ATLAS

OF AFRICAN PREHISTORY

COMPILED BY

J. DESMOND CLARK

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The ATLAS OF AFRICAN PREHISTORY

was compiled under the direction of
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University of California, Berkeley

The maps were drawn by
EVE KEMNITZER

An advisory committee appointed by the Pan-African Congress on Prehistory and Quaternary Studies, held at Tenerife, Canary Islands, in September, 1963, consisted of L. Balout, Institut de Paléontologie Humaine, Paris; O. Davies, University of Ghana, Legon; H. J. Hugot, Institut Fondamental d'Afrique Noire, Université de Dakar; R. R. Inskeep, Department of African Studies, University of Cape Town; G. L. Isaac, then of the National Museum Centre for Prehistory and Palaeontology, Nairobi; and J. Nenquin, Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

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(To a Scale of 1:38 Million)

SKETCH MAP

APPENDICES

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SWAZILAND: J. R. Masson, Mbabane.

BASUTOLAND: James Walton, Cape Town.

The industrial distributions for greater Somalia, Zambia, and Malawi were drawn from sources available to the compiler.

The assistance of Stanley P. Jackson of the Department of Geography, University of the Witwatersrand, Johannesburg, and of the Scientific Council for Africa in making available copies of the CCTA/CSA base maps (CCTA/CSA Commission de Coopération Technique en Afrique, Conseil Scientifique d'Afrique, Lagos-Nairobi), drawn for the compilation of the *Climatological Atlas of Africa* (1961, published by CCTA/CSA, Lagos-Nairobi, edited by S. P. Jackson; printed in Pretoria, South Africa), is gratefully acknowledged.

Very special credit must be given here to the careful and skilful work of Eve Kemnitzer, who was responsible for drawing the maps in this atlas. In the work of plotting the cultural distributions, she was ably assisted by Charles M. Keller and also by Sonia H. Ragir.

In thanking my colleagues for the generous cooperation that has brought this joint undertaking to a successful conclusion, I also wish to express my regrets that it was not possible to complete the project sooner. The last amendments to the industrial distributions have only just been received, and a few that were promised never materialized; in these cases it has been necessary to use such data as could be obtained from the literature to meet the completion date of February, 1966.

J. DESMOND CLARK

HISTORICAL BACKGROUND AND GENERAL OBSERVATIONS

The most influential single factor in the life of early man was the environment in which he lived. It is now apparent that the chief emphasis in the study of prehistoric times must be on an appreciation of man's increasing use and control of natural resources. This is particularly important for the period that preceded the change from hunting and gathering to a village farming or pastoral way of life with its more stable economy, since, until then, man was totally unable to exploit his environment beyond the narrow limits imposed by his technical and intellectual capacities. The introduction of ever more efficient equipment and methods of obtaining food resulted in a more complete adaptation to particular habitats and thus in the increasing identification of human culture with them. As time went on, greater use was made of the natural resources, and because of this, man became able first to occupy and then to intensify his occupation of habitats that at an earlier stage were unfavorable. As a result, the material part of human culture tends to show an ever-increasing specialization and an ever-greater number of equipment forms.

The close relationship that existed between culture and environment in Africa at almost all periods in the past can best be seen from a study of distribution maps, but it is only for a few parts of the continent that such maps have been available up to now. The atlas project was initiated partly to remedy this omission and to direct the emphasis of archaeological investigation on a continent-wide basis toward the interpretation of culture in relation to the natural setting.

The need for maps to show the distribution of prehistoric industries in Africa and their relation to ecological data was recognized at a meeting of the South African Museums' Association in 1957, when a number of institutions cooperated in an agreement to begin compiling data for southern Africa from Rhodesia to the Cape. In 1959 the Fourth Pan-African Congress on Prehistory, which met in Leopoldville, voted to extend the work to cover the whole of the continent. In the meantime CCTA/CSA had given the project official recognition and had promised technical advice, although it was not able to assist financially. In Leopoldville eight regional correspondents were appointed with the present writer as compiler, and together with the members of a committee formed by the South African Museums' Association, they were charged with the task of assembling the information for Stone Age prehistoric sites that would cover the whole continent. It was decided not to include a map or maps of Iron Age cultural distributions, since in only one or two areas has sufficiently detailed investigation been carried out and the proto-historic archaeology of most of the continent is quite unknown.

Progress in mapping and collating the information proceeded slowly up to October, 1962, primarily because of the lack of financial assistance and the reluctance on the part of some correspondents to begin indexing and mapping where no records had previously existed. This was especially the case where a large number of sites was involved or where there was uncertainty as to industrial determination. In October, 1962, a grant from the Institute of Social Sciences at the University of California, Berkeley, where the compiler had taken an appointment, provided part-time assistance and expert draftsmanship facilities so that the compilation could begin. The Institute has supported the project to its completion.

In order to gauge the effect of habitat and biome on the distribution and form of prehistoric industry, maps have been prepared to provide the basic ecological information, and an attempt has been made to show the possible effect of Pleistocene climatic changes on rainfall and vegetation distribution. The industrial and other significant distributions have been printed on transparent overlays in order that they may be viewed against any of these base maps and in conjunction with other overlays.

Although the Pleistocene climatic fluctuations in Africa were not of the same scale of magnitude as those in higher latitudes closer to the continental ice sheets, they were nevertheless of sufficient importance to bring about significant changes in the distribution of fauna, flora, and surface water resources and thus to have influenced the development and distribution of the prehistoric human populations. One way in which the effect of such climatic change is seen today is in the discontinuous distribution of fauna and flora species, which at some time in the past must have been linked by a continuous area or areas of favorable habitat. Such distributions may suggest directions of movement, especially when viewed in the light of the distributions of certain fossil forms.

Accordingly, a series of twelve maps has been drawn to show the fragmented ranges of certain mammals and birds considered to be indicators of both drier and wetter fluctuations of climate in the past. In addition, since the malarial mosquito and the tsetse fly have had important effects on human settlement, maps have been included to show the distribution of these two disease vectors.

The industrial distributions are not intended as a means of identifying individual sites on the map but rather to show relationships, where these exist, among industrial complexes, regional habitats, and ecology. Only the more important prehistoric sites have, therefore, been recorded by name (see Overlay 1).

For only a few regions does a gazetteer of sites exist, and it will be many years before there are complete lists for the whole continent. Compilation of a gazetteer of sites with coordinates and based on the data brought to light in the course of work on these maps has been undertaken and is published as a supplement to this atlas.

Each black symbol on the maps represents what is recorded by the correspondents as a single occurrence of artifacts be-

longing to a clearly identified industry or facies; less specific identifications are shown by means of an open symbol. Isolated or indeterminate finds have been omitted except in the case of *art mobilier*. (It should be noted that the regional correspondents are responsible for the specific identifications that have been made, except in those cases where the compilation has been undertaken by the compiler and his staff.) Some of these specific determinations will need to be revised later in the light of the new terminology proposals that have now been made (see below).

The accuracy of the industrial distributions reflects the accuracy and completeness of the basic data available. In some cases this was very complete and precise, in others it was less so, although in every instance it is believed to be adequate for the scale at which the maps are reproduced.

The extent of knowledge of an area is conditioned by the intensity of the investigation that has been conducted there. This usually depends on the presence, or absence, of professional and amateur archaeologists, the general accessibility of the terrain, and the length of time that investigations have been under way there. Some regions, such as the Maghreb, or South Africa, are comparatively well known and the maps show a large number of sites. Indeed, in some areas of the continent, such as the Casablanca, Oran, and Lake Naivasha regions, it is, regrettably, impossible to show the full number of sites on such small-scale maps. Much of the continent has been only superficially investigated so far as prehistory is concerned, while some regions, for example, the southern Sudan, still remain quite unstudied. The inadequacy, or absence, of investigations in some areas clearly reduces the significance of the industrial distributions and, at best, these must be considered as provisional only, especially in regard to industrial boundaries, although they are believed in general to reflect reasonably well the distribution trends of prehistoric populations, many of which can now be seen as having special regional and ecological significance.

It is important that these reservations and shortcomings should be remembered when using the industrial distribution overlays. An attempt has been made in the sketch map to show, in very general terms, the degree of intensity to which prehistoric investigation has progressed on the continent as a whole.

The first eleven maps and overlays 1–26 were drawn to a scale of 1:10 million (compiled from data plotted on the CCTA/CSA 1:5 million base map in six sheets). It was hoped originally to publish on the scale of 1:10 million but, to cut publication costs, further reduction has been necessary. Fortunately, little or no detail has been lost at the 1:20 million scale that has been chosen. The projection is zenithal equal area, centered on 18° E.

Wherever possible the compiler has relied upon the data supplied by the regional correspondents, supplemented in some cases by his own research. For some areas no assistance, or only very little, was available—for example, Gabon, Cameroun, Liberia, Basutoland—so that sites plotted in these regions are the result of searching the literature and of personal communications.

In the case of the industrial distributions overlays for the Republic of South Africa, the compilation was done by Charles M. Keller who visited the museums at Kimberley, Bloemfontein, Pietermaritzburg, and Durban in June, 1963, and recorded the data provided by the directors and other museum officers to whom acknowledgment is made. To this was added the information received from the South African, East London, and Albany Museums. Only the collection at the University of the Witwatersrand, once the property of the former South African Archaeological Survey, is omitted since access to this was denied. Much of this material is believed to duplicate sites already plotted and its omission is unlikely to have affected greatly the overall pattern of distribution in the Republic.

The archaeological identifications in the atlas are based upon the current terminologies in use in northern and southern Africa. The former is derived in large part from Europe, the latter is that officially recognized by the Pan-African Congress on Prehistory and Quaternary Studies. The rapid progress in African Quaternary Studies over the last ten years, however, has now made revision a necessity. At the twenty-ninth Wenner-Gren Foundation Symposium on "Systematic Investigation of the African Later Tertiary and Quaternary" held in the summer of 1965, specific proposals were made by the prehistorians present for bringing the terminology into line with current thinking and for introducing a degree of precision in classificatory methods that has hitherto been lacking in archaeological studies in Africa. The recommendations of this symposium and the discussion that induced them are published in *Background to Evolution in Africa*, edited by W. W. Bishop and J. D. Clark (Chicago: University of Chicago Press, 1967). These proposals will be debated by the Pan-African Congress at Dakar in 1967.

These recommendations provide for the establishment of a graded system of archaeological units, for standardizing nomenclature and for the setting up of criteria for the clear definition of these units. Reexamination and proper definition of the various archaeological units will take time, but in other respects the nomenclature and terminology used in this atlas have been brought into line with the recommendations of this symposium. All terms having only informal significance have been placed in quotation marks. The major archaeological divisions "Earlier," "Middle," and "Later Stone Age," together with the "Intermediates," are both time-stratigraphic and cultural-stratigraphic terms, and their abandonment was accordingly recommended by the symposium. They have been retained in this atlas but are given only informal connotation as are also the terms "Palaeolithic," "Mesolithic," and "Neolithic." Similarly, hybrid industrial terms (e.g., "Acheulio-Levalloisian") and others that have lost any industrial significance they were once thought to have had (e.g., "Chellian," "Levalloisian") have either not been used or have been placed in quotation marks. As the term "Chellian" has been abandoned in relation to the Olduvai succession and as no type site can now be defended, it has not been used here.

The following list shows the industrial stages included in the atlas. Whereas further subdivision may be justifiable at some sites, it is impossible for most parts of the continent, and for the sake of uniformity, the separate recording of substages has, therefore, in most cases, not been attempted.

OUTLINE OF INDUSTRIAL COMPLEXES AND INDUSTRIAL STAGES

I. *"Earlier Stone Age": "Lower Palaeolithic" Industries*

A. Oldowan and "Pre-Abbevillian" ("Pebble Culture") facies in northern Africa

B. Acheulian
   1. Earlier Acheulian stage
   2. Middle and Later Acheulian stages
   3. Undifferentiated facies of Clacto-Tayacian and "Hope Fountain" type
C. "Pre-Aurignacian" (Haua Fteah only)

II. *"First Intermediate" Period: "Middle Palaeolithic"*

A. "Acheulio-Levalloisian"
B. Fauresmith
C. "Levallois-Mousterian" and Mousterian
D. Sangoan

III. *"Middle Stone Age": "Upper Palaeolithic"*

A. Aterian
B. Blade industries
   1. Dabba industry
   2. Lower Kenya Capsian
C. "Levalloisian"
D. Lupemban
E. "Epi-Palaeolithic" (Sebilian: Khargan: "Khormusan")
G. Other undifferentiated "Middle Stone Age"

IV. *"Second Intermediate" Period and Late "Upper Palaeolithic"*

A. Blade industries
   1. "Silsilian," "Sebekian," "Menchian"
   2. Et Tera industry
   3. Ibero-Maurusian (Lower Stage)
   4. Kérémian
   5. Upper Kenya Capsian
   6. Hargeisan
B. "Halfan" & "Qadan"
C. "Lupembo-Tshitolian"
D. "Magosian"
E. Undifferentiated evolved "Middle Stone Age" occurrences

V. *"Later Stone Age": "Epi-Palaeolithic" (Post-Pleistocene)*

A. Capsian
B. Ibero-Maurusian (Middle and Upper Stages)
C. Khartoum "Mesolithic"
D. Elmenteitan
E. Doian
F. Ishangian
G. Tshitolian
H. Ultimate "Middle Stone Age" (West Africa)
I. Nachikufan
J. Smithfield
K. Wilton
L. Brandberg/Erongo occurrences (South West Africa)
M. Other undifferentiated Blade and Microlithic occurrences
N. Other undifferentiated "Epi-Paleolithic" occurrences

VI. *Neolithic Industries*

A. Northeast African and Nile Valley Neolithic
B. Badarian (Chalcolithic)
C. Predynastic Egyptian
D. "Neolithic" of Capsian tradition
E. Saharan "Neolithic"
F. West African "Neolithic"
G. Undifferentiated "Meso-Neolithic" of West Africa
H. East African Stone Bowl industries
I. Other undifferentiated "Neolithic" (Congo, Gabon, etc.) occurrences

EXPLANATORY NOTES

To Accompany the Individual Maps and Overlays

Base Maps

MAP 1. TOPOGRAPHY

Based, in the main, on Bartholomew, "Topographic Map of Africa" (1960), to a scale of 1:10 million and on the 1:5 million CCTA/CSA base map in six sheets.

MAP 2. GEOLOGY

Based, with the assistance of H. B. S. Cooke, on the "Carte Géologique Internationale de l'Afrique" (1964), to a scale of 1:5 million, prepared by the Association of African Geological Surveys under the direction of R. Furon and J. Lombard and published by UNESCO.

This map is designed to show the solid geology from which were derived the rocks used by early man for stone tool-making.

MAP 3. SOILS

Based on the soils map by D. d'Hoore, Director of the Bureau Interafricain des Sols, as reproduced in the "Map of Erosion Danger in Africa South of the Sahara" (1962), published jointly by the European Economic Community and the Commission for Technical Co-operation in Africa under the direction of F. Fournier. The soils of the Mediterranean coast and the Atlas massif are not included on this map and an attempt to reconcile the soil types for these regions as shown on the Soil Map (scale 1:19 million) in the *Oxford Regional Economic Atlas for the Middle East and North Africa* (Oxford: Oxford University Press, 1960) was not satisfactory. In general, soils of these regions are either podsolic soils or desertic or semiarid brown soils of rendzina type with high carbonite content.

MAP 4. MEAN ANNUAL RAINFALL

Based on the "Mean Annual Rainfall Map" (scale 1:5 million) from the *Climatological Atlas of Africa* (1964), published by CCTA/CSA and compiled under the direction of Professor S. P. Jackson.

MAP 5. MAIN VEGETATION TYPES

Based on two sources and reconciled with the help of Herbert G. Baker: (1) "The Vegetation Map of Africa South of the Tropic of Cancer" (1958) (scale 1:10 million), prepared by R. W. J. Keay and others, published by UNESCO, and (2) "Vegetation Map of the Area North of the Sahara" in the *Oxford Regional Economic Atlas* (1960) (scale 1:19 million). Relicts of Mediterranean flora exist in the Hoggar and Tibesti massifs but do not show on the scale of this map.

MAPS 6–11. HYPOTHETICAL RAINFALL AND VEGETATION ZONES

Compiled and annotated by Karl W. Butzer.

Two maps (Nos. 6 and 7) showing hypothetical rainfall distribution during periods of greater (150% that of the present) and reduced precipitation (50% that of the present) were drawn in simple analogy to modern rainfall distributions. The CCTA/CSA *Climatological Atlas of Africa* provided the basic information necessary for such arithmetic conversions.

By implication, these two maps provide a general impression of possible mean annual isohyets during pluvial and interpluvial periods. On the basis of geomorphological and palynological work, particularly in southern Africa, there is reason to believe that mean precipitation in some parts of Africa did, in fact, fluctuate between about 50% and 150% of today during the course of the Pleistocene. It is rather unlikely, however, that climatic anomalies were uniform. In the Sahara, for example, the Pleistocene record suggests that several pluvial episodes were appreciably wetter than the 50% increase suggested here. Parts of the Libyan Desert, with less than 1 mm. mean annual precipitation today, enjoyed a Pleistocene rainfall average in excess of 200 mm. It seems, therefore, that the 100% amplitude allowed for here may apply to semiarid and subhumid areas only. The range of variation seems to have been far greater in arid regions and may well have been somewhat less in the perhumid equatorial belt. Furthermore, the question of strict contemporaneity of climatic change would have to be considered.

There are also theoretical objections to a simple equation of these two maps with real situations in time. Planetary climatic changes would inevitably have a different impact along the subtropical fringes of the extra-tropical westerly belts in the seasonally humid tropics and within the equatorial regions. Precipitation in each of these zones has its origin in different circulation and weather patterns and the responsible rain-bringing synoptic disturbances of the lower or upper troposphere are quite distinct in each climatic belt.

These hypothetical rainfall distribution maps are not, then, intended to be reconstructions of pluvial or interpluvial isohyets.

The following maps of hypothetical vegetation zones have been prepared: (*a*) Map 8—Hypothetical Vegetation Zones: 50% of Present Rainfall (Temperatures as Today); (*b*) Map 9—Hypothetical Vegetation Zones: 150% of Present Rainfall (Temperatures as Today); (*c*) Map 10—Hypothetical Vegetation Zones: Rainfall as at Present (Temperatures 5° C Lower than Today); and (*d*) Map 11—Hypothetical Vegetation Zones: 150% of Present Rainfall (Temperatures 5° C Lower than Today).

Objections concerning the 100% amplitude are equally applicable to these four maps of hypothetical vegetation zones. The 5° C lowering of mean annual temperature does, however, correspond to an actual Pleistocene situation. Deep-sea core palaeotemperature determinations and other convergent lines of evidence suggest a general planetary lowering of temperature by at least 5° C during the glacial maxima of the Middle and Upper Pleistocene. With due reservations, therefore, these four maps may envisage interglacial patterns, both wetter and drier than today, as well as glacial patterns with no change in precipitation and again with an increase in rainfall.

There is no simple linear relationship between vegetatio and climate. Our understanding of the modern distribution vegetation is imperfect at best, and the ecology of ma vegetation types is either controversial or obscure. Partic larly in the seasonally wet tropics the ecological status forest versus savanna is questionable as a result of anthrop burning and grazing practices. The same applies to the Sou African veld, which may or may not be a true grassland. Th subtropical woodlands of the Mediterranean littoral, of th Cape area, and of the Ethiopian highlands have also bee seriously modified by man. Edaphic factors play a major ro in the African vegetation. Low-lying, poorly drained, or se sonally inundated areas favor grassland or parkland veget tion within the forest-savanna complex. Ground water ava ability near perennial streams may simultaneously permit th growth of fringing forests in subhumid or semiarid region Arid subsoil environments, such as those provided by the la Tertiary Kalahari System, favor open vegetation.

In attempting the various sketches of vegetation und differing climatic conditions, highly generalized climatical and physiognomically defined classes of vegetation have ha to be adopted:

(1) tropical rain forest (closed hygrophytic and thermopl ilous forests, highly temperature-sensitive, generall intolerant of minimum temperatures below +5° C);
(2) tropical montane forest (similar to [1] above, but les temperature-sensitive although not frost-tolerant);
(3) tropical dry deciduous savanna woodland;
(4) tropical forest-savanna mosaic;
(5) tropical grassland and deciduous scrub (including th "grass steppe" and parts of the "bushveld and grassland shown on Main Vegetation Types, Map No. 5);
(6) subtropical mixed woodland (including the Mediter ranean-type woodlands and scrub, primarily lightl stocked, as well as a variety of thermophile but frost tolerant arboreal associations);
(7) subtropical grassland and scrub (including the Mediter ranean halfa-grass steppes, the Karoo succulent, and th mixed veld grasslands);
(8) temperate mixed forests (including sub-Mediterranea woodlands and other cold-tolerant forest types);
(9) temperate grassland (including cold-tolerant, winter dormant species);
(10) subdesert and scrub; and
(11) desert.

Alpine meadows and glaciated areas are not shown, sinc they have always been of negligible extent and do not warran inclusion on maps of this scale.

Employing the above scheme, the hypothetical vegetatio maps were drawn making use of the following temperatur criteria:

(*a*) tropical rain forest—average coldest annual temperatur 5° C or over, mean monthly minimum of coldest montl 10° C or over;
(*b*) tropical montane forest—average coldest annual tempera ture between 0 and 5° C, mean monthly minimum o coldest month under 10° C;
(*c*) subtropical woodland and grassland—average coldest an nual temperature under 0° C, mean monthly minimum o coldest month over 0° C; and

(*d*) temperate woodland and grassland—mean monthly minimum of coldest month under 0° C.

Modern temperature data were obtained from the *Climatological Atlas of Africa* and from the British Meteorological Office *Tables of Temperature, Relative Humidity and Precipitation for the World*, Part 4 (Africa) (London: Her Majesty's Stationery Office, 1958).

Criteria for the relationship of vegetation and available moisture were considerably less satisfactory. The length of the rainy season, as defined by humid versus arid months, proved to be a useful concept. Estimates for the effect of reduced evaporation under cooler conditions were made with Koeppen's linear formulas of annual precipitation and temperature and with Thornthwaite's evapotranspiration and water-budget nomograms. Edaphic factors have necessarily been ignored. Altogether, however, the moisture aspect of the hypothetical reconstructions remains somewhat subjective.

It should be emphasized in conclusion that these reconstructions of climatic-vegetation belts are theoretical in purpose and mechanical in their construction. They have not been adapted to conform in any way with the available empirical evidence, either biological or physical. In some respects these maps may show certain analogies with recent palynological studies. In other cases the empirical evidence cannot be reconciled with any of these reconstructions. The palynological research of recent years, primarily carried out or inspired by E. M. van Zinderen Bakker, should be consulted by the serious reader. A brief bibliography of relevant articles or sources follows.

Bakker, E. M. van Zinderen 1963, "Paleobotanical studies. Symposium on early man and his environments in southern Africa," *African J. Sci.*, **59**, 332.

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Clark, J. D., and Bakker, E. M. van Zinderen 1964, "Prehistoric culture and Pleistocene vegetation at the Kalambo Falls, Northern Rhodesia," *Nature* (London), **201**, 971.

Coetzee, J. 1964, "Evidence for a considerable depression of the vegetation belt during the Upper Pleistocene on the East African mountains," *Nature* (London), **204**, 564.

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MAP 12. SIMPLIFIED VEGETATION

OVERLAYS

OVERLAYS 1 AND 2. DRAINAGE AND POLITICAL BOUNDARIES

To show also main archaeological sites (Overlay 1), and political units (Overlay 2) as at the end of 1965.

OVERLAYS 3–5. HUMAN TRYPANOSOMIASIS, CATTLE TRYPANOSOMIASIS, AND MALARIA

Compiled and annotated by Frank Lambrecht.

TRYPANOSOMIASIS

I. *Human*

Two kinds of human sleeping sickness are recognized:

1. Gambian, caused by *Trypanosoma gambiense*, transmitted by certain species and subspecies of the *Glossina palpalis* group: *G. palpalis, G. fuscipes, and G. tachinoides*. The area of distribution is mainly along rivers of the lowland rain forests and the forest galleries extending from them.
2. Rhodesian, caused by *Trypanosoma rhodesiense*, transmitted by tsetse flies of the *G. morsitans* group: *G. morsitans* and *G. pallidipes*. The areas of distribution occur in various types of savanna country.

Sleeping sickness caused by *T. gambiense* is essentially a man-to-man transmitted disease. Main foci of infections are at gathering points along river banks and wherever *G. palpalis* group flies and human populations are in close contact. The distribution of the disease follows a mosaic pattern, with areas of high or low infection rates within the territories occupied by the *palpalis* vectors. No natural animal reservoir has been definitely proved to exist. The disease is chronic during the first years but ends in death after three or more years. Rare cases of "healthy carriers" have been found in which infected persons, showing *T. gambiense* in their blood streams, remained relatively healthy for many years.

T. rhodesiense is maintained mainly in wild animals, transmitted along with other trypanosome species by *morsitans* group flies of the savannas. Man is an occasional "accidental" host because *morsitans* group flies have relatively little and mostly infrequent contact with human populations. Rhodesian sleeping sickness may present the characteristics of a man-to-man transmitted disease, however, in cases of severe epidemics when a closer contact between the fly and man is established. This may happen when human settlements are first moved into *morsitans* fly belts or when such fly belts advance and encroach upon human habitations. Or it may happen when the faunal balance is upset and *morsitans* group flies are compelled to feed more often on humans when their natural hosts are removed from their habitats.

Both conditions may only be temporary because there is little chance for *morsitans* group flies to survive long in the absence of adequate numbers and proper frequency of animal hosts. Human settlements will tend to disperse and even eradicate those animals. *T. rhodesiense* causes a more acute disease than *T. gambiense*—the victim may die in a matter of weeks after the onset of the infection.

While effective treatment with drugs and some successful clearings against *G. palpalis* have gradually reduced the incidence of Gambian sleeping sickness over most of Africa, this has not been the case for the Rhodesian disease.

On the northeastern coast of Lake Victoria an unusual situation has developed in which transmission of both *T. gambiense* and *T. rhodesiense* occur in the same area. Under very interesting ecological circumstances *G. palpalis* and *G. pallidipes* occupy similar biotopes along the lake shore. Both flies are in close contact with human populations—fishermen along the shores and farmers working their fields nearby. (Strains of *T. rhodesiense* have been isolated from *G. palpalis* but it is questionable whether this fly is a potent *T. rhodesiense* transmitter; under the circumstances it is more likely that *G. pallidipes* is a good *T. gambiense* vector.)

Concerning Overlay 3, the outlined areas are those where human trypanosomiasis occurs. It is not meant to infer that the disease prevails in every bit of country outlined, but it indicates the boundaries of its range. In the case of Rhodesian sleeping sickness, it should be pointed out that while some of the foci have remained relatively active for many years epidemics have come and gone in other places. The situation regarding this type of trypanosomiasis is thus very fluctuating and one could say that all *morsitans* and *pallidipes* belts are potential Rhodesian sleeping sickness areas that will flare up when circumstances provide increased man-fly contacts.

II. *Cattle and Other Domestic Animals*

Trypanosomiasis in domestic animals and its distribution is somewhat more complicated than the human disease—more trypanosome and more glossina species are involved. Also the different trypanosome species will react differently according to the kind of animals they invade. From the economic point of view, the problem in Africa is directly related to infections in cattle by *T. vivax*, *T. congolense*, and *T. brucei*. Cattle being kept mainly in open country of the grassland and parkland savanna-type have the trypanosomes transmitted largely by vectors of the *G. morsitans* group flies. When cattle are grazed or moved in forested areas, or near forest galleries, however, they will become subject to attack by glossina species inhabiting those biotopes, e.g., flies of the *palpalis* and *fusca* group, and transmission of pathogenic trypanosomes may occur.

The trypanosome species infecting cattle and other domestic animals are commonly carried by game animals that constitute a constant reservoir of infection. All wild animals are "healthy carriers," that is, they are apparently not affected by the parasite. It has been observed that in localized areas some types of cattle become resistant to the local trypanosome strains. This immunity breaks down, however, when they are exposed to strains to which they have not been exposed previously. This resistance may also break down during stress, such as a long dry season when the food supply is short.

While *T. congolense* and *T. brucei* need to be ingested by the tsetse fly in order to complete their normal life cycle and to become infective again, *T. vivax* has a simpler cycle. It can survive for a certain time in the mouthparts of other biting flies, such as *Stomoxys* (stable fly) and *Tabanus* (horse fly). Transmission by means of simple "transportation" is called "mechanical." This occurs both in tsetse fly belts and outside the glossina belts. As such, *T. vivax* is found distributed in many parts of the tropical belts, such as Central and South America and in Asia. Other animal-infecting trypanosomes that dispense with the need of cyclic development in the tsetse are *T. evansi*, transmitted by *Tabanus* and other blood-sucking flies in Africa, Central and South America and causing a disease called "surra"; *T. equinum*, which infects horses, causing "Mal de Caderas" in Central and South America; *T. equiperdum*, which causes "dourine" does not need an insect vector—infections occur during the mating of the animals; and *T. lewisi*, transmitted by fleas and occurring in rats and other rodents.

T. vivax infections are often refractory to treatment and reinfections are frequent, but the pathogenic manifestations are usually less severe than those caused by *T. congolense* or *T. brucei*. Cases of *T. congolense* and *T. brucei* are sometimes reported outside glossina belts when they are carried by cat traveling to seasonal grazing, to market, and the like. Wh the infection may persist and kill the animal if not ac quately treated, transmission to other animals will not occ in the absence of glossina species.

To conclude, cattle trypanosomiasis will occur in all pa of the country where tsetse flies are present in the case *T. brucei*, *T. congolense*, and *T. vivax*. In addition, *T. viv* transmissions may occur outside the tsetse belts. Of local a of much smaller economic importance is camel trypanos miasis caused by *T. evansi* and transmitted mechanically the areas of camel distribution when outside the tsetse f belts.

Detailed reports of the distribution of domestic anim trypanosomiasis are mostly incomplete for many territorie The matter of distribution, however, is easily answered whe it is known that the disease will occur wherever the animal come into contact with fly belts. Overlay 4 shows the com bined patterns of occupation of all the twenty-two tsets species, and this is the area where cattle trypanosomiasis wi occur if these animals are moved in.

III. *Malaria*

Although secondary anophelini vectors may play an im portant role in localized areas, the main vectors of malaria i Africa are *A. gambiae* and *A. funestus*. The former is esti mated to be responsible for something like three quarters o all human malaria transmissions. Both mosquitoes breed in tropical areas from sea level to about 4,500 feet, and human malaria can be said to be distributed equally. The fact that *A. gambiae* larvae breed easily in small, sometimes seasonal, water collections so common around human settlements accounts for its importance as the leading malaria vector. It also explains why in many areas malaria transmission is more intense and frequent during and just after the rainy season. This is well demonstrated at the northern and southern extremes of Africa where malaria is mostly completely seasonal, directly related to the presence of sufficient numbers of *A. gambiae*. Breeding places increase with increasing rainfall, and higher temperatures boost both the development of mosquito larvae and that of the plasmodium cycle in the adult mosquito. In certain regions malaria may occur only during years of exceptionally high rainfall, the source of infection being maintained in confined parts of the country where permanent watercourses assure the survival both of the insect vector and of the parasite because of the concentration of people around these areas.

In conjunction with rainfall characteristics, malaria transmission is also related to altitude. Cooler temperatures encountered at higher altitudes will curtail the development cycle of both vector and plasmodia. The altitude at which malaria transmission no longer occurs depends on its location in regard to distance from the caloric equator and on the configuration of the country. Thus, whereas endemic malaria tends to disappear at about 3,000 feet on the sharply rising slopes of the coastal hills of east Africa, transmission persists up to 7,000 feet on the central African plateau. In Ethiopia malaria extends up the gradual slopes to Addis Ababa at 7,000 feet, while comparable endemicity is only found no higher than 5,000 feet on the steep sides of other surrounding hills. On the high plateau of Ruanda Urundi malaria transmis-

sion goes up to 6,000 feet. At the outer tropics, that is north or south of the 15° line, 4,000 feet seems to be the limit of malaria transmission.

In summary, locally transmitted (i.e., endemic) malaria is correlated to temperature and rainfall or, to speak in geographic terms, to altitude and latitude. Generally speaking, endemic malaria stops at about 5,000 feet and where the rainfall is less than twenty inches a year. This means that the greater part of Africa must be considered malarious, and this is reflected in Overlay 5. Except for local variations and special conditions, the malarious areas of Africa may be classified into three zones:

(1) between 10° north and 10° south of the equator where malaria transmission occurs the year-round at altitudes lower than 6,000 feet;
(2) between 10° and 20° north and south of the equator where malaria is seasonal up to about 4,000 feet and rare above that altitude; and
(3) the relatively small areas further north and south from 20° where malaria maintains itself in sporadic outbursts in the most humid parts—such an area is the east coast regions of South Africa.

Concerning the parasite itself, four species of plasmodia have been described in humans: *Plasmodium falciparum*, *P. vivax*, *P. malariae*, and *P. ovale*. The relative frequency of these parasites varies but *P. falciparum* is by far the most commonly found, accounting in some areas for over 90% of the infections. *P. ovale* is very rare, found in confined areas scattered on the west coast, in the Congo, and in east Africa, including the island of Mauritius. In some areas, like South Africa, Madagascar, Mauritius, Eritrea, and eastern Ethiopia, *P. vivax* may equal or even exceed *P. falciparum* in frequency. In all these regions *P. malariae* accounts for less than 10% of the infections, but in west Africa and in part of the Congo basin *P. malariae* replaces, to a large extent, *P. vivax*, and *P. falciparum* is still the most frequent parasite. A typical example of frequency in Senegal would be *P. falciparum* 52%, *P. malariae* 43%, and *P. vivax* 5%.

In endemic areas the infection rates are always higher in younger children, the peak being at about four to five years of age, rates having risen from zero at birth. From the five-year age-group on rates decrease sharply to reach the average level of the adult population at about fifteen years. This is clearly an indication of partial immunity acquired by those living continuously in malarious regions. In seasonal areas the infection rates of the five-year age-group are maintained throughout adult life because interruption in infections during long periods of dry, malaria-free seasons makes immunity mechanisms less effective.

The various malarial zones indicated on Overlay 5 represent essentially the boundaries as they were in 1946. Since then World Health Organization-sponsored antimalaria campaigns have been responsible for the reduction and even the eradication of the disease in sporadic or seasonal malaria areas. Such is the case for the southeastern part of South Africa where the sporadic area is now completely free of the disease.

Overlays 6–8. Earlier, Middle, and Later Pleistocene Faunal Distribution

Compiled and annotated by W. W. Bishop.

The study of the distribution of fossil Pleistocene mammals in Africa is useful to the prehistorian in the following ways:

(1) as a means of dating within broad faunal zones the prehistoric cultures found associated with early man or his artifacts;
(2) to build up a picture of the different animals that were the contemporaries of Stone Age man at various stages of his development and upon a selection of which he depended for his meat supply as man the hunter; and
(3) *to a limited extent* as a means of reconstructing the different types of environment in which early man lived, as he developed through the course of the Pleistocene epoch.

Only the most important published sites, based upon the evidence of at least several genera and species, and whose age is reasonably firmly established, have been shown with black symbols. All other sites, having only a very short list of fauna, or whose age is uncertain, or for which evidence has not yet been published, are indicated by open symbols. Because of the problems of plotting several sites into a limited area at the scale of the atlas maps, it has been necessary, in some cases, to represent two or more sites with only one symbol.

Sources

Acknowledgment is made to numerous palaeontologists for their kindness in supplying information and particularly to C. Arambourg, P. Biberson, and Y. Coppens for information on northern Africa; G. Mortelmans, J. Lepersonne, A. Gautier, and J. de Heinzelin for information on the Congo; L. S. B. Leakey, P. M. Butler, R. Pickering, and the commissioners for geology of the Kenya and Tanzania geological surveys for information on eastern Africa; H. B. S. Cooke, R. A. Dart, J. T. Robinson, R. Singer, R. F. Ewer, and the directors of the geological surveys of Zambia and Malawi for information on southern Africa.

Distributions

It is immediately apparent from the maps that there are three main clusters of Pleistocene faunal sites in Africa revealed in the Earlier, Mid-, and Later Pleistocene distributions. (For definitions of Earlier, Mid-, and Later Pleistocene, see p. 13.)

(1) The north African littoral, or Maghreb. That is, the Barbary Coast once popular with writers together with its immediate hinterland. It comprises parts of Morocco, Algeria, and Tunisia, and the concentration of sites continues some distance eastward into Cyrenaica and Tripolitania.

(2) The volcanic hinterlands of east Africa and adjacent sites along the line of the Kenya or Gregory Rift. Some lesser concentrations occur on the eastern shores of Lake Victoria and locally in the Western or Albertine-Edward Rift. This concentration might be termed the east African faunal province. It is separated from the Maghreb concentration by the Saharan barrier. This region, although largely inhospitable at present, contains several important localities and the absence of abundant evidence may arise, at least in part, from the fact that it has been as yet only partially searched by geologists. This is emphasized by the several sites discovered recently in Chad by Y. Coppens. The reasons for the concentration of sites in east Africa and other regions are briefly discussed below.

(3) The South African concentration is based principally

upon cave-breccia sites in the Pre-Cambrian dolomitic limestones and open sites in the terrace gravels of the Vaal and other rivers southwest of Johannesburg and in the Orange Free State. Other scattered sites occur throughout the Republic with a secondary concentration in the hinterland of the coast to the northwest and southeast of Cape Town. This large number of sites and the clusters to be found near the large towns again reflect, at least in part, the more detailed investigations that have taken place.

A string of isolated sites through Rhodesia, Zambia, Malawi, and the Congo into southern Tanzania serves as a tenuous link between the South African and east African faunal provinces. By contrast with the frequency of fossiliferous localities along the highlands of eastern and southern Africa, the western portion of the continent contains only a few isolated sites giving a vast empty area continuous with that of the Sahara.

Although most of the fossil sites plotted are listed with coordinates of latitude and longitude in the accompanying lists (p. 22), the faunal evidence is discussed in detail only for the three main provinces of north, east, and South Africa. In preparing the list of characteristic assemblages of fossils for each of the major time divisions, only firm specific determinations have been used and tentative (cf.) or (aff.) and query determinations of species have been ignored.

I. *Fauna of the North African Littoral (Maghreb)*

The maps show 16 Earlier Pleistocene ("Villafranchian") sites, 7 Mid-Pleistocene sites, and 32 Later Pleistocene sites (Appendix A). The large number of Later Pleistocene sites is typical of all three provinces, but the occurrence of 16 "Villafranchian" localities underlines the importance of this region. The fact that 7 Lower "Villafranchian" and 9 Upper "Villafranchian" assemblages have been studied from the area has resulted in the best known Earlier Pleistocene fauna from Africa. The most characteristic genera and species of the faunas for the combined sites are given in List 1 of Appendix B. The proximity of this region to the Mediterranean and to the "Villafranchian" type-area makes it of extreme importance in effecting correlations between the African and European Earlier Pleistocene faunas.

The Mid-Pleistocene is represented by only a few sites (fauna given in List 2, Appendix B), but these have yielded important hominid remains and artifacts (Ternifine and Sidi Abderrahman). These and the numerous Later Pleistocene faunal localities (characteristic fauna in List 3, Appendix B) again allow correlations through the classical Mediterranean strand-line sequence, with European Pleistocene mammalian zones.

The 13 localities scattered through the Saharan belt and the Nile Valley into the Horn of Africa form a tentative bridge between the north and the east African provinces.

II. *Fauna of East Africa*

The totals of 11 Earlier, 23 Mid-Pleistocene, and 22 Later Pleistocene sites (Appendix A) emphasize the importance of the region, and the maps illustrate how the sites are concentrated (with the addition of some Congo localities) in an elliptical area centered upon Lake Victoria and circumscribed by the two arms of the Rift Valley system.

The Earlier Pleistocene assemblage has been separated into forms characteristic of Upper and Lower subdivisions. The assemblage from the Lower Kaiso division (List 4, Appendix B) is comparatively small but shows affinities with the Lower "Villafranchian" of north Africa. The Upper faunal division (List 5, Appendix B)—Omo, Olduvai Bed I, and Lower Bed II, and Kaiso type-sites—is much better known and again a broad similarity with the Upper "Villafranchian" of north Africa can be seen. A great deal of new information, including many discoveries of genera and species not previously recorded, has been obtained recently in the course of the excavations in Beds I and II at Olduvai Gorge (Leakey 1959).

For the Lower part of the Mid-Pleistocene, the evidence from Olduvai Upper Bed II is crucial and stands very much alone (List 6, Appendix B). The caveat made with respect to recent excavations must again be borne in mind. The contemporaneity of this fauna with early hand-axe industries together with the unrivaled stratigraphical sequence at Olduvai allows broad correlations to be made with other areas. For faunal purposes, Olduvai Bed III has been ignored in view of the fact that the red portion of this bed is lenslike in character and the published record of fossils at present known from Bed III is much smaller than that for the other horizons. The fauna from Bed IV is not as well known as that of Beds I and II, as Bed IV has not yet been subjected to the same detailed excavation, although this is projected. For the Upper division of the Mid-Pleistocene, evidence from other localities is available to supplement that from Olduvai Bed IV (List 7, Appendix B).

A faunal list has not been prepared for the Later Pleistocene in east Africa.

The faunal localities in Rhodesia, Zambia, and Malawi (11 sites), in the Congo (17 sites), and in Angola and southwest Africa (3 sites) serve to link east Africa with the South African province.

III. *Fauna of South Africa*

The South African fossiliferous localities are listed on page 24. The Earlier Pleistocene fauna is limited virtually to that from the cave-breccia sites of Taung, Sterkfontein, and Makapansgat. These comprise the Sterkfontein faunal span of Cooke. (List 8, Appendix B) that covers the latter part of the Earlier Pleistocene although its exact limits cannot be defined. The other main faunal sites occurring in cave breccias in the Pre-Cambrian dolomitic limestones at Swartkrans, Kromdraai, Bolt's Farm, Gladys Vale, and the Sterkfontein extension site are grouped by Cooke into his Swartkrans faunal span of broadly Lower Mid-Pleistocene age (List 9, Appendix B). It is also probably more correct to think of all the cave-breccia faunas as forming a series, with some overlapping sections and several gaps, ranging from the upper part of the Earlier Pleistocene through into the lower part of the Mid-Pleistocene. It is important to remember in attempting correlation that the breccias represent rather a select cave fauna and thus are difficult to compare in detail with the open-site faunal spectra found elsewhere.

The higher Vaal River terraces have yielded a fauna that is probably broadly contemporary with the cavern faunas of the Swartkrans faunal span. The later terrace faunas, however, range into the Upper Mid-Pleistocene, and therefore, the characteristic fossils from the Vaal terraces and from Cornelia are shown separately in List 10, Appendix B. Because of prob-

lems of scale, only five of the main Vaal River Mid-Pleistocene sites and two Upper Pleistocene sites are shown on the overlays. Some seventeen fossiliferous localities are known from the stretch of the Vaal between Delport's Hope and Balkfontein.

The Hopefield and Cave of Hearths faunas cover the period from the top of the Mid-Pleistocene into the Later Pleistocene and serve to link the Vaal-Cornelia faunal span with the Later Pleistocene, Florisbad-Vlakkraal faunal span (List 11, Appendix B).

Correlations

It is impossible to suggest detailed correlations at present among the concentrations of sites in north, east, and south Africa. Despite assistance from some "linking" sites, any correlations attempted must be extremely tenuous. Each sequence of local faunal stages, however, is based upon quite firm evidence and continent-wide correlations on a tentative basis are suggested in Table 1.

Environments

At the present state of knowledge, it is difficult to reconstruct with any degree of certainty the environmental conditions characteristic of a group of sites or of a particular period of time. Although the local environment at any one site can be inferred under favorable conditions, it is almost impossible to generalize as to overall influences, either climatic or geological in origin, that have affected the distribution patterns. Indeed, only two major factors can be isolated as having controlled the distribution patterns seen in the overlays. These are: (1) Proximity to dense areas of population resulting in more thorough investigations of certain regions. As instances may be cited the numerous localities situated within easy reach of centers of population such as Cape Town, Johannesburg, Nairobi, Nakuru, or the cities on the north African coast. Also the absence of finds in many remote areas such as the Sahara and South West Africa is in part attributable to the superficial investigation that they have received to date. (2) The presence of conditions suitable for the preservation of fossils. The prime example of this is seen in the numerous fossiliferous localities concentrated within the area of the alkaline and frequently calcareous volcanic deposits in east Africa. Particularly is this true where calcareous pyroclastic rocks are found within internal basins of lacustrine sedimentation, as along the lines of the Rift valleys. Other examples are the calcareous cave and cave-breccia sites along the outcrop of the dolomitic limestones in South Africa, or the numerous *Grottes* associated with Mediterranean strand lines. It cannot be pretended that this is the only major factor governing distribution of the mammalian fossil sites, but it is certainly the most important.

Although the term faunal provinces has been used, *fossil provinces* would be more accurate. The distributions of fossil sites do not in any way reflect the actual distributions during life of the creatures represented. Indeed, the wide distribution of the *Australopithecinae* or of various genera of pigs and elephants implies that the "unfossiliferous" blank areas on the maps must also have been regions where all these creatures thrived. They were not lucky enough to be preserved for posterity as fossils, however, owing to the absence in these areas of the unusual combination of factors leading to the fossilization of bone, tooth, or horn.

On the other hand, it cannot be denied that a dense population during life might enhance the possibility of preservation. More detailed future investigations may show whether the fossiliferous provinces of Africa were more favorable for life than those where fossil evidence is currently lacking.

OVERLAYS 9–11. FOSSIL MAN

Compiled and annotated by P. V. Tobias.

Three overlays have been allocated to the distribution of African sites from which hominid fossil remains have been recovered. For convenience, the overlays portray respectively Lower and Middle Pleistocene sites, Upper Pleistocene sites, and Post-Pleistocene Stone Age sites.

The basis of this subdivision is somewhat arbitrary, especially since the terms Lower, Middle, and Upper Pleistocene correspond to European faunal divisions. In general, however, they are equivalent to the Early, Mid-, and Later Pleistocene proposed by E. G. Wayland for east Africa in 1933 and followed by W. W. Bishop (with slight modification to Earlier, Mid-, and Later Pleistocene). According to Bishop, the Earlier Pleistocene broadly corresponds with the oldest, or Kaiso, faunal stage of Hopwood and with the Omo-Kanam faunal stage established by the Pan-African Congress. The onset of the Mid-Pleistocene approximates to the beginning of the Acheulian industrial complex. On Bishop's definition, the Later Pleistocene spans the effective range at present of radiocarbon dating, or approximately the last 60,000 years, but for some a longer duration would be more appropriate. The commencement of the Later Pleistocene almost coincides with the incoming of a group of the more diverse industries of the "First Intermediate," including Fauresmith, Sangoan, "Acheulio-Levalloisian," and comparable material.

Overlay 9.—With these broad time divisions as a background, the first fossil hominid overlay shows the relatively sparse sprinkling of sites datable to both the Earlier and Mid-Pleistocene. Eight of these sites—5 in the Republic of South Africa and 3 in Tanzania—have yielded remains assigned to *Australopithecus* (including *Paranthropus* and *Zinjanthropus*). Some of these *Australopithecus*-bearing sites have yielded, in addition, evidence of a somewhat more advanced hominid, namely, *Telanthropus* of Swartkrans and, possibly, of the middle breccia at the Sterkfontein extension site (which was reassigned by A. Simonetta to *Pithecanthropus* and by J. T. Robinson to *Homo erectus*) and *Homo habilis* from Olduvai Beds I and II. A further site lacks Australopithecine remains but has indications of a hominid more advanced than *Australopithecus*, yet not of *Homo erectus* grade, i.e., perhaps of *H. habilis* grade (this is Yayo in the Chad Republic). The final group of sites in the earlier category have yielded remains of *H. erectus* grade, namely, Olduvai Bed II (upper part), Ternifine, Sidi Abderrahman, Rabat, and perhaps just between Mid- and Later Pleistocene, Témara. Kanam and Kanjera are sites dated, respectively, to the Earlier and Mid-Pleistocene, but the human skeletal remnant of at least the former does not seem to be of the same age as the deposits within which it was found.

Overlay 10.—In contrast to the 14 sites in the Earlier and Mid-Pleistocene map, some 28 sites are recorded on the Upper Pleistocene map. The industrial range of these sites south of the Sahara is from the "First Intermediate" (as represented in the Cave of Hearths and, probably, Hopefield) to the "Second

TABLE 1

STONE TOOLS		NORTH AFRICA (AFTER ARAMBOURG)	LINKS	EAST AFRICA	LINKS	SOUTH AFRICA (AFTER COOKE)
LATER INDUSTRIES	LATER PLEISTOCENE	*Grottes* associated with Mediterranean strand lines Ain Titmellil	Kom Ombo Taoudenni Sounfat	Ishango Many sites in Gregory Rift Nyabusora	Mumbwa Broken Hill Cave Chelmer	FLORISBAD-VLAKKRAAL FAUNAL SPAN Cave of Hearths Hopefield
HAND-AXES	MID-PLEISTOCENE	Sidi Abderrahman Lac Karar Ternefine	Erg de Tihodäine — Various Sites in Chad —	Isimila Olduvai IV Kanjera Olorgesailie Olduvai Upper Bed II	Victoria Falls	VAAL-CORNELIA FAUNAL SPAN Cornelia Vaal Terraces SWARTKRANS FAUNAL SPAN Kromdraai Swartkrans Sterkfontein Extension
OLDOWAN TOOLS ? ? ?	EARLIER PLEISTOCENE	Ain Hanech Bel Hacel UPPER "VILLAFRANCHIAN" Fouarat Ain Boucherit Ain Brimba Ichkeul LOWER "VILLAFRANCHIAN"		Omo Olduvai I and Lower II Kaiso Village (type site) Lower Kaiso – Kanam	Chiwondo Beds	STERKFONTEIN FAUNAL SPAN Makapansgat and Sterkfontein ? ? ?

Intermediate" (as represented by Ingwavuma and Fish Hoek). North of the Sahara, the range is from the "Middle Palaeolithic" (Mousterian and Aterian) to the "Upper Palaeolithic" (Oranian or Ibero-Maurusian). Physically, all the remains datable to this period belong to *Homo sapiens*. Following B. Campbell, at least three subspecies may be recognized: *Homo sapiens neanderthalensis* (e.g., Jebel Irhoud, Mugharet-el-Aliya); *Homo sapiens rhodesiensis* (e.g., Broken Hill, Hopefield); and *Homo sapiens sapiens* (e.g., Naivasha). Some of the Upper Pleistocene specimens, however, may be a little difficult to fit into any of these three subspecies if, after Campbell, *H. sapiens sapiens* is confined to Caucasiform man, while *H. sapiens afer* is used to designate Negriform man. It should be mentioned that some (e.g., Coon) would regard the Broken Hill and Hopefield crania as representatives of *H. erectus*, but this is a minority view not followed here. Instead, we have followed the definition agreed upon by the Wenner-Gren Symposium on Classification and Human Evolution as set forth in B. Campbell's contribution to that symposium.

Overlay 11.—The sites shown on this map relate to Post-Pleistocene occurrences of the "Later Stone Age" (sub-Saharan terminology) or of the late "Upper Palaeolithic," "Mesolithic," and "Neolithic." Some 80 sites are shown and the total number of individuals represented runs to several hundred. As an example, from Matjes River alone skeletal remains of over 20 individuals have been recovered.

Surveying the continent as a whole, one sees large gaps, both geographical and chronological. Very little has so far emerged from the northeastern parts of Africa, between the equator and the Mediterranean, an area likely to prove crucial in closing the gap between the African population sequence and the peoples of Mount Carmel and the eastern Mediterranean littoral. Again, west Africa, from Walvis Bay to the Gulf of Guinea, is virtually *terra incognita*, while the eastern flank of the subcontinent doubtless has much to contribute, especially to the later (Upper Pleistocene) chapters of the story.

The prehistoric populations are very unequally represented. On the one hand, *Australopithecus* is known from 8 sites, the remains including over 600 teeth. On the other hand, Middle Pleistocene hominids (excluding the late surviving members of *Australopithecus*) are known from only 6 or 7 sites and the number of teeth available for study is 87, of which 71 are mandibular and only 16 maxillary!

The past decade (1954–64), however, has witnessed a large increase in the number of discoveries. Since the important finds in northwest Africa, starting in 1954, it has been possible to fill in almost an entire chapter in hominid phylogeny—that of *H. erectus*, previously hardly known from the African continent. Furthermore, the discovery at Olduvai Gorge of skeletal remains representing at least 16 individuals has made it possible to close one of the remaining substantial gaps in the hominid sequence, namely, that between the Australopithecine and the *H. erectus* grades of hominid organization.

Compiler's Note. More recently still the excavation of terminal Pleistocene "Mesolithic" settlements at Sahaba, Tushka, and Wadi Halfa, during salvage operations by Yale University, the University of Colorado, and the Southern Methodist University's expeditions in connection with the construction of the Aswan High Dam, has yielded a number of burials predating the advent of the Neolithic and possibly, also, showing Negroid characteristics.

OVERLAYS 12–24. INDUSTRIAL DISTRIBUTIONS

Eight symbols have been used on the industrial distribution maps. Where the determination is recorded as certain the symbol is solid black, where uncertain the symbol is shown in outline only.

Where the number of industries identified in a major division (e.g., "Earlier," "Middle," and "Later Stone Age," etc.) is large and where distributions overlap, two or more transparent overlays have been found necessary. Each of such maps is printed in a different color to facilitate study when two or more are laid over the same base map. Only on Overlay 12 have two chronologically distinct industrial stages been included, and this was done because of the paucity of the assemblages that can definitely be assigned to the Lower and earlier Middle Pleistocene and because very little, if any, confusion could result from so doing.

There was little confusion in the terminology used by the regional correspondents and the few inconsistencies that appeared were reconciled directly with the correspondent concerned.

Table 2 sets out the north African and sub-Saharan terminology and the chronological relationships of the different industrial traditions, based upon stratigraphic, faunal, and absolute dating methods. The north African terminology employed is that in most common usage, or in the case of industries newly reported, the term used is that adopted by the discoverer. For sub-Saharan Africa, the terminology is that laid down by the Nairobi meeting of the Pan-African Congress in 1947, as subsequently amended by later meetings of the Congress, and by the recommendations of the Burg Wartenstein Conference in 1965.

Overlay 12.—"Earlier Stone Age": "Lower Palaeolithic." Oldowan and Lower Acheulian

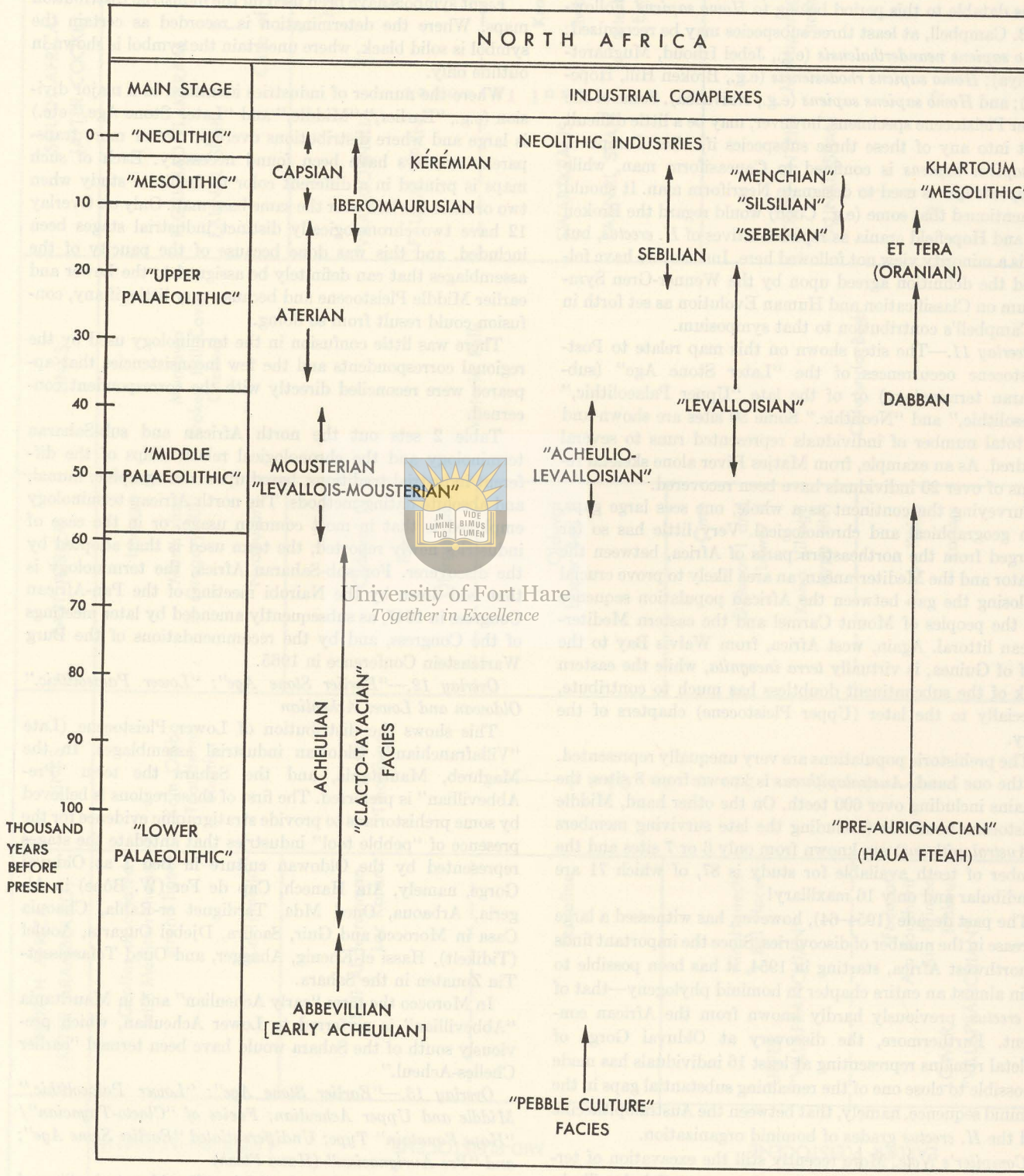
This shows the distribution of Lower Pleistocene (Late "Villafranchian") Oldowan industrial assemblages. In the Maghreb, Mauritania, and the Sahara the term "Pre-Abbevillian" is preferred. The first of these regions is believed by some prehistorians to provide stratigraphic evidence for the presence of "pebble tool" industries that antedate the stages represented by the Oldowan culture in Bed I at Olduvai Gorge, namely, Aïn Hanech, Cap de Fer (W. Bône) in Algeria, Arbaoua, Oued Mda, Tardiguet er-Rahla, Chaouia Casa in Morocco and Guir, Saoura, Djebel Ougarta, Aoulef (Tidikelt), Hassi el-Khenig, Ahagger, and Oued Tefassasset-Tin Zouaten in the Sahara.

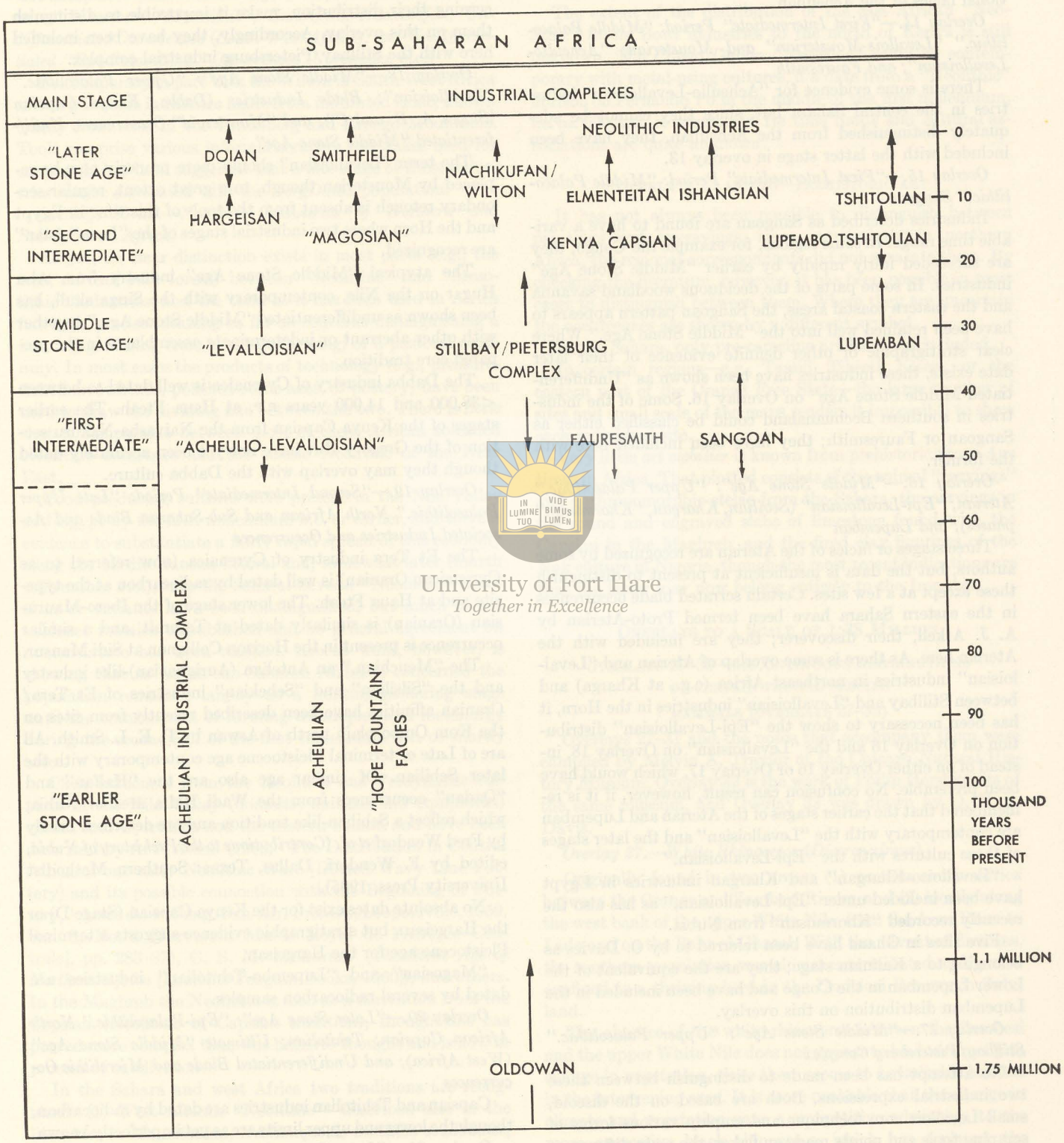
In Morocco the term "early Acheulian" and in Mauritania "Abbevillian" is preferred to Lower Acheulian, which previously south of the Sahara would have been termed "earlier Chelles-Acheul."

Overlay 13.—"Earlier Stone Age": "Lower Palaeolithic." Middle and Upper Acheulian; Facies of "Clacto-Tayacian"/ "Hope Fountain" Type; Undifferentiated "Earlier Stone Age"; and "Pre-Aurignacian" (Haua Fteah)

The term "Pre-Aurignacian" (also "Pre-Mousterian") used to describe the blade industry from the lower levels of the Haua Fteah cave in Cyrenaica is that first employed by its discoverer, C. B. M. McBurney, and it should not be taken as implying that it is connected in any way with the "Upper

TABLE 2 AFRICAN TERMINOLOGY AND INDUSTRIAL TIME RANGE





Palaeolithic" Aurignacian tradition. The same reservations apply to the term "Clacto-Tayacian" where a technological but no cultural relationship is implied. The "Clacto-Tayacian" and "Hope Fountain," are commonly regarded as occupational facies of the Acheulian.

Overlay 14.—"First Intermediate" Period: "Middle Palaeolithic." "Levallois-Mousterian" and Mousterian; "Acheulio-Levalloisian"; and Fauresmith

There is some evidence for "Acheulio-Levalloisian" industries in the central Sahara but, since they cannot be adequately distinguished from the Acheulian, they have been included with the latter stage in overlay 13.

Overlay 15.—"First Intermediate" Period: "Middle Palaeolithic." Sangoan

Industries described as Sangoan are found to have a variable time range. In some regions, for example the Congo, they are succeeded fairly rapidly by earlier "Middle Stone Age" industries. In some parts of the deciduous woodland savanna and the eastern coastal areas, the Sangoan pattern appears to have been retained well into the "Middle Stone Age." Where clear stratigraphic or other definite evidence of their later date exists, these industries have been shown as "Undifferentiated Middle Stone Age" on Overlay 16. Some of the industries in southern Bechuanaland could be classified either as Sangoan or Fauresmith; they have been included here with the former.

Overlay 16.—"Middle Stone Age": "Upper Palaeolithic." Aterian; "Epi-Levalloisian" (Sebilian, Khargan, "Khormusan" phases); and Lupemban

Three stages or facies of the Aterian are recognized by some authors, but the data is insufficient at present to distinguish these except at a few sites. Certain serrated blade occurrences in the eastern Sahara have been termed Proto-Aterian by A. J. Arkell, their discoverer; they are included with the Aterian here. As there is some overlap of Aterian and "Levalloisian" industries in northeast Africa (e.g., at Kharga) and between Stillbay and "Levalloisian" industries in the Horn, it has been necessary to show the "Epi-Levalloisian" distribution on Overlay 16 and the "Levalloisian" on Overlay 18, instead of on either Overlay 16 or Overlay 17, which would have been preferable. No confusion can result, however, if it is remembered that the earlier stages of the Aterian and Lupemban are contemporary with the "Levalloisian" and the later stages of these cultures with the "Epi-Levalloisian."

"Levalloiso-Khargan" and Khargan industries in Egypt have been included under "Epi-Levalloisian," as has also the recently recorded "Khormusan" from Nubia.

Five sites in Ghana have been referred to by O. Davies as belonging to a Kalinian stage; they are the equivalent of the Lower Lupemban in the Congo and have been included in the Lupemban distribution on this overlay.

Overlay 17.—"Middle Stone Age": "Upper Palaeolithic." Stillbay/Pietersburg Complex

No attempt has been made to distinguish between these two industrial expressions. Both are based on the discoid, small Levallois core technique and employ various forms of scraping tools and points made on flakes, the main differences being in the percentage of classes of tools and some stylistic preferences. The term Stillbay has been widely used throughout the savanna regions of sub-Saharan Africa generally distinguished by a regional adjective, e.g., Kenya Stillbay. Other variants have been recognized in South Africa (e.g., Mossel Bay, Mazelspoort, Alexandersfontein, and Hagenstad), but the validity of such distinctions, generally resulting from the use of a particular raw material (e.g., hard quartzite or indurated shale) and the lack of precise definition and data concerning their distribution, make it impossible to distinguish them on this overlay. Accordingly, they have been included here with the Stillbay/Pietersburg industrial complex.

Overlay 18.—"Middle Stone Age": "Upper Palaeolithic." "Levalloisian"; Blade Industries (Dabba, Kenya Capsian [Stages A, B, and C]); and "Mousteroid" Occurrences. Undifferentiated "Middle Stone Age"

The term "Levalloisian" should more properly now be replaced by Mousterian though, to a great extent, regular secondary retouch is absent from the tools of this time in Egypt and the Horn where two industrial stages of the "Levalloisian" are recognized.

The atypical "Middle Stone Age" industry from Abu Hugar on the Nile, contemporary with the Singa skull, has been shown as undifferentiated "Middle Stone Age," together with other aberrant or indeterminate assemblages in the prepared core tradition.

The Dabba industry of Cyrenaica is well dated to between <38,000 and 14,000 years B.P. at Haua Fteah. The earlier stages of the Kenya Capsian from the Naivasha-Nakuru section of the Gregory Rift have not yet been accurately dated though they may overlap with the Dabba culture.

Overlay 19.—"Second Intermediate" Period: "Late Upper Palaeolithic." North African and Sub-Saharan Blade and Associated Industries and Occurrences

The Et Tera industry of Cyrenaica (now referred to as Cyrenaican Oranian) is well dated by radiocarbon at the type-site and at Haua Fteah. The lower stage of the Ibero-Maurusian (Oranian) is similarly dated at Taforalt, and a similar occurrence is present in the Horizon Collignon at Sidi Mansur.

The "Menchian," an Antelian (Aurignacian)-like industry and the "Silsilian" and "Sebekian" industries of Et Tera/Oranian affinities have been described recently from sites on the Kom Ombo plain north of Aswan by P. E. L. Smith. All are of Late or terminal Pleistocene age contemporary with the later Sebilian. Of similar age also are the "Halfan" and "Qadan" occurrences from the Wadi Halfa area of Nubia, which reflect a Sebilian-like tradition and are described briefly by Fred Wendorf *et al.* (*Contributions to the Prehistory of Nubia*, edited by F. Wendorf, Dallas, Texas: Southern Methodist University Press, 1965).

No absolute dates exist for the Kenya Capsian (Stage D) or the Hargeisan, but stratigraphic evidence suggests a terminal Pleistocene age for the Hargeisan.

"Magosian" and "Lupembo-Tshitolian" industries are dated by several radiocarbon samples.

Overlay 20.—"Later Stone Age": "Epi-Palaeolithic." North African Capsian; Tshitolian; Ultimate "Middle Stone Age" (West Africa); and Undifferentiated Blade and Microlithic Occurrences

Capsian and Tshitolian industries are dated by radiocarbon, though the lower and upper limits are as yet imperfectly known.

Overlay 21.—"Later Stone Age": "Epi-Palaeolithic Industries." Ibero-Maurusian (Middle and Upper Stages); Kérémian; Wilton; Ishangian; Elmenteitan; and Doian

The Kérémian (type-site Kef-el-Kerem) is distinguished from the Upper Capsian by a large proportion of end scrapers and few notched or strangulated tools.

Two sites with bone harpoons on the west side of Lake Rudolph have been included as uncertain Ishangian-type industries.

Overlay 22.—"Later Stone Age": "Epi-Palaeolithic Industries." Khartoum "Mesolithic"; Smithfield; Nachikufan; Undifferentiated Occurrences (South West Africa); and Undifferentiated "Epi-Palaeolithic" Occurrences (Cyrenaica, etc.)

Contemporary in part with the Wilton in South West Africa are certain flake industries made from indurated shale, known chiefly from sites in the Brandberg and Erongo Mountains. Tools comprise various informal scrapers and flakes used for cutting. It has been suggested that a late stage of these industries can be associated with the BergDama population.

Overlays 23–24.—Neolithic Industries of Northern and Sub-Saharan Africa

As yet, no clear distinction exists in most parts (e.g., the west African rain forest) between "Neolithic" and "Mesolithic" industries, and the term as it has been used in Africa has little precise meaning so far as concerns distinguishing a hunting-gathering from a village farming, or a pastoral economy. In most cases the products of technology (e.g., pressure-flaked arrowheads, polished stone axes, or pottery) have been used to draw the dividing line between the two. There is little that is comparable between most of these African so-called Neolithic industries and the classic Neolithic of the Near East.

Food producing cultures were present in the Nile Valley and Egypt by the fifth millennium B.C. or earlier, and there is evidence to substantiate a fairly rapid spread of this economy along the Mediterranean littoral and, somewhat later (fourth millennium B.C.), into the Sahara. Several "Neolithic" traditions or variants have been distinguished, but much of the evidence remains unpublished and no general agreement on nomenclature has been reached. Recent work, however, is showing that so far as sub-Saharan Africa is concerned the population remained largely at a hunting-gathering stage until the transmission of farming techniques and metallurgy during the second half of the first millennium B.C. or shortly after.

Clear influences from the Neolithic and Predynastic cultures of the Nile Valley (domestic animals and equipment) spread into Cyrenaica and the eastern Sahara and have been described by A. J. Arkell (1962, "The Distribution in Central Africa of one early Neolithic Ware [Dotted Wavy Line Pottery] and its possible connection with the Beginning of Pottery," Actes du 4e Cong. Pan-Afr. Préhist., Léopoldville, 1959, Ser. 8, No. 4 [Tervuren: Musée Royal de l'Afrique Centrale], pp. 283–87), C. B. M. McBurney (*The Stone Age of Northern Africa* [London: Penguin Books, 1960]), and others. In the Maghreb the Neolithic is seen as a derivation from the Capsian (Neolithic of Capsian tradition), though this has proved more complex than was hitherto thought and is now in process of subdivision.

In the Sahara and west Africa two traditions are recognized: (1) West African "Neolithic"—described also in the literature as Mauritanian, *Néolithique de tradition soudanaise,* or Guinean. Further work will probably make subdivision justifiable and initial attempts are already under way, e.g. *Néolithique du littoral de l'ouest;* rain forest Guinean, Fadélien (*facies* Campignon), and so forth; and (2) Saharan "Neolithic"—forming a fairly homogeneous tradition stretching from the Hoggar and Aïr eastward to Tibesti and Chad.

The inability to distinguish between "Neolithic" and "Mesolithic" industries in the west African rain forest region led Oliver Davies to adopt the term "Meso-Neolithic" and this has been retained for the sites he so recorded.

The extent of the distribution of the east African "Neolithic" Stone Bowl industries to the north of Kenya is still unknown. The Congo/Gabon "Neolithic" could be contemporary with metal-using cultures, if a date from a "Neolithic" horizon on Fernando Po in the middle of the first millennium, i.e. *ca.* 500 A.D., is acceptable. Its time limits and cultural associations are quite unknown.

OVERLAYS 25 AND 26—PREHISTORIC ART

It has not always been possible to distinguish between paintings and engravings, since, particularly in northern Africa, the regional correspondents did not separate them. By checking the literature, however, it has been possible in most cases to distinguish between them. Where they are uncertain the occurrences are shown by a different symbol.

In the Sahara, only pre-cameline art has been included.

In certain regions—e.g., Tassili, Tibesti, Kisese, or the eastern part of the Orange Free State—the large number of sites and small scale of the maps renders it impossible to show each individual site.

Very little *art mobilier* is known from prehistoric Stone Age times in Africa. That plotted consists of the animal "carvings" and anthropomorphic stelae from the Sahara, the carvings in the round and engraved slabs of limestone found with the Capsian in the Maghreb, and the fired clay figurines of the Nok culture in Nigeria, though the most recent indications are that the latter may now belong entirely to the Iron Age.

OVERLAYS TO A SCALE OF 1:38 MILLION

OVERLAYS 27–38—DISCONTINUOUS DISTRIBUTIONS OF CERTAIN FAUNAL SPECIES

MAMMALS (OVERLAYS 27–33)

Overlays 27–31 and the notes that accompany them were compiled by Melvin A. Traylor of the Chicago Natural History Museum. Overlay 32 is the work of Philip Hershkovits of the same museum, and Overlay 33 was drawn by D. H. S. Davis.

Overlay 27.—White Rhinoceros (Diceros simus)

Originally found in two areas: (1) eastern south Africa between the Orange and Zambezi Rivers, and (2) locally along the west bank of the upper White Nile, from the Arau River to Lado and on the Bahr-el-Ghazal. With the advent of firearms, the southern population was almost exterminated and is now confined to a thriving herd in the Umfolozi Reserve in Zululand.

The absence of the white rhinoceros between the Zambezi and the upper White Nile does not appear to be due directly to change in vegetation, since there seems to be suitable habitat in the intervening area. It is more probable that the change in climate and vegetation gave a competitive advantage to the more aggressive black rhinoceros, which has replaced the white one over most of east Africa.

Overlay 28.—Oryx, or Gemsbok

The Gemsbok, *Oryx gazella,* and the Oryx, *O. beisa* (considered by some mammalogists to be merely races of the same species) are both characteristic of arid country. Their range

was probably continuous during periods of greater desiccation in the past, and their present ranges are separated by an area of unsuitable habitat.

Overlay 29.—Giraffe (*Giraffa camelopardalis*)

The main range of the giraffe is divided into two major portions, with a large gap between them in Rhodesia and Portuguese east Africa where, presumably, the vegetation is no longer suitable. The interesting population is the isolated herd on the left bank of the Luangwa River in Zambia. According to W. F. H. Ansell, this herd has always been isolated, at least within historic times. It is presumably a relict population from drier times when giraffes probably ranged over much of the region north of the Zambezi.

Overlay 30.—Dikdik (*Rhynchotragus kirki*)

The distribution of this Dikdik is similar to that of the Oryx or Gemsbok and the causes of the broken distribution are probably similar. The case of the Dikdik, however, may be complicated by its preference for stony ground. The range of the Damara population at present is completely confined to rocky areas and, if this preference is of long duration, there are large sandy areas in Bechuanaland and western Rhodesia where it would never have occurred.

Overlay 31.—Bongo (*Boocercus eurycerus*)

The fragmented range of the Bongo is an example of a humid forest species whose range has been broken up by the reduction of what must once have been a continuous forest across equatorial Africa. The populations in west Africa and the Congo are found in lowland forest; that in east Africa is found in humid montane forest and does not extend below 6,000 feet. These should be compared to the Oryx whose range is divided because the once continuous arid district is now divided by a more humid savanna area.

Overlay 32.—Needle-clawed Galagos (genus *Euoticus*)

The needle-clawed galagos are distinguished by a raised keel, prolonged distally into a sharp point, on all the nails except the pollux, hallux, and second pedal digit. The only two species, *elegantulus* and *inustus*, are both characteristic of lowland tropical forest. Their ranges, however, are separated by almost the whole of the Congo basin east of the Ubangi, despite the fact that the lowland forest is continuous across this area.

Overlay 33.—Diademed Monkey (*Cercopithecus mitis*)

The species is characteristic of submontane and montane forests and gallery forest and occurs throughout the southern savanna zone in suitable habitats. It is not apparently known west of the lower Congo or Oubangui rivers. Its closest relative in West Africa is *C. nictitans*.

G. M. Allen, following E. Schwarz, lists 20 forms of *mitis* as valid subspecies. The subsequent description of *C. mitis stevensoni* (Roberts 1948) brings the total recognized forms to 21. Great variation is found in the forms of the species. For example, in the eastern Congo highlands there are at least 3 distinct recognizable forms, each attached to a different altitudinal zone, e.g., *C. m. stuhlmanni* (Blue monkey) is a rain forest form found mostly at lower altitudes, *C. m. doggetti* (Silver monkey) is found in swamp forest, and *C. m. kandti* (Golden monkey) is found in the bamboo zone. Elsewhere in Africa, 2 forms may be found living very near to one another or even coexisting (e.g., *C. m. opisthostictus* and *C. m. moloneyi*). This considerable subspeciation offers good material for an evolutionary study taking past changes of climate, with their correlated expansion and contraction of forest areas, into account. Such effects are traceable well into the Pliocene, e.g., the gap between *C. m. stuhlmanni* populations in the southwestern Sudan and *C. m. boutourlini* in southern Ethiopia has not, apparently, been bridged during the Pleistocene. Also, there are distinct island subspecies (*C. m. albogularis* on Zanzibar and Mafia Islands; *C. m. phylax* on Patta Island). *C. m. labiatus* of the eastern Cape and Natal is very distinct from the *erythrarchus* group to the north in the Transvaal, Zululand, and Mozambique and elsewhere in southern Africa.

OVERLAYS 34–38 (BIRDS)

Drawn and annotated by R. E. Moreau of the Edward Grey Institute of Field Ornithology, Oxford.

Overlay 34.—This shows the distribution of *Alcippe abyssinicus*, from Abyssinia to southern Malawi, with outliers far to the west on the highlands of the Cameroons (and Fernando Po) and of Angola. These connections to the Cameroons must surely have been by way of the northern rim of the Congo basin and that to Angola from near the southern end of Lake Tanganyika. It is noteworthy that, although the species shows such subspecific variation, the population of the Bamenda-Banso highlands of the Cameroons is identical with that from the north end of Lake Tanganyika to Ruwenzori, while the Angola birds are like those populations, themselves identical, scattered from the southern end of Lake Tanganyika to Abyssinia.

Numerous species of the central and east African montane forests have representatives on the Cameroon highlands in the same way as *A. abyssinicus*, but Angolan outliers are fewer.

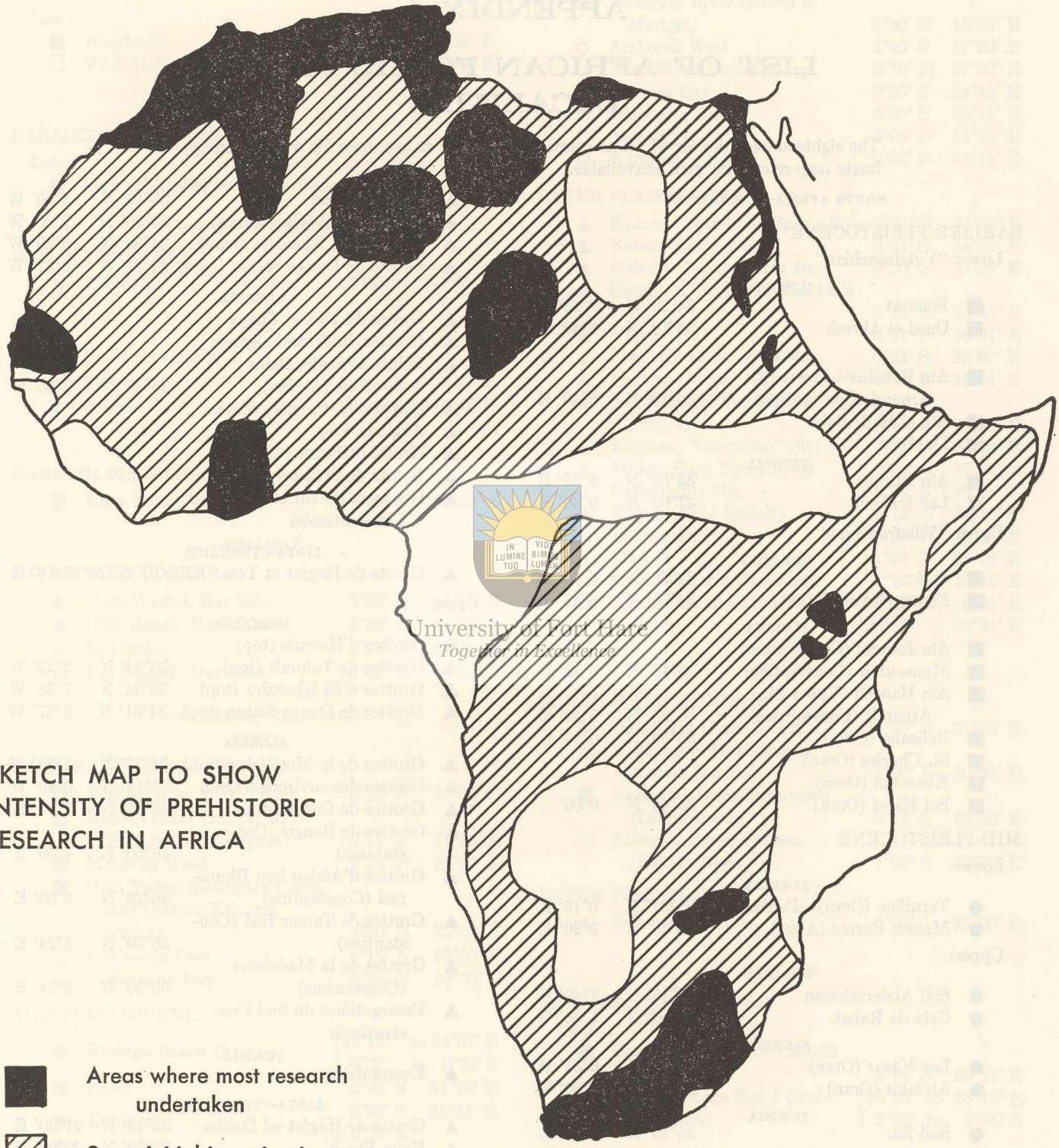
Overlay 35.—Pogonocichla stellata is an example of the rather few species of the tropical montanes that extend discontinuously south to the Cape Province.

Overlay 36.—Phylloscopus umbrovirens. This is one of three east African montane species that reach the vestigial *Juniperus* forests in the mountains of Somaliland. Two of these species and one other from the African mountains occur also on the mountains of Yemen in southwestern Arabia.

Overlay 37.—Ploceus rubiginosus is one of more than a dozen species belonging typically to semiarid *Acacia* country, which have one population in northeastern Africa and another in southwestern. All show a gap in distribution covering at least the southern half of Tanzania and all Zambia except the extreme west. This naturally suggests a former semiarid corridor between Lakes Malawi and Tanganyika, but the country between the two lakes is relatively high and aridity there is not easy to envisage.

An extreme example of discontinuous range in dry country (but not so dry as in the *Ploceus rubiginosus* group) is that of the lark *Heteromirafra ruddi*, with a very limited range in the northwestern corner of Somaliland and another in the high grassveld in a small area of South Africa (marked xx on the overlay).

Overlay 38.—Neocossyphus rufus is one of a few lowland forest species with their main range in western Africa, extending across the Congo basin into Uganda and then reappearing in the vestigial forests on and near the east African coast. The one-time connection of lowland forest could have been either north or south of Lake Victoria and the Kenya highlands; either would involve much greater humidity than the present.



SKETCH MAP TO SHOW
INTENSITY OF PREHISTORIC
RESEARCH IN AFRICA

Areas where most research undertaken

Some initial investigation

Unexplored

APPENDIX A

LIST OF AFRICAN FOSSIL FAUNA LOCALITIES

The eighteen localities for which no coordinates are shown are those for which even approximate map references were unavailable.

NORTH AFRICA—LOCALITIES

EARLIER PLEISTOCENE

Lower "Villafranchian"

MOROCCO

■ Fouarat	34°20′ N	6°25′ W
■ Oued el Akrech	34°10′ N	6°40′ W

ALGERIA

■ Aïn Boucherit-Lower St. Arnaud (Constantine)	36°10′ N	5°40′ E
■ Aïn el Hadj Baba		
■ Duvivier		

TUNISIA

■ Aïn Brimba	33°50′ N	8°50′ E
■ Lac Ichkeul	37°00′ N	9°30′ E

Upper "Villafranchian"

MOROCCO

■ Salé	34°20′ N	6°45′ W
■ Ferme Guyot (Rabat)	34°05′ N	6°45′ W

ALGERIA

■ Aïn Jourdel (Constantine)		
■ Mansourah (Constantine)	36°45′ N	6°42′ E
■ Aïn Hanech (Upper St. Arnaud) (Constantine)	36°25′ N	5°49′ E
■ Relizane (Oran)	35°50′ N	0°55′ E
■ St. Charles (Oran)		
■ Kharoubi (Oran)		
■ Bel Hacel (Oran)	35°45′ N	0°00′

MID-PLEISTOCENE

Lower:

ALGERIA

● Ternifine (Oran)—Palikao	35°31′ N	0°15′ E
● Maison Carrée (Alger)	36°40′ N	3°20′ E

Upper:

MOROCCO

● Sidi Abderrahman	33°35′ N	7°40′ W
● Grès de Rabat	33°50′ N	6°50′ W

ALGERIA

● Lac Kârar (Oran)	35°15′ N	0°55′ W
● Aboukir (Oran)	35°45′ N	0°30′ W

TUNISIA

● Sidi Zin	36°15′ N	8°45′ E

LATER PLEISTOCENE

Lower:

MOROCCO

▲ Grottes d'Hercule (base)		
▲ Grottes de Taforalt (base)	35°54′ N	2°22′ W
▲ Grottes de Kifan bel Ghomari (Taza)	34°10′ N	3°50′ W
▲ Djebel Irhoud	33°15′ N	5°30′
▲ Aïn Titmellil (Casablanca)	33°35′ N	7°30′
▲ Grotte d'El Khenzira (base)	34°50′ N	6°20′
▲ Grotte de Dar es Soltan (base)	34°01′ N	6°57′

ALGERIA

▲ Grotte du Djebel Thaya		
▲ Grottes du littoral algérois		
▲ Pointe Pescade, Bains Romains (Algiers)	36°40′ N	2°45′ E
▲ Guyotville, Carrière Sintès		
▲ Anglade, etc.		
▲ Grotte d'Hydra (Alger)		
▲ Grotte de St. Roch (Oran)		
▲ Gisement de Bir el Ater (Sud Constantinois)		

LIBYA-CYRENAICA

▲ Grotte de Hagfet et Tera	32°8/10′ N	20°15/16′ E

Upper:

MOROCCO

▲ Grottes d'Hercule (top)		
▲ Grottes de Taforalt (top)	35°54′ N	2°22′ W
▲ Grottes d'El Khenzira (top)	33°04′ N	7°33′ W
▲ Grottes de Dar es Soltan (top)	34°01′ N	6°57′ W

ALGERIA

▲ Grottes de la Mouillah (Oran)	34°55′ N	1°50′ W
▲ Grottes des environs d'Oran	35°45′ N	0°45′ W
▲ Grottes de Constantine	36°25′ N	6°30′ E
▲ Grottes de Bougie (Constantine)	36°50′ N	4°50′ E
▲ Grottes d'Afalou bou Rhummel (Constantine)	36°29′ N	3°00′ E
▲ Grottes de Tamar Hat (Constantine)	36°30′ N	5°24′ E
▲ Grottes de la Madeleine (Constantine)	36°30′ N	5°24′ E
▲ Escargotières du Sud Constantinois		

TUNISIA

▲ Escargotières		

LIBYA-CYRENAICA

▲ Grotte de Hagfet ed Dabba	32°48′ N	21°30′ E
▲ Haua Fteah	32°50′ N	22°05′ E
▲ Benghazi	32°20′ N	20°05′ E

SOMALIA-EGYPT-SAHARA—LOCALITIES

EGYPT

LATER PLEISTOCENE

▲ Asyut	27°15′ N	31°00′ E
▲ Kom Ombo	24°30′ N	32°50′ E

SUDAN

EARLIER PLEISTOCENE

Late:

■	Khartoum	15°35′ N	32°30′ E
□	Wadi Halfa	21°50′ N	31°20′ E

ETHIOPIA

EARLIER PLEISTOCENE

Late:

■	Omo (Ethiopia/Kenya border)	4°40′ N	36°00′ E

SOUTHERN ALGERIA

MID-PLEISTOCENE

●	Tihodaïne	Approx. 23°00′ N	6°00′ E

MALI

LATER PLEISTOCENE

▲	Taodeni	22°43′ N	3°45′ W
▲	Sounfat	20°50′ N	0°35′ E

CHAD

EARLIER PLEISTOCENE

■	Koro Toro	16°10′ N	18°30′ E

SOMALIA

LATER PLEISTOCENE

▲	Gure Warbei, Bur Eibe	3°00′ N	44°15′ E
▲	Rifle Range, Bur Hakaba	2°56′ N	44°05′ E
△	El Dubbo	3°55′ N	44°45′ E
△	Bur Dauleh, Bur Eibe	3°05′ N	44°12′ E

EAST AFRICA—LOCALITIES

KENYA

EARLIER PLEISTOCENE

■	Baringo (Chemeron Beds)	0°35′ N	35°55′ E
■	Kanam (East Central and West and also Koguta)	0°21′ S	34°30′ E
■	Marsabit Road	2°30′ N	37°27′ E
■	Omo Valley (Shungura Crossing) (Kenya/Ethiopia border)	4°30′ N	35°52′ E
□	Lokitaung Pass	4°18′ N	35°50′ E
□	Todenyang Pass	4°30′ N	35°55′ E

MID-PLEISTOCENE

●	Rusinga Island (2 sites)	34°13′ to 34°07′ E	0°27′ to 0°22′ S
●	Rawe	0°22′ S	34°28′ E
●	Kanjera	0°20′ S to 0°23′ S	34°34′ E
●	Kendu	0°22′ S	34°38′ E
●	Olorgesailie	1°35′ S	36°27′ E
●	Kariandusi	0°27′ S	36°16′ E
●	Loperot (Kipu-Namadang Area), Turkana	2°20′ N	35°58′ E
●	Kuwur (incl. Homa Lime Works and Homa Point)	0°26′ S to 0°21′ S	34°28′ E
○	Kandizi (West of Nairobi)	1°24′ S	36°43′ E
○	Kapthurin River	0°34′ N	35°51′ E
○?	Nasagum River (North of Marigat)	0°30′ N	35°55′ E
○	Amboseli West	2°40′ S	37°20′ E
○	Naro Moru Lime Quarry	0°10′ S	37°02′ E
○	Kisumu Bay	0°05′ S	34°45′ E
○	Muhoroni Bridge	0°09′ S	35°11′ E
○	Yala River	0°06′ N	34°30′ E
○	Karungu	0°52′ S	34°12′ E

LATER PLEISTOCENE

▲	Kanam Central Hot Spring Site	0°21′ S	34°30′ E
▲	Kanam Camp Gully	0°21′ S	34°30′ E
▲	Kokoth (North Homa Bay)	0°20′ S	34°31′ E
▲	Gamble's Cave (and Gamble's Drift)	0°33′ S	36°05′ E
▲	Nderit Drift	0°31′ S	36°07′ E
▲	Lion Hill Cave	0°23′ S	36°07′ E
▲	Malewa Gorge	0°38′ S	36°24′ E
▲	Naivasha (Railway Rock Shelter)	0°42′ S	36°26′ E
▲	Kanjera, "Gamblian" Site	0°21′ S	34°34′ E
△	Middle Uaso Nyiro River	0°36′ N	37°32′ E
△	Cartwrights Site	0°38′ S	36°28′ E
△	Kabua (Lake Rudolf)	3°13′ N	36°10′ E
△	Lodwar Hill	3°07′ N	35°36′ E
△	Magadi	1°59′ N	36°16′ E
△	Kiambaa Cave (Kiambu)	1°12′ S	36°45′ E
△	Kariandusi and Little Gilgil rivers	0°27′ to 0°35′ S	36°16′ to 36°21′ E

UGANDA

EARLIER PLEISTOCENE

■	Kaiso Spit (Lake Albert)	1°30′ N	31°00′ E
■	Nyabrogo—Makoga area (Lower Semliki)	1°00′ N	30°20′ E
■	Kazinga—Bushabwanyama (Lake Albert)	0°15′ S	29°50′ E
□	Kikagati Power Station (Kagera River)	1°05′ S	30°30′ E

LATER PLEISTOCENE

▲	Kikorongo Crater	0°00′	39°00′ E

TANZANIA

EARLIER PLEISTOCENE

Upper:

■	Vogel River Series—Laetolil Beds	3°14′ S	35°11′ E
■	Olduvai Gorge Bed I (multiple sites)	35°25′ to 3°00′	35°12′ E to 2°56′ S

MID-PLEISTOCENE

Lower:

●	Olduvai Gorge Bed II (multiple sites)	35°25′ to 3°00′	35°12′ E to 2°56′ S

Upper:

●	Olduvai Gorge Bed IV (multiple sites)	35°25′ to 3°00′	35°12′ E to 2°56′ S

● Makuyuni valley (near cross roads)	3°34′ S	36°06′ E
● Isimila	7°54′ S	35°36′ E
● Peninj (Humbu Formation)	2°20′ S	35°55′ E
○? Tinde Beds (Manonga—Wembere Steppe)	4°02′ S	33°46′ E
△? Rukwa Lake Beds (2 sites)	8°25′ S	32°32′ E

LATER PLEISTOCENE

▲ Nyabusora (Kagera River)	1°10′ S	31°07′ E
▲ North East of Lake Eyasi	3°32′ S	35°17′ E
▲ Apis Rock	2°40′ S	35°05′ E
▲ Lake Manyara Eastern Beaches	3°35′ S	35°55′ E
▲ Ngaloba Beds	3°14′ S	35°11′ E

ZAMBIA

MID-PLEISTOCENE

● Victoria Falls	17°56′ S	25°53′ E

LATER PLEISTOCENE

▲ Mumbwa Cave	14°58′ S	27°01′ E
▲ Broken Hill (No. I Kopje)	14°27′ S	28°28′ E
▲ Twin Rivers Kopje	15°25′ S	28°08′ E
▲ Maramba River	17°50′ S	(?)25°55′ E
▲ Leopards Hill Cave	15°25′ S	(?)28°50′ E
▲ Nachikufu Cave	12°15′ S	(?)31°15′ E

MALAWI

EARLIER PLEISTOCENE

■ Uraha Hill (Chiwondo Beds)	10°20′ S	34°07′ E

MID-PLEISTOCENE

● Mwenirondo	9°54′ S	33°57′ E

RHODESIA

LATER PLEISTOCENE

▲ Chelmer	19°50′ S	28°05′ E
▲ Inyanga	18°10′ S	32°45′ E

SOUTH-WEST AFRICA AND EQUATORIAL AFRICA—LOCALITIES

SOUTH-WEST AFRICA

LATER PLEISTOCENE

△ Kalk Plateau	24°50′ S	18°20′ E
△ Usakos	22°05′ S	15°30′ E

ANGOLA

◬ Leba	15°05′ S	13°16′ E

CONGO

EARLIER PLEISTOCENE

■ Gué de Katanda (Upper Semliki)	0°05′ S	29°37′ E
■ Kanyatsi (Upper Semliki)	0°08′ S	29°37′ E
■ Nyamavi area (Lake Albert)	1°19′ N	30°23′ E

MID-PLEISTOCENE

● Katanda, southern cliffs	0°05′ S	29°37′ E
● Passe de Songe	7°54′ S	26°56′ E

LATER PLEISTOCENE

▲ Ishango (Upper Semliki)	0°08′ S	29°37′ E
▲ Lukunki	10°46′ S	26°40′ E
▲ Mulungwishi	10°47′ S	26°38′ E
▲ Kakontwe	10°59′ S	26°42′ E
▲ Mbaya	11°55′ S	27°30′ E
△ "Kawa"	7°13′ S	29°46′ E
△ Kabwe	7°16′ S	29°34′ E
△ Dibwe Lukele	9°04′ S	25°27′ E
△ Mine d'étain de Sofwe	9°35′ S	26°07′ E
△ "Sand-gravels of Kasenga"	10°21′ S	28°37′ E
△ Rocks of Lovo	5°43′ S	14°27′ E
△ Diamond mines of Kasai	6°26′ S	20°48′ E

SOUTH AFRICA—LOCALITIES

EARLIER PLEISTOCENE

Late	■ Makapansgat Lime-works	24°12′ S	28°57′ E
Late	■ Sterkfontein (including extension site)	25°59′ S	27°45′ E
Late	■ Taung	27°32′ S	24°45′ E
	◘ Langebaanweg	32°57′ S	18°10′ E

MID-PLEISTOCENE

Early	● Swartkrans	26°01′ S	27°43′ E
Early	● Kromdraai	25°59′ S	27°47′ E
Early	● Bolts Farm	25°55′ S	27°30′ E
	● Gladys Vale	?	?
	● Zululand Clays	28°30′ S	32°15′ E
	● Cornelia O.F.S.	27°05′ S	28°35′ E
	● Vaal-Delports Hope	28°30′ S	24°20′ E
	● Vaal-Barkly West	28°30′ S	24°30′ E
	● Vaal-Windsorton	28°20′ S	24°35′ E
	● Vaal-Christiana	27°50′ S	25°10′ E
	● Vaal-Sheppard Island	27°40′ S	26°00′ E
	◭ Hopefield (Elandsfontein Farm)	33°04′ S	18°23′ E
	◭ Bloembosch (Darling)	33°30′ S	18°30′ E

LATER PLEISTOCENE

▲ Florisbad	28°45′ S	26°00′ E
▲ Vlakkraal	28°50′ S	26°05′ E
▲ Cave of Hearths (Makapan Valley)	24°12′ S	28°57′ E
▲ Kalkbank	23°32′ S	29°15′ E
▲ Wonderwerk Cave (Kuruman)	27°31′ S	23°30′ E
▲ Taung Area	27°32′ S	24°45′ E
▲ Border Cave, Zululand	27°01′ S	31°59′ E
▲ Tierfontein O.F.S.	28°02′ S	26°16′ E
▲ Chubani O.F.S.	29°02′ S	26°55′ E
▲ Rustfontein 120 O.F.S.	29°16′ S	26°35′ E
▲ Mahemspan O.F.S.	27°45′ S	26°09′ E
▲ Kranskraal & Mockesdam	29°03′ S 29°03′ S	26°26′ E 26°29′ E
▲ Voorspoed (Abrahamskraal) O.F.S.	28°53′ S	25°46′ E
▲ Koffiefontein O.F.S.	29°15′ S	24°25′ E

	▲	Cango Caves, Oudtshoorn	33°40′ S	22°15′ E		Nooitgedacht, Stanford	34°26′ S	19°25′ E
	▲	Zwartklip (False Bay)	34°10′ S	18°45′ E	△	Skildergat Cave, Fish Hoek	34°15′ S	18°25′ E
	▲	Hoedjiesbaai	32°50′ S	17°50′ E	△	Kalk Bay	34°15′ S	18°25′ E
	▲	Vaal-Vet River confluence	27°35′ S	26°05′ E	△	Saldanha Bay (≡ Darling?)	33°00′ S	18°00′ E
	△	Vaal—near Balkfontein	27°25′ S	26°30′ E				
	△	Modder River O.F.S.	29°30′ S	27°15′ E				
Late	△	Uitkomst Cave	25°45′ S	27°55′ E	△	Geelwal Karoo, Van Rhynsdorp district	31°35′ S	18°40′ E
	△	Linkerhandsgat &						

APPENDIX B

CHARACTERISTIC AFRICAN GENERA AND SPECIES OF THE FAUNAS OF THE COMBINED SITES

List 1

North Africa—"Villafranchian" Fauna

EARLIER PLEISTOCENE

Lower "Villafranchian":

Anancus Osiris Aramb.
Elephas africanavus Aramb.
Rhinoceros cf. *simus* Burch.
Equus numidicus Pom.
Stylohipparion (*ambiguum*) *libycum* Pom.
Hippopotamus (*Hexaprotodon*) *hipponensis* Pom.
Hippopotamus amphibius L.
Omochoerus phacocheroides (Thom.)
Libytherium maurusium Pom.
Camelus sp.
Bos (*Leptobos*) nov. sp.
Antidorcas nov. sp.
Taurotragus? Gaudryi Thim.
Gazella sp.
Gazella nov. sp. (cf. *Cuvieri*)
Gorgon? cf. *Tournoueri* Thom.
Redunca sp.
Lithocraniis leporinus Pom.
Alcelaphus sp.
Capra nov. sp.
Hyaena crocuta Erxl.
Machairodus nov. sp.
Mellivora sp.
Macaca sp.

Upper "Villafranchian":

Anancus Osiris?
Elephas Recki Dietr.
Rhinoceros simus
Asinus sp.
Equus sp.
Stylohipparion libycum
Hippopotamus amphibius
Omochoerus maroccanus Enn.
Libytherium maurusium
Giraffa sp.
Bos (*Leptobos*) nov. sp.
Numidocapra crassicornis Aramb.
Oryx sp.
Gorgon? Tournoueri Thom.
Gazella sp.
Gazella nov. sp. (cf. *Cuvieri*)
Felis leo
Hyaena crocuta
Canis cf. *atrox*
Cynocephalus atlanticus Pom.

List 2

North Africa—Mid-Pleistocene Fauna

Lower:

Elephas Atlanticus Pom.
Rhinoceros simus
Equus mauritanicus Pom.
Hippopotamus amphibius
Afrochoerus nov. sp.
Giraffa camelopardalis L.
Camelus Thomasi Pom.
Connochaetes prognu Pom.
Alcelaphus probubalis (Pom.)
Taurotragus cf. *oryx* (Pall.)
Oryx cf. *algazel* (Oken)
Gazella rufina Thom.
Felis leo L.
Panthera sp.
Machairodus nov. sp.
Mellivora sp.
Hyaena crocuta
Hyaena striata Zimm.?
Ursus cf. *Larteti* Bourg.
Canis cf. *atrox*
Herpestes ichneumon Lac.
Hystrix cristata L.
Cynocephalus? sp.

Upper:

Elephas atlanticus
Elephas iolensis Pom.
Rhinoceros simus
Equus mauritanicus
Equus asinus sp.
Hippopotamus amphibius
Sus scrofa L.
Bos primigenius Boj.
Omoioceras antiquus (Duv.)
Rabaticeras Arambourgi Enn.
Alcelaphus probubalis
Connochaetes prognu
Gazella rufina
Gazella Cuvieri Og.?
Redunca Maupasi Pom.
Oryx sp.
Ursus cf. *Larteti* (*U. Bibersoni* Enn.)
Hyaena crocuta
Hyaena striata
Canis anthus F. Cuv.
Hystrix cristata

List 3

North Africa—Later Pleistocene Fauna

Lower:

Elephas atlanticus
Rhinoceros simus
Rhinoceros Mercki Kaup
Equus sp.
Hippopotamus amphibius
Sus scrofa
Phacochoerus aethiopicus Gray
Camelus Thomasi
Megeceroides algericus (Lydd.)
Omoioceras antiquus
Bos primigenius
Bubalis boselaphus Pall.
Ammotragus lervia Pall.
Taurotragus cf. *oryx*
Hippotragus cf. *equinus* Geoffr.
Connochaetes prognu
Cobus sp.
Redunca Maupasi

Gazella atlantica Bourg.
Gazella Cuvieri
Gazella dorcas L.
Gazella rufina Thom.
Gazella tingitana Aramb.
Ursus arctos Larteti
Ursus arctos Faidherbi Bourg.
Hyaena crocuta
Hyaena striata
Felis leo
Felis pardus L.
Felis serval Schr.
Felis ocreata
Canis anthus
Vulpes atlantica Wagn.
Genetta afra F. Cuv.
Viverra sp.
Herpestes ichneumon
Hystrix cristata
Erinaceus algirus Duv.
Oryctolagus cuniculus L.

Upper:

No difference from Lower except for the disappearance of *Rh. Mercki* and *El. atlanticus* and the incoming of *El. africanus*.

List 4

East Africa—Lower Earlier Pleistocene Fauna

Kanam, Lower Kaiso

Anancus kenyensis
Stegodon kaisensis
Archidiskodon subplanifrons
Archidiskodon exoptatus
Dinotherium bozasi
Loxodonta africanava
Stylohipparion albertense
Equus oldowayensis
Ceratotherium simum
Diceros bicornis
Mesochoerus limnetes
Notochoerus euilus
cf. *Notochoerus capensis*
cf. *Pronotochoerus jacksoni*
Nyanzachoerus kanamensis
Hippopotamus imaguncula
Hippopotamus amphibius
Giraffa camelopardalis
Sivatherium olduvaiensis

List 5

East Africa—Upper Earlier Pleistocene Fauna

Olduvai Bed I and Lower Bed II
Kaiso Village, Omo

Paranthropus boisei
Homo habilis
Crocuta aff. *ultra*
Panthera aff. *crassidens*
Canis africanus
Thos mesomelas
Otocyon recki
Archidiskodon exoptatus
Elephas recki
Stegodon kaisensis
Loxodonta africanava
Dinotherium bozasi
Equus oldowayensis
Stylohipparion albertense
Ceratotherium cf. *simum*
Ceratotherium cf. *efficax*
Ancylotherium cf. *hennigi*
Phacochoerus altidens robustus
Mesochoerus limnetes
cf. *Pronotochoerus jacksoni*
Notochoerus euilus
Ectopotamochoerus dubius
Potamochoerus intermedius
Promesochoerus mukiri
Nyanzachoerus kanamensis
Hippopotamus imaguncula
Hippopotamus cf. *amphibius*
Giraffa gracilis
Libytherium olduvaiensis
Okapia cf. *stillei*
Gazella cf. *wellsi*
Parmularius altidens
Beatragus antiquus
Strepsiceros maryanus
Hippotragus gigas
Damaliscus antiquus
Gorgon olduvaiensis

List 6

East Africa—Lower Mid-Pleistocene Fauna

Olduvai, Upper Bed II

Simopithecus jonathani
Thos mesomelas
Panthera cf. *tigris*
Elephas recki
Stylohipparion albertense
Equus oldowayensis
Ceratotherium simum
Diceros bicornis
Potamochoerus majus
Mesochoerus olduvaiensis
Notochoerus compactus
Tapinochoerus meadowsi
Orthostonyx brachyops
Afrochoerus nicoli
Hippopotamus gorgops
Giraffa jumae
Libytherium olduvaiensis
Strepsiceros grandis
Bularchos arok
Hippotragus niro
Damaliscus angusticornis
Damaliscus antiquus
Alcelaphus kattwinkeli
Pultiphagonides africanus
Gorgon olduvaiensis
Gazella aff. *granti*
Pelorovis oldowayensis
Phenacotragus recki

List 7

East Africa—Upper Mid-Pleistocene Fauna

Olduvai Bed IV, Kanjera, Olorgesailie

Simopithecus jonathani
Simopithecus oswaldi
Thos mesomelas
Elephas recki
Stylohipparion albertense
Equus oldowayensis
Ceratotherium simum
Diceros bicornis
Potamochoerus majus
Notochoerus hopwoodi
Tapinochoerus minutus
Tapinochoerus meadowsi
Afrochoerus nicoli
Phacochoerus altidens
Hippopotamus gorgops
Giraffa jumae
Libytherium olduvaiensis
Taurotragus arkelli
Bularchus arok
Hippotragus niro
Damaliscus angusticornis
Alcelaphus kattwinkeli
Gorgon olduvaiensis
Phenacotragus recki
Parmularius rugosus
Thaleroceros radiciformis

List 8

South Africa—Sterkfontein Faunal Span

Upper earlier pleistocene

(Taung, Sterkfontein, Makapansgat)

Insectivora

Chrysotricha hamiltoni
Chlorotalpa spelea
Elephantulus langi
Elephantulus cf. *brachyrhynchus*
Mylomygale spiersi
Crocidura taungsensis
Crocidura cf. *bicolor*
Suncus cf. *etruscus*
Myosorex robinsoni

Chiroptera

Rhinolophus cf. *capensis*

Primates

Simopithecus darti
Parapapio antiquus

Parapapio jonesi
Parapapio broomi
Parapapio whitei
Papio izodi
Papio wellsi
Cercopithecoides williamsi
Australopithecus africanus

Rodentia
Pedetes gracile
Mystromys antiquus
Mystromys hausleitneri
Mystromys darti
Tatera cf. *brantsi*
Desmodillus auricularis
Grammomys cf. *dolichurus*
Pelomys cf. *fallax*
Rhabdomys cf. *pumilio*
Aethomys cf. *namaquensis*
Rattus debruyni
Mastomys cf. *natalensis*
Mus cf. *minutoides*
Mus cf. *major*
Dendromus antiquus
Malacothrix cf. *typica*
? Malacothrix makapani
Steatomys cf. *pratensis*
Palaeotomys gracilis
Prototomys campbelli
Xenohystrix crassidens
Hystrix major
Hystrix cf. *cristata*
Petromus minor
Gypsorhychus darti
Gypsorhychus minor
Gypsorhychus makapani
Cryptomys robertsi

Carnivora
Canis mesomelas pappos
Canis brevirostris
Cynictis penicillata brachyodon
Lycyaena silberbergi
Crocuta cf. *brevirostris*
Hyaena makapani
Therailurus barlowi
Panthera pardus incurva
Megantereon gracile
Megantereon sp. nov.
"Macheirodus" transvaalensis

Hyracoidea
Procavia antiqua
Procavia transvaalensis
Procavia sp. nov.

Perissodactyla
Equus helmei
Meteschizotherium transvaalensis

Artiodactyla
Potamochoeroides hypsodon
Potamochoeroides shawi
"Tapinochoerus" meadowsi
Notochoerus euilus
Libytherium cf. *olduvaiensis*
Syncerus? makapani
Cephalophus parvus
Cephalophus pricei
Redunca darti
Hippotragus broomi
Makapania broomi
Oreotragus major
Oreotragus longiceps
Phenacotragus vanhoepeni
Gazella gracilior
Gazella wellsi

LIST 9

SOUTH AFRICA—SWARTKRANS FAUNAL SPAN

LOWER MID-PLEISTOCENE

(Swartkrans, Kromdraai, Bolt's Farm, Gladys Vale)

Insectivora
Proamblysomus antiquus
Chlorotalpa spelea
Atelerix major
Elephantulus langi
Elephantulus antiquus
Elephantulus cf. *brachyrhynchus*
Crocidura cf. *bicolor*
Suncus cf. *etruscus*
Myosorex robinsoni

Chiroptera
Rhinolophus cf. *capensis*
cf. *Myotis* sp.

Primates
Gorgopithecus major
Simopithecus danieli
Parapapio jonesi
Papio angusticeps
Papio robinsoni
Dinopithecus ingens
Cercopithecoides williamsi
Paranthropus robustus
Telanthropus capensis

Rodentia
Pedetes cf. *cafer*
Mystromys hausleitneri
Tatera cf. *brantsi*
Grammomys cf. *dolichurus*
Dasymys bolti
Rhabdomys cf. *pumilio*
Rattus debruyni
Mastomys cf. *natalensis*
Mus cf. *minutoides*
Mus cf. *major*
Malacothrix cf. *typica*
Steatomys cf. *pratensis*
Palaeotomys gracilis
Cryptomys robertsi

Carnivora
Canis mesomelas pappos
Canis atrox
Canis terblanchei
Vulpes pulcher
Aonyx cf. *capensis*
Herpestes mesotes
Crossarchus transvaalensis
Cynictis penicillata
Lycyaena silberbergi
Lycyaena nitidula
Leecyaena forfex
Crocuta crocuta angella
Crocuta spelea
Crocuta venustula
Crocuta ultra
Hyaena brunnea
Hyaena brunnea dispar
Hyaena bellax
Leptailurus spelaeus
Felis crassidens
Therailurus barlowi
Therailurus piveteaui
Panthera whitei
Panthera shawi
Panthera aff. *leo*
Panthera pardus incurva
Megantereon eurynodon
Machairodus transvaalensis

Proboscidea
cf. *Loxodonta atlantica*

Hydracoidea
Procavia antiqua
Procavia transvaalensis

Perissodactyla
Stylohipparion steytleri
Equus plicatus
Equus helmei

Artiodactyla
Potamochoeroides shawi
"Tapinochoerus" meadowsi
Mesochoerus paiceae
Potamochoerops antiquus
Hippotragus broomi
Damaliscus cf. *pygargus*
Makapania broomi
Gazella wellsi

LIST 10

SOUTH AFRICA—CHARACTERISTIC FAUNA, MID-PLEISTOCENE VAAL—CORNELIA FAUNAL SPAN

Proboscidea
Gomphotherium sp.
Archidiskodon subplanifrons
Archidiskodon broomi

Archidiskodon transvaalensis
Loxodonta atlantica

Perissodactyla

Stylohipparion steytleri
Equus burchelli
Equus plicatus
Equus helmei
Eurygnathohippus cornelianus
Diceros bicornis

Artiodactyla

Tapinochoerus modestus
"Tapinochoerus" meadowsi
"Kolpochoerus sinuosus"
cf. *Orthostonyx* sp.
Notochoerus capensis
Mesochoerus paiceae
Stylochoerus compactus
Stylochoerus altidens
Phacochoerus aethiopicus
Phacochoerus africanus
Hippopotamus amphibius
Hippopotamus gorgops
Giraffa camelopardalis
Libytherium olduvaiensis
Strepsiceros strepsiceros
Taurotragus oryx
Syncerus caffer
"Homoioceras" baini
Sylvicapra grimmia
Hippotragus niger
Damaliscus cf. *lunatus*
Alcelaphus caama
Alcelaphus robustus
Connochaetes gnou
Connochaetes laticornutus
Connochaetes taurinus
Megalotragus eucornutus
Aepyceros melampus
Gazella wellsi
"Gazella" helmoedi

List 11

South Africa—Florisbad-Vlakkraal Faunal Span

later pleistocene

(Cave of Hearths, Kalkbank, Florisbad, Vlakkraal, Wonderwerk)

Primates

Homo sp.
Papio ursinus

Lagomorpha

Pronolagus randensis
Lepus saxatalis

Rodentia

Xerus sp.
Pedetes hagenstadi
cf. *Tatera* sp.
Otomys cf. *irroratus*
Myotomys cf. *turneri*
Myotomys cf. *unisulcatus*
Hystrix africae-australis
Thryonomys swinderianus

Carnivora

Canis familiaris
Canis mesomelas
Vulpes chama
Lycaon picta
Otocyon megalotis
Ictonyx sp.
Suricata suricatta
Herpestes ichneumon
Myonax cauui
cf. *Atilax paludinosus*
Crocuta crocuta
Hyaena brunnea
Caracal caracal
Panthera pardus
Panthera leo

Hyracoidea

Procavia capensis

Perissodactyla

Equus burchelli
Equus quagga
Equus plicatus
Equus helmei
Diceros bicornis

Artiodactyla

Phacochoerus aethiopicus
Hippopotamus amphibius
Giraffa camelopardalis
Libytherium sp.
Strepsiceros strepsiceros
Tragelaphus angasi
Taurotragus oryx
Bos taurus
Syncerus caffer
Homoioceros baini
Cephalophus sp.
Sylvicapra grimmia
Kobus sp.
Onotragus leche
Redunca arundinum
Pelea capreolus
Hippotragus equinus
Oryx gazella
Damaliscus albifrons
Damaliscus pygargus
Damaliscus lunatus
Alcelaphus cf. *caama*
cf. *Alcelaphus robustus*
cf. *"Alcelaphus helmei"*
Connochaetes taurinus
Connochaetes antiquus
Creotragus oreotragus
cf. *Ourebia* sp.
Raphicerus campestris
Aepyceros melampus
Antidorcas marsupialis
Gazella bondi
Antilope Indet
Capra hircus

GAZETTEER

This gazetteer lists a large number of the named prehistoric localities of which the details have come to hand in the course of compiling the maps for the atlas. It has not been possible to include all the sites plotted on these maps since, in several cases (e.g., for the Republic of the Congo [Leopoldville]), only the location without the name was provided. The list is, therefore, in no way exhaustive, but it provides an easy means of locating the approximate geographical positions of many published and some unpublished sites on the 1:20,000,000 maps and, especially, of many, the location of which is either inadequately given or omitted in the literature.

In some cases the coordinates have been plotted by the regional correspondents (e.g., for the East African countries, Zambia, Ghana, and for a large proportion of the sites in West Africa generally). For the remainder, it has been necessary to determine the coordinates here; this work has been done in great part by Beatrice Sandelowsky under the general direction of the compiler. Wherever the data permit, the position is given to the nearest 15′ of latitude and longitude but, in the greater number of cases, the margin of error is larger and varies in accordance with the accuracy of the original source material available to us (maps, site lists, and the like).

Since it was found that the coordinates of even such localities as could be traced in standard atlases may vary by as much as a degree, we have done the best we can. In some instances the spelling of site names cannot be guaranteed as the only lists available were handwritten and there was no means of checking with any literature. Sites have been arranged to conform as closely as possible with the maps. Countries are listed alphabetically.

In offering our apologies for the many shortcomings of this gazetteer, of which we are very sensible, we hope that the results will prove generally adequate for the scale at which the *Atlas of African Prehistory* maps have been reproduced and for the purpose for which they are intended.

J. Desmond Clark

GAZETTEER OF PREHISTORIC SITES

Algeria
Angola
Basutoland
Bechuanaland
Cameroun
Central African Republic
Chad
Congo, Republic of (Brazzaville)
Congo, Republic of (Leopoldville)
Dahomey
Egypt
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea, Portuguese
Ivory Coast
Kenya
Liberia
Libya
Malawi
Mali
Mauritania
Mozambique
Morocco
Niger
Nigeria
Rhodesia
Rio Muni and Fernando Po
Ruanda
Sahara, Algerian
Sahara, Spanish
Senegal
Sierra Leone
Somalia and French Somaliland
South Africa, Republic of
South West Africa
Sudan
Swaziland
Tanzania
Togo
Tunisia
Uganda
Upper Volta
Urundi
Zambia

ALGERIA

Compiled from data supplied by L. Balout, P. Biberson, and J. Tixier of the Institut de Paléontologie humaine, Paris, and by G. Camps, Algiers.

"Lower Palaeolithic"

"Pre-Abbevillian"

("Pebble Culture") Facies

Aïn Hanech	36°25′	N	5°49′	E
Cap de Fer (W. Bône)	37 00	N	7 45	E

Undifferentiated

Chebka de Negrine	34 40	N	7 30	E
Mansourah (Constantine)	36 45	N	6 42	E

Lower Acheulian

Cap de Fer (W. Bône)	37 00	N	7 45	E
Champlain	36 08	N	3 04	E
Djidjelli, West	37 00	N	5 42	E
Ouled Rahmoun	36 20	N	7 00	E

Middle and Upper Acheulian

Aïn Kéda	35 20	N	1 20	E
Aboukir	35 48	N	1 48	W
Ammi-Moussa	35 20	N	1 02	E
Bou Gherara	35°25′	N	1°31′	E
Cap de Fer (W. Bône)	37 00	N	7 45	E
Champlain	36 08	N	3 04	F
Chenoua	36 32	N	2 15	E
Chetma	34 45	N	5 50	E
Clairfontaine	35 25	N	7 42	E
Djidjelli, West	37 00	N	5 42	E
Douaouda	36 56	N	3 00	E
El-Alef (Ammi-Moussa region)	35 47	N	1 00	E
El Kseur	36 56	N	4 56	E
El Ma el-Abiod	34 55	N	8 05	E
Inkermann	35 56	N	1 00	E
Kolea (Tombeau de la Chrétienne)	36 54	N	2 56	E
Montagnac, Lake Karar	33 15	N	0 21	W
Oued Zenati Guelma	36 52	N	7 45	E
Ouled Rahmoun	36 20	N	7 00	E

"Lower Palaeolithic"

Middle and Upper Acheulian

Ouzidane	33 12	N	1 10	W
Saint Aimé	35 55	N	1 00	E
Takdempt	37 00	N	4 12	E
Tamda (middle terrace of the Sebaou)	36 58	N	3 52	E
Ternifine	35 31	N	0 15	E
Tiaret, in Affreville direction	35 50	N	1 39	E

Acheulian

Undifferentiated

Aïn Ksibia (St. André de Mascara)	35 30	N	0 00	
Bredea	35 40	N	0 45	W
Eghris (Mascara)	35 30	N	0 05	W

El Bordj	35°54′	N	1°48′	W
Djidjelli	36 50	N	5 43	E
Keria	35 45	N	1 39	E
Lourmel	35 40	N	0 45	W
Mansourah (Constantine)	36 45	N	6 42	E
Merdjidja (Tiaret)	35 27	N	1 35	E
Mers el-Kebir	35 40	N	0 45	W
Oulet Djellal	34 38	N	5 05	E
Picard	36 08	N	0 21	E
Saint Hippolyte	35 30	N	0 05	E
Sbaikia	35 15	N	8 10	E
Sebdou, S. of Tlemcen	33 00	N	1 25	W
Sidi Said	35 03	N	7 45	E
Souk ek Ettsemine (Portes de Tlemcen)	33 00	N	1 25	W
Tazbent	35 20	N	7 42	E
Tlidjene, S.W. of Tebessa	35 00	N	7 55	E

"Middle Palaeolithic"

Mousterian

Ali Bacha (Bougie)	36 32	N	5 10	E
Demmet el Hassan	36 50	N	7 40	E
El Aguel	34 55	N	8 00	E
El Oudiane	35 00	N	8 20	E
Grotte de Palestro	36 40	N	3 55	E
Kef Oum Touiza	36 43	N	7 30	E
Koudia Nador	36 55	N	3 22	E
Retaimia	35 20	N	1 03	E
Rocher Noir	36 55	N	3 17	E
Tamar Hat (Grotte de la Madeleine)	36 30	N	5 24	E
Troglodytes	35 45	N	0 45	W

"Upper Palaeolithic"

Aterian

Aflou	34 08	N	2 03	E
Aïn Ograb	34 59	N	4 15	E
Ali Bacha	36 32	N	5 10	E
Arzew	35 50	N	0 19	W
Berard	36 33	N	2 17	E
Bou-Zabaouine	35 56	N	6 58	E
Cap Djinet	36 40	N	4 35	E
Cité Fronzy	35 10	N	1 09	E
Djebel Fartas	36 27	N	7 39	E
Djebel Nador	35 01	N	1 40	E
Djebel Naga	35 48	N	4 19	E
Djidjelli	37 00	N	5 42	E
El Oubir	35 08	N	8 21	E
Gouraya	36 35	N	1 55	E
Grotte des Hyènes	35 45	N	6 32	E
Grotte des Ours	36 26	N	6 57	E
Guertoufa	35 19	N	0 53	E
Habibas, largest island	35 43	N	0 08	W
Herbillon	37 05	N	7 23	E
Karouba	36 00	N	0 30	E
Koual	36 20	N	2 25	E
Koudiat bou-Gherara	35 20	N	1 09	E
La Marsa	36 38	N	7 55	E
La Mouillah	34 55	N	1 50	W
Le Figuier	36 41	N	3 45	E
Les Allobroges	36 40	N	3 30	E
Négrine	34 27	N	7 23	E
Novi	36 19	N	2 05	E
Oglat Chaâcha	35 00	N	8 00	E
Oued Djebbana	34 39	N	8 11	E
Oued Djouf el-Djemmel	34 47	N	7 20	E
Oued Serdiesse	35 20	N	7 44	E
Oum et-Tine	34 42	N	8 11	E
Polygone	36°00′	N	0°40′	W
Rachgoun Island	35 20	N	1 38	W
Rased-Deba	35 22	N	4 47	E
Ténès	36 34	N	1 18	E

"Epi-Palaeolithic"

Iberomaurusian

Abri Alain	35 33	N	0 45	W
Afalou	36 29	N	3 00	E
Aïn Khiar (3 localities)	36 45	N	7 30	E
Aïn Ograb	34 59	N	4 15	E
Chenoua	36 32	N	2 15	E
Columnata	35 29	N	1 16	E
El Hamel	35 11	N	4 13	E
El-Kçar	35 08	N	3 22	W
La Mouillah	34 55	N	1 50	W
Oueds Kerma	36 45	N	3 07	E
Tamar Hat	36 30	N	5 24	E
Ténès	36 34	N	1 18	E

Capsian

Aïn Kéda				
Aïn Khanga	35 08	N	8 05	E
Aïn Rhezal	35 10	N	5 00	E
Aïn Rhilane	35 29	N	8 15	E
Aïn Tinn	36 15	N	5 15	E
Bir Zarif el-Ouar	34 15	N	7 32	E
Bou-Nouara	35 05	N	6 30	E
Chacal	35 22	N	8 17	E
Chouchet el-Ghourb	34 01	N	6 32	E
Columnata	35 29	N	1 16	E
Dakhlat es-Saâdane, shelter B	34 58	N	4 15	E
El-Mengoub	33 40	N	5 00	E
El-Oued	32 14	N	7 15	E
Guelt es-Stel	35 06	N	2 12	E
Guentis	34 52	N	7 50	E
Khanguet el-Mouhaâd	35 20	N	8 14	E
Koudiat Naga	35 45	N	3 18	E
Maison du Caïd	35 46	N	5 18	E
Mechta el-Arbi	36 08	N	5 59	E
Mesloug	36 00	N	5 01	E
Négrine el-Quédim	34 27	N	7 23	E
Oued Diffel	34 27	N	5 12	E
Relilaï	33 56	N	7 46	E
Site 12 (Aioun Berriche)	35 44	N	7 29	E
Site 51	35 45	N	7 27	E
Torrich I	35 33	N	1 15	E

Keremian

Bois de Pins	35 14	N	1 00	E
Bou-Aichem	35 40	N	0 33	W
Djebel Mekaïdo	33 48	N	1 00	W
Kef el-Kerem	35 07	N	1 24	E
La Jumenterie	35 35	N	1 15	E
Torrich	35 33	N	1 15	E
Undifferentiated				
Aïn Korirech	34 02	N	3 07	E
Champlain	36 08	N	3 04	E

Not Listed: Neolithic and Rock Art

ANGOLA

Site lists based on information supplied by A. de Almeida, Centro de Estudos de Antropologia, Lisbon, and J. Camarate França, Serviços Geologicos de Portugal, Lisbon.

"Earlier Stone Age"

Oldowan

Uncertain				
Catongula	7 40	S	21 23	E

Acheulian

Undifferentiated, certain				
Arco	15°25′	S	12°35′	E
Arco Carvalhão, Unguaia turning	15 30	S	12 30	E
Assunção Farm IIIA	14 53	S	13 07	E
Bom Jesus (on Cuanza)	9 09	S	13 34	E
Brutuei pools	16 00	S	13 10	E
Buco Zau	4 46	S	12 33	E
Bungo (Quiuca River)	11 39	S	15 55	E
Camafufo	7 58	S	21 31	E
Camucuio	14 12	S	13 20	E
Camucuio (Chipopilo)	14 12	S	13 20	E
Carvalhão (29 km. from Porto Alexandre)	12 25	S	12 35	E
Carpenter's farm	13 45	S	15 10	E
Cassenga	7 39	S	20 32	E
Cataila	7 40	S	21 23	E
Chibia	15 11	S	13 41	E
Damba	6 40	S	15 20	E
Humpata lagoon	15 02	S	13 24	E
Karakul (Carvalhão-Oliveira farm)	15 00	S	14 30	E
Lower Giraul	15 05	S	12 09	E
Luxilo	7 37	S	21 22	E
Maconge (Tampa boundary, Leba slope)	15 30	S	13 30	E
Maquela (Luidi)	6 03	S	15 07	E
Mavoio (3 localities)	6 14	S	15 01	E
Moçamedes (32 km. toward Lucira)	15 02	S	19 09	E
Moçamedes (40 km. toward Porto Alexandre)	15 30	S	12 05	E
Mufo	7 37	S	21 23	E
Munhengo (2 localities)	11 06	S	23 18	E
Munhino (4 localities)	15 01	S	13 33	E
Necuto (2 localities)	4 58	S	12 40	E
Ochinjau (administrative post)	16 30	S	13 57	E
Oci	15 14	S	15 16	E
Pocolo	15 44	S	14 05	E
Porto Alexandre (39 km. toward Moçamedes)	15 30	S	12 05	E
Sa da Bandeira	14 50	S	13 10	E
S. Nicolau (3 localities)	14 15	S	12 21	E
S. Salvador (Banza Lambo)	6 16	S	14 15	E
Vila Arriaga	14 46	S	13 21	E
Zootechnic, 2d dam	15 00	S	14 30	E
Uncertain				
Caama-Ochinjau road crossing	16 30	S	13 57	E
Caitou (11 km. on Vila Arriaga road)	11 28	S	13 06	E
Octavio's Hand	15 30	S	12 05	E

Facies of Clacto-Tayacian/Hope Fountain Type

Buco Zau	4 46	S	12 33	E
Luanda	8 48	S	13 14	E
Mavoio (2 localities)	6 14	S	15 01	E
Necuto	4 58	S	12 40	E
Tando Zinze	5 15	S	12 27	E

"First Intermediate"

Fauresmith

Uncertain

Arco	15°25′ S	12°35′ E
Arco Carvalhão, Unguaia turning	15 30 S	12 30 E
Assunção farm (2 localities)	14 53 S	13 07 E
Bruco (2 localities)	15 05 S	13 30 E
Brutuei pools (3 localities)	16 00 S	13 10 E
Cainde (2 localities)	15 42 S	13 12 E
Caitou (25 km. from Vila Arriaga)	14 28 S	13 06 E
Camucuio	14 12 S	13 20 E
Carvalhão	15 25 S	12 35 E
Cuangar	17 36 S	18 39 E
Lower Giraul	15 05 S	12 09 E
Maconge (3 localities)	15 30 S	13 30 E
Moçamedes (3.5 km. toward Lucira)	15 10 S	19 09 E
Moçamedes (32 km. toward Lucira)	15 02 S	19 09 E
Munhino (11 localities)	15 01 S	13 33 E
Ochinjau (administrative post)	16 30 S	13 57 E
Octavio's Hand	15 30 S	12 05 E
Pediva	16 04 S	12 24 E
Porto Alexandre (toward Moçamedes) (3 localities)	15 30 S	12 05 E
S. Nicolau (2 localities)	14 15 S	12 21 E
Unguaia top	6 40 S	14 10 E
Zootechnic station, Humpata (8 localities)	15 00 S	14 30 E

Sangoan

Certain

Calonda	8 30 S	20 32 E
Camafufo	7 58 S	21 31 E
Cassenga	7 39 S	20 32 E
Cataila	7 40 S	21 23 E
Catongula	7 40 S	21 23 E
Cauma	7 25 S	21 10 E
Luaco 6	7 59 S	21 30 E
Luxilo	7 37 S	21 22 E
Musolexi	7 59 S	21 30 E
Toca Mai	7 25 S	21 10 E

Uncertain

Bungo (Quiuca River)	11 39 S	15 55 E
Cacanda	13 45 S	15 10 E
Carpenter's farm	13 45 S	15 10 E
Jimba	12 44 S	16 22 E
Moçamedes (3.5 km. toward Lucira)	15 10 S	19 09 E
Moçamedes (32 km. toward Lucira)	15 02 S	19 09 E
Munhengo	11 06 S	23 18 E
Nonchima	12 44 S	16 22 E
Palanca (Humpata)	12 10 S	13 30 E
Quilemba	7 19 S	14 58 E
Robinson	12 44 S	16 22 E

"Middle Stone Age"

Stillbay/Pietersburg Complex

Cacanda IIIB	13 45 S	15 10 E
Chitundulo	16 00 S	13 10 E
Cubango River (125 km. from Cuangar toward Caiundo)	17°00′ S	18°10′ E
High Choi	12 12 S	13 31 E
Leba Waterfall IV	16 04 S	13 15 E
Lower Giraul	15 05 S	12 09 E
Mulola de Nondau	11 06 S	23 18 E
Nonchima	12 44 S	16 22 E
Robinson (3 localities)	12 44 S	16 22 E
Serpa Pinto (Lovers' Island)	14 36 S	17 48 E

Lupemban

Certain

Belize	4 35 S	12 39 E
Bom Jesus	9 09 S	13 34 E
Buco Zau	4 46 S	12 33 E
Calonda	8 30 S	20 32 E
Camafufo	7 58 S	21 31 E
Cassenga	7 39 S	20 32 E
Catongula	7 40 S	21 23 E
Cauma	7 25 S	21 10 E
Congui Mongui	7 37 S	21 22 E
Damba	6 40 S	15 20 E
De Janeiro	6 55 S	15 35 E
Furi I	7 37 S	21 11 E
Iondi	7 59 S	21 24 E
Jimba (*ca.* 2.5 km. from Nondau road)	12 44 S	16 22 E
Luaco 6	7 59 S	21 30 E
Luanda	8 48 S	13 14 E
Luxilo	7 37 S	21 22 E
Maquela (Luidi)	6 03 S	15 07 E
Mavoio (4 localities)	6 14 S	15 01 E
Mucuquesse	7 38 S	21 21 E
Mufo	7 37 S	21 23 E
Musolexi	7 59 S	21 30 E
Necuto	4 58 S	12 40 E
N'zongolo	7 05 S	14 46 E
Ochinjau	16 30 S	13 57 E
Quinfangondo	8 15 S	13 50 E
S. Salvador (Banza Lambo)	6 16 S	14 15 E
Toca Mai	7 25 S	21 10 E
Tomboco	6 48 S	13 18 E

Uncertain

Pediva	16 04 S	12 24 E

"Middle Stone Age"

Undifferentiated

Arco	15 25 S	12 35 E
Assunção farm (3 localities)	14 53 S	13 07 E
Belize	4 35 S	12 39 E
Big Rock pool (2 localities)	16 04 S	12 24 E
Bom Jesus	9 09 S	13 34 E
Bruco (2 localities)	15 05 S	13 30 E
Brutuei (3 localities)	16 00 S	13 10 E
Buco Zau	4 46 S	12 33 E
Bungo (Quiuca River)	11 39 S	15 55 E
Caama (2 localities)	16 30 S	13 57 E
Cacanda	13 45 S	15 10 E
Caculuvar River, left bank (5 km. from Caama-Ochinjau turning)	16 30 S	13 57 E
Cainde (2 localities)	15 42 S	13 12 E
Caitou (3 localities)	14 28 S	13 06 E
Camucuio (2 localities)	14 12 S	13 20 E
Carpenter's farm	13 45 S	15 10 E
Carvalhão	13 25 S	12 35 E
Carvalhão (29 km. from Porto Alexandre)	12°25′ S	12°35′ E
Chela slope by Quenderala	16 00 S	13 10 E
Chiange (Vila Almoster)	15 44 S	14 10 E
Chibemba (2 localities)	15 45 S	14 05 E
Chibemba-Chibia road (23 km. from Chibia)	15 50 S	14 05 E
Chibemba-Gambos road (22 km. from Chibemba)	15 50 S	14 15 E
Chibia	15 11 S	13 41 E
Chibia-Chibemba road (1 km. N. of Pocolo turn) (2 localities)	15 45 S	14 05 E
Chicolongira path (5 localities)	15 00 S	14 30 E
Chitundulo, near rock shelter (2 localities)	16 00 S	13 10 E
Chivinguiro (hilltop)	15 09 S	13 22 E
Cuangar	17 36 S	18 39 E
Cuito-Cuanavale (right bank of river)	15 10 S	19 10 E
Damba do imbondeiro (4 localities)	6 40 S	14 10 E
De Janeiro	6 55 S	15 35 E
Giraul (2 localities)	15 05 S	12 09 E
High Choi (2 localities)	12 12 S	13 31 E
Huila road, on Venancio farm, near Nene River crossing	15 05 S	13 30 E
Humpata, Jau road (Nene River)	15 12 S	13 31 E
Jimba (5 localities)	12 44 S	16 22 E
Karakul (6 localities)	15 00 S	14 30 E
Leba (8 localities)	15 04 S	13 16 E
Lower Giraul (3 localities)	15 05 S	12 09 E
Luanda	8 48 S	13 14 E
Lucira (3 localities)	13 51 S	12 31 E
Lucira turn (3.5 km. from Moçamedes)	15 10 S	12 09 E
Lucira turn (32 km. from Moçamedes)	15 02 S	12 09 E
Maconge (10 localities)	15 30 S	13 30 E
Mavinga	15 50 S	20 21 E
Mavoio (3 localities)	6 14 S	15 01 E
Moçamedes road (13.5 km. from Vila Arriaga)	14 50 S	13 00 E
Montipa	14 40 S	13 17 E
Mulola de Nondau (5 localities)	11 06 S	23 18 E
Munhengo (3 localities)	11 06 S	23 18 E
Munhino (13 localities)	15 01 S	13 33 E
Mupa	16 10 S	15 44 E
Necuto (2 localities)	4 58 S	12 40 E
Nonchima (3 localities)	12 44 S	16 22 E
Oci	15 14 S	15 16 E
Octavio's Hand	15 30 S	12 05 E
Oncocua farm	16 31 S	13 56 E
Palanca (Humpata) (2 localities)	12 10 S	13 30 E

Pediva	16°04′S	12°24′E
Pocolo	15 44 S	14 05 E
Porto Alexandre toward Moçamedes (3 localities)	15 30 S	12 05 E
Porto Alexandre (Pinda hill)	15 49 S	11 53 E
Providence rock (2 localities)	16 04 S	12 24 E
Quibala (Quissange rock shelter)	10 46 S	14 49 E
Quilemba (2 localities)	7 19 S	14 58 E
Robinson (4 localities)	12 44 S	16 22 E
Samona farm	11 06 S	23 18 E
Serpa Pinto (2 localities)	14 36 S	17 48 E
S. Nicolau (8 localities)	14 15 S	12 21 E
Small Rock (2 localities)	16 04 S	12 24 E
Tampa (4 localities)	15 30 S	13 30 E
Tando Zinze	5 15 S	12 27 E
Torres Concession (2 localities)	11 06 S	23 18 E
Umpupa	16 00 S	13 10 E
Unguaia top	6 40 S	14 10 E
Ungueria (2 localities)	16 00 S	13 10 E
Vila Arriaga	14 46 S	13 21 E
Vila de Aviz (Onococua)	13 30 S	16 40 E
Zootechnic station (Humpata) (11 localities)	15 00 S	14 30 E

"Second Intermediate"

Magosian

Arco	15 25 S	12 35 E
Cuangar (left bank)	17 36 S	18 39 E
Chitundulo	16 00 S	13 10 E
Cubango River (125 km. from Cuangar toward Caiundo)	17 00 S	18 10 E
Dirico	17 58 S	20 47 E
Mavinga	15 50 S	20 21 E
Ochinjau	16 30 S	13 57 E
Oci	15 14 S	15 16 E

"Later Stone Age"

Tshitolian

Calonda	8 30 S	20 32 E
Catongula	7 40 S	21 23 E
Cauma	7 25 S	21 10 E
Congui Mongui	7 30 S	21 22 E
Furi I	7 21 S	21 11 E
Iondi	7 59 S	21 24 E
Luaco 6	7 59 S	21 30 E
Mavoio C	6 14 S	15 01 E
Mucuquesse	7 38 S	21 21 E
Mufo	7 37 S	21 23 E
Musolexi	7 59 S	21 30 E

Undifferentiated

Azevedo peak	15 25 S	12 35 E
Belize	4 35 S	12 39 E
Big Rock pool	16 04 S	12 24 E
Bom Jesus	9 09 S	13 34 E
Bruco	15 05 S	13 30 E
Brutuei	16 00 S	13 10 E
Buco Zau	4 46 S	12 33 E
Bungo (Quiuca River)	11 39 S	15 55 E
Camucuio (2 localities)	14 12 S	13 20 E
Capelongo	14 54 S	15 08 E
Chela slope by Quenderala	16°00′S	13°10′E
Chibemba	15 45 S	14 05 E
Chibia-Chibemba road	15 45 S	14 05 E
Chicolongira path	15 00 S	14 30 E
Chitundulo (2 localities)	16 00 S	13 10 E
Chivinguiro (hilltop)	15 09 S	13 22 E
Cuangar	17 36 S	18 39 E
Cuito-Cuinavale	15 10 S	19 10 E
Cunene River, left bank	16 30 S	13 57 E
Giraul	15 05 S	12 09 E
High Choi	12 12 S	13 31 E
Humpata, Jau road (2 localities)	15 12 S	13 31 E
Jimba (3 localities)	12 44 S	16 22 E
Karakul path near Chicolongira (3 localities)	15 00 S	14 30 E
Leba and waterfall path (2 localities)	15 04 S	13 16 E
Lower Giraul	15 05 S	12 09 E
Luanda (2 localities)	8 48 S	13 14 E
Lucira (3 localities)	13 51 S	12 31 E
Maconge (6 localities)	15 30 S	13 30 E
Mavoio	6 14 S	15 01 E
Moçamedes road (13.5 km. from Vila Arriaga)	14 50 S	13 00 E
Mulola de Nondau (3 localities)	11 06 S	23 18 E
Munhengo	11 06 S	23 18 E
Munhino (5 localities)	15 01 S	13 33 E
Ochinjau (administrative post)	16 30 S	13 57 E
Oci	15 14 S	15 16 E
Providence rock (2 localities)	16 04 S	12 24 E
Pungo Andongo	9 40 S	15 35 E
Robinson	12 44 S	16 22 E
Serpa Pinto	14 36 S	17 48 E
Small rock (2 localities)	16 04 S	12 24 E
S. Nicolau (5 localities)	14 15 S	12 21 E
South St. John	15 00 S	14 30 E
S. Salvador (Canga hill)	6 16 S	14 15 E
Tampa (4 localities)	15 30 S	13 30 E
Torres Concession	11 06 S	23 18 E
Umpupa	16 00 S	13 10 E
Ungueria waterfall	16 00 S	13 10 E
Varanda de Pilatos	7 25 S	14 55 E
Zootechnic station, Humpata (3 localities)	15 00 S	14 30 E

"Neolithic"

S. Salvador	6 16 S	14 15 E

BASUTOLAND

Compiled from data received from the South African Museum, Cape Town, and from James Walton, Cape Town.

"Earlier Stone Age"

None

"First Intermediate"

None

"Middle Stone Age"

Undifferentiated

Buthe Buthe	28 45 S	28 13 E
Little Caledon R.	28 30 S	28 30 E
Mafeteng	29°48′S	27°13′E
Maseru	29 17 S	27 30 E
Quthing, Orange R.	30 22 S	27 37 E

"Later Stone Age"

Undifferentiated

Maseru	29 17 S	27 30 E
Mohales Hoek	30 10 S	27 28 E
Roma	28 28 S	27 43 E

Not Listed: Rock Art

BECHUANALAND

Site lists are being prepared by C. K. Cooke, Director of the Rhodesian National Monuments Commission, but were not available at the time of going to press.

CAMEROUN

Compiled largely from data supplied by R. Mauny, University of Paris.

"Neolithic"

Equatoria

Undifferentiated

Babadjou	5 40 N	9 18 E
Babimbi	4 30 N	10 55 E
Bafia	4 45 N	11 16 E
Bamenda	5 50 N	10 15 E
Banyo	6 42 N	11 45 E
Barom	5 02 N	11 12 E
Djanti	5 12 N	11 20 E
Foumban	5 32 N	10 45 E
Galim	7 15 N	12 25 E
Garga Sardi	5 25 N	14 15 E
Mamfe	5 42 N	8 47 E
Maroua	10 30 N	14 22 E
Mbah	6 30 N	11 25 E
Ngorro	5 03 N	11 22 E
Nsam	3 50 N	11 45 E
Tibati	6 27 N	12 32 E

Engravings

Bidzai	10 20 N	15 13 E
Kassa	9 10 N	12 30 E

CENTRAL AFRICAN REPUBLIC

No information available.

CHAD

"Lower Palaeolithic"

Acheulian

Undifferentiated

Goz Kerki	15 40 N	18 20 E
Koro Toro	16 10 N	18 30 E
Koula	16 40 N	18 17 E
Koula Rikatir	16 40 N	18 20 E
Ounianga Kebir	19 10 N	20 28 E
Tekro	19 30 N	20 58 E

"Middle Palaeolithic"

Undifferentiated

Ounianga Kebir	19 10 N	20 28 E
Ounianga Serir	19 00 N	20 32 E
Sherda	20 12 N	16 45 E

"Upper Palaeolithic"

Aterian

Ounianga Kebir	19 10 N	20 28 E

"Neolithic"

Eastern Saharan Facies

Bochianga	10 15 N	18 23 E
Daski	20 26 N	16 33 E
Ehi Atrun	19 25 N	16 50 E

Enneri Mouto	20°00′ N	17°08′ E
Koro Toro	16 10 N	18 30 E
Koueinga Bile	16 13 N	18 42 E
Koula Rikatir	16 40 N	18 20 E
Ounianga Serir	19 00 N	20 32 E
Tchie	17 10 N	18 50 E
Tchiene	17 18 N	18 52 E
Toungour	16 20 N	18 20 E
Yao	12 50 N	17 45 E
Yoakoura	21 50 N	16 00 E

Not Listed: Rock Art

CONGO (BRAZZAVILLE), REPUBLIC OF

Information inadequate for compilation.

CONGO (LEOPOLDVILLE), REPUBLIC OF

Information inadequate for compilation.

DAHOMEY

Compiled from data supplied by O. Davies, University of Ghana, and R. Mauny, University of Paris.

"Earlier Stone Age"

Acheulian

Uncertain

Bersingou	10 14 N	1 23 E
Kossokouangou	10 11 N	1 12 E
Pendjari gorge	11 26 N	1 53 E
Savé	8 01 N	2 28 E
Tannogou	10 49 N	1 26 E
Wéwé	9 23 N	2 07 E

"First Intermediate"

Sangoan

Bersingou	10 14 N	1 23 E
Diepouro	10 03 N	1 33 E
Dikokoré	10 25 N	1 20 E
Gogoro	8 17 N	2 39 E
Kouissigou	10 08 N	1 16 E
Kouniangou	10 09 N	1 10 E
Modji-Gangan	7 55 N	2 12 E
Savé	8 01 N	2 28 E
Wéwé	9 23 N	2 07 E

Uncertain

Tanmbogole	10 41 N	1 20 E

"Middle Stone Age"

Lupemban

Agouagou	7 58 N	2 14 E

Undifferentiated

Koualegou	10 53 N	1 29 E
Kouissigou	10 08 N	1 16 E
Kouniangou	10 09 N	1 10 E
Tanguiéta	10 38 N	1 17 E
Tannogou	10 49 N	1 26 E
Toukountouna	10 28 N	1 22 E

"Later Stone Age"

Blade and Microlithic Occurrences

Undifferentiated

Bersingou	10 14 N	1 23 E
Danri	10 25 N	1 42 E
Faficé	10 21 N	1 23 E
Ganikpérou	10 19 N	1 37 E
Kabaré	10 28 N	1 41 E
Kopargo	9 50 N	1 32 E
Kouniangou	10 09 N	1 10 E
Koutatiégou	10 09 N	1 08 E
Koutayagou	10 09 N	1 13 E
Modji-Gangan	7 55 N	2 12 E
Natitingou aerodrome	10 22 N	1 22 E
Ouémé	8°01′ N	2°23′ E
Ouroubouga	10 16 N	1 23 E
Perma	10 07 N	1 26 E
Takongou	10 59 N	1 34 E

"Neolithic"

Pabegou	9 47 N	1 35 E

EGYPT

Compiled largely from data supplied by A. J. Arkell, formerly of the University of London.

"Lower Palaeolithic"

Acheulian

Undifferentiated

Abbassia	30 15 N	31 00 E
Abydos	26 14 N	32 00 E
Aklit	24 44 N	32 57 E
Ballas	26 00 N	32 33 E
Beni Adi	28 15 N	30 40 E
Birkat Karum	29 18 N	30 35 E
Esna (east of)	25 18 N	32 43 E
Sibaiya	24 50 N	32 57 E
Sohaq (west of)	26 30 N	31 15 E
Qena	26 15 N	32 45 E
Qena (south of)	26 02 N	32 45 E

Uncertain

Siwa	29 01 N	25 34 E

"Middle Palaeolithic"

"First Intermediate"

Acheulio-Levalloisian

Abydos	26 14 N	32 00 E
El-Kab	25 00 N	32 55 E
Kharga	25 18 N	30 28 E
Kharga (east of)	25 18 N	31 27 E
Qena	26 15 N	32 45 E

"Levalloisian"

Levallois-Mousterian

Abydos	26 14 N	32 00 E
Birkat Karum	29 18 N	30 35 E
Dendera	26 10 N	32 35 E
El-Kab (southwest of)	24 45 N	32 42 E
J. el-Ahmar	29 47 N	31 40 E
Kharga	25 18 N	30 28 E
Kharga (east of)	25 18 N	31 27 E
Nakada	25 46 N	32 30 E
Qena (east of)	26 10 N	32 50 E
Sohaq (west of)	26 30 N	31 15 E
Tuna	27 42 N	30 40 E
Zawaida	26 00 N	32 33 E

Sangoan

Uncertain

Beni Adi	28 15 N	30 40 E

"Upper Palaeolithic"

Epi-Levalloisian

Abu Hugar	12 37 N	34 00 E
Abu Hugar (north of)	13 00 N	33 58 E
Abu Tabari Wells	17 31 N	28 30 E
Birkat Karum	29 18 N	30 35 E
Hiba	28 50 N	30 52 E
Hierakonpolis	25 00 N	32 45 E
Hierakonpolis (south of)	24 40 N	32 45 E
Kharga	25 18 N	30 28 E
Kom Ombo	24 30 N	32 50 E
Laketta oasis	25 45 N	32 47 E

Aterian

Kharga	25 18 N	30 28 E
Luxor (south of)	25 34 N	32 27 E
Siwa	29 01 N	25 34 E

Neolithic

(Northeast African)

Birkat Karum	29°18′ N	30°35′ E
Kharga	25 18 N	30 28 E
Merimda	30 15 N	30 45 E

Pre-Dynastic

Abydos	26 14 N	32 00 E
Amrah	26 11 N	32 00 E
Armant	25 33 N	32 26 E
Badari	27 15 N	31 10 E
Dabod	23 45 N	32 45 E
Dakka	23 00 N	32 40 E
Diospolis Parva	26 00 N	32 26 E
El-Kab	25 00 N	32 55 E
Gerf Hussin	23 15 N	32 45 E
Gerza	29 26 N	31 10 E
Harageh	29 08 N	30 56 E
Hierakonpolis	25 00 N	32 45 E
Khor Bahan	23 49 N	32 50 E
Maadi	29 50 N	31 10 E
Mahasna	26 15 N	31 45 E
Navada	25 45 N	32 40 E
Qau	27 00 N	31 15 E

Badarian

Badari	27 15 N	31 10 E
Qau	27 00 N	31 15 E

Not Listed: Rock Art

ETHIOPIA

"Earlier Stone Age"

Oldowan

Omo Valley	4 32 N	36 00 E

Middle and Upper Acheulian

Melka Kontoure	8 55 N	38 40 E

"First Intermediate"

Fauresmith

Gondar (northeast of)	12 32 N	37 31 E
Melka Kontoure	8 55 N	38 40 E

Acheulio-Levalloisian

Bakke Gargadou	9 15 N	42 30 E
Daghabur	8 14 N	43 29 E
Daghabur/Webi confluence	6 58 N	42 17 E
Garasleh Tug	9 59 N	42 02 E
Robabouto	6 47 N	40 48 E

"Middle Stone Age"

Levalloisian

Darchaua Tug	6 00 N	43 30 E
Durualeh	6 20 N	43 20 E
Gabredarre	6 50 N	44 14 E
Gherlogubi	6 50 N	45 06 E
Kabahan	6 16 N	43 16 E

Stillbay/Pietersburg Complex

Abbé	6 48 N	40 37 E
Amba Alagi	12 59 N	39 30 E
Chekifton	6 37 N	42 00 E
Daghabur	8 14 N	43 29 E
Dolo	4 16 N	42 05 E
Gorgora	12 15 N	37 15 E
Iddi	6 34 N	42 06 E
Karsaalek	6 19 N	41 20 E
Lake Awassa	7 00 N	38 30 E
Melka Kontoure	8 55 N	38 40 E
Moggio	8 30 N	39 10 E
Oksa	6 40 N	41 56 E
Porc Epic cave, Dire Dawa	9 38 N	41 52 E
Tug Sullul	7 37 N	42 54 E
Wadalai Delanta	11 29 N	39 15 E

Undifferentiated

Aisha	10°44′ N	42°30′ E
Cura Ba'ad	6 03 N	43 22 E
Durdere	5 38 N	44 10 E
Garasleh Tug	9 59 N	42 02 E
Kadjoua	6 52 N	40 30 E
Lake Adili	9 27 N	41 55 E
Melka Taka, Webi Shebeli	6 06 N	43 10 E
Oksa	6 40 N	41 56 E
Ubitale	6 52 N	45 19 E

"Second Intermediate"

Magosian

Uncertain

Abbé	6 48 N	40 37 E
Alablah Balleh	7 54 N	45 10 E
Batie	11 02 N	40 00 E
Bethor	11 29 N	39 15 E
Daghabur	8 14 N	43 29 E
Daghabur/Webi confluence	6 58 N	42 17 E
Dallehale	7 28 N	42 50 E
Gorgora	12 15 N	37 15 E
Iddi	6 34 N	42 06 E
Jigiga	9 20 N	42 46 E
Melka Kontoure	8 55 N	38 40 E
Mille River crossing	11 18 N	40 50 E
Moggio	8 30 N	39 10 E
Mustahil	5 16 N	44 44 E
Porc Epic cave, Dire Dawa	9 38 N	41 52 E
Roukatcha	8 30 N	40 44 E
Saka Sharifa	9 22 N	42 10 E
Segag (Segak)	7 32 N	42 59 E
Sheik Hussein	7 40 N	40 36 E
Sirrau Balleh	7 19 N	43 20 E
Tug Ensiral	7 24 N	42 48 E
Webi Shebeli (left bank)	6 52 N	42 13 E
Webi Shebeli (left bank)	7 03 N	42 18 E
Webi Shebeli (left bank)	7 10 N	42 19 E

"Later Stone Age"

Wilton

Abbé	6 48 N	40 37 E
Adele	10 46 N	42 30 E
Adjin	10 54 N	42 50 E
Aisha	10 44 N	42 30 E
Bakke Gargadou	9 15 N	42 30 E
Bio Addo	7 16 N	45 10 E
Cura Ba'ad	6 03 N	43 22 E
Daghabur/Webi confluence	6 58 N	42 17 E
Dahlak Islands	15 30 N	40 15 E
Dallehalé	7 28 N	42 50 E
Djilohanno	6 30 N	41 16 E
Garasleh Tug	9 59 N	42 02 E
Goba	6 54 N	40 10 E
Karsaalek	6 19 N	41 20 E
Laga Oda (Goda Dassa, Durso, Djilbo)	9 28 N	41 30 E
Lake Langano	7 33 N	38 50 E
Melka Taka, Bama'asi cave	6 10 N	43 10 E
Melka Taka, Webi Shebeli	6 06 N	43 10 E
Moggio	8 30 N	39 10 E
Omerdin	9 10 N	42 08 E
Orahaut	7 30 N	42 52 E
Porc Epic cave, Dire Dawa	9 38 N	41 52 E
Saka Sharifa (Goda Rorris, Oladi, Goda Oudji)	9°22′ N	42°10′ E
Souri	6 44 N	42 10 E
Tug Fidadeida	7 20 N	42 49 E
Tug Sullul	7 37 N	42 54 E
Webi Shebeli (left bank)	6 52 N	42 13 E
Webi Shebeli (left bank)	7 03 N	42 18 E
Webi Shebeli (left bank)	7 10 N	42 19 E
Webi Shebeli (left bank)	7 18 N	42 20 E

Doian

Balleh Bio Mudo	7 44 N	44 26 E
Bur Dahir	5 26 N	44 34 E
Bur Eighei	5 44 N	44 06 E
Domo	7 53 N	46 52 E
Walwal	7 08 N	45 25 E

Blade and Microlithic Occurrences

Undifferentiated

Amba Sel	11 28 N	39 38 E
Dessie	11 07 N	39 37 E
Gadaret	11 07 N	39 37 E
Melka Kontoure	8 55 N	38 40 E
Quiha	13 27 N	39 33 E

Rock Paintings

Adi Kaie sites—Meheba Eeli, Hulum Bareto, Zeban Cabessa, Coaito, Hirschmele	14 45 N	39 25 E
Genda Biftou; Sourré	9 34 N	41 40 E
Kondoddo area, north of Harar Bake Khalto, Errer Kimiet (Goda Kassé, Goda Rorris) Saka Sharifa	9 22 N	42 10 E
Lago Oda (also Durso, Djilbo, Aleyou Meta, Goda Dassa)	9 28 N	41 30 E
Mai Aini sites—Ba'atte Abba Keisi, Mesbar Guebi, Zeban Onalibanos, Mezab Alabe, Sollum Ba'atti, Adi Qanza	14 43 N	39 10 E
Porc Epic, Dire Dawa	9 38 N	41 52 E

Rock Engravings

Bur Dahir	5 26 N	44 34 E

GABON

Compiled from data in Farine, B., "Sites Préhistoriques Gabonais," N.D. (Ministère de l'Information, Gabon).

"First Intermediate"

Sangoan

Libreville airport	0 30 N	9 30 E
Nyanga	2 35 S	11 30 E
Portes de l'Okanda	0 25 N	12 50 E

"Middle Stone Age"

Lupemban

Lake Gome, N'Djole	0 15 S	10 45 E
Libreville	0 30 N	9 30 E
Moanda, Haut Ogooue	1 23 S	13 10 E
Mouila	1°29′ S	10°40′ E
Moukoumou, N'Djole	0 15 S	10 45 E
Mounana	1 13 S	13 33 E
N'Djole	0 15 S	10 45 E
Nyanga	2 35 S	11 30 E
Portes de l'Okanda	0 25 N	12 50 E

"Later Stone Age"

Tshitolian

Libreville	0 30 N	9 30 E
Mouila	1 29 S	10 40 E
Mounana	1 13 S	13 33 E
Okouma/Bafoula	1 28 S	13 15 E
Port Gentil	0 30 S	9 30 E

Blade and Microlithic Occurrences

Undifferentiated

Lake Gome, N'Djole	0 15 S	10 45 E
Lake Okouma	1 28 S	13 12 E
Libreville	0 30 N	9 30 E
Moanda, Haut Ogooue	1 23 S	13 10 E
Mounana	1 13 S	13 33 E

"Neolithic"

Equatoria

Undifferentiated

Lake Gome, N'Djole	0 15 S	10 45 E
Libreville	0 30 N	9 30 E
Moanda	1 13 S	13 33 E
Moanda, Haut Ogooue	1 23 S	13 10 E
Portes de l'Okanda	0 25 N	12 50 E
Sindara	1 29 S	10 40 E

GAMBIA

Information inadequate for compilation.

GHANA

Compiled from information supplied by O. Davies, University of Ghana.

"Earlier Stone Age"

Oldowan

Abuchen	5 57 N	0 39 W
Bawdua	6 03 N	0 48 W
Oda	5 56 N	0 59 W
Yapei	9 08 N	1 10 W

Lower Acheulian

Uncertain

Akroso Amanfoso	7 24 N	0 13 E
Amanfinaso	5 36 N	2 10 W
Angeta	6 50 N	0 19 E
Ayrafie	7 44 N	0 18 E
Duakur	5 06 N	1 17 W
Edubia	5 57 N	1 05 W
Hohoe	7 09 N	0 28 E
Huni	5 06 N	1 20 W
Kledjo	7 07 N	0 27 E
Koloenu	7 02 N	0 26 E
Kpong	6 03 N	0 04 E
Kukuadu	5 06 N	1 21 W
Ochereso	5 58 N	1 07 W
Ofinso	6 54 N	1 39 W
Poyonu	6 03 N	0 03 E
Todome	6 39 N	0 15 E
Wegbe	7 07 N	0 27 E
Ypala	9 35 N	2 26 W

Middle and Upper Acheulian

Uncertain

Abriankaw	8 20 N	0 30 E
Angata	6 50 N	0 19 E
Anyaju	7 18 N	0 28 E

Asokrochana	5°56′ N	0°03′ W
Avenya	6 40 N	0 28 E
Awahame	6 35 N	0 22 E
Bame	6 40 N	0 21 E
Bawdua	6 03 N	0 48 W
Breniasi	7 28 N	0 17 E
Densu mouth	5 33 N	0 20 W
Edubia	5 57 N	1 05 W
Hohoe	7 10 N	0 29 E
Honuta	6 50 N	0 31 E
Kongolo	9 48 N	2 20 W
Kubalem	8 56 N	0 26 E
Kwanyaku	5 36 N	0 38 W
Mamkuma	9 13 N	2 28 W
Nsaba	5 39 N	0 43 W
Ocherebuana	5 47 N	0 20 W
Oyibi	5 49 N	0 07 W
Sachiri	5 19 N	0 53 W
Todome	6 38 N	0 18 E
Tota	6 49 N	0 17 E
Tsito	6 33 N	0 17 E
Uncertain		
Apaso	7 31 N	0 07 E
Asuboni	6 00 N	0 49 W
Bagble	6 34 N	0 23 E
Brawhani	8 00 N	2 27 W
Chuim	5 34 N	0 16 W
Dzefe	6 39 N	0 28 E
Etinasi	5 03 N	2 06 W
Golokuati	7 00 N	0 26 E
Have	6 41 N	0 29 E
Huni	5 06 N	1 20 W
Kunkoa	10 49 N	0 45 W
Lawra	8 10 N	2 10 W
Lume	6 45 N	0 29 E
Nsuasi	5 50 N	0 11 W
Oklu	5 44 N	0 26 W
Osenasi	5 58 N	0 46 W
Pokoasi	5 41 N	0 17 W
Poyonu	6 48 N	0 03 E
Sawla	9 18 N	2 25 W

"First Intermediate"

Sangoan

Abehenasi	7 07 N	0 24 E
Abejum	6 18 N	1 39 W
Abonku	5 15 N	1 02 W
Aboso	5 22 N	1 57 W
Abuchen	5 51 N	0 39 W
Aburi	5 51 N	0 10 W
Accra	5 36 N	0 11 W
Achimota	5 37 N	0 13 W
Adofin	5 39 N	0 37 W
Adomekwa	5 37 N	0 37 W
Afum	7 46 N	0 02 E
Agate	6 44 N	0 21 E
Agbone	6 57 N	0 27 E
Agome	6 46 N	0 22 E
Ahamansu bridge	7 45 N	0 33 E
Aiyimensa	5 46 N	0 11 W
Akim Soadru	5 53 N	1 00 W
Akropong	5 57 N	0 06 W
Akroso Amanfoso	7 24 N	0 12 E
Amanforo	7 21 N	0 28 E
Amanful	5 37 N	0 44 W
Amisano cross	5 06 N	1 21 W
Amoaku	6 55 N	1 37 W
Amoanda	5 14 N	0 47 W
Ando	6 34 N	0 22 E
Angeta	6 50 N	0 19 E
Ankaful	5 12 N	1 02 W
Ankobra jn.	5 26 N	2 07 W
Anokye	5 13 N	1 03 W
Anomabu	5 11 N	1 07 W
Anum jn.	6°24′ N	0°10′ E
Anyirawasi	6 34 N	0 18 E
Apai	7 33 N	0 08 E
Apaso	7 31 N	0 07 E
Apiakrom	6 16 N	0 05 E
Asamankese	5 52 N	0 41 W
Asantckwa	8 05 N	1 49 W
Asawku	5 03 N	1 39 W
Asebu	5 22 N	0 41 W
Asempaniyi	6 19 N	0 10 E
Ashaiman	5 41 N	0 02 W
Ashalebotwe	5 41 N	0 09 W
Asokrochona	5 36 N	0 03 W
Ataire	7 36 N	0 03 E
Atiankana	5 57 N	0 51 W
Atinsumu	7 26 N	0 09 E
Atomi	6 54 N	0 23 E
Avanime	6 28 N	0 13 E
Avedu	6 57 N	0 17 E
Avenui	6 36 N	0 18 E
Aviepe	6 41 N	0 35 E
Awlime	6 50 N	0 29 E
Bagble	6 34 N	0 23 E
Bame	6 40 N	0 21 E
Bawalashi	5 40 N	0 11 W
Begbi	6 42 N	0 30 E
Biawhani	7 49 N	2 27 W
Biriwa	5 10 N	1 09 W
Bleman	5 44 N	0 37 W
Boguadi	5 06 N	1 26 W
Bremang	5 31 N	2 09 W
Breniasi	8 01 N	0 34 E
Brenu Achinum	5 04 N	1 26 W
Bronikrom	6 36 N	1 01 W
Bunsu	6 17 N	0 28 W
Chawenu	6 34 N	0 19 E
Chichiwere	5 21 N	1 07 W
Chive ?	6 29 N	0 13 E
Chuim	5 36 N	0 16 W
Ciubi	6 44 N	0 24 E
Dansami	5 54 N	1 21 W
Dansukrom	6 11 N	2 21 W
Datano	6 16 N	2 28 W
Densu mouth	5 33 N	0 20 W
Doba	10 57 N	1 02 W
Dodi	6 32 N	0 07 E
Domiabra	6 13 N	1 41 W
Dompim	5 09 N	2 04 W
Dukludja	6 58 N	0 16 E
Dunkwa	5 58 N	1 46 W
Dzefe	6 39 N	0 28 E
Eja	5 11 N	1 06 W
Ejisu	6 43 N	1 28 W
Ejura	7 22 N	1 23 W
Enyanmem	5 19 N	1 01 W
Ewisa	7 47 N	2 06 W
Famaye	5 35 N	0 37 W
Have	6 41 N	0 29 E
Hohoe	7 10 N	0 29 E
Honuta	6 50 N	0 31 E
Jasikan	7 24 N	0 28 E
Jedu	5 17 N	1 03 W
Jesi	5 37 N	0 37 W
Jetuakrom	5 54 N	1 35 W
Jigbe	6 55 N	0 17 E
Jomuro	5 46 N	2 34 W
Kadakofe	6 37 N	0 20 E
Kade	6 05 N	0 50 W
Kadingben	7 48 N	0 05 W
Kala	6 48 N	0 30 E
Kamba bridge	10 45 N	2 50 W
Katichiasi	5 24 N	1 09 W
Kaura	8 08 N	2 01 W
Kawli Gino	5 32 N	0 14 W
Kete Krachi	7°47′ N	0°04′ W
Kiodua	5 45 N	0 36 W
Koloenu	7 02 N	0 26 E
Kone	8 31 N	0 36 E
Kpetinu	6 30 N	0 14 E
Kpodore	6 44 N	0 29 E
Kpong	6 09 N	0 03 E
Kubalem	8 56 N	0 26 E
Kunfosi	9 31 N	2 34 W
Kunkoa	10 49 N	0 45 W
Kwadjokrom	7 46 N	0 10 W
Kwaminkrom	5 13 N	1 02 W
Kwanyaku	5 35 N	0 38 W
Kwasimakura	5 39 N	0 37 W
Kwawu	6 42 N	0 20 E
Kwenue	5 23 N	0 39 W
Labadi	5 32 N	0 10 W
Laitch	5 50 N	0 05 W
Legon	5 39 N	0 12 W
Legu	5 13 N	0 47 W
Logba Adjakoe	6 54 N	0 26 E
Lokoe	6 35 N	0 26 E
Lume	6 43 N	0 28 E
Mankesim	5 16 N	1 01 W
Mankwadzi	5 20 N	0 42 W
Manprobi	5 31 N	0 15 W
Manso	5 54 N	0 53 W
Mokwa	5 43 N	1 36 W
Motte	6 43 N	0 33 E
Mpata	5 23 N	0 37 W
Mpintim	5 34 N	2 09 W
Nkatckwan	8 00 N	0 07 E
Nkwatanang	5 41 N	0 10 W
Noaso	6 09 N	0 03 E
Nsawam	5 48 N	0 20 W
Nsuasi	5 50 N	0 11 W
Nungwa Lashibi	5 38 N	0 04 W
Nyamibechire	5 41 N	0 38 W
Nyanyanu	5 28 N	0 25 W
Nyigbe	6 47 N	0 22 E
Nyinawonsu	6 06 N	2 01 W
Obimpeobyie	6 50 N	1 52 W
Oblojo	5 34 N	0 19 W
Obuasi	6 12 N	1 40 W
Ocherebuana	5 47 N	0 20 W
Ochreku	5 25 N	0 36 W
Oda	5 57 N	0 59 W
Odemesua	6 47 N	0 19 W
Odomi	8 20 N	0 31 E
Ofotokuasi	6 26 N	0 10 E
Okitsiu	5 38 N	0 37 W
Ongwa	5 38 N	1 26 W
Onyimso	6 50 N	0 46 W
Osimpo	5 43 N	0 37 W
Otisu	7 38 N	0 05 E
Oyibi	5 49 N	0 07 W
Pampani	7 46 N	0 01 W
Pokukrom	7 45 N	2 08 W
Pomadi Brofoyedru	5 24 N	0 39 W
Pore	6 17 N	0 12 E
Poyonu	6 08 N	0 03 E
Sabogira	8 02 N	0 52 W
Sachiri	5 19 N	0 53 W
Saltpond	5 12 N	1 03 W
Senchi	6 12 N	0 05 E
Senya Beraku	5 23 N	0 29 W
Siabuda	6 22 N	0 11 E
Sokwati	10 46 N	0 45 W
Somanya	6 06 N	0 00
Soronuasi	8 11 N	1 38 W
Suprudu jn.	5 15 N	1 01 W
Tanyigbe	6 42 N	0 31 E
Telopan	6 48 N	0 30 E
Tema	5 37 N	0 00

Teshi	5°34′ N	0°08′ W
Tiklakuma	8 04 N	1 46 W
Toboasi	5 20 N	1 06 W
Todome	6 39 N	0 15 E
Todzi	6 50 N	0 17 E
Tokunga	6 10 N	0 04 E
Tokuse	5 33 N	0 22 W
Topeasi	5 54 N	0 43 W
Tsito	6 31 N	0 16 E
Tuna	9 32 N	2 25 W
Twifu Praso	5 36 N	1 33 W
Wanchi	5 59 N	0 55 W
Wasipe	8 26 N	2 10 W
Wegbe	6 38 N	0 20 E
Weremaso	5 43 N	1 36 W
Winneba	5 20 N	0 37 W
Yaninega	10 43 N	0 45 W
Yaokrom ?	5 10 N	1 08 W
Yashiamankrom	6 37 N	1 11 W
Yindin ?	5 14 N	1 20 W
Zaglekope	6 04 N	0 01 W

"Middle Stone Age"

Lupemban

Certain

Abokobi	5 44 N	0 12 W
Accra	5 33 N	0 12 W
Accra airport	5 35 N	0 10 W
Achimota	5 38 N	0 13 W
Angita	6 50 N	0 19 E
Anyirawasi	6 33 N	0 18 E
Apeguso	6 18 N	0 09 E
Biong	10 45 N	0 48 W
Branfo	8 56 N	2 32 W
Chichiwere	5 21 N	1 07 W
Fian	10 22 N	2 28 W
Jinurasi	6 24 N	1 12 W
Legon	5 39 N	0 12 W
Pisi	9 56 N	2 28 W
Sara	9 27 N	2 40 W
Ypala	9 35 N	2 26 W

Uncertain

Akawla	6 02 N	0 01 W
Asokrochona	5 56 N	0 03 W
Chawena	6 34 N	0 20 E
Maluwe	8 38 N	2 16 W
Navrongo	10 53 N	1 07 W
Nungua Lashibi	5 38 N	0 04 W
Sianibo	7 19 N	1 59 W
Todome	6 38 N	0 15 E
Yaokrom	5 11 N	1 08 W

"Guinea Aterian"

Akpofu Todzi	7 15 N	0 29 E
Angata	6 50 N	0 19 E
Anum jn.	6 24 N	0 10 E
Apeguso	6 18 N	0 09 E
Azupunfiun	10 54 N	0 32 E
Baika	7 14 N	0 32 E
Bandinsuguru	10 36 N	0 13 W
Biong	10 45 N	0 48 W
Bume	7 13 N	0 28 E
Dapa	7 47 N	0 31 E
Dodi	6 31 N	0 09 E
Ejenem	7 42 N	2 47 W
Faomang	7 39 N	2 47 W
Fawman	8 01 N	1 01 W
Hohoe	7 10 N	0 29 E
Jakasi	10 29 N	1 01 W
Jasikan	7 24 N	0 28 E
Kpafa	9 48 N	2 44 W
Kpong	6 03 N	0 05 E
Kukuo-Nawuni	9 40 N	1 01 W
Lolobi Ashianbi	7 12 N	0 31 E
Lolobi Kumasi	7 12 N	0 32 E
Lungbunya	9°42′ N	1°14′ W
Mpeasem	7 14 N	0 29 E
New Todzi	6 50 N	0 17 E
Nkevabara	8 13 N	0 12 W
Npuasu	7 44 N	2 48 W
Nyango	9 15 N	2 23 W
Odomi	7 16 N	0 29 E
Pasinkpe	10 26 N	1 04 W
Sokpekofe	6 25 N	0 11 E
Zaglekope	6 04 N	0 01 W

"Middle Stone Age"

Undifferentiated

Ababawankaw	6 34 N	2 26 W
Achempim	5 15 N	2 00 W
Adawso	5 57 N	0 13 W
Adonekwa	5 37 N	0 37 W
Afienya	5 48 N	0 00
Akroso Amanfoso	7 25 N	0 10 E
Amoanda	5 14 N	0 47 W
Ando	6 34 N	0 22 E
Anyirawasi	6 18 N	0 18 E
Asokori	6 07 N	0 16 W
Asokrochona	5 37 N	0 03 W
Asuboa	5 53 N	0 52 W
Avenui	6 37 N	0 19 E
Awuressi	7 44 N	0 03 E
Bachin Gulubi	8 13 N	0 14 W
Baghari	10 44 N	2 54 W
Bale	9 07 N	2 37 W
Banaku	9 59 N	2 29 W
Banka	7 48 N	0 05 E
Bawaleshie	5 40 N	0 11 W
Black Volta bridge, south bank	8 45 N	1 28 W
Bopa	6 07 N	2 35 W
Borada	7 22 N	0 29 E
Bremang	5 42 N	1 36 W
Buafori Konkomba	8 01 N	0 08 W
Burufu	10 31 N	2 52 W
Chemu lagoon	5 39 N	0 02 E
Chuchiliga	10 49 N	1 11 W
Danso	5 45 N	0 31 W
Dansukrom	6 11 N	2 21 W
Densu mouth	5 33 N	0 20 W
Dienyamibeka	6 59 N	2 08 W
Dindindusi	7 19 N	1 23 W
Eja	5 11 N	1 06 W
Ejisu	6 43 N	1 28 W
Ekawso	6 18 N	0 42 W
Fume	6 43 N	0 25 E
Ga	9 49 N	2 32 W
Jifaji	6 50 N	0 09 E
Jomuro	5 46 N	2 34 W
Kadangben	7 49 N	0 05 W
Kitari East	8 15 N	0 11 E
Kledjo	7 07 N	0 27 E
Kojokope	6 03 N	0 01 W
Kokiobite	5 30 N	0 22 W
Kongolo	9 48 N	2 29 W
Kpandu	6 59 N	0 15 E
Kpone	5 41 N	0 03 E
Krodua	5 45 N	0 36 W
Krufabela	9 58 N	2 28 W
Kunga	6 29 N	0 12 E
Kuradaso	6 21 N	0 21 W
Kwadjokrom	7 45 N	0 09 W
Kwawu Dukomae	7 36 N	0 03 E
Lake Kpiri	9 03 N	1 50 W
Lawgawie	10 49 N	0 43 W
Legon	5 39 N	0 12 W
Little Legon	5 38 N	0 12 W
Mamato	7 59 N	0 06 W
Mamomom	5 45 N	0 23 W
Mlayu	5 55 N	0 04 E
Mojina	9°00′ N	0°17′ E
Nakwaby	9 23 N	2 27 W
Navrongo	10 54 N	1 06 W
Nkunsia	7 39 N	2 05 W
Nkwanta	8 08 N	0 44 W
Nouhunu	7 51 N	2 23 W
Nsoba	5 39 N	0 45 W
Ntereso	9 07 N	1 13 W
Nyinsu	5 56 N	0 11 W
Obopa	6 10 N	0 05 W
Oduponkpehe	5 32 N	0 26 W
Ofin bridge	5 59 N	1 47 W
Oyibi	5 49 N	0 07 W
Peduasi	5 48 N	0 11 W
Poyonu	6 08 N	0 03 E
Sabari	9 20 N	0 18 E
Sabogira	8 02 N	0 52 W
Sackira	5 19 N	0 54 W
Salamkpong	9 25 N	0 22 W
Sara	9 30 N	2 40 W
Sawekope	5 43 N	0 08 E
Skiani	9 09 N	0 29 E
Somanya	6 06 N	0 00
Soomia	9 31 N	2 21 W
Soronuasi	8 11 N	1 38 W
Suhwiem	7 24 N	0 14 E
Tanoso	7 28 N	1 58 W
Tema	5 37 N	0 00
Temebobi	8 06 N	1 53 W
Tiego	10 59 N	0 24 W
Tiklakume	8 04 N	1 46 W
Todome	6 39 N	0 17 E
Tsati	6 37 N	0 15 E
Tsikofe	6 26 N	0 12 E
Wankayo	7 58 N	0 07 E
Wayenu	6 35 N	0 34 E
Wuinta	6 56 N	0 28 E
Wuru	10 58 N	1 35 W
Ypala TP 113 22	9 36 N	2 26 W

"Ultimate Middle Stone Age"

(West Africa)

Aboabo	5 56 N	0 58 W
Accra golf course	5 32 N	0 12 W
Achimota	5 37 N	0 13 W
Akawle	6 03 N	0 01 W
Akrakrom	4 45 N	2 04 W
Akroso	5 46 N	0 46 W
Akwatia	6 01 N	0 48 W
Anincheche	6 02 N	0 50 W
Apan	5 17 N	0 44 W
Asafo	5 34 N	0 39 W
Asani	4 51 N	1 57 W
Chawenu	6 34 N	0 19 E
Densuso	6 05 N	0 29 W
Dogberi	9 43 N	2 47 W
Drobo	7 51 N	2 44 W
Edubia	5 57 N	1 05 W
Ejuia	7 22 N	1 23 W
Grupe	9 14 N	2 14 W
Jadam	6 22 N	0 30 W
Kawli Gono	5 32 N	0 14 W
Kpafa	9 47 N	2 47 W
Kusi	6 01 N	0 52 W
Labadi	5 32 N	0 10 W
Legon	5 39 N	0 12 W
Maluwe	8 40 N	2 17 W
Manprobi	5 31 N	0 15 W
Mankwadzi	5 19 N	0 42 W
Nakpanduri	10 37 N	0 12 W
Narago	10 15 N	2 45 W
Nasia	10 09 N	0 48 W
New Todzi	6 50 N	0 17 E
Nsama cove	4 45 N	2 06 W
Obenemasi	6 40 N	1 10 W

Osenasi	5°57′ N	0°45′ W
Pala	9 58 N	2 45 W
Prampram	5 43 N	0 06 W
Takoradi	4 54 N	1 46 W
Tema	5 37 N	0 00
Vako	10 51 N	0 19 W

"Mesoneolithic"
(West Africa)

Undifferentiated

Ababawankaw	6 34 N	2 26 W
Abakenu	5 05 N	1 28 W
Abatim	6 43 N	0 55 W
Abejum	6 18 N	1 39 W
Abene	6 42 N	0 47 W
Abesiwa	5 59 N	1 47 W
Abetifi	6 40 N	0 45 W
Aboabo	5 56 N	0 58 W
Abodiam ferry	6 08 N	0 49 W
Abompe	6 23 N	0 29 W
Abonu	6 32 N	1 26 W
Abreshia	5 53 N	1 59 W
Abwosini	5 04 N	2 04 W
Achinasi	6 18 N	2 31 W
Achinata	5 37 N	0 13 W
Adamsonkwanta	6 03 N	1 47 W
Adinkrakrom	6 07 N	1 45 W
Adiouso	4 55 N	2 02 W
Adokima	6 36 N	0 49 W
Adome	6 14 N	0 06 E
Adonkrono	6 05 N	0 50 W
Adwuku	5 53 N	0 04 E
Adwuku hilltop	5 52 N	0 03 E
Afienya	5 48 N	0 00
Afuaman	5 37 N	0 21 W
Agati	6 44 N	0 21 E
Agbogba	5 41 N	0 12 W
Agomeda	5 58 N	0 00
Agona	5 13 N	2 01 W
Aiyerade	7 29 N	1 38 W
Aiyinabirini	6 21 N	2 35 W
Ajenkotoku	5 45 N	0 20 W
Ajinpaboa	5 58 N	1 49 W
Ajuman	5 56 N	1 42 W
Akagia	6 25 N	0 07 E
Akatawia	6 17 N	0 08 W
Akawanda	6 29 N	0 41 W
Akitechi	4 46 N	2 06 W
Akokoaso	6 09 N	1 03 W
Akrofufu	6 21 N	0 35 W
Akropong	5 47 N	2 05 W
Akroso	5 46 N	0 45 W
Akroso Amanfoso	7 25 N	0 10 E
Akukome	6 53 N	0 17 E
Akumadan	7 33 N	1 58 W
Akwaboso	6 21 N	0 39 W
Akwamu	6 16 N	0 05 E
Akwide	4 45 N	2 02 W
Amansala	8 10 N	1 52 W
Amoaku	6 55 N	1 37 W
Amomaso	7 21 N	2 41 W
Amowi	6 57 N	1 41 W
Aniben	5 00 N	2 11 W
Angeta	6 50 N	0 19 E
Angoma	6 56 N	0 13 E
Aniago	10 58 N	0 26 W
Ankobra jn.	5 27 N	2 07 W
Ankwana	5 04 N	1 23 W
Anum	6 29 N	0 09 E
Anwia	6 24 N	1 38 W
Anwiankwante	6 27 N	1 38 W
Anyensu	6 20 N	0 07 E
Anyinam	6 22 N	0 33 W
Anyirawasi	6 34 N	0 18 E
Anyuam	6°37′ N	2°24′ W
Apiakrom	6 11 N	2 25 W
Apimso	6 18 N	0 05 W
Arumon	10 39 N	2 47 W
Asakwa	6 15 N	1 31 W
Asamang	5 54 N	1 31 W
Asantekwa	8 05 N	1 49 W
Asekrom	6 10 N	2 32 W
Asempaniye	5 55 N	1 22 W
Asiekpe	6 16 N	0 33 E
Asoboa	6 10 N	1 06 W
Asokrochona	5 37 N	0 03 W
Asuboa jn.	5 52 N	0 52 W
Asuboi	4 48 N	2 06 W
Atukrom	6 15 N	0 27 W
Avedu	6 57 N	0 17 E
Avenui	6 37 N	0 19 E
Avenui	6 37 N	0 20 E
Aviepe	6 41 N	0 35 E
Awaso	6 13 N	2 16 W
Awiabo	5 02 N	2 26 W
Axim	4 52 N	2 14 W
Ayido	5 39 N	0 13 W
Babun	6 34 N	0 02 W
Bambui ferry	8 09 N	2 02 W
Bamkpona	9 56 N	2 41 W
Banda	8 10 N	2 26 W
Banda	8 16 N	0 06 W
Bandakile	7 59 N	2 30 W
Bandiyili	8 53 N	0 10 E
Banka	7 48 N	0 05 E
Banso	4 54 N	2 00 W
Basa	10 17 N	2 47 W
Bassa crossing	8 28 N	0 19 E
Bassa Valley	8 29 N	0 19 E
Batabe	5 54 N	0 55 W
Bato	8 42 N	0 10 E
Befoadum	6 13 N	1 35 W
Bejim	8 27 N	0 04 E
Bepawso	6 48 N	1 50 W
Bimbila	8 50 N	0 04 E
Black Volta bridge, south bank	8 45 N	1 28 W
Blinkpala	9 16 N	0 27 E
Bokukrua	7 07 N	2 04 W
Bole	9 02 N	2 29 W
Bosumuoso	6 12 N	2 28 W
Breniasi	7 28 N	0 17 E
Brofoyedru	6 12 N	1 41 W
Brofoyedru	7 12 N	2 06 W
Buafori Konkomba	8 01 N	0 08 W
Buaku	6 24 N	2 34 W
Buga	10 03 N	2 44 W
Bui	8 16 N	2 15 W
Buipe	8 63 N	1 33 W
Bungase	8 15 N	2 17 W
Bungwali	9 42 N	1 54 W
Bunsu	6 17 N	0 28 W
Burufu	10 31 N	2 52 W
Camp	6 21 N	2 32 W
Chache ferry	9 11 N	2 44 W
Chakoto	8 41 N	1 09 W
Chia	6 13 N	1 06 W
Chiranda	8 14 N	1 36 W
Chremekrom	5 56 N	1 55 W
Christian's village	5 38 N	0 13 W
Chwiwaho jn.	7 12 N	2 09 W
Dabiso	7 46 N	0 05 E
Daboasi	5 07 N	1 39 W
Daboya	9 32 N	1 23 W
Dagonkade	8 42 N	0 29 W
Dalling	9 38 N	1 01 W
Damang	5 10 N	2 03 W
Damango	9 06 N	1 50 W
Damango	9°05′ N	1°47′ W
Damango	9 08 N	1 50 W
Damango	9 02 N	1 44 W
Damongo resettlement area	9 15 N	1 40 W
Damongo resettlement area	9 15 N	1 35 W
Dawa	5 52 N	0 19 E
Dawkwenya	5 46 N	0 03 E
Debibi	7 53 N	2 33 W
Degwiwu	9 20 N	2 35 W
Densu mouth	5 33 N	0 20 W
Denyau FR	6 02 N	1 47 W
Dienbra	7 56 N	0 06 E
Dierbra	7 58 N	0 06 E
Dikpwie	10 39 N	2 55 W
Djo	9 04 N	0 18 E
Dobo	10 07 N	2 45 W
Dodi	6 32 N	0 07 E
Dogberi	9 43 N	2 47 W
Domenasi	5 00 N	2 11 W
Domiabra	5 56 N	0 47 W
Domiabra	6 13 N	1 41 W
Domiabra	8 06 N	1 46 W
Duadaso	7 50 N	2 39 W
Dukludja	6 58 N	0 14 E
Dumakuai	6 50 N	1 27 W
Dumbai	8 05 N	0 12 E
Dunkwa	5 46 N	2 32 W
Dunkwa	5 58 N	1 47 W
Duri	10 36 N	2 47 W
Dwinasi	6 14 N	2 29 W
Edumata	5 12 N	0 58 W
Efrokumosi	5 50 N	0 44 W
Ejan	4 49 N	2 12 W
Ekawso	6 18 N	0 42 W
Esanang	5 06 N	1 24 W
Esasi	6 12 N	1 42 W
Esikado	4 57 N	1 43 W
Esikofokrom	6 15 N	1 40 W
Esupon	4 58 N	1 42 W
Etinasi	5 03 N	2 06 W
Etinasi	5 04 N	2 06 W
Ewbem	5 52 N	1 33 W
Ewisa	7 47 N	2 05 W
Fawman	8 01 N	1 00 W
Fiakwasa	7 47 N	1 21 W
Fijai	4 56 N	1 45 W
Finaso	6 05 N	1 47 W
Fisa	6 14 N	0 28 W
Fomangro	6 36 N	0 56 W
Forikrom	7 35 N	1 50 W
Fryfusu	9 06 N	1 17 W
Fryfusu	9 09 N	1 26 W
Furu	10 37 N	2 52 W
Fwidiem	6 47 N	1 06 W
Gabi	7 00 N	0 18 E
Garkwa	9 37 N	2 37 W
Glova	6 15 N	0 05 E
Gradau	8 14 N	2 18 W
Grube	8 12 N	0 14 W
Grubi	8 04 N	0 49 W
Grufi	9 14 N	2 12 W
Grupe	9 14 N	2 15 W
Gulumpe	8 33 N	1 35 W
Gwo	10 47 N	2 42 W
Huni	5 06 N	1 20 W
Inchaban	4 59 N	1 41 W
Iture	5 06 N	1 19 W
Jameskrom	6 10 N	1 42 W
Jang	9 30 N	2 09 W
Jani	6 46 N	0 16 E
Jawpanya	5 55 N	0 02 E
Jema	7 54 N	1 47 W

Jentilfe	9°14′ N	2°21′ W
Jetuakrom	5 54 N	1 35 W
Jigbe	6 55 N	0 17 E
Juansa	6 42 N	1 08 W
Jumo	10 13 N	1 57 W
Kabanfe	9 12 N	2 03 W
Kadelso	8 39 N	1 31 W
Kadue	8 15 N	0 42 W
Kagbiri	10 55 N	0 11 W
Kaisara	10 38 N	2 48 W
Kakalapara	9 54 N	2 47 W
Kalande	8 28 N	0 12 W
Kalaovi River	9 17 N	1 31 W
Kalba	9 34 N	2 39 W
Kananto	9 13 N	1 57 W
Kananto	9 13 N	1 55 W
Kankang	6 27 N	0 38 W
Kankang	6 27 N	0 36 W
Kanne	10 30 N	2 49 W
Katakwo	4 45 N	2 30 W
Kenten	7 36 N	1 57 W
Kibi	6 10 N	0 33 W
Kintampo	8 02 N	1 43 W
Kisikrom	5 34 N	2 02 W
Kitari East	8 15 N	0 11 E
Kitari West	8 15 N	0 11 E
Kofiso	7 43 N	0 02 E
Kofridua	7 32 N	1 47 W
Kokroko	5 34 N	0 16 W
Kongolo	9 50 N	2 28 W
Konkora	6 33 N	1 38 W
Konongo	6 37 N	1 13 W
Kopota	9 28 N	1 27 W
Koura	8 08 N	2 01 W
Kpanjoli	9 42 N	0 17 E
Kpechu ferry	7 56 N	0 04 E
Krenkuasi	7 44 N	0 04 E
Krokosue	6 20 N	2 55 W
Kudani	10 12 N	0 20 E
Kufore	10 21 N	0 07 W
Kugri	10 47 N	0 18 W
Kukuo-Nawuni	9 40 N	1 01 W
Kulkwe	10 32 N	2 45 W
Kulun	10 04 N	1 53 W
Kumasi	6 41 N	1 36 W
Kumasi University	6 41 N	1 33 W
Kunfosi	9 31 N	2 34 W
Kunkrum	7 37 N	1 43 W
Kunkwa	10 25 N	1 06 W
Kuradaso	6 21 N	0 21 W
Kuto	9 21 N	1 16 W
Kwabeng	6 20 N	0 35 W
Kwadia	6 49 N	1 39 W
Kwadjowuokrom	6 08 N	1 44 W
Kwamikankakrom	6 20 N	2 36 W
Kwaysi	8 16 N	0 40 W
Kyefurey	8 34 N	0 01 W
Lake Kpiri	9 03 N	1 50 W
Lakentere	9 16 N	1 31 W
Larabanga	9 13 N	1 52 W
Lawra	10 39 N	2 52 W
Legon	5 39 N	0 12 W
Lissa	10 43 N	2 43 W
Little Legon	5 38 N	0 12 W
Maluwe	8 38 N	2 16 W
Maluwe	8 40 N	2 17 W
Mamangro	6 20 N	1 00 W
Mamkuma	9 11 N	2 29 W
Mamomoho	6 18 N	2 37 W
Mamomom	5 45 N	0 23 W
Mangoasi	6 35 N	0 36 W
Manhia	5 39 N	0 21 W
Manji	7 55 N	2 23 W
Manprobi	5 31 N	0 15 W
Manso	5°05′ N	1°50′ W
Manso	5 31 N	1 10 W
Mantukwa	8 17 N	1 34 W
Matwimuhu	5 05 N	1 27 W
Metaw	10 34 N	2 54 W
Metemanu	6 14 N	1 40 W
Mfensi	6 46 N	1 47 W
Midie	5 46 N	0 20 W
Mojina	9 00 N	0 17 E
Moli G.R.	9 18 N	1 59 W
Morago, new bridge	10 40 N	0 12 W
Morno	8 42 N	1 30 W
Motigu	9 50 N	2 04 W
Mpasem	6 14 N	2 13 W
Mpiasem	6 22 N	2 34 W
Mproeso	6 35 N	0 44 W
Mraden	6 17 N	2 32 W
Murugu	9 17 N	1 45 W
Murugu moledrift	9 16 N	1 46 W
Nabori	9 08 N	1 51 W
Nadawli	10 21 N	2 39 W
Nakpanduri	10 38 N	0 11 W
Nakwa	5 12 N	0 56 W
Naloli	9 38 N	0 15 E
Nalori	9 36 N	1 24 W
Nambiri	9 54 N	0 19 E
Namvili	10 14 N	2 42 W
Nandom	10 50 N	2 45 W
Nantifa	5 34 N	0 38 W
Narago	10 15 N	2 45 W
New Buipe	8 46 N	1 29 W
New Tafo	6 14 N	0 22 W
New Todzi	6 50 N	0 17 E
Nkantanang	6 09 N	0 51 W
Nkatieso	6 14 N	2 14 W
Nkwanta	5 00 N	2 01 W
Nobekaw	6 39 N	2 25 W
Nsugwi	5 05 N	1 28 W
Nsawam	5 18 N	0 45 W
Nsimsim	6 29 N	2 53 W
Nsoatie	7 24 N	2 28 W
Nsuechiri	5 22 N	0 35 W
Ntereso	9 07 N	1 13 W
Ntonsu	6 50 N	1 31 W
Ntronang	6 20 N	1 04 W
Nungwa	5 36 N	0 04 W
Nyamibechire	6 00 N	1 46 W
Nyinawonsu	6 06 N	2 01 W
Obeyie	5 41 N	0 20 W
Oblogo	5 34 N	0 19 W
Oboyani	6 43 N	0 53 W
Obriasi	6 12 N	1 40 W
Oda	5 57 N	0 59 W
Odei	7 28 N	0 18 E
Odukio	6 57 N	1 40 W
Odumasi	8 15 N	0 26 E
Odumparara Bepo	6 27 N	0 30 W
Oduponkpehe	5 30 N	0 24 W
Ofin bridge	5 59 N	1 47 W
Ofuasi	6 09 N	1 09 W
Ofuasi	7 50 N	0 06 W
Ofuasikuma	6 11 N	1 09 W
Ofuman	7 47 N	1 57 W
Oko	5 39 N	0 13 W
Okumeni	6 07 N	0 55 W
Okutunso	6 00 N	1 55 W
Oli	10 11 N	2 45 W
Onyimso	6 50 N	0 46 W
Osino	6 21 N	0 29 W
Osuyu	5 59 N	0 10 E
Otimibi	5 47 N	0 09 W
Otisu	7 38 N	0 05 E
Oyibi	5 49 N	0 07 W
Paga	10 59 N	1 07 W
Pala	9°58′ N	2°45′ W
Paliba	9 33 N	0 14 E
Patakio	6 17 N	1 36 W
Patsiensa	6 39 N	1 11 W
Pawia	8 35 N	1 33 W
Pawiapawiniya	6 20 N	0 01 W
Peki Blengo	6 31 N	0 13 E
Pelungo	10 48 N	0 42 W
Pingwi	10 50 N	0 43 W
Pongeri	9 37 N	2 28 W
Popotia	6 20 N	0 05 E
Prang	7 59 N	0 53 W
Prasu	5 56 N	1 22 W
Pumpuanu	8 09 N	1 41 W
Pumpuanu	8 07 N	1 41 W
Pwalagu	10 36 N	0 51 W
Sabiyi	8 04 N	2 21 W
Sakoga	10 36 N	0 16 W
Sakpa	8 49 N	2 20 W
Saltpond	5 13 N	1 04 W
Samuboi	5 36 N	2 34 W
Sanso	6 09 N	1 42 W
Sayo	5 08 N	2 05 W
Sekondi	4 58 N	1 42 W
Sekwa	7 42 N	2 31 W
Sefwikwa	6 04 N	0 45 W
Senchi	6 12 N	0 05 E
South Fomangsu FR	6 36 N	0 56 W
Shi	6 15 N	2 38 W
Shiega	10 43 N	0 44 W
Shiega	10 46 N	0 35 W
Siabuda	6 22 N	0 11 E
Simpa	5 06 N	2 06 W
Sogakope	6 00 N	0 36 E
Somanya	6 06 N	0 00
Soomia	9 31 N	2 21 W
Subi	6 08 N	0 51 W
Sugbaniati	5 48 N	0 01 W
Suhienso	6 18 N	2 27 W
Sukwiem	7 24 N	0 14 E
Sunyani	7 20 N	2 20 W
Supom road	7 40 N	0 01 E
Surano	6 12 N	2 22 W
Tachikrom	6 00 N	1 46 W
Takoradi	4 54 N	1 46 W
Takrowasi	6 01 N	0 53 W
Tamso	5 16 N	2 00 W
Tangasia	10 22 N	2 43 W
Tankomia	8 15 N	2 13 W
Tankpe	9 00 N	2 31 W
Tanoso	7 51 N	2 21 W
Tanoso	6 14 N	2 29 W
Tantuo	10 56 N	2 49 W
Tarkwa	5 17 N	2 00 W
Teko Bokaso	4 58 N	2 19 W
Tolundipe	8 56 N	1 35 W
Tsifufunkwanta	6 01 N	1 45 W
Tsito	6 31 N	0 16 E
Tunga	8 19 N	0 37 W
Turi	10 38 N	2 51 W
Twiapiasi	6 09 N	1 44 W
Wankayo	7 58 N	0 07 E
Wankayo	7 59 N	0 08 E
Wegbe	7 07 N	0 27 E
Wenchi	7 45 N	2 06 W
Wewa	8 05 N	2 24 W
Wiawso	6 12 N	2 28 W
Yagha	10 29 N	2 46 W
Yale	10 46 N	0 44 W
Yapei	9 09 N	1 11 W
Yashiamankrom	6 37 N	1 11 W
Yayakwano	5 10 N	1 18 W
Yazore	10 44 N	0 45 W
Yeji	8 14 N	0 39 W
Yipara	8 26 N	2 09 W

GUINEA

Compiled from data supplied by O. Davies, University of Ghana, H. J. Hugot, University of Dakar, and R. Mauny, University of Paris.

"Earlier Stone Age"

Acheulian

Latjiel	12°03′ N	10°18′ W
Pita	11 05 N	12 26 W

"Middle Stone Age"

"Upper Palaeolithic"

Aterian

Deilare	12 00 N	12 15 W
Kankan	10 23 N	9 16 W

Neolithic

Bande Bokkori	9 56 N	13 00 W
Bontola	11 54 N	12 43 W
Boumeoul	11 56 N	13 06 W
Dantoumaya	9 58 N	13 02 W
Dem Beyacori	9 59 N	13 45 W
Friguiagbe	9 58 N	12 59 W
Kakimbon	9 35 N	13 40 W
Kitiaoul	12 00 N	13 00 W
Kolakoure	9 59 N	12 59 W
Kolenti	10 06 N	12 37 W
Kolia Garon	9 55 N	12 59 W
Malissa	9 58 N	12 59 W
Massa M'bombo	9 50 N	13 30 W
Oualia	10 47 N	13 02 W
Peté Bouroudie	10 41 N	13 06 W
Peté Lalia	11 05 N	13 23 W
Peté Tounte	11 04 N	12 20 W
Sangolan	12 30 N	11 40 W
Saran	11 05 N	12 25 W
Touba	11 36 N	13 01 W
Youkounkoun	12 34 N	13 03 W

GUINEA, PORTUGUESE

Compiled from data supplied by A. de Almeida, Centro de Estudos de Antropologia, Lisbon; T. Camarate França, Serviços Geologicos de Portugal, Lisbon; and A. Mateus, University of Oporto.

"Earlier Stone Age"

None

"Middle Stone Age"

Undifferentiated

Féfiné	12 00 N	14 06 W

Neolithic

Bolama	11 35 N	15 30 W
Douberè	11 58 N	14 07 W
Féfiné	12 00 N	14 06 W
Nhampassarè	12 10 N	14 30 W
Rio Saquíri	11 59 N	14 05 W

IVORY COAST

Compiled from data supplied by O. Davies, University of Ghana.

"Earlier Stone Age"

Oldowan

Bouaflé	7 00 N	5 45 W
Leraba bridge	10 08 N	5 00 W
Tiendoukio	7 42 N	5 42 W

Middle and Upper Acheulian

Alangouassou	7 35 N	2 40 W
Bouaflé	7 00 N	5 45 W
Leraba bridge	10 08 N	5 00 W

"First Intermediate"

Sangoan

Adounikio	6°63′ N	3°35′ W
Bingerville	5 20 N	3 50 W
Bocanda	7 02 N	4 32 W
Dimbokio	6 40 N	4 40 W
Tiassale	5 50 N	4 50 W
Tiebissou	7 10 N	5 10 W
Tounzebo	7 04 N	5 16 W
Yamounoukio	6 50 N	5 30 W
Uncertain		
Alangouanou	7 35 N	4 40 W
Toumodi	6 35 N	5 00 W

"Middle Stone Age"

Undifferentiated

Bingerville	5 20 N	3 50 W
Bofreba	6 36 N	4 49 W
Gouroumankio	6 44 N	5 12 W
Naniefongo	9 46 N	5 09 W
Sakassou	7 42 N	4 58 W
Satiari	7 03 N	5 17 W
Tindene	8 29 N	4 13 W

"Later Stone Age"

"Mesoneolithic"

Undifferentiated

Bada	8 07 N	5 31 W
Bocanda	7 11 N	4 32 W
Bouaflé	6 58 N	5 45 W
Bouaflé	7 00 N	5 45 W
Bouaki aerodrome	7 44 N	5 05 W
Gbadougou	8 19 N	4 20 W
Gouroumankio	6 44 N	5 12 W
Kinkene FR	8 15 N	4 49 W
Lopou	5 27 N	4 25 W
M'bakiakio	7 26 N	4 20 W
Ngala	8 21 N	4 22 W
Orbaf	5 24 N	4 24 W
Servilkaha	9 36 N	5 20 W
Tiassale	5 50 N	4 50 W
Tiendoukio	7 42 N	5 42 W
Toumodi	6 30 N	5 00 W
Yeyaradougou	8 01 N	4 14 W
Uncertain		
Bacadi	5 39 N	4 35 W

Neolithic

Alepe	5 29 N	3 40 W
Oroumbo Boka	6 21 N	4 54 W
Engravings		
Fourougoula	8 11 N	5 07 W
Paraladougou	8 24 N	4 43 W
Souroukaha	8 13 N	5 07 W

KENYA

Compiled from data supplied by G. L. Isaac, Department of Anthropology, University of California, Berkeley.

"Earlier Stone Age"

Oldowan

None confirmed

Lower Acheulian

None confirmed

Middle and Upper Acheulian

Certain

Gilgil Duffers pool	0 30 S	36 20 E
Kariandusi	0 27 S	36 17 E
Lewa swamp	0 12 N	37 26 E
Lone Tree gully	1 21 S	36 51 E
Oleolondo	0 23 N	36 22 E
Olorgesailie	1°35′ S	36°26′ E
Yala Alego	0 02 S	34 19 E
Uncertain		
Dagoretti	1 17 S	36 41 E
Doinyo Nyiro	0 45 N	37 00 E
Karen	1 20 S	36 44 E
Malikisi	0 40 N	34 25 E
Muhoroni	0 09 S	35 13 E
Ngira	0 53 S	34 10 E
Ol Kalou	0 15 S	36 29 E
Songhor	0 45 S	35 12 E
Sotik (3 localities)	0 41 S	35 07 E
Yatta plateau	2 10 S	38 05 E

"First Intermediate"

Fauresmith

Certain

Kinangop (several localities)	0 45 S	36 30 E
Mid Uaso Nyiro	0 15 N	36 37 E
Nanyuki (many sites)	0 02 N	37 05 E
Ndaragwa	0 07 S	36 35 E
Ngobit	0 03 S	36 47 E
Nyeri	0 22 S	36 55 E
Timau (2 localities)	0 06 N	37 15 E
Uncertain		
Kamagambo	0 44 S	34 38 E
Mega (Abyssinia)	4 05 N	38 20 E
Migori ford	1 00 S	34 08 E
Ngoina	0 30 S	25 04 E

Sangoan

Certain

Aringo	0 53 S	34 10 E
Chemegal (1+2)	0 41 S	35 06 E
Muguruk	0 05 S	34 38 E
Ober Awach	0 58 S	34 50 E
Yala Alego	0 02 S	34 19 E
Uncertain		
Buni hill (near Mombasa)	3 55 S	39 30 E
Hoho Runga	0 04 S	34 40 E
Lodwar, near	3 10 N	35 10 E
Losadok hills	3 25 N	35 50 E
Magada	0 05 N	34 36 E
Moruwerat	3 15 N	35 55 E
Orengitok	0 55 S	35 54 E
Rusinga	0 25 S	34 10 E

Stillbay/Pietersburg Complex (Kenya Stillbay)

Certain

Gilgil River	0 35 S	36 21 E
Kiambaa cave	1 06 S	36 46 E
Kinangop (several localities)	0 45 S	36 30 E
Malewa gorge (government farm)	0 38 S	36 25 E
Prospect farm	0 36 S	36 10 E
Uncertain		
Gambles cave	0 33 S	36 05 E
Kabete	1 15 S	36 46 E
Kariandusi River	0 27 S	36 17 E
Kedong	1 05 S	36 30 E
Nanyuki	0 02 S	37 05 E
Njoro	0 20 S	35 57 E
Olekaitorr	1 10 S	36 05 E

Sangoan (Derivatives) ? Lupemban

Certain

Mbeje	0 02 N	34 21 E
Muguruk	0 05 S	34 38 E
Mur	0 02 N	34 20 E
Ng'aya	0 03 N	34 22 E

Ober Awach	0°58′S	34°50′E
Yala Alego	0 02 S	34 19 E

Uncertain

Chemegal-Ngoina crossroads	0 32 S	35 01 E
Kahwaya	0 03 N	34 22 E
Usenge	0 05 N	34 03 E

"Middle Stone Age"

"Upper Palaeolithic"

Kenya Capsian

Sub-Saharan Blade Industries

Certain

Gambles cave 11	0 33 S	36 05 E
Knightwick escarpment and Griswold WM's farm	1 05 S	36 30 E
Lion Hill cave	0 22 S	36 08 E
Naivasha railway rock shelter	0 46 S	36 27 E
Nderit drift	0 31 S	36 06 E
St. Austin's mission	1 15 S	36 46 E

Uncertain

Aitong Narok road	1 05 S	35 25 E
Little Gilgil River	0 35 S	36 21 E
Malewa gorge	0 38 S	36 25 E
Montague farm	1 10 S	36 50 E

"Middle Stone Age"

Undifferentiated

Aruba dam	3 30 N	38 50 E
Burkus hill	3 50 N	41 45 E
Koora North	1 36 S	36 25 E
Magadi Lake	2 00 S	36 15 E
Mombasa (various localities)	4 05 S	39 40 E
Muguruk	0 05 S	34 38 E
Red hillock	0 30 S	36 08 E

"Second Intermediate"

"Magosian"

Uncertain

Deighton's cliff	0 30 S	36 03 E
Gibberish cave	1 15 S	36 42 E
Kadawa (Kamenya)	0 12 S	35 33 E
Kiambaa cave	1 06 S	36 46 E
Lukenia	1 29 S	37 04 E
Montague farm	1 10 S	36 50 E
Namasoli	0 08 N	34 32 E
St. Austin's mission	1 15 S	36 46 E
Yala Alego	0 02 S	34 19 E

"Later Stone Age"

Wilton

Certain

Kacheliba	0 30 N	35 00 E
Kanam East shell mound and Kanjera shell mound	0 21 S	34 29 E
Karula forest	1 14 S	36 50 E
Long's drift	0 29 S	36 07 E
Lukenia	1 29 S	37 04 E
Marsabit	2 20 N	38 00 E
Moruwerat	3 15 N	35 55 E
Ngong escarpment	1 21 S	36 37 E
Nyarindi shelter	0 06 S	34 34 E
Old Narok road	1 13 S	36 13 E
Olorgesailie	0 35 S	36 26 E

Uncertain

Mbogathi springs	1 14 S	36 40 E
Ngong hills south	0 27 S	36 40 E
Sore	0 53 S	34 10 E
Thika	1 02 S	37 05 E

Kavirondo "Smithfield"

Nyarindi shelter	0°06′S	34°34′E

Elementeitan

Certain

Bromhead's site	0 29 S	36 05 E
Gambles cave 11	0 33 S	36 05 E
Lion Hill cave	0 22 S	36 08 E

Uncertain

Elburgon	0 18 S	35 48 E
Kabete	1 15 S	36 46 E
Thompson's Falls road east	0 26 S	36 20 E

Neolithic

Stone Bowl and Gumban

Certain

Aitong Narok road	1 05 S	35 25 E
Athi	1 27 S	36 58 E
Hyrax hill	0 17 S	36 06 E
Ilkek	0 36 S	36 22 E
Kariandusi River	0 27 S	36 17 E
Kinangop (several localities)	0 45 S	36 30 E
Kipipiri	0 27 S	36 30 E
Knight's farm	0 46 S	36 33 E
Knightwick farm, Kedong	1 58 S	36 30 E
Lanet	0 18 S	36 08 E
Legisnan hills	0 01 S	36 03 E
Loreko forest cave	0 32 S	36 23 E
MacDonald's farm	0 17 S	36 06 E
Makalia burial	0 28 S	36 05 E
Nairobi city park	1 16 S	36 50 E
Nairotia	0 07 S	36 45 E
Na ishi cave, Njoro	0 20 S	35 55 E
Naivasha government farm	0 38 S	35 25 E
Njoro River cave	0 20 S	35 55 E
Njorowa gorge	0 50 S	36 20 E
Soit Sambu, Nettles cave	0 30 N	36 15 E
Sotik	0 41 S	35 07 E
Stable's drift	0 30 S	36 07 E
Timboroa, burnt forest	0 05 N	35 33 E

Rock Art

Engravings

Poor hill	2 54 N	36 33 E
Sirima water hole	2 34 N	36 45 E

Paintings

Mt. Elgon	1 05 N	34 45 E

LIBERIA

No recorded sites.

LIBYA

Compiled from data supplied by A. J. Arkell, formerly of the University of London, and E. S. Higgs, University of Cambridge.

"Lower Palaeolithic"

Upper Acheulian

Bir Dufan	31 50 N	14 22 E

Acheulian

Undifferentiated

Sarra	21 47 N	22 00 E
Tocra	32 31 N	20 35 E
Tummina (south of)	32 01 N	15 08 E

Uncertain

Bu Fatima	28 49 N	22 30 E

Pre-Aurignacian

Haua Fteah	32°50′N	22°05′E

"Middle Palaeolithic"

"Acheulio-Levalloisian"

Sarra	21 47 N	22 00 E

Levallois-Mousterian

Benina aerodrome	32 06 N	21 17 E
Bir Dufan	31 50 N	14 22 E
Derna	32 45 N	22 25 E
Haua Fteah	32 50 N	22 05 E
Tera	32 05 N	20 15 E
Tocra	32 31 N	20 35 E
Wadi Bei el-Kebir	30 50 N	16 00 E
Wadi et-Tmimi	32 00 N	23 01 E

"Mousteroid" Occurrences

Bir el-Muscuru	23 30 N	14 22 E
Bir Iaeco	24 30 N	14 31 E
Djebel Oeida	23 00 N	14 10 E
Gadopin	24 00 N	15 20 E
Gatrun	24 58 N	14 32 E
Kurini asmi Nasah	23 45 N	15 25 E
Lagara	23 18 N	14 15 E
Tegerni	24 15 N	14 32 E
Uigh el-Chebir	24 12 N	14 58 E

"Upper Palaeolithic"

Aterian

Bushra	22 44 N	22 12 E
Sand Sea	23 56 N	21 00 E
Sand Sea (east of)	23 59 N	21 27 E
Wadi Bu Mras	28 45 N	18 02 E
Wadi Gan	32 11 N	13 05 E

Blade Industries

Hagfet ed Dabba	32 48 N	21 30 E
Hagfet et Tera	32 8/10 N	20 15/16 E
Haua Fteah	32 50 N	22 05 E

"Epi-Palaeolithic"

Blade and Microlithic Occurrences

Undifferentiated

Benina aerodrome	32 06 N	21 17 E
Marble Arch aerodrome	30 30 N	18 40 E
Martuba	32 32 N	22 42 E
Sirte	31 10 N	16 30 E
Wadi Tamet	31 10 N	16 05 E

Northeast African Neolithic

Agheila (west of)	30 08 N	18 45 E
Aïn el-Gazala (east of)	32 15 N	23 00 E
Benghasi (east of)	32 12 N	20 20 E
Bu Ngem (east of)	30 41 N	16 05 E
Bu Ngem (north of)	30 26 N	15 40 E
El-Marj	32 30 N	20 51 E
Fozzi Giaren	24 50 N	10 25 E
Haua Fteah	32 50 N	22 05 E
Marada (south of)	28 55 N	19 12 E
Marsa Suss (south of)	32 45 N	22 00 E
Sirte (east of)	31 00 N	16 15 E
Sirte (south of)	31 00 N	16 40 E
Soluch (south of)	31 28 N	20 15 E
Tocra	32 31 N	20 35 E
Tummina	32 15 N	15 15 E
Uaddan (north of)	29 18 N	16 19 E
Uaddan (south of)	28 58 N	16 10 E
Uaddan (south of)	28 45 N	16 10 E
Uan Muhuggiag	24 54 N	10 22 E
Wadi Bu Mras	28 45 N	18 02 E
Wadi Imha	24 54 N	10 25 E

Not Listed: Rock Art

MALAWI

"First Intermediate"

Sangoan

Mwenerondo, Karonga district	9°54′ S	33°57′ E

"Middle Stone Age"

Lupemban

Mwenerondo, Karonga district	9 54 S	33 57 E

Undifferentiated

Chitimba, Florence Bay	10 30 S	34 13 E
Karonga	9 52 S	33 57 E
Livingstonia mission station	10 35 S	34 06 E
Mpata gap	9 40 S	33 49 E
Nyungwe	10 16 S	34 03 E
Uraha hill	10 20 S	34 07 E

"Later Stone Age"

Nachikufan

Hora Mountain	11 47 S	33 37 E
Mpata gap	9 40 S	33 49 E

Blade and Microlithic Occurrences

Undifferentiated

Chitimba, Florence Bay	10 30 S	34 13 E
Livingstonia	10 35 S	34 06 E
Manchewe-Lukwe (Livingstonia)	10 36 S	34 07 E
Mbande Court, Karonga	9 52 S	33 55 E
Monkey Bay, Lake Nyasa	14 03 S	34 59 E
Mphunzi rock shelter, Dedza	14 20 S	34 17 E

Not Listed: Rock Art

MALI

Compiled from data supplied by O. Davies, University of Ghana; H. J. Hugot, University of Dakar; and R. Mauny, University of Paris.

"Lower Palaeolithic"

Acheulian

Anou Melline	17 29 N	0 33 E
Ansongo	15 40 N	0 30 E
Arebeb	21 15 N	0 05 W
Bamako	12 39 N	8 03 W
Bir Oumane	21 30 N	3 55 W
Boutounguisse Kollé	15 11 N	11 40 W
Foum el-Alba	20 40 N	3 37 W
Goundam	16 30 N	3 08 W
Hombori	15 20 N	1 50 W
In Azarol	19 29 N	2 36 E
Jimeiait	20 55 N	3 40 W
Kayes	14 27 N	11 27 W
Kelevaga	10 20 N	6 04 W
Koré	14 54 N	10 19 W
Nioro	15 16 N	9 17 W
Oued Aklet	18 12 N	1 15 E
Samartara	14 46 N	10 13 W
Talohos	18 34 N	1 21 E
Taodeni	22 43 N	3 45 W
Tessalit	20 15 N	0 48 E
Toufourine	24 36 N	4 43 W
Tourougoumbé	15 17 N	9 13 W

"Middle Stone Age"

"Middle Palaeolithic"

"Mousteroid" Occurrences

Aigrette	12°37′ N	8°00′ W
Arebeb	21 15 N	0 05 W
Bamako	12 39 N	8 03 W
Bouiret et-Temeur	21 25 N	1 45 W
Carrière Coignet	12 36 N	8 01 W
Chetaouadi	16 29 N	0 06 E
Diakandape	14 30 N	11 40 W
El-Hadiga	21 18 N	1 27 W
Foum el-Alba	20 40 N	3 37 W
Imeya	20 45 N	3 37 W
Inrhar	18 40 N	0 18 E
Kalé	13 40 N	10 42 W
Kouga	16 17 N	3 22 W
Laguich	16 48 N	0 20 E
Ouessadan	13 51 N	9 27 W
Tessalit	20 15 N	0 48 E

Lupemban

Boutounguisse	15 11 N	11 40 W
Karofine	12 39 N	7 57 W
Koussané	14 53 N	11 14 W
Taodeni	22 43 N	3 45 W

"Upper Palaeolithic"

Aterian

Bir el-Kseib	21 25 N	5 06 W
El-Goub	24 25 N	4 25 W
Erg Outouila	21 55 N	3 05 W
Foum el-Alba	20 40 N	3 37 W
In Jaouak	16 35 N	0 20 E
Mooyeim	23 15 N	5 25 W
Tayert el-Hamra	22 10 N	2 45 W
Tazadit	25 00 N	5 22 W
Toufourine	24 36 N	4 43 W

Blade and Microlithic Industries

Undifferentiated

Noumoubougou	12 56 N	8 03 W

"Epi-Palaeolithic"

"Mesoneolithic" (West Africa)

Undifferentiated

Bougouni	11 24 N	7 28 W
Bougouni	11 27 N	7 31 W
Niékélékoulouni (Oueyanko Valley)	12 33 N	8 03 W
Samanho Valley	12 33 N	8 07 W
Tickongoba	11 27 N	6 35 W

Neolithic

Agamor	17 20 N	0 01 E
Ansongo	15 40 N	0 30 E
Arakat	17 40 N	2 15 E
Arebeb	21 15 N	0 05 W
Bafoulade	13 50 N	10 45 W
Bamako	12 39 N	8 03 W
Bamako radio station	12 40 N	7 55 W
Bamba	17 10 N	1 27 W
Bandiagara	14 25 N	3 37 W
Baouli (upper valley)	13 15 N	3 32 W
Bir Ckali	23 00 N	5 15 W
Bir el-Kseib	21 25 N	5 06 W
Bir Ounane	21 30 N	3 55 W
Bouera	19 30 N	3 48 W
Bouir Arlef	24 50 N	5 20 W
Bourem	16 59 N	0 20 W
Boutounguisse Kollé	15 11 N	11 40 W
Chitaouadi	16 29 N	0 06 E
Dagdag	14 35 N	11 15 W
Dandoko	12 40 N	11 05 W
Darsilami	14 29 N	11 33 W
Diara	15 15 N	9 13 W
Dinguira	14°06′ N	11°18′ W
Dougoubara	15 08 N	10 36 W
Eblelit	16 54 N	0 11 E
Elb Techerit	19 00 N	2 50 W
El-Hadiga	21 18 N	1 27 W
El-Mraiti	19 15 N	2 30 W
Erg Achaif	20 35 N	3 45 W
Erg Atouila	20 42 N	3 28 W
Erigat	19 25 N	4 42 W
Faladie	13 15 N	8 30 W
Fangola	13 36 N	10 05 W
Farit	17 30 N	0 20 W
Foum el-Alba	20 40 N	3 37 W
Gadaoui	16 24 N	0 00
Gangabu	16 25 N	0 05 E
Gao	16 17 N	0 00
Gavimani	15 08 N	9 35 W
Gayem-Barak	19 09 N	3 43 W
Goundaka	14 30 N	3 58 W
Goundam	16 30 N	3 08 W
Guelb Doreno	22 20 N	3 52 W
Guemou	14 29 N	11 51 W
Guettatira	25 00 N	5 05 W
Guif	18 35 N	1 20 W
Guir	18 45 N	2 52 W
Ibibran	17 15 N	2 30 E
In Aouhert	16 48 N	0 09 E
In Arabou	16 46 N	0 12 E
In Dagouber	22 10 N	2 40 W
In Frit	18 25 N	0 28 E
In Killa	17 12 N	1 45 W
In Milach	17 45 N	1 30 W
In Rhar	18 28 N	0 25 E
In Tassit	17 22 N	0 03 E
In Tebezzas	17 50 N	1 45 E
In Tecoufit	16 18 N	1 15 E
In Till	17 20 N	1 58 E
Irter	17 27 N	2 18 W
Kale	13 40 N	10 42 W
Kanbo	10 40 N	5 48 W
Kayes	14 27 N	11 27 W
Keichoual	17 08 N	0 14 E
Khnaghila	21 35 N	3 45 W
Korofine	12 39 N	7 57 W
Kounarepara	14 56 N	11 05 W
Labbezenga	15 02 N	0 43 E
Merzoug	24 12 N	3 45 W
Missirikoro	11 16 N	5 45 W
Moribabougou	12 41 N	7 52 W
Nagkt	16 20 N	0 55 E
Nilkit Aoudache	17 12 N	0 00
Nioro	15 16 N	9 17 W
Ntekedo	12 36 N	8 06 W
Oued Azaouak	16–17 00 N	3 20–40 E
Oued Sbot	19 46 N	3 45 W
Ouri	18 40 N	0 03 E
Rali Salem	20 55 N	1 01 E
Semar Semarien	16 55 N	0 22 E
Tabankort	17 40 N	0 25 E
Taberrichat	17 44 N	0 08 E
Tacant Keina	18 25 N	3 20 W
Tadekamat	16 40 N	0 30 E
Tadrart	17 28 N	2 48 W
Tahebanat	17 03 N	0 16 E
Takarangat	17 52 N	0 30 E
Talohos	18 34 N	1 21 E
Taouardei	17 06 N	1 14 E
Tarazat	17 30 N	2 00 E
Tassegna	22 30 N	3 28 W
Tayegt Bir Zhila	24 20 N	5 30 W
Teberim	16 49 N	0 11 E
Tessalit	20 15 N	0 48 E
Tienfola	12 44 N	7 45 W
Ti Gueroui	16 37 N	0 07 E

Tiguilatin	17°20′ N	0°10′ W
Tin Darmene	16 42 N	2 15 E
Tineglay	17 15 N	2 40 W
Tin Ekiad	17 15 N	0 03 E
Tiniko	13 40 N	9 45 W
Tondia	16 25 N	3 55 W
Tondibi	16 39 N	0 14 W
Toukoto	13 28 N	9 53 W
Tourougoumbé	15 17 N	9 13 W
Yako	12 38 N	8 02 W
Zangoi (Borkorma)	17 00 N	0 52 W

Rock Paintings (mostly Post-Neolithic)

Bamako, in town	12 39 N	8 03 W
Boho	13 03 N	9 30 W
Bondolo	13 05 N	9 31 W
Fiko	14 27 N	3 54 W
Fodébougou	13 03 N	9 32 W
Kouroukoto	13 04 N	9 34 W
Morikoiengo	12 54 N	7 15 W
Nafadie	12 56 N	8 43 W
Niodougou	16 00 N	4 10 W
Sanga	14 28 N	3 19 W
Songo	14 24 N	3 42 W
Suakoro	12 41 N	9 14 W
Somkoudingeye	10 56 N	5 50 W

Rock Engravings

Bamako station (10 km. from Bamako)	12 39 N	*ca.*8 03 W
Bandiagora	14 25 N	3 37 W

MAURITANIA

Compiled from data supplied by P. Biberson, Institut de Paléontologie humaine, Paris; H. J. Hugot, University of Dakar; and R. Mauny, University of Paris.

"Lower Palaeolithic"

"Pre-Abbevillian"

("Pebble Culture") Facies

Oued Adeibe	20 50 N	12 07 W

Uncertain

Oued Takfoil	19 48 N	14 16 W

Lower Acheulian

Rhallaouia	21 30 N	10 55 W

Uncertain

El-Beyyed	21 30 N	11 10 W
Hamdoun	20 20 N	13 30 W
Oued Amokjar	20 42 N	12 55 W
Oued Arhamakou	21 05 N	12 02 W
Oued Takfoil	19 48 N	14 16 W
Timzak	20 50 N	12 55 W

Middle and Upper Acheulian

Aderg	21 04 N	12 10 W
Aouinet el-Mliss	20 52 N	13 00 W
Aroui el-'Kebir	20 00 N	10 55 W
Atar—Oued Amder	20 45 N	13 00 W
Chinguetti	20 35 N	12 10 W
Dar Mohamed Fadel	21 12 N	11 07 W
El-Beyyed	21 30 N	11 10 W
Er-Richat	21 17 N	11 07 W
Hamdoun	20 20 N	13 30 W
Ouadane	20 54 N	11 40 W
Oued Adeibe	20 50 N	12 07 W
Oued Aguinjob	20 28 N	13 00 W
Oued Amokjar	20 42 N	12 55 W
Oued Arhamakou	21 05 N	12 02 W
Rhallaouia	21 30 N	10 55 W
Semsiyyat	20 56 N	12 00 W
Tarf el-Khil	21 35 N	11 05 W
Tazazmout	21 20 N	11 12 W
Timzak	20°50′ N	12°55′ W
Tourarine	20 15 N	14 15 W
Zibet, Oued Mallil, Argoub el-Frass	20 54 N	12 15 W

Uncertain

Araounan	19 00 N	3 40 W
Bir Ounane	21 25 N	3 58 W
Denader	22 02 N	9 47 W
El-Goub	24 36 N	4 18 W
Erg Ijafen	21 10 N	7 54 W
Foum el-Alba	20 12 N	3 35 W
Guelb d'Akjoujt	19 57 N	14 07 W
Idjafoum	21 19 N	8 05 W
Jbeilat	22 52 N	11 45 W
Jineirat	20 35 N	3 35 W
Kedama	18 00 N	7 50 W
Lebeiré	19 18 N	14 00 W
Lemseidi	19 55 N	14 00 W
Nema	16 30 N	7 25 W
Nord Maqteir	22 52 N	11 00 W
Oued Takfoil	19 48 N	14 16 W
Oum Mouchyate	22 20 N	10 07 W
Rachid	18 55 N	13 45 W
Sferiat	24 00 N	11 45 W
Tanfourine	24 48 N	4 22 W
Taoudeni	22 45 N	4 00 W
Tarhmanant	24 49 N	4 15 W
Tichit	19 00 N	9 45 W
Tourine	22 57 N	11 59 W

"Middle Palaeolithic"

"Mousteroid" Occurrences

Angamami	15 55 N	11 46 W
Bir Moghrem	25 06 N	11 35 W
El-Glatt	18 16 N	8 03 W
Guenebtet Reji	16 10 N	6 50 W
Hamdoun	20 20 N	13 01 W
Kaossa	15 52 N	6 50 W
Nejam	15 57 N	6 48 W
Nema	16 30 N	7 25 W
Niout	16 02 N	6 50 W
Njebir	16 45 N	7 22 W

Neolithic

Capsian and Saharan Facies

Aguelt en-Naje	19 29 N	14 16 W
Aguelt Nemadi	19 58 N	10 26 W
Aïn es-Safia	22 42 N	6 15 W
Aium abd el-Malek	24 50 N	7 30 W
Akle	19 45 N	10 55 W
Akreijit	18 22 N	9 15 W
Amder	20 32 N	13 00 W
Aratane	18 19 N	8 11 W
Argoub el-Frass	20 54 N	12 15 W
Ben Amera	21 15 N	13 35 W
Bir el-Bardi	23 42 N	10 35 W
Bir el-Khzaim	24 20 N	7 45 W
Bir Igueni	20 25 N	14 52 W
Bir Moghrein	25 06 N	11 35 W
Denader	22 18 N	9 02 W
Dra Malka	20 00 N	13 50 W
El-Audj	21 20 N	16 32 W
El-Kseib	25 12 N	5 55 W
El-Mreyer	21 25 N	8 10 W
Hamdoun	20 20 N	13 01 W
Ibi	19 53 N	13 28 W
Imdel el-Abiod	18 18 N	8 10 W
Inkebden	20 38 N	15 32 W
Kaossa	15 52 N	6 50 W
Karet	23 45 N	8 12 W
Kedama	18 00 N	8 01 W
Keurig	17 06 N	7 07 W
Lemdena	20 15 N	15 55 W
Medinet Sbat	19 28 N	14 18 W
Neigiat	17°16′ N	7°10′ W
Nejam	15 57 N	6 48 W
Niout	16 02 N	6 50 W
Ntalfa	20 40 N	15 35 W
Ouadane	20 54 N	11 40 W
Oujaf	17 49 N	7 32 W
Oualata	17 30 N	7 25 W
Oukdur	20 15 N	5 50 W
Ourkem	16 26 N	7 45 W
Richat	21 08 N	11 20 W
Tachemine	20 28 N	16 20 W
Tadrart	17 35 N	10 10 W
Tamsagout	24 10 N	6 30 W
Tanouchert	20 45 N	11 58 W
Taokest	18 03 N	9 45 W
Tarazit	22 30 N	12 26 W
Tarf el-Guettara	17 33 N	7 16 W
Tarf Frekike	17 48 N	7 33 W
Tarf Sapti	18 30 N	10 20 W
Tenegué	18 21 N	9 12 W
Tenoumer	22 52 N	10 23 W
Tikitaken	18 32 N	10 15 W
Tirer Joum	21 25 N	16 18 W
Umat el-Lham	25 45 N	11 56 W
Zig	18 33 N	9 48 W

Not Listed: Rock Art

MOZAMBIQUE

Data supplied by L. Barradas, Instituto de Investigação Cientifica de Moçambique, and A. de Almeida, Centro de Estudos de Antropologica, Lisbon.

"Earlier Stone Age"

Oldowan

Bunganine	25 11 S	32 15 E
Machaze	20 48 S	32 50 E
Nhancuazi	15 43 S	31 30 E
Nharungo	16 50 S	34 37 E
Tiobene	23 46 S	31 58 E

Acheulian

Undifferentiated

Bunganine	25 11 S	32 15 E
Buzi company	19 53 S	34 30 E
Cardiga 8	26 14 S	32 12 E
Chaimite	24 40 S	33 15 E
Chibabava	19 55 S	33 50 E
Chiliga lagoon	21 18 S	33 28 E
Chitavi	15 40 S	30 41 E
Machaze	20 48 S	32 50 E
Mangulane	25 05 S	32 29 E
Mapai	22 59 S	32 05 E
Movene	25 47 S	32 18 E
Nhancuazi	15 43 S	31 30 E
Nharungo	16 50 S	34 37 E
Pafuri	22 31 S	31 13 E
Ponta Maona	26 08 S	32 35 E
Revez Duarte	26 00 S	32 30 E
Sunduine	25 07 S	32 24 E
Tiobene	23 46 S	31 58 E

"First Intermediate"

Fauresmith

Camachamba	23 28 S	31 45 E
Changala	25 15 S	32 03 E
Changalene	26 15 S	32 05 E
Macanhi	24 06 S	32 35 E
Magude	25 02 S	32 45 E
Mangulane	25 05 S	32 29 E
Pafuri	22 31 S	31 13 E
Tembe VIII	26 13 S	32 25 E

Sangoan

Camachamba	23 28 S	31 45 E
Changalene	26 15 S	32 05 E

Mangulane	25°05′ S	32°29′ E
Pafuri	22 31 S	31 13 E
Revez Duarte	26 00 S	32 30 E
Ponta Maona	26 08 S	32 35 E

"Middle Stone Age"

Stillbay/Pietersburg Complex

Guija Velho	24 15 S	32 44 E
Mabosi	23 42 S	31 57 E
Macanhi	24 06 S	32 35 E
Mepusi	23 00 S	32 12 E
Undifferentiated		
Buzi company, K38	26 25 S	32 13 E
Changalene	26 15 S	32 05 E
Duarte Moraie	24 37 S	32 15 E
Goba	26 09 S	32 04 E
Lunho	12 22 S	34 59 E
Mutadarede	17 36 S	36 48 E
Ourique	24 37 S	32 55 E
Revez Duarte	26 00 S	32 30 E
Sanadala	15 17 S	32 45 E
Tembe VIII	26 13 S	32 25 E

"Later Stone Age"

Wilton

Casalinho	25 45 S	32 17 E
Marissa	15 31 S	32 30 E

Smithfield

Machavel	24 26 S	32 31 E
S. Martinho do Bilene	25 15 S	33 10 E
Undifferentiated		
Angoche	16 14 S	39 58 E
Changalene	26 15 S	32 05 E
Criul	24 30 S	32 10 E
Lunho	12 22 S	34 59 E
Macanhi	24 06 S	32 35 E
Metangula	12 26 S	34 43 E
Monapo	15 00 S	40 15 E
Mugazine	26 10 S	32 28 E
Revez Duarte	26 00 S	32 30 E
Rotanda	19 14 S	32 56 E

Not Listed: Rock Art

MOROCCO

Compiled from data supplied by L. Balout, P. Biberson, and J. Tixier, Institut de Paléontologie humaine, Paris.

"Lower Palaeolithic"

"Pre-Abbevillian"

("Pebble Culture") Facies

Arbaoua	35 05 N	6 00 W
Bou Regueg, 150 m. terraces	34 02 N	6 15 W
Oued Mda	34 55 N	6 00 W
Rabat	34 15 N	7 00 W
Salé	33 59 N	6 45 W
Sidi Kacem	34 18 N	5 26 W
Souk el-Arba	34 50 N	5 24 W
Tardiguet er-Rahla	34 10 N	6 00 W
Tensift mouth	32 02 N	9 15 W
Undifferentiated		
Aouinet Tolkoz	26 36 N	10 05 W
Guelta	28 00 N	11 43 W
Icht-ait ou Abdelli	29 35 N	7 50 W
Khaloua	28 05 N	11 43 W
Oum-er-Rbia (bridge on Casa-Marrakech road)	32 40 N	7 42 W

Lower Acheulian

Chaouia Casa	33 20 N	7 30 W
Icht-ait ou Abdelli	29 35 N	7 50 W
Khaloua	28 05 N	11 43 W
Oued Mellah, upstream	33°34′ N	7°02′ W
Rabat	34 15 N	7 00 W
Salé	33 59 N	6 45 W

Middle and Upper Acheulian

Aïn Fritissa	33 20 N	3 32 W
Aouinet Tolkoz	28 36 N	10 05 W
Bab Merzouka	34 20 N	4 00 W
Boumalne	31 10 N	6 05 W
Chaouia Casa	33 20 N	7 30 W
Chebeika	28 44 N	11 30 W
Foum Dra, right bank	28 50 N	11 05 W
Foum Dra, left bank	28 55 N	11 00 W
Goulimine	29 10 N	10 00 W
Guelta	28 00 N	11 43 W
Hamedia Geblia	28 41 N	11 10 W
Icht-ait ou Abdelli	29 35 N	7 50 W
Khaloua	28 05 N	11 43 W
Ouarzazat	31 00 N	6 45 W
Oued el-Khemis	33 52 N	5 52 W
Oued Mellah, downstream	33 35 N	7 30 W
Rabat	34 15 N	7 00 W
Saidia	35 03 N	2 00 W
Salé	33 59 N	6 45 W
Tafnidilt	28 50 N	10 45 W
Tantane	28 20 N	11 00 W
Zagora	30 40 N	5 45 W

Acheulian

Undifferentiated		
Aouinet Tolkoz	28 36 N	10 05 W
Azrou	33 46 N	5 08 W
Debdou region	34 20 N	2 28 W
Diabet Mogador	31 20 N	9 45 W
Fès	33 59 N	4 58 W
Guelta	28 00 N	11 43 W
Guercif	34 20 N	3 30 W
Khouribga	33 00 N	6 30 W
Midelt	32 40 N	4 45 W
Oujda	34 58 N	1 55 W
Oum-er-Rbia (bridge on Casa-Marrakech road)	32 40 N	7 42 W
Taourirt	34 40 N	2 40 W
Tensift (terraces)	31 40 N	9 42 W
Zagora	30 40 N	5 45 W

"Middle Palaeolithic"

Mousterian

Djebel Irhoud	33 15 N	5 30 W
Taforalt, level G	35 54 N	2 22 W
Taza, Kifan bel Ghomari	34 00 N	3 30 W

"Upper Palaeolithic"

Aterian

Aïn Fritissa	33 20 N	3 32 W
Aïn Takielt	33 20 N	3 32 W
Dar-es-Soltan	34 01 N	6 57 W
Djebilet	31 37 N	6 20 W
El-Hank	33 40 N	7 15 W
El-Khenzira	33 04 N	7 33 W
Ghabt el-Bhar	33 45 N	7 29 W
Mougharet el-Aliya	35 44 N	5 50 W
Oued Goréa	33 15 N	6 50 W
Ras el-Ma	34 00 N	4 30 W
Taforalt	35 54 N	2 22 W
Taouz	30 53 N	4 01 W
Taroudant	30 31 N	8 55 W
Temara	33 50 N	6 59 W
Tiouli	34 15 N	1 43 W
Tit Mellil	33 45 N	7 00 W

"Epi-Palaeolithic"

Iberomaurusian

Barranco del Lobo	35°08′ N	3°12′ W
Bouskoura	33 05 N	7 32 W
El-Khenzira	33 04 N	7 33 W
Goutitir	34 24 N	3 12 W
Pont du Meloulou	34 22 N	3 14 W
Taforalt	35 54 N	2 22 W
Temara	33 50 N	6 59 W
Undifferentiated		
Aguelman Sidi Ali	33 10 N	2 01 W
Cap Ghir	30 37 N	9 33 W
Giboulet	30 50 N	7 48 W
Kifan bel-Ghomari	34 06 N	3 53 W
Télouet	31 17 N	7 15 W

Not Listed: Neolithic Rock Art

NIGER

Compiled from data supplied by O. Davies, University of Ghana; H. J. Hugot, University of Dakar; and R. Mauny, University of Paris.

"Lower Palaeolithic"

Acheulian

Achegour	19 05 N	11 50 E
Adrar Bous	20 28 N	9 20 E
Agavem	16 45 N	13 15 E
Aho	23 15 N	12 00 E
Alaka	21 22 N	12 45 E
Bilma	18 41 N	13 01 E
Blaka Kallia	21 32 N	12 53 E
Bourougou	18 36 N	13 12 E
Daua Menni	20 18 N	15 48 E
Dibella	17 40 N	13 14 E
Dirkou	19 01 N	12 55 E
Enneri Achelouma	22 00 N	13 15 E
Geoh mountains	21 18 N	9 40 E
Guelb Armand	20 15 N	9 30 E
Guelb Berliet	20 40 N	9 45 E
Kokorama	22 10 N	13 40 E
Madama	21 55 N	13 35 E
Tofidet	18 12 N	9 51 E
Totomaye	21 05 N	13 35 E
Yerkehida	21 55 N	13 30 E

"First Intermediate"

"Middle Palaeolithic"

Sangoan

Carrière Tondubia	13 33 N	2 01 E
Uncertain		
Soudouré	13 36 N	1 58 E

"Middle Palaeolithic"

"Mousteroid" Occurrences

Adjetederra	18 22 N	13 05 E
Aho	23 15 N	12 00 E
Alawlera	17 35 N	9 52 E
Areschima, southwest	18 12 N	10 03 E
Bourougou	18 36 N	13 12 E
Guelb Berliet	20 40 N	9 45 E
Karma	13 39 N	1 51 E
Kori Tizourigui	17 02 N	8 50 E
Niamey	13 33 N	2 08 E
Sherda	20 03 N	16 25 E
Tazole	17 04 N	9 03 E
Tchigrine Modjigo	17 30 N	13 15 E
Teguidoa Nadrar	17 00 N	7 15 E
Tiffa	20 18 N	11 50 E
Tondibia	13 37 N	2 00 E
Yegueba	19 48 N	12 38 E

"Upper Palaeolithic"

Aterian

Ader Bissimat	15°25′ N	7°50′ E
Adrar Bous	20 28 N	9 20 E
Aho	23 15 N	12 00 E
Areschima, south	18 12 N	10 03 E
Bilma	18 41 N	13 01 E
Seguedine	20 12 N	12 58 E
Tiffa	20 18 N	11 50 E

"Epi-Palaeolithic"

"Mesoneolithic" (West Africa)

Undifferentiated

Birni in Gaoure	13 05 N	2 57 E
Boe Niger	13 48 N	1 38 E
Karma	13 39 N	1 51 E
Sorey	13 27 N	2 14 E
Soudouré	13 36 N	1 58 E

Neolithic

Abadarokoum	17 10 N	6 20–40 E
Achegour	19 05 N	11 50 E
Adjetederra	18 22 N	13 05 E
Adrar Bous	20 28 N	9 20 E
Adrar Madet	18 46 N	10 20 E
Afarer	15 00 N	5 30 E
Agadem, southwest	16 47 N	13 12 E
Agauem	16 45 N	13 15 E
Agguer	18 45 N	12 54 E
Agueb Kamadir	20 18 N	14 25 E
Aho	23 15 N	12 00 E
Ajiour	15 15 N	9 50 E
Amassara	16 46 N	5 36 E
Anay	19 20 N	12 50 E
Arbre du Ténéré	17 50 N	10 04 E
Areschima, south	18 12 N	10 03 E
Bilma	18 41 N	13 01 E
Blaka Kollia	21 32 N	12 53 E
Blaka Tiduna	22 20 N	13 50 E
Bourougou	18 36 N	13 12 E
Braon	18 45 N	13 05 E
Chemidour	18 47 N	12 50 E
Chidinoufoud	17 18 N	5 18 E
Chirfa	20 51 N	12 27 E
Dibella	17 40 N	13 14 E
Efeinates	15 42 N	6 33 E
Ehi Dohar	20 10 N	14 35 E
Ehi Mounto	18 02 N	13 12 E
Emi Buridé	20 01 N	13 24 E
Enneri Achelouma	22 00 N	13 15 E
Erg Bréard	19 30 N	9 50 E
Erg Brusset	18 52 N	10 15 E
Erg Capot-Rey	20 20 N	10 15 E
Erg Nessebel	17 30 N	10 32 E
Er-Roui	21 50 N	12 03 E
Fachi	18 08 N	11 35 E
Gobo	20 12 N	15 06 E
Gossoloram	16 50 N	11 10 E
Greboun, northwest	20 16 N	9 00 E
Guelb Berliet	20 40 N	9 45 E
Guezeda Kieta	17 35 N	13 20 E
Iferouane	19 00 N	8 26 E
Ikarambrouane	16 30 N	7 45 E
In Abanrarit	17 43 N	5 56 E
In Aridal	17 48 N	4 30 E
In Arouinat	17 50 N	4 50 E
In Azaoua	21 00 N	8 30 E
In Guezzam	19 33 N	5 40 E
In Ontololog	17 40 N	5 45 E
In Oudei	17 31 N	10 43 E
In Tekebrine	17 30 N	5 10 E
Itchouma	20 16 N	13 20 E
Kafra	18 48 N	12 30 E
Kagougou, south	22 18 N	14 12 E
Kao Tilo	18°30′ N	12°55′ E
Kourki	14 27 N	0 14 E
Koussa Ana	16 12 N	13 10 E
Latuna	22 18 N	14 45 E
Mada Adzina	22 03 N	13 55 E
Madama	21 55 N	13 35 E
Manga	15 55 N	15 10 E
Merguigara, southwest	19 46 N	13 22 E
Nabaro	19 20 N	9 05 E
Niamey	13 33 N	2 08 E
Norounga	16 32 N	11 30 E
Oued Imoulaye	18 45 N	5 10 E
Ouinoussoui, northwest	17 46 N	12 00 E
Ouollé Sonoso	22 35 N	14 05 E
Rea Arkenna	20 18 N	14 40 E
Sountellane	16 42 N	11 35 E
Tadera	20 42 N	8 10 E
Tadreilat Kebir	17 20 N	10 30 E
Tadrilet	17 20 N	4 30 E
Tafeijit	16 31 N	5 57 E
Tafidet	18 20 N	9 51 E
Taguedoufat	16 26 N	8 45 E
Tamaia	17 42 N	5 15 E
Tamatout	15 55 N	10 40 E
Tamaya Mellet	17 37 N	5 22 E
Targane	16 22 N	5 35 E
Tasa Takoret	17 32 N	11 15 E
Tcheni-Tchadi	16 45 N	13 40 E
Tchigrine Modjigo	17 30 N	13 15 E
Tiffa	20 18 N	11 50 E
Timmochar	20 15 N	13 19 E
Tin Golene	20 10 N	8 35 E
Torodi	13 20 N	1 42 E
Torouf	16 35 N	7 30 E
Toumma	22 40 N	14 15 E
Ufa Atikine	18 12 N	7 10 E
Yank Aradinga	22 30 N	14 45 E
Yerkehida	21 55 N	13 30 E
Zerga Mouchi	21 42 N	13 05 E
Zouzoudinga	22 30 N	12 30 E

Not Listed: Rock Art

NIGERIA

Compiled from data supplied by Robert Soper, formerly of the Department of Antiquities, Jos; O. Davies, University of Ghana; and Thurstan Shaw, University of Ibadan.

"Earlier Stone Age"

Oldowan

Uncertain

Beli	7 52 N	10 58 E
Jebba	9 10 N	4 50 E
Nassarawa	8 32 N	7 44 E

Upper Acheulian

Uke	8 55 N	7 42 E

Uncertain

Kontagna	10 22 N	5 25 E
Nassarawa	8 32 N	7 44 E

Acheulian

Undifferentiated

Banke	10 50 N	8 32 E
Dadin Kowa II	10 18 N	11 27 E
Jos Gangare	9 55 N	8 52 E
Kalban Hill	9 47 N	10 27 E
Kila I	7 55 N	11 48 E
Lake Tilla	10 31 N	12 09 E
Mai idon Toro	9 43 N	8 59 E
Maljiba	10 34 N	12 01 E
Ngalda	11°08′ N	11°22′ E
Nok	9 30 N	8 01 E
Pingell	10 20 N	9 05 E
Ropp	9 30 N	8 55 E
Shen	9 47 N	8 54 E
Timbukum	8 11 N	12 02 E

"First Intermediate"

Sangoan

Anagada	9 02 N	7 10 E
Buga	8 29 N	7 23 E
Bungudu	12 15 N	6 30 E
Bungudu II	12 16 N	6 34 E
Gidan Mada	8 45 N	7 51 E
Gora	8 53 N	7 45 E
Gwona	9 14 N	6 53 E
Jebba	9 10 N	4 49 E
Kaura Namoda	12 37 N	6 36 E
Keffi	8 52 N	7 52 E
Keffi/Abuja	9 01 N	7 40 E
Keita River	11 55 N	6 54 E
Maru/Maiinchi	12 22 N	6 20 E
Minna	9 38 N	6 33 E
Nassarawa	8 30 N	7 44 E
Nassarawa/Toto	8 30 N	7 40 E
Nassarawa/Toto	8 27 N	7 36 E
Nok	9 30 N	8 01 E
Shamu	8 42 N	7 50 E
Share	8 48 N	4 57 E
Tabula	10 52 N	13 34 E
Walali River	11 58 N	5 18 E
Yelwa	10 49 N	4 44 E

Sangoan

Uncertain

Bata	8 18 N	12 04 E
Gadabuke	8 27 N	7 18 E
Gamu	8 16 N	12 04 E
Gora	11 53 N	7 41 E
Ikono	5 10 N	7 40 E
Kano B 15/6	12 08 N	8 22 E
Katsina/Kankara	12 22 N	7 28 E
Kidanda	11 07 N	7 34 E
Kila II	7 55 N	11 48 E
Kishi	9 05 N	3 50 E
Limankara	11 02 N	13 42 E
Oyo	7 50 N	3 55 E
Sinau	8 59 N	3 22 E
Zaria/Funtua	11 27 N	7 21 E

"Middle Stone Age"

Undifferentiated

Agwarra	10 37 N	4 39 E
Agwarra SG	10 56 N	4 43 E
Amboshidi	10 17 N	4 30 E
Bajabure	9 17 N	12 29 E
Bakwatimto	11 12 N	13 46 E
Banikani	9 30 N	3 54 E
Bedibe Pawa	9 09 N	12 39 E
Beli	7 52 N	10 58 E
Beli-Serti M 36	7 49 N	11 26 E
Bubon	8 59 N	11 48 E
Dadiya	9 45 N	11 54 E
Dugga	10 29 N	4 28 E
Duke	9 54 N	10 22 E
Gar	10 03 N	10 14 E
Garbabi	7 51 N	11 02 E
Giwa	11 16 N	7 25 E
Gungan Masu	10 29 N	4 38 E
Gusau	12 10 N	6 38 E
Gwoza M 6	11 03 N	13 43 E
Izonni	7 00 N	9 13 E
Jimeta	9 16 N	12 28 E
Jimleri	9 05 N	11 28 E
Kagoge	10 15 N	4 31 E
Kaiama/Wawa	9 38 N	3 59 E

Kaltungo	9°49′ N	11°46′ E
Karewa	9 15 N	12 27 E
Kaurami	9 11 N	12 03 E
Kaura Namoda	12 37 N	6 36 E
Kila III	7 55 N	11 52 E
Kokorogi	10 34 N	4 35 E
Kpan	10 37 N	4 29 E
Kunini	9 07 N	11 20 E
Kurga Kwaya	10 29 N	11 47 E
Kwanakalgo	12 32 N	5 55 E
Kwojeffa	10 26 N	12 30 E
Kyambara	12 26 N	6 37 E
Lankoviri	9 03 N	11 23 E
Libba	11 46 N	4 25 E
Libba II	11 45 N	4 25 E
Lokoja	7 48 N	6 44 E
Mahindu	7 37 N	11 25 E
Mai idon Toro	9 43 N	8 59 E
Malaru River	8 17 N	12 04 E
Malumfashi	11 45 N	7 38 E
Mando road	10 40 N	6 50 E
Mando road	10 37 N	7 13 E
Maska	11 20 N	7 22 E
Mayo Butale	7 57 N	12 00 E
Mayo Selbe I	7 17 N	11 12 E
Mayo Selbe II	7 17 N	11 12 E
Monguna	9 18 N	8 53 E
Mubi	10 16 N	13 17 E
Nok	9 30 N	8 01 E
Ororo River	10 40 N	4 41 E
Pulke	11 12 N	13 44 E
Rahama	10 27 N	8 39 E
Rop	9 30 N	8 55 E
Rop rock shelter	9 29 N	8 56 E
Sangwabe	10 18 N	4 29 E
Sasako	9 54 N	4 35 E
Shaaman hill	9 47 N	10 18 E
Shagunu	10 21 N	4 28 E
Shagunu M 189	10 23 N	4 27 E
Shuwa	10 44 N	13 25 E
Sugu	8 21 N	12 03 E
Toja River	8 58 N	12 38 E
Toungo	8 07 N	12 03 E
Toungo II	8 06 N	12 03 E
Tungan Gwamna	10 32 N	4 37 E
Tungan Teku	10 32 N	4 28 E
Uke	8 53 N	7 40 E
Wawa/Kainji	9 54 N	4 31 E
Woro River	9 45 N	4 12 E
Yola airport	9 16 N	12 26 E
Yumu	10 26 N	4 28 E
Zenebi	10 47 N	8 47 E

West African Neolithic

Afikpo	5 53 N	7 55 E
Bama	11 32 N	13 40 E
Banke	10 50 N	8 32 E
Bunga	9 56 N	8 58 E
Daudu	9 08 N	8 51 E
Durbi Takusheyi	13 00 N	7 51 E
Gada	10 03 N	9 00 E
Garafini	10 03 N	4 36 E
Gero	9 48 N	8 47 E
Jemaa	9 28 N	8 21 E
Kaduna	10 32 N	7 26 E
Kafin Malamai	11 39 N	8 55 E
Kagoro hills	9 35 N	8 25 E
Karaduwa River	12 23 N	7 28 E
Kila III	7 55 N	11 52 E
Kuchamfa	9 26 N	7 56 E
Maiduguri	11 50 N	13 10 E
Maji	9 46 N	10 35 E
Makafo	9 33 N	8 45 E
Malali	10 05 N	4 33 E
Miango	9°50′ N	8°43′ E
Nok	9 30 N	8 01 E
Rop rock shelter	9 29 N	8 56 E
Sokoto River	11 51 N	6 52 E
Wamba	8 56 N	8 37 E
Yan Daki	13 04 N	7 42 E
Yan Tumaki	12 12 N	7 29 E
Zaria/Chafe	11 42 N	7 04 E
Zaria/Kidanda	11 07 N	7 34 E
Zawan	9 45 N	8 52 E
Art Mobilier ("Nok Culture")		
Ankiring	9 26 N	8 55 E
Bwari	9 17 N	7 22 E
Jemaa area	9 28 N	8 21 E
Kagara	10 14 N	6 15 E
Katsina Ala	7 14 N	9 20 E
Shere	9 15 N	7 30 E
Takwashara	8 52 N	7 28 E
Wamba	8 56 N	8 37 E
Rock Painting Sites		
Birnin Kudu	11 28 N	9 30 E
Geji	10 17 N	9 38 E
Shadawanka	11 28 N	9 30 E
Shira	11 30 N	10 02 E
Engravings		
Igbara Oke	7 24 N	5 03 E

RHODESIA

Site lists with coordinates are being prepared by C. K. Cooke, director of the Rhodesian National Monuments Commission, but are not available at the time of going to press.

Reference should be made to the lists published in the "Archaeological Survey of Southern Rhodesia," by R. F. H. Summers and C. K. Cooke, Supplement 1 to the Annual Report of the Southern Rhodesia Historical Monuments Commission, 1959.

This lists all known sites up to 1957.

RIO MUNI AND FERNANDO PO

Compiled from information supplied by J. Sabater Pi, Centro de Ikunde, Bata.

RIO MUNI

"Neolithic" (Equatoria)

Undifferentiated		
Bata	1 50 N	9 46 E
Isla Ivelo	1 04 N	9 39 E

FERNANDO PO

"Neolithic" (Equatoria)

Undifferentiated		
Basacato del Oeste	3 35 N	8 36 E
Basuala	3 36 N	8 52 E
Drumer	3 26 N	8 29 E
Islote Loros	3 32 N	8 34 E
Playa Carboneras	3 45 N	8 45 E
Punta Cañones	3 23 N	8 46 E
Rio Eoso	3 34 N	8 36 E

RUANDA

Information inadequate for compilation.

SAHARA, ALGERIAN

Compiled from data supplied by P. Biberson and J. Tixier of the Institut de Paléontologie humaine, Paris.

"Lower Palaeolithic"

"Pre-Abbevillian"

("Pebble Culture") Facies

Ahaggar	20°58′ N	6°00′ E
Aoulef (Tidikelt)	27 00 N	1 15 E
Djebel Ougarta	30 15 N	2 58 W
Draa, upper valley	29 45 N	6 00 W
Eched (Oued)	19 57 N	1 50 E
Guelb Cornet	22 56 N	11 05 E
Guir	30 58 N	3 00 W
Hassi el-Khenig	26 48 N	3 10 E
In Afalatet	23 23 N	9 01 E
Oued Tefassasset—Tin Zouaten	19 57 N	3 16 E
Reggan	26 48 N	0 12 E
Saoura	30 40 N	2 09 W
Takoumbaret	24 40 N	4 32 E

Lower Acheulian

Guir	30 58 N	3 00 W
Djebel Illerene	27 00 N	8 30 E
Djebel Ougarta	30 15 N	2 58 W
Draa, upper valley	29 45 N	6 00 W
Saoura	30 40 N	2 09 W
Ti-n-Tamatt	25 55 N	3 28 E
Uncertain		
Eched (Oued)	19 57 N	1 50 E
Tabelbala—Tachenguit	29 20 N	3 10 W
Tamanrasset—Oued Takhacherouet	23 05 N	5 30 E

Middle and Upper Acheulian

Adennet	24 55 N	4 15 E
Admer	24 28 N	0 02 E
Aoulef (Tidikelt)	27 00 N	1 15 E
Arak	25 15 N	3 45 E
Bourharet	27 32 N	7 50 E
Djanet	24 35 N	9 30 E
Djebel Ougarta	30 15 N	2 58 W
Erg Tihodaine (northwest Djanet)	25 15 N	9 11 E
Fort Flatters	28 35 N	5 00 E
Guir	30 58 N	3 00 W
Hassi el-Mislane	27 32 N	7 40 E
In Afalatet	23 23 N	9 01 E
Meniet	24 40 N	4 15 E
Saoura	30 40 N	2 09 W
Tiguentourine	27 40 N	7 45 E
Timbrourine	25 00 N	3 45 E
Uncertain		
Aguelmar (Assekrem)	23 17 N	6 01 E
Aman Salan	23 00 N	16 15 E
Amguid	25 42 N	5 40 E
Chebka Mzab	32 35 N	4 00 E
Chenachène	26 02 N	4 15 W
Djado, Col de Salvador	24 40 N	9 40 E
Eglab Dersa	26 58 N	5 38 W
Fort Polignac	26 40 N	8 30 E
Site Dédé (In Eker)	24 40 N	5 02 E
Tabelbala—Tachenguit	29 20 N	3 10 W
Tindouf	27 20 N	8 03 W

"Middle Palaeolithic"

"Mousteroid" Occurrences

Uncertain		
Esselekine (Ahaggar)	22 58 N	5 15 E
Tiguelguemine (Mouydit)	25 00 N	4 45 E

"Upper Palaeolithic"

Aterian

Adrar	27°51′ N	0°19′ W
Anchal	30 16 N	2 31 W
Aoulef	27 21 N	1 53 E
Arak	25 15 N	3 45 E
Beni-Abbes	30 11 N	2 14 W
Djanet	24 35 N	9 30 E
Erg er-Raoui	31 28 N	4 10 W
Fort Flatters	28 35 N	5 00 E
In Afalatet	23 23 N	9 01 E
In-Amguel	23 41 N	5 10 E
In-Belbel	27 54 N	0 09 E
In Guezzam	19 30 N	5 40 E
Kheneg et-Tlaia	29 55 N	1 56 W
Meniet	24 40 N	4 15 E
Ouargla	32 00 N	5 16 E
Oued Abezzou	25 45 N	4 40 E
Oued Asriouel	27 43 N	2 00 E
Ouled-Djellal	34 00 N	6 45 E
Reggane	27 10 N	1 01 E
Tabelbala—Tachenguit	29 20 N	3 10 W
Tademait	29 02 N	3 31 E
Tadjmout	30 00 N	9 20 E
Timimoun	29 15 N	0 14 E
Tiouririne	25 00 N	9 56 E
Touggourt	33 08 N	6 04 E

Not Listed: Neolithic; Rock Art

SARAHA, SPANISH

Compiled from data supplied by P. Biberson, Institut de Paléontologie humaine, Paris; H. J. Hugot, University of Dakar; and R. Mauny, University of Paris.

"Earlier Stone Age"

Acheulian

Undifferentiated

Asatef	27 32 N	12 10 W
Bir Nsaram	23 45 N	15 00 W
El-Aioum	27 10 N	13 15 W
Imilik	23 12 N	15 29 W
Smara	27 02 N	11 40 W
Tagsehent	23 20 N	15 28 W

"Upper Palaeolithic"

Aterian

El-Aioun	27 10 N	13 20 W
El-Mekaiteb	26 40 N	10 08 W
Hauza	26 52 N	10 50 W
Segviet el-Hamra	27 12 N	13 00 W
Tagumr	26 50 N	13 10 W
Umma Abed Duz	26 20 N	12 15 W

Neolithic

Agdi Babaalit	26 35 N	13 30 W
Dolba Amgala	26 08 N	11 35 W
El-Massait	26 52 N	12 12 W
Garan	25 05 N	13 36 W
Gleibat/Tararat	21 42 N	14 32 W
Kera	27 03 N	13 10 W
Mzomezit	26 27 N	13 55 W
Nekjer	23 20 N	14 35 W
Oranat	26 38 N	13 22 W
Seaja Echalfa	27 30 N	12 40 W
Seaja um Seirira	27 15 N	12 50 W
Sergao	26 20 N	13 35 W
Smeil el-Nzer	27 06 N	13 17 W
Taguerzimetz	24 10 N	15 15 W
Tagumr	26 50 N	13 10 W
Tiref	24 10 N	15 40 W
Tiris	23 18 N	13 15 W
Villa Cisneros	23 44 N	16 00 W
Wad Kraa	24°40′ N	14°55′ W
Zug	21 30 N	14 10 W

Not Listed: Rock Art

SENEGAL

Compiled from data supplied by O. Davies, University of Ghana; H. J. Hugot, University of Dakar; and R. Mauny, University of Paris.

"Earlier Stone Age"

Acheulian

Undifferentiated

Cap Manuel, Dakar	14 39 N	17 26 W
Sarré	14 40 N	12 22 W

"Middle Palaeolithic"

"Mousteroid" Occurrences

Bargny	14 34 N	17 02 W
Cap Manuel, Dakar	14 39 N	17 26 W
Guebe	16 28 N	14 26 W
Mali	12 15 N	12 22 W
Richard Toll	16 27 N	15 45 W
Sarré	14 40 N	12 22 W

Neolithic

(Southern Sahara facies)

Anguenia Pissa	12 30 N	12 18 W
Bakel	10 54 N	12 28 W
Cap Manuel, Dakar	14 39 N	17 26 W
Dakar-Fann	14 39 N	17 26 W
Dakar racecourse	14 39 N	17 26 W
Dendoudi	15 25 N	13 25 W
Diourbel	14 45 N	16 25 W
Kayar, north	15 00 N	17 10 W
Kedougou	12 35 N	12 10 W
Keurndiayelo	15 00 N	17 10 W
Lguer	14 49 N	16 45 W
Ngayere	14 49 N	17 09 W
Samekouya	12 50 N	12 20 W
Sarré	14 40 N	12 22 W
Sénoudébou	14 21 N	12 15 W
Thies	14 50 N	16 55 W
Tiaroye	14 41 N	17 22 W

SIERRA LEONE

Information inadequate for compilation.

SOMALIA AND FRENCH SOMALILAND

"First Intermediate"

"Acheulio-Levalloisian"

Eil	8 01 N	49 48 E
Ged Dobo	10 14 N	45 20 E
Haleya	9 31 N	44 10 E
Hargeisa	9 32 N	44 01 E
Kor Ali	11 45 N	42 59 E
Manjasseh	10 09 N	45 16 E
Mount Mabla	11 52 N	43 00 E
Obok	11 52 N	43 09 E
Sheik (Sheikh)	9 55 N	45 17 E
Skutar	9 37 N	45 20 E
Tug Issutugan	10 07 N	44 30 E

"Middle Stone Age"

"Levalloisian"

Babani Tug	8 05 N	49 26 E
Bohol Bandoi	2 38 N	44 12 E
Bohol Washaga	4 53 N	44 30 E
Donkukoq	8 05 N	48 14 E
Eil	8 01 N	49 48 E
El-Dubbo	3 54 N	44 44 E
Garoe Tug	8 26 N	48 33 E
God'dere	5 05 N	44 03 E
Hargeisa	9°32′ N	44°01′ E
Jesomma	4 05 N	45 44 E
Madeida	4 08 N	43 20 E
Ohole	5 15 N	45 16 E
Saha Gurral	4 38 N	44 50 E

Stillbay/Pietersburg Complex

Al hills	10 50 N	48 52 E
Biede	7 59 N	49 56 E
Bihen/Bender Beila	9 18 N	50 34 E
Borama	9 56 N	43 10 E
Bur Degis	3 00 N	44 08 E
Bur Hakaba	2 56 N	44 04 E
Darbruk	9 44 N	44 29 E
Donkukoq	8 05 N	48 14 E
Dubato	9 40 N	44 30 E
Garoe Tug	8 26 N	48 33 E
Genile Tug	9 39 N	43 40 E
Haleya	9 31 N	44 10 E
Hobat	10 22 N	48 56 E
Jesomma	4 05 N	45 44 E
Laba Higlo, mile 14 from Garoe	8 20 N	48 29 E
Mandera	10 00 N	44 48 E
Obok	11 52 N	43 09 E
Ras Hafun	10 24 N	51 15 E
Sheik Gure	4 08 N	45 16 E
Teisa Tug	9 34 N	43 50 E
Trogo Dait	8 14 N	49 24 E
Tug Argan	9 48 N	44 34 E

Undifferentiated

Al hills	10 50 N	48 52 E
Arabsiyo	9 40 N	43 44 E
Dudubo coffee shop	9 26 N	44 29 E
Durgale	5 37 N	48 18 E
Gawan Wein	3 04 N	43 52 E
Hobat	10 22 N	48 56 E
Ijara Tug	9 37 N	43 44 E
Las Anod	8 24 N	47 20 E
Mandera	10 00 N	44 48 E
Salagle	1 53 N	42 16 E
Sheik Gure	4 08 N	45 16 E
Wajir road, mile 75	2 02 N	41 18 E

"Second Intermediate"

Somaliland "Magosian"

Bakbah	8 30 N	49 58 E
Bihen	8 27 N	48 22 E
Bohotleh, Merkanwein	8 17 N	46 20 E
Bun Mess	2 02 N	42 19 E
Bur Dauleh	3 08 N	44 17 E
Bur Eibe	3 01 N	44 18 E
Dol Dol plateau	8 09 N	49 53 E
Dudubo coffee shop	9 26 N	44 29 E
Eil	8 01 N	49 48 E
Guretca	3 45 N	42 37 E
Hobat	10 22 N	48 56 E
Jesomma	4 05 N	45 44 E
Jifa Ure	9 43 N	43 20 E
Khansaha au Plain	9 18 N	43 58 E
Kourou	5 44 N	48 00 E
Mount Mabla	11 52 N	43 00 E
Obok	11 52 N	43 09 E
Sheik Gure	4 08 N	45 16 E
Trogo Dait	8 14 N	49 24 E
Upper Nogal	8 30 N	49 00 E

Hargeisan

Al hills	10 50 N	48 52 E
Borama	9 56 N	43 10 E
Buran	10 15 N	48 44 E
Dudubo coffee shop	9 26 N	44 29 E
Eil	8 01 N	49 48 E
Garoe Tug	8 26 N	48 33 E

Ged Dobo	10°14′ N	45°20′ E
Gedeis	10 10 N	45 34 E
Guban plain, Berbera	10 20 N	44 56 E
Hargeisa	9 32 N	44 01 E
Hobat	10 22 N	48 56 E
Hormo	10 30 N	48 56 E
Kirit	8 55 N	46 10 E
Mandera	10 05 N	44 50 E
Raguda Tug	10 38 N	46 37 E
Sheik (Sheikh)	9 55 N	45 17 E

"Later Stone Age"

Wilton

Adad	5 29 N	47 34 E
Adani	5 34 N	47 54 E
Afgudut	5 42 N	47 49 E
Al hills	10 50 N	48 52 E
Badi Ahmud	9 50 N	50 42 E
Bakbah	8 30 N	49 58 E
Berbera rock shelter	10 18 N	44 54 E
Biede	7 59 N	49 56 E
Bihen	9 08 N	50 27 E
Bihen	8 27 N	48 22 E
Bihen-Airi	8 54 N	50 26 E
Buran	10 15 N	48 44 E
Bur Khansa, Bihen	10 39 N	48 24 E
Daba Gallo	5 45 N	47 50 E
Darror, Lower	10 28 N	50 44 E
Darror, Upper	10 40 N	49 07 E
Djebel Djinn	12 32 N	43 09 E
Dubar	10 16 N	45 00 E
Dukokolol Yero	9 55 N	46 44 E
Durdur Heime	4 24 N	45 18 E
Eil	8 01 N	49 48 E
El-Dur Elan	10 08 N	46 22 E
Erigavo	10 39 N	47 22 E
Garoe Tug	8 26 N	48 33 E
Gerbakele shelter	9 50 N	49 49 E
Gowein	5 20 N	48 18 E
Habr Fordisso	4 29 N	45 16 E
Haded, Bala Ad	9 17 N	48 07 E
Halin	9 05 N	48 39 E
Hamas	10 10 N	44 48 E
Hararile	8 07 N	49 22 E
Hudin-Ainabo road	9 14 N	47 18 E
Hudin-Halin road, 12 miles from Hudin	9 09 N	47 30 E
Jifa Ure	9 43 N	43 20 E
Kirit	8 55 N	46 10 E
Kor Ali	11 45 N	42 59 E
Laba Higlo, 14 miles from Garoe	8 20 N	48 29 E
Laferug	10 08 N	44 50 E
Las Anod	8 24 N	47 20 E
Mandera	10 00 N	44 48 E
Matissor Dunti-Scerer Hor	10 00 N	50 44 E
Nogal, Upper	8 30 N	49 00 E
Obbia	5 20 N	48 26 E
Raguda Tug	10 38 N	46 37 E
Rakon	6 06 N	47 48 E
Ras Filuc	11 55 N	50 39 E
Ras Kiro	11 35 N	42 52 E
Shimbir Beris	10 42 N	47 12 E
Tajura, Gulf of	11 44 N	42 52 E
Taleh	9 12 N	48 27 E
Teisa Tug	9 34 N	43 50 E
Warassimoghe-Bender Beila	9 42 N	50 44 E

Doian

Alamo	4 25 N	43 10 E
Allengo	2 48 N	42 24 E
Ato	4 38 N	43 22 E
Bardera	2°18′ N	42°20′ E
Bugda Akable	4 05 N	45 28 E
Bulo Burti	3 50 N	45 30 E
Bun Mess	2 02 N	42 19 E
Bur Degis	3 00 N	44 08 E
Bur Dinsor	2 26 N	42 56 E
Burdo	4 16 N	44 44 E
Bur Eibe	3 01 N	44 18 E
Bur Hakaba	2 56 N	44 04 E
Bur Mahamudo	3 00 N	44 14 E
Danane	1 56 N	45 02 E
Duldir, fossil dune 7 miles from	4 22 N	45 17 E
Durgale	5 37 N	48 18 E
Eil	8 01 N	49 48 E
El-Colco	4 03 N	44 32 E
El-Dubbo	3 54 N	44 44 E
El-Goran	5 00 N	43 18 E
El-Ure	3 50 N	43 08 E
Far Abou	4 32 N	43 14 E
Gawan wein	3 04 N	43 52 E
Gesira	2 00 N	45 12 E
God'dere	5 05 N	44 03 E
Mirsale	5 59 N	47 53 E
Mogadishu	2 12 N	45 20 E
Morogavi	4 16 N	43 38 E
Sijjia	4 00 N	43 29 E
Ted	4 26 N	43 55 E
Wanei	3 08 N	43 48 E
Warishe	2 50 N	43 56 E
Washaga Guran	4 03 N	42 52 E
Wejit	3 44 N	43 12 E

Rock Paintings

Balleh shelter, Skutar	9 49 N	49 54 E
Bur Eibe	3 01 N	44 18 E
Dombosleh shelter	9 51 N	49 52 E
Gala Ad shelters	9 53 N	45 16 E
Gerba Kele	9 53 N	44 54 E
Karin Heganah	11 10 N	48 30 E
Tug Khaboba	9 48 N	49 50 E

Rock Engravings

El-Goran	5 00 N	43 18 E
Jid Banan	8 20 N	47 46 E

REPUBLIC OF SOUTH AFRICA

Evidence based on data supplied by C. M. Keller (from literature); South African Museum, Cape Town (J. & I. Rudner); National Museum, Bloemfontein (C. M. Keller); Albany Museum, Grahamstown (H. Deacon); and O. Davies, University of Ghana.

"Earlier Stone Age"

Oldowan

Sterkfontein	25 59 S	27 45 E
Swartkrans	25 59 S	27 45 E

Uncertain

Avoca	29 00 S	29 50 E
Bergville	28 40 S	29 20 E
Colenso	28 40 S	29 20 E
Empangani, siding	29 40 S	32 20 E
Hluwehluwe River terraces	28 30 S	32 25 E
Ifafa, south bank, beach II	30 40 S	30 35 E
Instane River	28 30 S	32 25 E
Klipdam	28 18 S	24 38 E
Middle drift	28 50 S	30 40 E
Mkuzi River	27 40 S	32 10 E
Mtubatuba beach II	28 30 S	32 25 E
Nogle dam above Umgeni River (2 localities)	29°40′ S	30°40′ E
Pongola tributary terrace	28 10 S	32 20 E
Umhlatuzana	30 00 S	30 55 E
Umhlatuzi River terraces	28 30 S	31 35 E
Waterloo	28 40 S	29 20 E

Acheulian (mostly Middle and Upper)

Undifferentiated

Aapies River gravels, Pretoria	25 35 S	28 15 E
Alice	32 45 S	26 50 E
Amalinda, near East London	33 00 S	27 51 E
Amanzatwa	38 40 S	29 20 E
Barberton	25 47 S	31 02 E
Baynes drift	29 00 S	29 50 E
Beukesfontein	32 56 S	19 27 E
Biggarsgat	30 00 S	19 00 E
Bizana	30 51 S	29 52 E
Blaaubank (Kuruman)	27 05 S	23 05 E
Blaauwkop (Hopetown)	24 05 S	29 35 E
Blaawkranz	28 50 S	30 40 E
Blaaukrantz (Humansdorp)	34 00 S	24 45 E
Blinkwater	32 40 S	26 50 E
Blesbokspruit	26 30 S	28 25 E
Bloemfontein	29 07 S	26 13 E
Bloemhof	27 38 S	25 35 E
Bloodriver Monument	28 50 S	31 30 E
Bonza Bay	33 00 S	27 55 E
Boshof	28 30 S	25 12 E
Brink's farm, Wellington	33 40 S	19 00 E
Britstown	30 35 S	23 30 E
Butterworth	30 18 S	28 10 E
Burghersdorp	30 58 S	26 18 E
Campbell	28 50 S	23 45 E
Cape Flats	34 02 S	18 34 E
Cape Point	34 21 S	18 30 E
Carnarvon	30 58 S	22 08 E
Cave of Hearths	24 09 S	29 04 E
Cedarville Flats	30 20 S	29 03 E
Christiana (Tvl)	27 38 S	25 20 E
Clansthal	30 05 S	30 55 E
Clare estate	28 30 S	31 35 E
Cliffdale	29 55 S	30 40 E
Clifton	33 56 S	18 22 E
Colenso	28 40 S	29 20 E
Constantia	34 02 S	18 26 E
De Aar	30 38 S	24 00 E
De Dam	30 50 S	17 52 E
De Put	30 48 S	23 59 E
Dikgatlhon	27 05 S	23 06 E
Dinoten	27 51 S	23 21 E
Doornhoek	25 35 S	26 05 E
Douglas	29 03 S	23 44 E
Drumond	29 00 S	29 50 E
Dummurry	28 19 S	22 41 E
Durban	30 10 S	31 20 E
Durban north Umgeni lagoon	29 48 S	31 02 E
Durbanville	33 50 S	18 38 E
East London	33 00 S	27 55 E
Elandsfontein (Saldanha Bay)	33 07 S	18 14 E
Fish Hoek pan	34 09 S	18 25 E

Fort Beaufort	32°44′ S	26°38′ E
Formosa	34 02 S	23 11 E
Fort Brown	33 12 S	26 40 E
Gamopedi beacon	27 15 S	23 17 E
Geluk	27 01 S	24 15 E
General Hertzog bridge	30 56 S	27 27 E
Gordonia	28 11 S	21 15 E
Gordon's Bay	34 10 S	18 52 E
Graaf Reinet	32 15 S	24 30 E
Grahamstown	33 17 S	26 35 E
Grenau	30 10 S	31 20 E
Griquatown	28 47 S	23 14 E
Groenvlei, Knysna	34 01 S	23 03 E
Grootdrink, Gordonia	28 31 S	21 51 E
Grootmes (N. Namaqualand)	17 52 S	29 38 E
Halfway house, Kimberley—Barkly West	28 30 S	24 40 E
Hangklip	34 21 S	18 50 E
Hawston	34 23 S	19 08 E
Healdtown	32 43 S	26 43 E
Heidelberg, Cape	34 09 S	20 55 E
Heidelberg, Transvaal	26 30 S	28 21 E
Hell's Hoogte	33 50 S	18 55 E
Henkies	28 28 S	18 09 E
Henley-on-Klip	26 32 S	28 02 E
Herbert	28 45 S	23 50 E
Hermanus	34 25 S	19 14 E
Hex River	33 31 S	19 36 E
Hibbendene	30 45 S	30 30 E
Hlimbitwa mouth	29 30 S	31 10 E
Hluwehluwe River terrace	28 30 S	32 50 E
Hopefield	33 05 S	18 20 E
Houtkraal	30 23 S	24 04 E
Huguenot station	33 44 S	18 59 E
Ida's Valley	33 55 S	18 53 E
Idutywa	32 05 S	28 18 E
Ifafa, south bank	30 35 S	30 50 E
Ifafa, north bank	30 40 S	30 40 E
Ifafa, north bank	30 40 S	30 35 E
Illovo lagoon	30 10 S	30 50 E
Impanza	28 20 S	29 40 E
Impapasi hill	28 30 S	32 25 E
Impengati, south bank	30 45 S	30 30 E
Ingane mouth	30 20 S	30 55 E
Instane River, right bank	28 20 S	32 30 E
Instane River, right bank	28 30 S	31 35 E
Isipingo beach road	30 05 S	30 50 E
Jagersfontein	29 44 S	25 25 E
Jamieson's drift	28 40 S	29 20 E
Kampfersdam, Kimberley	28 41 S	24 46 E
Kanteenkop, Barkly West	28 35 S	24 30 E
Karree siding	29 47 S	23 26 E
Karree dam	29 47 S	23 26 E
Kheis	28 49 S	22 08 E
Khosi Reserve	27 51 S	23 15 E
Kimberley diggings	28 39 S	24 42 E
Kingwilliamstown	32 50 S	27 23 E
Kinderdam	26 14 S	24 40 E
Kirstenbosch	33 59 S	18 23 E
Klawervlei, Darling	33 24 S	18 20 E
Klawervlei, Clanwilliam	32 20 S	17 56 E
Klein Drakenstein	33 45 S	19 00 E
Klipdam	28 18 S	24 38 E
Klipjes pan, Kimberley	28°39′ S	24°42′ E
Klipplaatdrift	26 26 S	26 43 E
Knysna	34 01 S	23 03 E
Knysna, western head	34 04 S	23 02 E
Koffiefontein	29 23 S	25 00 E
Komgha	32 43 S	27 55 E
Koosfontein (O.F.S.)	27 38 S	25 40 E
Kroonstad	27 40 S	27 12 E
Kruismond, Kenhardt	21 08 S	29 19 E
Kubakaga River	28 30 S	32 25 E
Labombu terrace	26 40 S	31 40 E
Labuschagne's kraal	28 50 S	29 30 E
Ladismith	33 30 S	21 12 E
Lammt	30 05 S	30 55 E
Leeuwpont 50′ terrace	29 55 S	30 40 E
Lorraine	33 56 S	18 51 E
Lovedale (Alice)	32 45 S	26 50 E
Loxton	31 27 S	22 24 E
Luckhoff	29 45 S	24 49 E
Lynedoch	33 59 S	18 46 E
Mafeking	25 53 S	25 40 E
Makapansgat	25 20 S	28 05 E
Malmesbury	33 28 S	18 40 E
Mamba	28 30 S	30 35 E
Marianhill	29 52 S	30 54 E
Mashoweng	28 30 S	21 00 E
Matjiesfontein	33 15 S	20 36 E
Mavela	28 30 S	30 35 E
Mbone store	28 20 S	29 40 E
Melton Wold	31 29 S	22 47 E
Melville 60′ terrace, 110′ terrace	29 20 S	31 00 E
Meyerton	26 34 S	28 01 E
Middledrift	32 50 S	30 40 E
Mkuzi R. 60′ gravel at rlwy. bridge	27 40 S	32 10 E
Mkuzi Falls	28 00 S	30 00 E
Mkuzi Falls 220′ terrace	28 00 S	30 00 E
Modder River, south bank	29 00 S	24 34 E
Molopo River, Gordonia	28 30 S	20 30 E
Molteno	31 20 S	26 20 E
Montagu cave, Montagu	33 47 S	20 07 E
Montagu cave, Derdeheuwel	33 47 S	20 11 E
Montebella	29 00 S	29 50 E
Mooi bridge at Middlerest road	28 20 S	29 40 E
Mooi River, right bank	29 10 S	30 30 E
Mooreesburg	33 05 S	18 40 E
Mossel Bay	34 10 S	22 08 E
Moyanvuba	29 30 S	30 25 E
Mtubatuba beach II	28 30 S	32 25 E
Mzendrie drift	27 30 S	31 50 E
Nahoon River	32 59 S	27 57 E
Nakop–S.-W.A. border	28 08 S	19 57 E
Nels Rust	29 55 S	30 40 E
Niekerk's Rust	28 29 S	24 23 E
Nogle dam above Umbova Valley (6 localities)	29 40 S	30 45 E
Nogle dam, above Umgeni River (11 localities)	29 40 S	30 40 E
Nondweni, Rorke's drift	28°20′ S	30°35′ E
Noordhoek	34 07 S	18 23 E
Orange and Caledon R. junction	30 30 S	26 20 E
Oranjeville	26 59 S	28 11 E
Oudtshoorn	33 36 S	22 12 E
Pafuri and Limpopo confluence	22 00 S	31 25 E
Parys	26 54 S	27 27 E
Philippolis road	30 45 S	25 10 E
Pietermaritzburg	29 36 S	30 22 S
Pinetown	29 49 S	30 52 E
Piketberg	32 55 S	18 40 E
Plaatjiesdam	28 41 S	22 35 E
Plakenriver	33 50 S	18 50 E
Pniel	28 32 S	24 28 E
Pongola canal terrace (4 localities)	28 10 S	32 20 E
Pongola (2 localities)	27 40 S	32 20 E
Port Edward	31 02 S	40 13 E
Port Elizabeth	33 57 S	25 38 E
Port Shepstone	30 43 S	30 28 E
Prieska	29 38 S	22 40 E
Prince Albert	33 13 S	22 02 E
Pringle Bay	34 20 S	18 50 E
Randfontein	26 11 S	27 42 E
Riet and Modder R. junction	29 02 S	24 38 E
Riversdale, Cape	34 07 S	21 12 E
Riverton	28 28 S	24 38 E
Robertson	33 49 S	19 50 E
Rooidam	29 43 S	23 49 E
Rustenburg	34 08 S	20 00 E
Rouxville	30 23 S	26 48 E
Sanddrif	29 30 S	22 58 E
Sheppard Island	27 40 S	25 45 E
Shisackop	30 00 S	30 50 E
Shongweni dam	29 55 S	30 50 E
Signal Hill, Cape	33 56 S	18 27 E
Simondium, Paarl	33 50 S	18 57 E
Simonstown barracks	34 12 S	18 26 E
Sir Lowry's pass	34 07 S	18 54 E
Smithfield	30 12 S	26 30 E
Somerset East	32 40 S	25 35 E
Somerset West	34 06 S	18 52 E
Spektakel	29 37 S	17 32 E
Spitzkop, Gordonia	28 10 S	21 15 E
Spitzkop, Fauresmith	29 24 S	25 22 E
Sterkfontein (extension site)	25 59 S	27 45 E
Stellenbosch	33 56 S	18 51 E
Steynsdorp	26 08 S	30 55 E
Stinkfontein, Namaqualand	28 47 S	17 23 E
Swartkrans	25 59 S	27 45 E
Swellendam, near river terraces	34 04 S	20 35 E
Taaibosch Spruit	26 25 S	27 50 E
Tanqua, Karroo	32 34 S	20 17 E
Taung	27 32 S	24 48 E
Tesco Halt	29 40 S	32 20 E
Three Rivers	26 40 S	27 53 E
Tiger Kloof	26 54 S	24 40 E
Tongaat	29 40 S	32 20 E
Tugela mouth	29 40 S	32 20 E
Tugela, north bank in gorge	28 40 S	29 20 E
Tulbagh	33 18 S	19 05 E
Tumlele Inn	29 50 S	30 50 E
Tyumi River (Alice)	32 45 S	26 50 E
Uitenhage	33 45 S	25 25 E
Ulundi	28 20 S	31 20 E

Umbogintwini Valley 190′ terrace	30°05′ S	30°55′ E
Umbova Valley (Upper)	29 40 S	30 45 E
Umfazazaan drift	30 05 S	30 55 E
Umfolozi bridge, south bank	28 30 S	32 25 E
Umgeni Valley	29 40 S	30 40 E
Umhlatuzana	30 00 S	30 55 E
Umhlatuzi	28 30 S	31 00 E
Upper Umhloti Valley	29 30 S	31 10 E
Umlaas	30 05 S	30 55 E
Umlaas, right bank	30 00 S	30 55 E
Umlozi Reserve, Umbogintwini 190′ terrace	30 05 S	30 55 E
Umlozi, 150′–80′ terrace	30 00 S	30 54 E
Umorafu–Makosi beach III	30 45 S	30 30 E
Umsindusi (Umgeni divide) (9 localities)	29 40 S	30 40 E
Umvoti R., near mouth	29 25 S	31 25 E
Upington	28 23 S	21 14 E
Utrecht townlands	27 37 S	30 18 E
Uvongo Valley	30 50 S	32 25 E
Vaibeen Fontein	38 40 S	29 20 E
Van Rhyn's dorp	18 42 S	31 36 E
Vereeniging	26 40 S	27 53 E
Victoria West	31 23 S	23 05 E
Villiersdorp	34 00 S	19 18 E
Vlakfontein	26 10 S	27 20 E
Vryburg	26 54 S	24 40 E
Wagenmakers Valley	33 38 S	19 00 E
Waldeck's plant, Cape	29 30 S	24 00 E
Warrenton	28 05 S	24 46 E
Windsorton	28 23 S	24 44 E
Witsand	34 01 S	18 21 E
Wittedrift	34 01 S	23 20 E
Wonderboom south, Pretoria	25 40 S	28 15 E
Worcester	33 39 S	19 26 E
Zoutendal farm, Wellington	33 38 S	19 00 E
Zuurkop, Wollefontein	32 30 S	25 30 E
Zwartkop, Kenhardt	29 40 S	21 10 E

Acheulian

Undifferentiated

Uncertain

Arolsen farm, Bedford	32 41 S	26 05 E
Aughrabies Falls, Kakamas	28 33 S	20 20 E
Bathurst	33 27 S	26 50 E
Bats cave, East London	33 00 S	27 55 E
Bellville brickfield	33 54 S	18 38 E
Bezuidenhout Valley	26 10 S	28 00 E
Bishopscourt	34 02 S	8 26 E
Breede R., Swellendam	34 03 S	21 34 E
Breede R., Worcester	33 41 S	19 26 E
Bakbaai	33 35 S	18 22 E
Boschbulten, Kenhardt	21 08 S	29 19 E
Calitzdorp	33 32 S	21 40 E
Cape Seal	34 05 S	22 24 E
Cape St. Francis	34 11 S	24 50 E
Ceres	33 24 S	19 16 E
Clanwilliam	32°12′ S	18°50′ E
Cornlands, Breede R.	34 00 S	21 35 E
Cradock	32 07 S	25 35 E
Danielskraal, Calitzdorp	33 32 S	21 41 E
Dassenberg, Noordhoek	34 06 S	18 21 E
Doornrivier, Olifants R.	31 31 S	18 39 E
Driefontein	31 07 S	25 35 E
Dunedin	31 56 S	22 35 E
East London	33 00 S	27 55 E
Eerste Rivier	34 00 S	18 45 E
Eksteenkuil	28 45 S	21 01 E
Elandsdrift, Aspoort	32 20 S	25 50 E
Elandsrivier	25 00 S	29 10 E
Elim, Donkiesrivier	33 18 S	19 19 E
Fauresmith	29 44 S	25 17 E
Fish Bay, Mossel Bay	34 10 S	22 05 E
Fish Hoek brickfield	34 09 S	18 25 E
Fort Hare, Victoria East	31 00 S	26 50 E
Geelhoutboom, Humansdorp	34 00 S	24 41 E
George	33 56 S	22 27 E
Groblaars hoop, Orange R.	23 40 S	20 55 E
Grootrivier Pass, Knysna	34 00 S	23 00 E
Helderberg	34 02 S	18 53 E
Hen and Chickens estate, Wynberg	34 01 S	18 28 E
Holsluit	29 40 S	22 45 E
Howieson's Poort	33 17 S	26 35 E
Humansdorp	34 00 S	24 45 E
Jakhalswater	29 33 S	22 36 E
Jonkershoek	33 58 S	18 57 E
Kanonieland, Orange R.	21 05 S	28 40 E
Kanteenkop, Barkly West	28 35 S	24 30 E
Kariega Valley	33 40 S	26 39 E
Kasoaga R. mouth	33 40 S	26 43 E
Keidebees, Upington	28 30 S	21 15 E
Keimoes, Upington	23 38 S	20 56 E
Keurboom R. mouth	34 01 S	23 23 E
Klawer	31 46 S	18 35 E
Kleinmond	34 21 S	19 02 E
Kleinsee (north of)	31 00 S	20 00 E
Knersvlakte	31 17 S	18 42 E
Koehoeb, Keimoes	23 38 S	20 56 E
Koelmansrust, Potgietersrust	24 10 S	28 55 E
Kokstad	30 32 S	29 25 E
Kommetjie	34 09 S	18 20 E
Kookfontein, Lamberts Bay	32 05 S	17 22 E
Kornet Spruit	30 17 S	27 05 E
Kraai R.	30 56 S	27 27 E
Krugersdorp Valley	26 07 S	27 45 E
Langeberg, Durbanville	33 50 S	18 38 E
Louisvale, Upington	28 29 S	21 16 E
Lower Linton, Adelaide	32 31 S	26 15 E
Lusikisiku	31 20 S	29 35 E
Montana	34 00 S	20 22 E
Mootverloren	31 23 S	18 26 E
Mowbray (medical school)	33 57 S	18 28 E
Mulder's vlei, Faure	34 02 S	18 46 E
Nababeep	29 35 S	16 47 E
Newlands	33 59 S	18 29 E
New Year's R., Roodekranz	33°15′ S	26°24′ E
North Doorn R., Knersvlakte	31 03 S	18 52 E
Omdraaivlei	28 00 S	20 19 E
Oude Post	33 15 S	18 36 E
Palmiet R. mouth	34 02 S	19 00 E
Pinehurst	34 02 S	18 26 E
Pretoria	25 45 S	28 10 E
Prieska (16 miles east of)	29 38 S	22 44 E
Prieska (5 miles east of)	29 38 S	22 41 E
Prince Alfred's Hamlet	33 20 S	19 18 E
Redburn, Plettenberg Bay	34 01 S	23 20 E
Renosterkop, Kakamas	28 43 S	20 32 E
Riemvasmaak, Gordonia	28 10 S	21 15 E
Rivers	33 13 S	19 05 E
Robinson mine	26 06 S	27 45 E
Rondebosch	33 58 S	18 28 E
Rooidam, Upington	28 25 S	21 15 E
Sandy Bay	34 12 S	18 18 E
Sandflats, Alexandria	33 38 S	26 25 E
Schmidt's drift	28 40 S	23 24 E
Silverhurst, Constantia	34 02 S	18 26 E
Smalvish, Molopo R.	28 13 S	20 35 E
Smith's field	33 45 S	18 55 E
South Doornk, Knersvlakte	31 10 S	19 04 E
Stanford	34 27 S	19 27 E
Steinkopf	29 13 S	17 39 E
Stillbay	34 22 S	21 20 E
Stockwell, Ashton	33 50 S	20 04 E
Stoll R. south of Beaufort West	32 25 S	22 28 E
Studties, Baviaanskloof	33 32 S	23 58 E
Thermal Baths (Cradock)	32 08 S	25 35 E
Tows Rivier	33 22 S	20 03 E
Tygerberg hill	33 52 S	18 35 E
Uitzig, Warm Bokkeveld	33 15 S	19 09 E
Uitkomst	28 20 S	21 15 E
Umhala's Kop, East London	33 00 S	27 55 E
Vink	33 47 S	19 47 E
Vioolsdrift, Orange R.	28 40 S	17 35 E
Visserskraal, Mooreesburg	33 05 S	18 40 E
Vleitjies, Willowmore	33 17 S	23 27 E
Wellington	33 38 S	19 00 E
Widouw Rivier	31 41 S	18 43 E
Wimbledon, Douglas	29 08 S	23 52 E
Wittebomen	29 40 S	22 45 E
Wolseley	33 26 S	19 18 E
Wynberg	34 01 S	18 28 E
Zoutputz, Langeberg, Orange R.	27 55 S	20 30 E
Zuurbrak	34 00 S	20 40 E

"First Intermediate"

Fauresmith

Certain

Bergville	28 40 S	29 20 E
Bezuidenhout Valley	26 10 S	28 00 E
Blaauwheuwel	29 44 S	25 17 E
Blood River	28 50 S	31 30 E
Bokbaai	33 35 S	18 22 E

Bonza Bay, mouth of Quinera River	33°00′ S	27°55′ E
Brakfontein	29 33 S	25 18 E
Brook's Nek	30 40 S	29 30 E
Bubesi, Matatiele	30 18 S	28 45 E
Clifton	33 56 S	18 22 E
Cofimvaba	32 08 S	27 20 E
Dundee-Utrecht road	27 37 S	30 18 E
East London	30 00 S	27 55 E
Edendale, Matatiele	30 18 S	28 45 E
Elandsfontein	29 03 S	23 11 E
Elandsput (O.F.S.)	27 35 S	28 25 E
Fauresmith	29 44 S	25 17 E
Ft. Brown, road crossing Great Fish River	33 12 S	26 40 E
Hesomdale	28 20 S	30 30 E
Ingwavuma	26 50 S	32 00 E
Ixopo	30 09 S	30 04 E
Kokstad townlands	32 32 S	29 25 E
Kuruman	27 03 S	21 30 E
Lockshoek farm northeast of Jagersfontein	29 45 S	25 17 E
Luckhoff	29 45 S	24 49 E
Lynedock station, at Spier farm	33 59 S	18 46 E
Mavela	28 30 S	30 35 E
Mill grange, Kokstad	30 32 S	29 25 E
Mkuzi	27 36 S	35 05 E
Mohale's Hoek	30 15 S	27 30 E
Mooidraai, Kokstad	30 32 S	29 25 E
Moyanvuba	29 30 S	30 25 E
Ngobevu	28 50 S	30 40 E
Petrusberg	29 05 S	25 23 E
Philippolis road station	30 20 S	25 05 E
Pniel	28 32 S	24 28 E
Pomeroy	28 50 S	31 30 E
Port Durnford	28 30 S	31 35 E
Power's site between Pniel and Nooitgedacht	28 30 S	24 30 E
Rietvalley, Bergville	28 40 S	29 20 E
Riet vlei	29 40 S	30 20 E
Riverview estates, Windsorton (3 localities)	28 23 S	24 44 E
Schaapfontein	27 53 S	24 51 E
Seteba Weila, Matatiele	30 18 S	28 45 E
Springfontein	30 30 S	23 45 E
Thornville	29 45 S	30 30 E
Tugela mouth	29 45 S	32 30 E
Umhlangana	28 50 S	30 40 E
Umtata	31 33 S	28 45 E
Umzimkulu	30 16 S	29 57 E
Utrecht-Dundee road	27 37 S	30 18 E
Valschfontein(O.F.S.)	27 30 S	27 00 E
Wonderwerk cave, Kuruman	27 03 S	21 30 E
Uncertain		
Hesomdale	28 20 S	30 30 E
Instane R., right bank	28 20 S	32 30 E
Mkuzi R. (2 localities)	27 40 S	32 10 E
Mooi R., right bank	29 10 S	30 30 E
Ngutu	28 20 S	31 00 E
Umgeni Valley	29 40 S	30 40 E
Umhlatuzi bridge	28 30 S	31 35 E
Umkomaas	30 10 S	30 50 E
Wonderboom	25 42 S	28 12 E

Sangoan

Certain		
Blackwoods, 20 miles west of Umtwalumi	29°50′ S	30°40′ E
Charter's Creek	31 35 S	28 30 E
Coldmore	30 00 S	30 55 E
Durban	30 10 S	31 20 E
Emoyani	29 40 S	32 20 E
Enseleni, near Empangen	28 20 S	32 30 E
Hluwehluwe terraces	28 30 S	32 25 E
Ifafa, south bank	30 35 S	30 40 E
Illovo lagoon	30 10 S	30 50 E
Jamieson's drift	28 50 S	30 40 E
Kubakaga (east of)	28 30 S	32 25 E
Labuschagne's kraal	28 50 S	29 30 E
Makosi R., south bank	30 20 S	30 54 E
Matanta and Umhlangana, between	25 40 S	31 30 E
Middle drift	28 50 S	30 40 E
Mkuzi Reserve, south of Pongola	27 40 S	32 10 E
Mlambongwenya store	26 50 S	31 40 E
Mlongosi	27 40 S	32 20 E
Mlongosi (2 localities)	28 40 S	29 20 E
Mtubatuba beach (2 localities)	28 30 S	32 25 E
Ndumu road	27 40 S	32 20 E
Nkasini	28 20 S	29 40 E
Port Durnford	28 30 S	31 35 E
Redhill brickworks	28 30 S	31 35 E
Redhills just north of Durban	30 05 S	31 20 E
Tugela estates bridge	25 40 S	31 30 E
Umbogintwini	30 05 S	30 55 E
Umgababa	30 20 S	30 54 E
Umhalozi, above lagoon	29 40 S	32 20 E
Umhlatuzana	30 00 S	30 55 E
Umsindusi R., Spitzkop store	29 40 S	30 40 E
Umzimbati (2 localities)	28 30 S	31 35 E
Uncertain		
Bull's Run	28 20 S	31 20 E
Eteza road	28 30 S	32 25 E
Impapasi hill	28 30 S	32 25 E
Instane River	28 30 S	32 25 E
Jamieson's drift	28 40 S	29 20 E
Mkuzi R.	27 40 S	32 10 E
Mlongesi R., south bank	27 40 S	32 20 E
Nels Rust	29 55 S	30 40 E
Pongola canal terrace	28 10 S	32 20 E
Tugela, north bank in gorge	28 40 S	29 20 E
Umfolozi bridge, south bank	28 30 S	32 25 E
Umhloti beach	30 10 S	31 20 E
Umpambinyani R.	30 05 S	30 55 E
Umkomaas	30 10 S	30 50 E

"First Intermediate"

Undifferentiated		
Albert	32 55 S	22 00 E
Aliwal North	30 40 S	26 40 E
Barberton	25 47 S	31 02 E
Barkly West	28 35 S	24 30 E
Blaauwkop Hopetown	29 34 S	24 03 E
Bloemhof Christiana	27 38 S	25 35 E
Boshof	28 30 S	25 12 E
Boshof Schweizer Reineke	27 10 S	25 18 E
Brakfontein	25°31′ S	25°09′ E
Burghersdorp	30 58 S	26 18 E
Carnarvon	30 58 S	22 08 E
Clanwilliam	32 12 S	18 50 E
De Put	30 48 S	23 59 E
Dikgathlon, Kuruman	27 05 S	23 06 E
Dinoten	27 51 S	23 21 E
Driefontein	31 07 S	25 35 E
Fonteintjie (Schaapkraal) Colesberg	30 30 S	24 40 E
Frankfurt	27 17 S	28 29 E
Griquatown	28 47 S	23 14 E
Grootmes	17 50 S	29 40 E
Healdtown	32 43 S	26 43 E
Heidelberg	26 30 S	28 21 E
Herbert	28 45 S	23 50 E
Houwater, Ongers R.	30 20 S	23 17 E
Humansdam, Victoria West	31 23 S	23 05 E
Jakhalswater	29 02 S	16 53 E
Kanteenkop, Barkly West	28 35 S	24 30 E
Kareerand	29 20 S	26 01 E
Klipiespan	29 49 S	24 15 E
Koelmansrust, Potgietersrust	24 10 S	29 03 E
Koffiefontein	29 23 S	25 00 E
Komgha	32 43 S	27 55 E
Kransfontein	28 24 S	24 15 E
Mafeking	25 53 S	25 40 E
Matjiesfontein	33 15 S	20 30 E
Mlongosi R. (2 localities)	27 40 S	32 20 E
Nababeep	29 35 S	16 47 E
Ndumu road	27 40 S	32 20 E
Nooitgedacht	32 30 S	30 05 E
Orange River, Aliwal North	30 40 S	26 40 E
Plettenberg Bay	34 00 S	23 20 E
Prieska commonage	29 38 S	22 40 E
Prince Albert	33 13 S	22 02 E
Pringle Bay	34 20 S	18 50 E
Queenstown	31 52 S	26 50 E
Rietfontein	26 41 S	20 02 E
Rooidam	29 43 S	23 49 E
Rouxville	30 23 S	26 48 E
Skietpan	26 54 S	24 17 E
Smithfield	30 12 S	26 30 E
Stanford	34 27 S	19 27 E
Taung	27 32 S	24 48 E
Tigerkloof	27 02 S	24 47 E
Uitenhage	33 45 S	25 25 E
Umbogintwini	30 05 S	30 55 E
Umgababa	30 05 S	30 54 E
Umgantsi R. mouth	31 41 S	29 27 E
Vereeniging	26 40 S	27 53 E
Vryburg	26 54 S	24 40 E
Warrenton	28 05 S	24 46 E
Wellington	33 38 S	19 00 E
West Prairie	30 35 S	23 30 E
Windsorton, Barkly West	28 23 S	24 44 E
Witsands	28 32 S	22 31 E

"Middle Stone Age"

Stillbay/Pietersburg

Aasvoelkop	26 10 S	28 00 E
Addo Bush (Uitenhage)	33 45 S	25 25 E
Albert	32 55 S	22 00 E
Alexandersfontein pan	28 40 S	24 42 E
Alexandria	33 38 S	26 25 E

Alexandria Sandflats	33°38′	S	26°25′	E	De Hoek	29°30′	S	29°00′	E	Ingwavuma	26°50′	S	32°00′	E
Aliwal North (4 localities)	30 40	S	26 40	E	De Put	30 48	S	23 59	E	Instane	28 20	S	32 30	E
Amalinda brickfields	33 00	S	27 51	E	De Rust	33 44	S	26 45	E	Intinini mouth	28 40	S	31 30	E
Amanzimtoti	30 10	S	30 50	E	Diepgeset, Msolip R., Carolina distr.	26 05	S	30 00	E	Inverdoorn	33 07	S	19 49	E
Amatolo Mts.	32 40	S	27 02	E	Dieprivier	34 05	S	18 28	E	Jamieson's drift, near	28 40	S	29 20	E
Aughrabies Falls, Kakamas	28 33	S	20 20	E	Dinoten	27 51	S	23 21	E	Kaffirpan	28 57	S	22 12	E
Aries Gordonia	28 11	S	21 15	E	Doctor's drift, Kraai R., Aliwal North	30 40	S	26 40	E	Kaffir'skuil River mouth s. of Riversdale	34 15	S	21 30	E
Balfour	32 30	S	26 38	E	Doornrivier at Olifants R.	31 31	S	18 39	E	Kalkbank	33 40	S	19 40	E
Bankvlei, Upington	28 23	S	21 14	E	Dordrecht	31 22	S	27 02	E	Kalkbank	23 32	S	29 15	E
Barberton	25 47	S	31 02	E	Doringbaai	31 49	S	18 14	E	Karoopoort	32 34	S	20 17	E
Barkly West	28 29	S	24 26	E	Douglas	29 03	S	23 44	E	Karridene, Umzimbaza	30 10	S	30 50	E
Barrydale	33 55	S	20 40	E	Draaihoek, Aliwal North	30 40	S	26 40	E	Keat's drift	28 10	S	29 40	E
Basterpad (Tvl)	23 55	S	28 39	E	Draaikraalsrivier, Tanqua, Karoo	31 45	S	19 43	E	Kendrew	32 30	S	24 25	E
Beaufort West	32 20	S	22 32	E	Dreurenberg	50 55	S	26 18	E	Kenhardt, 20 miles n. of	29 23	S	21 08	E
Beesdam, Vanwyksvlei, Carnarvon	30 30	S	21 40	E	Dunedin	31 56	S	22 25	E	Keurfontein, Vosburg	31 00	S	23 05	E
Beukesfontein	32 56	S	19 27	E	Durban North	29 48	S	31 02	E	Kimberley	28 38	S	24 42	E
Bethesda mission	33 30	S	25 30	E	East London	33 00	S	27 55	E	Kinderdam	26 14	S	24 40	E
Bethulie (O.F.S.)	30 28	S	26 00	E	Ekuseni River, Hluwehluwe	28 02	S	32 15	E	Kingwilliamstown	32 50	S	27 23	E
Bezuidenhout Valley	26 10	S	28 00	E	Elandsfontein near Hopefield	33 05	S	18 20	E	Klawer	31 46	S	18 35	E
Bizana (Pondoland)	30 51	S	29 52	E	Eldorado	30 31	S	27 01	E	Klein Begin	21 41	S	50 04	E
Blaaubank	24 45	S	27 45	E	Emoyani	29 40	S	32 20	E	Kleinmond	34 21	S	19 02	E
Blaauwkop Hopetown	29 34	S	24 03	E	Finksfontein (Vinkfontein?)	31 46	S	26 33	E	Klerksdorp	26 52	S	26 40	E
Blakeley camp	32 40	S	27 25	E	Fish Hoek pan	34 09	S	18 25	E	Koebos, Richtersveld	28 40	S	17 00	E
Bloemhof, Christiana (Tvl)	27 38	S	25 20	E	Fish Hoek Valley	34 09	S	18 25	E	Koedoesrand	23 30	S	30 30	E
Bokbaai	33 35	S	18 22	E	Fish River banks	31 52	S	25 22	E	Koedoesrand	28 17	S	24 50	E
Border cave (Ingwavuma)	26 50	S	32 00	E	Flesh Bay, Kanon	34 17	S	21 55	E	Koelmansrust, Potgietersrust (Tvl)	24 10	S	29 03	E
Bower's drift (Queenstown)	31 52	S	26 50	E	Florisbad (O.F.S.)	29 00	S	26 10	E	Kokstad	30 32	S	29 25	E
Bonza Bay, Quinelar	33 00	S	27 55	E	Fonteintjie (Schaapkraal) Colesberg	30 42	S	25 07	E	Kononeiland, Orange R.	21 05	S	28 40	E
Bonza Bay sandpits cave	33 00	S	27 55	E	Forest Hill cave	33 55	S	23 05	E	Kookpan	29 37	S	23 20	E
Bosrivier, Agterwitzenberg Valley	33 09	S	19 14	E	Fraserburg road near Karoopoort	32 37	S	20 17	E	Kornet Spruit (O.F.S.)	30 17	S	27 05	E
Bothas hill (Natal)	29 50	S	30 40	E	Gamtoos River mouth	33 45	S	24 30	E	Knysna	34 01	S	23 03	E
Brakfontein (O.F.S.)	29 33	S	25 18	E	Garies	30 31	S	17 59	E	Kraai River	30 56	S	27 27	E
Brandvlei, 25 miles south of	30 30	S	20 30	E	Geluk	27 01	S	24 15	E	Kransfontein	28 24	S	24 15	E
Brandvlei, 37 miles north of	30 20	S	20 30	E	Glen Grey	32 00	S	26 40	E	Kuruman	27 03	S	21 30	E
Britstown East	30 35	S	23 30	E	Goede Hoop	27 30	S	30 20	E	Kwe Minya	28 00	S	31 30	E
Brown's brickfields (East London)	30 00	S	27 55	E	Goudgenoeg farm, Msolip R.	26 05	S	30 00	E	Labuschagne's kraal	28 50	S	29 30	E
Buffels R.	29 41	S	16 32	E	Gouritz R.	34 12	S	21 55	E	Ladismith	33 30	S	21 12	E
Buffelspruit	31 00	S	26 22	E	Gouritz R. mouth	34 15	S	21 40	E	Laingsburg	33 12	S	20 48	E
Bulhoek	31 59	S	18 48	E	Gowies Kloof, Grahamstown	33 20	S	26 30	E	Laingsburg kopje	33 12	S	20 48	E
Bushman Kop	32 20	S	22 15	E	Grace Dieu	23 52	S	29 27	E	Lebombo (Tvl)	24 30	S	32 00	E
Butterworth	30 18	S	28 10	E	Grahamstown	33 17	S	26 35	E	Liefdood	29 30	S	21 14	E
Calitzdorp	33 32	S	21 40	E	Groblaarshoop, Orange R., Gordonia	28 11	S	21 15	E	Linksfield ridge	26 12	S	28 03	E
Campbell	28 48	S	23 43	E	Groot Rivier, s. bank	31 15	S	19 51	E	Little Caledon near Maseru-Morijard	29 20	S	26 40	E
Cape Seal	34 05	S	22 24	E	Groot Rivier, Tanqua, Karoo	32 34	S	20 17	E	Lokenburg	31 40	S	19 11	E
Cape St. Blaize	34 10	S	22 08	E	Groote Schuur, Cape (2 localities)	33 58	S	18 28	E	Louisvale, Upington	28 29	S	21 16	E
Cape St. Francis	34 11	S	24 50	E	Gunzoya shelter	27 25	S	31 00	E	Lubombu terrace	26 40	S	31 40	E
Cavendish St.	30 00	S	30 54	E	Hagenstad	29 05	S	26 13	E	Lymputs	29 00	S	22 54	E
Cave of Hearths	24 09	S	29 04	E	Halston	31 30	S	26 46	E	Maclear	31 04	S	28 22	E
Ceres, Mitchell's pass	33 24	S	19 16	E	Hangklip	34 21	S	18 50	E	Mafeking	25 53	S	25 40	E
Charter's Creek	31 35	S	28 30	E	Hartnekskloof, Tanqua, Karoo	32 34	S	20 17	E	Magebukana donga	27 30	S	32 10	E
Charter's Creek on St. Lucia road to Umfolozi	28 10	S	32 05	E	Hazeldene	28 20	S	30 30	E	Maitland, Cape Flats	34 02	S	18 34	E
Clarens	28 16	S	27 58	E	Healdtown	32 43	S	26 43	E	Manyibeni	28 20	S	29 40	E
Cofimvaba	32 00	S	27 35	E	Herschel	30 35	S	27 10	E	Marabastad (Tvl)	23 53	S	29 30	E
Concordia	29 30	S	17 57	E	Hlogoma hill	30 30	S	30 30	E	Mashoweng	28 30	S	21 00	E
Cordmatskuil	31 32	S	23 05	E	Hopefield	33 05	S	18 20	E	Matatiele	30 18	S	28 45	E
Cossac post	31 30	S	25 30	E	Impanza	25 40	S	31 30	E	Matatiele, St. Margaret's mission	30 18	S	28 45	E
Cradock	32 07	S	25 35	E	Ingwavuma drift	27 30	S	31 00	E	Matjesfontein	33 15	S	20 30	E
Crocodile R. (Tvl)	25 30	S	31 15	E						Mazelsfontein, Aliwal North	30 40	S	26 40	E
Danielskraal, Calitzdorp	33 32	S	21 41	E						Melkboschstrand dunes	33 44	S	18 27	E
De Aar	30 38	S	24 00	E						Melkspruit	30 42	S	26 38	E
										Melkspruit, Aliwal North	30 40	S	26 40	E
										Melmoth	28 20	S	31 10	E
										Melton Wold	31 29	S	22 47	E

Middelburg	31°28′ S	25°02′ E
Middelfontein, Carnarvon	30 58 S	22 08 E
Milnerton	33 54 S	18 29 E
Mkuzi	28 00 S	30 00 E
Mlambongwenya	26 50 S	31 40 E
Mohale's Hoek	30 15 S	27 30 E
Montagu cave, Derdeheuwel	33 47 S	20 11 E
Mooi River, right bank	29 10 S	30 30 E
Morokweng	26 05 S	23 50 E
Mossel Bay, Cape St. Blaize	34 10 S	22 08 E
Mount Nelson (O.F.S.)	28 38 S	27 00 E
Moyanvuba	29 30 S	30 25 E
Mt. Ayliff	40 48 S	29 22 E
Mulder's vlei, Faure	34 02 S	18 46 E
Mvalu's cave	24 05 S	29 16 E
Nakop, S. W.A border	28 08 S	19 57 E
Ndumu	27 40 S	32 20 E
Ndumu Reserve	26 50 S	32 00 E
Newcastle	27 43 S	29 58 E
Ngamakwe distr., Transkei	32 10 S	27 59 E
Nohlamadoda	28 15 S	30 35 E
Nooitgedacht	20 05 S	32 30 E
Noordhoek	34 07 S	18 23 E
Norvalspont	30 35 S	25 25 E
Nottingham, road to Underberg	29 20 S	30 00 E
Nyalazi	28 30 S	32 25 E
Nylstroom	24 30 S	28 30 E
Olieboomspoort	24 05 S	27 30 E
Olifants R. between Clanwilliam and Klawer	31 58 S	18 46 E
Onverwacht	30 27 S	25 11 E
Palmietfontein (O.F.S.)	29 12 S	26 26 E
Pearston	32 32 S	25 08 E
Peerboom, Carnarvon	30 58 S	22 08 E
Peers cave, Fish Hoek	34 09 S	18 26 E
Phillipi, Cape Flats	34 00 S	18 35 E
Pietkloof	26 00 S	29 00 E
Pietersburg (Tvl)	23 52 S	29 27 E
Pietermaritzburg	29 36 S	30 22 E
Pniel	28 32 S	24 28 E
Pongda River	27 40 S	32 30 E
Poortjie	30 48 S	24 41 E
Port Alfred, Kowie River	33 35 S	26 57 E
Port Durnford	28 30 S	31 35 E
Port Edward, north of hotel	31 02 S	30 13 E
Port Edward S.	31 02 S	30 13 E
Port Elizabeth	33 57 S	25 38 E
Port Shepstone, new school	30 43 S	30 28 E
Postmasburg	28 18 S	23 00 E
Potlepel kraal, Willowmore	33 17 S	23 27 E
Pretoria (Tvl)	25 45 S	28 10 E
Prieska	29 38 S	22 40 E
Prieskapoort	29 38 S	22 40 E
Pringle Bay	34 20 S	18 50 E
Progress, opp. Boulders' station—Kaapmuiden	25 47 S	31 02 E
Quaggaskop, Knersvlakte	31 23 S	18 40 E
Queenstown	31 52 S	26 50 E
Ramohlokana location, Matatiele	30°18′ S	28°45′ E
Ravenhill, Tarkastad distr.	20 00 S	26 20 E
Riemvasmaak, Gordonia	28 11 S	21 15 E
Rietfontein	26 41 S	20 02 E
Rietpan	28 25 S	25 57 E
Rietspruit (Tvl)	22 54 S	29 33 E
Riverton	28 28 S	24 38 E
Rockwoods	32 38 S	28 08 E
Rooikrans, Mafeking	25 53 S	25 40 E
Roodepoort (Tvl)	26 11 S	27 50 E
Rustenburg (Tvl)	25 40 S	27 14 E
Sandpits cave, Bonza Bay	33 00 S	27 55 E
Schiet drift	26 54 S	24 17 E
Skildergat cave in Fish Hoek–Noordhoek Valley	34 10 S	18 25 E
Skildergatkop	34 10 S	18 25 E
Skoonheid	24 07 S	29 27 E
Slagerskuil, Willowmore	33 17 S	23 27 E
Slangrivier	34 09 S	24 42 E
Smithfield (O.F.S.)	30 12 S	26 30 E
Soutpan (Tvl)	22 57 S	29 20 E
Spekbahel	29 37 S	17 32 E
Springbok	17 52 S	29 38 E
Steinkop	29 13 S	17 39 E
Stellenbosch	33 56 S	18 51 E
Sterkfontein	26 55 S	27 45 E
Sterkspruit	30 31 S	26 22 E
Sterkstroom	31 32 S	26 33 E
Stikland Hospital, Cape Flats	34 02 S	18 34 E
Stillbay	34 22 S	21 20 E
Stoll River, south of Beaufort West	32 25 S	22 28 E
Strothview Spruit	28 20 S	29 40 E
Suikerbosrand near Badfontein	26 30 S	28 05 E
Sunday's River mouth	30 50 S	25 58 E
Taaibosspruit	26 35 S	27 50 E
Taung	27 32 S	24 48 E
Tevreden, Aliwal North	30 40 S	26 40 E
Thaba Nchu (O.F.S.)	29 14 S	26 51 E
Thebus near Hofmeyr	31 35 S	25 30 E
Thornville	29 45 S	30 30 E
Tkokobos, Carnarvon	30 58 S	22 08 E
Tugela River (4 localities)	28 50 S	30 40 E
Tugela River mouth (2 localities)	29 45 S	32 30 E
Tweedepoort	30 30 S	24 59 E
Twyfelpoort Colesberg	30 42 S	25 07 E
Uitloop (Tvl)	24 06 S	29 03 E
Umgababa	30 20 S	30 50 E
Umhalozi	29 40 S	32 20 E
Umkomaas	30 12 S	30 38 E
Umlaas	29 55 S	30 30 E
Umzimkulu	30 16 S	29 57 E
Umzimbuzi	30 15 S	30 55 E
Upington	28 23 S	21 14 E
Utrecht, upstream from bridge	27 37 S	30 18 E
Uttawa site, north of Durban	29 57 S	31 01 E
Varsche River, Knersvlakte	31 30 S	18 42 E
Venterstad	30 50 S	25 50 E
Vents drift	28°20′ S	30°25′ E
Vereeniging (Tvl)	26 40 S	27 53 E
Victoria West golf course	21 33 S	23 05 E
Vink	33 47 S	19 47 E
Vinkfontein (Finksfontein?)	31 46 S	26 33 E
Vlakkraal near Bloemfontein	29 07 S	26 13 E
Vogelvlei	33 21 S	19 01 E
Vosberg (2 localities)	31 00 S	23 05 E
Vryburg	26 54 S	24 40 E
Vryheid, Kambula road	28 00 S	31 00 E
Wartburg, Holley shelter	29 26 S	30 35 E
Waterpoort (Tvl)	22 53 S	29 37 E
Waterval, Albert	32 55 S	22 00 E
Weenen on Bushman's River	28 50 S	30 05 E
Welverdien	28 30 S	32 30 E
Widow Rivier	31 41 S	18 43 E
Windsorton, Barkly West	28 29 S	24 26 E
Witkop	31 08 S	26 37 E
Witkoppies, Willowmore	33 17 S	23 27 E
Witsand	34 05 S	18 21 E
Witsands	28 32 S	22 31 E
Wonderwerk cave, Kuruman	32 32 S	29 25 E
Worcester Town commonage	33 39 S	19 26 E

Lupemban

Certain

Primrose Ridge	26 10 S	28 00 E

"Second Intermediate"

"Magosian"

Bokbaai	33 35 S	18 22 E
Butterworth	30 18 S	28 10 E
Byzonderheid, Potgietersrust	24 10 S	29 03 E
Fish Hoek pan	34 09 S	18 25 E
Fish Hoek Valley	34 09 S	18 25 E
Howieson's Poort	33 17 S	26 35 E
Kalk Bay harbor	34 08 S	18 27 E
Matatiele	30 18 S	28 45 E
Milnerton	33 54 S	18 29 E
Modderpoort	29 08 S	26 50 E
Noordhoek, cape	34 07 S	18 23 E
Peers cave, Fish Hoek	34 09 S	18 26 E
Rose Cottage cave, Ladybrand	29 10 S	26 48 E
Skildergatkop	34 10 S	18 25 E
Tunnel cave, Fish Hoek	34 09 S	18 25 E
Ventersdorp	26 19 S	26 49 E
Winnaarsbaken, Albert	31 00 S	26 20 E

"Later Stone Age"

Wilton

Abiam, Gordonia	28 11 S	21 15 E
Alicedale, Wilton cave	33 20 S	26 10 E
Bankvlei, Upington	28 23 S	21 14 E
Barberton	25 47 S	31 02 E
Berlin	35 51 S	27 35 E
Bessiepoort	30 22 S	22 58 E
Bethesda road	31 56 S	24 47 E
Blaauwbank, Kuruman	27 05 S	23 05 E

Blombos	34°22′ S	21°15′ E
Bosrivier, Agterwitzenberg Valley	33 09 S	19 14 E
Brakfontein	29 33 S	25 18 E
Brandvlei	30 27 S	20 30 E
Burnt kraal, Grahamstown	33 17 S	26 35 E
Cango caves, Oudtshoorn	33 36 S	22 12 E
Cape St. Blaize, Mossel Bay	34 10 S	22 08 E
Cape St. Francis	34 11 S	24 50 E
Carolina	26 05 S	30 07 E
Coldspring (Paradise Kloof)	33 20 S	26 27 E
Cordmatskuil	31 23 S	23 05 E
Culmstock, Middelburg	31 28 S	25 02 E
Die Grip	33 49 S	19 25 E
Die Hoop, Bredasdorp	34 34 S	20 02 E
Dieprivier, Cape	34 00 S	18 10 E
Doornrivier at Olifants River	31 31 S	18 39 E
East London	33 00 S	27 55 E
Excelsior	32 58 S	19 26 E
Fish Bay	34 10 S	22 08 E
Fish Hoek pan	34 09 S	18 25 E
Fish Hoek Valley	34 10 S	18 25 E
Garcia Pass cave	33 58 S	21 13 E
Glen cave, Riversdale	34 07 S	21 12 E
Glentyre cave	33 56 S	22 28 E
Goobis, Pofadder	29 07 S	19 20 E
Gordon's Bay	34 10 S	18 52 E
Grahamstown	33 17 S	26 35 E
Hangklip	34 21 S	18 50 E
Hawston	34 23 S	19 08 E
Henley-on-Klip, Meyerton–Heidelberg road	26 32 S	28 02 E
Hermanus	34 25 S	19 14 E
Hout Bay	34 03 S	18 21 E
Jakhalskop, Riversdale	34 07 S	21 12 E
Jongensgat, Riversdale	34 07 S	21 12 E
Keimoes, Orange River	23 38 S	20 56 E
Kestel	28 16 S	27 58 E
Klein Begin	21 41 S	50 04 E
Klipbakken, Kenhardt	21 08 S	23 29 E
Knysna, shell caves	34 01 S	23 03 E
Koebos, Richtersveld	28 40 S	17 00 E
Koegrabies	29 04 S	21 48 E
Ludlow cave, Naauwpoort	31 10 S	24 58 E
Maitland	34 00 S	18 10 E
Matjies River	30 00 S	23 21 E
Middeldrif	32 47 S	26 59 E
Mietjiesekraal	33 48 S	21 09 E
Moldt, Uitkoms	33 10 S	30 03 E
Montagu cave, Derdeheuwel	33 47 S	20 11 E
Niewoudtsville	31 25 S	19 05 E
Noordhoek	34 07 S	18 23 E
Northcliff	26 12 S	28 03 E
Oakhurst	33 56 S	22 28 E
Oliviershoek Pass, Bergville–Harrismith road	28 14 S	29 05 E
Peers cave, Fish Hoek	34 09 S	18 25 E
Philippolis	30 20 S	25 05 E
Platbos, Stillbay	34°22′ S	21°20′ E
Plumstead	34 02 S	18 29 E
Port Alfred	33 35 S	26 57 E
Putzonderwater	29 14 S	21 55 E
Queenstown	31 52 S	26 50 E
Rietspruit, Transvaal	22 54 S	29 33 E
Rietvlei	34 20 S	21 32 E
Riverton	28 28 S	24 38 E
Riverview estates, Windsorton	28 23 S	24 44 E
Robberg cave, Cape Seal	34 05 S	22 24 E
Rooidam, Upington, Gordonia	28 11 S	21 15 E
Rooipoort, Kimberley	28 39 S	24 42 E
Rosendal-Rietvlei, Cold Bokkeveld	30 40 S	19 20 E
Rouxville, Upington	28 20 S	21 25 E
Sandy Bay	34 12 S	18 18 E
Simonstown	34 12 S	18 26 E
Slangrivier	34 09 S	24 42 E
Soebatsvlakte	34 12 S	21 23 E
Soutpan cave, Transvaal	23 00 S	29 30 E
Spitzkop	29 53 S	25 18 E
Stillbay	34 22 S	21 20 E
Towater, Uniondale	33 25 S	24 50 E
Uitzip, Upington	28 23 S	21 14 E
Upington dunes	28 23 S	21 14 E
Verkeerdevlei, Donkies River	33 20 S	19 53 E
Witbank, Peerboom	30 58 S	22 08 E
Warrenton	28 05 S	24 46 E
Witpan, Kuruman road, Gordonia	28 11 S	21 15 E
Witsand	34 12 S	18 20 E
Witsand, Griqualand West	28 40 S	23 30 E
Wilton cave, Alicedale	33 20 S	26 10 E
Wolmaransstad	32 26 S	19 08 E

Smithfield A

Certain

Blaauwheuwel, Fauresmith	29 44 S	25 17 E
Blaauwheuwel, Koffiefontein	29 23 S	25 00 E
Bongolo shelter, Queenstown	31 52 S	26 50 E
Bowker's park, Queenstown	31 52 S	26 50 E
Brakfontein	29 33 S	25 18 E
Brook's farm, Queenstown	31 52 S	26 50 E
Burghersdorp	30 58 S	26 18 E
Burghersdorp, Bethulie	30 28 S	26 00 E
Cofimvaba	32 08 S	27 20 E
Cordmatskuil, Victoria West	31 23 S	23 05 E
Cradock	32 07 S	25 35 E
Crystal springs, Kokstad	29 23 S	29 25 E
Culmstock, Middleburg	31 28 S	25 02 E
Darling	33 24 S	18 20 E
De Aar, Jacobsdal distr.	29 20 S	24 50 E
De Kiel Oost	29 21 S	24 52 E
De Put, Edinburgh distr.	30 48 S	23 59 E
Die Bos, Tanqua, Karroo	31 59 S	19 43 E
Dunedin	31 56 S	22 25 E
Eagle's Nest farm, 16 miles north of Petrusberg	29°45′ S	25°20′ E
East London	33 00 S	27 55 E
Eller's farm, Queenstown	31 52 S	26 50 E
Floris, mineral baths, Brandford	32 08 S	25 35 S
Graafwater	30 35 S	23 10 E
Hakwa, Victoria West	31 23 S	23 05 E
Koffiefontein, 10 miles northwest of	29 23 S	25 00 E
Kuruman	27 03 S	21 30 E
Lockshoek farm on Bloemfontein road	29 45 S	25 17 E
Luckhoff townlands	29 45 S	29 49 E
Melton Wold	31 29 S	22 47 E
Middledrift near Alice	32 45 S	26 50 E
Petrus (O.F.S.)	29 40 S	24 50 E
Port St. John's	31 35 S	29 31 E
Vosberg drift, Victoria West	31 23 S	23 05 E
Zevenfontein	26 00 S	28 00 E

Smithfield B

Certain

Alarmkraal, Carnarvon	30 58 S	22 08 E
Albert	31 00 S	26 20 E
Alexandersfontein	28 25 S	26 00 E
Aliwal North	30 40 S	26 40 E
Asbestos hills	28 50 S	22 50 E
Aughrabies Falls	28 33 S	20 20 E
Avalon farm, northeast of Jagersfontein	29 44 S	25 25 E
Beaufort West	32 20 S	22 32 E
Bethany	29 35 S	25 28 E
Bethel	26 27 S	29 28 E
Bethesda	31 56 S	24 47 E
Bethesda road	31 56 S	24 47 E
Bethulie	30 28 S	26 00 E
Beukesfontein	32 56 S	19 27 E
Blaauwbank, Fauresmith	29 44 S	25 17 E
Blaauwbank, Jacobsdal	29 20 S	24 50 E
Bloemfontein waterworks	29 07 S	26 13 E
Bongolo shelter	31 52 S	26 50 E
Boshof	28 30 S	25 12 E
Brakvlei	30 23 S	22 49 E
Cordmatskuil	31 23 S	23 05 E
Cradock	32 07 S	25 35 E
De Aar	30 38 S	24 00 E
De Kiel Oost	29 21 S	24 52 E
Die Hoop	34 34 S	20 02 E
Doctor's drift, Kraai R., Aliwal North	30 40 S	26 40 E
Dordrecht	31 22 S	27 02 E
Doringbos	31 58 S	19 12 E
Eldorado	30 31 S	27 01 E
Fonteintjie, Colesberg	27 43 S	24 51 E
Grobelaar's grave, Queenstown	31 52 S	26 50 E
Hagenstad	29 00 S	26 13 E
Hakwa, Victoria West	31 23 S	23 05 E
Halfway house, Kimberley	28 39 S	24 42 E
Hanover	31 03 S	24 28 E
Hartnekskloof, Tanqua, Karroo	32 34 S	20 17 E
Hell Poort	33 10 S	26 22 E
Hofmeyer	31 35 S	25 50 E

Hopetown	29°34′ S	24°03′ E
Hutchinson	31 30 S	23 10 E
Jacobsdal saltpan	29 20 S	24 50 E
Jacobsdal townlands	29 20 S	24 50 E
Kaffir River stn., Bloemfontein	29 07 S	26 13 E
Kalkgat	28 30 S	25 12 E
Kanariesfontein, Carnarvon	30 58 S	22 08 E
Karreeput, Britstown W.	30 35 S	23 30 E
Karroo River, Clanwilliam distr.	32 12 S	18 50 E
Karroopoort	32 35 S	20 20 E
Kendrew	32 30 S	24 25 E
Keurfontein, Vosburg	30 30 S	22 55 E
Kimberley	28 39 S	24 42 E
Klein Philippolis	30 20 S	25 05 E
Klerksdorp	26 52 S	26 40 E
Klipfontein, Jacobsdal	29 20 S	24 50 E
Koffiefontein townland	29 23 S	25 00 E
Kromdraai	25 59 S	27 45 E
Lockshoek	29 45 S	25 17 E
Ludlow, Naauwpoort	31 10 S	24 58 E
Mazelspoort	29 07 S	26 13 E
Meadows	29 29 S	26 41 E
Melton Wold	31 29 S	22 47 E
Middelwater (Brak River)	33 35 S	20 35 E
Modder River station, Kimberley	28 39 S	24 42 E
Molteno	31 20 S	26 20 E
Morgenzon	26 43 S	29 37 E
Nooitgedacht	32 30 S	20 05 E
Norvalspont	30 35 S	25 25 E
Oakhurst shelter, George	33 56 S	22 28 E
Orangia, Aliwal North	29 38 S	26 40 E
Paardeberg	33 38 S	18 49 E
Peerboom, Carnarvon	30 58 S	22 08 E
Philippolis	30 20 S	25 05 E
Pigeon rocks on Matatiele townlands	30 18 S	28 45 E
Pniel mission	28 32 S	24 28 E
Potfontein, Phillipstown	30 12 S	24 06 E
Prieska	29 38 S	22 40 E
Prieskapoort	29 38 S	22 40 E
Rietkuil	29 05 S	25 19 E
Rietpan	28 30 S	25 10 E
Riverside	30 05 S	29 43 E
Riverton	28 28 S	24 38 E
Rockwoods	31 52 S	26 50 E
Rooispruit	31 28 S	25 20 E
Skilderkranz	31 58 S	26 15 E
Smithfield (2 localities)	30 12 S	26 30 E
Spionkop, Albert	30 55 S	26 20 E
Spitzkop, Edenburg	28 10 S	21 15 E
Spitzkop, Smithfield	30 12 S	26 30 E
St. Marks River	31 59 S	27 22 E
Taaiboshspruit	26 35 S	27 50 E
Telegraaffontein	29 30 S	25 09 E
Thaba Nchu townlands	29 14 S	26 51 E
Thebus near Hofmeyr	31 35 S	25 50 E
Thokobos	30 58 S	22 08 E
Tollhoop	31 29 S	26 22 E
Upington	28 23 S	21 14 E
Vlakfontein	26 01 S	27 29 E
Vooruitzicht, Boshof	28 30 S	25 12 E
Vosberg	31 00 S	23 05 E
Warrenton, Vaal River	28°05′ S	24°46′ E
Waterworks, Bloemfontein	29 07 S	26 13 E
Wepener townlands	29 42 S	27 02 E
Witbank, Peerboom	30 58 S	22 08 E
Withoogte, Molteno	31 20 S	26 20 E
Ziguda cave, Keilands	32 11 S	27 31 E
Zoutpan	29 32 S	24 28 E
Zoutpansfontein	29 31 S	23 22 E

Smithfield C

Certain

Bethesda rd.	31 56 S	24 47 E
Bethlehem	28 16 S	27 58 E
Birch's Nek	31 52 S	26 50 E
Bongolo shelter	31 52 S	26 50 E
Caledon Poort	30 25 S	26 15 E
Carolina	26 05 S	30 07 E
Clarens Town	28 15 S	28 00 E
Clark's siding, Dordrecht	31 26 S	27 09 E
Coldspring (Paradise Kloof)	33 20 S	26 27 E
Cottell	32 07 S	25 35 E
Doctor's drift	30 40 S	26 40 E
Dordrecht	31 24 S	27 03 E
East London	33 00 S	27 55 E
Eldorado	30 31 S	27 01 E
Ficksburg townlands	28 50 S	27 43 E
Fish Hoek	34 10 S	18 25 E
Fish Hoek pan	34 09 S	18 25 E
Glen Grey	31 45 S	27 01 E
Glentyre cave	33 56 S	22 28 E
Grahamstown	33 17 S	26 35 E
Kalkgat	28 30 S	25 12 E
Klipfontein, Kimberley	28 39 S	24 42 E
Kraai River	30 56 S	27 27 E
Ludlow, Naauwpoort	31 10 S	24 58 E
Meadows	29 29 S	26 41 E
Modderpoort, Middledrift	32 45 S	26 50 E
Molteno	31 20 S	26 20 E
Morgenzon	26 43 S	29 37 E
Mossel Bay	34 10 S	22 08 E
Niewoudtsville	31 25 S	19 05 E
Peers cave, Fish Hoek	34 09 S	18 26 E
Putzonderwater	29 14 S	21 55 E
Rietpan	28 30 S	25 10 E
Schaapplaats farm, Clarens	28 15 S	28 00 E
Skilderkranz	31 58 S	26 15 E
Smithfield	30 12 S	26 30 E
St. Catherine's cave, Dordrecht	31 24 S	27 03 E
Taaiboshspruit	26 35 S	27 50 E
Tollhoop	31 29 S	26 22 E
Umgeni River lagoon, Durban N.	29 48 S	31 02 E
Ventershoek farm, Wepener	29 42 S	27 02 E
Victoria West	31 23 S	23 05 E
Vlakfontein	26 01 S	27 29 E
Withoogte	31 20 S	26 20 E
Wolmaransstad	32 26 S	19 08 E
Zastron, Mooifontein	30 17 S	27 05 E
Ziguda cave, Keilands	32 11 S	27 31 E

Smithfield N

Certain

Giants' Castle game reserve	29 15 S	29 30 E
Oliviershoek Pass, Bergville–Harrismith road	28°14′ S	29°05′ E
Rorke's drift, northwest Natal	28 20 S	31 00 E
Weenen, west Natal (2 localities)	28 50 S	30 05 E

Smithfield P

Certain

Umgazana cave (10 miles from Port St. Johns)	31 35 S	29 35 E

Smithfield

Undifferentiated

Beaufort West	32 20 S	22 32 E
Birch's Nek, Queenstown	31 52 S	26 50 E
Bloemfontein	29 07 S	26 13 E
Britstown	30 35 S	23 30 E
Bunnyvale	30 00 S	29 30 E
Douglas	29 03 S	23 44 E
Durban	30 10 S	31 20 E
Elandsfontein	26 10 S	28 14 E
Estcourt	29 25 S	29 30 E
Griquatown	28 47 S	23 14 E
Hennopsrivier	26 00 S	28 00 E
Ingwavuma	26 50 S	31 40 E
Karridene River mouth	30 10 S	30 50 E
Keat's drift	28 10 S	29 40 E
Labuschagne's kraal	28 50 S	29 30 E
Magabengborg cave	28 55 S	23 15 E
Matjies River	30 00 S	23 21 E
Misty Home	29 35 S	29 32 E
Mzenlini drift	27 30 S	31 50 E
Newcastle	27 43 S	29 58 E
Olieboompoort	24 05 S	27 30 E
Philippolis on Colesberg road	30 20 S	25 05 E
Pietkloof	26 00 S	29 00 E
Riet and Modder confluence	29 05 S	24 38 E
Rietpan	28 30 S	25 10 E
Rorke's drift shelter	28 20 S	31 00 E
St. Augustine's rock shelters	28 55 S	31 20 E
Tugela	28 20 S	29 40 E
Uitkomst	26 00 S	29 00 E
Umhloti beach	30 10 S	31 20 E
Vosberg shelter	31 00 S	23 05 E
Wartburg near Pietermaritzburg	29 36 S	30 22 E
Welverdien	28 20 S	32 30 E
Wuthering Heights	29 25 S	29 40 E

"Later Stone Age"

Undifferentiated

Addo bush, Uitenheye	33 45 S	25 25 E
Alexandria Sandflats	33 38 S	26 25 E
Biesiesfontein	29 30 S	24 30 E
Blouberg strand dunes	33 48 S	18 28 E
Bontheuwel	31 41 S	18 55 E
Boskraal	31 35 S	19 03 E
Botha's hill, Uniondale farm (Albany)	33 30 S	26 30 E
Caledon	30 25 S	26 15 E
Cave of Hearths, Makapan	24 09 S	29 04 E
Clifton	34 00 S	18 15 E
Cordmatskuil	31 23 S	23 05 E
Couga cave, Baviaanskloof	33 32 S	23 57 E
Cradock (Baroda; Glenalphs; Grassridge; Highlands;		

Cottell; Katkop)	32°07′ S	25°35′ E
Culmstock, Middelburg	31 28 S	25 02 E
Dikgat	29 35 S	16 15 E
Dordrecht, Mount Victory	31 20 S	27 00 E
Fort Brown, Great Fish River	33 12 S	26 40 E
Gamtoos River mouth	33 12 S	24 30 E
Garies	30 31 S	17 59 E
Glenalphs, Cradock	32 07 S	25 35 E
Glen Grey	31 45 S	27 01 E
Glentyre	33 56 S	22 28 E
Gobbin, Molteno	31 20 S	26 20 E
Grassridge, Cradock	32 07 S	25 35 E
Green Point	33 54 S	18 24 E
Haakdoringdraai shelter, Transvaal	24 25 S	28 49 E
Hamburg, Peddie	33 17 S	27 28 E
Hawston	34 23 S	19 08 E
Highlands, Cradock	32 07 S	25 35 E
Hounslow, Albany	33 30 S	26 30 E
Jeffrey's Bay, Humansdorp	34 02 S	24 56 E
Kaffirskuil River mouth	34 15 S	21 30 E
Katbakkies, Cold Bokkeveld	32 30 S	20 00 E
Katkop, Cradock	32 10 S	25 38 E
Kikvorsfontein	31 47 S	18 59 E
Kingwilliamstown	32 50 S	27 23 E
Klipfontein	29 18 S	23 53 E
Klipfontein mine	30 24 S	26 49 E
Koffiefontein	29 23 S	25 00 E
Kokstad	30 32 S	29 25 E
Kowie River mouth, Port Alfred	33 36 S	26 53 E
Krom Rivier	32 00 S	25 35 E
Langeberg shelter	28 30 S	22 35 E
Llandudno Bay, Cape	34 00 S	18 15 E
Lockshoek	29 42 S	25 34 E
Luckhoff	29 45 S	24 49 E
Ludlow cave, Naauwpoort	31 10 S	24 58 E
Lynedock	33 59 S	18 46 E
Mietiieskraal	33 48 S	21 09 E
Moneysworth, Aylesby	33 38 S	26 40 E
Niekerks Rust, Barkly West	28 29 S	24 26 E
Nthlonyane	32 10 S	28 59 E
Oakhurst shelter, George	33 56 S	22 28 E
Onrust	34 25 S	19 10 E
Paarl Rock	33 44 S	18 55 E
Pearly beach	34 40 S	19 30 E
Pietermaritzburg	29 36 S	30 22 E
Port Alfred	33 35 S	26 57 E
Richards Bay	28 50 S	32 00 E
Rocklands	33 51 S	25 18 E
Saaiplaas	31 34 S	19 21 E
Schaapfontein (O.F.S.)	27 43 S	24 51 E
Scott's cave, Humansdorp	34 01 S	24 47 E
Simonsvlei Pofadder	29 07 S	19 20 E
Smithfield Poort	30 12 S	26 30 E
Smitswinkel cave	34 16 S	18 28 E
Springbok flats	29 40 S	17 55 E
Stanhope, Alicedale	33 19 S	26 05 E
Taung	27 32 S	24 48 E
Tongaat	29 40 S	32 20 E
Towater (Uniondale-Willowmore)	33 25 S	24 50 E
Tows Rivier	33°22′ S	20°03′ E
Tzitzikama Mountain	33 50 S	24 00 E
Tzolo, Ezolo	31 30 S	29 00 E
Umtata	31 33 S	28 45 E
Vereeniging	26 40 S	27 53 E
Vlermuisgat, Carnarvon	30 58 S	22 08 E
Vryburg	26 54 S	24 40 E
Waterpoort, Transvaal	22 53 S	29 37 E
Welcome Woods near Sidbury, Albany	33 25 S	26 10 E
Wesley, Peddie	33 19 S	27 21 E
Witsand, Gordonia	28 11 S	21 15 E
Ysterfontein	33 21 S	18 10 E

Rock Art

Lists of localities by districts where rock paintings and rock engravings occur in the Republic of South Africa were published by C. van Riet Lowe in "The Distribution of Prehistoric Rock Engravings and Paintings in South Africa" (*Archaeological Survey Bulletin*, Archaeological Series No. VII, 1952, Johannesburg). This publication also includes a map.

SOUTH-WEST AFRICA

Compiled from data supplied by H. R. MacCalman (State Museum, Windhoek), A. Viereck, E. Scherz, W. Sydow, J. Rudner, and G. J. Fock.

"Earlier Stone Age"

Middle and Upper Acheulian

Brandberg (Outer Tsisab)	21 08 S	14 31 E
Chamchauib, Maltahöhe	25 45 S	16 40 E
Florida, Keetmanshoop	27 30 S	18 30 E
Gobabis	22 28 S	18 53 E
Grünau, Keetmanshoop	27 42 S	18 22 E
Holoog, Keetmanshoop	27 23 S	17 59 E
Kanas, Bethanie	26 50 S	17 27 E
Klein Karas	27 33 S	18 05 E
Kuhn, Gobabis	22 55 S	18 35 E
Kums, Warmbad	28 05 S	19 35 E
Kuring Kuru	17 24 S	18 24 E

Acheulian

Undifferentiated

Onguati	21 46 S	15 38 E
Otjisansema, Kaokoveld	17 27 S	13 17 E
Orabis R., Brandberg	21 08 S	14 31 E
Signalberg, Keetmanshoop, Warmbad	27 32 S	18 10 E
Vioolsdrift-Modderdrift, Warmbad	28 42 S	17 38 E
Wittenhorst, Keetmanshoop	27 06 S	18 40 E

"First Intermediate"

Fauresmith

Chamaites, Seeheim (Keetmanshoop dist.)	27 13 S	17 52 E
Fish R. Canyon, Gaab R.	27 25 S	17 45 E
Holoog Berg, Klein Kanas	27 23 S	17 59 E
Kanas, Bethanie	26 40 S	17 25 E
Khosis, S. Kalahari	25 55 S	19 05 E
Klein Karas	27 33 S	18 05 E
Nam, Maltahöhe	25°05′ S	16°25′ E
Nieuwefontein, Warmbad distr.	28 20 S	18 20 E
Runtu	17 55 S	19 45 E
Stamprivier, Gaab R.	27 24 S	17 40 E
Tsisab ravine, Brandberg	21 08 S	14 31 E
Witvlei	22 25 S	18 25 E

"Middle Stone Age"

Undifferentiated

Aar, near Aus, Lüderitz	26 45 S	16 32 E
Ameib, Karibib	21 46 S	15 42 E
Aroab, Keetmanshoop	26 45 S	19 36 E
Arimas, Lüderitz, Hunsberg	27 40 S	17 00 E
Aub, Lüderitz, Hunsberg	27 40 S	16 55 E
Aus, Lüderitz	26 40 S	16 15 E
Dawib Ost, Karibib	44 46 S	15 30 E
Dubis, Bethanie	25 37 S	16 40 E
Fish River Canyon, Amfelsentor	27 23 S	17 45 E
Fish River Canyon, Gaab River	27 25 S	17 45 E
Ghost cave, Klein Spitzkoppe	21 50 S	15 00 E
Gross Spitzkoppe	21 48 S	15 10 E
Klein Karas	27 33 S	18 05 E
Kranzberg, Karibib	21 52 S	15 40 E
Kuring Kuru	17 24 S	18 24 E
Kowas	23 00 S	18 02 E
Lüderitz peninsula	26 40 S	15 10 E
Mukorob, Keetmanshoop	25 25 S	18 10 E
Narris, Gibeon	24 30 S	18 00 E
Nauzerus, Naukloof, Rehoboth	23 40 S	16 20 E
Numas, Lower	21 08 S	14 31 E
Numaskluft claim	28 00 S	17 00 E
Omandumba West	21 33 S	15 33 E
Onguati	21 46 S	15 38 E
Orabis Koppie	21 08 S	14 31 E
Orabis River (outer)	21 08 S	14 31 E
Petrified forest	20 26 S	14 32 E
Phillips cave, Ameib, Karibib	21 46 S	15 42 E
Pollysberg, Lüderitz	26 41 S	15 12 E
Rhino cave, Gross Spitzkoppe	21 48 S	15 10 E
Riverside, Bethanie	26 35 S	17 00 E
Seeheim	26 50 S	17 45 E
Sesriem, Maltahöhe	24 32 S	15 45 E
Sheep ravine (Brandberg)	21 08 S	14 31 E
Signalberg, Keetmanshoop	27 32 S	18 10 E
Swakopmund	22 40 S	14 30 E
Swakop River	22 40 S	14 30 E
Tsawisis, Klein Karas	27 28 S	18 05 E
Tses dunes, Keetmanshoop	25 55 S	18 05 E
Tsisab Koppe, Brandberg	21 08 S	14 31 E
Tsisab ravine, Brandberg	21 08 S	14 31 E
Twyfelfontein	20 33 S	14 21 E
Vioolsdrift, Modderdriff road (2 localities)	28 42 S	17 38 E
Wiltenhorst, Keetmanshoop	27 08 S	18 40 E

Weltevrede, Naukloof, Rehoboth	24°10′ S	16°00′ E
Zaris, Maltahöhe	24 55 S	16 20 E

"Second Intermediate"

"Magosian"

Okahandja	22 00 S	16 52 E
Runtu	17 55 S	19 45 E
Sambio	17 52 S	20 03 E

"Later Stone Age"

Wilton

Aar, Lüderitz	26 45 S	16 32 E
Asab station	25 28 S	17 59 E
Brandberg, Numas ravine	21 08 S	14 30 E
Dassiefontein, Keetmanshoop	27 14 S	18 35 E
Gaias, S. Kaokoveld (W. of Twyfelfontein)	20 40 S	14 01 E
Grosse Spitzkoppe	21 48 S	15 10 E
Hanaus Gibeon	25 15 S	17 40 E
Haruchas	24 55 S	18 50 E
Ivanhoe, Gobabis	22 42 S	18 20 E
Kamanjab Outjo	19 38 S	14 47 E
Klein Spitzkoppe	21 50 S	15 00 E
Lüderitzbucht (peninsula)	26 41 S	15 12 E
Margarethenthal, Gobabis	22 25 S	18 33 E
Marienhof	23 30 S	16 40 E
Neuhof-Kowas	23 00 S	18 02 E
Noasanabis	23 20 S	18 45 E
Noronaub	25 10 S	18 05 E
Okombahe (Omaruru)	21 22 S	15 23 E
Rocky Point, N. of Khumib River	18 59 S	12 30 E
Ruimte, Grootfontein	19 35 S	18 05 E
Runtu	17 55 S	19 45 E
Sambio	17 52 S	20 03 E
Thinthuma 20 miles S. of Tsumkwe	19 37 S	20 30 E
Torra Bau, W. of farm 715 (Outjo)	20 16 S	13 10 E
Tses	25 55 S	18 05 E
Tsumkwe pan	19 32 S	20 50 E
Twyfelfontein	20 33 S	14 21 E
Warmquelle (E. of Sesfontein)	19 12 S	13 45 E
Wilsonfontein (Karibib)	22 38 S	15 43 E
Witvlei	22 25 S	18 25 E

Undifferentiated

Abbabis Rehoboth	23 59 S	16 01 E
Achenib, Windhoek	23 00 S	19 10 E
Ai, Keetmanshoop	26 35 S	18 08 E
Amandumba West	21 32 S	15 29 E
Ameib	21 46 S	15 42 E
Anibib	21 28 S	15 37 E
Annasruh	22 21 S	19 00 E
Arandis	22 25 S	14 56 E
Aroab	26 45 S	19 36 E
Atsab	20 27 S	14 06 E
Aub, Hunsberg, Lüderitz distr.	27 40 S	16 55 E
Augustfelde	27 30 S	16 25 E
Aus area between Bogenfels and Meteor	27 30 S	15 25 E
Aussenkjer	28 28 S	17 30 E
Averas	26 32 S	19 10 E
Awahuab River (near Burnt Mt., Twyfelfontein)	20 33 S	14 21 E
Bethanie townlands	26°25′ S	17°08′ E
Blankenesse	24 00 S	18 05 E
Bossie	26 12 S	17 05 E
Brakwater (alt)	22 25 S	17 04 E
Brandberg (upper)	21 08 S	14 31 E
Bremen	25 50 S	17 10 E
Brukkaros Mts.	25 45 S	17 45 E
Büllsport	24 10 S	16 23 E
Burnt Mountain, Twyfelfontein	20 33 S	14 21 E
Cape Cross	21 42 S	14 02 E
Chamchauib, Maltahöhe	25 45 S	16 40 E
Coas	22 50 S	17 35 E
Dabib	24 20 S	18 00 E
Davib (east)	44 46 S	15 30 E
Doornkom	21 00 S	16 47 E
Doraabis	22 55 S	17 45 E
Eausiro	21 04 S	15 47 E
Ehangeru	21 17 S	17 03 E
Ehorongue	20 29 S	15 27 E
Epupa Falls (halfway to Swartbooisdrift)	17 00 S	13 15 E
Eremutua	20 54 S	15 40 E
Etemba	21 25 S	15 33 E
Felseneck	21 40 S	16 35 E
Friedabrunn	24 36 S	17 35 E
Gamkarab	20 00 S	16 23 E
Ganab	23 06 S	15 28 E
Ganikobes, Keetmanshoop	26 35 S	18 08 E
Ghaub, Grootfontein	19 27 S	17 45 E
Gauko (Kaoko) Otavi	19 40 S	17 17 E
Gibeon Res.	25 10 S	17 40 E
Goab	22 45 S	19 35 E
Goamus	25 10 S	18 12 E
Gobabis townlands	22 28 S	18 53 E
Gomnab	23 32 S	18 15 E
Goreis	20 00 S	15 42 E
Gross Spitzkoppe	21 48 S	15 10 E
Halifax Bay (Lüderitz)	26 42 S	15 08 E
Hardap	24 30 S	17 45 E
Haribes	24 30 S	17 30 E
Haruchas	24 55 S	18 50 E
Herrenhofen	22 33 S	18 32 E
Hoachanas	23 50 S	18 00 E
Holoog	27 23 S	17 59 E
Huab	19 47 S	15 00 E
Itsawisis	26 10 S	18 10 E
Judaä	23 42 S	18 00 E
Kanas	26 50 S	17 27 E
Karasburg	28 00 S	18 40 E
Karibib townlands	21 56 S	15 43 E
Karios	27 39 S	17 50 E
Keetmanshoop townlands	26 35 S	18 08 E
Keikanachab	24 25 S	17 50 E
Klein Okombahe (Kapelle)	20 56 S	15 38 E
Klein Spitzkoppe	22 04 S	15 38 E
Koichab River	26 20 S	15 40 E
Kums	28 05 S	19 35 E
Kunibes/Tsaobis	22 29 S	15 48 E
Kurikaub	22 23 S	16 04 E
Lichtenfelds/Agterfontein	25 28 S	17 40 E
Lichtenstein	22 50 S	17 03 E
Lievenberg	22 14 S	16 16 E
Limerick	23 30 S	18 00 E
Lüderitzbucht	26 41 S	15 12 E
Maltahöhe townlands	24 50 S	16 53 E
Mooihoek	20 08 S	15 47 E
Mukorob	25 25 S	18 10 E
Naib, Warmbad distr.	28°28′ S	18°43′ E
Namutoni	18 48 S	16 55 E
Nauzerus, Naukloof, Rehoboth	23 40 S	16 20 E
Neuhof-Kowas	23 00 S	18 02 E
Numas, Lower Brandberg	21 08 S	14 31 E
Okahandja townlands	22 00 S	16 52 E
Okakombo	20 45 S	15 30 E
Okapekaha	21 49 S	15 49 E
Okaturua	21 14 S	16 25 E
Okonguarri	20 25 S	15 37 E
Omaha	21 06 S	16 28 E
Omambonde East	20 03 S	17 53 E
Omandumba West	21 33 S	15 33 E
Omarurukuppe	21 25 S	15 55 E
Omateva	22 10 S	18 10 E
Ombu	21 37 S	15 38 E
Ombujomenge	22 04 S	16 05 E
Omburo	21 14 S	16 10 E
Ondera Tsumeb	19 15 S	17 40 E
Ongangasemba	21 09 S	16 29 E
Onguati	21 46 S	15 38 E
Ost Ende	21 20 S	15 39 E
Otjikoko	21 18 S	16 21 E
Otjimbondona	22 45 S	18 10 E
Otjimbuindja (Okahandja)	22 00 S	16 25 E
Otjitoroa West	20 30 S	15 50 E
Otjongoro	20 52 S	15 33 E
Outjo townlands	20 10 S	16 07 E
Paula cave	21 29 S	15 56 E
Petrified forest	20 26 S	14 32 E
Phillips cave, Ameib	21 46 S	15 42 E
Pockenbank	27 10 S	16 30 E
Rietmond	24 24 S	18 10 E
Ringklip	20 22 S	17 32 E
Rössing	22 31 S	14 46 E
Rostock	23 18 S	15 53 E
Ruacana Falls (on road to Swartbooisdrift)	17 16 S	14 08 E
Schellenberg	22 37 S	18 40 E
Schlangkop	26 42 S	17 50 E
Seeheim	26 50 S	17 45 E
Sesriem	24 32 S	15 45 E
Skietwerf, Windhoek	22 30 S	17 01 E
Sorris-Sorris, Ugab River	20 58 S	14 43 E
Springbokfontein	21 33 S	15 25 E
Swakopmund	22 40 S	14 30 E
Tsawisis	27 30 S	18 05 E
Tsisab ravine, Brandberg	21 08 S	14 31 E
Tsumda	22 25 S	19 38 E
Twyfelfontein	20 33 S	14 21 E
Uis mine (12 miles east of)	21 12 S	14 47 E
Uitsig, Hunsberge (Lüderitz)	27 32 S	17 02 E
Ukurenz (Okombahe Res.)	21 22 S	15 23 E
Vioolsdrift	28 42 S	17 38 E
Walvis Bay dunes	23 00 S	22 59 E
Warmbad	28 28 S	18 43 E
Weissenfels	23 10 S	16 25 E
Westfalenhof	22 13 S	16 23 E
Witputs	27 30 S	16 40 E

Rock Paintings

Aar, Lüderitzbucht	26 45 S	16 32 E
Alt Heusis, Windhoek	22 42 S	16 38 E
Ameib, Karibib	21 46 S	15 42 E
Anahib, Outjo	20 03 S	14 50 E
Anibib/Etemba	21 25 S	15 35 E

Anibib, Omaruru	21°28′	S	15°37′	E	Otjisemba, Okohandja	21°40′	S	16°33′	E	Langenberg, Outjo	20°34′	S	14°44′	E
Aris, Bethanien	26 20	S	16 43	E	Otjompaue South, Windhoek	22 34	S	16 53	E	Löwenquelle, west of farm Huab	20 30	S	14 03	E
Aritzis (Morgenrot), Rehoboth	23 28	S	16 25	E	Otjumue East, Omaruru	21 10	S	15 42	E	Margarethenthal, Gobabis	22 25	S	18 35	E
Aukaikas Damm, Windhoek	22 30	S	19 59	E	Persephone	20 05	S	15 15	E	Miteb, Rehoboth	23 30	S	17 00	E
Blaauwsport	20 34	S	14 28	E	Remhogte, Rehoboth	24 00	S	16 10	E	Nabis, Grootfontein	19 48	S	17 38	E
Blaauwsport	20 34	S	14 30	E	Rooiberg, Outjo	20 26	S	14 38	E	Oas, Gobabis	22 34	S	19 23	E
Blaesskranz, Rehoboth	24 08	S	16 17	E	Salzrivier, Outjo	20 00	S	14 59	E	Ombu, Omaruru	21 37	S	15 38	E
Brakwater (alt) Windhoek	22 25	S	17 04	E	Schanzen, Keetmanshoop	27 12	S	19 15	E	Okaturua, Omaruru	21 14	S	16 25	E
Brambach, Outjo	19 50	S	14 35	E	Sonntagsbrunn, Bethanien	27 20	S	17 30	E	Okonguavi, Outjo	20 20	S	15 32	E
Brandberg (8 localities)	21 08	S	14 31	E	Sorris-Sorris, Outjo	20 45	S	14 50	E	Okosongomingo, Otjiwarongo	20 47	S	17 05	E
Bremen Bethanien	25 50	S	17 10	E	Spitzkoppe	21 50	S	15 05	E	Olive, Windhoek	22 55	S	18 25	E
Chowachasib, Maltahöhe	20 12	S	15 20	E	Springbokfontein, Swakopmund	21 33	S	15 25	E	Omborokoberge, Otjiwarongo	20 30	S	16 35	E
Cypress, Outjo	20 08	S	15 15	E	Stingbank, Swakopmund	22 07	S	15 23	E	Onguati-Kakatsua, Outjo	21 46	S	15 38	E
Davib (east), Karibib	44 46	S	15 30	E	Swartmodde, Maltahöhe	22 40	S	16 12	E	Onguati, Omaruru	19 50	S	14 35	E
Die Valle, Rehoboth	24 08	S	16 05	E	Tinkaneib, Swakopmund	22 45	S	15 30	E	Otjikondo, Outjo	19 53	S	15 28	E
Eendrag, Outjo	20 20	S	15 15	E	Teschendorf, Outjo	19 52	S	15 11	E	Otjimakuru, Omaruru	21 23	S	16 23	E
Elisenheim, Windhoek	22 25	S	17 05	E	Tjirundu, Omaruru	21 12	S	15 45	E	Otjimbingue Reserve	22 10	S	16 00	E
Eremutua, Omaruru	20 49	S	16 48	E	Tsais (Zais)	24 00	S	16 10	E	Otjitambi, Outjo	19 48	S	15 10	E
Eremutua, Omaruru	20 55	S	15 50	E	Tsaobis, Karibib	22 28	S	15 50	E	Paresisberge, Outjo	20 30	S	16 10	E
Erongo, Gais, West	21 34	S	15 40	E	Tumib, Swakopmund	21 40	S	15 25	E	Rhinelands, Outjo	19 57	S	15 03	E
Etemba, Omaruru	21 25	S	15 35	E	Twyfelfontein, Outjo	20 33	S	14 21	E	Rietquell, Atzab, northwest of farm Huab	20 30	S	14 05	E
Fingerklippe, 11 km. west of Otjikondo	21 18	S	16 21	E	Ubibrivier, 10 km. north of Tinkaneib	22 12	S	15 35	E	Rooipunt, Bethanie	27 08	S	17 02	E
Franken, Outjo	19 38	S	14 47	E	Uhib, Karibib	22 12	S	15 30	E	Sorris-Sorris, Outjo	20 50	S	14 45	E
Gainatseb, Outjo	20 17	S	15 15	E	Warmfontein, Keetmanshoop	26 35	S	18 08	E	Stampriet near Oas, Gobabis	22 34	S	19 31	E
Gamamas, Windhoek	22 29	S	17 00	E	Weerlig (Orpheus) Outjo	20 00	S	15 00	E	Tiefland, Outjo	20 23	S	16 02	E
Gröss Spitzkoppe, Swakopmund	22 04	S	15 38	E	Weissenfels, Rehoboth	23 10	S	16 25	E	Tsosstsoss, Outjo	19 05	S	13 35	E
Harus, Hauchab, Lüderitzbucht	26 36	S	15 09	E	Westende, Windhoek	22 50	S	16 35	E	Tsumis, Rehoboth	23 36	S	17 22	E
Hoas, Outjo	19 55	S	14 45	E	Witwatersrand (Verbrannter Berg)	20 34	S	14 30	E	Twyfelfontein, Outjo	20 33	S	14 21	E
Hohenfelde, Outjo	19 44	S	15 15	E	Zaris, Maltahöhe	24 55	S	16 20	E	Waterberg, Otjiwarongo (*painted engravings*)	20 20	S	17 08	E
Hottentottenkirche	22 33	S	16 00	E	Zwiebelhochebene, Lüderitzbucht	26 36	S	15 09	E	Witvlei, Gobabis	22 25	S	18 25	E
Hubertustal, Omaruru	21 26	S	15 56	E	*Engravings*									
Hunsberge, Lüderitzbucht	26 50	S	16 40	E	Anhalt/Ivanhoe, Gobabis	22 42	S	18 20	E					
Kabes, Rehoboth	23 30	S	17 00	E	Anus, Poggenbank	27 20	S	16 32	E					
Kaliombo, Karibib	22 00	S	16 05	E	Aris, Bethanien	26 20	S	16 43	E					
Karios, Warmbad	27 39	S	17 50	E	Bethanis, Outjo	19 48	S	14 46	E					
Katemba, Outjo	19 40	S	14 45	E	Beuhla, Outjo	19 40	S	14 53	E					
Kaukausib, Omaruru	21 26	S	15 58	E	Brakwater (alt), Windhoek	22 25	S	17 04	E					
Klein Aukas, Karibib	22 02	S	15 38	E	Chairos, Outjo	19 50	S	15 06	E					
Klein Okombahe, Omaruru	20 59	S	15 45	E	Chowachasib, Lüderitzbucht	25 12	S	15 50	E					
Klein Spitzkoppe, Swakopmund	22 04	S	15 38	E	Daberas, Lüderitzbucht	28 20	S	16 45	E					
Klein Windhoek	22 35	S	17 08	E	Eduardsfelde/Klein Omaruru/Rhinelands	19 59	S	15 10	E					
Klipkop, Otjiwarongo	20 38	S	16 45	E	Eendrag, Outjo	20 20	S	15 45	E					
Kraiport, Karibib	23 00	S	15 50	E	Elisenhöhe, Windhoek	22 04	S	17 30	E					
Langenberg, Outjo	20 34	S	14 48	E	Fingerklippe, Outjo	19 53	S	15 28	E					
Nauzerus, Rehoboth	23 40	S	16 20	E	Franzfontein, Outjo	20 12	S	15 00	E					
Noab, Rehoboth	23 55	S	16 19	E	Gainatseb, Outjo	20 17	S	15 15	E					
Okapekaha, Outjo	21 28	S	15 50	E	Ghaub, Grootfontein	19 27	S	17 45	E					
Okombahe Reserve (2 localities)	21 22	S	15 23	E	Grauwater, Gobabis	22 28	S	18 53	E					
Omandumba East, Omaruru	21 31	S	15 38	E	Hunsberge, Aris, Lüderitzbucht	26 20	S	16 40	E					
Omandumda West, Omaruru	21 25	S	15 35	E	Kamanjab, Outjo	19 38	S	14 47	E					
Omaue, Omaruru	21 05	S	15 55	E	Karios, Warmbad	27 39	S	17 50	E					
Ombu, Omaruru	21 36	S	15 40	E	Katemba, Outjo	19 40	S	14 45	E					
Ombujomenge, Karibib	22 04	S	16 05	E	Krenzhof, Outjo	20 03	S	14 52	E					
Onanis, Swakopmund	22 45	S	15 40	E	Krisab Ghams, Outjo	20 03	S	14 50	E					
Onguati Kakatzua, Outjo	19 50	S	14 32	E										
Ostende, Omaruru	21 17	S	15 45	E										
Otjikondo, Outjo	21 18	S	16 21	E										

SUDAN

Compiled mostly from data supplied by A. J. Arkell, formerly of the University of London.

"Lower Palaeolithic"

"Pre-Abbevillian"

("Pebble Culture") Facies

Faras (south of)	21 50	N	31 05	E	
J. Nakhara	18 20	N	33 30	E	
Khor Hudi	17 33	N	34 15	E	
Merowe (north of)	18 43	N	31 49	E	
Saji	20 40	N	30 20	E	

Acheulian

Undifferentiated

Faras (several localities)	21 50	N	31 00	E	
J. Nakhara	18 20	N	33 30	E	
Khashm el-Girba	14 55	N	36 00	E	
Khor Abu Anga	15 35	N	32 13	E	
Khor Hudi	17 33	N	34 15	E	
Merowe (south of)	18 15	N	31 45	E	
Saji	20 40	N	30 20	E	
Wadi el-Gaab	19 12	N	30 27	E	
Wawa	20 27	N	30 30	E	

"Middle Palaeolithic"

"Levalloisian" (Levallois-Mousterian)

Tangasi	18 15	N	31 45	E	
Wadi Halfa (several localities)	21 56	N	31 18	E	

"Acheulio-Levalloisian"

Ahkeit	22 00	N	31 37	E	
Amaraw	20 55	N	30 15	E	

Khor Abu Anga	15°35′ N	32°13′ E
Relima Oasis	21 20 N	29 15 E
Sai Island	20 34 N	30 15 E
Wadi Afu	15 00 N	32 20 E
Wadi Halfa (several localities)	21 56 N	31 18 E
Wadi Siru	15 52 N	32 20 E
Wawa	20 27 N	30 30 E

Sangoan

Uncertain

Khor Abu Anga	15 35 N	32 13 E

"Upper Palaeolithic"

"Epi-Levalloisian"

Sikkat el-Mehpila	18 34 N	31 05 E
Wadi Halfa (several localities)	21 56 N	31 18 E
Wadi Halfa (north of)	22 15 N	31 14 E
Wadi el-Khowi	19 00 N	30 34 E

Aterian

Tekro (north of)	19 40 N	20 50 E

"Epi-Palaeolithic"

Tshitolian

Fashat	13 35 N	25 50 E

Khartoum "Mesolithic"

Atbara	17 37 N	34 00 E
Basa	16 35 N	33 50 E
J. Abraq el-Nus	17 15 N	31 28 E
J. Barkal	18 40 N	31 50 E
Kassala	15 33 N	36 28 E
Khartoum	15 30 N	32 35 E
Sofyiad Wata	15 35 N	34 00 E
Wadi el-Gaab	19 12 N	30 27 E
Wadi Hawhar	16 30 N	26 08 E

Northeast African Neolithic

Amaraw	20 55 N	30 15 E
Khartoum (south of)	15 20 N	32 28 E
Sabaloka	16 05 N	32 40 E
Shaheinab	15 50 N	32 30 E

Not Listed: Rock Art

SWAZILAND

Compiled from information supplied by E. Masson, Mbabane.

"Earlier Stone Age"

Acheulian

Undifferentiated

Kobolondo (east of)	25 51 S	31 20 E
Lombamba (2 localities)	26 30 S	31 11 E
Makane (east of)	26 18 S	31 00 E
Mbabane	26 20 S	31 06 E
Mbabane (south of)	26 24 S	31 09 E

"Middle Stone Age"

Stillbay/Pietersburg Complex

Black Umbeluzi River	26 18 S	31 09 E
Ingwavuma River	27 09 S	31 40 E
Kobolondo (south of)	25 52 S	31 15 E
Kobolondo (east of)	25 51 S	31 20 E
Komati River	26 04 S	31 09 E
Mbabane (north of)	26 19 S	31 09 E
Sayama (southeast of)	25 55 S	31 29 E

"Later Stone Age"

Smithfield B

Great Usutu River (2 localities)	26 35 S	30 50 E
Hawani (northeast of)	25 48 S	31 09 E
Inkomati	25 48 S	31 20 E
Komati	26 04 S	31 23 E
Lobamba	26 30 S	31 11 E
Mahamba (north of)	26°55′ S	31°02′ E
Mankaiana (east of)	26 41 S	31 08 E
Mbabane (north of)	26 19 S	31 09 E
Mbabane (south of)	26 20 S	31 09 E
Ngome	26 42 S	30 53 E

TANZANIA

Evidence based on data supplied by S. E. West, then of the King George V Memorial Museum, Dar-es-Salaam; G. H. Cole, Chicago Natural History Museum; and H. N. Chittick, British Institute for History and Archaeology in East Africa.

"Earlier Stone Age"

Oldowan

Olduvai gorge	2 56 S	35 10–20 E

Lower Acheulian

Olduvai gorge	2 56 S	35 10–20 E

Middle and Upper Acheulian

Certain

Isimila	7 54 S	35 36 E
Kalambo (north bank)	8 35 S	31 13 E
L. Haubi	4 47 S	35 56 E
Nyabusora	1 07 S	30 58 E
Olduvai gorge	2 56 S	35 10–20 E

Uncertain

Dindima	4 07 S	34 45 E
Lakoze River	5 24 S	35 25 E
Longido	2 50 S	36 37 E
Lower Kagera	1 12 S	31 05 E
Manyara "Pyramids"	3 47 S	35 50 E
Mumba hill	3 32 S	35 19 E

"First Intermediate"

Sangoan

Certain

Chamsala Mbuga	6 58 S	36 07 E
Pawaga road	7 39 S	35 43 E
Luwege River	8 39 S	37 24 E

Uncertain

Endulen	3 12 S	35 10 E
Lake Haubi, near	4 48 S	35 57 E
Vogel River Valley	3 22 S	35 09 E

Fauresmith

Isimila	7 54 S	35 36 E

"Middle Stone Age"

Stillbay/Pietersburg Complex

Apis Rock	2 40 S	35 20 E
Mumba hill	3 32 S	35 09 E

Lupemban

Kalambo Falls (north)	8 35 S	31 13 E

Sangoan (derivatives) Lupemban?

Iringa North road	7 08 S	35 59 E
Kilwa Kisiwani and Masoko	8 58 S	39 31 E
Kilwa Kivinje	8 44 S	39 23 E
Lukokwe	10 11 S	39 57 E
Matandu	8 45 S	39 18 E
Mkangira, Luwego Valley	8 57 S	37 25 E
Mpara hill	8 52 S	39 38 E
Noto ridge area	9 45 S	39 18 E
Noto ridge area	9 58 S	39 17 E
Noto ridge area	9 54 S	39 25 E
Noto ridge area	9 54 S	39 38 E
Noto ridge area	9 58 S	39 25 E

Undifferentiated

Apis Rock	2 40 S	35 20 E
Isimila	7 54 S	35 36 E
Kiomboi	4°17′ S	34°20′ E
Weru	7 50 S	35 30 E

"Middle Stone Age" (early)

Undifferentiated

Sekenke	4 16 S	34 09 E

Sub-Saharan Blade Industries

Kenya Capsian

Olduvai gorge	2 56 S	35 10–20 E

"Second Intermediate"

"Magosian"

Apis Rock	2 40 S	35 20 E
Uvinza area	5 11 S	30 42 E

"Later Stone Age"

Wilton

Certain

Apis Rock	2 40 S	35 20 E

Uncertain

Kandaga	4 30 S	35 48 E
Kilwa Masoko	8 57 S	39 28 E
Kisese	4 27 S	35 48 E
Kisiju	7 24 S	39 18 E
Pahi	4 44 S	35 57 E
Shigara	2 56 S	32 58 E

Blade and Microlithic Occurrences

Undifferentiated

Bunduki	7 00 S	37 37 E
Igawa	8 45 S	34 22 E
Kalambo River, near Muimbi	8 34 S	31 15 E
Lugalu	7 45 S	35 52 E
Masasi	10 43 S	38 47 E
Moto wa Mbu	3 21 S	35 50 E
Mumba hill	3 32 S	35 19 E
Twelele cave	8 02 S	31 30 E
Weru	7 50 S	35 30 E

Neolithic

East African Stone Bowl Industries

Engare, Nairobi	3 03 S	37 02 E
Kilimanjaro West	2 51 S	37 07 E
Monduli (Arusha)	3 17 S	36 25 E
Mumba hill	3 32 S	35 19 E
Ngorongoro	3 10 S	35 36 E

Paintings

Bahi	5 56 S	35 19 E
Bwanjai (4 localities)	1 13 S	31 42 E
Iambi (Sindiga district)	4 21 S	34 45 E
Ilangire (15 localities)	2 02 S	31 33 E
Kilimanjaro	2 48 S	37 05 E
Kondoa Group A incl. Kisese and Kandaga Cheke	4 27 S 4 30 S	35 48 E 35 45 E
Lelbeni	3 56 S	37 07 E
Masasi	10 43 S	38 47 E
Mumba hill	3 32 S	35 19 E
Mwanza, near	2 41 S	32 57 E
Mwanza, near	2 41 S	32 58 E
Shagein, near	4 32 S	38 20 E
Shingara	2 56 S	32 58 E
Sindiga district incl. Kititimu Ilangero	4 50 S	34 47 E
Tusa, near	4 43 S	34 55 E
Ukerewe Is. (3 localities)	4 10 S	38 07 E
Ukerewe Is. (3 localities)	2 03 S	32 55 E
	2 04 S	33 02 E

TOGO

Compiled from information supplied by O. Davies, University of Ghana.

"Earlier Stone Age"

Middle and Upper Acheulian

Uncertain

Agouden	7°34′ N	1°04′ E
Kpele-Beme	7 05 N	0 44 E
Kpime	6 57 N	0 39 E
Legouanselande	9 07 N	1 02 E
Sabatei	9 06 N	1 03 E
Sokode	9 00 N	1 08 E

"First Intermediate"

Sangoan

Certain

Agbessia	6 50 N	0 44 E
Amon-Oblo	7 28 N	0 56 E
Anie	7 50 N	1 10 E
Blakpa	6 58 N	1 11 E
Bassari	9 10 N	0 56 E
Ebera	7 32 N	1 05 E
Gadja	6 50 N	0 47 E
Have	7 36 N	1 10 E
Kande	9 54 N	1 02 E
Kpele-Beme	7 05 N	0 44 E
Kpele	6 57 N	1 13 E
Kpime	6 57 N	0 39 E
Lama Kara	9 39 N	1 13 E
Malfakassa FR	9 08 N	1 02 E
Pont Lassa	9 40 N	1 21 E
Palime	6 54 N	0 38 E
Sabatri	9 06 N	1 03 E
Sokode	9 00 N	1 09 E
Torogode	9 10 N	1 12 E
Tonu	6 58 N	0 33 E
Tchalo	8 55 N	1 07 E
Tchalo	8 54 N	1 07 E
Ugle bridge	7 23 N	1 08 E
Wouto	6 48 N	0 48 E

Uncertain

Glei	7 19 N	1 12 E
Goudere	7 33 N	1 05 E
Kpedji	6 35 N	1 00 E
Kpesside	9 47 N	1 05 E
Keve	6 20 N	1 03 E
Lilikore	6 36 N	1 10 E
Nuadja	6 56 N	1 16 E
Paratao	8 55 N	1 13 E
Zozokondji	6 53 N	0 55 E

"Middle Stone Age"

Lupemban

Uncertain

Bena	7 38 N	0 50 E

"Guinea Aterian"

Badou	7 35 N	0 36 E

"Middle Stone Age"

Undifferentiated

Avetonou	6 50 N	0 48 E
Blitta	8 19 N	0 58 E
Kpele-Beme	7 05 N	0 44 E
Naboulgou	10 10 N	0 49 E
Sousanni Mayo, 4 mi. south	10 20 N	0 29 E
Tchamba	9 01 N	1 23 E

"Ultimate Middle Stone Age"

Anié	7 46 N	1 11 E

"Later Stone Age"

"Mesoneolithic"

Undifferentiated

Agbatope	6 27 N	1 16 E
Agodjololo	7 55 N	1 10 E
Anié	7 46 N	1 11 E
Badou road	7 30 N	1 00 E
Bena	7 38 N	0 50 E
Blakpa	6°59′ N	1°10′ E
Blitta	8 19 N	0 58 E
Gadjagan	6 50 N	0 46 E
Katchammba	9 57 N	0 36 E
Koffikope	7 26 N	1 26 E
Kpesside	9 38 N	0 57 E
Kpovenou	6 49 N	0 53 E
Lome hospital	6 09 N	1 13 E
Malfakessa FR	9 03 N	1 02 E
Naboulgou	10 10 N	0 49 E
Nammbi-Kara	9 57 N	0 30 E
Nanou rapids	9 46 N	0 51 E
Natigou	10 38 N	0 13 E
Ouebou	9 07 N	1 01 E
Palime	6 53 N	0 38 E
Pont Lassa	9 40 N	1 21 E
Tchalo	8 55 N	1 07 E

TUNISIA

Compiled from data supplied by L. Balout, P. Biberson, and J. Tixier, Institut de Paléontologie humaine, Paris.

"Lower Palaeolithic"

Lower Acheulian

Sidi Zin	36 15 N	8 42 E

Middle and Upper Acheulian

El-Mekta	34 35 N	8 40 E
Gafsa	34 30 N	9 00 E
Redeyef	34 25 N	8 37 E

"Middle Palaeolithic"

Mousterian

Aïn Meterchem	35 12 N	8 42 E
Aïn Mrhotta	35 20 N	10 02 E
El-Guettar	34 25 N	9 00 E
Oued Akarit	33 58 N	9 58 E
Sidi Zin	36 15 N	8 42 E

"Upper Palaeolithic"

Aterian

Cap Blanc	37 05 N	9 52 E
Hergla	35 43 N	10 30 E
Koudiat el-Mergueb	34 27 N	8 33 E
Lac de Bizerte	37 18 N	9 25 E
Monastir, plateau	35 46 N	10 59 E
Oued Darb	34 43 N	8 52 E
Ragoubet Belgacem	36 43 N	8 25 E

"Epi-Palaeolithic"

Iberomaurusian

Aïn el-Atrous	33 45 N	9 30 E
Mareth	33 37 N	10 12 E
Menchia	33 34 N	8 55 E
Oued el-Akarit	33 54 N	9 47 E
Ouchtata, both banks	37 01 N	8 50 E

Capsian

Aïn Kouka	35 13 N	9 29 E
Aïn Meterchem	35 12 N	8 42 E
Aïn Zannouch	34 15 N	9 10 E
Bir Oum Ali	34 33 N	9 16 E
El-Mekta	34 35 N	8 40 E
Khanguet Halfaya	34 12 N	9 13 E
Mezzouna	34 52 N	9 20 E
Redeyef	34 25 N	8 37 E

Not Listed: Neolithic; Rock Art

UGANDA

Evidence based largely on data compiled by M. Posnansky, Department of History, Makerere College, Kampala, Uganda.

"Earlier Stone Age"

Oldowan

None confirmed

Lower Acheulian

None confirmed

Middle and Upper Acheulian

Certain

Mweya	0°12′ S	29°54′ E
Nsongezi	0 59 S	30 45 E
Oruchinga	0 58.5 S	30 45 E
Paraa	2 19 N	31 35 E
Solomon's gulley (Kibwera)	0 53 S	30 46 E
Toro-Semliki border, mainly Kisegi Valley	1 05 N	30 13 E

Uncertain

Bugungu	0 25 N	33 12 E
Kikaya hill	0 23 N	32 35 E
Murchison Falls park	2 11 N	31 38 E
Mweya	0 10 S	29 53 E
Rhino view	2 20 N	31 37 E

"First Intermediate"

Sangoan

Gayaza	0 45 S	30 47 E
Kabingo	0 46 S	30 45 E
Kagarama	0 48 S	30 45 E
Nsongezi	0 59 S	30 45 E
Oruchinga Valley	0 58 S	30 45 E
Sango Bay area	0 53 S	31 40 E

"Middle Stone Age"

Sangoan (derivatives) Lupemban?

Namirembe	0 19 N	32 35 E
Nsongezi	0 59 N	30 45 E
Solomon's gulley	0 53 N	30 46 E

Stillbay/Pietersburg Complex

Bugungu	0 25 N	33 12 E
Hoima	1 25 N	31 22 E
Ibuje	1 54 N	32 24 E
Kikaya hill	0 23 N	32 35 E
Moroto	2 30 N	34 38 E
Rupa	2 35 N	34 38 E
Walassi hill	1 11 N	34 13 E

Undifferentiated

Akokoro	1 43 N	32 24 E
Oruchinga	0 58 S	30 45 E
Paraa	2 19 N	31 35 E

"Second Intermediate"

"Magosian"

Magosi	2 55 N	34 31 E
Nabugabo	1 11 N	31 53 E

"Later Stone Age"

Wilton

Chui cave	1 11 N	34 13 E
Entebbe Aerodrome cave	0 03 N	32 26 E
Kantsyore Island	1 00 S	30 44 E
Magosi	2 55 N	34 31 E
Nsongezi rock shelter	1 00 S	30 45 E
Nyero	1 29 N	33 51 E

Blade and Microlithic Industries

Undifferentiated

Kagade	0 55 N	30 49 E
Kasese	0 08 N	30 10 E
Kibengo	1 04 N	30 46 E
Kikaya	1 23 N	32 35 E
Kyeitabya cave	0 29 N	32 35 E
Moroto	2 30 N	34 38 E
Mweya	0 10 S	29 56 E
Oruchinga erosion gulleys	0 58 S	30 45 E
Rupa	2 35 N	34 38 E
Ten Cents terrace	0 07 S	30 17 E

Rock Art

Paintings

Asuret	1°37′ N	33°37′ E
Kakoro (3 sites)	1 11 N	34 05 E
Lolui Island	0 07 S	33 41 E
Magosi	2 55 N	34 31 E
Ngora	1 26 N	33 46 E
Nyero	1 29 N	33 51 E
Olupe	1 30 N	33 31 E

UPPER VOLTA

Compiled from information supplied by O. Davies, University of Ghana, and R. Mauny, University of Paris.

"Lower Palaeolithic"

Oldowan

Poura	11 38 N	2 46 W
Wizini	10 54 N	2 50 W

Lower Acheulian

Uncertain

Diarobakoko	10 27 N	4 44 W

Middle and Upper Acheulian

Uncertain

Golokuati	7 00 N	0 26 E

Acheulian

Undifferentiated

Dia Ra Bakoko	10 22 N	4 56 W

"Middle Palaeolithic"

"Mousteroid" Occurrences

Tiebelé	11 05 N	0 58 W

"First Intermediate"

Sangoan

Diarobakoko	10 27 N	4 44 W
Ouessa	11 03 N	2 50 W
Po FR	11 23 N	1 07 W
Po	11 11 N	1 13 W
Zecco	11 03 N	0 45 W

"Middle Stone Age"

Undifferentiated

Boromo	11 46 N	2 56 W
Boussouma	12 54 N	1 05 W
Niou	12 46 N	1 55 W
Pama 55, Arly 60 km.	11 20 N	1 05 E
Porga drift	11 03 N	0 58 E
Samandeni	11 28 N	4 27 W
Tagbaladougou	10 47 N	4 42 W

"Ultimate Middle Stone Age"

Dapola	10 33 N	2 55 W

"Mesoneolithic" (West Africa)

Undifferentiated

Arly G.R. boundary	11 17 N	1 02 E
Arly	11 30 N	1 30 E
Beregadougou	10 47 N	4 45 W
Bolo crossing	11 43 N	2 44 W
Boromo	11 47 N	2 55 W
Boukero	10 38 N	2 56 W
Dapola	10 34 N	2 55 W
Diarobakoko	10 29 N	4 46 W
Djipologo	10 56 N	3 10 W
Douna	10 37 N	5 07 W
Doura	12 54 N	2 12 W
Fada N'Gourma	12 04 N	0 20 E
Forgane	10 50 N	2 56 W
Gorougbe	10 39 N	2 56 W
Karfiguéla	10 42 N	4 48 W
Karfiguéla waterfall	10°43′ N	4°49′ W
Koro	11 09 N	4 13 W
Laro	11 18 N	2 51 W
Leraba bridge	10 10 N	5 04 W
Lemouroudougou	10 41 N	4 47 W
Nabere FR	10 55 N	3 39 W
Nebou	11 17 N	1 56 W
Niego	11 06 N	2 42 W
Niou	12 45 N	1 55 W
Nobere	11 26 N	1 11 W
Ouessa	11 02 N	2 49 W
Pama 55, Arly 60 km.	11 20 N	1 05 E
Pontore	12 45 N	1 09 W
Poura	11 38 N	2 46 W
Samandéni	11 28 N	4 27 W
Tanbolo	11 04 N	1 07 W
Tianga crossing, Aumani	12 19 N	1 39 E
Tougouya	13 27 N	2 03 W
Wizini	10 53 N	2 51 W
Wolonkoto	10 40 N	4 56 W

West African Neolithic

Banfora	10 30 N	4 48 W
Beriga Dougou	10 35 N	4 42 W
Digfoula	10 18 N	4 37 W
Gaoua	10 18 N	3 20 W
Karaborora	10 05 N	4 42 W
Karankasio	11 15 N	4 45 W
Koumi	11 10 N	4 30 W
Loumasa	10 24 N	5 18 W
Nayouna	10 21 N	5 12 W
Ouahigouya	13 35 N	2 28 W
Pabré	12 36 N	1 30 W
Sindou	10 28 N	5 15 W
Siniena	10 25 N	4 45 W

Engravings

Aribinda	14 14 N	0 52 W
Boradougou	11 11 N	4 09 W

URUNDI

Information inadequate for compilation.

ZAMBIA

Compiled largely from data supplied by the National Monuments Commission, Zambia.

"Earlier Stone Age"

Oldowan

Kalomo River gravels	17 03 S	26 27 E

Acheulian

Undifferentiated

Broken hill, no. 1 kopje	14 29 S	28 28 E
Chilesha railway cutting	17 02 S	26 20 E
Chingola	12 33 S	27 51 E
Chisingasinga	16 52 S	28 02 E
Freeman's cave	15 50 S	28 26 E
Kafue-Mazabuka road	15 59 S	27 08 E
Kalambo Falls	8 35 S	31 14 E
Kalomo Boma	16 57 S	26 29 E
Kalomo railway cutting	17 02 S	26 21 E
Kalomo railway cutting	17 02 S	26 22 E
Kalomo River gravels	17 03 S	26 27 E
Kalomo-Zimba road	17 05 S	26 25 E
Kalomo-Zimba road	17 12 S	26 20 E
Kashiba	10 23 S	28 42 E
Kaumba	16 48 S	28 06 E
Kotakota	16 52 S	28 00 E
Lake Chila	8 47 S	31 23 E
Lilanda	15°23′ S	28°19′ E
Livingstone:		
Anderson's drift	17 51 S	25 46 E
Golf course	17 51 S	25 51 E
Legg's farm	17 51 S	25 52 E
McKillop's brickyard	17 52 S	25 52 E
Nansanzu stream	17 52 S	25 53 E
Old drift	17 51 S	25 47 E
Sewage works	17 52 S	25 50 E
Lukanda	16 51 S	28 04 E
Maboya	16 52 S	28 01 E
Magoye road bridge	16 03 S	27 34 E
Magoye River dam	16 03 S	27 35 E
Magoye River	16 05 S	27 36 E
Magoye River	16 07 S	27 36 E
Manyanga	17 14 S	27 44 E
Maramba mission	17 50 S	25 52 E
Monze Donga	16 16 S	27 30 E
Mpulungu	8 44 S	31 08 E
Mpulungu, Good News Monument	8 45 S	31 07 E
Muchuto stream	15 34 S	28 18 E
Mudela Donga	16 57 S	26 57 E
Munali pass	15 57 S	28 09 E
Ndola, Allison's quarry	13 03 S	28 44 E
Ndola, Munkulungwe quarry	13 05 S	28 46 E
Senanga	16 08 S	23 17 E
Sengwa	16 52 S	28 02 E
Siakaliamutondo	16 51 S	28 05 E
Siamuswe	16 52 S	28 01 E
Siasuntwe	16 54 S	27 58 E
Songwe gorge	17 58 S	25 51 E
Victoria Falls, eastern cataract	17 54 S	25 51 E
Victoria Falls, Silent Pool	17 56 S	25 51 E

"First Intermediate"

Sangoan

Bowood railway siding	17 06 S	26 18 E
Broken hill, no. 1 kopje	14 29 S	28 28 E
Chemekane hills	10 22 S	32 07 E
Chisingasinga	16 52 S	28 02 E
Chikunku camp	10 12 S	32 50 E
Chilesha railway cutting	17 02 S	26 20 E
Chiona	16 52 S	28 01 E
Freeman's Concessions	15 46 S	28 21 E
Impwe	16 43 S	27 46 E
Isoka	10 10 S	32 37 E
Johnston Falls	10 31 S	28 40 E
Kafubu River	12 57 S	28 33 E
Kafue road bridge	15 50 S	28 14 E
Kalambo Falls	8 35 S	31 14 E
Kalomo-Zimba road	17 05 S	26 25 E
Kalundu mound	17 03 S	26 31 E
Kame Kache Mulapo	17 27 S	24 21 E
Kanchindu	17 35 S	27 17 E
Kanchindu	17 36 S	27 16 E
Kashiya River	15 52 S	28 14 E
Kasowa stream	9 47 S	33 14 E
Katima Mulilo	17 27 S	24 16 E
Livingstone:		
Anderson's drift	17 51 S	25 46 E
Beaton's farm	17 47 S	25 46 E
Knight's drive	17 50 S	25 48 E
Legg's farm	17 51 S	25 52 E
Maramba quarries	17 50 S	25 52 E
Old drift	17 51 S	25 47 E

Skenck's brickyard	17°52′	S	25°52′	E
Zambezi scarp	17 54	S	25 52	E
Lukanda hill	16 53	S	28 03	E
Lukanda hill	16 51	S	28 03	E
Lundu	10 56	S	32 31	E
Lusu	17 14	S	24 08	E
Maboya	16 52	S	28 01	E
Mafinga Mountains	9 57	S	33 21	E
Magoye	16 02	S	27 35	E
Manzeia	16 49	S	28 05	E
Middlewater brick-fields	15 19	S	28 16	E
Mishishi River	12 55	S	28 31	E
Mpangala	9 53	S	33 20	E
Mpulungu:				
Fisher's Bay	8 45	S	31 06	E
Good News Monument	8 45	S	31 07	E
Kasakalawe road	8 48	S	31 05	E
Main road	8 48	S	31 07	E
Munyamadzi River	12 28	S	32 13	E
Mwemba	17 36	S	27 19	E
Mweru marsh	8 41	S	29 31	E
Mwila village	11 14	S	32 28	E
Mwinimpangala village	9 53	S	33 16	E
Namumba	16 47	S	28 11	E
Namwala, pontoon road	15 28	S	26 22	E
Natebe scarp	17 43	S	25 27	E
Ndola, Allison's quarry	13 03	S	28 44	E
Ndola, Munkulungwe quarry	13 05	S	28 46	E
Ngambwe rapids	17 20	S	24 10	E
Ngonye Falls	16 40	S	23 36	E
Sangole-Luangwa confluence	9 52	S	33 14	E
Sejoba	17 51	S	27 08	E
Siabwengu	16 53	S	27 56	E
Siamuswe	16 52	S	28 01	E
Siasuntwe	16 54	S	27 58	E
Simani	16 51	S	28 03	E
Sinachisigili	17 27	S	27 27	E
Songwe gorge	17 58	S	25 51	E
Sumbu Bay	8 31	S	30 30	E
Victoria Falls, Silent Pool	17 56	S	25 51	E
Viziwa Petrified Forest	10 48	S	33 03	E
Wotherspoon's donga	15 42	S	28 13	E
Zambezi Sawmills railway	17 13	S	25 21	E

"Middle Stone Age"

Stillbay/Pietersburg Complex

Bimbe	16 54	S	27 52	E
Buni	17 04	S	27 47	E
Chagowola	17 06	S	27 38	E
Chepepo's	16 54	S	27 56	E
Chete gorge	17 17	S	27 37	E
Chezia springs	16 53	S	27 51	E
Chibulamenda	16 49	S	28 05	E
Chibwe	16 52	S	27 59	E
Chibwe	16 51	S	27 58	E
Chikumbe	17 04	S	27 47	E
Chisingasinga	16 52	S	28 02	E
Choma-Kanchindu road	17 33	S	27 15	E
Choma-Kanchindu road	17 22	S	27 17	E
Impwe	16 43	S	27 46	E
Kanchindu	17 36	S	27 16	E
Kaumba	16 48	S	28 06	E
Kaumba	16 47	S	28 06	E
Kaumba	16 47	S	28 07	E
Kaumba	16 47	S	28 09	E
Lukanda	16 51	S	28 04	E
Lukanda hill	16 51	S	28 03	E
Lumbu	16 49	S	28 07	E
Majune road	17 25	S	27 28	E
Makololo	16 44	S	28 13	E
Manyanga	17 04	S	27 45	E
Manyanga	17 04	S	27 43	E
Maze	17 28	S	26 26	E
Manzeia	16 49	S	28 05	E
Mazila	16 43	S	28 15	E
Munyali	17 00	S	27 46	E
Mwemba	17 36	S	27 19	E
Namumba	16 47	S	28 10	E
Namutope	17 47	S	27 08	E
Sijoba	17 51	S	27 08	E
Siakaliamutondo	16 51	S	28 05	E
Siamfoma	16 50	S	28 05	E
Sianavilu	17 47	S	27 08	E
Siasuntwe	16 54	S	27 58	E
Siatwinda	17 18	S	27 25	E
Siatwinda-Chesigili road	17 26	S	27 27	E
Siluwe	17 27	S	27 29	E
Simani	16 51	S	28 03	E
Simondole	16 55	S	27 57	E
Simondole	16 51	S	27 56	E
Sinachisigili	17 26	S	27 28	E
Sinazongwe	17 22	S	27 28	E
Songwe	17 16	S	27 32	E

Lupemban

Chamana River	11 38	S	32 53	E
Chambeshi pontoon	10 56	S	31 05	E
Chibi village	9 29	S	30 33	E
Chikwamba village	12 27	S	32 13	E
Isoka	10 10	S	32 37	E
Kalambo Falls	8 35	S	31 14	E
Kazembe	12 10	S	32 35	E
Lundazi	12 18	S	33 12	E
Manga village	11 52	S	32 38	E
Mawe River	8 22	S	29 44	E
Mpulungu:				
Fisher's Bay	8 45	S	31 06	E
Kasakalawe road	8 48	S	31 07	E
Main road	8 47	S	31 07	E
Six metre beach	8 44	S	31 07	E
Mulenga village	9 07	S	30 02	E
Mulenga village	9 10	S	30 06	E
Mulindwa village	11 24	S	32 37	E
Mulopwe village	11 07	S	32 54	E
Mundu village	12 38	S	32 23	E
Munwa stream	10 30	S	28 42	E
Munyamadzi River	12 28	S	32 08	E
Musombeshi stream	8 53	S	31 18	E
Saisi River	9 07	S	31 29	E

Undifferentiated

Chifumpa kopje cave	13 13	S	28 10	E
Chifumpa lagoon	13 12	S	28 10	E
Chilesha railway cutting	17 02	S	26 20	E
Chingola, Hippo Pool	12 30	S	27 52	E
Chipapa dam	15 43	S	28 20	E
Chirundu bridge	16 02	S	28 52	E
Chirundu forest	16 02	S	28 43	E
Dambwa forest	17 47	S	25 50	E
Kafubu River	12 59	S	28 36	E
Kafushi River	14 52	S	27 40	E
Kalomo:				
Old Lusaka road	17 03	S	26 32	E
Railway cutting	17 02	S	26 21	E
Railway cutting	17 02	S	26 22	E
River gravels	17 03	S	26 27	E
Zimba road	17 12	S	26 20	E
Kansanshi	12 06	S	26 24	E
Katombora	17°49′	S	25°21′	E
Katombora road vlei	17 47	S	25 21	E
King Edward mine	15 30	S	27 55	E
Leopard's hill cave	15 35	S	28 43	E
Livingstone:				
Anderson's drift	17 51	S	25 46	E
Game park	17 53	S	25 48	E
Katombora road	17 51	S	25 49	E
Knight's drive	17 50	S	25 48	E
Legg's farm	17 51	S	25 52	E
Maramba mission	17 50	S	25 52	E
Maramba-Zambezi confluence	17 53	S	25 50	E
McKillop's brick-yard	17 52	S	25 52	E
Measuring post	17 54	S	25 51	E
Old drift	17 51	S	25 47	E
Old game park	17 53	S	25 51	E
Railway cuts	17 48	S	25 52	E
Sewage works	17 52	S	25 50	E
Lukulu River	12 52	S	30 51	E
Lunsemfwa bridge	13 45	S	29 05	E
Lusu	17 14	S	24 08	E
Magoye railway crossing	16 00	S	27 35	E
Magoye road bridge	16 02	S	27 34	E
Mamikaze Mulapo	16 40	S	23 38	E
Mazabuka bridge	15 52	S	27 50	E
Mkushi stream	13 33	S	29 37	E
Mudela donga	16 57	S	26 57	E
Mumbwa caves	14 58	S	27 01	E
Namazumbi donga	17 26	S	25 52	E
Namwala pontoon	15 40	S	26 27	E
Nansanzu village	17 48	S	25 57	E
Nanzhenda donga	15 52	S	28 14	E
Ndola:				
Allison's quarry	13 03	S	28 44	E
Cecil avenue	12 58	S	28 39	E
Munkulungwe quarry	13 05	S	28 46	E
Mushili road	13 05	S	28 38	E
Speck's brickfield	12 58	S	28 36	E
Stansted road	12 57	S	28 39	E
Ngambwe rapids	17 20	S	24 10	E
Ngonye Falls	16 38	S	23 34	E
Pangwe rapids	17 23	S	24 12	E
Senanga	16 08	S	23 17	E
Siachitema	16 50	S	26 07	E
Siakaunda hill	16 41	S	26 17	E
Siamuswe	16 52	S	28 01	E
Silver Rest	15 22	S	28 25	E
Simango	17 26	S	25 46	E
Sinde mission	17 40	S	25 50	E
Sinde River	17 49	S	25 44	E
Songwe gorge	17 58	S	25 51	E
Sunflower farm	17 05	S	26 47	E
Twin Rivers kopje	15 25	S	28 08	E
Victoria Falls:				
Eastern cataract	17 55	S	25 51	E
Fourth gorge plateau	17 56	S	25 50	E
Silent Pool	17 56	S	25 51	E
Washa River	13 10	S	28 42	E
Wotherspoon's donga	15 42	S	28 13	E

"Second Intermediate"

"Magosian"

Chepepo's	16 54	S	27 56	E
Chibwe	16 52	S	27 59	E
Chimamba rapids	17 56	S	26 07	E
Chingola-Solwezi road	12 33	S	27 31	E
Kalambo Falls	8 35	S	31 14	E
Kanchindu road	17 34	S	27 18	E
Livingstone:				
Agricultural show-ground	17 52	S	25 51	E

ATLAS

OF AFRICAN PREHISTORY

MAP 1

TOPOGRAPHY

0 500 1500 2500 3500 Meters

0° 16° 32° 100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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MAP 2

GEOLOGY

SEDIMENTARY ROCKS

- QUATERNARY
- TERTIARY
- CRETACEOUS
- JURASSIC
- TRIASSIC
- KARROO SYSTEM: Stormberg, Beaufort, Ecca, Dwyka
- PERMIAN
- CARBONIFEROUS
- PALEOZOIC and PRECAMBRIAN (including undifferentiated metamorphic and gneissic rocks of the Basement Complex)

IGNEOUS ROCKS

- Acid / Basic — INTRUSIVE ROCKS
- Acid / Basic — EFFUSIVE ROCKS
- STRATIFORM FLOWS
- "GREENSTONES"
- GRANITIZED AREAS

S	Sands
St	Sandstones
L	Limestones
M	Marls
Q	Quartzites
C	Conglomerates
Sc	Schists
Gn	Gneisses
Sh	Shales
B	Basalts
Rh	Rhyolites

0° 16° 32° 100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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MAP 3

SOILS

- Desert soils: undifferentiated
- Desert soils: sands, dunes (ergs)
- Desert soils: pebble-strewn surfaces (regs)
- Desert soils: calcareous crusts, gypsum soils
- Bare rock and rock debris
- Skeletal soils, mostly rock debris with pockets of soil
- Weakly developed soils on young alluvium, often halomorphic or hydromorphic
- Soils developed on recent volcanics
- High Veldt prairie soils (South Africa), gley-like podzolic soils, readily erodable
- Coastal belt soils of Eastern Province (South Africa), sandy to sandy-clay soils, often overlying compact clay substratum, and then readily erodable
- Sandy to sandy clay soils of south and southwest Cape Province, often weakly developed, shallow and gritty, associated with skeletal soils
- Brown soils of the arid and semi-arid tropical regions
- Lithomorphic soils with dark non-kaolinitic clays, developed on calcareous and basic igneous rocks
- Soils with dark non-kaolinitic clays, confined to topographic depressions
- Ferruginous tropical soils (fersiallitic soils) on sandy parent material
- Ferruginous tropical soils (fersiallitic soils) on miscellaneous rocks
- Ferrisols
- Ferrallitic soils on sandy parent material
- Ferrallitic soils on clayey sands to sandy clays
- Ferrallitic soils on miscellaneous rocks
- Halomorphic soils
- Hydromorphic soils, temporarily or permanently waterlogged
- Organic soils, mainly lowland swamps but also occurring in high mountain areas

100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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MEAN ANNUAL RAINFALL

Millimetres

- Above 4000
- 3200-4000
- 2600-3200
- 2200-2600
- 1800-2200
- 1400-1800
- 1000-1400
- 800-1000
- 600-800
- 400-600
- 200-400
- 100-200
- 0-100

0° 16° 32° 100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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MAP

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MAP 6

HYPOTHETICAL RAINFALL
AT 150% OF PRESENT

- 0-100 Mm.
- 100-200
- 200-400
- 400-600
- 600-800
- 800-1000
- 1000-1400
- 1400-1800
- 1800-2200
- 2200-2600
- 2600-3200
- 3200-4000
- Over 4000

100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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AT 20% OF PRESENT HYPOTHETICAL RAINFALL

1800-2500
1400-1800
1000-1400
800-1000
600-800
400-600
200-400
100-200
0-100 MM.

100 0 100 200 300 400 500 600 700 Miles

100 0 200 400 600 800 1000 Kilometers

HYPOTHETICAL VEGETATION AT 50% OF PRESENT RAINFALL (Temperatures As Today)

- Tropical rain forest
- Tropical montane forest
- Tropical forest-savanna mosaic
- Tropical dry deciduous savanna woodland
- Tropical grassland and deciduous scrub
- Subtropical mixed woodland
- Subtropical grassland and scrub
- Sub-desert steppe and scrub
- Desert

0° 16° 32° 100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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HYPOTHETICAL VEGETATION AT 150% OF PRESENT RAINFALL (Temperatures As Today)

- Tropical rain forest
- Tropical montane forest
- Tropical forest-savanna mosaic
- Tropical dry deciduous savanna woodland
- Tropical grassland and deciduous scrub
- Subtropical mixed woodland
- Subtropical grassland and scrub
- Sub-desert steppe and scrub
- Desert

0° 16° 32° 100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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HYPOTHETICAL VEGETATION
RAINFALL AS AT PRESENT
(Temperatures 5°C Lower Than Today)

- Tropical rain forest
- Tropical montane forest
- Tropical forest-savanna mosaic
- Tropical dry deciduous savanna woodland
- Tropical grassland and deciduous scrub
- Subtropical mixed woodland
- Subtropical grassland and scrub
- Temperate mixed forests
- Temperate grassland
- Sub-desert steppe and scrub
- Desert

100 0 200 400 600 800 1000 Kilometres

100 0 100 200 300 400 500 600 700 Miles

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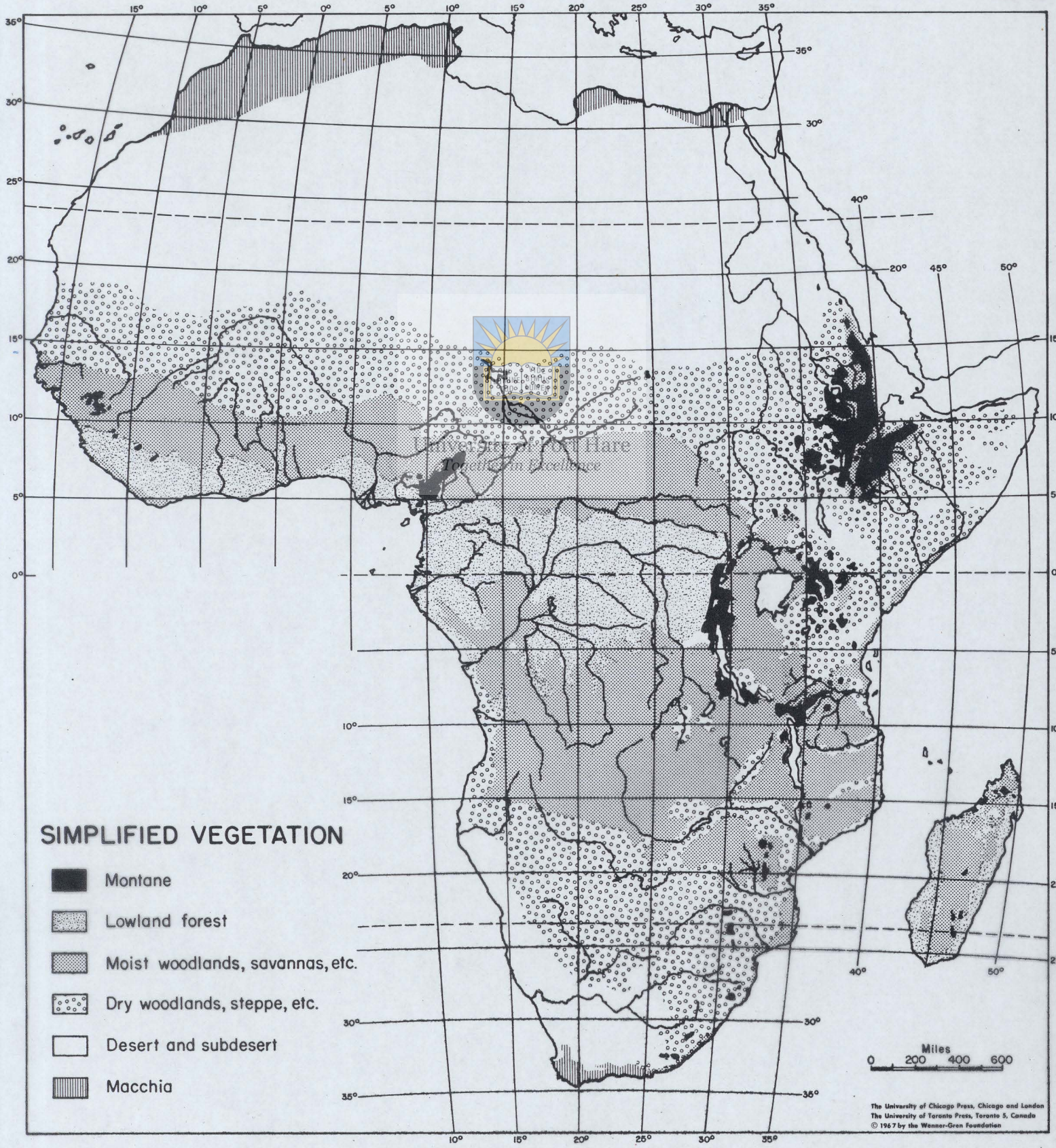
MAP 12



OVERLAY 1

DRAINAGE

(WITH MAIN ARCHAEOLOGICAL SITES NOT SHOWN ON OTHER MAPS)

0° 100 0 200 400 600 800 1000 Kilometres
16°
32°

0° 100 0 100 200 300 400 500 600 700 Miles
16°
32°

OVERLAY 5

OVERLAY 3

HUMAN TRYPANOSOMIASIS

AREAS OF *T. gambiense* TRANSMISSIONS

AREAS OF *T. rhodesiense* TRANSMISSIONS

AREAS WHERE BOTH SPECIES OCCUR

OVERLAY 4

CATTLE TRYPANOSOMIASIS

AREAS OF TSETSE FLY OCCUPATION

OVERLAY 5

MALARIA

YEAR AROUND ENDEMIC MALARIA

SEASONAL MALARIA

SPORADIC MALARIA

MALARIA FREE

OVERLAY 6

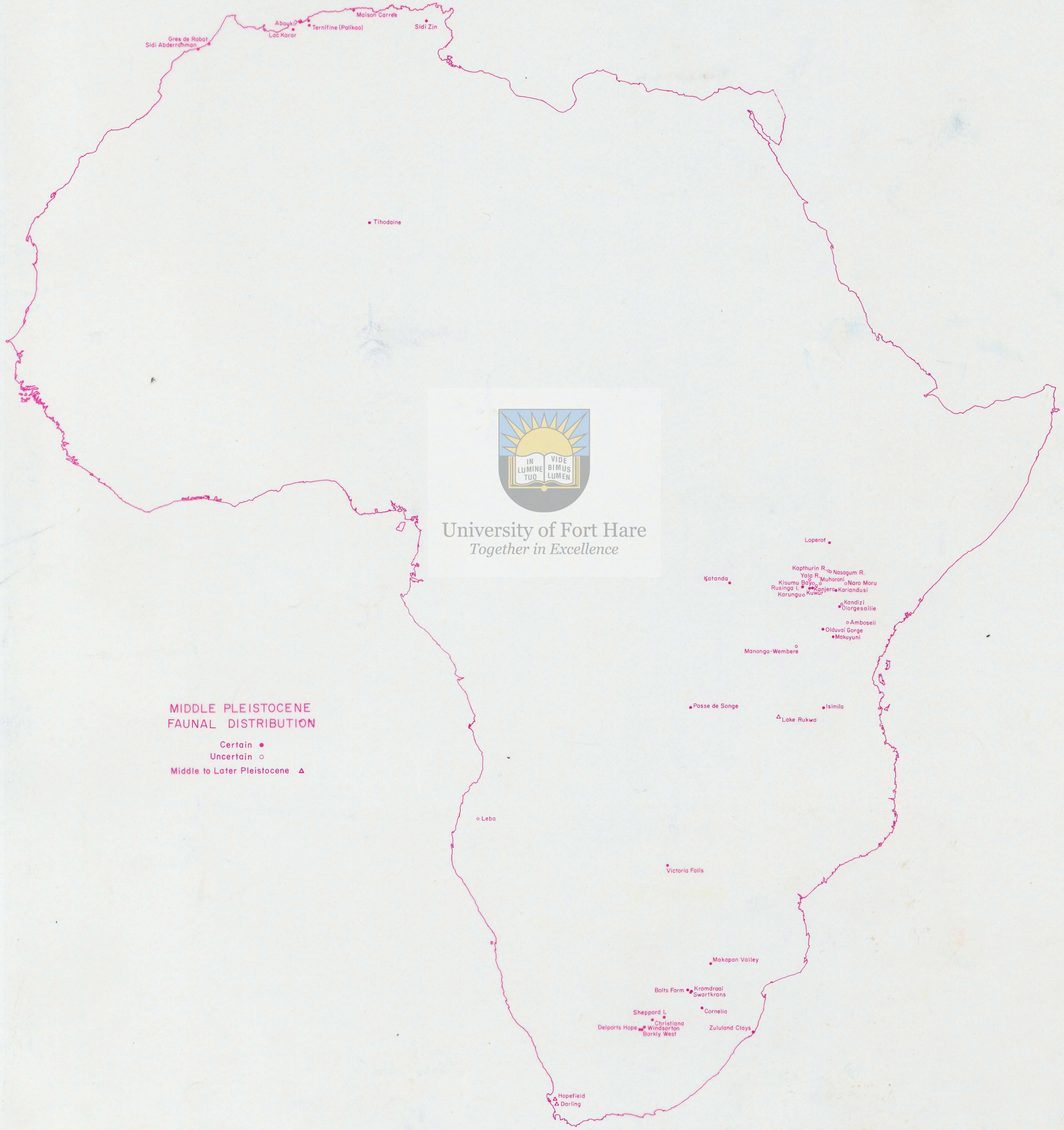
Kharoubi
Bel Hacel
Relizane
Ain Boucherit
Ain Hanech
St. Arnaud
Lac Ichkeul
Salé
Ferme Guyot
Fouarat
Oued el Akrech
Ain Brimba
Wadi Halfa
Koro Toro
Khartoum
Shungura
Omo
Todenyang
Lokitaung
Marsabit Road
Nyamavi
Kaiso
Lower Semliki
Nyabrogo-Makoga
Upper Semliki
Kazinga
Kanam
Kikagati
Vogel R.
Olduvai Gorge
Uraha Hill-
Chiwondo Beds
Makapaansgat Limeworks
Sterkfontein
Taung
Langebaanweg

EARLIER PLEISTOCENE
FAUNAL DISTRIBUTION

Certain ■
Uncertain □

Earlier to Middle Pleistocene ◘

OVERLAY 7



MIDDLE PLEISTOCENE
FAUNAL DISTRIBUTION

Certain ●
Uncertain ○
Middle to Later Pleistocene △

OVERLAY 8

OVERLAY 9

Ternifine (Palikao)

Rabat

Sidi Abderrahman

Yayo

Baringo

Kanjera
Kanam

Peninj

Olduvai Gorge

Laetolil

Makapansgat Limeworks

Swartkrans

Kromdraai
Sterkfontein

Taungo

FOSSIL MAN IN AFRICA
Earlier and Middle Pleistocene Sites

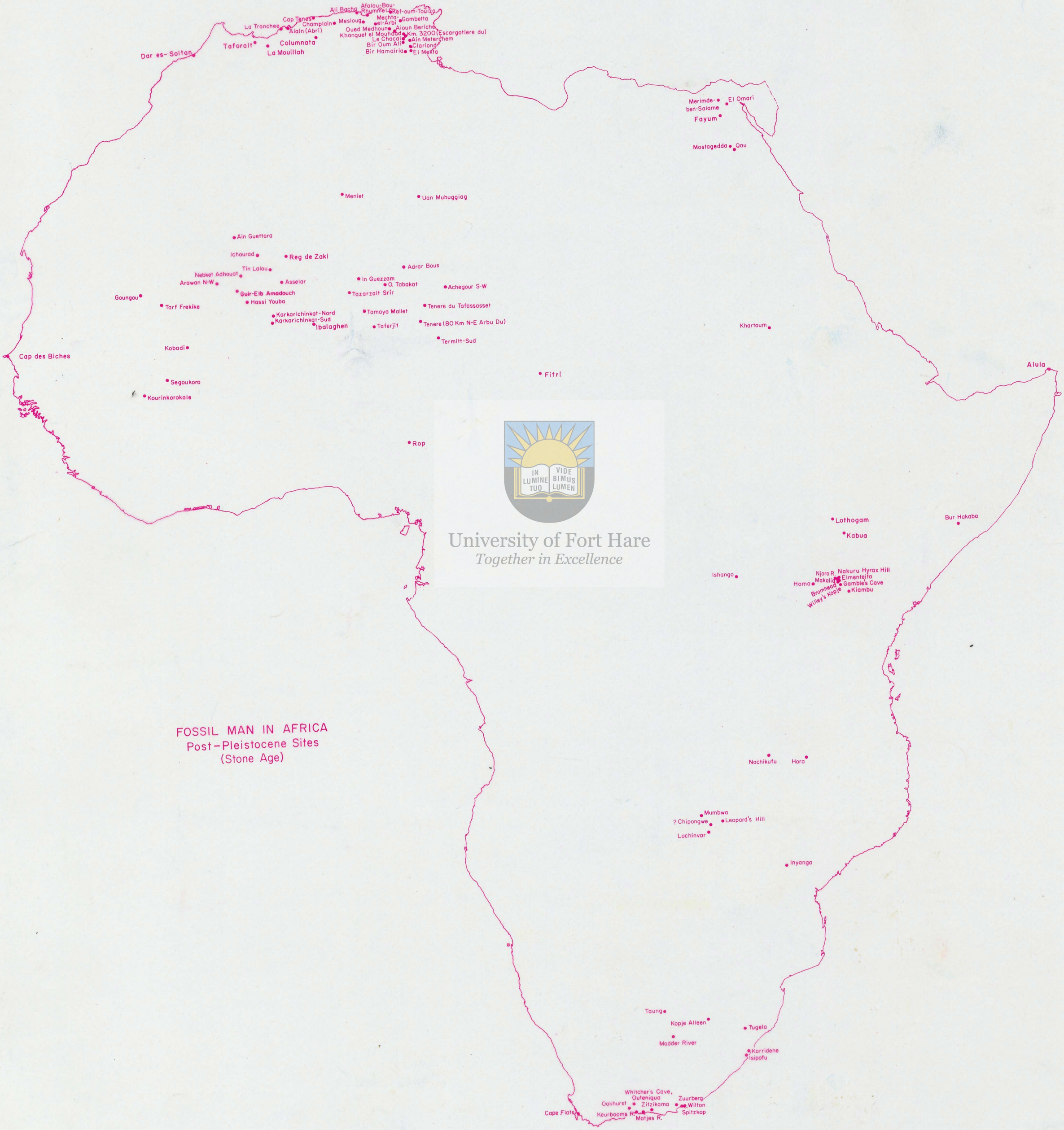
- Earlier Pleistocene Sites
- Middle Pleistocene Sites
- Earlier and Middle Pleistocene Sites

OVERLAY 10

Tangier (Mugharet-el-Aliya)
Témara
Taforalt
Jebel Irhoud
Haua Fteah
Kom Ombo
Tushka
Wadi Halfa
Sahaba
Singa
Dire Dawa
Iwo Eleru
? Gamble's Cave
Naivasha
Garusi
Olduvai Gorge
L. Eyasi
Kakontwe
Broken Hill
Mumbwa
Maramba
Cave of Hearths (Makapansgat)
Springbok Flats (Tuinplaats)
Kassimatis
Boskop
Ingwavuma (Border Cave)
Florisbad
? Hofmeyer
Hopefield (Saldanha)
Kalk Bay
Fish Hoek
? Matjes R.
East London

FOSSIL MAN IN AFRICA
Later Pleistocene Sites

OVERLAY 11



FOSSIL MAN IN AFRICA
Post-Pleistocene Sites
(Stone Age)

OVERLAY 15

„EARLIER STONE AGE": „LOWER PALAEOLITHIC"
INDUSTRIES

OLDOWAN Certain Uncertain

FACIES IN NORTHERN AFRICA
INCLUDING „PRE-ABBEVILLIAN" („PEBBLE CULTURE")

LOWER ACHEULIAN

OVERLAY 13

INDUSTRIES
"EARLIER STONE AGE": "LOWER PALAEOLITHIC"

MIDDLE AND UPPER ACHEULIAN: ▲Certain △Uncertain

◆ FACIES OF "CLACTO-TAYACIAN"\
"HOPE FOUNTAIN" TYPE

■ UNDIFFERENTIATED "EARLIER STONE AGE"

● "PRE-ABBEVILLIAN" (HAUA FTEAH)

OVERLAY 14

"FIRST INTERMEDIATE PERIOD"
"MIDDLE PALAEOLITHIC"
INDUSTRIES

	Certain	Uncertain
"LEVALLOIS-MOUSTERIAN" and MOUSTERIAN	▪	▫
"ACHEULIO-LEVALLOISIAN"	•	○
FAURESMITH	▲	△

OVERLAY 15

"FIRST INTERMEDIATE PERIOD"
INDUSTRIES

	Certain	Uncertain
SANGOAN	◆	◇

OVERLAY 16

"MIDDLE STONE AGE"
"UPPER PALAEOLITHIC"
INDUSTRIES

	Certain	Uncertain
ATERIAN	■	□
"EPI-LEVALLOISIAN" (SEBILIAN, KHARGAN, "KHORMUSAN" PHASES)	•	○
LUPEMBAN	▲	△

OVERLAY 17

"MIDDLE STONE AGE"
INDUSTRIES

	Certain	Uncertain
STILLBAY/PIETERSBURG COMPLEX	•	•

OVERLAY 18

INDUSTRIES
„UPPER PALAEOLITHIC"
„MIDDLE STONE AGE":

Certain Uncertain

NORTH-EAST AFRICAN AND HORN:
„LEVALLOISIAN"

NORTH AFRICAN BLADE INDUSTRY:
DABBA

SUB-SAHARAN BLADE INDUSTRY:
KENYA CAPSIAN

GENERAL:
UNDIFFERENTIATED
„MOUSTEROID" OCCURRENCES
(NORTHERN SAHARA) AND „MIDDLE
STONE AGE" (SOUTHERN AFRICA)
(STAGES A-C)

OVERLAY 19

"SECOND INTERMEDIATE PERIOD":
"LATE UPPER PALAEOLITHIC"
INDUSTRIES

	Certain	Uncertain
NORTH AFRICAN BLADE INDUSTRIES: ET TERA	■	□
IBERO-MAURUSIAN (LOWER STAGE)	●	○
"MENCHIAN", "SILSILIAN", "SEBEKIAN"	▲	△
SUB-SAHARAN BLADES INDUSTRIES:		
KENYA CAPSIAN (STAGE D)	◆	◇
HARGEISAN	▰	▱
"MAGOSIAN"	▼	▽
"LUPEMBO-TSHITOLIAN"	✚	✜
GENERAL:		
OTHER UNDIFFERENTIATED AND EVOLVED	✖	⊠

"MIDDLE STONE AGE" OCCURRENCES:
'HALFAN' AND 'GADAN' IN NUBIA

OVERLAY 20

"LATER STONE AGE":
"EPI-PALAEOLITHIC" INDUSTRIES

		Certain	Uncertain
NORTH AFRICAN:	UPPER CAPSIAN	▲	△
	CAPSIAN TYPIQUE	■	□
SUB-SAHARAN:	TSHITOLIAN	●	○
ULTIMATE "MIDDLE STONE AGE" (WEST AFRICA)		◆	◇
UNDIFFERENTIATED BLADE AND MICROLITHIC OCCURRENCES		▲	△

OVERLAY 21

"LATER STONE AGE": "EPI-PALAEOLITHIC" INDUSTRIES

	Certain	Uncertain
IBERO-MAURUSIAN (MIDDLE AND UPPER STAGES)	▲	△
KÉRÉMIAN	●	○
WILTON	▼	▽
ISHANGIAN	✚	✜
ELMENTEITAN	✖	✣
DOIAN	■	□

OVERLAY 22

"LATER STONE AGE": "EPI-PALAEOLITHIC" INDUSTRIES

	Certain	Uncertain
KHARTOUM "MESOLITHIC"	•	○
SMITHFIELD	▲	△
NACHIKUFAN	◆	◇
UNDIFFERENTIATED OCCURRENCES (SOUTH WEST AFRICA)	▪	▫
UNDIFFERENTIATED "EPI-PALAEOLITHIC" OCCURRENCES (CYRENAICAN, etc.)	▼	▽

OVERLAY 23

NEOLITHIC INDUSTRIES
OF NORTHERN AFRICA

	Certain	Uncertain
BADARIAN	•	○
PREDYNASTIC EGYPTIAN	▲	△
NEOLITHIC OF CAPSIAN TRADITION (NORTHERN SAHARA) AND OTHER FACIES (SOUTHERN SAHARA)	◆	◇
EASTERN SAHARAN	▲	△
UNDIFFERENTIATED NEOLITHIC (FAYUM, etc.)	■	□

OVERLAY 24

"NEOLITHIC" INDUSTRIES OF
SUB-SAHARAN AFRICA

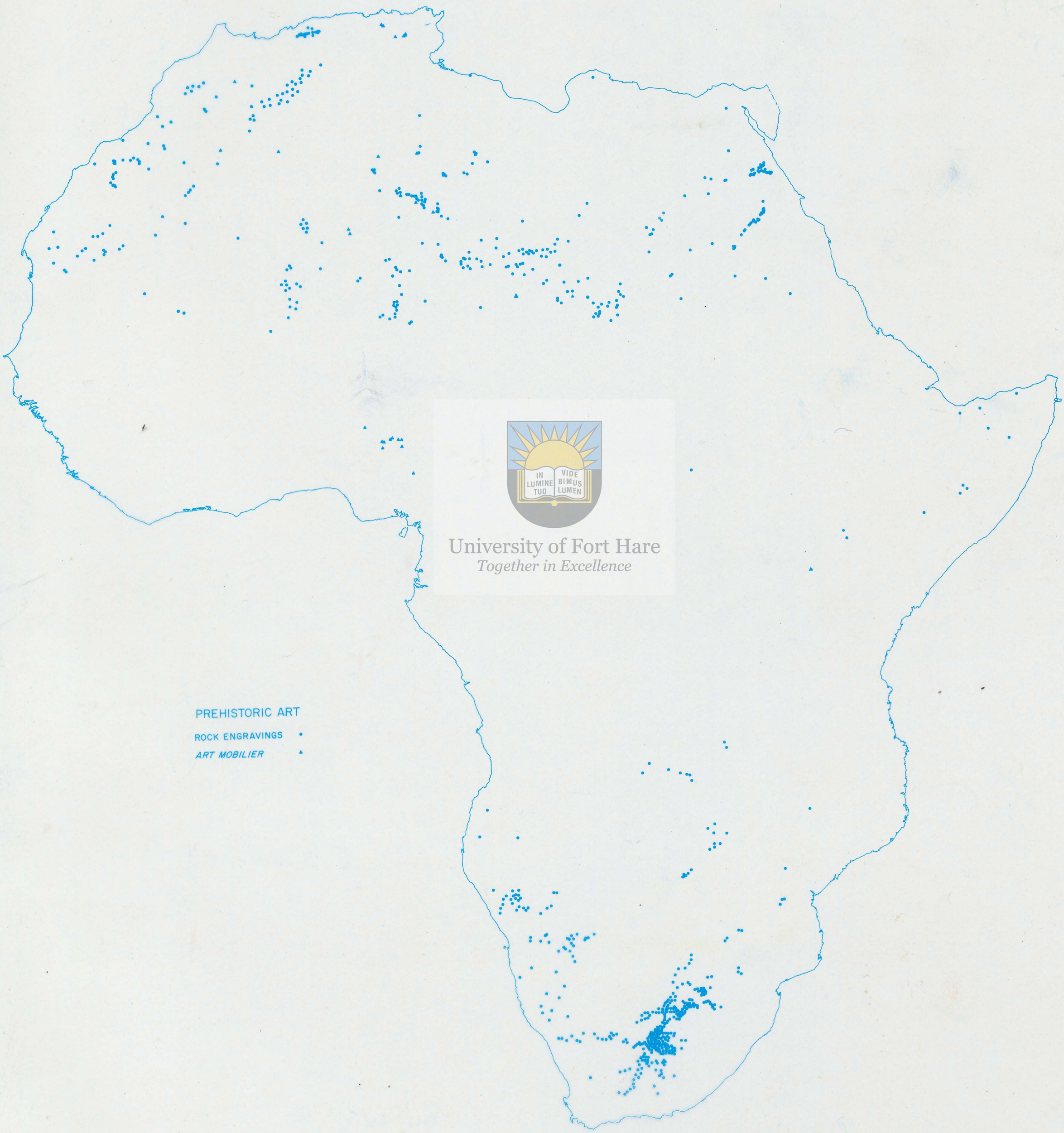
	Certain	Uncertain
STONE BOWL INDUSTRIES (EAST AFRICA)	▪	▫
WEST AFRICAN "NEOLITHIC" (MAURETANIAN/GUINEAN)	▪	
UNDIFFERENTIATED "MESONEOLITHIC" (WEST AFRICA)		▫
UNDIFFERENTIATED "NEOLITHIC" (CONGO, GABON, etc.)	◆	◇

OVERLAY 25

PREHISTORIC ART

ROCK PAINTINGS

OVERLAY 26

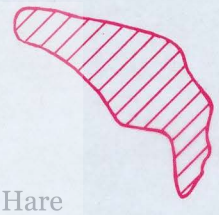


PREHISTORIC ART

ROCK ENGRAVINGS •

ART MOBILIER ▲

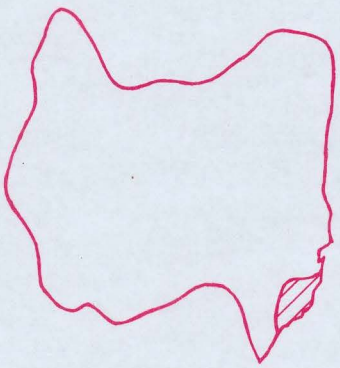
OVERLAY 27



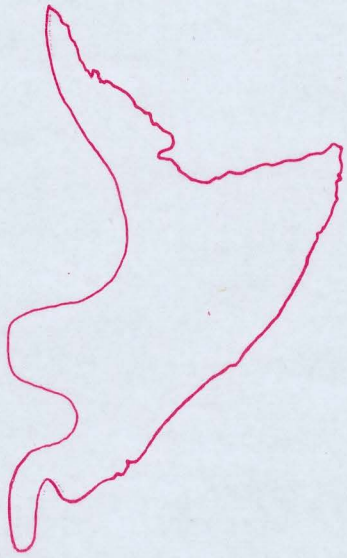
DISTRIBUTION
of
WHITE RHINOCEROS
(Diceros simus)

Present range

Range before arrival of firearms



OVERLAY 28

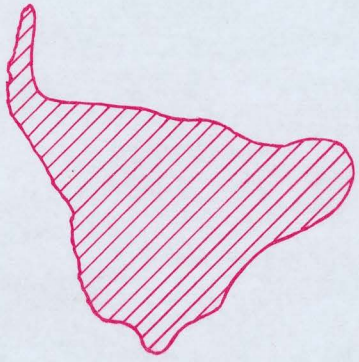


RANGE of ORYX or GEMSBOCK

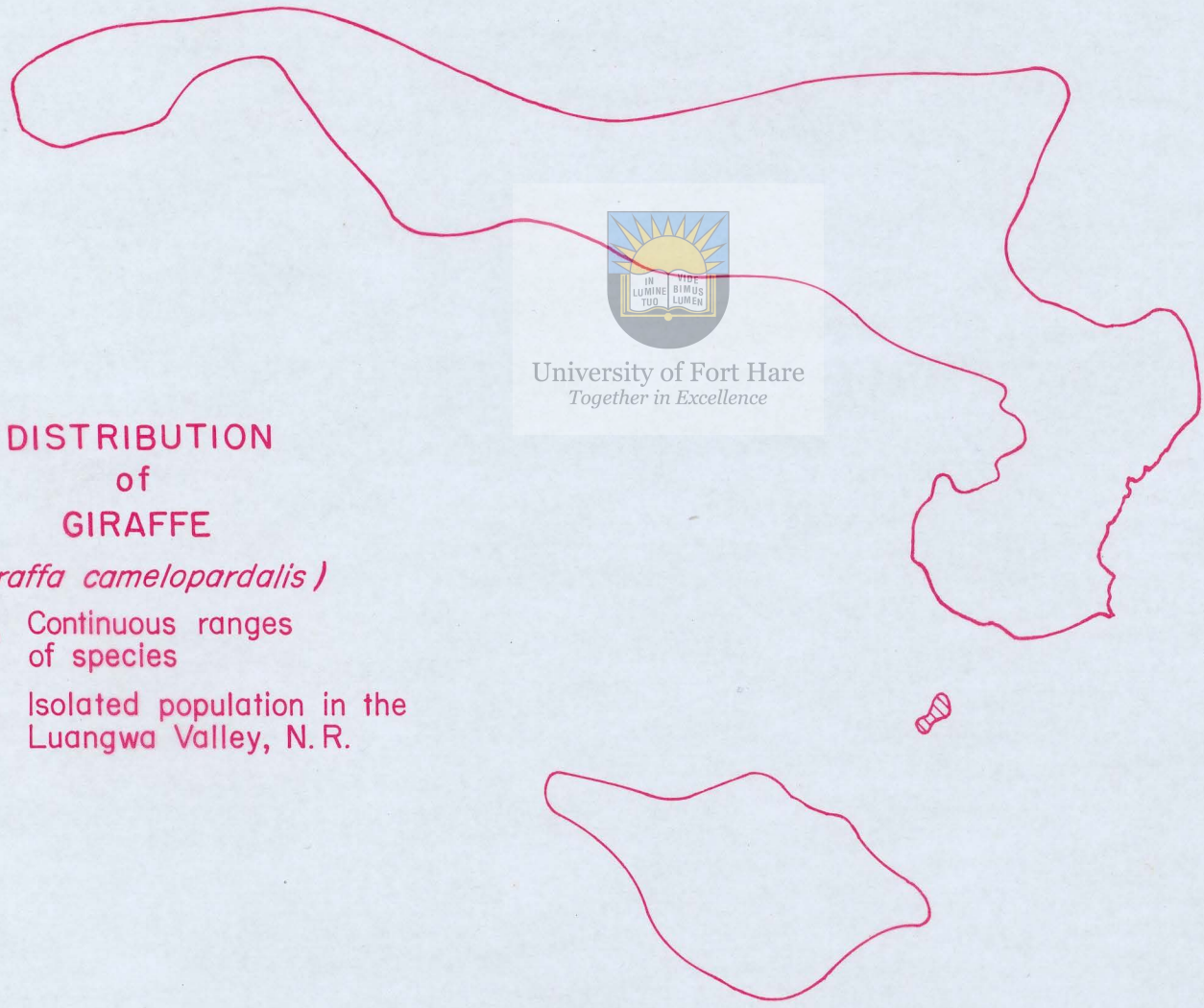
Oryx beisa

Oryx gazella

Other species in Sahara and Arabia



OVERLAY 29



DISTRIBUTION
of
GIRAFFE
(Giraffa camelopardalis)

Continuous ranges of species

Isolated population in the Luangwa Valley, N. R.

OVERLAY 30

DISTRIBUTION
of
DIKDIK (Rhynchotragus kirki)

Range of Kirk Dikdik
(R. K. kirki and subsp.)

Range of Damara Dikdik
(R. K. damarensis)

OVERLAY 31

RANGE of BONGO
(Boocercus eurycerus)

OVERLAY 32

RANGE of
NEEDLE-CLAWED
GALAGOS

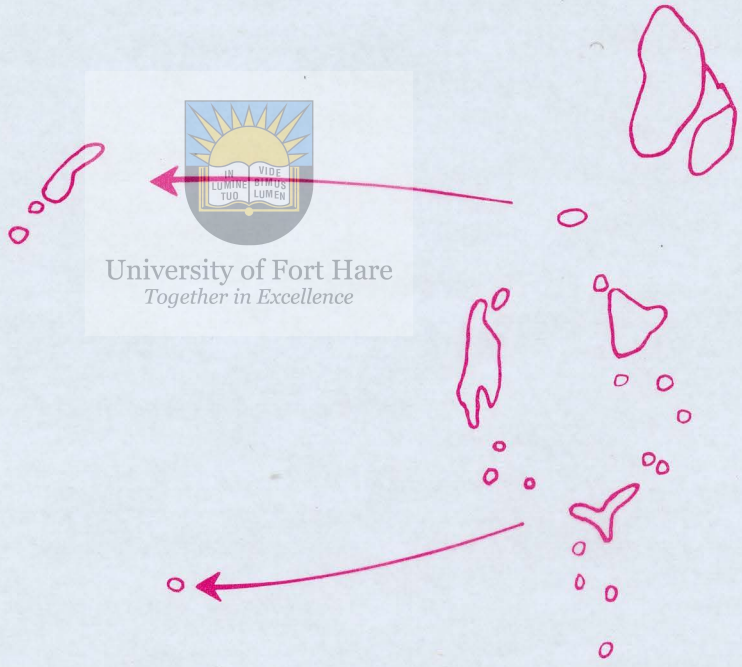
Euoticus elegantulus

Euoticus inustus

OVERLAY 33

DISTRIBUTION
of
DIADEMED MONKEY
(Cercopithecus mitis)

OVERLAY 34



DISTRIBUTION
of
Alcippe abyssinicus

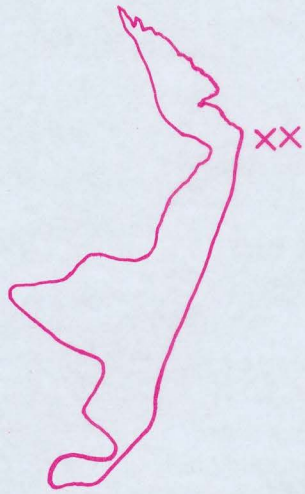
OVERLAY 35

DISTRIBUTION
of
Pogonocichla stellata

OVERLAY 36

DISTRIBUTION
of
Phylloscopus umbrovirens

OVERLAY 37



DISTRIBUTION
of
Ploceus rubiginosus
and
× *Heteromirafra ruddi*

OVERLAY 38

DISTRIBUTION
of
Neocossyphus rufus