

A Preliminary Report On Recent Archaeological Field School On Iron Working Sites In Nsukka Plateau: Onyohor, Ekwegbe and Obimo, Nigeria

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Abstract

As part of the on-going conference of West African Archaeological Association (WAAA) tagged “Archaeology of West Africa” aimed at re-examining archaeological researches in West Africa so as to chart a way forward, the researchers decided to present a documentation of some “Recent Archaeological Field School on Iron Working Sites in Nsukka Plateau” with special emphasis on Onyohor and Ekwegbe, both in Igbo-Etiti Local Government Area and Obimo town in Nsukka Local Government Area of Enugu State. The aim of these researches is not only to teach students field archaeology, but also to document these sites as a way of conserving them while using the relics/artifacts recovered from them to reconstruct the culture history of the present inhabitants of the areas under study. These researches are jointly done by the staff and students of the Department of Archaeology and Tourism, University of Nigeria, Nsukka. Iron working is an age long technology of Africans and should be seen as such. Unfortunately, this technology is dwindling, if not becoming obsolete. Traditional/indigenous iron smelting has gone into oblivion. We only see patches of blacksmiths here and there. This technology has to be preserved where ever their relics could be found as they tell much about the technological and artistic ingenuity of our fore-fathers who invariably were the makers. They are part of our cultural patrimony.

Introduction

The history of man dates back to as far as 2.6 – 3.5 million years (Williams *et al* 1993). Since then, man has interacted with his physical environment. To survive the precarious environment in which he found himself, he has to invent culture. Man's first cultural attribute came in the form of tools and implements with which to fight and conquer the environment. This came first in the form of stick/wood and stone, which was gradually or rather evolutionarily replaced by iron/metal objects.

This technology came in vogue during the Late Stone Age in Africa and the upper Paleolithic age in other parts of the world. In some literature, it is referred to as the "Neolithic" or "New Stone Age" and was generally marked with sedentary life, agricultural practices and climaxed with urbanization. This process of iron tool production today is an ancient technology which is continuing up till present in the form of blacksmithing.

To a large extent, if not for a minimal percentage of the study areas, the technology and other processes involved in the production of iron would have gone into oblivion. Some reasons for this may be found on the abandonment of the technology. The second reason for its nearly extinction is that the smelters are no longer there.

Iron working is one of the indigenous technologies of the Africans which is concretely and convincingly applied when refuting the "Eurocentric" view that "Africans remained what the Europeans made them". In addition, "that Africans were more receptive than donor in the world technological inventory". The manner in which the origin of early iron technology in sub-Saharan Africa was studied in the past and the poor attention given to this crucial issue particularly with respect to the nature and process of iron working in the region has created a weak picture of how the industry functioned in the past. These issues along with the factors mentioned earlier spurred the researchers into action towards conducting and documenting these researches on iron smelting sites in Onyohor, Ekwegbe and Obimo, all in Nsukka plateau.

These field schools were conducted from 2001 – 2002 in Onyohor, 2002 – 2007 in Ekwegbe and 2006 and 2007 in Obimo – all yielding similar evidences. The team included lectures, final years and post graduate students of the Department of Archaeology and Tourism, U.N.N.

It is therefore the aim of this research among other things to report on the archaeological excavations conducted in the afore mentioned areas and see how the relics excavated from the sites can help in the reconstruction of

the cultural history of the people of our areas of study in particular and Igboland in general.

Background Information

As earlier noted, this work is centered on the report of recent archaeological field work conducted on some iron-working sites in Nsukka plateau with special emphasis on Onyohor, Ekwegbe and Obimo. These areas were formally grouped under old Nsukka division which according to Afigbo, (1981) occupies the northern most portion of that section of Igboland, which ethnographers have traditionally described as ‘*Elugu*’ sub-cultural group of the northern Igbo. They lie between latitudes $6^{\circ}, 18^1$ and $7^{\circ}, 06^1$ north and longitude $6^{\circ}, 52^1$ and $7^{\circ} 34^1$ east of the Greenwich-meridian (Ofomata, 1978). Nsukka division covers a local surface area of approximately 3, 961 sq kilometers.

Presently, our research areas are within a politically demarcated zone in Enugu State called Nsukka Zone; they may not be easily umbrellered under one cultural zone as they have diverse and different cultural traits that can differentiate one from the other.

Onyohor and Ekwegbe iron smelting sites are located in Igbo-Etiti L.G.A. of Enugu State which forms the southern boundary of Nsukka zone with Udi/zone, while Obimo is one of the towns found in the western sector of Nsukka L.G.A.

Climatically, two main seasons prevail in these areas. They are the rainy and dry season. While the south east trade wind brings rain, the north east trade wind brings a dry period known as Harmattan (*Uguru*). Vegetationally, the zone formerly wears or belongs to the rainforest zone, but as a result of incessant human and other anthropogenic factors, has turned into a derived savannah. The main determinant of the vegetation of the Nsukka area is the drainage pattern. Patches of forests exist around the valleys of some parched streams, springs and rivers within the area. The complex of trees and grasses that make up the zone has led to the region being termed “the savannah mosaic” (Igbozurike, 1978. p.92). There exist groves here and there which demarcated sacred or forbidden areas like Odo masquerade groves. These groves show the natural vegetation cover of the areas.

Like other parts of Igboland, the areas under discussion have different historical backgrounds and versions of origin. These versions range from theory of autochthony and migrations to intermingling. According to Afigbo (1980) “there are at least three aspects to the problem of Igbo origin, which

so far have not always been distinguished by scholars and others. The result is that they have been lumped together and dealt with in an undifferentiated manner with consequent and attenuated confusion". The second lies on the time and place of differentiation of the Igbo from others and the third is the origin of the various and autonomous and sub-cultural groups of the Igbo-speaking people. It is the same problem that is facing most of the "ascephalous" or non-literate people of sub-Saharan Africa, including our areas of study.

However, the people of our study areas have a sense of history. Oral tradition of Onyohor claim that the town was founded by Elunyi Ugwunye who had five sons that founded the five villages that make up the town. Among them were; Ozibo, Amabinagu, Amobo, Amaoji and Umuriko. According to Igwe Mathew Ukpabi (Anyorah I of Onyohor), there were no traces of migration. They initially had cultural ties with Ukehe people, but it is presently an autonomous community.

For Ekwegbe people, the stories differ. While some informants claim autochthony, others were of the view that the town migrated from 'Use' in Aku and passed through Umuna town before settling where they are presently found. Ekwegbe had a wife Nome from Ideke Aruona and hence the name, Ekwegbe Odike Arumona. Nome had two sons viz, Ugwu Mpitima and Ugwu Epi. Ugwu Epi had six sons that founded the six villages that make up the town. Among them were, Ohunwu Ofa, Ama Onicha, Ama-Ohu, Amu-Udu, Ukopi and Uzu-Achalla.

Views on the tradition of origin and migration of Obimo people are far different from that of her neighbours. One version talks of Igala influence, while another version point at Eri-Nri influence. More claims were that while there was Eri-Nri influences in the area, the influence of Attah of Igala was more felt in the early settlement of the inhabitants of Obimo town just like many other localities within Nsukka area.

Socio-culturally, these communities were traditional religionists. They attach most of their socio-cultural, political and economic activities to traditional African religion – until the advent of the white man with his new religion.

Economically, they are subsistence agriculturalists depending more on their locally produced agricultural tools like hoes, axes and matchets. Their most staple food crop till present is yam (*Dioscorea spp*). They also engage in crafts and artistic works like blacksmithing, carving, basket making, weaving. They also engaged in activities with their neighbouring towns.

Site Discovery And Reconnaissance

Generally speaking, one of the major tasks of archaeologists is to locate and record the where about of sites and features (Renfrew and Bahn, 1991). There is no single way through which this task can be performed. Some sites and features such as monuments, caves, rubbish heaps or remains of iron working sites can be seen and located with the naked eyes, while those that are hidden inside the soil can be located by scientific search. Site discovery in archaeology mainly occur through two main processes. One is by chance or accidental, while the other is by purely technical and scientific search. Archaeological survey/reconnaissance is very vital and indispensable in any excavation or field work. It helps very much in the collection of surface and at times, sub-surface data. According to Ogundele (2000), “greater attention should be paid to surface research, which makes it possible for the archaeologist to have some insight about how man has used space in a broad manner at one-time or the other, or the relationships between man and terrestrial space”.

The discovery of iron smelting sites in our study areas was by chance or accidental. The iron smelting site at Onyohor just like that of Ekwegbe and Obimo were discovered by one of the present authors. The main attraction was the presence of debris heaps and scatters of cylindrical iron slags within the vicinity. There were also concentric lines on the road and compounds of the area excavated, which were assumed to be remnants of broken furnaces. Sequel to this, we decided to carry out an archaeological reconnaissance within those areas from 2001 – 2007 during which many other features like monumental buildings and rock-shelters were discovered. During the ground reconnaissance, surface collections were made and photographs of ethnographic features taken. Among some of the surface collection were potsherds, pieces of slags and discovery of *in-situ* heaps of cylindrical slags, which because of their weight could not be collected, but rather photographed in their matrix.

The Onyohor site exposed a scatter of cylindrical slags, and debris of baked clay with broken pieces of slag dug up in the compound of Nichodemus Odo where a cistern was being constructed. Other sites were exposed in the process of road construction.

Thus, after the reconnaissance and report, the Department of Archaeology and Tourism designated those sites for final year and post graduate field work from 2001 to 2007. All the materials recovered during

the reconnaissance survey including those of authors were collected and deposited in the archaeology museum for further studies.

Excavations

The history of archaeological excavation can be dated back to the 18th century A.D. when it first became a serious tool of investigation about the past of mankind (Ogundele 1995; Fagan, 1975, 1998). Archaeological excavation can be seen as a vital component of any archaeological work or research. It involves a careful and scientific digging up of material remains left behind by man. It gives us data with which the chronological framework (strata) of any excavated site can be discerned. It is also the way through which the reliability of surface data can be confirmed using various methods and techniques.

Thus, archaeological excavations were conducted in our research areas after field reconnaissance/survey. The ethnographic materials collected as surface data were used to interpret the ones excavated and these would be useful in the final result and conclusive part of this report.

The Onyohor iron smelting site was excavated in 2001 by a team of lecturers and students of the department. The site is located at the compound of the Igwe of Onyohor H.R.H. Igwe Mathew Utazi. All the necessary procedures (clearing, gridding, excavation and finally drawing the stratigraphy of the excavated areas) required before, during and after excavation were applied. The site was excavated on 10cm arbitrary spit and three levels were excavated. The cultural materials identified and excavated are of two categories. Category one includes the materials that could be easily picked by hand from the site. Among these are potsherds, aggregate iron slags, palm kernel shells, broken pieces of clay, charcoal, metal object and some pieces of iron ore. The second category comprises those features which could not be retrieved from the site because of either their fragility or huge sizes. Such materials include cylindrical slags, loosed tuyere pieces and house foundation. The iron smelting site at Ekwegbe was first excavated in 2002 in Etiti Amaohu village. The site was located in a shallow bush, which has been cultivated by the time we visited in 2007. The excavation of the site lasted for three days (17th – 19th of May 2002) starting with the mapping, clearing and gridding of the site.

The site measured 20m long and 10m width and was divided into eight (8) grids of 5 x 2m each. The site was excavated using 10cm arbitrary spit and at the end, we dug down to 40cm. The site contained three *in-situ*

cylindrical slags. One of the slags at the centre has baked clay lining surrounding it and this according Dr. F.N. Anozie of the blessed memory, (who was in the team) may represent the clay laid down in the pit before firing and which has hardened now as a result of heat. The materials excavated include pieces of iron slags, potsherds, palm kernel shells, pieces of charcoal, seed of 'Ube Okpoko' (*Canarium schweinfurthii*). Others are features like roots and rootlets and pieces of hardened or baked clay. Most of the charcoal samples came from spits III and IV.

The Obimo site was first excavated in 2006. It is an iron smelting site located at the compound of Mr. Richard Ugwuoke in Ama-Eha-Amaelugwu Obimo. The excavation lasted for two days (24th – 25th of April, 2006). The excavation commenced after the necessary excavation procedures with a measurement of 10cm arbitrary spit. Two layers were discernible and measured 30cm from spit I. The site had heaps of cylindrical and aggregate slags. There were also concentric lines of baked clay representing a broken furnace with broken tuyere nozzles lined inside. The cultural materials excavated from the site include broken pieces of furnace wall and tuyere nozzle debris, slags – both cylindrical and aggregate, pieces of iron ore, charcoals and potsherds. There were also pieces of wood and *in-situ* sticks suspected to be house posts that were uncovered in spits II and III.

Interpretation And Conclusion

The materials excavated from the three sites were analyzed from which we made certain deductions. Firstly, from the cultural materials excavated, one can conclude that the sites were iron smelting. These showed that the early settlers of Onyohor, Ekwegbe and Obimo smelted iron. The question that is yet to be answered is the type of furnace used in these sites and other iron smelting sites within the vicinity, namely Lejja, Opi, Orba, Umundu, Idoha, Ukehe and Aku. Opinion differs very much among scholars that had done some work on iron smelting site within Nsukka area prominent among them were E.E. Okafor and F.N. Anozie. This problem is compounded by the fact that in all these sites, two main types of slags, viz, the cylindrical and aggregate slags were found. Okafor (1993) was of the view that shaft furnaces were used for smelting, while Anozie (1979) suggested the pit furnace. As for the date of these sites, they have not presently been dated due to the lack of well equipped laboratory for chronometric dating in Nigeria. However, from dates already obtained from sites within Nsukka area, these sites are believed to belong to the second phase of Nsukka iron smelting, which according to Okafor (1993) dates between 200BC and 1450AD.

However, this date has to be taken with caution since it has not been finally proved. The first phase according to him is dated to 765BC and is mainly identified with cylindrical slags. The second phase is identified with tapped slags which are flat with ropy surfaces. The third phase contains mainly aggregate slags which are pulled out from shaft furnace and separated. Okafor (1993) was of the view that all the phases made use of shaft furnace. His views set up another question. If both cylindrical and aggregate slags occurred, how justifiable is one to conclude that these sites belong to the second or first phase of Nsukka iron smelting or that there is no demarcation as to where the first phase stopped and the second phase started.

The present authors are of the view that the occurrences of these two phases are transitional and evolutionary rather than spontaneous. The early phase transcended into the second and there is no clear-cut demarcation between the two phases. If the first phase according to Okafor (1993:95) is full of cylindrical slags, it then follows that the Nsukka iron smelting, which has more of cylindrical slags with the exception of Owerre-Elu should belong to the first phase rather than the second phase. Whatever the case may be, it is our contention here that both pit and shaft furnaces must have been used in the production of these slags. It was only in Idoha (Ekechukwu, 1988) that the dome furnace, which produces mainly aggregate slags must have been used. For instance, in the 2000 excavation at Ekwegbe, no traces of shaft furnace was found, but the cylindrical slags excavated there were found *in-situ* in the pit with baked clay lining surrounding it. Our research in these sites indicates that slag and bloom were tapped into a pit from a shaft furnace and on cooling, the bloom was knocked off from the slag leaving behind the slag. It is further our contention that the cylindrical slags can be products of either pit or shaft furnace. In the case of the pit, the pit was first dug and lined with clay after which the ore and combustible materials were arranged inside and fire set in. At the melting point of impurities, the slag will flow down and coagulate, while the bloom will concentrate at the top. After cooling and solidification, the bloom would be knocked off leaving the slag behind. At Obimo, both shaft and pit furnaces were used. Our research showed that behind every shaft furnace are three openings leading to three pits, which contain *in-situ* cylindrical slag. These pits acted as receptive tanks for both slag and bloom. At the end of smelting, the slag which is less dense than the bloom will melt and flow first into the pit and coagulate. Then follows the bloom which is heavier and coagulated when cooled and solidified on top of the slag. It is then knocked off for re-smelting when needed leaving the slag behind.

In most cases, the aggregate slags are produced by the dome furnace or shaft without openings at the base for tapping both the slag and the bloom. It could be deciphered from this work that the early settlers of Ekwegbe, Onyohor and Obimo engaged themselves in large scale iron working. This to a large extent must have played important roles in all spheres of their life especially their economic and political life. They must have exchanged the bloom for other scarce goods with their neighbours or could have learnt the art of smelting thereby producing iron implements for defense and agricultural purposes.

Presently, the slags found in our study areas play vital roles for the inhabitants. Apart from being used for checking erosion, they are used as foundation blocks for erecting buildings. They can as well be broken into smaller pieces and used as bullets for hunting animals. The aggregate slags are used for road construction. They are also used for making fences and demarcations as well as seats in their village squares (*Otobo*). In some of the communities under discussion, the cylindrical bloomery slags are used as tripod stand for cooking.

From our researches and through a thorough study of the cultural materials excavated, there was an evidence of cultural continuity between the early settlers and the present inhabitants. There exists presently blacksmiths in Ekwegbe, Onyohor and Ukehe communities. Most of the potsherds excavated showed the same decorative motif and designs with the ones presently being used by the inhabitants. Most pottery materials being used in Nsukka area are being produced by the Nrobo in Uzo-Uwani local government area and Ugwuogo Nike in Nkanu local government area. Although, the present inhabitants could not say much about bloomery slags, they utilize them in their day-to-day activities. We cannot conclude without reminding ourselves and our readers that this work is a preliminary one aimed at exposing the technological ingenuity of the early settlers of Onyohor, Ekwegbe and Obimo communities in particular and Igboland in general. A reappraisal of this technology would no doubt lead to the enhancement of our indigenous technology and this would in no small measure play a greater role towards our nation's economic growth and development.

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