



## Archaeology and food production in Africa

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### **Abstract**

*The case studies in the archaeological evidence of food production in Africa are not exhaustive. Hence, this paper makes a modest attempt to underscore the role of archaeology in tracing the origins of African food production. While it will be ambiguous to claim, that this paper has done justice to the subject, it is also not out of place to state that an attempt has been made. The literature on the archaeology of food production in Africa is seriously limited in scope and depth. Archaeologists have mostly depended on ethnologists, linguists and botanists and anthropologists for answers to their investigations. The implication has been broad generalizations which have, most often, no archaeological proofs. The current mass of information on the subject matter, therefore, is not sufficient to give a final answer to the archaeological origins of food production in Africa. However, despite the shortcomings, current archaeological works have provided insight into pre-historic agriculture and food production systems of the continent. However, it remains that the existing challenges of archaeology in tracing the origins of Africa's food production is a matter of further research which we earnestly wait for archaeologists to resolve.*

**Keywords:** Archeology, food production, Agriculture, Pre-history

### **Introduction:**

Information on the major land marks in early Nigerian history was made possible through the work of archaeologists. Through archaeologists, we have been able to know some of the places where man lived in

### ABSTRACT

Nigeria in the very remote past included: Nok, Igbo Ukwu, Ife and Benin among others. They are usually referred to as centres of ancient civilization. The history of these centres of ancient civilization presents us with the scientific and technological developments of early Nigerian societies.

(Huntington, 1996:41) however, noted that the concept of civilization provided a standard by which to judge a society during the 19<sup>th</sup> century. Europeans devoted much intellectual, diplomatic and political energy in expounding or setting standards or criteria by which non-European societies might be judged sufficiently civilized to be accepted as members of the European – dominated international system. Thus, from the foregoing, one could conclude that Civilisation has come to be erroneously deployed in interpretation of our indigenous past. Hence, Africans are classified as been barbaric based on western standard or stereotype.

In this direction, one could notice that whenever the African past or civilization is mentioned in comparison to the foreign ones, people either consider it to be non-existent or they underrate it. One of such misconceptions as cited by (Fage, 1973) was the view expressed in 1923 by A. P Newton, a former professor of Imperial History at the University of London. He stated thus:

Those lands (i.e., African Lands) have been inhabited since remote ages by peoples who are to be numbered by millions, and who can afford to the anthropologist and the student of language and primitive custom an extremely varied field of study but history only begins when men take to writing: it is concerned almost entirely with written records and can only make subsidiary use of the material remains with which archaeologist and anthropologist are concerned.

This follows to underscore the fact that there were a lot of prejudices with regards to African History. (EndreSik, 1966), a Hungarian Marxist, argued in this direction that “the pre-colonial peoples of Africa led a primitive life. Some were sunk in the lowest state of barbarism, and scientific history in Africa primarily revolves around the expansion of Europe and as to the soil of Africa.



(Hegel, 1975) also had this prejudiced view of African History when he stated:

"The history of the world travels from east to west; for Europe is absolutely the end of history, Asia the beginning... Africa is no historical part of the world; it has no movement or development to exhibit".

In the above statement, Hegel presents Africa as being on the edge of history instead of being part of it.

Professor Hugh Trevor –Roper of Oxford University also took turn to flatly reject the idea that there can be any African history. Thus, in 1963, when he was responding to students' demands for some courses in African History, the British historian went on record as saying:

"Perhaps, in the future, there will be some African history to teach. But at present, there is none; there is only the history of Europeans in Africa. The rest is darkness... and darkness is not a subject of history".

The climax of all the misconceptions about African civilisations and its development and contribution to world development was a submission by Trevor – Roper, which still haunts the general consideration of many individuals in contemporary times. He said:

"...the new rulers of the world, wherever they may be, will inherit a position that has been built up by Europe, and by Europe alone, It is European techniques, European examples, European ideas which have shaken the non- European world out of the past- out of barbarism in Africa, out of far older, slower, more majestic civilisations in Asia; and the history of the world, for the last five centuries in so far as it has significance, has been European history, I do not think we need to make any apology if our study of history is Europe centred".  
(Hugh Trevor – Roper, 1957)

The foregoing misconception and thoughts by European historians and writers which anchors on the fact that history only begins when men take to writing has a number of implications. It shows that history is equated with written records and the absence of these written records as the absence of any events worthy of historical study. The aforementioned European writers regarded Africa in this direction as having no history at all before the coming of Europeans to the continent because there were no sufficient written sources comparable to what obtained in Europe.



Their presentations with regards to African history are wrong. Thus, this paper is aimed therefore at re-examining how archaeology as a source of history has helped in reconstructing African history. It is believed that this misconception of African history has to be re-corrected by showing that African history, predicts, the emergence of Europe, by thousands of years, it is not possible for Africa to have waited in darkness, for the Europeans to bring light. So to say Africa was a Dark Continent should not arise. Europeans apparently were ignorant about Africa. Perhaps, it could be suspected at this trajectory that those in darkness were the Europeans themselves and not Africans, because, it seemingly appears unarguable that those in darkness are those who assumed that anything not known to them did not exist.

At that, the assertion by Professor A. P. Newton's that history began when men started to write was a much myopic conclusion as it was erroneous and misleading. The aforementioned is predicated on the fact that, it offers the impression that our prehistoric ancestors did not make any contribution to history nor had any historical heritage to preserve. And when connected to Africa- the worst victim of Eurocentric bias and unscientific postulations-the continent is usually presented as a place without history; a continent without indigenous science or art; and the race which has made no contribution to civilization. Based on the orientation, that history began with the advent of writing, the thinking about African history, pre-history, has received less commendation from the Eurocentric community. This is because of lack of documented evidence to prove most of the facts associated with Africa's prehistoric past.

However, the emergence of archaeology as a discipline concerned with the reconstruction of man's past from his physical and cultural remains (Derefaka, 1997) has liberated African history from the bondage, western sentiment and scientific biases. It has also given credence to the historicity of Africa's prehistoric past as well as espoused the richness of the continent's prehistoric greatness and contributions to world history and civilization.

However, at this point, one could be assured that civilization is not owned by anybody or group. It is the broadest cultural entity of villages, regions, ethnic groups, nationalities, religious groups where all have distinct cultures that are dynamic, can be shared and at same time learned. At best, one could safely conclude that civilisation is a process through which a society attains advancement in every sector of it life. And it follows that different societies has in history passed through different levels of civilization.



Thus, if culture and civilisation could be understood as social systems, thought, religion, moral values, magical beliefs, arts, meta physics and the development of these in the course of the evolution of a people's civilization and history, then the fact cannot be denied that the Africans had, as they still have, a very rich past.

The complex social and political structures in various empires and kingdoms all over the continent, such as the excavated art works of such places such as Nok, Benin, Ife, Igbookwu in Nigeria all show an impressive civilisation dating to prehistoric times.

### **Archaeology and Africa's Prehistory**

Some European historians as highlighted previously from Europe omitted Africa in their discussion in the past. (Okoroafor, 2013) posits that given the fact that archaeology as a discipline is concerned traditionally on the visual objects (finds) met in research processes and the fact that the main focus of contemporary theoretical orientation of archaeological research consists of:

- i. The reconstruction of climatic morphogenetic environment.
  - ii. The reconstruction of site development history.
  - iii. The determination of site specific human activities; and
  - iv. The interpretation of man-land relationship,
- i. Nature of the parent material
  - ii. The distance and means of transport
  - iii. The nature of depositional environment and
  - iv. The post-depositional modifications. It then remains that there is a large portion of Africa's pre historic past which can only be uncovered through the help of unwritten sources. This is because the earliest uses of writing as (Goody,1986) observed was invented in ancient Sumeria about 3000BC and before this period, about 20 million years ago human beings (early hominids) had begun to make simple tools in a regular and predictable pattern which indicate a conscious effort in that regard.

Archaeology has therefore removed the "iron curtain" that demarcated prehistory from the modern period. Prehistory according to (Derefaraka, 1997) deals with social groups and societies and embraces the whole range of human activities. It is generally concerned with the period before man could record his experiences on earth in writing. This prehistoric period starts from about 2 million years ago when the ancestors of human beings first appeared on the earth and ends with the beginning of written history.

From archaeology therefore, it is evident that human being as a tool maker originated in Africa. This evidence is confirmed by Afigbo (1997;

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cited in Gabriel and Jaja, 2000) wherein, it he revealed that there is evidence of the activity of Homo erectus in this part of Nigeria between one million and half a million years ago. Finds from Iwo Eleru in Yoruba land, and Ishango in Central Africa indicate that the Negroid is in fact the oldest known physical type in Africa (Shaw and Daniels, 1984). Also, the Iwo Eleru and Afikpo finds establish the long presence of late Stone Age ancestors from about 10,000BC until the transition to the Neolithic Revolution around 3,000BC. Archaeological finds have also disproved the idea that Africa did not produce advanced civilizations. The discovery of fine works of arts from places such as Nok, Ife, Benin, Igbo Ukwu, Daima, Zimbabwe, Akan testify to the existence of remarkable African civilizations.

Archaeology has also proved the existence of pottery which seemed to be ubiquitous in Africa. Archaeologists have classified them into domestic and industrial pottery. Domestic pottery wares were used for storing water, palm wine, palm oil, grains (cereals etc), some were used as dishes and as buckets, while some like the Tamunobeles at Oyoma (Bayelsa State) and Ogoloma (Rivers State) were made from clay and so were used for smoking pipes (Ogoloma finds) and drinking cups. It is plausible that there were other objects used for decoration. This list is not exhaustive of pottery and clay relics that archaeologists have uncovered. The industrial pottery includes clay bellows, potsherds (these were used as tiles in Ife culture) tuyeres and moulds for a variety of objects made from iron, bronze, and brass. Most of the Pre-European smoking pipes in the Niger Delta rest on pedestals and were decorated. Nok culture material has evidence of iron axe blades, pieces of iron smelting furnaces, iron slag and clay draught pipes of the furnaces known as tuyeres. This represents the earliest iron-using culture in Nigeria. Indeed African, albeit Nigerian, could mine ore from its natural state and produced implements or tools of iron. This story is the same for Akan, and Zimbabwe cultures. The above exercise is not exhaustive and does not contain the volume of information about the past activities of human beings in Africa that archaeological findings have revealed. However, what has been documented so far reveals the invaluable nature of archaeology to the reconstruction of Africa's prehistory (Gabriel and Jaja, 2000:9-11).

### **The Neolithic revolution and the origins of agriculture**

The Neolithic Revolution was the first agricultural revolution-the transition from nomadic hunting and gathering communities and bands, to agriculture and settlement. According to Symcox (2001:6-8) "the Neolithic is the name given to the time when humankind first settled in villages, herded and domesticated animals, and farmed the land. It occurred in various independent prehistoric human societies between 10 – 12 thousand years ago.



The term refers to both the general time period over which these initial developments took place and the subsequent changes to Neolithic human societies which either resulted from, or are associated with, the adoption of early farming techniques, crop cultivation, and the domestication of animals (Pringle, 1998).

The Neolithic Revolution is notable primarily for development in social organisations and technology. The changes most often associated with the Neolithic Revolution include an increased tendency to live in permanent or semi-permanent settlement, a corresponding reduction in nomadic lifestyles, the concept of land ownership, modification to the natural environment, the ability to sustain higher population densities, and increased reliance on vegetable and cereal foods in the total diet, alterations to social hierarchies, nascent "trading economies" using surplus production from increasing crop yields, and the development of new technologies. The relationship of these characteristics to the onset of agriculture, to each other, their sequence and even whether some of these changes are supported by the available evidence remains the subject of much academic debate, and seems to vary from place to place.

The term Neolithic Revolution was first coined by Childe as cited by (Brami, 2009) who used it to describe the first in a series of agricultural revolutions to have occurred in Middle Eastern history. This period is described as a 'revolution' to denote its importance, and the great significance and degree of change brought about to the communities in which these practices were gradually adopted and refined.

### **The development of agriculture**

In the views of Marek and Mark, Agriculture is based on the cultivation of domesticated plants and the keeping of domestic animals. Domestication, then, is a key social practice that defines agriculture, but agriculture is more than domestication. In the same way, domestication is more than an economic process of managing the reproduction of plants and animals and changing their characteristics through selective breeding. It denotes more generally the bringing closer to home of plants and animals useful to humans, thereby increasing control over them; it is an act of socialization, of conceptual enculturation of natural resources. Many scholars researching the subject have recognized domestication as an act of taming. Domestication began as a process of emerging separation between two key symbolic concepts, one having to do with a domestic, enclosed, enculturated sphere of life, the other with the natural, wild, and outside. Other, more tentative binary opposition can be attached to these two basic notions, sometimes referred to as



*domus*(inside) and *agrios*(outside). It well may be the case that this basic distinction provided an organizing principle around which social and symbolic life revolved already in the Paleolithic Age.

The duality between the cultural and the natural can be traced back to the symmetrical tools such as hand-axes in the Lower Paleolithic, symbolizing the beginnings of an abstracted cultural code which provided a symbolic language based on the prestige and security of the cultural as opposed to the dangers of the wild, the natural. Prestige was gained and maintained through the ordering and embellishment of the wild: at first through the controlled use of fire and the elaboration of hunting equipment in the Lower and Middle Paleolithic Ages.

This process according to them continued in the Upper Paleolithic (40 000 years ago to 10 000 years ago)through architectural developments of the living space, either within caves and rock shelters, or within free-standing dwellings, through the elaboration of ritual and burial, through cave art and other forms of symbolic expression, and through technological advances. Taken together, these conceptual and practical advances of the Upper Paleolithic are represented by many scholars as the first human revolution. At the end of the last Ice Age, environmental changes and restructuring in the distribution of resources permitted more sedentary existence, an opportunity taken up by some hunter-gatherer societies for a variety of reasons. Greater sedentism led to an increase in population numbers, increase in social competition within and between communities, and to the development of the dwelling place as the focus for the social and symbolic strategies of domestication.

What until then was a part of a broader symbolic effort for the enculturation of nature merged as a deliberate social strategy for gaining personal or collective prestige and for exercising more practical control over a community, a region, and the surrounding natural environment and its resources. The shift in emphasis from symbolic to social domestication as they posits also represents the point when symbolic domestication begins to have practical, economic implications. This shift began toward the end of the Upper Paleolithic, about 14 000 years ago. It is within this cultural code, that Marek Zvelebil and Mark Pluciennik postulations about the domestication of food resources and the origins of agriculture can be regarded as entirely predictable. The economic domestication is merely an extension of the concept from the symbolic and social sphere to selected food resources. The historical trajectory moves from symbolic to social to economic domestication. In the last 10 000 years, many hunter-gatherers adopted farming, and agricultural societies began replacing those based on hunting and gathering. The



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Neolithic, originally defined as a farming society with stone tool technology, began in the Near East some 10 000 years ago, later elsewhere; and lasted until the introduction of metals 6000 years ago in the Near East, 4000 years ago in Europe, and much later in other parts of the world.

### **Archaeological Evidence of Food Production in Africa**

Subsistence agriculture, the domestication of animals and cultivation of crops is the basis on which all human civilizations were built (Clark and Brandt, eds 1980), including Africa. However, the transition from hunter gathering to food production was not a rapid one as was once assumed. This is evidenced from studies carried out on the Kalahari San and the Hadza of Tanzania, which showed significant resistance of these cultures to the transition from hunter gathering to food production. This resistance was characteristic of all hunter gathering populations and it showed that the process of food production was stressful and it demands too much of individual liberty and leisure. So it was only when the resources for hunting and gathering was depleted that the people considered the option of animal domestication and plant cultivation. Although, this was not always so because the nature of the environment offered a lot of opportunities for physical mobility; thus it was possible to move from one to another in search of hunting and gathering opportunities, as was the case in tropical Africa. Hence environmental factors played a lot of role in explaining why hunting and gathering thrived much in Africa, and why the transition from hunting and gathering to food production was slow and often resisted; or why even after the transition was effective, people still has recourse to the hunting and gathering system. Therefore, the chronology of food production indicates lateness in the transition from hunting and gathering to food production in sub Saharan Africa than it did in Southwest Asia. This is because of the favourable environmental conditions in sub Saharan Africa, whereas in Southwest Asia, the prevailing environmental conditions necessitated the rapid transition from hunting and gathering to food production. It is evident though, that the case was different in the Sahel savanna and desert zone given the environmental disequilibrium which necessitated the rapid transition to food production in that region.

In the case of West Africa, while the evidence of draught and famine on the over populated parts of the region was obvious, it is not clear to posit the correlation between climatic fluctuation and economic change, and it is likely that the effects of any change will become apparent in the archaeological record after rather than during times of climatic adversity. From the records of plant geneticists, it is possible that the Sahel zone of the Sudan is the possible place of early African food production. It is here, as the record shows, that the great majority



of the indigenous food plants were brought under cultivation. The development of these cereal grasses and plants cultigens appears in the Sahara after 2000B.C. While not precluding a much earlier manifestation of these plants staples, the chronology as we know it today suggests that the movement of large numbers of cattle pastoralists out of the Sahara into the Sahel and Sudan is related to the change from hunter gathering to regular food cultivation (Clark and Brandt, 1980:6).

### **Appraisal of Current Thoughts on the Origins of African Food Production**

The interest in African agricultural origins was initially generated among botanists and plant geographers, who postulated at least one independent centre of origin in the African continent. Research on the topic, according to Stahl (1980), appeared in the anthropological literature in the 1960s mostly based on the pioneering work by Murdock (1959) which put forward a number of hypotheses concerning African Agriculture. Since that study, three key issues have been of interest to researchers: (1) the elucidation of the geographical origins of African agriculture; (2) the role of environmental changes in the transition to agriculture; and (3) the spread of various crop complexes within the African continent.

The contention over the geographical origins of African agriculture has focused on whether it was an independent development or whether it diffused from either the Middle East or Southwest Asia. Although most African subsistence crop complexes have indigenous African domesticates as their staples, researchers have been reluctant to postulate that agriculture developed in African independent of influence from the Middle East. It is interesting to note that most of the workers who have postulated such an independent development are botanists or anthropologist whose main areas of interest are outside the African continent (Murdock, 1959).

Interpretations dealing with the role of environmental change in the transition to agriculture in Africa have shifted their emphasis through time. Earlier studies postulated climatic factors, allowing or stimulating the diffusion of agriculture from the Near East into sub Saharan Africa. Such an interpretation assumed a transition to agriculture automatic, since it was thought to provide an inherently better lifestyle. Under the impact of modern studies of hunters and gatherers, however, it has become apparent that this transition could not be assumed. Hence, more recent have postulated climatic change as a stress factor.

On the spread of crop complexes to the East and South Africa, researchers have linked these movements with Bantu or Cushitic

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speaking people's whose migration have been intimately linked to the introduction of agriculture to these areas.

### **Some Cases Studies of Archaeological Evidence of Food Production In Africa**

Studies of (Posnansky, 1980) have indicated the evidence of early agricultural societies in ancient Ghana. The study is largely based on Kintampo industry. The study records that there is circumstantial evidence of agriculture in the form of village communities mainly situated north of the forest, particularly in the Begho and Kintampo areas, where most of the research has been undertaken. Other Kintampo sites area also found in areas in the forest such as Boyasi near Kumasi (Anquandah, 1976; cited in Posnanky, 1980) where changes may be of a substantial age, and on the grassland of the Ghanaian coast. The artefact identified from the Kintampo industry is the object first called a 'terracotta cigar' by O. Davies (1962) and now thought to have been used as a potting stool (Anquandah, 1965; cited in Posnansky).

It is associated at Ntereso with harpoons and arrow heads reminiscent of these found in the Sahel and Boyasi with stone beads and polished stone arrowheads (Anquandah, 1976; in Posnansky, 1980). At several sites some terracotta "arts" object finds which appeared to depict domestic animals. There is a suspicion of dwarf goat occurred at Ntereso and Kintampo. The available radiocarbon dates for settlement sites, as opposed to stray finds, cluster in the middle and later half of the second millennium B. C. (Posnansky, 1980). At various sites, particularly in Begho area, there is evidence of small wattle-and-duab houses. At Mumute, the settlement covers an area of some 2,100m<sup>2</sup> and includes, at least, one well or cistern. At bonoase huts of about 4 – 5m<sup>2</sup> occur; the outline is picked out by a rough square of laterite boulders. There is an indication that oleaginous forest trees such as oil palm as well as cowpeas, were being exploited, or perhaps even managed (Flight, 1972; cited in Posnansky, 1980).

What is striking about the Kintampo material is, first, its relative abundance. Second, though the artefacts are distinctive, there has yet been no indication of the Kintampo industry outside Ghana. Third and more significant, though is that there is a chronological gap in the evidence between the Kintampo material and the early Iron Age, several of the sites are located close to major Iron Age Sites, and areas associated in the oral traditions with the origins of some of the later Akan people of Ghana. On such tradition refers to the founders of Begho (a town that developed around A. D 1000), who are said to have emerged from a hole in the ground within a grassy plain. Historians called these stories myths, but archaeological investigation

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revealed an area in which Kintampo sites occurred. Excavation revealed that the holes were man-made, rock-out water cisterns design to capture the runoff from the thinly vegetated plain in an area otherwise devoid of surface water (Posnansky, 1980). Caves associated with the origin of the Bono Manso State to the east similarly turned out to be early sites (Effah-Gyamfi, 1974; cited in Posnansky, 1980).

In summary, the kintampo finds indicates the existence of an Iron Age agricultural industry in ancient Ghana. The multidisciplinary approach to the study and the connections with different historical times is able to prove the presence of a sustained agricultural practice in the area. Posnansky has however, noted that a more detailed linguistic analysis of the terms used to describe the collecting and trapping activities, for the items collected or for the processed-end-products, to see if a pre-Akan underlay can be found, to add to our knowledge of Ghana's early agricultural societies.

In similar study by (ShawThurstan,1980) on the archaeological evidence and effects of food producing in Nigeria, he posited that Nigeria yields scant archaeological evidences for the investigation in to early food production. This is as a result of the bad conditions of food production. Although there are evidences of animal domestication base on findings from the remains of at excavated sites at Daima, Mejiro Cave, Rop Rock Shelter on the plateau, but there was no direct evidence of food production due to the lack of findings of food remains at the excavated sites. The only evidence, according to Shaw, is the cultivation of yam and oil palms, which is claimed to be the staple food for the people of the southern Nigeria. But there is at present no direct evidence about anything can be called processes of domestication. The botanical evidence declares that there are at least seven species of wild African yams, of which four (*Dioscoreadumetorium*, *D. bulbifera*, *D. sansibarensis*, and *D. preussii*) are toxic and require special treatment to make them edible; the first two are eaten in time of need. Of the reminder, *D. abyssinica* and *D. praehensilis* are southern savanah forms, *D. cayanensis* the forest form. From the latter, the domesticated yellow yam was developed from a cross between the wild *cayanensis* and the wild *praehensilis*.

Southern Nigeria is suggested as the place where the process of domestication, is likely to have taken place, and while there is no evidence of when yam cultivation began, there is speculation that this may have occurred as far as thousand years ago (Coursey, 1976). No other indigenous tuberous crop has the same importance as the yam, but hausa potato (*plecthrantub* spp.) is a cultivated crop, although the locale of its domestication is uncertain (Dalziel, 1955:459; Davies, 1968; Purseglove, 1976; cited in Shaw, 1980). Just as it is likely



that many tropical grasses were at one time grown for their grain, so it is likely that a number of African tubers were formerly much more widely cultivated than now and have come to be displaced by more successful ones such as the cassava, sweet potato and cocoyam introduced from America by Europeans.

Shaw acknowledged the difficulties posed by archaeological evidence in exploring the origin of food production in Africa, but suggested that further research on the archaeological origins of food production in Nigeria could help in solving the present dilemma associated with findings on the subjects matter. To support this he cited the case of Nwana Nzewunwa, who in a study of prehistoric economy and culture in Niger Delta has utilised column-sampling in Shell Middens and made a calculation of the calorie and protein contributions from the fish, shell fish and mammalian resources thus measured. Setting against the time span derived from radio carbon dates, it has been inferred that the Delta environment was only settled and exploited by people predominantly engaged in fishing and utilizing the resources peculiar to the delta, in a system of exchange symbiosis with yam cultivators inland. This appears not to have got under way until the first mellenium A.D, long after the probable date of early cultivation in the hinterland; the arrival of the Asiatic crops of banana/plantain and cocoyam (*colocoasia* spp.) after their overland journey across Africa during the millennium may have further helped top establish the system.

On the domestication of animals, Shaw postulated that 'Since domestic cattle are an introduced animal in Nigeria and since, unlike the situation in North Africa, there is no potential wild ancestor available for domestication and one can assume that they were introduced from the north of the country's present boundaries. What is not known is how the 'Yam and oil palm' agriculture of Southern Nigeria came about. It has usually been assumed that it was as a result of a stimulus from cereal growers to the North but it could have been an indigenous process (Shaw, 1976:129-130; Posnansky, 1980). The present state of knowledge does not give the opportunity to choose between these different hypotheses, and further research should be designed to test them.

Shaw, arguing further on the effect of food production in Nigeria maintained that while other parts of the world may have experienced greater population increases, the experience in Africa was different due to the threat of malaria and trypanosomiasis. Also, the exploitation of River Valleys for agricultural production was also disastrous in Nigeria as it posed the threat of River blindness, which he said, is responsible for the depopulation of inhabited River Valleys (Hunter, 1966; cited in T. Shaw, 1980). Perhaps this is where oil palm



products may have been important in enabling human populations to main themselves in areas where the disease was endemic, along the river valleys and streams where the simuliumdamanosum fly, the vector of onchocerciasis, is accustomed to breed; for vitamin A in palm oil gives a large measure of immunity to the disease. This was an additional, but very important, benefit derived from a basic diet of yams and palm oil; necessary small quantities of protein were supplied by fish, goat-meat, and wild game, supplemented by a whole range of wild products culled from trees, bushes, and herbs to add sauce and variety and which also provide a well-balanced nutritional intake. The plentiful supply of calories from yams would therefore have made possible maximum utilization of the small supply of protein, which would therefore have been adequate. Such a diet, further supplemented by palm-wine, could well help to account for the build up to the great population in the middle belt. One other long term effect of the change to food production is connected with the development of dense population in the southern Nigeria. It concerns the progression toward centralization of economic and political power and the beginning of urbanization and state formation, without influence from the Sudanic zone and before Europeans arrived on the coast (Shaw, 1980:155).

Other studies by (Mcintosh and Mcintosh,1980) point to the existence of early Iron Age economy in the Inland Niger Delta of Mali. The authors explain different phases of the study area which indicates the existence of the cereal cultivation in the inland delta of the study area. The study also indicated the existence of fishing and animal domestication in the study area. The study which was undertaken in the Jenne area from around different phases of settlement and occupation which dates from around 250B.C, to 1400 A.D. the period identified started in the Late Stone Age into the Christian era. (Brandt, 1980) also gave a 'New Perspectives on the Original food production in Ethiopia in which he claimed Ethiopia to be the original centre of food production in Africa. This claim is derived from archaeological, historical, ethnographic and anthropological data, which he massed together to derive his hypothesis.

Several other studies have been carried out North and Southern Africa including Egypt. The study in North Africa by (Stemler, 1980) focussed on the transition from food collection to food production in that region. Using the Sorghum as her case study, she demonstrated the evidence of cereal cultivation in that region during the transition from food gathering to food production. There have also been investigations in Eastern Africa on early evidence of animal domestication in that region. These studies are abased on bone remains of animals at excavated sites in the region.



## **Conclusion**

This study on the archaeological evidence of food production in Africa is not exhaustive. The attempt made herein is to trace the role of archaeology in tracing the origins of African food production. While it will be ambiguous, to claim that this paper has done justice to the subject, it is also not out of place, to state that an attempt has been made.

The literature on the archaeology of food production in Africa is seriously limited in scope and depth. (Stahl, 1980) and (Shaw, 1980) acknowledged the need for further research to breach these gaps. Stahl had particularly complained that the research on the subject is belated and the issues raised among researchers have been the same since Murdock's study, and this has not been impressive. Archaeologists have mostly depended on ethnologists, linguists and botanists and anthropologists for answers to their investigations. The implication has been broad generalizations which have, most often, no archaeological proofs. The current mass of information on the subject matter, therefore, is not sufficient to give a final answer to the archaeological origins of food production in Africa. Most of the works are mainly assumptions and hypotheses, as no final conclusions have been derived so far from them. Another issue is that most of the researches on the archaeological origins of food production in Africa were undertaken by Western researchers whose sentiments and biases dominate their investigations and as a result, the outcome of their findings has not been totally satisfactory. An example is the view on stimulus diffusion which postulates that agriculture came in to Africa from the Middle East and South Asia. This view is an extension of the Hamitic hypothesis which sees nothing worth of noble origin as indigenous to Africa, but with the aid of foreign influence. So far, it is glaring that the current level of thinking on African food production is mostly dominated by foreign researchers whose interest is not free of racial sentiment and bias. It would be great relief for African archaeology if African scholars take up the challenge of providing answers to the lingering archaeological questions to the origins of food production in Africa. African governments and universities should also provide the necessary intellectual and financial support that will stimulate a comfortable climate for further investigations into the archaeology of the continent.

However, despite the shortcomings, current archaeological works have provided insight into pre-historic agriculture and food production systems of the continent. It has also proved that Africa was part of the Neolithic Revolution and contributed greatly to the making of that unique moment of universal historical change. Strength of the paper is the fact that given the weakness of mono-causal interpretations,

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archaeologists have overcome this challenge by utilizing the findings from other disciplines and also found answers to archaeological questions through the help of other disciplines. It thus remains that the existing challenges of archaeology in tracing the origins of Africa's food production is a matter of further research which we earnestly wait for archaeologists to resolve.

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