) and pottery, together with the remains of a burial. One occupation layer was recognised.

In 1964, with the help of Robert Soper, I organised a dig in the unexcavated right sector of the shelter and recovered an extremely large quantity of tools and pottery but no further human skeletal remains. The most significant result was the establishment of two occupation layers separated by a sterile layer. The lower layer contained microliths of larger proportions compared with the upper layer, together with "Middle Stone Age", levallois-type flakes and a single point reminiscent of the "Stillbay" industry of East Africa. There was no pottery from this layer but pottery was abundant in the upper layer and was associated with microliths of smaller proportions.

The problem now is how to place Rop in relation to other microlithic sites found in Ghana (Bosumpra) by Thurstan Shaw and Mejiro cave at Old Oyo excavated by Frank Willett. I am of the opinion that the lower quartz level at Rop is as old as the Mejiro cave assemblage, reported to have no pottery in association, and that the upper layer is probably contemporaneous with Bosumpra cave where microliths have been reported in association with pottery.

Bernard Fagg has obtained a date of B.C. 25 + 120 from the bone material at Rop. Since it was a burial, this date may belong to the upper layer of microliths, although the skeleton is said to have been found in the "microlithic layer".

(b) The Work of the Nigerian Department of Antiquities.

The Department is nominally in charge of all the archaeological work in the country on behalf of the Antiquities Commission. However, much of the excavation work is now being undertaken by the Universities, while the Department concentrates on rescue work.

Kainji Dam. The request for money from the United Nations Special Fund was made rather late so that it was not

included in the general application for assistance which the Government made in connection with research in other disciplines. However, the Departmental archaeologist under the direction of Professor Shaw has already excavated one of the recommended sites and the results have been fruitful.

Jos Museum. The museum stores a lot of archaeological material from the country and facilities are provided for research workers.

Pottery Collection. There is a fine, though incomplete, collection of modern pottery in the Jos Museum and a catalogue of this is being prepared for publication by Mrs. Leith Ross, who was responsible for making most of the collection.

(4) Donald Hartle. Archaeology in Eastern Nigeria.

Archaeological survey and research in Eastern Nigeria was initiated in 1963¹ under the auspices of the University of Nigeria, Nsukka. In November, 1964, the work was formally launched by the support of the National Science Foundation, Washington, D.C. The projected plans were considered in four inter-related parts:

- (1) Site survey
- (2) Limited stratigraphic test excavations
- (3) Intensive large scale excavations, and
- (4) Ethnographic comparative analysis.

The initial purpose of this survey was to determine the number of sites in the region that would repay further investigation on a more extensive basis. Since up to that time very few sites had been excavated and no systematic attempt had been made at locating sites at all, we considered this a necessary prerequisite. Historians have long

1. The exceptions to this are Thurstan Shaw's excavations at Igbo Ukwu 1959, 1960 and 1964, and a survey of the monoliths in the Cross River area by Allison, 1964.

discussed the early periods of West African History without the specific references that are altogether dependent on archaeological confirmation; the obvious connections between the two disciplines made it necessary to explore the archaeological dimension for a more complete picture.

In recent years, lithic "phases" have been reported for both the Northern and Western Regions. This has added greatly to our general chronological picture of Nigeria. Now, with some lithic materials reported in our survey from the Afikpo area, we are beginning to extend these data to the Eastern Provinces. In other words, we are finally approaching a comprehensive picture of the prehistory of Nigeria, although we obviously are just beginning.

It should be pointed out that in our survey we were not looking for sites or horizons of specific periods of Nigerian prehistory but rather for any information at all bearing on any period, since it is the archaeological view that all human documents form a part of history, no one type being more valid than another.

At the present time (June, 1966) approximately 400 sites in the Eastern Region have been recorded; they have been placed into nine categories:

- | | |
|-----------------------------|--------------------|
| (1) Defended sites | (6) Monoliths |
| (2) Caves and Rock Shelters | (7) Burials |
| (3) Abandoned areas | (8) Historic |
| (4) Shrines | (9) Miscellaneous. |
| (5) Iron smelting sites | |

One of the key tasks facing archaeologists, not only in Nigeria, but also in West Africa as a whole, is to devise a cataloguing system for all materials that is both specific and flexible. Our objective was to create something coherent and to cope with the amount of material now being collected, since it is absolutely essential to unify our thinking on these basic problems. Thus, in our cataloguing methodology all survey forms provide for the following: site number, site name, political location, type of site, descriptive location, dimensions, site description, specimens collected and the date the site was surveyed. A designation for each site consists of five symbols referring, in sequence, to Region, Province,

Division, District (or County Council) and the site number. For example, E-5-N-1-1 designates Eastern Region, Enugu Province, Nsukka Division, Igbo Etiti County Council and site number one. For specimen cataloguing the same number/letter system is used plus a "series" number to designate the total of the several specimens. At the present time, approximately 150,000 artifacts have been processed, the majority of which are potsherds.

Fourteen sites have been test-excavated in the following areas: Nsukka, Okigwi, Awka, Bende, and Afikpo, three of which are of particular importance:

(1) The University Farm Site, Nsukka. At this site pottery (both fired and unfired) was found up to a depth of about 1 metre. Two carbon-14 dates were obtained with the "earliest" pottery types:

(a) B.C. 2,555 \pm 130

(b) B.C. 1,460 \pm 115

Work will continue on this site in the dry season of 1966/67.

(2) The Nwankwor site, Etiti Ulu, Bende. This was excavated because local tradition stated that the area was occupied for twelve generations. The excavations were concentrated on the "oba" (ceremonial house) and the garbage dump. Two carbon-14 dates were obtained on the garbage dump:

(a) A.D. 805 \pm 95

(b) Less than 145 years B.P.

These dates are "reversed", that is, (b) is lower than (a). Other samples will be sent for dating.

(3) The Ifeka Garden Site, Ezira, Awka Division. This was a burial site which produced some 30 pieces of bronze - anklets, bracelets, rings, various sizes of bells, and unidentified objects of a ceremonial nature. These may be related to the bronze objects of Igbo-Ukwu excavated by Thurstan Shaw. Samples submitted for carbon-14 analysis were not datable.

At present one large-scale excavation is being conducted at the Ukpa Rock Shelter at Afikpo. Excavation will

be completed in a few months, but test trenches and pits have suggested four horizons:

(1) An upper level (0" - 6") of fairly recent Afikpo well-fired grey pottery, a fragment of a white kaolin pipe stem, a metal bracelet, etc.

(2) A thin layer (6" - 12") of red, thin pottery. Not well fired. Other artifact associations questionable.

(3) A very thick horizon (12" - 84") of large, crude stone tools and thick crudely-fired pottery.

(4) A possible pre-ceramic horizon containing the same stone tools as in No. 3.

The above is a preliminary and tentative presentation. The depth of excavation at present (7 ft. 6 ins.) continues to yield pottery and stone tools. The pre-ceramic horizon, if present, is located outside the shelter and much closer to the surface. A number of samples for carbon-14 analyses will be submitted from this site.

Analysis of materials collected from these and other sites has begun in the newly established Laboratory of Archaeology at the University of Nigeria, Nsukka. These quarters are temporary and it is anticipated that a permanent laboratory/museum will be provided in the near future. These analyses are very preliminary and generalizations would be specious at this time; artifacts have been collected in huge quantities and our staff has been able to do little more than cope with the cataloguing. Artifacts include pottery, iron, worked stone, beads, shell, glass and bronze. Detailed analysis will begin in September, 1966, and reports will begin to appear shortly thereafter.

A collection of ethnological artifacts, primarily pottery, has been made and includes samples from all parts of Nigeria. These are used to compare with the excavated materials and have already proved invaluable. The rapidity of culture change, particularly in technology, will soon bring an end to indigenous skills of all kinds; we are thus observing a living experiment in material culture change. Thus, the ethnographic collections serve two main functions: (1) of providing the archaeologist with critical comparative materials, and (2) of preserving cultural traditions that are rapidly disappearing in Nigeria.

In summary, about 400 sites have been surveyed, fourteen have been intensively excavated (three of which seem critical in the history of the area), and modern ethnological artifacts have been collected for the Laboratory of Archaeology. We plan to spend the next year in analysis of materials collected and in excavation of the more promising sites located during our survey.

(5) S. G. H. Daniels. Recent Statistical Work in Nigerian Archaeology.

1. Quality Control Procedures. In cases where the processing of archaeological data involves large counting or size-classification operations, we have encountered the problem of inaccurate observation. In order to check the reliability of work already done on counting and classifying beads, we re-counted the beads from approximately 5% of the total number of bead-producing stratigraphical units and obtained estimates of the mean difference between the first and second counts for different classes, expressed in percentage form. The results showed that, while the errors in classification into classes were, for the most part, small, errors in classification into size-ranges were much larger. It would be advantageous, particularly where counting and classifying have been done by semi-skilled operatives, to employ similar checks and to include in the publication of quantitative data, an estimate of the experimental (as opposed to statistical) error.

2. Invisible Stratigraphy. While excavating at Iwo Eleru we were able to develop a field technique for the elucidation of stratigraphical information which was not readily apparent from the appearance of the deposits in section. The site produced large quantities of quartz pieces and a proportion of chert pieces which varied with fair consistency from 0% on bed rock to over 30% in the top level. The chert and quartz were separated and counted on site, largely by unskilled labourers. We were, thus, able to record the "Chert Index" (percentage of chert) in each stratigraphical unit. Taking the value for the unit as the true value for the centroid of the unit, it was then possible to construct a contoured diagram of each trench in section showing the variation in the chert index. To decide

on the intervals at which contours should be interpolated, a frequency table was constructed showing the frequency of occurrence over the whole site of stratigraphical units with given values of the Chert Index. This table proved markedly multimodal and the values at which contours were to be interpolated were taken as those of the "bottom of the troughs" between adjacent modes. For contours interpolated according to these criteria we have coined the word "catomers".

The results showed a high degree of consistency and in one case an anomalous sharp dip in the contours was subsequently clearly observable in the section as a stratigraphical feature. Use of such a technique depends on easily discernable classes and sufficiently large quantities of material from each stratigraphical unit.

3. The Lognormal Distribution. Following a suggestion made to me by Dr. C. B. M. McBurney, I have examined the statistical distributions of a number of measurements on pottery and stone flakes and found that they are rarely, if ever, normally distributed. The usual case is a positively skewed curve which is closely approximated by the lognormal distribution, in which the two parameters necessary to describe a set of observations are given by the geometric mean \bar{x} the standard deviation. In other words, the logarithms of the observations are normally distributed. The lognormal distribution stems from a multiplicative theory of errors where each error affects the effect of the succeeding one. This theory would seem appropriate where the operating cause has a feedback mechanism, as with human activity. For this reason and, also, because tests of hypotheses in normal theory are valid only if the data are normally distributed, it might be advisable that the current practice of treating archaeological dimensional data as normally distributed be replaced by an assumption that data are lognormally distributed unless this is demonstrably not so.

Reference: Aitchison, J. and J. A. C. Brown, 1963. The Lognormal Distribution, with special reference to its uses in economics. Cambridge University Press.

4. Grinding Hollows. We have started a typological analysis of the forms of grinding hollows in Nigeria. Seven measurements are taken on each groove: the greatest length; width at rightangles to the length at $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of the

length; depths at the three intersections so formed. An attempt will be made to establish formal types as consistently recurring patterns of these seven measurements. A preliminary centroid factor analysis (on a small sample of data) has indicated that it may be possible to explain a large proportion of the observed variance with three factors.

Reference: Fruchter, B., 1954. Introduction to Factor Analysis. Van Nostrand, New York.

(6) Frank Willett. The Archaeological Context of Nigerian Art.

Rock Art: Paintings and petroglyphs occur in Nigeria but no direct evidence has been obtained of their date.

Nok. In addition to Thurstan Shaw's comments I should like to add that Bernard Fagg's recent season at Taruga revealed, by means of a proton-magnetometer, over a dozen locations of iron-working, one of which - a furnace - was excavated. More than fifty small exploratory cuttings were dug down to the main occupation layer which had yielded the radiocarbon date B.C. 280 \pm 120 (I-1457), but no further excavations of this layer were attempted. It is intended to undertake this in December.

Ife. The close similarity in many details of the terra cotta arts of Ife and Nok make it difficult to believe that they are separated by a thousand years. The 9th century dates for Igbo-Ukwu show that bronze casting was already known then on the Guinea coast and help to make an early dating for the Ife art less unlikely. Unfortunately, despite the large amount of terra cotta and bronze sculpture known from Ife, none has yet been excavated from a primary context. Only one radiocarbon date has so far been obtained, from Igba Obameri, a typical grove containing reassembled fragments, excavated by Oliver Myers: A.D. 1730 \pm 100 (M.-1686). Others, from occupation material at Ita Yemoo, and from the pits in Ife where the heads of the Kings of Benin were buried, are awaited from the British Museum Laboratory. Indirect evidence comes from beads associated with some of the bronzes, identified by Van der Sleen as Indian Ocean Trade Wind Beads of the 3rd to 13th centuries

A.D. Other types of beads found at Ita Yemoo are technically very similar to some from Igbo-Ukwu.

Most of the Ife sites are characterised by potsherd pavements, some of which contain maize-impressed pottery, which can hardly be earlier than the 16th century. It is hoped that thermoluminescence will be able to afford direct evidence of the date of the terra cotta sculptures.¹

Benin. This is discussed by Connah but, apart from small sheets of brass from his excavations, only one Benin art object came from an excavation. - the serpent head excavated by Goodwin from a late 19th century level in the palace. The rest of Benin art is "dated" only by typology coupled with oral traditions. One D-shaped plaque of typical Benin style was found in Ife, about 1942, but the deposit in which it lay was recent. A terra cotta face has lately been found in Ife which is of typical Benin style, but closer to the bronzes than to the terra cottas.¹

Ilesha.

Twenty miles from Ife, Ilesha is the site of a royal burial which cut through deposits that included a group of sculptures in fired clay. The burial is securely dated by oral tradition to the third quarter of the 19th century. Pottery of the distinctive Old Oyo fine, grey-black ware occurred. It is found widely distributed in southwestern Nigeria and forms a useful dating horizon. Samples are being tested in Oxford to determine whether the pottery was made in Old Oyo and traded or whether it was made by refugees from Old Oyo after its collapse about 1837.²

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1. F. Willett - Ife in the History of West African Sculpture, London, Thames and Hudson, forthcoming.
 2. F. Willett - "Recent Archaeological Discoveries at Ilesha", Odu, 8, 1960.

Discussion on papers 2-6 inclusive.

Opening the discussion the Chairman remarked that, just as further south in sub-Saharan Africa, so also was there a great need in Nigeria for detailed analysis and precise description of finds from excavated sites with a series of absolute dates to establish a chronological framework. Palynology would seem to be of particular importance in West Africa. Shaw pointed out that the main difficulties in obtaining the services of a palynologist were finance and the fact that in the tropics a great deal of arduous palynological groundwork still had to be done before it could yield results for archaeology. The need for international collaboration was also stressed, in order not to duplicate services in several countries. Ozanne cited D. G. Courcy's observation that the gradual disappearance of yam pollen was due to the ennoblement of the yam, a fact that would have wide implications for the study of food production in West Africa.

With reference to Daniels' plan to draw up a typology of grinding grooves Ozanne cited the Shai practice of using narrow grooves to grind gneiss for pot making. Willett mentioned grinding grooves which had a 2"-3" subsidiary hollow at one end and several possible explanations for this were suggested. Clark described grooves from Zambia with narrower, parallel grooves within them which, it was thought, might have been used for putting edges on metal tools. In Ghana small holes are used for pounding and large circular ones for breaking up iron ore. The practice was referred to of "sharpening" grindstones by pounding with another stone which rapidly becomes spherical and York agreed that he had found grindstones and round stone balls in association at some of his Volta Basin sites.

At the Old Oyo rockshelter Willett agreed with Shaw's suggestion that the number of artifacts (8000) was not great enough to warrant the laying of too much importance on the fact that no polished axe had been found there, though Clark thought that fragments and flakes should have been found had axes been made there. It was suggested that the polish on the axe passed round by Hartle could have been caused by its use for digging (as was found to result from experiment in Angola) and Ozanne cited the Shai use of polished axes for digging the clay for pot making. He pointed out that pot burnishers quickly acquire a high polish.

Shaw referred to the recent discovery by Oliver Myers in Ife, during the cleaning out of a fishpond, of two pottery pavements with a pattern of quartz stones. It was thought that the site might warrant further investigation even though there is often nothing beneath such pottery pavements.

Willetts showed examples of maize cob and maize ear decorated pottery. The participants agreed on the need for a properly documented corpus of modern pottery from the various regions. This should, wherever possible, include descriptions of the techniques and tools used in manufacture and socio-economic data on use and function so that it could be of use in the interpretation of archaeological data. Such catalogues are in process of preparation for parts of Nigeria and for Shai pottery near Accra.

It was considered that W. Fagg's sequence of art styles for Benin had, in many cases, been too rigidly applied.

(7) Graham Connah. Summary of research in Benin City and in Bornu.

This summary covers field research carried out by the writer since late 1961, firstly at Benin City and then in those parts of Bornu adjacent to Lake Chad.

Benin City. A programme of both excavation and field survey was carried out from late 1961 until May 1964. In the attempt to establish an archaeological sequence for Benin two main difficulties had to be overcome: (1) the initial apparent lack of stratified occupation deposits and (2) soil conditions which rendered isolation of pit-fills and mud-built structures very difficult and necessarily detracted from the value of normal stratigraphic observation.

After dealing with many subterranean archaeological features, such as pits and wells, on the "Benin Museum site", a 3.50 m. deep stratified occupation site was eventually located at the "Clerks' Quarters Site" - traditionally the location of Oba Esigie's palace in the 16th/17th century. Excavation revealed deposits dating probably from that period up to the end of the last century. Floors and walls of part of the palace destroyed in 1897 were found in the

upper part. Imported beads and glazed wares probably indicated a similar time span. About half-way down the section was the top of a narrow, well-like shaft some 17.50 m. deep containing approximately 44 human skeletons towards the bottom. These were probably all women between 20 and 30 years of age who had been cast down the shaft together with brass bracelets, manillas, clothing and pieces of timber. A distinctive variety of local pottery found in this shaft was also found in sectioning the innermost city wall and in its ditch. These can be dated documentarily to the mid-16th century at latest. Excavation was also carried out at Usama, a traditionally early Benin palace site, where material possibly of 14th/15th century date was obtained.

Survey of the Benin City walls led to the mapping of the 90 or more miles of linear earthworks of which they are composed. This showed that they are not concentric urban fortifications, as previously thought, although probably the innermost was primarily defensive. The great majority, however, were probably the agricultural and territorial boundaries of the individual settlements which perhaps fused together into the Benin City of the early travellers' accounts. As this process went on an overall cellular pattern of interjoined earthwork enclosures grew up.

Bornu. Whereas the work at Benin was done for the Department of Antiquities, that in Bornu has been carried out on behalf of the Northern History Research Scheme. It was preceded, however, by a reconnaissance for the Department of Antiquities during June and July, 1963.

Commencing in December, 1964, extensive fieldwork has enabled the mapping of some 57 sites in this area, almost certainly a small part only of those that exist. Two main aspects have emerged. Firstly, along the River Yobe is a series of sites comprising midden mounds of probably 16th to 19th century date. Secondly, within the "firki" lands, the old lake sediments best represented to the south of the lake, is a series of settlement mounds of tell-like appearance. In the 1964-5 season test excavations of three of the first type of site and one of the second were carried out. In the 1965-6 season a major excavation was organised on one of the settlement mounds - that at Daima, between Rann and Kala on the Nigeria/Cameroun border. Seven test-holes, spaced out from the highest point of the mound to its periphery, were excavated and these were followed by a 6 x 50 m. section excavated to a total depth of 11.50 m.

Some 10.50 m. of this comprised multi-banded, horizontal occupation deposits containing definite structural features. There seems little doubt that this mound can be called a tell. The earliest occupation was immediately on the "firki". Structural evidence was in the form of substantial laid floors of clay pierced by occasional post holes. Polished stone axes and polished bone tools, probably intended for leather working, were accompanied by double-ended bone points and by bilaterally barbed bone harpoons. Small clay figurines of animals - often apparently of cows - and large quantities of animal bone in which cow is probably heavily represented, were also found. In addition there were grindstone fragments, some of which had been used for sharpening stone axes and grooved stones of the sort often referred to as "bead polishers". It is possible that these were really intended for the production of bone points and harpoons as they were not associated with stone beads of any kind. There was no evidence for the use of iron. The dead were buried in a crouched or flexed position, unaccompanied, in graves dug within the settlement. One such burial had been speared in the lower abdomen with one of the bone harpoons. The pottery was best represented by a fine ware with burnished red surface decorated often with toothed comb or roulette.

It is likely that this occupation continued unaltered for some time. Then, when a substantial mound had already formed, iron first appeared, partly in the form of personal ornaments. From then on there is continuous evidence of iron. The clay figurines persisted throughout the history of the site, cows still being the most commonly represented. They became, however, increasingly naturalistic and other animals too were represented. Stylised, anthropomorphic figurines were also present. When the mound was half its present height, first the polished bone tools and then the polished stone axes ceased to be used. At around this stage structural evidence was in the form of remnants of circular mud huts, of areas of potsherd pavements, of burnt clay spreads and of occasional hearths. The burials were as before. Gradually a heavier pottery appeared and ousted that formerly in use.

The upper part of the mound consisted of occupation debris from settlements of an iron-using people with structural evidence in the form of the remnants of a circular mud hut and of clay floors. A common late structural feature was a distinctive type of clay fireplace. Burials

were as before but were now accompanied by a variety of grave goods: concave bronze discs or bracelets; white stone lip-plugs; carnelian, rock crystal and glass beads; and, in one case, by a pottery head rest. Also, during this final phase, smoking pipes appeared. At a late date, perhaps even after the abandonment of the site, one typical modern burial was inserted into the mound.

It is apparent that occupation of this site extended over a substantial period and that, although certain aspects of the material culture persisted throughout, there was a change in the basic raw material of tools from stone or bone to iron. A series of samples for radiocarbon dating have already been despatched.

Discussion.

Yonk said he had been doing work on pipes and would like to know more about those from Bornu but Connah said the information was not available until he had studied his material.

Shaw asked if the resemblance between Sao material and that from the top of the Daima mound was based only on the figurines. Connah replied that the pottery also is similar and that the "Sao" type material fades out as one goes down the mound. Small clay figurines of animals, usually cows, and a few anthropomorphic ones occur throughout the mound. They were often very simple, even crude, and were fired.

Asked if there was any flat-based pottery with a round inside configuration, Connah replied that there was but that no pointed-base pots occurred. Thin-walled, well-fired pottery occurred as well as thick pieces of clay that resembled those found with the Sao material by Lebeuf though this was usually not pottery. There were no pot burials in the mound. Much flaked, coarse-grained grindstone material occurred. Clark asked if this had been broken by fire as the modern Lungu do to obtain pieces with which to smoothe bow staves. The small bone tools and the pottery seemed to constitute the bulk of the material culture. This deep excavation should finally throw some light on what the so-called "Sao culture" really means; with increased financial assistance it should be possible to uncover a large area and obtain unique settlement patterns. This dig was an instance of the fruitful results to be obtained from the careful selection of a site following reconnaissance.

(8) P. L. Shinnie. Recent Developments in Archaeology in Ghana.

Since my own fieldwork over the last few years has been in the Nile valley and not in West Africa, I will not discuss it; though I hope the results, particularly of work at Meroe, will not be without some relevance to West Africa. I will confine myself to recent developments in archaeology in Ghana.

Over the last few years there has been a change in emphasis from a primary concentration on Old Stone Age sites and materials to one on later periods, particularly in connection with studies of the comparatively recent historical past of Ghana - that is of the last 400 to 500 years. There has also been a switch from field survey and collection of surface materials to the excavation of single sites selected for the information they may give on historical problems.

This approach was begun in 1961 with my excavation of the 17th century Dagomba capital at Yendi Dabari and has been continued with Ozanne's work on the 17th and 18th centuries in the Accra plains. The work of the Volta Basin Research Project archaeologists has fitted into this scheme and present work is concentrated on sites in Gonja which may be associated with the political and military development of that state in the 17th century. There are now plans to excavate at Begho, an important trading town in late mediaeval times and at Techiman, a site closely associated with the rise of Ashanti.

The existence of two archaeological teams financed by a direct grant from the Ghana Government as a part of the Volta Basin Research Project has been of very great assistance in developing fieldwork and, by the nature of the crash programme they have carried out, has substantially increased our knowledge. The Volta Basin Research Project also carries out Zoological and Botanical research and has made an investigation of indigenous religious cults in the Volta area.

There are hopes of maintaining the archaeological part of this project as a permanent organisation to form an Archaeological Survey of Ghana as a unit within the Department of Archaeology.

(9) R. N. York. The Volta Basin Research Project, Ghana.

The specific problem of rescue excavations in the flood area of the Akosombo dam is being tackled by the Volta Basin Research Project of the University of Ghana at Legon. Two Research Fellows were appointed between 1963 and 1964 who, by spending the whole of the dry season each year in the field, have between them conducted excavations at 22 sites to date. The majority of these have been small operations of the type requiring the efforts of a director, his assistant and about ten labourers for periods of between a month and six weeks; but three have been on an appreciably bigger scale, namely Duncan Mathewson's excavations at the vast site of Kitare and Richard York's work at Bui and New Buipe. As the Newsletter has already carried articles on Kitare and Bui, this note will be concerned only with New Buipe.

This site, which lies on the north bank of the Black Volta about 70 miles southwest of Tamale, a quarter of a mile downstream from the old ferry-crossing on the Kintampo-Tamale road, consists of three mounds running in a straight line parallel with the river. They occupy an area 250 x 60 yards and, starting with the westernmost, will be referred to as Mounds A, B and C. Mound A is free-standing and about 30 feet high; Mound B is about 20 feet high and is joined by a low saddle to Mound C, about 40 feet in height. Owing to the slope of the surrounding terrain down towards the east, however, the summits of Mounds A and C are both the same height (294.25 ft.) above sea level. The eventual level of the flood waters is expected to be 280 ft. a.s.l. All three mounds are approximately oval in plan, orientated along varying axes.

A cutting ten feet wide has been made along a radius of each mound, treating the centre as the highest point, and each of these was divided into ten foot lengths with no baulks between them. The resulting ten foot square control units were treated independently so that during excavation a series of steps resulted, allowing vertical control without transverse baulks but still permitting spoil removal from depths of 30 feet without special equipment. Two of these cuttings, on Mounds A and B, are finished and have resulted in main sections 30 x 100 ft. and 20 x 80 ft. respectively. The third cutting, due for completion in December this year, will measure about 40 ft. x 120 ft.

As the stratigraphy of Mound B was largely destroyed by the burrowings of porcupines some time during this century, it has produced rather disappointing results, but since such archaeological horizons as could be identified corresponded with the completed series from Mound A, it will suffice to discuss only the latter.

Mound A revealed evidence of seven successive occupations, the first of which was upon the pre-mound surface, the then exposed silt-terrace. Scratched into its surface were two tiny graves not more than 18" in depth containing infant burials. No other traces of this people were found and the bones themselves had disintegrated almost completely. Only the alkaline nature of the site, which lies on limestone, had permitted their survival at all.

Separated from this by a stratum of barren, red-brown sand about 2 ft. thick was the material of the second occupation, a thick layer of sherds, charcoal and ash, elaborated under the centre of the mound by a large pit dug through into the silt-terrace. The pottery here represented is of two distinct types - a sophisticated red ware with bands of burnished paint and impressed decoration and a crude, undecorated, yellow-orange ware with thick flat bases. Above this and separated from it by a further sterile stratum, 18" thick, of laminated sands which the excavator believes were wind-deposited, were very large quantities of sherds of Occupation 3, deposited sporadically through a stratum 2 ft. thick indicating a slow build-up. The ware was orange biscuit-paste decorated simply with bands of red paint and some comb impressions. A fragment of a large iron cauldron-rim was found among them and one post-hole indicates the presence of a wooden structure.

This horizon gave way abruptly to a 5 ft. thick layer consisting of three superimposed floors, a mass of shale fragments mixed with mortar and two further floors lying above them. The floors were of varying kinds of gravel (red, white or grey) mixed with the mortar mentioned above, or of a very fine grey material closely resembling cement. The floors were thickened in ridges in the plan of small rectangular structures and it is thought that the mass of shale and mortar rubble represents building collapse redistributed to form a new platform by later occupants of the mound.

Up to and including this phase of occupation the mound appears to have grown accidentally rather than intentionally, but the remaining three phases all show that a definite effort was made to achieve a raised platform on which to build. They are all of essentially the same cultural tradition, characterised by rectangular daub buildings, fine biscuit-paste wares decorated with comb impression and painted designs of varying complexity, tobacco pipes, baked clay bangles of triangular section and a particular kind of spherical container of very finely decorated black paste which is, for the present, being referred to as a snuff-pot.

The dating evidence of the pipes suggests that the earliest of these phases (the 5th on the Mound) belongs to the mid 17th century; Period 6 to the turn of the century; and Period 7 to the end of the 18th century. But it should be noted that dates based on the coastal series may well be inapplicable as far north as Buipe though the sequence is apparently the same in nearly all details.

It appears that a good deal of erosion has taken place on all three of the mounds, material of the latest occupations being washed down the sides to form a layer on the lower slopes sometimes 3 ft. thick. It is interesting to note in conclusion that the only stone tools so far found have been three ground stone axes from this layer.

(10) David Calvocoressi. Rockshelters in Ghana.

During most of the 1965/66 field season I was working with Richard York at Buipe and the rest of the time was taken up with lecturing commitments. However, in early December I was able to spend a few days examining rockshelters with Colin Flight in the Kintampo area of central Ghana. There are large sandstone outcrops to the north and east of Kintampo in which were found many rockshelters. What made the area seem more promising was the presence of Kintampo "Neolithic" material on a number of surface sites within a few miles radius. Of the rockshelters we examined almost all had very little or no deposit. One shelter, at Forikrom (about 5 miles northeast of Kintampo) produced a few small comb-decorated potsherds scattered through 2 ft. of deposit, giving no indication of date except within very

broad limits. At another shelter a stone "cigar", typical of the Kintampo culture, was found on the surface with the same kind of pottery.

In the same area there are clear traces of more recent activity - engravings in rockshelters consisting of geometrical designs, male and female fertility symbols and "owari" boards. Such engravings were found in a number of shelters near Forikrom. Oliver Davies found very similar ones at Bosumkyekye north of Kumasi. He considers that they were carved over a long period and are perhaps connected with some initiation ceremony.

Clearly, rockshelters attracted human attention in fairly recent times, probably within the last few centuries, though engravings such as these cannot be dated; and although it does not follow that this was so in earlier times, it is reasonable to expect that it was. We know that rockshelters were occupied further south, as at Abetifi and also further east in Nigeria. If a rockshelter or cave is found with "Neolithic" or "Iron Age" material, it will be from such a site rather than from open sites that sufficient organic material will be preserved for radio-carbon dating so urgently needed in West Africa.

Discussion on Papers 8, 9 and 10.

The tendency to parochialism in West African archaeology was deplored and a strong plea made for a freer exchange of ideas with no reference to modern political boundaries. Since it was very difficult for West African archaeologists to get their results published the time seemed to be ripe now for a professional journal of West African archaeology, particularly for the English-speaking countries.

Asked why the occupants of the mounds he was excavating lived for so long in one place, which is not a usual African custom, York gave as a theory that, as the mounds were opposite an old, traditional river-crossing, they had been continually occupied and later artificially built up to give strategic advantage. Some of the successive occupations (but not the last three) appeared to have ended very abruptly and some of the buried human remains had definitely suffered violent death; this seemed to bear out the theory of a defensive place.

Eyo suggested that the pots with the small hole in the top, tentatively referred to as snuff pots, might have been drinking pots for the dead, normal pots being used only by the living. It was also suggested that they might indeed have been snuff bottles or even percussion rattles.

(11) Paul Ozanne. A Preliminary Archaeological Survey of Sierra Leone.

During four-and-a-half weeks in February, 1966, I conducted a short survey of the surface remains of the Iron Age in Sierra Leone. The work was commissioned by the Institute of African Studies, Fourah Bay College, which requested my advice on whether the archaeological material of the country was sufficient, in quantity and in interest, to warrant or demand the appointment of a Research Fellow in Archaeology at the University College of Sierra Leone.

Much less time than had been expected could be spent on fieldwork in areas of high potentiality, and two areas of the greatest historical significance, the gold-rich banks of the Pampana River and the area around Kabala and Falaba, which dominates the pass across the Futa Jallon to the ancient empire of Mali, could not be visited. This limitation of the scope of the work enhances, rather than detracts from, a favourable answer to the primary question of the commission. Areas which would not, from other evidence, be expected to be of much interest proved to be so and the archaeology of Sierra Leone, especially that of the last few thousand years, has proved to be of international interest, assisting greatly in the interpretation of the past of West Africa as a whole.

Sierra Leone and adjacent parts are composed of basic igneous rocks with a coastal and valley cover of their decomposition products. In such rocks the silica of the underlying magma is mainly absorbed; as a result there is little left to produce quartz, jasper and other silicate veins which would supply a source of material for the industries of the latter part of the Stone Age. Other rocks, such as basalt and dolerite, could be exploited for the crude implements of earlier times and, ground smooth, served well during the transitional period between the

Stone and Iron Ages, but they are too macrocrystalline for exploitation in the delicate industries of the Later Stone Age. Because of this, every group of quartz fragments - from one to many - discovered during the survey was found to include a proportion of artifacts. Acting upon the geologist's advice, the archaeologist should be able to discover Later Stone Age sites with some ease by simply examining areas containing quartz, jasper and other silicate minerals in utilisable quantities.

From the point of view of the cultivation of foods, Sierra Leone is culturally distinct from the rich areas east of the Bandama River of the Ivory Coast; certainly the quality of the yams there is poor and they are called "hungry man's food". On the other hand, many of the fluvial soils - especially the head-water areas of the rivers - are apparently well suited to the cultivation of rice, the country's staple food. This suggests a close linkage from the time of the introduction of agriculture with the economy of the Upper Niger; and it may partly explain the preponderance of Mende and related peoples in the country.

Why should a country so short in quartz attract Later Stone Age settlers? Two industrial commodities are available in good quantity in Sierra Leone - salt and iron. The exploitation of the latter, it should be noted, is closely related to potting in Mende communities from the Gambia to Ghana, the potter being the wife of the numu or blacksmith. Thus it is possible that, after some long period of underpopulation, Sierra Leone was colonised for the sake of its iron and salt by peoples from the Upper Niger who introduced rice cultivation and pottery but were still using stone where available for cheap and simple tools. If this hypothesis could be substantiated and further developed it would be easier to understand the early origins of the empires of Ghana and Mali.

Some corroboration of this suggestion was found in Kono. There are many small archaeological deposits in the upper reaches of the Maia River; some certainly consisting of mixed material of varying date but with a strong suggestion of an underlying continuum. This consists of crude, gritty potsherds in very worn condition; a few quartz micro-liths, including a transverse arrowhead; miniature triangular ground stone axes - an early type in Ghana but one found there in Iron Age contexts; and rough palettes of a rock as yet unidentified, of a type found as far away as the Congo

and perhaps analogous to those of Ghana which were used for making pottery and which seem to appear there at a time early in the development of agriculture.

Other parts visited yielded traces of such a transitional culture but they were too slight for analysis. Material excavated from a cave in the north by Brown and recently re-examined by Coon in the collections of the Department of Archaeology, Legon, includes, in a mixture of various periods, microliths almost certainly of this date.

Of greatest interest to the historian is what will be described as the Beaker Group, a mediaeval culture complex covering most of Sierra Leone. It is typified by thin-walled vessels (very similar in shape and decoration to those of the West European Beaker Culture of the late Neolithic and early Bronze Ages) of which fine examples are on show in the Sierra Leone Museum. Recently work by the Museum, especially near Bunumbu, has linked such Beakers with the famous steatite figures, the nomoli. The perforated stones, many of such craftsmanship as suggests use as ceremonial maceheads (though the many rough ones of other stone may have been digging-stick weights or kwe), probably belong to this complex and, if so, indicate that the craftsmanship of the Beakers and nomoli was accompanied by ceremonial of a kind suggesting an advanced polity. The survey yielded evidence to date this complex to the mediaeval period. Beaker sherds were found on several sites, mostly ones which bear no signs of European influence. But they were prolific at Imperi, in the residential estate of the Sherbro Minerals Company's rutile industry, round the spot where many copper alloy bracelets were recently found. Several of these have been recovered by Mr. Schultze of the Company and presented to the Sierra Leone Museum. The chances of this wealth in copper coming to such an area, so poor in mediaeval resources, from the Congo, from Takedda or from across the Sahara are very small compared with those that it came from European ships, en route for richer communities. Thus the Imperi material implies that the Beaker complex can be partly dated to the fifteenth or sixteenth century.

Similarly, at Baka on the mouth of the Sierra Leone Estuary, a site further described below, several Beaker sherds were found. Reasons will be given for applying late fifteenth and early seventeenth century dates to this site.

In consequence, it may be suggested that the Beaker complex represents a rich mediaeval society, changing and perhaps declining in the sixteenth century. It is a reasonable guess that its origin lay in the commercial expansion of Mali between the eleventh and fifteenth centuries.

In the Kono district several places yielded fragments of pottery different from, and better preserved than, the Beaker and associated wares. A large collection of such was made at Tankoro, the hill overlooking Sefadu from the west, but here no sign of European influence, not even a fragment of a tobacco pipe (imported or local) could be found. Apart from its pottery styles, Tankoro suggests a great change in social life by its implication of a sizeable nucleated village. From the absence of Beaker material and of pipe fragments it would seem almost certain that the site dates from somewhere between 1450 and 1650. The social change could be ascribed, in that case, to the area's changing in its commercial relationships with Mali from a subordinate to a dominant intermediary position.

Baka ($8^{\circ} 30' N$; $13^{\circ} 5' W$), dominating the Sierra Leone Estuary, presents a site where evidence could be easily obtained to discover what effect the advent of Europe had upon the cultural and economic development of West Africa. It is almost certainly the Manquy mentioned, from earlier information, in 1507 by Valentim Fernandes. A search of the site yielded a European pipe bowl of 1590-1610 but no sign of anything later. As said above, it yields Beaker sherds but there are also thicker, plain ones; some in their fabric, tend towards corkiness. Here, I am sure, excavation would yield a picture of the cultural development from 1400 to 1650 A.D. with dating evidence, true and extrapolated, which could be applied through cultural similarities throughout much of Sierra Leone and perhaps even as far as the ancient capital of Mali itself. I regard Baka as one of the most promising sites in West Africa.

It was a disappointment that nothing definitely ascribable to the period 1650-1800 was found. In the Sierra Leone Museum there are two locally made tobacco pipes, similar in design to those of Ghana of about 1720-1760; there are also pots formed and decorated exactly like ones from Yendi Dabari, Ghana, a site occupied from 1450/1500 to 1713/14. Research into such connections is obviously of great interest to the West African historian, but the survey was not rewarded by any evidence of this kind.

In the Freetown area most of the material collected was from the early settlers of the Colony which lay outside the scope of the present survey. The pottery types were, in many cases, surprisingly reminiscent of Shai, in south-eastern Ghana, and it would appear that anyone interested in the industrial development of the early Colony could gain much from comparative studies of the types of pottery with those of other parts of West Africa.

The material collected is all, at present, in the custody of the Institute of African Studies, Fourah Bay College. The full report, listing all the sites and objects, will be available there and the present writer's ideas about them will shortly be incorporated in a paper offered to Sierra Leone Studies.

It is hoped that this preliminary report has made clear that, in the interests not only of Sierra Leone itself but of much of West Africa, it is most desirable that the means should be found for concentrated and continuous research into the archaeology of the country.

Discussion.

Clark observed that with the poor material, other than quartz, available for stone tools in Sierra Leone, it was often difficult to tell whether objects were implements or not.

Crowder thought that people who have done work in Sierra Leone, such as Newman and Coon, should make more effort to ensure that their results are available to their colleagues. It was agreed that outside scientists should, wherever possible, seek to work in collaboration with local institutions and personnel.

Clark said that Coon had asked him to look at the material he obtained from a deposit 190 cm. deep in a cave at Yengama in 1965. This consisted of pottery, small polished axes, worked schist and quartz, one large tranchet and a very few microlithic tools with a few small cores and scrapers. The upper levels containing the celts showed a fall-off in the percentage of outils écaillés and this might mark a change-over from percussion tools in quartz to ground and polished celts in the upper levels. The celts were all small and there were no large ones with them of the type

sometimes described as "hoes" or as reported from the upper levels at Iwo Ileru. It was suggested that their absence might be related to the type of staple plant cultivated, i.e. rice, for which hoes are not a necessity, whereas the hoe is an essential implement for yam cultivation.

The participants then adjourned to visit the Sierra Leone Museum.

(12) Henri J. Hugot. Archaeology in Senegal, Mali, Mauretania and Guinea.

Since 1963 quite good results have been obtained from work in Senegal, Mauretania and part of Mali though political reasons have made work in Mali somewhat difficult. It is unlikely that any recent work has been done in Portuguese Guinea.

Senegal. A tumulus complex between St. Louis and Poder has yielded pottery, bronze and a little gold. The original work was done 20-30 years ago but has recently been republished in greater detail.

The pottery from Bandiala in southern Senegal has recently been restudied and shows interesting forms with lids and strip handles, conical shaped pots and basket impressions. Twenty complete pots have been reconstructed. All are similar except for two found at the head of a burial which are black and have three ridges round the body. There are also beads and bronze bracelets; the date seems to be 14th century.

A young American from the Smithsonian has been working on shell mounds near the Gambia border. These have all proved artificial and have yielded worked flint, potsherds and a hippo tooth.

No serious excavation has yet been done at Cap Manuel in the shell mound areas. The material has been variously described as historic, Neolithic and Lupemban/Sangoan.

An inventory is also to be made of the megalithic monuments in the Gambia river area.

Mali. Studies have been made on the cliffs at Bandiagara, south of Mopti, by a team from Rotterdam, but it has not been possible to examine the material recovered as this has been removed to Holland.

Good Neolithic, with cultivated cereals as at Meniet, occurred in the Tilemsi valley.

Mauretania. Investigation of a cemetery on Tidra Island produced old Muslim pottery, skeletal remains and ancient Arabic inscriptions.

Pottery from Tagdaoust resembled that from the Maghreb but no connection could be proved. This area formed the boundary between the Berber pottery influence of northern Africa and that of black Africa. There will shortly be a series of dated pottery finds covering most of this region.

In southeastern Mauretania, near the Lac de Tichit, many Neolithic villages have been found. Tichit was occupied from Neolithic to mediaeval times and then abandoned, the 12th century being its heyday. The University of Dakar has a three year plan for a team study to be made there combining archaeology, pedology, hydrography, etc.

At Agoudir, immediately north of Chinguetti, an old Portuguese fort has been found. This was well placed for defensive purposes and was constantly rebuilt during its history. Recent erosion of the glacis revealed many potsherds and the site is now protected.

Commercial development nowadays frequently raises the problem of rescue archaeology.

Discussion.

The black pot from Bandiala with the three ridges was compared with slightly similar pots obtained by York from his mound excavations, but it was agreed that the Bandiala pot appeared much finer.

Asked if the flakes occurring in the shell mounds in Senegal were Neolithic, Hugot replied that some undoubtedly were but some were associated with iron and must be more recent. People in the Sahara, for instance at Akabl, still strike off flakes to use for cutting leather; no cores are

found; and present day shell fish eaters are continually making or adding to mounds of shells. In 1952 at Tit in the Hoggar, Hugot saw a stork killed by a Neolithic stone arrowhead! The problem is not, therefore, simple.

The evidence at Tichit for agriculture was pollen in the soil, as at Meniet, and field systems seen from the air.

Third and Fourth Sessions - 29th June

DISCUSSIONS ON TERMINOLOGY

The greater part of these sessions was devoted to a consideration of the recommendations concerning the terminology used in African archaeology, proposed in July and August, 1965, by the symposium of African archaeologists and Quaternary scientists, held at Burg Wartenstein, Austria, the European headquarters of the Wenner-Gren Foundation for Anthropological Research.

The deliberations of this symposium at Burg Wartenstein, together with the recommendations in full, are at present with the Chicago University Press and will be published in January, 1967, under the title of Background to Evolution in Africa, edited by W. W. Bishop and J. D. Clark.

A short analysis of the implications of these recommendations for African archaeology, together with the text of the twelve that deal specifically with archaeology, has been sent for early publication in the South African Archaeological Bulletin, Cape Town. Entitled "Precision and Definition in African Archaeology", it was prepared jointly by J. D. Clark, G. H. Cole, G. Isaac and M. R. Kleindienst. Copies of this were circulated in advance to the participants of the Sierra Leone meeting.

The Chairman pointed out that it was hoped the volume to be published in January, 1967, would be read by all delegates to the forthcoming Pan-African Congress in Dakar. It was hoped to ensure that every intending delegate would be able to purchase a copy of the book and that as many African archaeologists as possible would be able to attend the Congress where the recommendations would be discussed, amended and adopted or discarded, and a new, authoritative system of terminology be evolved to make archaeology in Africa - or Palaeo-anthropology, as it might be called - a more precise and exact discipline.

The Vith Pan-African Congress on Prehistory and Quaternary Studies.

Hugot informed the participants that the Senegal Government had just confirmed its invitation to hold the Congress in Dakar in December, 1967. The conference proper

would be from December 15th-21st with one excursion during the meetings to the shell mounds at Joal Fadioute. Before the meetings - from December 5th-14th - there would be an excursion to the Acheulian and Aterian sites of Mauretania and the marine Quaternary levels in Senegal. After the conference there would be a visit to the megaliths at Sine Saloum, from December 22nd-24th. The conference would have special symposia on Shorelines, C 14 Dating, Nomenclature and the Neolithic.

Recommendations on Terminology.

Participants then considered the twelve recommendations in the circulated paper, firstly from the point of view of archaeology as a whole and secondly from that of specifically West African archaeology. These recommendations (set out below and indicated by a vertical line in the margin) had been made at Burg Wartenstein only after considerable thought and discussion on the part of a number of workers, both French and English, who had succeeded in reaching a remarkable amount of agreement.

1. Cultural-Stratigraphic Nomenclature.

Arising from discussions during the symposium, it became apparent that a graded system for the classification of archaeological units is needed to show clearly the value of different levels of archaeological abstraction.

In pursuance of the recommendation suggesting the inclusion of a cultural-stratigraphic nomenclature in the stratigraphical classification of the African Quaternary, the following points have been considered: (a) that there is no generally agreed term used by all prehistorians in Africa for any cultural-stratigraphic unit at any level of definition and (b) that many terms in current use have a number of different connotations.

In consequence, it is recommended that these cultural-stratigraphic units be designated by the following terms, as defined here: Industrial Complex, Industry, Phase, Archaeological Horizon (alternatively Archaeological Occurrence).

An Industrial Complex is that grouping of Industries (vide infra) considered to represent parts of the same whole.

Note: Except where long established usage prevails, this

term is to be coupled with a name based on an acceptable type site.

Examples: Acheulian, Mousterian, Capsian, Magdalenian.
Superseded synonyms: "Culture".

An Industry is represented by all the known objects that a group of prehistoric people manufactured in one area over some span of time.

Note: This term is to be coupled with a locality name, or a cypher, which qualifies a name at the Industrial Complex grade.

Examples: Magdalenian VI, Mousterian of Acheulian tradition, Capsien typique, Moroccan Acheulian III.

Superseded synonyms: usages of "Culture" as in "Kenya Capsian Culture", "Pietersburg Culture", "Rhodesian Wilton Culture", "East African Acheulian Culture".

Phase. An Industry may comprise a series of successive or, in some cases, distinctive, contemporaneous Phases. In the latter case the term Phase has the meaning of (industrial) facies.

Note: The term will generally be made specific by being coupled with a type-locality name or a cypher denoting sub-division of an Industry.

Examples: (successive) Magdalenian VIa and VIb.
(contemporaneous) Upper Capsian Tebessa facies.

Superseded synonyms: "Variant" as in "Bembesi Variant of the Sangoan Culture" or "Orange Free State Variant of the Wilton Culture". "Stage" as in "Stage A of the Kenya Capsian Culture".

An Archaeological Horizon, alternatively Archaeological Occurrence is the minimal cultural-stratigraphic unit which can be defined at any place.

Note: This term constitutes a point of contact with stratigraphy; it denotes the cultural material in its context. The term will normally be coupled with a reference to locality and to the rock-stratigraphic units involved.

Examples of Horizon or Occurrence of cultural material:

- (1) (in) a single hearth in a cave deposit, e.g. Taforalt, Morocco.
- (2) (on) an occupation surface where cultural material has been abandoned, e.g. Olduvai Bed I Formation FLK.I, Main, Tanzania.
- (3) (at) an atelier, e.g. at Khami Waterworks, Rhodesia.
- (4) (in) any grave.

- (5) (in) an accumulation of food and occupation debris, e.g. Kangila, Zambia.
- (6) (in) a fossil soil, e.g. Horizon Collignon, Tunisia.
- (7) (in) a river gravel, e.g. Klipplaatdrif, Vaal River Valley, South Africa.
- (8) (in) lacustrine deposits, e.g. Ain Hanech, Algeria.
- (9) (in) spring deposits, e.g. Ain Fritissa, Morocco.
- (10) (on) a land-surface with cultural material, e.g. Kalambo Falls Rubble II, Zambia; Cape Hangklip, South Africa, surface occurrence.

Discussion.

It was obvious that there was a need for revision of the terminology in use in Africa since the first Pan-African Congress in 1947 and this recommendation aimed at obtaining greater precision and uniformity by defining the levels of archaeological abstraction beginning with the smallest unit - a single artifact in its context.

Ozanne drew attention to the fact that for practical purposes it is necessary to treat cultural evolution as proceeding by steps. The time span necessary for the definition of a particular culture must vary with the area involved.

Daniels pointed out that classical typology is based on the interpretation of human intention and that concern should rather be with pure typology based on measurement of form and substance. Giving an exposition of the method involved he showed how typology must be based on the clusters revealed by the measurements within the field of reference (which cannot, usually, be very wide). Definitions of types made in any other way will be subjective rather than precise and a terminology on such a basis will appear imprecise in a few years' time, just as the 1947 terminology has done.

Discussion showed that participants appreciated the mathematical approach to the determination of types; unfortunately it was not yet practicable on a wide scale as archaeologists did not always possess sufficient mathematical knowledge and the length of time involved was frequently a deterrent. It was pointed out that archaeological types were unlike the genotypes of the biological sciences and do not necessarily fall into discrete units.

- (5) (in) an accumulation of food and occupation debris, e.g. Kangila, Zambia.
- (6) (in) a fossil soil, e.g. Horizon Collignon, Tunisia.
- (7) (in) a river gravel, e.g. Klipplaatdrif, Vaal River Valley, South Africa.
- (8) (in) lacustrine deposits, e.g. Ain Hanech, Algeria.
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brought into line with current conceptions and practices whenever this may be necessary. As in geology and other sciences, responsibility rests also with the editors of archaeological journals to ensure that the official, agreed terminology is adhered to.

2. Formal Definitions in the Nomenclature of Prehistory.

Because of the many terms that have been employed in the literature to describe cultural-stratigraphic units for which there is either inadequate or no precise published definition, there exists considerable confusion; this makes valid comparison and correlation of archaeological units either imprecise or impossible. In order to remedy this position and to standardise the use of names applied to these units, it is recommended that the following criteria should be recognised as the essential basis for adequately defining and naming cultural-stratigraphical units:

- (1) The publication of adequate dating evidence should be made to fix the position of the unit in a stratigraphic sequence by relative and/or isotopic methods.
- (2) The publication should include adequate illustrations and full textual description, which shall mean systematic and quantitative description and comparison in terms of the relevant, defined, reproducible criteria. Such definition should take into account the results of statistical testing where relevant.
- (3) The publication of a clear statement should be made of the cultural-stratigraphic unit which is being defined, including a name.

Discussion.

These suggestions were noted with approval with the warning that care should be taken that statistics were not used ignorantly and thus incorrectly.

3. Towards Comparability of Typological Procedures in the Study of African Prehistory.

In order to improve comparability of classificatory procedures in the study of African prehistory, it is recommended that principles of systematic typological analysis

(list of defined types and basis for their recognition) be adopted:

- (1) in order to characterise as precisely as possible industrial entities;
- (2) in order to provide a basis for more precise comparisons between industrial entities, both within Africa and between African entities and those of other areas.

It is highly desirable that those working on problems in African prehistory make reference, where relevant, to existing classificatory systems formulated for similar artifactual material and that they give, wherever possible, an analysis in the terms of such systems. For example, reference might be made to the procedures of F. Bordes (1), D. de Sonneville-Bordes and J. Perrot (2) and J. Tixier (3, 4).

In consideration of the many similarities between the oldest known artifacts in Africa, it is further recommended that support should be given to the establishment of a list of artifact classes based on the methods of analysis of L. Ramendo (5) and of M. D. Leakey (6).

- (1) Bordes, F., 1961, Typologie du Paléolithique ancien et moyen, 2 vols. Bordeaux.
- (2) Sonneville-Bordes, D. de and J. Perrot, 1954-56, Lexique typologique du Paléolithique supérieur, Bull. Soc. prehist. franc. 51, 327-335; 52, 76-9; 53, 408-12, 547-59.
- (3) Tixier, J., 1958-59, Les pierres pedunculées de l'Atérien, Libyca (Anthrop. Préhist. Ethnogra.) 6-7; 127-158.
- (4) Tixier, J., 1963, Typologie de l'Epipaléolithique du Maghreb, Centre de recherche anthrop., préhist. et ethnogr., Alger. Mem. 2. 1-211, Paris.
- (5) Ramendo, L., 1963, Les galets aménagés de Reggan (Sahara), Libyca, 51; 50.
- (6) Leakey, M. D., in Background to Evolution in Africa, ed. W. W. Bishop and J. D. Clark, Chicago University Press, forthcoming.

Discussion.

It was stressed that Stone Age and Iron Age should cease to be regarded as separate streams but as part of a single discipline, particularly as it was seldom possible to decide where one ended and the other began. Current analytical procedures were equally applicable to both.

Willett advocated the preparation of a lexicon of pottery types with illustrations of decoration and standardised nomenclature, citing ethnographic parallels where possible.

Clark stressed the need to make use of current classificatory systems when making proposals for a standardised terminology.

4. Towards Clarification of Archaeological Terminology in Africa.

(1) It is now apparent that a number of terms formally introduced at the Pan-African Congress on Prehistory (Nairobi, 1947) and at the 3rd Pan-African Congress on Prehistory (Livingstone, 1955) are ambiguous and have led to confusion. It is recommended to the forthcoming (1967) Pan-African Congress that the following terms be abandoned:

(a) Terms which are neither purely cultural-stratigraphic nor time-stratigraphic: Earlier Stone Age, First Intermediate, Middle Stone Age, Second Intermediate, Later Stone Age (cf. 3rd Pan-African Congress on Prehistory, Livingstone, 1955, Resolution 6, p. xxxiii).

(b) Terms which do not accord with recommended nomenclature: Chelles-Acheul, Pre-Chelles-Acheul (cf. Pan-African Congress on Prehistory, Nairobi, 1947, Resolution 16, paragraphs 1, 6, 7).

(2) Terms which, outside Africa, have been abandoned (e.g. Chellian, Levalloisian, etc.) should no longer be applied in Africa. A number of other terms for cultural-stratigraphic entities clearly defined outside Africa (e.g. Clactonian, Micoquian, etc.) should not be used in Africa unless the application can be clearly justified. Similarly, it is recommended that the use of compound terms (e.g. Clacto-Abbevillian, Acheuleo-Levalloisian, Levalloiso-

Mousterian, etc.) neither part of which may be appropriate or defined, be discouraged.

(3) It is recommended that the use of terms which fail to follow the proposed procedure for nomenclature (see Recommendations 1-3) be discouraged. Therefore, such terms as "Pebble Culture", "Civilisation du galet aménagé", "Civilisation du biface", "Handaxe Culture", "Flake Culture", "Blade and Burin Culture" are unsuitable and should be abandoned.

(4) It is recommended that those cultural-stratigraphic terms now in use in Africa which are already clearly defined and appropriate (e.g. Oldowan, Ténéréan, Acheulian, Mousterian, Aterian, Pietersburg, Capsian, Kéréman, "Néolithique de tradition capsienne", "Néolithique de tradition soudanaise") continue to be applied following procedures set forth in Recommendations 1-3.

Discussion.

It was appreciated that terms such as "Middle Stone Age", "Iron Age", etc. were imprecise and that their use should be discontinued in serious archaeology. However, it was felt that these were convenient labels for informal use, particularly for popular or semi-popular writing. It was not valid to try to fit a particular site into an arbitrary division; what is important is an accurate, precise description of the contents of the site, its stratigraphic associations and radiometric age.

5. Techniques of Stoneworking.

A. Direct Anvil. The expression "block on block" (adopted by the Pan-African Congress on Prehistory at Nairobi in 1947, Resolution No. 16, para. 2) and its French equivalent "sur enclume" have proved unsuitable. It is recommended that these be replaced by the expression "sur percuteur dormant"(1) and "direct anvil", which convey more exactly the nature of the technique.

B. Levallois. In order correctly to refer to the Levallois method of flake production, designated as "faceted-platform technique" by the Pan-African Congress on Prehistory, 1947 (Resolution No. 16, para. 3), it is recommended that only the term "Levallois" be used as defined in F. Bordes,

1961 (1), namely the method which produced all flakes ". . . with the form predetermined by a special preparation of the core before the detachment of the flake. This does not in any way affect the type of the talon of the flake, which may be plain, faceted, convex, dihedral, according to the various kinds of striking platforms presented by the core itself". (2)

Note: It should be noted that the term Levallois is more restrictive than this extract from the definition implies (refer op.cit.).

(1) Bordes, F., 1961, Typologie du Paléolithique ancien et moyen. Publications de l'Institut de Préhistoire de l'Université de Bordeaux, Mem. 1. p. 13.

(2) Ibidem, p. 14.

Discussion.

This recommendation aroused no comment.

6. On the Use of the Term "Neolithic".

Owing to the great variety of the definitions of the term "Neolithic", it is recommended:

(a) that it should be used with the greatest care and that it should be clearly defined in all cases;

(b) that the definition of the term Neolithic as applied to cultural-stratigraphic units be further discussed at the forthcoming Pan-African Congress on Prehistory and Quaternary Studies.

Discussion.

This is particularly important for West Africa and the participants were pleased to note the proposed inclusion of a symposium on the use of the term "Neolithic" at the forthcoming Pan-African Congress. The word itself implies simply "new stone tools" and this is misleading since later discoveries have shown that all the traits of material culture usually regarded as being the criteria of "Neolithic"

culture, may be present where there is no food production at all. Since the object is to describe a new way of life some term is required that implies food production. It is also important to divorce this from any time connotation. A distinction should be made between 'agriculture', implying cultivation in fields (e.g. of rice) and 'vegeculture' for the cultivation of such crops as yams. It might also be necessary to have a word to describe the cultivation of tree crops such as the oil palm.

The general concensus of opinion with regard to the "Neolithic" of the savannah and forest areas of West Africa was that, at present, not enough is known to be able to establish that food production was actually practised by the makers of the later artifact assemblages - with celts and pottery - in the rock shelters. Without direct evidence it is always difficult to be certain and such evidence at present is especially hard to come by in West Africa. Paly-nology could be of the greatest importance here. In a food producing economy open sites would be favoured for habitation and these are not easy to find, hence the importance of the Taruga and Ntereso sites.

7. Terminology of the Iron Age.

Arising from the discussions during the symposium, it is recommended that:

(1) because "Protohistory" expresses a state of knowledge and has no archaeological implication, a purely archaeological nomenclature should be substituted in tropical Africa;

(2) the following principles be adhered to when using descriptive terms: -

(a) that technological terms may be used to describe artifacts but should not be used in naming an Industry or Industrial Complex (formerly "Culture").

(b) that in using geographical terms, the names of physical features are more desirable than those of inhabited places and that vernacular names are preferable to imported names. The use of the ending "ian" in conjunction with vernacular names should be avoided.

(c) that ethnic and linguistic terms should not be used in the designation of cultural-stratigraphical units.

Discussion.

This recommendation was endorsed and it was agreed that ethnic and linguistic terms should not be used nor should the ending "ian" with vernacular names.

8. Ethno-Archaeology.

(1) The conference stresses the value of ethnographic and historical sources as a means of providing data for the interpretation of prehistoric settlement patterns, technology and economic practices. It urges the continuation and extension of systematic ethnographic studies of suitable living populations in Africa with specific reference to the interpretative problems facing archaeologists.

(2) It is urged that priority should be given to intensive research work on the various collections of modern (19th to 20th century) African pottery in institutions both in Africa and elsewhere. The object should be the compilation, by description and drawing, of regional catalogues detailing the form, fabric, decoration, function, trade and manufacture of such wares.

It is proposed that this recommendation should be brought to the attention of the Permanent Council of the International Congress of Anthropological and Ethnological Sciences.

Discussion.

The importance of such work was appreciated. Shaw mentioned the Experimental Archaeological Reserve being set up in a forest area near Ibadan, where deserted village sites were being studied. The value of this was stressed and the need for similar experiments in savannah country and in the Sahara. Reference was also made to work being done on Kalahari Bushman settlements.

The urgent need for a corpus of modern pottery types from various regions was again stressed as also of ethnographic material for comparative purposes. Some work is already being done on these lines in West Africa and it was thought that museums might help since they are closely concerned with such material, its acquisition and documentation.

9. Technical Drawing of Prehistoric Tools.

In order to overcome as rapidly and as completely as possible the inconvenience caused by the lack of pan-African unity in the nomenclature of forms and terminology of techniques applied to stone tools, it is recommended that general use be made of a system of graphic representation based upon the typological analysis of artifacts which will be comprehensible without the aid of explanatory text.

Reference is made, for example, to the drawing methods used by the Service de Typologie, Laboratoire de Préhistoire, Muséum National d'Histoire Naturelle, Paris, Institut de Paléontologie humaine, 1, rue René Panhard, Paris, 13e, as exemplified by the Fiches typologiques africaines.

Discussion.

Publication without adequate illustration is valueless for archaeological purposes and standardisation of method is desirable. Line drawings, rather than photographs, should be used, though the latter may be used in addition.

Attention was drawn to the series of superb casts of fossil material being prepared for distribution by the Wenner-Gren Foundation, as also to the casts of stone implements available at the Laboratoire de Préhistoire in Paris, prepared under the direction of Professor L. Balout and his associates. These can be invaluable where it is not possible for workers to see the original specimens and in the future it is to be expected that their availability will greatly simplify comparative work.

10. African Typology Card Catalogue.

In order to arrive as soon as possible at a unified nomenclature of forms and types and a terminology of techniques in the field of African Pre- and Proto-history, it is recommended that one system of typology cards be applied to the whole of Africa. This system should be based on the cards already being produced by inter-regional collaboration for the northwestern quarter of the continent.

It is also suggested that the next Pan-African Congress should create a permanent executive committee to deal with

problems of standardisation, mechanical classification, translation and circulation of the African typology cards.

Discussion.

Hugot referred to the specimen folders of the Fiches typologiques africaines. The aim is to build up as complete a collection of type cards as possible to cover the whole of Africa and to distribute these to archaeologists working there.

11. Inventaria Archaeologica Africana.

In order to promote uniformity of presentation in the publication of African prehistoric material, it is recommended that any new Phase, Industry or Industrial Complex defined in the course of future investigations (e.g. re-definition of Wilton from a site other than the type site which is now destroyed), be published in Inventaria Archaeologica Africana.

Discussion.

The Inventaria is edited by J. Nenquin at Tervuren, Hugot stated that he was doing a set of illustrations of the Bandiala material for the Inventaria and Clark said that one was proposed for the Kalambo Falls site.

12. Use of the Metric System.

It is urged that archaeologists working in Africa adopt the metric system for their measurements, in the interests of standardisation and for ease of comparison.

Discussion.

This recommendation received unanimous support and Clark said that the Wenner-Gren Foundation of New York had expressed interest in helping archaeologists who wished to change to the metric system, but who were unable to obtain the necessary equipment. Shaw reported that archaeologists in Nigeria had independently agreed to adopt the metric system, but the change-over was gradual on account of the difficulty of replacing certain equipment.

Summing up.

The Chairman said he hoped that the discussion had given participants the opportunity to become conversant with the recommendations of the Burg Wartenstein symposium, as also to see something of their implications for African archaeology as a whole. They merited much more careful examination than was possible at that moment; he hoped that participants would discuss them among themselves after returning to their own countries so that the Dakar Congress would have the benefit of a united West African point of view on this most immediate of all problems facing palaeo-anthropologists working in the continent today.

PUBLICATION

Journal of West African Archaeology.

It was agreed that sufficient good material was now being produced in West Africa to warrant the creation of a professional archaeological journal. In the past excavation reports had gone into the J.R.A.I. or the South African Archaeological Bulletin but this had usually taken a long time. Moreover the existing historical journals were not of the correct format for such reports. To a great extent French-speaking archaeologists were catered for by the publications of I.F.A.N. but it was felt that any new journal should print in both English and French, with a summary of each article in the other language.

It was suggested that the Journal would need a capital sum of about £2,000 and that it might be expected to begin with some 750 subscribers rising to 1,000. Professor Shaw, who had already started the very popular "West African Archaeological Newsletter" might be the first editor, assisted by a small committee.

Shinnie proposed and Willett seconded that a "Journal of West African Archaeology" should be started and that a committee should be appointed to take the necessary steps to bring this about. It was suggested that the committee should consist of Professor Thurstan Shaw as editor and Mr. David Calvocoressi, Mr. Ekpo Eyo and Dr. Henri J. Hugot.

This was agreed unanimously, a recommendation on this subject being subsequently drawn up.

Professor Shaw and the other nominees agreed to serve as the committee provided that other members might be co-opted if necessary. It was suggested that UNESCO might be a possible source of the capital sum needed and the meeting authorised the committee to make whatever arrangements were considered necessary to finance and launch the Journal. Shaw said he would probably aim at one issue a year to begin with.

West African Archaeological Newsletter.

This had been started as a means by which archaeologists working in isolation could keep in touch with each other.

Contributions were entirely informal and often of a preliminary nature so that reproduction was not permitted without the consent of the individual author. It had proved very popular, not only with the archaeologists for whom it was intended but with libraries, universities and workers elsewhere, and 250 copies of each issue were now roneo'd and distributed.

It was agreed that the informal newsletter should continue as at present and that workers should send their contributions as usual to Professor Shaw. If he found that he could not deal with both the Journal and the Newsletter he would find someone else to take over the latter. It was suggested that someone in Ghana might be willing to take it on and that it might be necessary to levy a small charge to cover reproduction and postage costs.

POSTS AND TRAINING FACILITIES

A Permanent Archaeologist for Sierra Leone.

From the preliminary report submitted by Ozanne it was clear that, if archaeological work could be carried out in Sierra Leone, this would open up a new and important region to West African archaeology. Crowder said he was very grateful for this report and would be delighted to have an archaeologist attached to the Institute of African Studies at Fourah Bay College. All possible facilities would be provided but financial assistance from outside the College would be essential. It was suggested that the Nuffield Foundation might be approached in this connection and Professor Shaw said he was willing to see the College Principal about this in England.

It was agreed to recommend to the University and the Government of Sierra Leone that archaeology should be included as a subject in the College curriculum.

Sierra Leone Museum.

The participants had been most impressed with the material in the Museum and with what had been achieved there with very slender resources. The local people were also very interested and visitors often numbered 3,000 a day. It was agreed that every effort should be made to extend museum services in Sierra Leone and a recommendation was drawn up to this effect.

Training in Archaeology in West African Countries.

Senegal

The University of Dakar has training in prehistory as part of the history degree but in future there is to be a degree in prehistory.

Ghana

The University of Ghana already has a post-graduate diploma course in prehistory - shortly to become an M.A. - and is prepared to provide half the degree in archaeological subjects when two-subject honours degrees are instituted.

Nigeria

Nsukka offers three archaeology courses for those doing a degree in history.

Ife has had an archaeology paper in its history course and this is to be continued.

Ibadan has a Research Professor in archaeology but it has always been the intention that after a period of concentrating on research, teaching should be offered in the subject. It was emphasised that it was undesirable for archaeology to be treated solely as a sub-department of history, particularly as it was becoming necessary to combine archaeology with science subjects. The teaching department at Ibadan should not be at the expense of research and no one would pass a course in archaeology who had not carried out a satisfactory piece of fieldwork.

Lagos will have an introductory course of eight lectures for first year undergraduates in 1966/67.

It was clear that West Africa was much better provided with facilities for training in archaeology than sub-Saharan Africa. So far only a few local students had shown a desire to become trained archaeologists but this is far from discouraging as the numbers required are not large and the training is comparatively new. British archaeologists wishing to work in Africa were also not numerous, though usually of good calibre, often young graduates.

Fifth Session - 30th June.

MISCELLANEOUS MATTERS

Chairman - Thurstan Shaw.
Recorder - Frank Willett.

Further Meetings.

Participants emphasised the value of holding regular meetings such as the current one. The beginning of the university long vacation or a weekend seemed to be good times. An offer was provisionally made to hold the first at Ibadan. Members discussed the implications of the suggested Burg Wartenstein terminology for West Africa and all were asked to prepare papers for the next meeting on how the proposed revisions would affect their own fields.

Pottery.

Several aspects of the problem of pottery classification were considered. In particular it was felt undesirable to continue to use the term "terra cotta", pottery sculpture being regarded as more appropriate. Various problems of classification were discussed including hardness, the use of vernacular names and the determination of pottery types by statistical means.

It was decided that this subject should be discussed at next year's meeting, for which Willett and York were asked to prepare papers for advance circulation and all members were requested to bring to the meeting examples for discussion and photographs of modern techniques.

Co-operation in Excavation.

Connah said that the lack of assistants often reduced the scale of archaeological operations and advocated the co-operation of archaeologists on major projects. Shinnie considered that this would be wasteful and said he had always managed with volunteer assistants, graduate students being particularly useful. Hugot stated that he, personally, had no need of such co-operation as his team of ten people was quite adequate, but de Beauchêne said he was alone with only a driver.

Various field work and staffing difficulties were discussed and it was suggested that attempts might be made to

interest graduate students in British and American universities in West African problems and to persuade them to come out and help on excavations. It was generally felt that ad hoc arrangements for inter-university and international co-operation could usefully be employed to deal with specific sites. It was suggested that a sum of £5,000 a season for 100-150 labourers would be necessary.

Register of Sites and Find Places.

This question was discussed in general and it was stated that Ibadan is now making a register for Nigeria and that when the punched card system employed has been more fully worked out, it will be made generally available. Reference was also made to the system in use in Eastern Nigeria already described by Hartle.

Oliver Davies at Legon has such a register which includes parts of Nigeria, a copy of which may be made available to the University when he retires.

The difficulties of finding sites again and of providing exact co-ordinates were considered. It was suggested that, in addition to latitude and longitude, reference should be given to local features and a description provided of the access route.

Beads and Bead Making.

After a few remarks on aggrey beads it was decided not to discuss this topic. De Beauchêne mentioned the need for a corpus of modern indigenous beads.

Palynology.

The enormous scale of the problem was emphasised, there being, for instance, 600 species of palm alone. West Africa was lagging behind in palynological study and it was agreed that the need for a palynologist there was pressing, though the difficulties of establishing such a post were appreciated.

Acknowledgements.

The participants expressed grateful thanks to their hosts at Fourah Bay College whose kindness and hospitality had made the meeting both possible and most enjoyable.

The recorder for the first two days (Mrs. B. C. Clark) was thanked for taking notes and for undertaking to type out the whole of the proceedings; and Professor Thurstan Shaw for offering to circulate these as a special number of the West African Archaeological Newsletter.

Sixth Session - 30th June.

The last afternoon of the conference was devoted to finalising the wording of resolutions, reports etc.

The following communication was received from Dr. Henri J. Hugot:

The Meeting of West African Archaeologists.

Firstly, it gives me great pleasure to thank, on behalf of IFAN at the University of Dakar, the organisers of the meeting at Fourah Bay College. Thanks to the great kindness of the authorities, it was held under the auspices of the Institute of African Studies so competently directed by Mr. Michael Crowder, and was a complete success from the material, personal and scientific points of view. I also wish to thank Professor J. Desmond Clark whose presence has been a great encouragement for us all.

There is no longer any question of the great interest such meetings hold and the main point is now to ensure their periodic recurrence in order to maintain that contact necessary among specialists who are prevented by the spacing of congresses from more frequent reunions. The proposal for an annual meeting may well become the means by which we can overcome the difficulties of language, the handicap of distance and the diversity of the cultural elements which constitute our basic interest. The first necessity is for an exchange of information. It is to assist in this that the Department of Prehistory and Protohistory at IFAN proposes to publish, under my direction, a supplement to the Bulletin of ASEQUA entitled "Senegal Prehistory" (Préhistoire-Senegal). This will allow, at least at first, the relatively rapid diffusion of very short notes on work in progress, research, projects, discoveries, etc., and will start to appear in December, 1966.

This meeting itself has led me to make several observations, the essential points of which are:-

(1) Concerning "Protohistory": in West Africa this term is not a happy one and covers historic as well as prehistoric material. As for "Neolithic" we must concentrate our efforts on the redefinition of this term as we are here dealing with an extremely confused situation which prejudices the conduct of our work. While it may be possible to use a geographical name plus the ending "...ien" or "...éen" (e.g. "Tidikeltien", "Ténéréen") on the other hand it is hopeless for those regions with no topographic names. The use of such terms, incidentally, removes any connotation of time from the industries to which they are applied. Finally, it is difficult to assert that what has hitherto been considered as "Neolithic" no longer is, unless a systematic revision has supplied a sound basis for judgement.

(2) The general mediocrity of the resources placed at the disposal of specialists in our disciplines is essentially due to a lack of understanding of our work and its results by the great majority of people. It is, therefore, plainly a problem of basic education. It would seem to be essential in West Africa to combine our experience to produce manuals of prehistory and protohistory, particularly for pupils of secondary schools and by so doing to call the attention of interested governments and of UNESCO to a highly educational project.

(3) The participants in the present meeting have put their finger on the difficulties encountered by some of our colleagues, both English and French, in attempting to carry out their scientific mission without the most elementary means. It seems to me to be vital that we should, in our meetings and congresses, reiterate solemn appeals to the highest national and international authorities so that the necessary modicum of stability and facilities be accorded to those who are undertaking the task of bringing to life the past of the countries in which they work.

(4) To facilitate reciprocal knowledge of each other's work, programmes, laboratories etc., I suggested in 1964 the production of an "Annual for workers in Pre- and Proto-history in West Africa". Such a work must depend on friendly collaboration between the specialists of each country and I am prepared to take up this project on the basis of replies to a questionnaire which will shortly be circulated to everyone.

(5) In so far as the question of typology is concerned, anyone who wishes to do so may receive a specimen of J. Tixier's "fiches typologiques" which I will send on request from IFAN. These cards, and the plates of Nenquin's "Inventaria Archaeologica Africana" seem to me to offer the complete solution to our problems in respect of typology. Those raised by terminology, general or specific, seem to me to be much more complex. Indeed, each term requires an exact scientific definition and a meticulously similar translation into other languages. This is apart from the proposed "International Lexicon" which should be undertaken as a matter of urgency, even if it should later be necessary to have several revisions.

RECOMMENDATIONS AND RESOLUTIONS MADE BY THE CONFERENCE OF
WEST AFRICAN ARCHAEOLOGISTS, JUNE, 1966.

1. Appointment of an archaeologist, Fourah Bay College.

The participants noted with considerable interest the results of the preliminary archaeological survey carried out by Mr. Paul Ozanne earlier in 1966 at the invitation of the Institute of African Studies, Fourah Bay College. This, together with the material preserved in the Sierra Leone Museum in Freetown, shows the high potential for archaeological research existing in the country. It is only by such research that the unwritten past of Sierra Leone will be revealed. Accordingly, the participants recommend that a post of archaeologist should be established in the Institute of African Studies to initiate research and teaching in this subject and that adequate facilities should be provided to enable the holder of such a post to carry out his work effectively.

2. Sierra Leone Museum.

Having visited and studied the materials in the Sierra Leone Museum, the participants recognise the importance of the collections gathered there and the very great interest shown in them by the extraordinarily large numbers of visitors. They were also impressed by the quality of the work already done with slender resources. They accordingly recommend, as a matter of urgency, the provision of a proper building and professional staff so that the Museum may be able to play adequately its important role in this developing country by displaying and conserving the cultural heritage of the peoples of Sierra Leone.

3. Journal of West African Archaeology.

The quantity and importance of the archaeological research now being carried out in West Africa, for which there is at present no adequate outlet in publication, shows there is an urgent need for a professional archaeological journal to cover West Africa. The conference therefore recommends that a Journal of West African Archaeology should be established. Professor Thurstan Shaw was asked to undertake the editing and a committee consisting of Dr. Henri J. Hugot, Mr. Ekpo Eyo, Mr. David Calvocoressi and the prospective editor was formed to

attempt to find the necessary finance and to take all other appropriate steps to implement this recommendation.

4. Regular Meetings of West African Archaeologists.

The members of the conference have found it most profitable to consult with each other and recommend that such meetings be held regularly.

5. Burg Wartenstein Recommendations on Terminology.

The members of the conference undertake to reconsider the terminology used in their areas in the light of the Burg Wartenstein recommendations and to prepare papers for discussion at the first meeting to be arranged under the provisions of Recommendation 4 above.

6. Archaeology in the Republic of Niger.

Extreme gratification was expressed at the appointment of an archaeologist for The Republic of Niger; members look forward to the establishment of a strong department of archaeology there.