UNIVERSITY OF NIGERIA, NSUKKA
DEPARTMENT OF ARCHAEOLOGY AND TOURISM

ARCHAEOLOGICAL STUDY OF OZIZZA IN AFIKPO NORTH LOCAL GOVERNMENT AREA, EBONYI STATE, NIGERIA

THESIS SUMBITTED TO THE SCHOOL OF POSTGRADUATE STUDIES IN FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTORATE DEGREE Ph.D IN THE DEPARTMENT OF ARCHAEOLOGY AND TOURISM OF THE UNIVERSITY OF NIGERIA, NSUKKA

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PG/Ph.D/07/43727

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CHAPTER ONE

INTRODUCTION

Archaeological excavations and documentation carried out in Eastern Nigeria in the past (1957 ï 2000) had posited that Nsukka-Okigwe-Afikpo cuesta was the origin of Igbo settlement. Particularly, the discovery and archaeological investigations at Igbo-Ukwu brought Igboland/South Eastern Nigeria to archaeological limelight (Shaw, 1970). It proves that the natural sandstone ridges in Afikpo with rockshelters and caves had been used as dwelling places for the prehistoric and historic peoples of the study area. The sites and rockshelters, therefore, served the earliest habitation/settlements for the inhabitants before their migration to the present location.

Afikpo sites are located on the north to south trending Cuesta with its east facing scarpslope rising between 200-300m above the Cross River plains. The Cuesta is formed by the resistant sandstones of the Mamu formation and the lower part of Ajalli formation (Obi et al 2001; Ofomata, 1978). Some scholars have investigated archaeological sites in parts of the Cuesta, such as iron smelting sites in Nsukka-Udi area (Anozie, 1979 and Okafor 1993). In Okigwe area, stone tools factory sites were discovered at Ugwuele as well as iron smelting sites, and also caves/ rockshelters have been documented and investigated (Anozie *et al*, 1978; Chigbu 1986; Okpoko and Ekechukwu, 1993; Okpoko and Ibeanu, 1994; Ibeanu 2000 and 2005; Ezeadichie, 2000; Ekechukwu, 2002 and Ibeanu *et al*, 2001 and Umeji, 1995; Umeji *et al*., 2012). These studies clearly showed the intense human activities and resource exploitation along the north-south trending Cuesta. For examples, in Okigwe area, the caves/rockshelters according to oral traditions were former abode of Ibin Ukpabi who served as an oracle in

Okigwe area but later left for Afikpo and lastly Arochukwu area of the Cuesta. It is interesting to note that oral tradition from Ozizza Community continues to maintain that Ozizza cave was occupied by Ibin Ukpabi, the evidence of which, according to our sources, was the supposed staff of office still imbedded in the cave. For example, the*Ezemairo* cave of Ozizza is believed to be the house of *Ibin Ukpabi* before he migrated to Arochukwu. According to our informant, an iron staff was found lying in the middle of the cave, and oral tradition maintained that this belonged to *Ibin Ukpabi* who used the cave as his abode. Attempt to retrieve this ôstaff of officeôwas not possible because of fear of the mythical python believed to inhabit the cave

However, in Ozizza, unlike other communities in other Cuesta example, in Okigwe, the knowledge of iron smelting was not observed vis-à-vis in other Afkpo sites. The Afikpo section of the Cuesta seems to be better endowed with pottery making. This occupational difference may be reflective of diverse natural resources and the adaptive human groups that did and still occupy different parts of the Cuesta. The rockshelter at Ozizza is called Ogba-eju.Ozizza, like other Afikpo communities, is characterized by hills, undulating landscapes and rockshelters that were separated from a narrow valley with series of sandstone ridges. It is almost surrounded by seasonal streams and tributaries of the Cross-River (Fig. I).

1.1 Statement of the Problem

Although there has been archaeological research done in the cuesta, this research arose owing to the fact that there has not been a systematic study of archaeological study of Ozizza. Therefore, this study aims at comparing other archaeological works done in the area and its

environs with a view to understanding and throwing more light on the human occupation of the area.

1.2 Research Aims and Objectives

This research has the following specific aims and objectives:

1. To locate sites and features in Ozizza, Afikpo with a view to determining the human occupations of the area.

2. To study oral traditions and ethnographic data, in order to interpret and understand archaeological materials and features in Afikpo sites.

3. To carry out survey of the site, and examine the features and excavation of the site in an attempt to collect materials relevant for understanding the history and activities of the study area.

4. To compare this research with other works already done in Afikpo by Hartle (1967), Chikwendu, (1976) Andah and Anozie (1980/81) with the aim of deciphering the similarities and differences in the cultural materials as well as determine cultural continuity or otherwise through time.

5. To ascertain the contribution, if any, of these archaeological sites and features in Afikpo to cultural tourism (development) in the study area.

1.3 Research Scope

For the purpose of in-depth investigation, the research covered Ozizza Community which has the following villages: Amainyime, Amaeta, Amorie and Urrah. These villages are known for pottery making and fish-netting. Pottery making was examined at Amaeta Village, fish-netting and fishing at Urrah beach, while some rock shelters such as Amainyime rockshelters were investigated archaeologically. Hunting and trapping expedition at Amainyime rock shelters, and finally, cultural festivals were studied in Ozizza Community. Ozizza was chosen because it had the various avenues that enabled the researcher to do thorough research. For example, numerous rock shelters, pottery making centres, beaches or banks and even cultural festivals such as wrestling (mgba) were highlighted.

1.4 Research Limitations

The major limitations encountered during the research were as follows: (1) long distance trekking from Ozizza Town Hall to the rock shelters at Ogba-eju. The distance was about 4.44km as was measured during mapping of the site. It is roughly on a rugged foot path. The area is characterized by undulating residual hills. (2) It was characterized with flooded terrain during the peak of the rainy season. This means that fieldwork can only be possible during the peak of dry season ï December to April. (3) Inaccessibility of the historic cave/rock shelter of the people of Ozizza to non-indigenes. The reason had been that the cave possesses a shrine that serves as the worldview of the entire Afikpo. According to Chief Inya, the community leader of Amainyime clan, lots of abolitions and sacrifices would be performed before foreigners could gain access to the cave. For him, the cave holds them together. This reservation made our local guide unwilling to give us any vital information about the cave. Only one friendly guide pointed

to the location of the cave. He also took us at proximity and only identified a spot where drinkable water was falling down a hilly slope that continues throughout the year. (4) Long trekking to Urrah Beach.

1.5 Research Design (Method of the Research)

The study adopted archaeological survey and ethnographic methods, as well as scientific analyses of recovered artefacts, ecofacts and features. Archaeological survey was embedded in the use of archaeological reconnaissance based on the use of oral tradition. In this process, Ezemairo Cave and Ogba-eju Rockshelters were located belonging to Amaori and Amainyime respectively in Ozizza.The information was deciphered from hunters and farmers. Cultural materials were collected at the surface. Rockshelter Ten (RS/10) was excavated to gain more information regarding the usage through time. A test pit excavation was carried out owing to its rich cultural materials, and not on deposits.

Again, through ethnographic method, the Ozizza heritage resources such as settlement patterns, festivals, traditional technology as well as their scenic resources were identified.

Finally, analysis of samples was conducted on the following: Rockshelter deposits were screened for palynological studies to gather information on palaeo-environmental changes, Potsherds from the surface collection, the excavated ones and those collected from Ugwuegu and Ukpa rockshelters by Chikwendu and Hartle were subjected to Mineralogy and Petrography studies with a view to tracing the source of raw materials for pottery making in the entire area. Likewise, soil analysis was conducted to know the depositional history of the rockshelter and nearest neighbour analysis was also conducted to identify the proximity of the study area.

1.6 Definition of Basic Concepts

Defintion of Rockshelters, Caves and Cuesta

Rock shelters are naturally small boulders of rock which formed a narrow cavity having evidence of human activities. Rockshelters are natural overhangs or shallow caves that form on cliff faces and other steep rocky exposures (Umeji *et al*, 2012). Ezeadichie (2000) defined rock shelters as small caves originated through the process of chemical weathering and mass washing to form damp concavities at the foot of cliffs by the aid of rock fall. However, rockshelters are quite different from caves. Caves are large hollow, formed underground or above the ground, precisely on top of a rock reaching the surface or from the water. Lozek (1965) defined caves as large formation caused by erosional forces of corrosion, and corrosion often referred to as ñsolution caveò. Some caves may be narrow or deep and often become very impossible for human occupation. Owing to excessive cool caves environment, Stalagmites and stalactites are the two major formations generaly found in caves. Stalactite is the building up of a conical pillar deposit from underground water through the roof of cave, while stalagmite is also a conical pillar deposit projecting upwards from the floor of a cave. Renfrew and Bahn (2003) posit that stalagmites and stalactities, which occur inside cave as speleothems, are used for assessing accurate past climate based on the oxygen isotope technique. The scope of the work concentrated on the rock shelters.

Cuesta, according to Encarta Dictionary, is a ridge with a steep face on one side and a gentle slope on the other especially in the South Western United States. Cuesta by a layman is a residual hill.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Relevant Archaeological Researches

The review is centered on the following sub-headings: Work in other Cuesta; previous researches in Afikpo and rock shelters and their relevance to tourism.

2.2 Research Works on Rockshelters in Europe/America

In reviewing rock shelters, the work was partitioned into three segments. They are as follows:

1. Rock shelters already investigated archaeologically and documented

2. Those only identified, surveyed but not archaeologically investigated

3. Those identified archaeologically, investigations carried out on them and harnessed for tourism.

Rock shelters already investigated archaeologically and findings recovered and documented are numerous world wide. In northeastern Spain and Austrialia, for instance, rockshelters investigation had been carried out and findings suggest evidence of rock art in Australia rock shelters and wooden stick dated about 50, 000 years ago at Aboric Romani rock shelters in Spain, (Renfrew and Bahn, 2000). The wooden stick was made of hollow top of decayed pointed wooden stick. Renfrew and Bahn (2000) further tagged the hollow ñpseudomorphò. In Mexico ï Latin America Renfrew and Bahn, (2000) also reported excavation done at Guila Naqutiz rockshelter valley in 1966 by Zapotee Indian called Flannery ï Marcus and other workmen from Mitla. The site was of transition site from foraging to food production in Latin America. The inference centred on the recoverable artifacts. Also in South-Latin America, carnivoresô rockshelter belonging to Puna of Andeen is Mammalian carnivore dens-ecology (Mondni, 2005). They are hunters and gatherers who provided their food by hunting and scavenging technique. They are referred to as predators because they catch and eat animals and humans raw. In the southwest of America, at Pueblo Rockshelters, Renfrew and Bahn (2000) reported it as a burial chamber around 700-1400AD. The aridity/dryness, owing to water shortage of the Pueblo Rockshelter, prevents (conserves) organic materials from destructions. Thus, artifacts such as hair-styles, cloth, basketry, feather, ornaments and leather were recovered in the chamber. Thailand (Shoocongdej, 2011) investigated and excavated Ban Rai and Tham Lad rockshelter under the auspices of Pang Mapha Project. According to him, the rockshelters were located near the top of a limestone cliff, under a large overhanging rock dated ca. 12500 and 2000Bp. They were temporary camp sites. Despite the fact that the sites have not been

formerly harnessed for eco-tourism, tourists visit the place (Loethanawanit, 2006 quoted from Shoocongdej (2011).

2.3 Research Works on Rockshelters in North-Central Nigeria

In Africa, precisely in Nigeria, extensive archaeological work had been carried out in different parts (of the country) and their findings have been published in different renowned journals such as West African Journal of Archaeology and other reputable ones in Nigeria and beyond. In north -central Nigeria such as Jos, Plateau State, near Dutsen Kongba Rockshelter, York (1978) also excavated the area and concluded that the site was a microlithic and pottery industry which took place in the 6th millennium B.C. In Kogi State, Oyeleran (1991 and 1996) excavated both Itaakpa and Oluwaju rock shelters belonging to the Iffe-Ijumu communities, while Asakitikpo (2001) excavated Aseye rock shelter still in Kogi State. Both excavators concluded their results based on their findings and concluded that the area had human occupations in the past. Oyelaran (1991) dated Itaakpa and Oluwaja communities about 300BC and 1840 ï 125 Bp. This contradicts the information about Aseye Community which was said to have been only occupied about a thousand years ago (Asakitikpi, 2001). Besides, there are numerous rockshelters discovered in this zone but are still unexcavated and are awaiting archaeological investigation. In Kogi state, Nigeria, Bakinde (2005) surveyed Ufe Rockshelter in Ijumu Local Government Area. He further visited Ondoo, Emoolu, Gangban/Uho Iyemote and Asaku Rockshelters, all in Kogi State. He concluded that these shelters were awaiting proper investigation since they should infer evidence of human occupation and activities.

2.4 Research Works on Rockshelters in Southeast, Nigeria

Igbo heartland around the cuesta is Nsukka ï Okigwe. Umeji (1995) reported numerous excavated cave formations, their description, occurrences and deposits around Nsukka ï Okigwe scarpland or cuesta. According to her, occurrence of caves in Uhuchukwu in Isuikwuato, Okpu Chukwu, Otamkpa in Isuikwuato, Ogba Nkoto, Ikpa Utu, Isi Ugwu Obukpa in Nsukka and Ogba Agu, Ugwu Nruru (Umabo) in Nsukka were as a result of the process of denudation and scarp retreat. Also Simpson (1955) mentioned the evidence of cave situated at Aku in Nsukka cuesta. Ofomata *et al.* (1981) and Chigbu (1986) posited that other caves, apart from Aku, were mentioned by Simpson to be lying in Nsukka ï Udi plateau. But much attention was not given until 1995 when Umeji conducted a geological and geomorphological survey. In Okigwe, Otamkpa, Okpuchukwu, Uhuchukwu and Ogba Nkoto rockshelters were extensively archaeologically investigated by (Ibeanu, 2000). He put forward that the cuesta is the major factor in the development of Igboland. Natural resources located in the area aid in the organization of settlement pattern, iron smelting, pottery making and agricultural practices. The characteristics of the cuesta imbued it to possess the Igbo heart zone. In the study of palo-ecological deposit in Okigwe caves, Ibeanu and Umeji (2001) gave evidence of campano-Maastrichtian sediments in the form of sandstones, shale, and minor limestone with coal deposited at the top and base of Mamu formation in Okigwe and Nsukka formation, which indicates high level of human impact/ utilization as well as high population density. In Awgu, around Mmaku and Achi, Ibeanu and Nze (2004) conducted a preliminary archaeological work at Ogba-Umude Nworji of Egama, Ogba Ngala Agu and Opia Echeta Ezioma Rockshelters, and came out with the finding that only harmless pythons and water fall occupied the shelters at this present time.

Ibeanu (2005), in his study of early settlements and subsistence in Okigwe Cuesta, observed settlement patterns and successful exploitation of agricultural resources due to availability of natural resources in Okigwe scarpland. Raw materials such as clay deposits, limestone, coal, stone ridge, dolerite volcanic (Ibeanu, 2005; Simpson, 1955; Wilson and Bain 1928) are numerous in the area. These made the manufacturing of pottery and basketries, weaving, iron working and stone quarrying peculiar with the people residing along the Okigwe Cuesta. Ibeanu further observed that iron smelting was found at Ugwuegu, Ihube and Isuochi, all at the Okigwe Cuesta. Evidence of smelting was seen at Ihube, while huge amount of slag debris was found along the farmlands, foot paths and in various compounds in Amaikpa and Agidi villages. Okigwe also had traces of human habitation seen at rock shelters and caves. Examples are Otamkpa and Okpu-Chukwu communities that are still using the rock shelters for hunting, drums and for refuge during wars.

Proximity of raw materials enhances industrial growth of any place. In Nsukka Cuesta, like Okigwe, availability of raw materials (magnetic ores used for bloom) enhanced the technique of smelting and blacksmith industry in Lejja, Umundu, Opi and Nsukka axes (Okafor, 1993; Anozie, 1985; Anozie *et al.* 1978; Ejike, 1989; Anozie, 1979; Ekechukwu, 1988; and Itanyi and Okonkwo, 2007). Onwuka (1989) researched on iron in which he observed that Nsukka was a cradle of iron technology in Igboland. Therefore, blacksmithing/smelting technology diffused to other places via Udi scrap land. Onwukaôs (1989) argument was that iron technology was a migrant issue, and in support of this assertion, Afigbo (1981) posited that the knowledge of iron started from Nsukka along Nsukka ï Okigwe Cuesta. Yet, iron knowledge was not traceable in Ozizza, Afikpo, where the cuesta continued and terminated at Arochukwu. There are no evidence of furnaces and slags at the surface, either in the farmland or settlement

areas. The reason why iron technology was not traced in Ozizza, Afikpo could be that the emigrants of iron workers did not reach Afikpo, but ended at Okigwe cuesta. Majority of the iron smelters are extinct while the beneficiaries abandoned the technology owing to western influence and Igbo idiosyncrasy. Blacksmithing is only still being practised in some places in Nsukka axes. Examples are found in Umundu and Lejja. In line with Bakindeôs view, the present researcher, while carrying out a reconnaissance in Nsukka area, recovered Efuru Rockshelter belonging to the popular Efuru deity in Ukeh/Igbo Etiti Local Government, Enugu State. She also came across Edemeani Rockshelter with its water falls in Nsukka South and Okpuje Rockshelter in Igbo Eze South. Okpuje rock shelters contain the popular Okpuje medicinal water called *Mmiri Okpuja* by the users. It was this water that is called today ó*Mmiri* Jesusô renamed by Rev Father Paul Obayi, a well-known Catholic priest in Nsukka. Additionally, Ibii Rockshelter at Afikpo recovered by Chikwendu (1976 and 1989) is on the waiting list for future researchers.

Within Eastern Nigeria, precisely in Afikpo cuesta, archaeological excavations had been done in Ukpa Rockshelter (Hartle, 1967) and Ugwuagu Rockshelter (Chikwendu 1976). Despite the discovery made at Igbo-Ukwu in 1938, Thurstan Shaw only excavated Igbo-Ukwu in 1964-65, while D.D. Hartle was authorized to carry out archaeological reconnaissance in Eastern Nigeria around 1963-1967 under the auspices of the University of Nigeria, Nsukka and he excavated at Afikpo, although he was interrupted by the Nigerian Civil War, which interrupted the work. The interruption brought by the Nigerian Civil war resulted in paucity of information, because data were not documented. Years after the war, scholars like Chikwendu visited Afikpo in 1975; Bassey Andah, and Fred Anozie also re-visited and re-worked on the sites of Hartle in 1980. They came up with the following results: Hartle (1967) posited that Ezi-Ukwu Ukpa Rockshelters after excavation in 1966 were Late Stone Age sites. Tools such as pottery and

Lithic objects ï grained sandstone embedded with pervious stone e.g. quartz pebbles and crystals were recovered. Dated with carbon-14, Hartle concluded that Afikpo is contemporaneous with late Stone Age sites in Western Nigeria. Andah and Anozie (1980/81) maintained that Ukpa rock shelter was a Late Stone Age site, located on the cliffs, after re-excavation. Stone tools such as pottery and microlith artifacts were also recovered by Andah and Anozie (1980/81). Chikwendu (1976 and 1998) excavated Ogwugwu valley in Ugwuagu Village in Afikpo cuesta. Chikwendu chose two sites: site i and site ii. Cultural materials such as shale scrappers, cores, flakes, grinding stones, polished stone axe, pottery, snail shells, cooking areas and pit were recovered at both sites i and ii. Chikwenduôs sites at Ugwuagu in Afikpo also suggested Late Stone Age. By and large, from the works done at Afikpo, based on the two communities excavated, there was a change in economy from hunting/gatherers to prolong settlement that gave rise to food production (Hartle, 1967; Chikwendu, 1976 and Anda *et al.*, 1980). Tools like microlithic, precious stones, corals and flakes, all suggested hunting expedition while polished stone, grinding stones, pottery, etc. belong to sedentary period ï period of food production (Hartle, 1987/Andah and Anozie, 1980/81 and Chikwendu, 1976 and 1998).

The discoveries done in Afikpo at Eziukwu ï Ukpa rockshelter by Hartle in 1966 and Andah and Anozie in 1967 as well as at Ogwugwu Valley, in Ugwuagu Village in 1975 by Chikwendu had proved Igbo rich in cultural practices, agriculture and indigenous technology. The artifact that belongs to late Stone Age from their research is pottery. Microliths assemblage such as scrapers, denticulate, truncate, trapezoids, etc. suggest the period of shift to food production in Igbo land dating between 5,000 ï 3,000 BP (Andah and Anozie, 1980/81). The cultural deposits of site ii and numerous stone artifacts of pottery and manuport on site i of Chikwenduôs report of Ugwuagu village as well as Hartleôs pottery remain in the middle

cultural layer at Ezi-Ukwu Ukpa Rockshelter following proved that agriculture was practised by the people. Andah and Anozie re-worked discovery of microlithic at Ezi-Ukwu Ukpa Rockshelter confirms that agriculture was indeed practised in Igbo land as an indigenous practice and was not a borrowed idea from anywhere; not from the western world as speculated. These studies clearly showed the intense human activities and resource exploitation along the north-south trending Cuesta. Thus, in Okigwe area, the caves/rockshelters, according to oral traditions, were former abode of Ibin Ukpabi who served for oracular services but later left Afikpo and Arochukwu areas of the Cuesta. It is interesting to note that oral tradition from Ozizza Community continues to maintain that Ozizza cave was occupied by Ibin Ukpabi with the supposed staff of office still embedded in the cave.The works at both Okigwe and Afikpo prove evidence of human activities and are presently used by farmers during rainy season.

2.5. Rock Shelters and their Role in Tourism

From the foregoing, one can conclude that rock shelters recovered, investigated archaeologically, documented, harnessed for tourism, and opened for touristsô consumption are very few the world over. The following stand as examples of beneficial rock shelters turned for archaeological tourism. Renfrew and Bahn (2000) reported Aboriginal Anbangbang Rockshelter site belonging to the Kakadu region in Australia, which recorded very high tourist in 1981 ï 82 by Rhys Jones and Co. during field corroboration and excavation research programme. It contained rich cultural materials on the surface and rock art on the walls. It is now ñKakadu National Parkò in Australia, as well as ñWorld Heritage Siteò. The merit of this rock shelter is its proximity to the north coast. It also serves as an environment to the famous avenue for

international Crocodile Dundee movies for shooting films (Renfrew and Bahn, 2000). The group (Rhys Jones and Co) also reported Lindner Rockshelter in Australia after excavation containing more than 30,000 stone artifacts. They suggested that the site would be useful for tourism site, but regretted its impossibilities owing to the fact that the landscape was not enough for National Parks. But it is a site that has recodered long term human usage and rich sediment in the vicinity (Renfrew and Bahn, 2003).

Again, in Nigeria, Aremu and Aleru (2000) surveyed and excavated Imoleboya Rockshelter in Odo Owa, Oke Ero Local Government Area, Kwara state in 1992. The positions of the rockshelter and data soon after 1992, precisely in 1993, were taken over by Oke Ero Local Government Tourism Committee, which later enacted/conformed it archaeological tourism centre. Tourists today flock the rockshelter via Kwara State Tourism Board at Ilorin. The Board directs tourists to Imoleboja and also assisted tourists to accomplish their mission at the rock shelter (Aremu, 1999). In Aremu and Aleru (2000), Imoleboja Rockshelter also serves as a religious centre accommodating the home of Christ Apostolic Church founder and the headquarters of the Church. The church congregations in Nigeria always embark on pilgrimage on that hill top, a rightful place where the founder started his call. It is referred to Godôs Miracle Centre by worshippers owing to the presence of its ñhealingò spring water.

Furthermore, an American Tourism Steering Committee (2008) reported Red River Gorge rock shelters in America as a tourist site. These rockshelters tell the story of the past Native Americans called Paleo-Indian, emigrants in America about 12,000 years ago. They dwelt in the Red River Gorge Rockshelter and practised hunting and gathering. The committee also reported that other rockshelters in the Gorge such as cloud splitter, new rash, Haystack, Rogers, William S.Web memorial Rockshelter and raved rock shelters all had evidence of human usage

(www.as.uky-edu/athropology/musenu.html). It was latter, around 300 years ago, that the committee also reported that Europeans and African descents arrived at the Gorge via Ohio River and settled. They mined at the rock shelters for saltpeter/niter which was used in making gun-powder, and was shipped as finished products to Lexington that bought them for hunting. In 1800, tourists visited the Red River Gorge and, in the mid twentieth century, the number of tourists increased till date. The number of tourists became overwhelming and, according to the steering committee (2008), between 250,000 and 750,000 tourists who come for recreations such as mountain/rock climbing, hiking trails, scenery and camping sports, are recorded yearly. Hence, the Red River Gorge District was named as ñNational Register of Historic Places in 2003 (Steering Committee, 2003).

Consequently, the relationship between rockshelters and archeological tourism had been demonstrated using Aboriginal Anbangbang Rockshelter in Australia, Imoleboja rock shelters in Kwara State, Nigeria and rockshelters found at Red River Gorge in America. The present Ogba-eju Rockshelter, Ozizza in Afikpo, according to the present research, possesses some features enumerated in Anbangang, Imoleboja and those at Red River Gorge. The Ogba-eju Rockshelters have large hectares of landscape surrounded by mountains and situates at proximity to the cross-river and beaches. The site would be suitable for mountain climbers, camping sports and beach scenery. Therefore, it would be suitable for Nollywood and even Hollywood movie industries to showcase epic moves in the rock shelter. Ogba-eju rock shelter, combined with other features mentioned, gives aura to the epic movies. Ogba-eju, when correlated with Ukpa and Ugwuegu Rockshelters in Afikpo, can generate Afikpo National Parks. The following are their contributions to tourism:

1. Tourism centres aid human life and these centres are suitable for such.

2. The government can improve her purse for societal development through the development of these areas because of their natural habitats.

3. Ezemairo cave can be developed for future tourism attraction.

4. The area can also be developed for mountain climbers because of sandstone ridges.

5. The beaches can be developed for tourists attractions.

6. Tourists from Tinapa in Cross River State can easily cross from Calabar via the Cross River to further increase their interest.

The effect of tourism in aiding human life centres on valorization achievement with tourism industry. Nations whose economy relies on tourism uses it to aid human life in every ramification in both social and economic developments. It generates foreign currency, infrastructural development and employment opportunities by making policies that encourage the conservation of the landscape and biodiversity while soliciting for both national and international partnerships. Recreational activities created and strengthened by the law of the land are centres for leisure and holiday makers, which serve to aid and ease human life. In line with this, therefore, the peopleôs cultural resources and traditions such as festivals and wrestling activities should be preserved. Museums also should be set up and opened for tourists. This will make them proud, seeing their way of life preserved and maintained, and being marketed to the global community. Promotion of tourism in Afikpo would aid human life and according to Mirbabayer and Shagazatora (2011: 48), it would give ñincomes and create respect for the local tradition and cultureò as well as improve both ñenvironmental and human welfareò (Mbaiwe, 2003: 448). Tourism in Afikpo, if developed and strengthened by the law, will be like Cook Island, Nairobi and, even in Cross River State, which has developed and continues to exploit other tourism sites

in the state for development to serve as a major source of income. Tourism in the area will give an essence to the livelihood of the people.

The economic contribution of tourism in this area will enhance national economy and lead to less dependance on oil. Oil accounts for over 60% of the nationôs economy, yet could not provide enough job opportunities to the looming youths of Afikpo, as in entire Nigeria. But with tourism in Afikpo, economic activities will improve, and life would-become meaningful to the local people. In the social aspect, the events and festivials of the people, such as festivals ï *iri iko, egwugwu, okomkpo* and *mgba* (wrestling), will be developed in response to tourist interest, and thus, improve the conservation of the heritage of the traditional community. Examples are the wildlife sanctuary at *Ogba-eju* and beach tourism at Urrah and Amainyime communities. These will strengthen the economic activities of Afikpo communities and minimize the rate of migration to other places in search of alternative sources of livelihood.

Furthermore, the government can improve her purse for societal development through the development of these areas because of their natural habitats. The natural habitats located at the *Ogba-eju* environment will become one of the friendliest environments when the government gazettes it into bird watching scernery. Laws and regulations will be passed to protect and preserve both natural resource from exploitation and endangered species, that is, ñnature protection environmentò as they were done in Croatia (Bocic *et al.,* 2006:14). The laws and regulations should also extend to hunting, and caves and rockshelterséô protection in the area. These laws should be included as Hunting Act, Cave and Rockshelter Protection Act and Bird Watching Act when reviewing the countryôs Constitution. Thus, an innovation in tourism will be inacted that will improve the income generation and, hence, improve government purse, leading to increase in development in society.

Moreover, Ezemairo cave can be developed for future tourism attraction. Cave tourism is a recent phenomenon in tourism industry. It is a ñfairly recent name given to tourism that involves speleological structuresò (Knezevic and Zikovic, 2011: 12). It is now widespread the world over such as in Brazil, Indonesia, Russia, Romania, and Kyrgzsten and in Nigeria, precisely, in Anambra State as an example (Resende, 2005, http://www.kyrgyzyer.com/en/tourism/esction; Romania, 2010; UNESCO, 2013 and Sunnewspaper, 2014). In Croatia, cave tourism had been established and flourished as early as in the 19th Century. Knezevic (2003) ascertained that cave tourism in Croatia was ready for visitors in 1889, and income generated right from inception had been going into the Croatian government purse.

A turning point only came in Southeastern Nigeria when Ogbunike Cave was discovered in the mid- 1990s after several debates. Three hundred and seventeen (317) steps were constructed by the Anambra State Government to aid in entering the Cave. Also, for effective function and maintenance, laws were enacted such that no menstruarting women should be allowed to enter the cave and visitors/tourists should wear shoes before entering the caves (UNESCO, 2013). In Ogbunike Cave, ñIme ogbeò is a yearly celebration to commemorate the discovery of the caves in order to strengthen the cultural affinity of the Ogbunike Cave with the inhabitants and for tourism generation. Other caves yet to be developed like Ogbunike cave is Ogbaukwu Cave in Anambra State, Owere Ezeukala Community in Orumba South Local Government Area. The cave can be regarded as ñGodôs former courtyardò (Obe, 2014).

The entrance floor of Ezemairo Cave is very clean and smooth. Only bats and pythons occupied the cave. The presence of Guano and python smooth line- paths from the entrance to the inside of the cave is evidence of occupation by animals (Fieldwork, 2011). The fear of the

precence of python within the cave could not allow the researchers to enter inside the cave to either retrieve the oracleôs staff of office of Ibini Ukpabi or get down the Cross River via the opening. The cave, just like Ogbunike Cave, calls for a quick and sustained development from both the government and the tourism industry through Public-Private Partnership (PPP).

Beach tourism contributes almost 100% social impact in tourism industry. It serves as an indicator for leisure and relaxation after busy work. Coastal areas and river beaches are most favourable for beach tourism than the inland areas. For instance, in India, Goa beaches cover about 125 km of its coastline. It is divided into Baga Beach in the North Goa and Colva beaches in the South with both local and foreign tourists. Goa is famously known for its tourism carrying capacity (Annual Report 2011 ï 2012). In Lagos, Nigeria, the Bar beach, Lekki Beach and Badagary Beach are the three famous beaches attracting both local and foreign tourists. Therefore, Urrah Beach in Ozizza is yet to be developed as beach tour attraction, but currently serves as avenue for local business ventures. The wideness of the beach gives room for necessary basic infrastructures that would feature beach tourism attraction.

The landscape of Afikpo is undulating, owing to sandstone ridges, otherwise called Cuesta/mountain. The cuesta/mountain had provided the inhabitants with economic resources for their survival. The housing, raw materials for buildings and other traditional technologies as well as game for edible consumption resulted from the nature of the landscape. Yet, this unique landscape has not contributed positively to tourism, just like the Himalayas (ICIMOD, 2014) that are still struggling with poverty alleviation, despite the natural endowment of the region. The Himalaya is famous for its high mountain peak in the world ï its unique and rare flora and fauna and a great variety of unique hills and mountain cultures.

Mountains are vital segments for tourism industry that occupies two-thirds of the peopleôs land, making them to live in clusters. It ranks second to both beach and habitats for tourist attraction, accounting for about 15 ï 20% of world tourism annually (UNEP, 2002 and 2007; Kruk, 2010 and ICIMOD, 2014). Mountain tourism offers the region it was located with lucrative impact on social, economic and environmental changes. Examples are mountain climbing, hiking trails, scenery, camping sports, etc. Places like the mountains in the Red River George, USA, Himalayan in Southeast Asia, and Kilmajaro Mountain in Nairobi, Kenya provide tourism attraction even as the hills and Cuesta equally possess similar characteristics with Mountains in terms of tourism potentiality.

CHAPTER THREE

BACKGROUND INFORMATION

3.1 Geographical Location

Afikpo North generally is found within the axis of 5^0 $54^{\acute{o}N}$ and 7^o 50^E in Ebonyi State, Nigeria. Afikpo is located on a hill, precisely within the Benue - Nsukka ï Okigwe ï Afikpo Cuesta. Afikpo Cuesta has a total area of 240km^{2}with eleven distinct clans. Oziza, the study area, is one of the clans in Afikpo. Afikpo North has a population of about 156, 611 (77, 368 males and 79, 243 females) based on the 2006 census.

Ozizza is a town in Afikpo North, and is made up of four sub-groups of villages: Amainyime, Amaori, Amaeta and Urrah. Ozizza lies between 90^{oNE} of upper Afikpo with a total land area of 24.32km^2. The town is an Igbo-speaking enclave that settled at this present position many generations ago. The major occupations of Ozizza settlers are farming, fishing, hunting and pottery-making. They also engage in wrestling, especially during festivities (Oral Tradition, 2010).

3.2 Geomorphology

Ozizza has unique and similar geomorphology to upper Afikpo. The geomorphology is characterized by two main lithological Units: (a) Siliceous Sand stone and carbonaceous shale (b) calcareous sandstone and grey shale (Andah and Anozie, 1980/81). Ozizza has undulating topography with sand stone forming prominent ridges. The Cuesta House where the Ogba-eju

(rock shelters) was located possessed a strong scrap features that made the shale underlay with much wider flat flowing lowlands which are flooded during the rainy season. The following plates 1 and 2 are the forms observed at Ogba-eju in Amainyime, Amaeta, Amaori and Urrah in Ozizza villages:

Plate 1: Undulating Landscape of Ozizza

Source: Fieldwork (2011)

Plate 2: Mapping of the Mountain Slope

Source: Fieldwork (2011)

3.2.1 A “U”- ShapedFlood Plain

This feature faces the rock shelters numbered from 1 to 10 of Amainyime in Ozizza. The õUô- shaped feature was noticed immediately after descending the second hill with a distance of 344.70 m starting from the first indigenous constructed bridge that measured 30^{oNE} of Ozizza. The bridge measured 5.6lm in length, 3.17 m in width and 1.52 m deep. The second bridge had a distance of 38.63m from the first bridge. Its length was 5.94m, width 3.51m and depth 1.34m and measured 40^{oNE} of Ozizza and 30^{oSW} of the third bridge which was about 60.96m from the second one. The third bridge had 6.40m in length, 3.84m in width and 1.19m deep and measured 50^{oNE} of Ozizza and 30^{oSW} of the second bridge. From the first bridge, the distance to Ogba-eju farmland was 391.73m. The flood plain area was actually the bank of river cross-river. The flood is often caused by excessive increase of water volume during the rainy season. The depth of the increase may get up to about 36.58m during the rainy season while it measures about 9.75±4.23m during the dry season. The readjustment of the river formed the õUô-shaped valley, and no cultivation is done within the flooded area in the peak of rainy season (June to August). Every member of Amaeta sub-group of the villages whose area is blocked by flood normally harvests enough foodstuffs on or before June yearly. Those crops cultivated at the following floodplains are harvested before the next flood occurs.

3.2.2 Ozizza Rock Hollows

Rock hollows called *Ujii* were found on the site. These *Ujiis* are in different forms and sizes and were found scattered in each of the villages. Measurement was done on two of the *Ujii's* represented by sizes A and B. Size A had a conference of 100.8cm, diameter 50.4cm and depth 70.5cm, while size B had a circumference of 60cm, diameter 30cm and a depth 50cm. *Ujii* is used for either processing of palm oil or fermentation of cassava for foo foo production. *Ujii* asfound at Amaori sub-group of the village in Ozizza is now abandoned. Tradition has it that the inhabitants of Amaori used it for oil processing and evidence of palm kernels are seen to have decayed at the walls of the *Ujii*. Tradition also associated it to *Ohaodu* (beings with tail) sitting posture. At Amainyime farmland, very close to Ogba-eju, *Ujii* was used for cassava fermentation. Again, the people made use of them during the Nigerian Civil War from 1967 - 1970, and they (Amainyime communities) used the rock shelters as their asylum. Presently, a member of Amaeta sub-group is found still using it for processing of palm oil. In Amaeta, *Ujii* measured 75cm deep and 45cm in diameter.

Generally, the origin of *Ujii* (rock hollows) is not known since they have been there before the present inhabitants migrated to the place, but archaeologically *Ujii* may have belonged to Stone Age ï period of food production, since its usage was associated more with the processing of food crops. In Southern England, *Ujii* is called ñIron Age Storage Pitò used to store grains over the winter (Greene and Moore, 2010:125). Its sustainability is seen with Amaeta dwellers that still make use of it for palm oil processing. Geologically, *Ujii* (rock hollows) may have been as a result of wind action called attrition on rocky surfaces leading to formation of hollows. Attrition menace is the process of transporting pebble materials (small smooth stone) on top of sandstone ridges. The consequence is erosion which can cause what laymen refer to as potholes. Such pothole or erosion is found on top of sandstone ridges.

3.2.3 Sand Stone Ridges

The ridges are in two formations: (a) coarse grained castle that make up the highlands at Ogba-eju, and (b) medium grained elastic ï siltty that make up the lower slope. Actually, it is on top of these sandstone ridges that *Ujiis* were formed.

3.2.4 The Cross River Beaches

Virtually, every sub-group of thevillages in Ozizza (Amaeta, Amainyime, Amaori and Urrah) has a beach. The studied beach is Urrah Beach found adjacent the River Cross in Cross River State. The Ozizza Beach is a low lying valley which is directly north of Calabar town. It demarcates Ozizza, Afikpo from Cross-River State. Urrah Beach measured 270.58m and 213.46m during the raining and dry seasons respectively. The measurement is by the use of boat and twine from Urrah, Ozizza Beach Point through Igorigo Town in Cross-River State (Plate 3). The depth of the water during raining season is 36.58m and 9.75m during the dry season (March to April).

Plate 3: Undeveloped Ozizza Beach

Source: Fieldwork (2011)

3.2.5 Caves and RockShelters

These are many in Afikpo communities. For instance in Eziukwu Ukpa, Ugwuegu, Amamgbala and Ozizza, they are numerous. Only Ukpa and Ugwuegu rock shelters have been excavated and documented. However, this research was carried out in Ozizza. While Amamgbala was surveyed during the course of this research, detailed work was left for future reseachers. Amamgbala cave is a historic cave and a shrine. It lies between 80^{oSW} of Ozizza. It has a cavity of 9.8m, depth of 2.8m, and deposit of 0.16m. Women are not permitted to enter the cave. Amaori cave in Ozizza Village has height of 12.5m, cavity of 75m and deposit 0.25m, while other Ozizza Rockshelters numbering from 1-10 are rich in deposits. All the caves and rockshelters found in Afikpo originated either as a result of erosion of the shale from overlying

sandstone through contact (Andah and Anozie, 1980/81) owing to Cuestaôs presence, or as a removal of siltstones which are interrelated with sandstones.

3.2.6 Miniature Waterfalls

The waterfalls probably occurred through the process of undulating nature of Ozizza land surface making drainage to be subsequent. The subsequent nature of drainage resulted in the tributary streams although low in density to produce a coarse texture to the landscape (Andah and Anozie 1980/81). Geologically, waterfalls are caused by the activities of sand stone ridges and hill, producing tributary flows (Plate 4). This is beneficial to man as it brings along the purest spring water and stream flows.

Plate 4: One of the Waterfalls Located in Ozizza

Source: Fieldwork (2011)

The waterfalls at Ozizza necessitated the flow of the spring and stream water to the communities, while the water finally empties into the Cross River. The cave of Amaori in Ozizza is located along the course of the tributaries. Many streams are seasonal (in the dry season some dry up to increase their volume during the rainy season).

3.3 Vegetation Cover

The vegetation cover of Ozizza falls within the Guinea Savanna Zone. Its vegetation is derived from Savannah. It is characterized by tall trees and grassland, as exemplified by the presence of raffia palm trees *Raphia hookeri and Raphia vinifera*; silk cotton tree *Ceiba pentandra*; shrubs and bamboos found especially at Amaeta Village. The road to the village is always flooded during the rainy season and the only access to the village during rainy periods is by canoe. Ozizza is also characterized by high temperature, climate fluctuations, but the wind action is stable. Ozizza Community has large hectares of land for farming and thus has a lot of foodstuffs with good climate. Ozizza Cuesta has rich mineral deposits. During reconnaissance, coal deposits were found at Amaori Village while shale and grained sand stones were found at Ogba-eju.

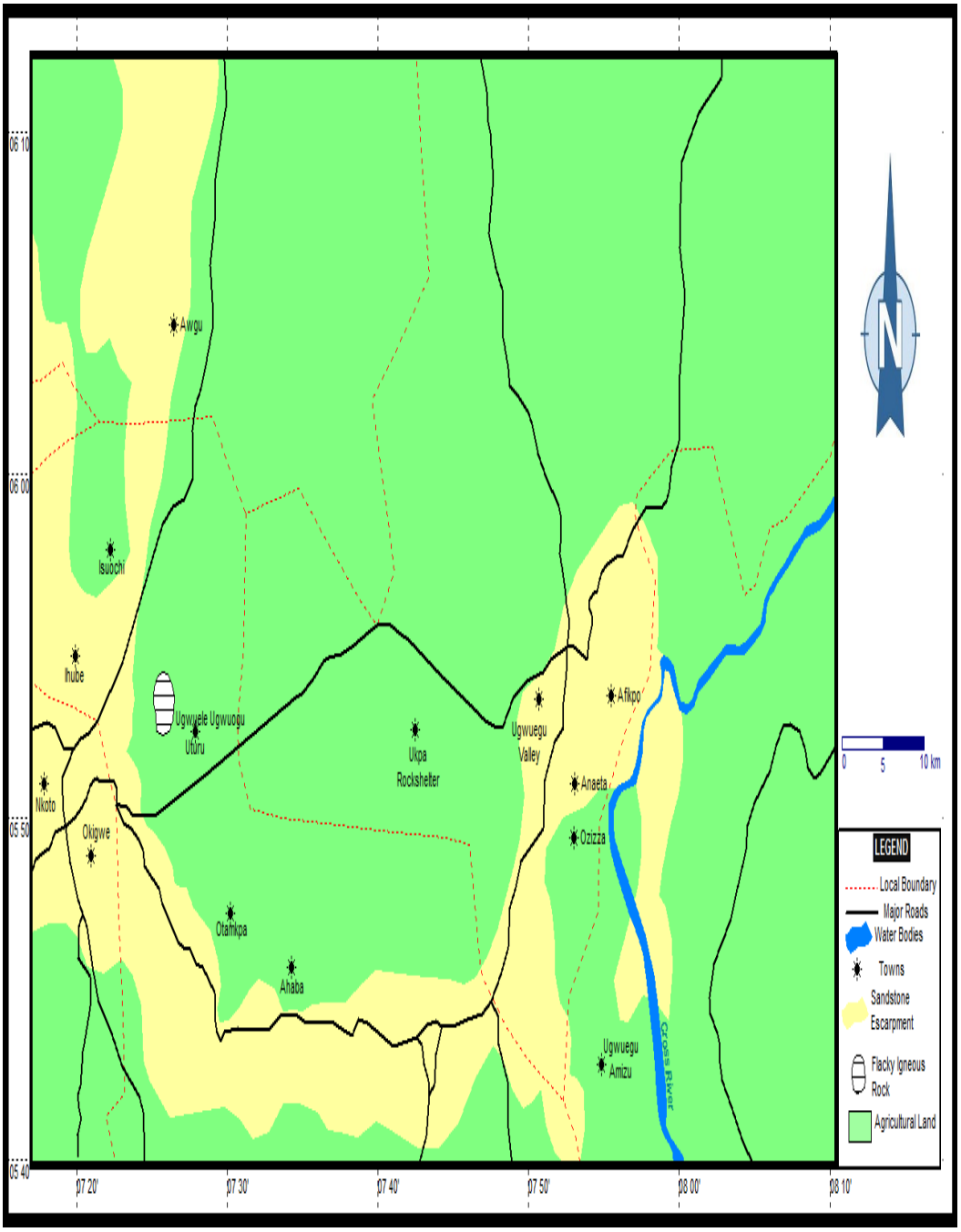


Fig 1: Afikpo and Environs Showing Physical Feautures.

Source: Google Map Library and Authors Fieldwork (2014).

This background information which captured the natural resources, vegetation cover, caves and rockshelters is to give information on how and why men occupied the area. However,

based on the fact that the escarpment of the Nsukka-Okigwe-Afikpo Cuesta was made of alternating layers of sandstones and shales (Umeji, 1992), it likely attracted the prehistoric men to the area. Again, the vegetation and drainage offered early human settlers, as men during this period, had the opportunityto exploit both flora and fauna resources for their livelihood as in the remnants which were seen in the rockshelters sites in Afikpo.

3.4 History of Ozizza

History of Ozizza would help in the reconstruction and interpretation of cultural artifacts collected from the surface and from excavated sites. The history of Ozizza would give us clue on the communityôs ways of life. The use of oral tradition is very vital in the reconstruction. Ibeanu (2000); Alagoa (1979); Afigbo (1983[a] and 1983[b]) and Okpoko (1988) postulate that oral traditions are the major tool in reconstructing peoplesô historical resources. Ozizza area in Afikpo can be reconciled in two ways: Internal version (Indigenous) and External version (migration).

3.4.1 Internal Version (Indigenous)

The internal tradition is the missing link that could be traced to the mythical people *Ohaodu* who, according to oral tradition, possess tails; that is, the first tail-like beings (Chief Ivo, 2011). Although the *Ohaodu* has gone extinct, oral tradition holds that they are the first humans

that linked them to their race in Ozizza Community. These creatures lived in proximity to the Ogba-eju Rockshelters, and close to the bank of Cross-River plain. Shortly after them, according to oral tradition, came *Ndiegu* people ï migrants from Cross-River to Afikpo (Chief Ivo, 2011). Both groups settled in Afikpo and traded at a particular market near the Ogba-eju Rockshelter. It was told by oral traditions that fear and trepidation was observed by the *Ngiegu* inhabitants when they discovered to their utter disbelief that the *Ohaodu* were always the first to be seated at the market and the last to leave on each market day. The manner of posture of *Ohaodu* gave concern for *Ndiegu* and it became a topical issue. Discussion was taken by *Ndiegu* and, with their knowledge of technical know-how, a solution was reached. *Ndiegu* had knowledge of palm oil processing, as they brought the knowledge to the area and thus poured palm oil sludge inside the tiny holes located on the rocks that marked the sitting position of the O*haodu* in the market premises. Palm oil sludge attracted soldier ants and, unknowingly for *Ohaodu* about the sludge trap, they sat as usual with their tails inside the holes at the market. Not quite long at the peak of market transaction, *Ohaodu* felt tortured and tormented by the soldier ants, rose up and took to their heels. This led to an adage which says, ñO*kuku kwaa, afu Ikeya"* ï when the cock crows, its anus gets exposed. *Ohaodus* exposed their tails to *Ndiegu which* explains their reason for coming to the market earlier and leaving late. During the process of running, *Ohaodu* people dropped those huge stones as a curse meted out to *Ndiegus* for startling and exposing their tails. Oral traditions ascertain stone dropping to be an excretion of faeces from the *Ohaodus*. The fairy tales led to the extinction of *Ohaodu* in Ozizza Community in Afikpo.

3.4.2 External Version (Migration)

The present Ozizza Community are the descendants of the *Ndiegu* who migrated from Cross-River State. Thus, from the external version, *Ndiegu* migrants are craft men and women who penetrated Afikpo via River - Cross-River State. They are pottery makers, fish netters and fishermen. They are the harbingers of traditional technologies to the people of Amaeta and other sub-groups of the community. Amaeta was known for pottery and other communities such as Amainyime and Urrah are fishermen and fish netters. The socio-economic organization would not be mentioned without reference to *Ndiegu* descendants ï the brain behind Ozizza development. While the missing link in Ozizza is *Ohaodu* ï humans (Fieldwork, 2011 and 2012).

CHAPTER FOUR

PRESENTATION OF DATA

4.1 Ethnographic Study

The present Ozizza Community in Afikpo has data very rich in artifacts, features and ecofacts (Field Work, 2011 and 2012). All these data are still found in Ozizza archaeological

sites. The peopleôs way of life in their environment was also examined. The following ethnographic resources were observed and investigated: settlement patterns, subsistence patterns (examples are farming systems and fishing), hunting traditions, festivals, traditional technology, and traditional means of communication.

4.1.1 Settlement Pattern

The settlement pattern of Ozizza is nucleated and houses compacted. This assertion was based on observation during the fieldwork in 2011. Thus, from obersavation, the communities live in clusters (Plate 5). Some houses are located on highlands owing to the undulating nature of the terrain. Modernisation has affected the structural buildings in Ozizza leading to various changes in house structures. They now have modern structures such as corrugated iron houses and even rectangular shaped types popularly called ósend down the rainô- a pattern or style of roofing.

Plate 5: Settlement Pattern in Ozizza

Source: Fieldwork (2011)

In 2011 and 2012 fieldwork, some buildings, however, are still in their traditional mud-house forms; majority of them were wearing new look with blocks and bricks, since the people settle in proximity to the raw materials. Therefore, it can conveniently be said that raw materials, subsistence and rituals (Ibeanu, 2000) contributed immensely to the development of settlement pattern in the area. Owing to the abundance of clay raw material at Amaeta, the Amata people live very close to the flooded area, separating them from other Ozizza sub-groups of villages. The Ozizza society maintains ñmatrilinealò relationship whereby names are given according to the lineage of the mother although, surnames are initiated according to oneôs direct fatherôs name; hence their slogan/adage ï óAlways answer or bear your fatherôs nameô. Their names look quite different from those of other Igbo groups, such as Igbo-Nsukka and Onitsha where names are given according to patrilineal decent (i.e. surname from the great grandparents). Ozizza family system is also nucleated, practising polygyny, although present Christians among them believe in monogamous system of marriage. Rearing of domesticated animals such as goats, cows and sheep is not quite common. Few who indulge in it use the coprolites as compost manure in the farm at Ogba-eju. This method is common in Amainyime in Ozizza, whose farmlands are located at Ogba-eju. Amaori community deposits foodstuff remains and other waste materials directly behind their homes as forms of manure during farming seasons.

4.1.2 Subsistence Pattern

Some portions of land of Ozizza are fertile, more especially those located toward the flood areas. It is in the lowland zone that food crop cultivation is prominent. Examples of food

crops are cassava species *Manihot esculenta*, yam species *Dioscorea alata* and *Dioscorea esculenta*, rice *Orysa sativa*, maize *Zea mays*, okro *Hibiscus esceulenta* and melon *Cucumeropus edulis*, and cultivation is in proximity to Ogba-eju area. Palm trees, mangoes and castor oil bean are not lacking in the area, for it aid in strengthening the peoplesô economic activities. Afikpo, according to Anozie and Andah (1980/81) and Chikwendu (1976), proves that food production in Igboland is indigenous to them. They, therefore, suggested that food production started in West Africa. Chikwendu (1976) buttressed the fact using *ikpa-ji,* that is adopting yam gathering by some young children and female as an avenue through which yam was cultivated in Igboland as an example of indigenous food production. He states that this date; from 3000 to 1500 BC in Afikpo is based on the recovered artifacts.

Plate 6: Rice Parboiling at Urrah Beach

Source: Fieldwork (2011)

Milling and parboiling of rice were more prominent at Orrah Beach whose distance from Amainyine Town Hall was 2.01km (Plate 6). The date of the rice milling in the area, according to our investigation was not known. Respondents attributed the abundance of water and fire wood in the vicinity of the beach to rice milling and parboiling while huge transaction in firewood was between Igorigo Town in Abi Local Government Area, Cross River State and Ozizza people. Hence, Ozizza subsistence pattern was similar to that of the entire Afikpo as reported by respondents.

4.1.3 Hunting Expedition

Man existed before 10,000 years ago, the era of agricultural practice in hunting and gathering solely for food which lasted for millions of years. It was planting of crops/trees that led to the rapid transition from hunting to agriculture. Modern agricultural practices perhaps diminished the number of hunters and enhanced the development of urbanization and industrialization (Baring et al 1974). The globalization phenomena created forum for the development of urban cities and migration from rural areas to the urban. This rapid change reduced the handfull of inhabitants remaining as hunters and gatherers. These sets of people are found in many regions of the world ï Africa (West, South, and East) Asia and so on. Since they have chosen hunting as a means of livelihood, certainly, they must have developed techniques in achieving their profession. Different elaborate techniques abound/exist, such as net hunting, using bows and arrows (Park, 1969), use of gun with trained hunting dogs and individual hunting without dogs but with gun and black powder (Basden, 1966). Others are traps, stones, wooden

implements, sharp iron and sticks and cordage as reported by the respondents. These implements are often hidden inside animal skin bags that are normally slung over hunterôs shoulder, and his gun, stick or arrow, would be held in his hands. For the members of the community, this is what characterizes and qualifies men in the hunting field as hunters. They depend much on the bush for their meat and other needs.

Plate 7: Hunting Techniques at Ogba-eju

Source: Fieldwork (2011)

Despite the fact that different traditional hunting techniques are known all over the world, those in Nsukka ï Okigwe ï Afikpo Zone practise the use of iron traps, stones, wooden implements, sharp sticks and cordage during hunting. Iron traps were possible around this Cuestaôs zone because of smelting and blacksmithing that are prominent among the people. In Ozizza, we observed a unique hunting technique at Ogba-eju. The technique is called ñ*nkwe"* ï it is the process of trapping animals inside the rock shelters using hedges of miniature shrubs (Plate 7). This skill uses no extra materials like stone, wood or iron traps apart from the hedge, and this technique is quite efficient in catching both larger and lower animals. Hunters, on a daily base,

always leave their clusters around 3.30am to Ogba-eju. Hunting in Oziza is not institutionalized. Each hunter must develop skill or style suitable for making his huge success. There is no *ndi-nta* with *di-nta* but *onye nta*. It, therefore, means that there are no forms of social organization for hunting within the community. Each hunter serves his personal interest without recourse to any law. This type of hunting expedition differed from that found in Nsukka-Okigwe Cuesta at Umunekwu-Agbo Community in Isukwuato in which hunting was done in groups with a leader called *di-nta* and a group name like *nta-ogbonna*, according to the founder who initiated it (Ibeanu, 2000). The hunters in Ozizza only hunt at Ogba-eju and game sold at the market in upper Afikpo and Calabar. Oziza hunting portrays Afikpoôs worldview. Opebelema (1991 and1993) in Ibeanu (2000) posited that Igbo hunting (poetry) songs shed some lights on the Igbo peopleôs worldview. It must be stated here that *onye nta* with Dane gun was found in Amaeta in Ozizza, although the man usually came from Cross River to hunt at the bushy flood zone at night. The sound of the gun at 3:30 am, very close to the Community Health Centre, where we were quartered by the community during the course of the research work, startled us. It was at dawn that we saw the *onye nta* with huge animals he caught.

However, the merit of hunting in Ozizza centres on the fact that it is a profession that provides a viable existence to those hunters who still engage in it. It provides meat and economic gain, although in the past, hunted games offerred sinews for skin, for clothing and as a cover materials for sleeping. In the past, also domestic animals provided alternative source of meat, while hunting of game now is seen as a secondary source of meat. In Ozizza, only few people show apathy in the eating of games, as it was highly valued by the community. Also, people in urban centres are anxious to eat the meat they are well familiar with. Youth and children in Ozizza have less interest in hunting, hence, only elderly men still hunt, as they combined it with

farmwork. Considering the fact that hunting in Ozizza is not a co-operative affair and Ogba-eju Rockshelter is very far away from residential areas, only few people take it as a profession.

By and large, hunting does not upset the ecological balance in the environment, and does not also pose any threat to both human and animal population (Baring *et al*, 1974). The case of Ozizza is an example of Baring *et al's* view. Hunting is a practice miles away from the residential zone which is about 4.44km away, although hunting at the creek very close to Amaeta Village is carried out at night. It is not hunting but excessive farming at Ogba-eju, which had encroached upon the animalsô habitation. The long and short terms of hunting in Ozizza are the extinction of hunters inside the Ogba-eju groves and rockshelters and western influence.

4.1.4 Fish Net and Fishing

Fishing is an alternative profession to agriculture and potting in Ozizza, Afikpo. Different methods of fishing, such as net-fishing, traps, lines, basket fishing, hook fishing and boat fishing abound the world over. Net-making is very sophisticated, intensive and demands labour investment. Nets are imported from China into Nigeria, and they are available all over the open markets. Yet, the netters purchase the ropes, that is the seine nets and the European nylon ropes. By the technique of *Oku ntofo* at the head, fish nets are formed (Plate 8). These techniques (*Oku ntofo)* enable the net into sink to a particular depth. Another method is trapping. This is done by using stakes anchored around the rock outcrop that projects into the river in a semi-circular formation. An opening that enables fish to penetrate is normally created. This also demands skillfulness and encourages sportsmanship. Despite the fact that trapping among Ozizza fishermen are not a very profitable method of fishing, it gives room for combining fishing with

another means of livelihood. The final method is basket fishing. Fish basket is mainly used by women. Basden (1966) calls it prawns. Fish basket is made, according to Basden (1966), by twigs plaited together to form balls. In Ozizza fish basket is made from either raffia palm or palm sheath in a cone-shape with a large spherical calabash bowl. The neck is shaped to fit into the funnel-like mouth narrowing into the bowl. The funnel-like mouth is the small opening that captures fishes into the middle of the basket, and prevents the escape of the fish. The inside is filled with little stones and tied into a long line and with good float; the basket is flown afar into the river to sink deep.

Plate 8: Fish-netting at Amaeta, Ozizza

Source: Fieldwork (2011)

These three methods: *Oku ntofo*, trapping and basket fishing are proficient to men and women in Ozizza. In some localities, fishing is regarded as men profession. In Afikpo, women do fishing. Fishing is done in two areas: at the beach of Cross-river all year round and that of the flood zone of Ogba-eju rock shelter environment during the peak of rainy season. Men, with fish net and canoe, paddle on the flood area with the help of bridges constructed to support fishing

during the flood time. It is at these bridges that the fishermen stand and haul their net with long rope. Fish caught are reasonable, and fishing within the flood zone, according to informants, involved division of labour. One fisherman hauls the net; the other gathers the fish into the canoe. No wonder a greater number of fish in Ozizza are harvested during the raining season. It is a simple logic: Ogba-eju Rockshelter environment houses the entire fish that were carried away by water. These fish had no escape route because Ogba-eju is surrounded by sand stone ridges. Again the Fulani cattle rearers also fish with their type of net called *marley* at Ogba-eju rock shelter flood zone (Plate 9). Their net was kept at the rock shelter number ten, in readiness for the next rainy season. They (Fulani cattle rearers) also used the rock shelters as abode during the rainy season.

Plate 9: Hausa Marley (Fish Net)

Source: Fieldwork (2011 and 2012)

Invariably, women prawn only at the Cross River Beach yearly. This means that women never fish at the flood plain probably owing to the high risk involved. Trapping was done by men only at the beach of the river of Cross River State. Little children also fish like their mothers. But

the sharp difference is that they do their own by splashing the water freely with stick while placing their baskets deep inside the water. After a few moments, they raise their baskets to behold few small fishes. The only limitation to fishing in Ozizza in Afikpo is continuous use of simple techniques compared with Chinese and Malayan fishing that has adapted to marine engines boat possessing sharp light (electricity) (Baring *et al.*, 1974). Despite this limitation, fishing at Ozizza serves the following purposes:

1. It serves as good diet for the people, themselves, their neighbours and the large market at the city of Abakiliki as well as upper Afikpo.

2. It is a profitable profession for those involved.

3. It gives room for interaction with nature.

4. It offers employment to those who fish.

Finally, fishing in Ozizza, like other West African villages that probably engaged in fishing owing to subsistence need, has metamorphosed into a profitable business largely as a result of increase in population in the big cities to augment meat like beef and other poultry products. It provides lots of income. Increase in demand for fish led to more demand for supply, hence its continuity and youthôs willingness to indulge in the industry. For this reason, during the dry season, when the flood waters had receded and the creeks are found with little pounds/pods of water, both men, women and children indulge in a type of fishing called splash fishing. In this method, the water in the pockets of ponds are transferred into artificial pond, holes (with created channels) using plates and calabashes. This practice makes it impossible for fishes trapped inside the pond to escape as all of them are caught.

4.1.5 Traditional Festivals

Festivals, agent of relaxation in Igboland, are celebrated to commemorate one important event or the other. Among the harbingers of cuesta in Igboland, *Iri-ji* (new yam festival) is very common. *Iri-ji* is an annual event with different dates in Igboland. It is a thanksgiving ceremony, thanking God for successful planting season. Ekechukwu (2002) recorded different festivals peculiar within the cuesta environment. For instance, in Nsukka cuesta, Omabe festivals are prominent in virtually all the towns in Nsukka environs. In Uturu-Okigwe scarp lands, *Oru-nta, Achii-cha, Iru Unuku, Itu-aka; Ihu-Ji, Ibo-Ahia and Gbudugbu* festivals (Ibeanu, 2001) are festivals remarkable with one type of activity or the other. At Ozizza, different kinds of festivals were recorded through oral information. They are masquerade festival, iriji/ikeji (new yam) festival and mgba festivals and all are equally prominent.

4.1.5.1 Masquerade Festival

Masquerade festival in Ozizza, Afikpo is classified into three, namely ñ*Iri Iko", "Igwugwu*ò and *Okumpko* festivals. *Iri Iko* masquerade festival is a yearly festival featuring masquerades such as *Okpa, Yewelo* and *Otero*. It is a festival set aside to mark the commencement of dry season. *Igwugwu* festival is celebrated once in ten years (decade), specifically in November. It is also a festival that celebrates manhood. This marks the rites of

initiation into adulthood. *Okumpko* is a periodic masquerade festival that is celebrated within a long period. It is a festival of cleansing of any bad behavioural conduct ï stealing, killing and robbery. Among these three masquerade festivals, *Okumkpo* is most widely known.

Okumkpo came into existence firstly in 1942. Subsequent events took place in 1966, 1979 and 1993. The last *Okumkpo* featured in October 2012 according to oral information. What is *Okumkpo*? Traditionally, *Okumkpo* means óbad omenô. Examples are armed robbery, killing or stealing of peeled yams freely planted in the farms. In further clarification, *Okumkpo* is referred to as ñ*Oko or Okokpu* - avenue through which people are buried alive in the olden days at evil places such as óAmaechara, Okokpum, Amuro and Mgbomô as a result of an evil deed. *Okumkpo,* therefore, has value in showcasing how evils in the environment are judged in the traditional ways. An *Okumkpo* festival, according to *oral* information, *is* not an evil festival as some believed, but a prototype of occurrence that took place in the past. It also projects and manifests peopleôs culture and tradition.

Nevertheless, the event of *Okumkpo* starts with *Olojo* masquerades ï master of ceremony (M.C) introducing the entry of *Okumpko* by dancing, chanting (song) and displaying acrobatically the gigantic and dreadful masquerade into the arena (a*mikpo* square) in Ozizza. Before the beginning of *Okumkpo, Amikpo* square must have been filled with spectators, consisting of the old, young and visitors. Also, elders of the sub-Ozizza village communities must have been seated to watch *Okumkpo* featuring. The occasion must commence with two very important masquerades called *Nnade* and *Ologo Okumkpo* to open the day. Their duty is to welcome the spectators and greet, in a special way, the elders who are seated among the spectators. They *are* regarded as the king of the masquerades. They take permission from the gods of the land before the commencement of the festival. This vital function must be performed

bythem *(Nnade* and *Ologo),* failure of which *Okumkpo* festival cannot feature. Better still, the regalia of the king masquerades centred on putting on cap made with *Pandamus* leaves or with coconut leaves and decorated with different colours of objects. They also hold a staff of office on their hands loaded with different kinds of objects on their back. It is these loaded items that signify the ñbad omenò which needs cleansing or to be disposed of.

Moreover, for *Okumkpo* festival to be a success, about two thousand masquerading youths must be dressed and well seated on the ground. *Nnade Okumkpo* will summon these masquerades- like youths to hold their brooms on their hands and begin to sing/chant a song while sitting on the ground, led by *Nnade Okumkpo.* Introductory song by *Nnade Okumkpo* marks the traditional beginning of *Okumkpo* festivals. Youth masquerades are complete manifestation of the festivalôs aims and objectives. The *Okumkpo* features by displaying ñ*Osha/Uyo"* musical instruments, tied on the legs and beads on the neck as it chants and demonstrates round the *Amikpo* square. It is during this display that the cleansing of the ôbad omenô committed and tied on the back of those king masquerade like *Nnade Okumkpo* masquerade would punch their brooms on the ground and exclaim ñbehold the ôbad omenô are cleansedò.

Ọrịsị, Odawa and mother masquerades, apart from father *Nnade* and *Ologo,* are different typologies of masquerades that always perform during *Okumkpo* masquerading. *Horris* masquerades are children/sons of both father *Nnade* and mother masquerades. *Odawa Okumkpo* is the leader of *Odawa* masquerade featuring to support the activities of *Okumkpo*. Doctor masquerade masking was instituted to treat any emergency that occured. The doctor masquerade must be beckoned by the mother masquerade to cure her *Horris Okumkpo* (sons). Doctor *Okumkpo* must receive its fares after treatment by mother *Okumkpo*.

In the final analysis of display of *Okumkpo*, a demonstration must take place to mark the end of the celebration. The very last epic is keeping of an earthen vessel (pottery product) on the ground. *Okumkpo* then asks the spectators, if they can lift the pot. Lifting the pot calls for wisdom, courage and strength. Whosoever lifts up the pot would be declared the winner in the festival. Therefore, *Okumkpo* masquerade is an interactive masquerade full of remarks. At the beginning of the celebration, immediately it enters the *Amikpo* square, the first question it would ask the spectators would be Can we precede with the celebration? Enekwe (1987) collaborated with the data obtained from elders that the spectators would shout *Yaah*! *Yaah! Yaah*! Meaning, yes! If *Yaah* is once, *Okumkpo* asks the same question a second time. Mr Inyia acknowledged that the second chorus would be three times, and immediately the atmosphere changes for joyous celebration. The final remark that would bring the ceremony to an end is the question regarding the lifting of clay pot.

In conclusion, *Okumkpo* masquerade can be compared with *mmanwu* festival in old Anambra State and later celebrated in the new Anambra State. Festivals that showcase assemblage of masquerades should be gazetted to reflect the sum total of Igbo life activities, beliefs, passions, theatre and tradition (Chiewe, 1990). Ike (2012) in his study of unmasking the mask posits *mmanwu* in Igbo traditional society as institution of unquestioned reverence. He further ascertained the mask as an inimitable agent of social order and court of final appeal. In line with Ikeôs view, *Okumkpo* is a *mmanwu* in Afikpo which possesses therein unquestioned reverence, portraying Afikpo identity and preserving Igbo ideaology. *Mmanwu* also provides the tourists a valuable source of entertainment (Okpoko and Okonkwo, 2004). *Okumkpo* does not reflect the entire Afikpo culture, but depicts only the negative aspects of life. This, therefore, helps to curtail or quench bad activities in Ozizza, Afikpo. In line with this, one hardly hears

about stealing, armed robbery, kidnapping and other vices common in most communities with the Ozizza people. *Okumkpo* masquerading instills fear, hence, cordiality and decency in behaviour are still present till now in the area. For instance, one can park oneôs car outside overnight for days, and still pick it exactly where it was packed. Strangers are not frightened by any event, because hospitality is maintained. Love, peace, hard-work and contentiousness are marks of the people of Ozizza in Afikpo

4.1.5.2 Iriji/Ikeji (New Yam Festivals)

Iriji/Ikeji (new yam) is very important and is celebrated during the dry season. It is one of the cultural festivals in some parts of Igbo land which has a historical importance (Okunamiri, 2008). The case is not different in Ozizza. The four groups of villages in Ozizza celebrate Iriji/Ikeji yearly around the third week of the eighth month, precisely on 24th August, while other Afikpo communities celebrate theirs on 26th August yearly. The celebrations are mainly within families, thanking God for abundant harvest. In the past, the celebration starts when the different chiefs representing the different sub-groups of villages in Ozizza marshall out at dawn with *Ogirisi* leaves (*Newbouldia laevis)* fixed at the tip of palm stem and put at the intersection of the two roads/tracks. This signifies greeting or sharing of pleasantries to the god of harvest, while the two roads stood as acceptance of sacrifice by two different gods. These practices now belong to the past. Modernity is overcoming this ceremony. Instead of a sacrifice to the two different gods, music is played by the youths in every household followed by palm wine drinking. Also, other western influences such as education and Christianity have contributed to changing clothing items. Establishment of churches perhaps was responsible for the hostility

towards traditional festivals. Okunamiri (2008) posited that both Christianity and western education are two factors leading to eradication of cultural heritage and value among the Igbo people. Dibia (1989) observed that the contribution of Christain Missionary Soceity (CMS) missionaries in Igbo land is the major instrument in the abolishment of Igbo festivals in its traditional make-up. Despite abhorrence of modernity regarding festivals, Iriji/Ikeji serves the following:

a) Produces bond of unity, love and stability among Ozizza communities

b) The new look of celebration helps to shade away the pagan practices of the past.

c) The festival helps in the sustenance of the culture in Ozizza, although with little modification.

1. It breeds the spirit of environmental cleanness. Every household must, as a matter of fact, maintain cleanliness by weeding and cleaning their surrounding.

Therefore, Iriji/Ikeji, like most festivals, is suggestive of the historic hygienic tradition in Nigeria (Olali, 2008). According to Agwo (2009), yam festivals are used to mark the end of an abundant food- producing harvest. Ozizza, including other Afikpo communities, celebrates Iriji in three days, and within these specified dates, only yam is cooked. It may be boiled, pounded, dried or roasted. Roasted yams can be consumed with mixture of red oil and vegetable called *Utazi* leave, a bitter leguminous plant, and good for stomach upset. It can also be eaten alone. Boiled yam can also be eaten with vegetables, stew or porridge. It can be pounded and takenwith soup. Dried yam can be made into flour. During the Ikeji festival, Ozizza people normally pound yam served with fresh fish and red soup. Their preffered soup is E*gusi or Nsala* soup. Soups are well prepared to mark and grease the festivals. Families in this present time never make any sacrifice

in honour of any deity; rather they ordinarily celebrate in thanksgiving to God for good harvest. Churches are now the squares where each family gathers for the occasion. The youths enjoy themselves with drums and songs. Visitations follow the following day among friends and neighbours. The third day is the whole inter-village wrestling competition and continuation of hospitality.

4.1.5.3 *Mgba* (Wrestling)

The origin of *mgba,* be it that of men or women, in Afikpo communities, is not well known. It was simply dated to the precolonial period in Igboland (Ikegwu, 2011), and it is a wholesome game. Nzewi *et al*. (2009) defines it ñas the sporting event, wrestlingò. It is not only peculiar with Igbo people, but also common among other African countries. For instance, the ethnic group of Mandingo in Gambia, particularly the people of Bentang called wrestling ñNeoberingò (Parks, 1969). Among the Baganda ethnic group in Uganda, wrestling is known as ñKubarigaò (Roscoe, 1965). By and large, *mgba,* in many Igboland, is a game affiliated to men and boys. But in Afikpo, women also indulge in the game, called *mgba mgbele/umunwanyi*.

Mgba in Ozizza, Afikpo, in the past, was classified into two; namely *mgba ndi umunwoke* and *mgba mgbele/umunwanyi*. The menôs *mgba* (wrestling) contest is at *Ogo* Square while the women have theirs at open spaces outside the *Ogo* Square. The women wrestling called *mgba mgbele,* are contested for four different occasions in the year. They are *mgba Akpukpa, mgba Uzo Iyi, Igba suba* and *Ocho* (Agwo, 2009). These various types were based on what they represent. The first one commenced during the month of July and early August when corn is in fullness, hence its name *Akpukpa* or *oka*. The secondis *mgba Uzo Iyi which* means ówrestling

along path to the streamô features during the dry season (Iko Okochi) and was contested only by newly married women of the year. It used to be their duty to weed or clean up the paths leading to the stream and must round off their duty with a wrestling contest. The third, *mgba mgbele/umunwayi (Igba suba)* is contested during the moonlight plays (Egwu Onwa) around March and April. According to its name, *Igba suba* ï ówrestle and standô was a kind of punishment for women who failed to participate during the moonlight games, and were arrogant to other young maidens, to their parents or seniors, and to indecent ladies. This *mgba mgbele* takes place during the peak of *egwu Onwa* and in secrecy. The fourth, *Ocho,* isa rite of passage for womenhood and serves as initiation ceremonies among some women to enable them to belong to a certain group. The various kinds of *mgba mgbele* or *umunwanyi* were meant in the past to show physical exercise, sanitize moral value and uplift social characteristics. Agwo (2009) asserted that ñ*mgba umunwanyi* was a forum used to settle conflict among womenò. Unfortunately, *mgbe mgbele* has been discarded in Ozizza Community these days, but is still common among other Afikpo communities.

Nevertheless, menôs wrestling is the wrestling of skill, stamina, joy, honour and fame, and come once in three years in Ozizza communities. The preliminary village contests were done on the market days, community by community. The preliminary, from each sub-group of villages, is contested within the three age-grades. The agegrades are***mkpufu mgba*** who are adolescents between ten to fifteen years old; ***Isogu*** the semi-adult group that falls within eighteen to twenty-eight years old and ***ikpo*** who are men from twenty-eight to thirty years old and above. The winners from these groups contest at *Ogo* Square during the grand finale. Women sing solidarity songs, encouraging their wrestlers, in order to select a winner. Winners of the various

sub-groups of Ozizza villages prepare contest on the grand finale ï the last day of the new yam festival (Ikeji).

The final Ikeji festivals feature *ndi mgba* from the various sub-groups of villages at the *Ogo* Square. This is to determine and select a winner (O*fu mgba*). During the contest *Anam, atama, owa* and small wrapper are used to tie round their waist. The attire is normally called *durose*, worn by the wrestlers. Songs sung by women give inspiration to men and also enlivens the environment (Ikegwu, 2011). The music brought demonstration from each wrestler into action. In Ozizza, judges are divided into two, namely, *Atamajas* and elders (*Onikara*). *Atamajas* are the drummers whose drums rent the air and control the situation. The sound from the *Atamajas* drums beating ï *kpo – ti – kpo* (Agwo, 2009) signifies óstopô when it is obvious that there was a winner. As soon as the *Onikara*, an elderly person who moderates the situation raises sand, it portrays automatic end of a wrestling contest. The issue stands that wrestling lasts for just a little moment. If the contest led to the throwing of an opponentôs back on the ground, behold a winner had emerged. Achebe (1988) calls this ówarriorô, ñ*Omalinze* the catò. In Ozizza, Afikpo, the ówarriorô is called ñ*Ofu mgba*ò. In other places in Igbo land, they are called *Di mgba, Ojamba, Azuelu-ani, mgbajiliki, Ozomgba,* etc. If need be, *Ofu mgba*, in Ozizza, will then meet and contest with other qualified *Onye mgba* from other Afikpo communities based on agreement by the communities. It is always one of its kind, done once in a very long time. It is a joyous contest which brings people en mass to watch and select *Ofu mgba* in Afikpo.

Moreover, the event at *Ogo* Village Square only features and stops at the square. Its old outlook and non-profitable nature characterised the noble sportsmanship as traditional game. It cannot be exported to other global villages, and yet it is not surviving much at Ozizza. Reasons for its diminished relevance and survival are not far-fetched. In terms of diminishing, factors

such as western education, soccer, hip-hop music and urbanization have been the super force affecting the game. Citizens, after much acquisition of education, migrate to cities and gain white-collar jobs. White manôs *mgba* (wrestling) is now well preferred by Nigerians. Industrialization, leading to development of urban centres, has affected agricultural sector, mostly in the villages. These factors also have encouraged the youth in this area into moving out in search of greener pastures. Drifting to the cities has affected mgba, especially *mgba mgbele*. Kanu (2012) observes urbanization as a positive or negative growth which influences peopleôs products and distributions. Hip-hop, according to Musa and Ikeme (2011), is a fast-*pa*cked tempo music that makes or has danceable track. The percussion brooms and clashes give it energy and the lyrics a mixture of native lingoes. Its Lingua Franca is diluted with pidgin language and is often arranged in blank verses. The chic, hip and coolness of the hip-hop make the youths to cherish it comparably to *Egwu Mgba* (wrestling music). Although hip ï hops is danceable, it is noisy, vulgar, senseless, gross and vain. Idonye (2011) lamented over the deteriorating nature of African music owing to hip-hop. The wide publicity of foreign music against African music demoted *mgba* and its music to the background. How many indigenes can comfortably tune *egwu mgba* music? The music satirized, mimed, raved and clinched the contesters into action in the past (Ikegwu, 2011).

In the area of soccer, *mgba* and its music are secondary. Soccer is cherished by all and sundry. Today, the attention given to football and mgba is not comparable. In Ozizza, soccer and hip-hop are welcome glamour games not *mgba*.

Finally, *Mgba* started from the past; its continuous survival is as a result of the elderly men whose duty was to feature the sportsmanship once in every three years. The elders still believe that the game was their cultural heritage. Despite the facts that, mgba do not contribute

financially to them, they see it as the tradition handed to them from their forefathers. Rules and regulations are issued such as: it is mandatory for the citizens to be part of *mgba* contest during the stipulated period. Secondly, anybody who did not return when others were returning after the contest is fined heavily. Food (*nri mgba*) is contributed by selected families that cook for the wrestlers. People are free to drink to stupor, and various types of drink, especially palmwine, are drunk on such days. During the feast, villages are allowed to challenge one another for a wrestling competition. In Ozizza, Afikpo, *mgba* brings peace and happiness. It breads the spirit of communal relationship as food and money are contributed by every family. The game is free; no charges are paid for the services and for watching.

4.1.6 Traditional Technology (Pottery)

A unique traditional industry is common and vital among the dwellers of the cuesta and the most striking technology is pottery. Pottery making is common in Inyi ï Udi/Awgu highlands, Oha Ndiagu on the Nsukka plateau, Nunya - Isiukwuato in the Okigwe scarp lands, and finally, in Ishiagu and Amaeta in Afikpo Cuesta. The uniqueness of the technology is its affiliation to the women, more especially the elderly women.

Pottery in Ishiagu in Afikpo has been studied by scholars such as Ibeanu (2000), Ali (1997 and 2007) and Oyeoku (1979 and 1999). All these researchers ascertained that Ishiagu pottery originated from women and a widow called Adaeke from Amaoye Village. Adaeke, according to the scholars narrated how pottery making was handed over to her by the goddess called *Okpala-Uro* who was believed to be the original owner of pottery making in Ishiagu.

a **b** **c**

Plate 10*:* (a) *Ezeuria* (Used as a Binder in Pottery Making), (b) *Uria* and (c) Pottery Making

Source: Fieldwork (2011 and 2012)

In Amaeta ï Ozizza, pottery wares are made using two major materials called *uria* (King of Mud) and temper material called *Ezeuria* (fine sandstone). These two materials are mixed to form various shapes and sizes according to the potterôs imagination and craftsmanship which are mainly undertaken by women (Plate 10). According to tradition, the scrotum sack of men would enlarge and dry up leading to impotency, should men mix the raw material or visit the firing place. The origin of pottery in Amaeta, according to oral tradition, was from their ancestors called *Ndiegu*. These people were the early inhabitants of Amaeta after *Ohaodu*.

Pottery wares are fired at a designated zone called *Ohuhu ite*. *Ohuhu ite* is community owned and each season a chosen *Ohuhuite* site would be cleared by all the women engaged in pottery. There were no tales of the activities of the goddess, thus no sacrifice of any kind is performed. Prayers, according to oral tradition, are only offered to summon *Ezeukwu* (God) to assist during firing of pots.

4.1.7 Traditional Means of Communication

Communication is a life wire of any nation and the pillar for development. Our progenitors knew the value of communication and developed different methods of it: town crying, the use of smoke, use of wooden gong and eldersô spokesman. In Ozizza Community, a town crier is used for dissemination of information (Plate 11). *Uyo* made of desired wooden material and filled with seeds from a black pear tree, is most popular.

Plate 11: A Town Crier

Source: Field Work (2011)

The essence is to make sound and alert the community by the user. The town-crier goes round the villages very early in the morning at the first cock crow or late in the evening when the sun had set, and at times, in the moonlight. Information comes from the community leaders or from the chief of the various communities to their subjects through the town criers. Messages disseminated are adhered to vehemently by the concerned citizens without delay. The use of town criers as medium for disseminating information is to ensure complete and equal access to

basic things going on in the community to all and sundry. This medium is the fastest method to disseminate information in Ozizza.

4.1.8 Tradional Palm Oil Processing

Afikpo cuesta has contributed immensely in the development of food production and food procurement. Large expanse of land within and round the Ogba-eju rock shelters is meant for the growth of palm trees. These are raw materials used in the processing of food items such as red oil and other raw materials. In Ozizza, Afikpo, like in any other Igbo land, women play significant role in the food procurement and processing. This, therefore, showcases the contribution of women in the upkeep of the family as a divine gift. According to Okorji (2007), Igbo women have assisted in sustaining agricultural production in Nigeria. She further noted that cocoyam, vegetables and grains are womenôs affair, both in cultivation and processing. The removal of women on the farm management would prove a serious threat to food security (Okorji, 1985). Boserup (1970), Spiro (1980) and Okorji (1985) supported Okorjiôs and Nwagboôs views and concluded that Igbo women ensure that the family does not lack, and are involved in many economic activities (processing and crafting). Therefore, the contribution of palm tree processing through the use of *Ujii* into red oil in Ozizza, Afikpo, is centred on the following techniques:

Palm oil from oil palm tree (*Elaeis guineensis*) is an oily substance from oil palm which yields edible oil (Itanyi, 2007). Put differently, palm oil is a reddish oil substance extracted from palm fruits. The abundance of palm trees and *Ujii* and rock hollows on sand stone ridges in

Ozizza are reasons why palm oil is very easy to process (Plate 12). Ikegwu (2012) posits that economic trees arethe primary source of income in Igbo culture area. This summed-up the reasons surrounding the process of red oil from palm tree as major food procurement in Afikpo. The food procurement and processing also indicate a shift of food production (Ikegwu, 2012).

Plate 12: *Ujii* (for Palm Oil Processing) at Amaeta Community in Ozizza

Source: Field Work (2011)

At Ozizza, palm oil processing commences with the cutting down of ripe palm fruits from the palm trees. It is the duty of the men, and not women, to cut the fruits. Women make-up never allowed them to climb palm trees, let alone cut down fruits. Itanyi (2007) buttressed that women were forbidden to climb palm tree because they do not wear pants in the olden days, and thus cannot expose their womenhood. After cutting, the branches are taken home by children and women to unpluck the ripe fruits from the spikelet. After few days, picking the nuts by women and children follows. As soon as picking is over, the only method adopted by Ozizza women in the making of palm oil is boiling. Boiling is normally done overnight. Boiled palm fruits is pound inside the communityôs *Ujii*. *Ujii* serves like mortar with long pestle ó*Odu akwu*ô. After a long pounding, the pounded fruits are removed from the *Ujii akwu* into a large bowl for

extraction. Cold water is poured inside the bowl of the pounded palm fruits and stirred. The stirring makes oil separate itself from the sludge ñ*Ogulu" akwu*. The oil is poured into the cooking bowl/pot, set a on fire and boiled to burn off any trace of water. After a long boiling, the oil is ready for use, while the sludge, popularly called grog, serves as fiber, dried and used as fuel for cooking. The palm oil processing in Ozizza in Afikpo is still in the traditional level. Mechanized method of extracting palm oil still sounds foreign to the indigenes. This means that Ozizza has not been benefiting from the government policy towards upgrading oil palm production. Therefore, there is urgent need for revitalization, improvement and mechanization in the system of palm oil processing in Ozizza.

4.2 Archaeological Survey and Excavation

A simple traverse means walking around an area in search of something of relevance to the researcherôs objectives. Ogunfolakan (2003) defined it as ña method which enables one to walk over a site on foot searching for and documenting cultural materials and featuresò. Ten rock shelters, numbering 1-10 were foundin Ozizza, called Ogba-eju.*Ujii* was also identified. Excavation was conducted from 220th March to 1st April 2012. The rock shelter was excavated for these reasons:

1. to find out when and how human beings occupied the area; and
2. to find out what materials were used in the area and how relevant they are in the present time

Nevertheless, the study embarked on serious ethnographic studies in order to interpret and understand the materials recovered from excavation at Ogba-eju in Ozizza, Afikpo. The study took time studying materials especially potsherds, and comparative studies were made with other works done in Afikpo, such as Hartle (1967), Chikwendu (1976) and Andah and Anozie (1980/81).This was done in order to determine the cultural continuity or discontinuity of our study area with other Afikpo communities. Furthermore, soil samples were taken from the area of study for chemical analysis. This was to determine the level of human occupation of the study area and Afikpo in general.

4.2.1 Ogba-ejuRockShelters

The rockshelters lie at the Nsukka ï Okigwe ï Afikpo Cuesta. All is located on sandstone of Afikpo escarpment, within the flooding zone (appendix 1). The shelters belong to Amainyime sub-group of villages in Ozizza Town, Afikpo. Measurements of the rock shelters were conducted to know the level of deposits and the distance from one rock shelter to the other. The table 1 below summarized the total cave and rock shelters recovered:

Table 1: Measurements of the Ezemairo cave and Rockshelters at Ogba-eju

Name of the features	**Cave Deposit**	**Width**	**Height**	**Length**	**Degree**	**Distance**	**Cultural materials**
Ezemairo Cave at Amorie	0.30cm	25m	12.5m	-	50^{0W}	1159.64m (1.16km)	Iron Staff of *Ibin Ukpai*
Ogba-eju	**Deposit**	**Width**	**Height**	**Length**	**Degree**	**Distance**	**Cultural**

Rockshelters							**Materials**
1	20.6cm	7.8m	21.4m	8m	50^{oSE}		Guano
2	20.8cm	10m	19m	44m	45^{oNE}		Guano
3	40.1cm	8.3m	19m	4m	60^{oSW}	(0.017km)	No cultural Materials
4	20.4cm	4.1m	17m	78m	30^{oNW}	(o.oo9144km)	Bats, guano and opening (indicating aging)
5	09mm	8.8m	4m	38m	80^{oNE}	(0.0819912 km)	Water Pot: thickeness; Rim =0.7cm body = 0.04cm
6	Rocky floor	8.5m	2.2m	25m	50^{oNE}	0.0277368km	Pot shreds: thickeness ; Rim = 0.065cm and body = 12.065cm and opening
7	Rocky floor	18.6m	8m	25m	90^{oSW}	0.05029km	Opening ñOgbuohiaò rootlets called *Utunkita* ie sterculia tragacautha. Its family= sterculiacaae
8	20.3cm	4.9m	6.1m	4m	20^{oNW}	(0.0195072 km)	ñOgbuohiaò rootlets inside: (*Utunkita* i.e. sterculia tragacautha. Its family= sterculiacaae) and pot: neck=3.5cm, thickness= 1.5cm and

							rim=11.5cm
9	20.5cm	9.50m	2.7m	45m	40^{oNW}	(0.029km)	Stone tripod stand, Ash and black coating on the wall of rockshelter, Pot and pot-shreds. Probably, a kitchen of ñOhaoduò. Pot measured: Rim = 0.07cm depth = 18.4cm and Bats guano
10	10.7cm	20m	3.5m	44m	50^{oSE}		Fish nets, Hausa Marley, and Igbo Oku-Azu. Stone Tripod Stand, Ash and Potsherds. Bats guano

4.2.2Types of *Ujii*

Ancient rock hollows called *Ujii* by the natives were observed. They were called Pits in South Cameroon and ñIron Age Storage Pitò in Southern England (Joseph-Marie, 1993 and Greene and Moore, 2010). Geologically, *Ujii* formation may have been as a result of Wind Action called attrition on rocky surfaces leading to formation of hollows. Attrition menace is the process of transporting pebble materials (small smooth stone) to the top of sandstone ridges. The consequences are erosion which the layman refers to as potholes. A pothole or erosion is found on top of sandstone ridges. These *Ujiis* were in different formations and sizes, that is, round, cylindrical and oblong. Those found at Ogba-eju were round and cylindrical, and those found in Amaeta as in other villages were oblong. Generally, they vary in depth, diameter and circumference and had flat bottom (Joseph-Marie, 1993). Measurement was taken on two of the *Ujii's* represented by sizes A and B (Table 2a and b and Plate 13). Almost all the villages had one or more, but located many at Ogba-eju rockshelters. The big and small as well as the miniatures types were found;

Table 2A: *Ujii* rock hollows; large

Depth	**Diameter**	**Circumference**	**Significance**
70.5cm	54.4cm	100.8cm	For processing palm oil and for fermentation of cassava

Table2B: *Ujii* Small

Depth			**Diameter**	**Circumference**	**Significance**
50cm	30cm	60cm	Ohaoduôs sitting position. (The mythical first settlers with tail in Ozizza)		

Plate 13: Large rock hollow (*Ujii)*

Plate 14: small rock hollow (*Ujii)*

Source: Fieldwork (2012)

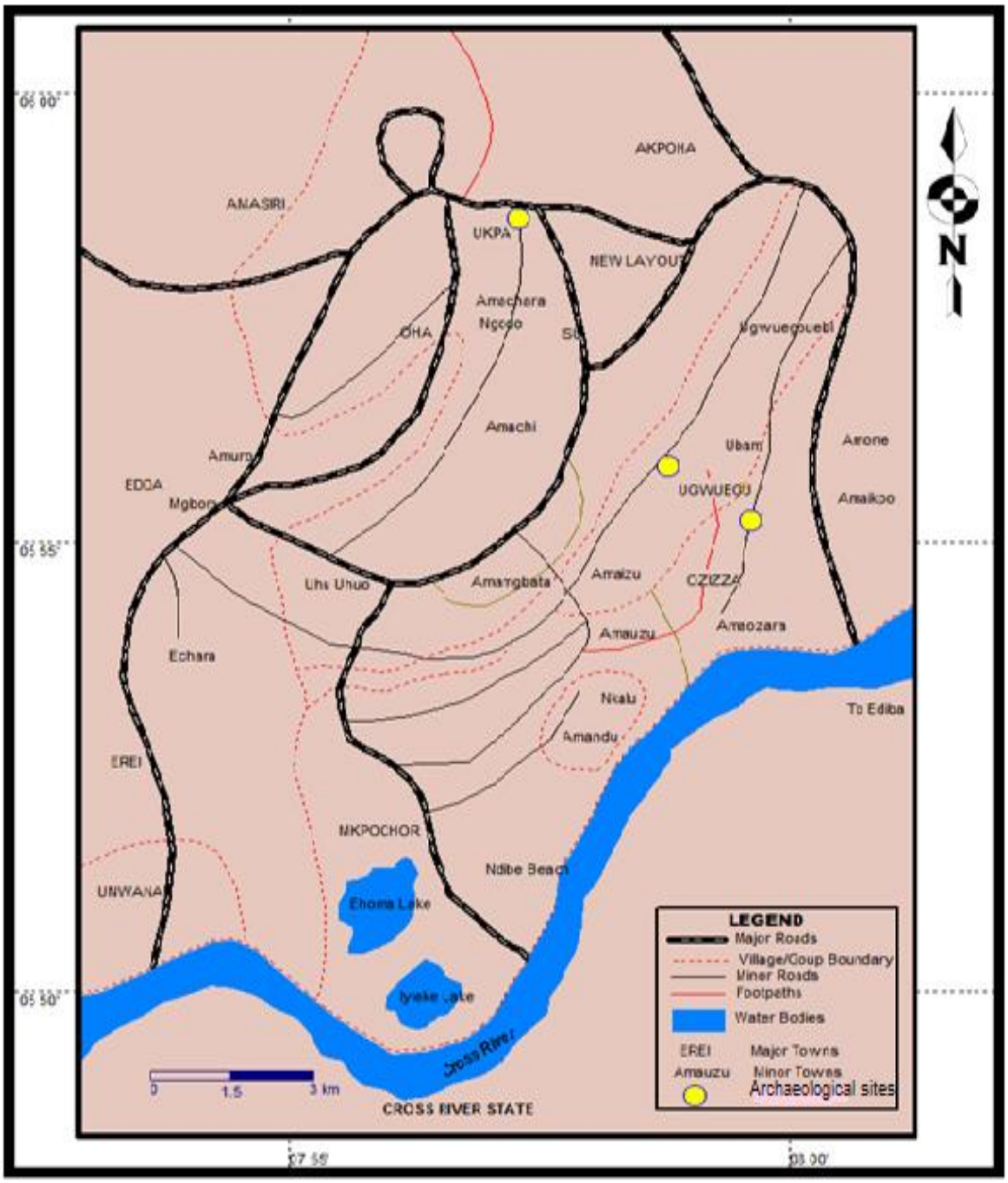


Fig. 2: Map of Afikpo Showing Ozizza, Ukpa and Ugwuegu Archaeological Sites

Source: Google Map Library and Authors Fieldwork (2014)

4.3 Sites Inventory Survey in Ozizza

Tools used such as compass, black and white scale, metal tape, range poles and iron ruler were used to actualize our work. Compass was used in measuring directions which showed that Ozizza lies in the south of upper Afikpo. Metal tape was used to measure the distance of all the sites reading from Amainyime Town Hall. Black and white scale was used to indentify the north of each site identified. Vanier caliper was also used to measure the thickness of artifacts found in-situ and at the surface collection. These tools were also very useful during excavation in the rock shelter 10(ten) at Ogba-eju. Another approach employed was map-based. Map-based approach is an indispensable Geographical Information System (G.I.S) used in displaying and analyzing spatial data (Ekechukwu, 2002). The maps, plans and scales were generated for the research by the aid of G.I.S.

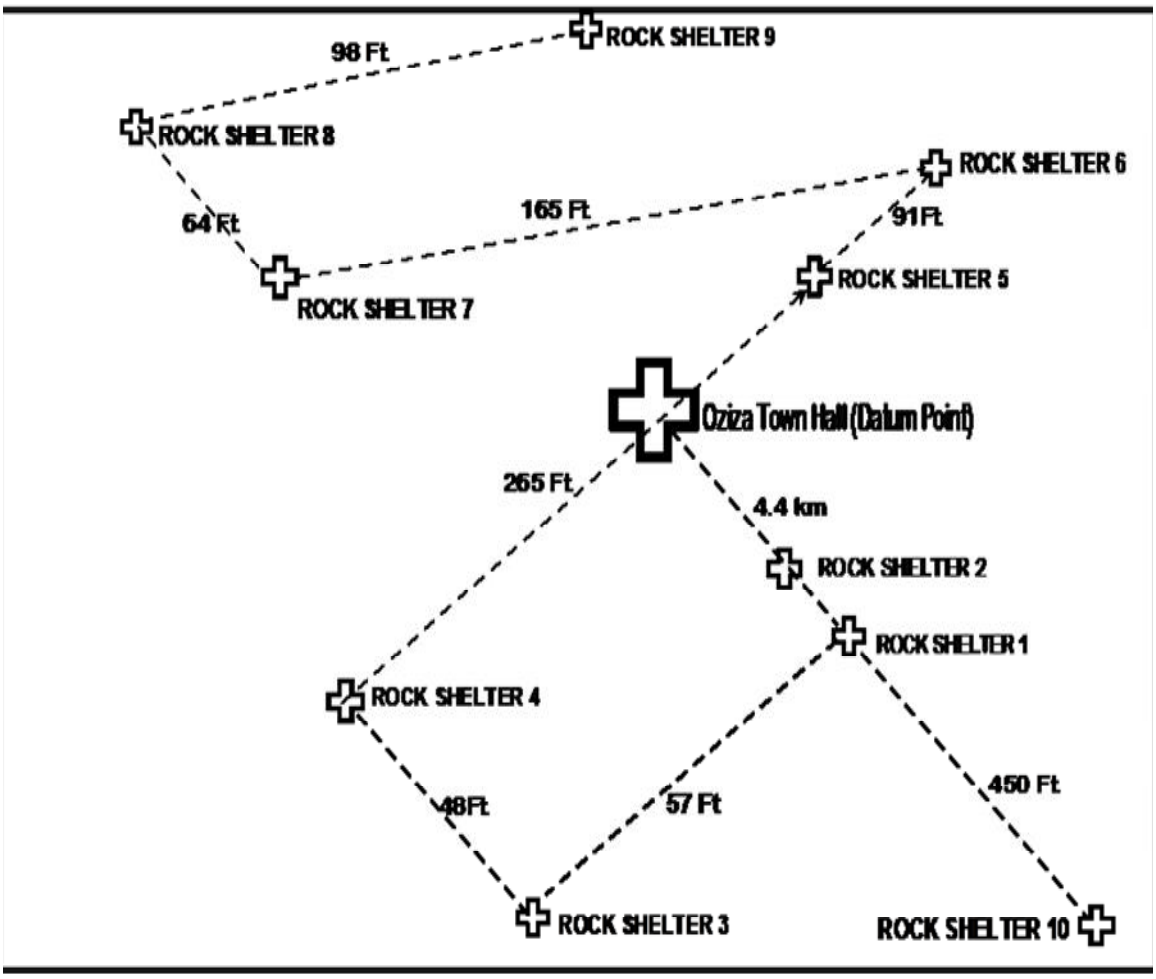


Fig. 3: Outline Map Showing Site Locations

Source: Fieldwork (2011 and 2012)

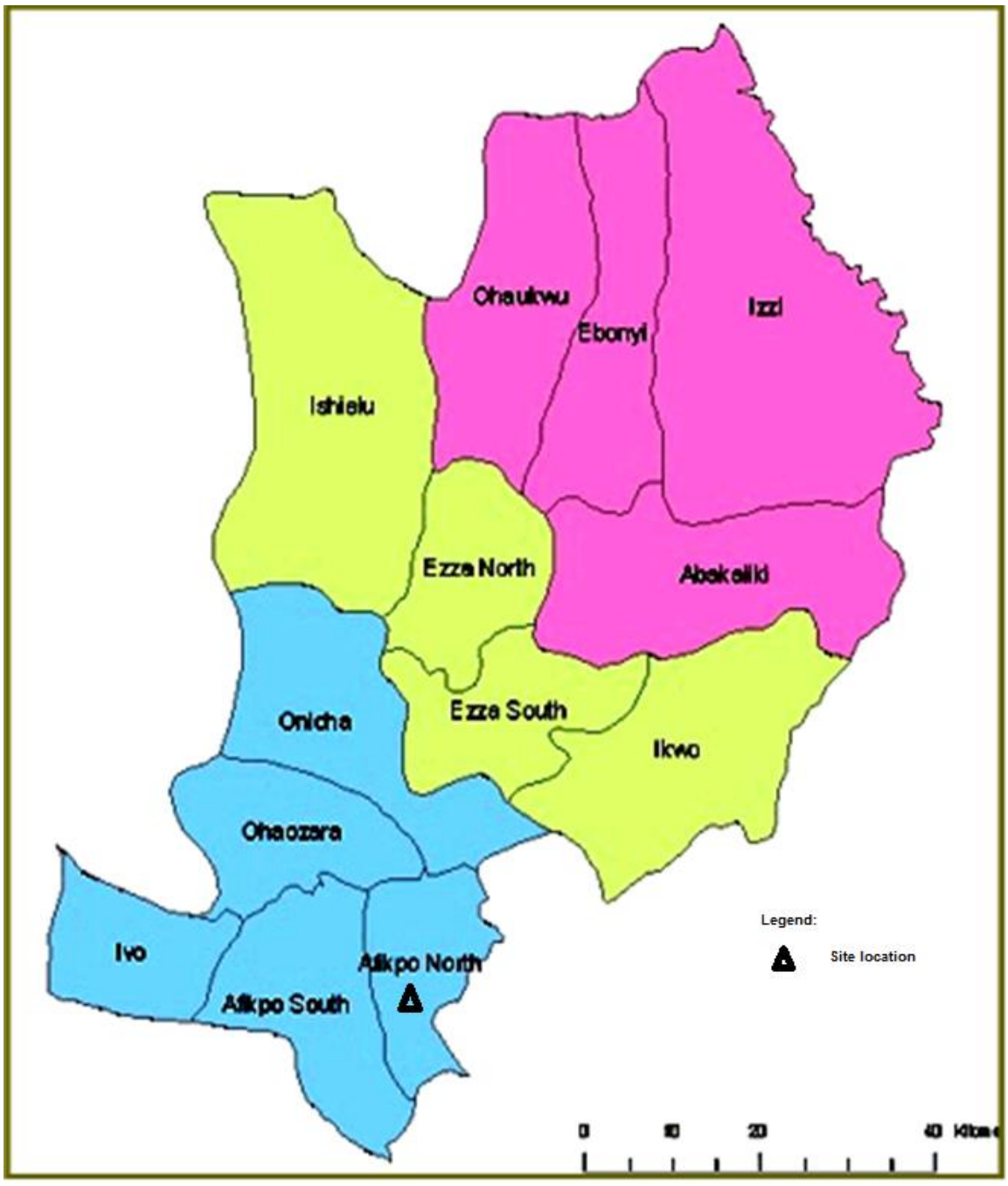


Fig. 4: Map of the Studied Area in Ebonyi State

Source: Sketch Map Collected from the Afikpo North L.G.A and Authors Fieldwork (2014)

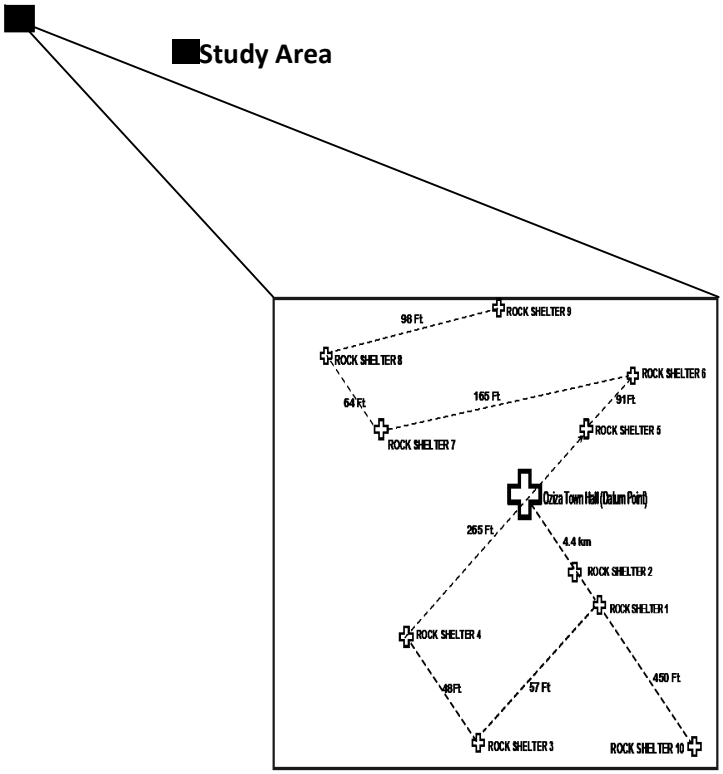


Fig. 5: Map of the study area showing site locations

Source: Fieldwork (2011 and 2012)

4.4 Archaeological Excavation

Ogba-eju Rock Shelter 10 (RS/10)

Ogba-eju rock shelter 10 (RS/10) was chosen because it contains the highest cultural materials collected at the surface and had wider cavity. It was located at 70^{oNE} and 50^{oSE} of rock shelter nine in Ogba-eju, Ozizza. Excavation was started by initiating a datum point. Datum point is always a permanent feature, and is defined as a point where measurement is taking place in order to initiate the North from the tripod stand. Datum point can be corner of monuments, forest corner, quarter corner, rock outcrop and location of poster. It is often abbreviated as BM (Bench Mark), mostly in America, while other scholars refer to it as the ñprincipal alpha datumò (Lewis 1975).

One test pit was excavated. A trench was initiated based on the Pythagoras theorem used: (30m + 40m + 50m). The theorem was adopted in order to help in achieving perfect square. The test pit emerged from our Datum point (rock outcrop) which was channeled through the tripod stand. The rock outcrop measured in 5ft height, and was situated adjacent to the rock shelter. The distance from the tripod stand to the Datum point was 9.2m, measuring 2.68 metres from the North Pole (fig 6). The test pit measured 2m by 2m was dug out after cleaning the rough surface (plates 15 and 16). The actual digging of the spit levels/arbitrary levels was initiated from the North Pole. A total of ten Grids were initiated with scale recorded as 5cm to 1m. Grids 5, 6, 7 and 8 were selected (fig 7, plate 17 and fig 8). Total of six spit levels were dug starting from 0-20cm to 100 ï 120cm. Spit level i measuring 0-20cm contained cultural materials such as charcoal, potsherds, quartzite, palm kernel, seed husk, snail shells, metal steel and zinc. Spit level ii which measured 20 ï 40cm possessed numerous potsherds, charcoal, quartzite rock, kernel shells, seed husk and rock out crop. A massive rock outcrop with height 25cm was located in between the north western wall, and east southern wall, precisely at 50cm of spit level iii was

found (fig 9 and plate 18). Reading was taken in-situ with scale as 10cm to 1m. Spit level iii: 40 ï 60cm had cultural materials like potsherds and charcoal. Spit level iv: 60-80cm had potsherds and charcoal; Spit level v 80- 100cm also possessed numerous potsherds, charcoal, rock and quartzite. Spit levl vi 100 -120cm was excavated, and it was found out to be the sterile soil. All these materials were sieved and recorded.

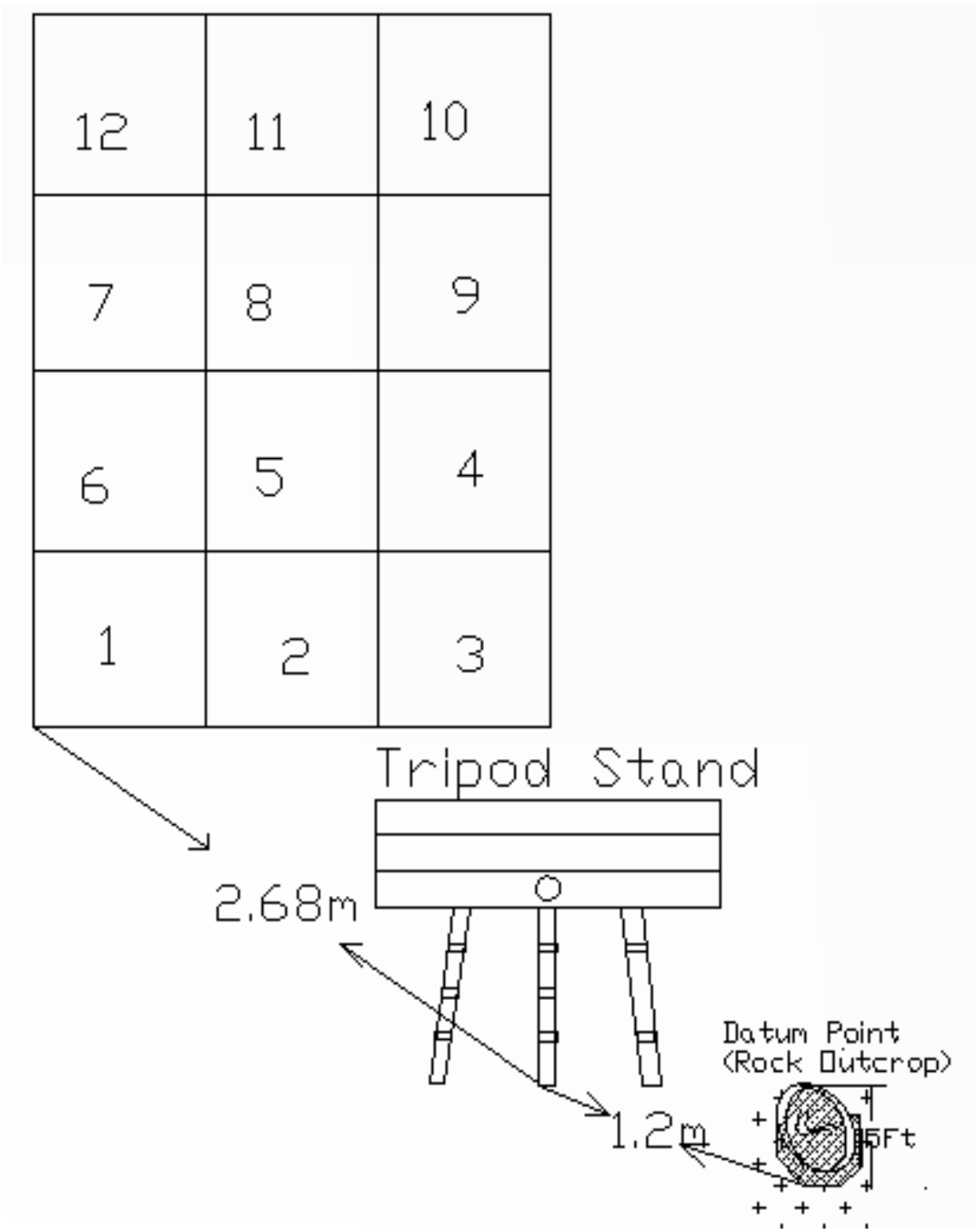


Fig. 6: Site plan

Source: Fieldwork (2012)

Plate 15: Surface Area of Site Excavated

Source: Fieldwork (2012)

Plate 16: Smooth Surface of the Site Excavated

Source: Fieldwork (2012)

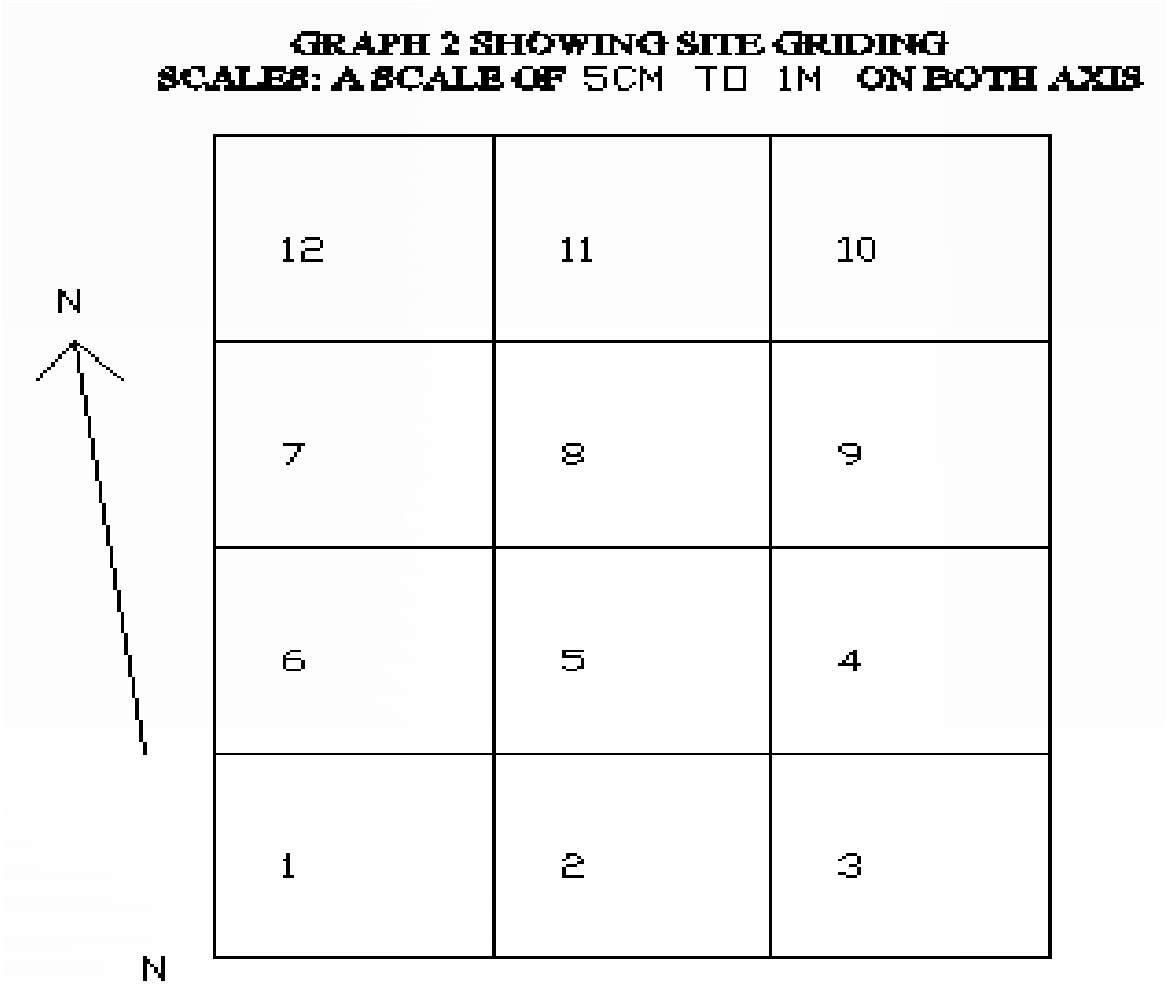


Fig 7: Site Gridding

Source: Fieldwork (2012)

Plate 17: Site Grid Plan

Source: Fieldwork (2012)

SCALE: 5 CM TO 1 M ON BOTH AXES

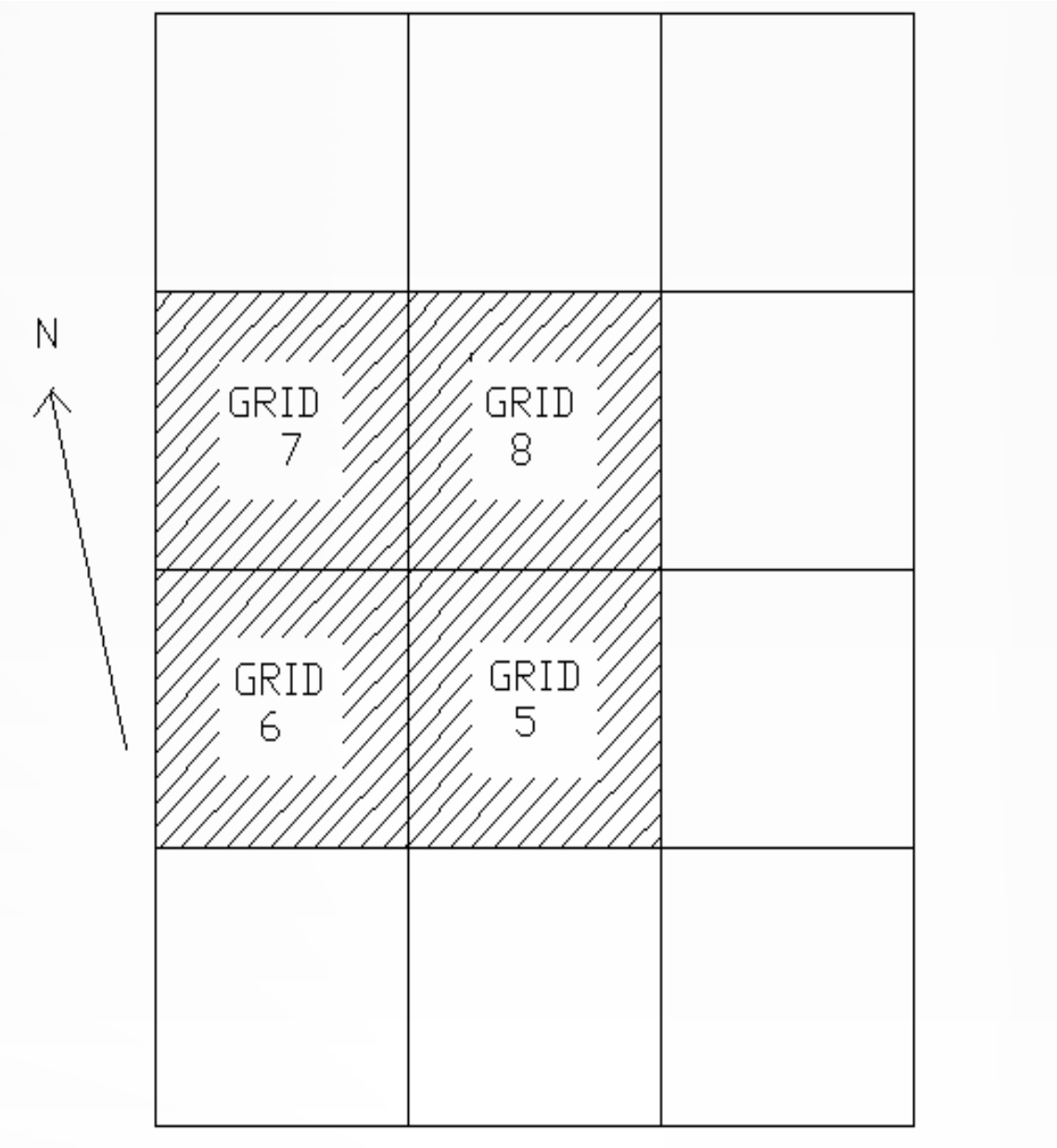


Fig. 8: Excavated Grid Plan (2m X 2m)

Source: Fieldwork (2012)

SCALE: A SCALE OF 10 CM TO 1 M

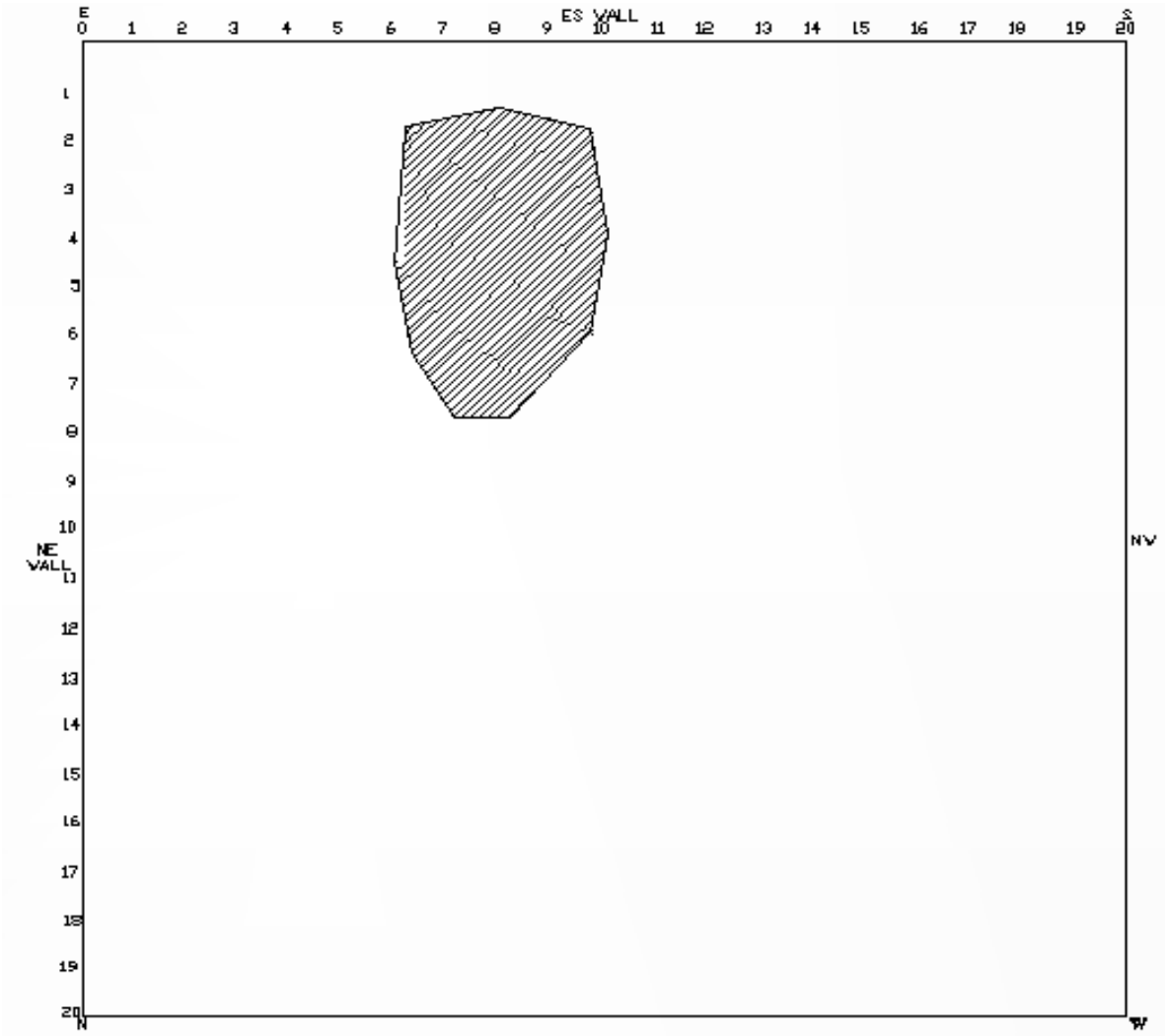


Fig. 9: Rock Outcrop in Situ **HEIGHT 25 cm** ⟶

Source: Fieldwork (2012)

Readings:

ES 80 AT 16 NE **ES 72 AT 75 NE**

ES 62 AT 18 NE **ES 82 AT 75 NE**

ES 94 AT 18 NE **ES 96 AT 58 NE**

ES 60 AT 45 NE **ES 96 AT 58 NE**

ES 65 AT 65 NE **ES 99 AT 39 NE**

Plate 18: Rock Outcrop in Spit Level iii: 40-60 cm

Source: Fieldwork (2012)

Alexander (1970) and Asakitikpi (2001) posited that sieved materials during excavation are a simultaneous process by archaeologists in the field. At 90 cm of spit Level v, a projection at northwest wall was discovered. It was a neck of a pot (Fig 10). For accurate investigation and recording, we had to extend the northwest (NW) wall by 0.5m to enable us to systematically excavate the object and thus have a clearer view of it. As Ogunfolakan (2003) would put it, systematic archaeological survey and excavation are means of opening a new site and retrieving

artifact for archaeological investigation. Based on this extension, therefore, the test pit finally derived from Ogba-eju rock shelter ten (RS/10) excavations was 2m by 2.5 metres. The neck of the pot in-situ at 90cm of spit Level v was measured. It was situated between northwest and west-south of the grids and recorded. The pottery found at 90cm spit Level v eventually was removed at spit level vi, measuring 100 - 120cm. It was a water pot placed on stones/granites, perhaps used as supportive stones. The discovering of the neck of the pot found in-situ ended the excavation, based on the fact that we reached the sterile layer, and cultural materials were no longer turning up.

Scale: A scale of 1 cm to 10 units on both axes

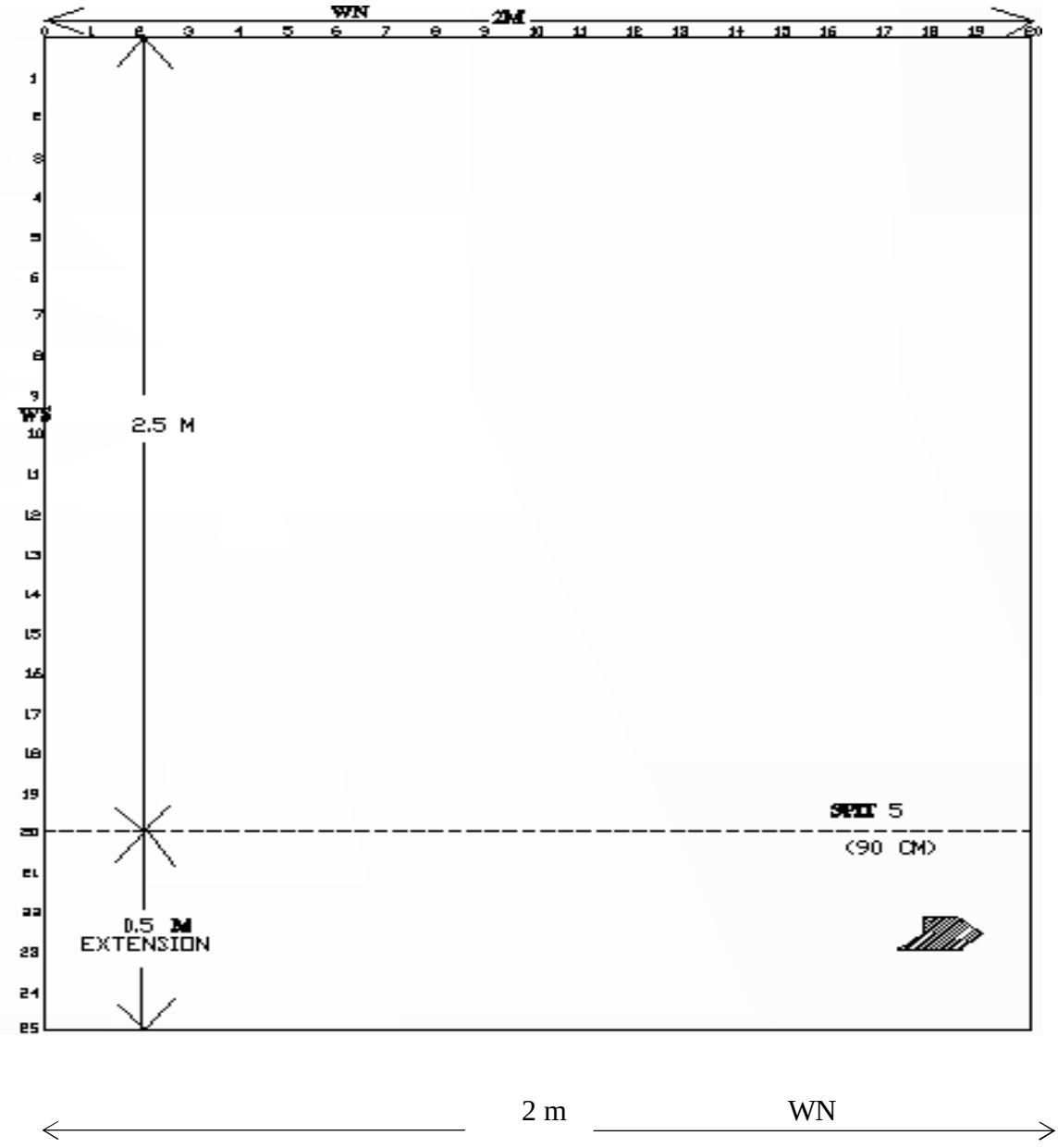


Fig 10: Neck of a Pot (Scale: 1:8 cm)

Source: Fieldwork (2012)

Readings:

WS 25 AT 10 WN WS 20 AT 20.5 WN WS 28 AT 21 WN

WS 28 AT 13.5 WN

WS 20 AT 14 WN WS 23 AT 21.5 WN WS 28.5 AT 17 WN

4.4.1 Excavation Results

The excavated findings were clearly recorded and documented. Renfrew and Bahn (2000) observe excavation results to come from the following: good organization, detailed plan, either in chart or field note and layer by layer reconstruction of a given site. Ibeanu (2000) ascertains that excavation results establish chronological sequences for the site excavated. In Ogba-eju site, the stratigraphy was drawn after artifacts were labelled and bagged layer by layer. Root cutter, hand trowels and brush were employed to smoothen and clear the layers. For accurate results, natural and cultural stratigraphy was established (Plate 19 and Fig 12). Ibeanu (2000) postulates that ñnatural stratigraphy represents the soil layers observed as well as records the specific soil deposition history in the soil profile of a given area, while cultural stratigraphy represents the distribution pattern using both vertical and horizontal cultural materials within the soil strataò. Invariably, both natural and cultural stratigraphies are essential tools in depicting the culture of an area.

Plate 19: Cleared and Smoothened Spit Levels for Statigraphy

Source: Fieldwork (2012)

4.4.2 Natural Stratigraphy

The stratigraphy was on the eastern wall demarcated by two major lines tagged A and B. Measurements and readings were taken within the two major demarcations. The topmost in the trench is overburdened (**20 year 7/8 munsell colour chart**). The soil was characterized with roots that were loose and smooth. There was a thick ash on the wall of the rock shelter. Layer 1 contained roots and the soil was dark in colour (**20 year 7/8 munsell colour chart**).

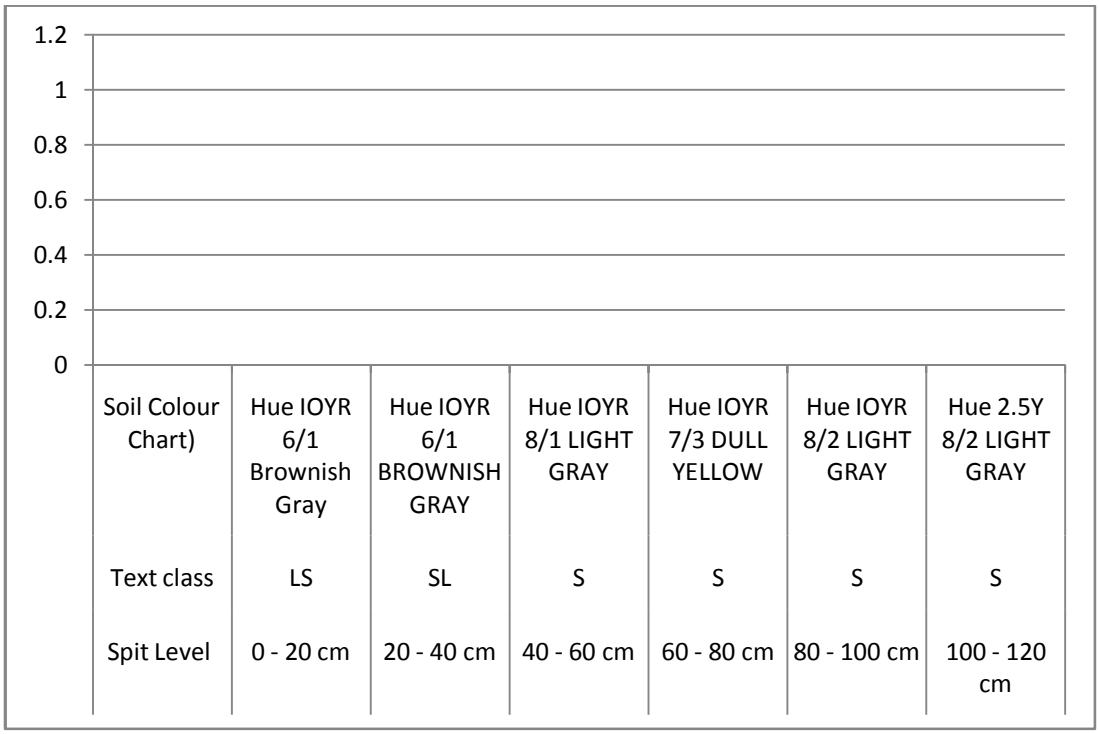


Fig. 11: Spit Levels Showing the Soil Colour Characteristics

Source: Fieldwork (2012)

In layer 2, the soil was light in colour (**20 year 6/8 munsell colour chart**). It has root hair and roots. In layers 3, 4, 5 and 6, the soils were lighter in colour (**20 year 6/5 munsell, colour chart**). Surprisingly, there was no much change of soil texture, probably owing to denudation process that washed the rock shelter surface into the flooding zone (Fig 11). Thus, the texture of the sand was powdery and soil type intrinsic and ash-like. The most interesting thing about the layers was the uncompact nature of the soil which makes it easier to demarcate. This probably resulted in its loose soil.

4.4.3 Cultural Stratigraphy

The two major lines demarcated in the stratigraphy resulted in producing three cultural layers discernible in our trench. The oldest cultural layer has the depth of 100 ï 120cm, followed by the middle layer which was 60 ï 100cm. The youngest cultural layer has 40 ï 60cm and the topmost is over-burden, covering the depth of 0-40cm(**See graphs 6**). Illustration of cultural materials was shown in **Table 4** below. Rock boulder/rock outcrop was found in the lower/youngest cultural layers, and the measurements taken were illustrated in Figure 9. The layer also depicted very sparse recoverable cultural materials. The middle cultural layer had materials mostly potsherds, palm kernels and other shells.

Scale: A scale of 1 cm to 10 units on both axes or 10 cm to 1 m

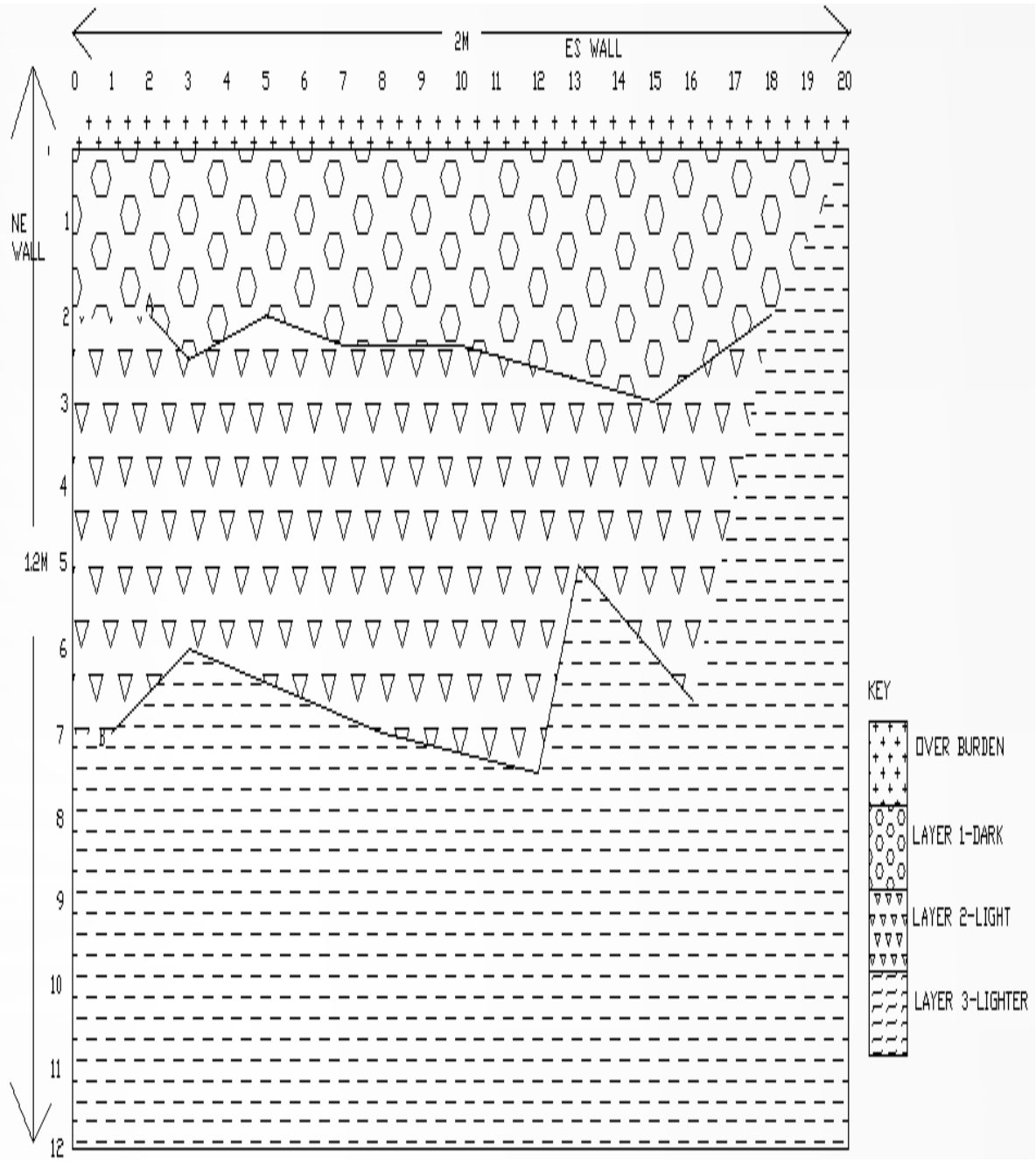


Fig. 12: Demarcation of Spit Layers

Source: Fieldwork (2012)

Readings:

A **B**

ES 10.5 AT 20.6 NE **ES 0.8 AT 70 NE**

ES 20.5 AT 30 NE **ES 30.2 AT 57 NE**

ES 50 AT 20.5 NE **ES 80.5 AT 70 NE**

ES 70.5 AT 20.8 NE **ES 120 AT 70.3 NE**

ES 102 AT 20.7 NE **ES 132 AT 40.6 NE**

ES 150 AT 30.2 NE **ES 153 AT 60.5 NE**

ES 180 AT 20 NE

The potsherds had similar decorative motifs and more dense than layer 2, 3 and 4. The lowest cultural layer contained a big water pot. Its neck was measured in situ (**See Figure 10)**. Arguments on how the pot discovered was buried and was analysed and this would be found in the nextsection. The surface materials have more concentration of materials. But the potsherds collected do not differ much from the excavated ones. Illustration of inventory of findings in our trench, according to spit levels and its percentage of occurrence, is shown in Table 2 below.

Table 3:Percentage Distribution ofCultural Materials from Ogba-eju Rockshelter 10

Objects discovered	**Surface**	**0 – 20cm**	**20cm – 40cm**	**40cm – 60cm**	**60cm – 80cm**	**80cm – 100cm**	**100cm –120cm**	**Total**	**% occurence**
Bottle	1	-	-	-	-	-	-	01	0.344828
Potsherds	7	36	66	8	17	18	-	152	52.41379

Pot	-	-	-	-	-	-	1	01	0.344828
Charcoal	3	8	3	4	2	1	-	21	7.241379
Metal steel	-	1	-	-	-	-	-	01	0.344828
Snail shells	3	3	-	-	-	-	-	06	2.068966
Kernel shells	3	26	12	-	-	-	-	41	14.13793
Zinc	1	2	-	-	-	-	-	03	1.034483
Quartzite	-	1	7	1	-	-	-	09	3.103448
Quartz	-	-	-	-	-	1	-	01	0.344828
Rock	-	-	-	-	-	1	-	08	2.758621
Clay	-	1	-	-	-	-	-	01	0.344828
Plastic	1	1	-	-	-	-	-	02	0.689655
Rock outcrop	-	-	1	-	-	-	-	01	0.344828
Palm kernel	-	14	-	1	-	-	-	15	5.172414
Aluminum	3	-	-	-	-	-	-	03	1.034483
Hook and net	1	-	-	-	-	-	-	01	0.344828
Fish net	4	-	-	-	-	-	-	04	1.379310
Coiled wire	1	-	-	-	-	-	-	01	0.344828
Grind stone	1	-	-	-	-	-	-	01	0.344828
Tripod stone	1	-	-	-	-	-	-	01	0.344828
Plants/trees	2	-	-	-	-	-	-	02	0.689655
Tin Can Tomatoes	1	-	-	-	-	-	-	01	0.344828
Snare	1	-	-	-	-	-	-	01	0.344828
Polish stone	1	-	-	-	-	-	-	01	0.344828
Seeds husk	3	7	1	-	-	-	-	11	3.793103
Total	38	104	91	16	19	21	01	290	100.0000

Table 4:Ogba-eju Rock shelter (RS/10) Inventory of findings

	Surface	0 – 20cm	20cm – 40cm	40cm – 60cm	60cm – 80cm	80cm – 100cm	100cm – 120cm	Total	% occurence
Organic Materials									
Palm Kernel and Shells	3	40	13	1	-	-	-	57	19.387755
Fish net	5	-	-	-	-	-	-	05	1.7000630
Bottle and charcoal	4	8	3	4	2	1	-	22	7.482393
Seed husk	3	7	1	-	-	-	-	11	3.741497
Wood snare	1	-	-	-	-	-	-	01	0.340135
Plants/Trees	2	-	-	-	-	-	-	02	0.680273
Snail shells	3	3	-	-	-	-	-	06	2.040816
Total								**104**	**35.374150**
Lithic Material									
Rock	-	5	1	2	1	1	-	10	3.401361
Quartzite	-	1	7	1	-	-	-	09	3.061234
Quartz	-	-	-	-	-	1	-	01	0. 340135
Stone tools	3	-	-	-	-	-	-	03	1.020488
Fish Hook	1	-	-	-	-	-	-	01	0. 340135
Total								**24**	**8.163265**
Metallurgy									
Aluminum	4	-	-	-	-	-	-	04	1.360544
Binding wire	1	-	-	-	-	-	-	01	0. 340135
Plastic	1	1	-	-	-	-	-	02	0. 680273
Zinc	1	2	-	-	-	-	-	03	1. 020488
Hearth	*								
Total								**10**	**3.401361**
Ceramics									
Pottery clay	-	1	-	-	-	-	-	**01**	**0.** 340135
Pottery									
Rims	3	6	-	1	1	1	1	13	4. 421768
Body	4	28	66	6	16	16	1	137	46.598640
Neck	-	1	-	1	-	1	1	04	1. 360544
Appliqué	-	-	-	-	-	-	1	01	0. 340135
Total								**155**	**52.721088**
Grand Total	**39**	**103**	**91**	**16**	**20**	**21**	**4**	**294**	**100.00000**

***Ash at the wall of the Rock Shelter**

4.5: Chronology/Comparison of Ukpa, Ugwuegu and Ozizza in Afikpo

From Tables 6, 7 and 8 below, Ogba-eju-Ozizza excavation had no evidence of microlithic tools such as axe-like and adze-like (small bifacial points for hunting and gathering) materials. These suggest lack of direct evidence in the change of economy ï hunting and gathering to agriculture, comparable with Ukpa and Ugwuegu rock sheltersô dwellers. Pottery recovered from the sites and the use of smaller *Ujii* (rock hollows) from Ozizza site are indications that agriculture was indeed practised as early as between 3000 and 5000 Bp in Ozizza as in other Afikpo communities. Therefore, inasmuch as bifacial points (axe-like and adzeï like) tools and microlithic tools were not found in Ogba-eju, Ozizza, the inference would be based on pottery analysis and *Ujii* (rock hollows). Others were palynological studies, petrographic microscope, mineraolgicla studies, and harness text (See Table 5, Section 4.5 to 4.5.1 and 4.6**).** We, therefore, reconciled our site with the other two excavated sites in Afikpo and Okigwe as late Stone Age sites. Other West African communities ï Iwo Eleru, Rop, Mejiro in Western Nigeria and Abetifi, Ghana could also be reconciled with the excavated sites in Afikpo. Tools like chart, sandstone, quartzite, microlithic and pottery identified in these West African countries suggest a change of economy ï hunting and gathering to food production.

However, the similarities in pottery from the excavated ones from our site and from the contemporary ones as well as from X-ray diffractogram and Thin section found within the three communities in Afikpo according to earlier excavations were signs of cultural affinity (Chikwendu, 1989) and cultural continuity. Perforated pedestals recovered by Chikwuendu at Ugwuagu site II (village community) which was not recovered in any other site in Afikpo were a replica of IgboUkwu and Benin ancient pottery excavated by Shaw (1970) and Connah (1975) dated around 9th ï 10th century (Shaw 1970). Chikwendu (1989) inferred that the ancient

pottery does not have resemblance with findings from Afikpo rock shelters which were an indication that the rock shelters at Afikpo belonged to Afikpo forefathers while the perforated pedestal at Ugwuagu Village probably came through trade contacts in the 9th ï 10th Century via the Cross River to Afikpo. This was further connected to Niger Delta confluence. Therefore, the following Tables (5, 6, 7 and 8) show the comparativeness of the sites. Also Figure 2 identifies, in the map, the three communities.

Table 5: X-Ray Diffractogram and Thin Section of Potsherds

MINERALS	**Ugwuegu**	**Ukpa**	**Ozizza (Ogba-eju)**
Quartz	✓	✓	✓
Kaolinite	✓	✓	✓
Illite	✓	✓	✓
Feldspar	✓	✓	✓
Microcline (FM)	✓	✓	✓
Plagioclase (FP)	✓	✓	✓
Clay (Uria)	✓	✓	✓
Temper (Ezuria)	✓	✓	✓

Source: Laboratory Work (2013)

Table 6: Comparism by Pottery in Ozizza with Other Afikpo Sites

Excavators	**Ugwuaga Sites:** I	II	**Ukpa**	**Ogba-eju (Ozizza)**	**Grand total**	**Dating**
Chikwendu (1976)	513	19,652	-	-	20, 166	2580 ï 80Bp 2220 ï 80Bp Layer

						4 = 2920 ï 125 2970 ï 90 (1020 + 90Bc). Site i
Hartle (1966)	-	-	Not summed (yes)	-	-	5000 ï 3000 Bp and 2500 ï 3000 Bp (550 ï 1050 Bc).
Andah and Anozie (1980/81)	-	-	Yes (not counted)	-	-	2100 ï 2000 Bp (150-50Bc
Ikegwu (present researcher)	-	-	-	153	153	-

Table 7: Comparism of Archaeological Remains in Afikpo and Ozizza Sites

Excavators	**Ugwuege Sites:** I II	**Ukpa**	**Ogba-eju (Ozizza)**
Chikwuendu (1976)	Micolithics and quartz	-	-
Hartle (1966)	-	Microlithic and quartz	-
Andah and Anozie (1980/81)	-	Microlithic	
Ikegwu (present researcher)	-		No microlithic tools but quartz and *Ujii* rock hollow

Table 8: Decorative Categories, Temper Materials, Present day Pot making and function

Decorative categories	**Ukpa (Hartle)**	**Ukpa (Andah and Anozie)**	**Ugwuage Sites:** I **(Chikwendu)**	II	**Ogba-eju Ozizza, Ikegwu(present researcher)**
Grove	Yes	Yes	Yes	-	Yes
Comb stamping	Yes	-	-	-	-
Criss-cross incision	-	Yes	Yes	-	Yes
Plastic application	-	Yes	-	-	-
Impressed	-	-	Yes	-	-
Slashing	-	Yes	Yes	-	-
Burnish	-	-	-	-	-

Perforated pedestals	-	-	-	Yes	-
Appliqué	-	-	-	-	Yes
Punctuate	-	-	-	-	Yes
Temper materials ground potsherd and fine sand (*Ezuria*)	-	Both	Both Normal (*Ezuria*)		Fine sand (*Ezuria*)
Present day pot making and functions	-	Same	Same		Same

4.5 Mineralogy and Petrography Studies of Pottery

The mixture of mineral grains and rock fragments make up sandstones, although most sand stones are dominated by mineral grains(Sandstone, Mudstone and Shale are the major constitutes of this study area). In Sandstone region, minerals such as calcium, magnesium, sodium, potassium, zinc, iron, manganese, titanium, phosphorus and some others abound. But in some area, calcium is generally more abundant, while clay minerals, fine-size micas, quartz and feldspars are abundant minerals in the Mudstone and Shale region. The availability of these geological outcrops (sandstone, mudstones and shale) in this study area generates resources that are highly valued by man. Examples are pottery and coal. Petrology is the scientific study of rock, clay and metal, while thin section is a specially prepared slice of stone, potsherds and iron. Petrology involves examination under a microscope of the thin sections cut from samples of pottery in exactly the manner used to examine stone by petrography (Greene and Moore, 2010). Petrographic microscopes are used to test the purity and to investigate the optical properties which are conditioned by atomic arrangement (Shephard, 1985). Both gave ample opportunities to really identify the source of raw materials instead of dwelling only on routine identifications comprising paste and paint, formation, finishing, decoration and firing (Shephard, 1985). In order words, the identification of mineral constituents was not based on postulations or conjectures. The media were among the best tools in establishing comparative analysis of pottery

and in correlating chronologies. These analyses are essential as they would tell about the mineral of the geological area where pots or other artifacts are manufactured. They would also give idea about the sources of raw materials (Sharer and Ashmore, 1993; Renfrew and Bahn, 2000 and Grant *et al.,* 2002). In view of these, therefore, Tomber and Dore (1998) posit that petrology is a medium for detailed record and for comparison.

The petrographic study of the potsherds has given ample opportunities to compare Ogba-eju site in Ozizza with other sites in Afikpo and its environs. Scientific and ethnographic analyses supported the research work about the pottersôtechniques in Afikpo. Petrographic study was aimed at throwing light on the similarity or otherwise of potsherd samples derived from archaeological sites in the areas that correlate with ethnographic data. It pointed out the rock types and genesis of clay (Ibeanu, 1989 and 2000). Petrographic studies have been used by authors in the various fields such as geologist, archaeologists and metallurgists, to mention a few. Geologists used petrography to assign pots to the geological sources of used clay on the basis of exotic rocks and mineral inclusions (Peacock, 1985 in Ibeanu, 2000). Archeologists adopted the method to extract the origin of the potsherds and potting tradition (Matson, 1969; Bishop *et al.,* 1982; Aspinall, 1985 and Grant *et al*., 2002) while metallurgist used the petrographic microscope to identify corrosion on metal artifacts and to explore manufacturing techniques (Grant *et al.,* 2001). However, this analytical data authenticated and strengthened the chronological or comparative studies in Afikpo sites and environs concerning the origin and distribution of the pots.

Mineralogical study based on xï ray diffraction (XRD) was also aimed at giving more information on the clay mineral composition for pottery making in the study area as well as

making inferences on comparative studies of the clay sample, temper material and other excavated potsherds and ethnographic surface collection.

Laboratory Methods: Selected potsherds, raw clay and temper material and excavated potsherds from Ogba-eju hereby referred to asRockshelter ten (RS/10) with that of Ukpa Rockshelter and Ugwuegu Valley were subjected to chemical analyses (petrographic and mineralogical analyses) and sent to the Geology Department, University of Ibadan for thin sectioning. Each sample for petrographic analysis was cut and impregnated with epoxy and lapped with carborandum, mixed with water for 3 days, and kept at a fresh slide at 30 micron. The slides were then ready for viewing under the petrographic microscope, while XRD was based on passing xï ray beam through the clay samples that generated peaks, typical for each type of minerals for the clay. Both results were then subjected to archaeological interpretation, aimed at identifying the authenticity and sources of the pottery tradition in Afikpo. The authenticating of their relationship would strengthen information generated from the ethnographic resources and archaeological sites.

4.5.1 Results of Mineralogical and Petrographic Studies

The results showed that the sample from Ozizza area (clay and temper material) has iron oxide, but does not have feldspar in the clay (Figures 7-15). Other results were as follows:

1. Plagioclase and microcline were two major types of feldspar found at the Afikpo sites.

2. Each sample contained minerals such as feldspar, quartz, kaolinite and illite, identified as percentage abundance (average petrographic modal composition of given samples and percentage abundance are given in Table 9 and Plates 20-28 thin sections**)**.

3. Each sample contained white and black inclusion.

4. All samples were run between polarizations of 2^0 and 40^0 which identified the primary/highest, secondary/middle and tertiary/lowest peaks at various points.

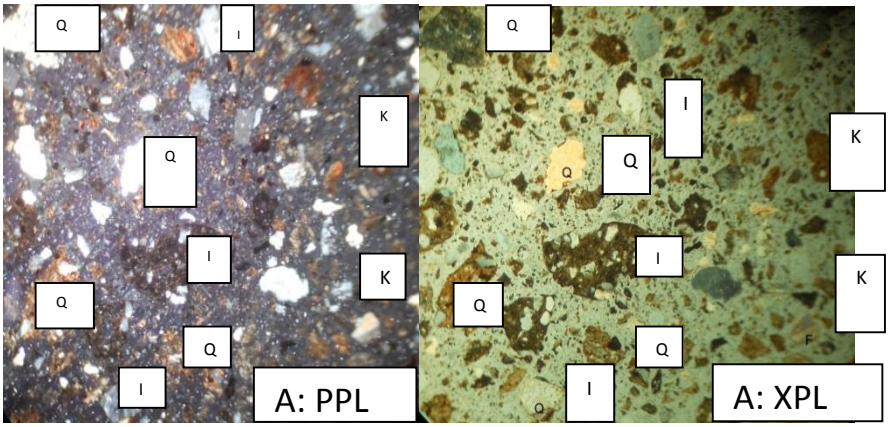


Plate 20: Micrographs of Potsherds from Surface Collection (×400)

Source: Laboratory Work (2013)

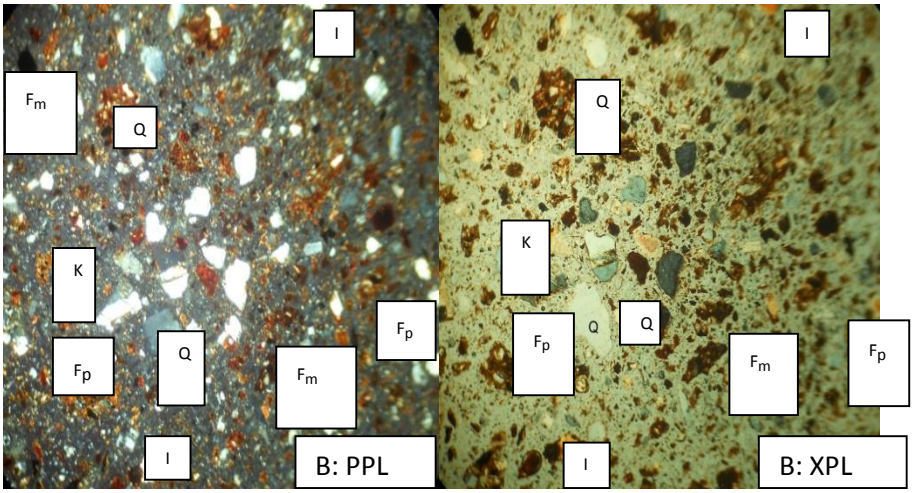


Plate 21: Micrographs of Potsherds Collected from Topmost Layer (0-40 cm)

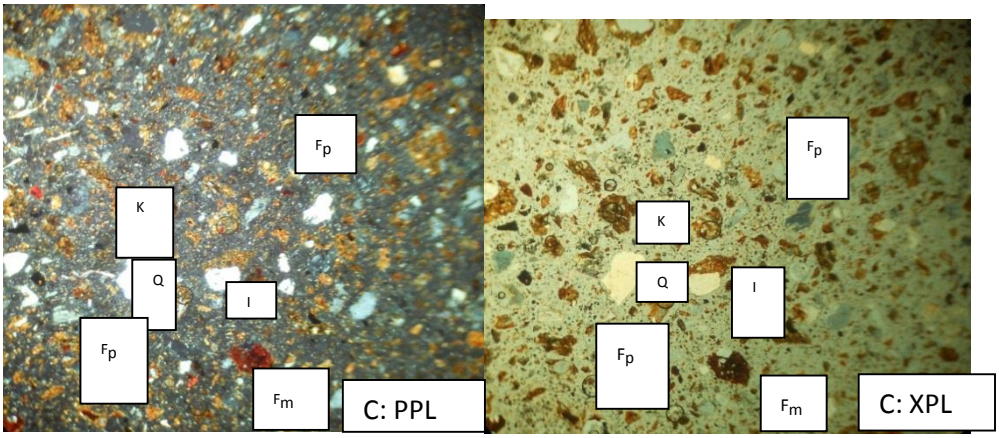


Plate 22:Micrographs of Potsherds Collected from Youngest Layer (40 – 60 cm)

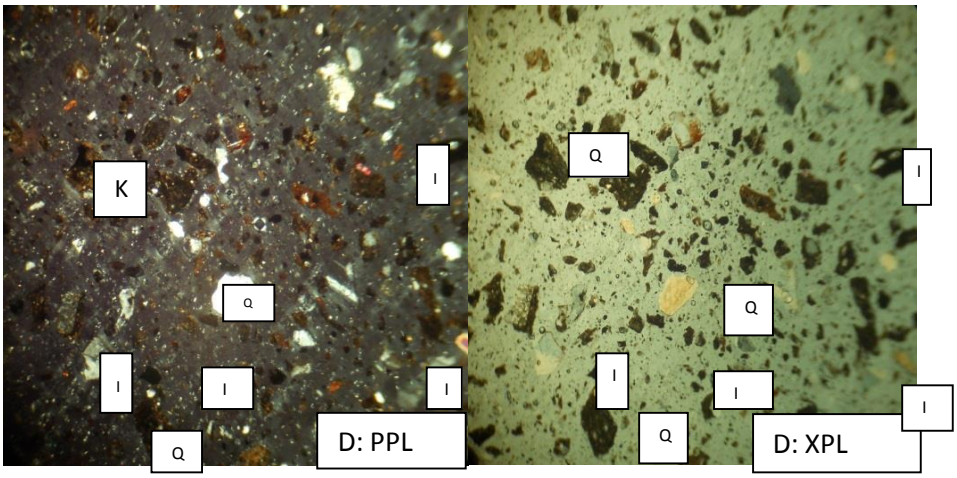


Plate 23: Micrographs of Potsherds Collected from Middle Layer (60 – 100 cm)

Source: Laboratory Work (2013)

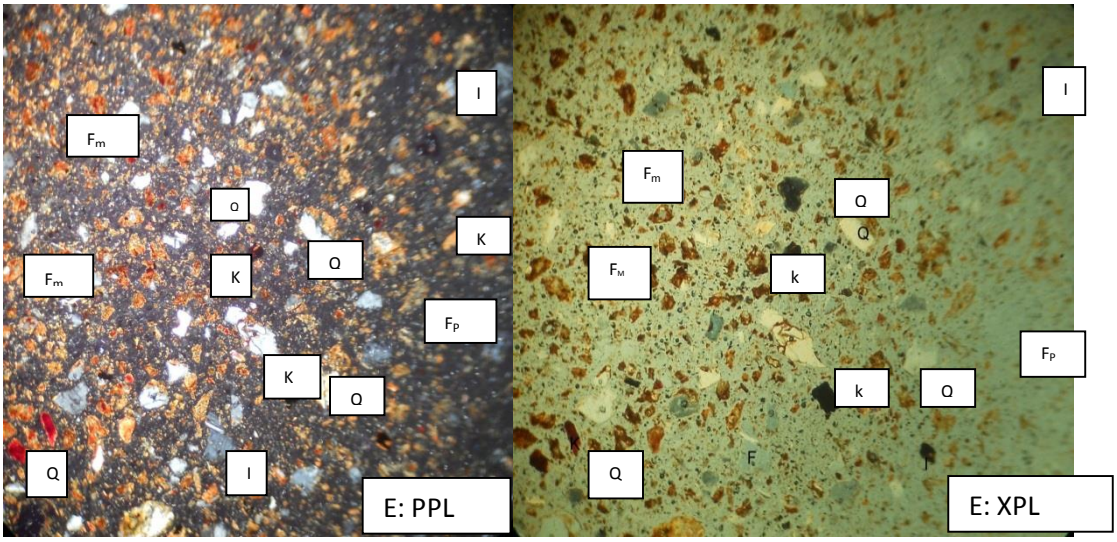


Plate 24: Micrographs of Potsherds Collected from Oldest Layer (100 – 120 cm)

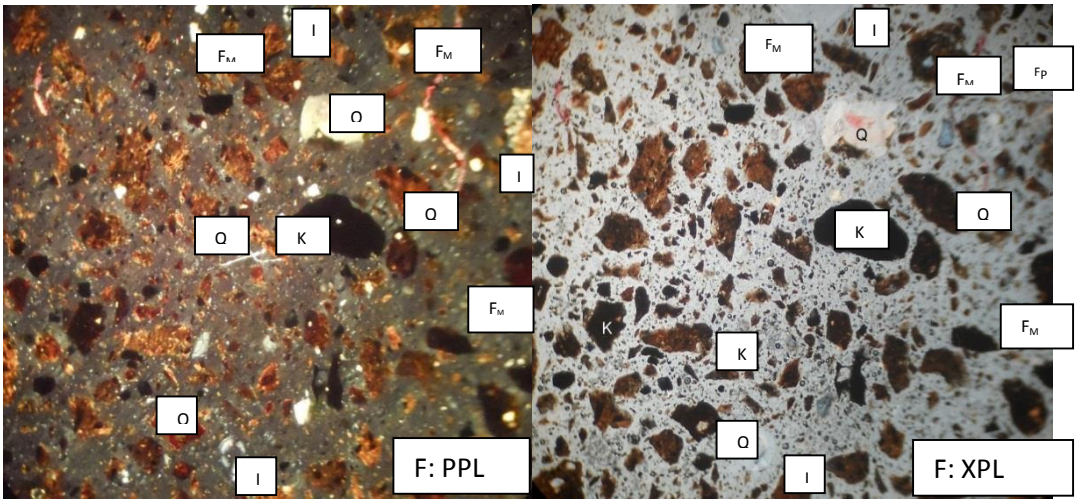


Plate 25: Micrographs of Potsherds Collected from Ugwuegu Site Afikpo (AF.75.2)

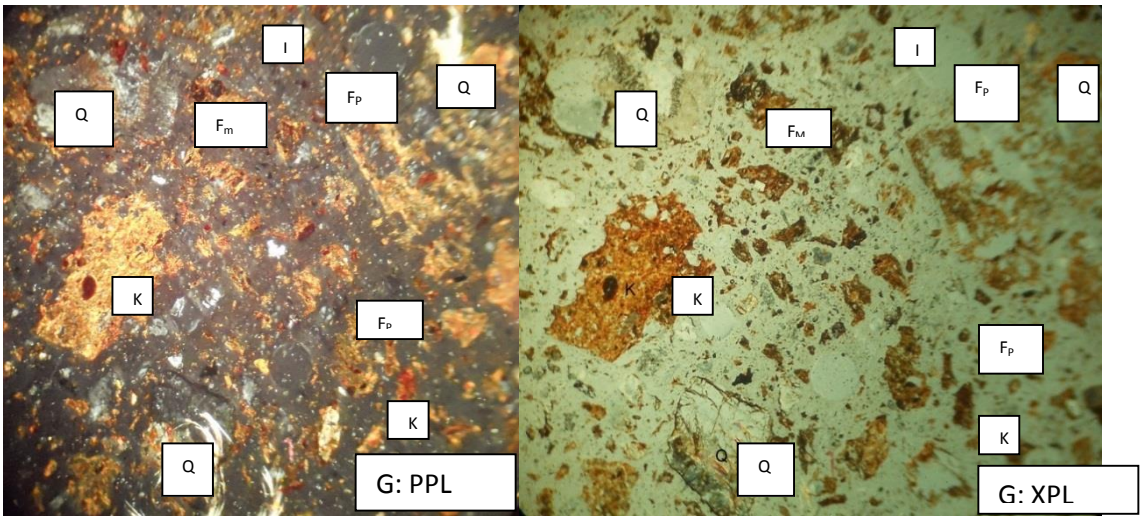


Plate 26: Micrographs of Potsherds Collected from Ukpa Rockshelter

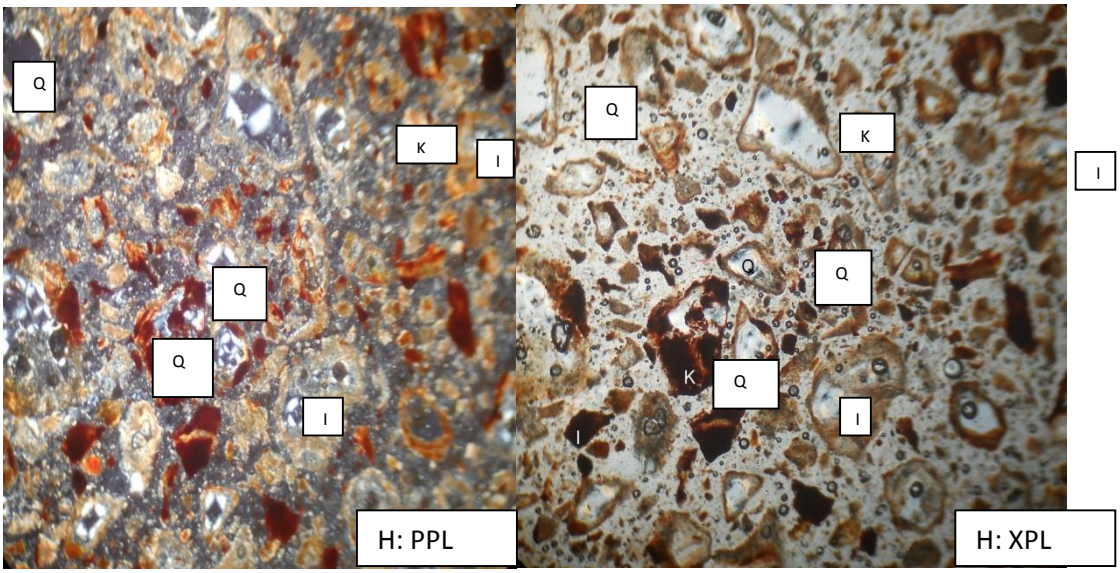


Plate 27: Micrographs of Raw Clay Material

Source: Laboratory Work (2013)

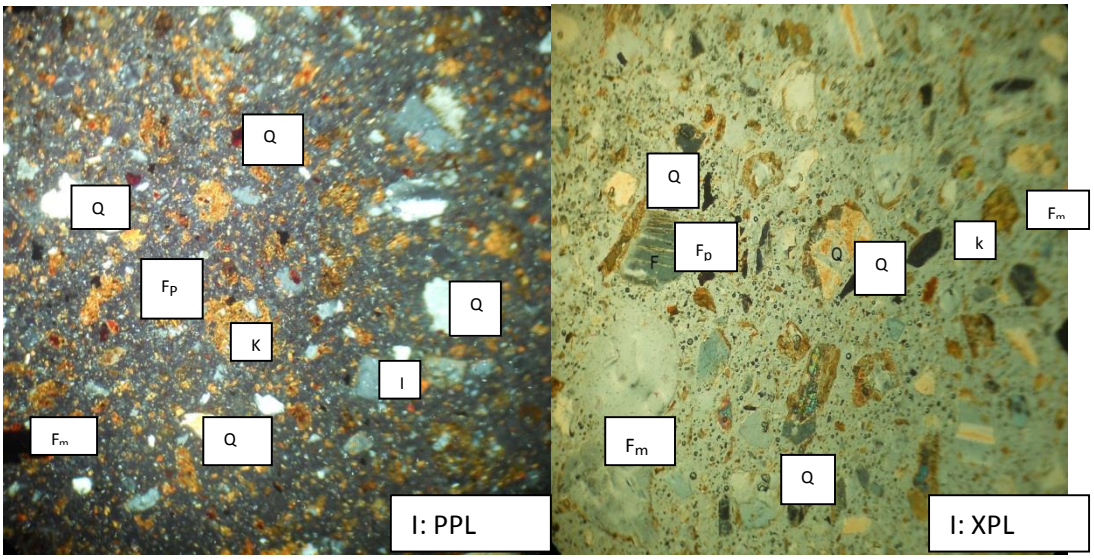


Plate 28: Micrographs of Temper Material used for Pottery Making in Ozizza Area

Source: Laboratory Work (2013)

Keys:

PPL = Plane polarized light

XPL = Cross polarized light

F_m = Microcline (Feldspar)

F_p = Plagioclase (Feldspar)

Q = Quartz

K = Kaolinite

I = Illite

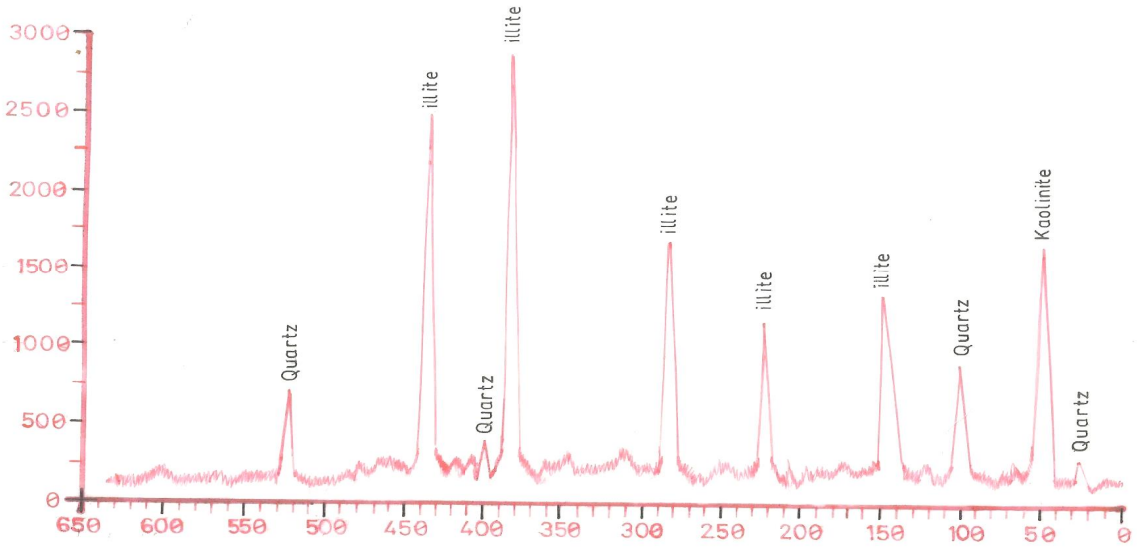
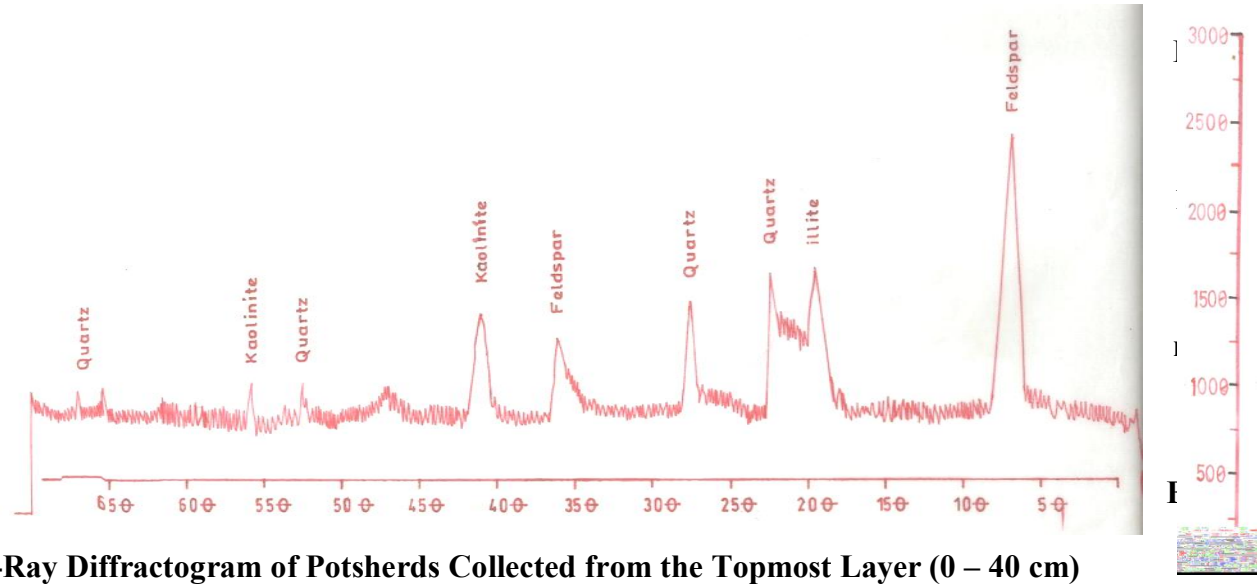


Fig. 13: Sample A - X-Ray Diffractogram of Potsherds from SurfaceCollection

Source: Laboratory Work (2013)



X-Ray Diffractogram of Potsherds Collected from the Topmost Layer (0 – 40 cm)

Source: Laboratory Work (2013)

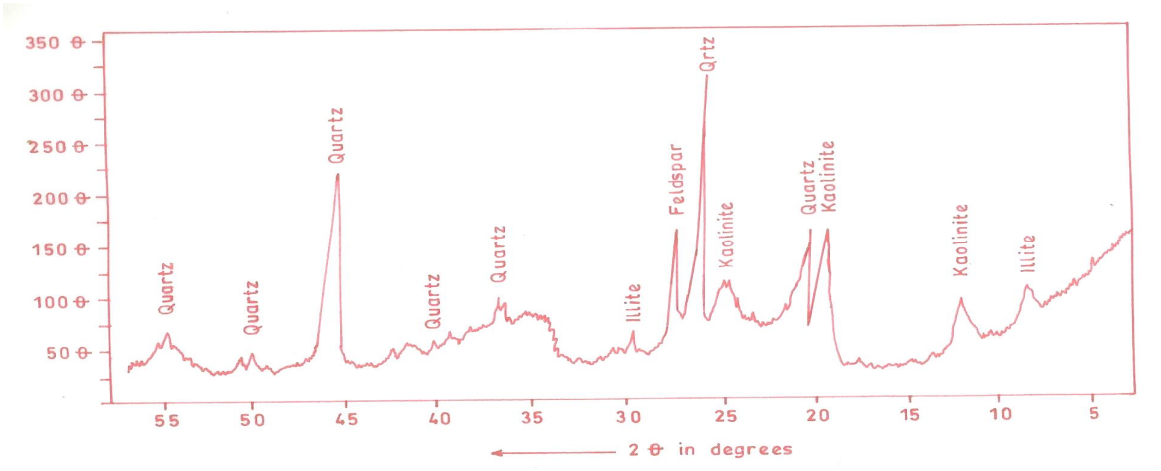


Fig 15: Sample C - X-Ray Diffractogram of Potsherds Collected from the Youngest Layer (40 – 60 cm)

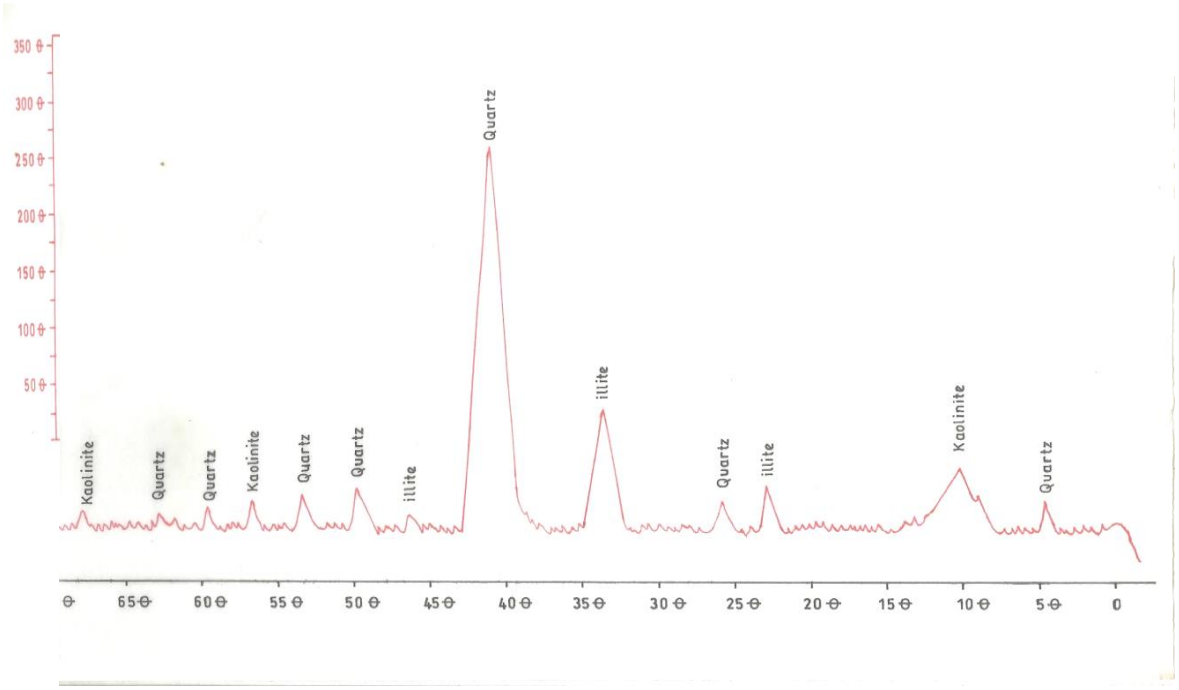


Fig. 16: Sample D – X-Ray Diffractogram of Potsherds Collected from the Middle Layer (60 – 100)

Source: Laboratory Work (2013)

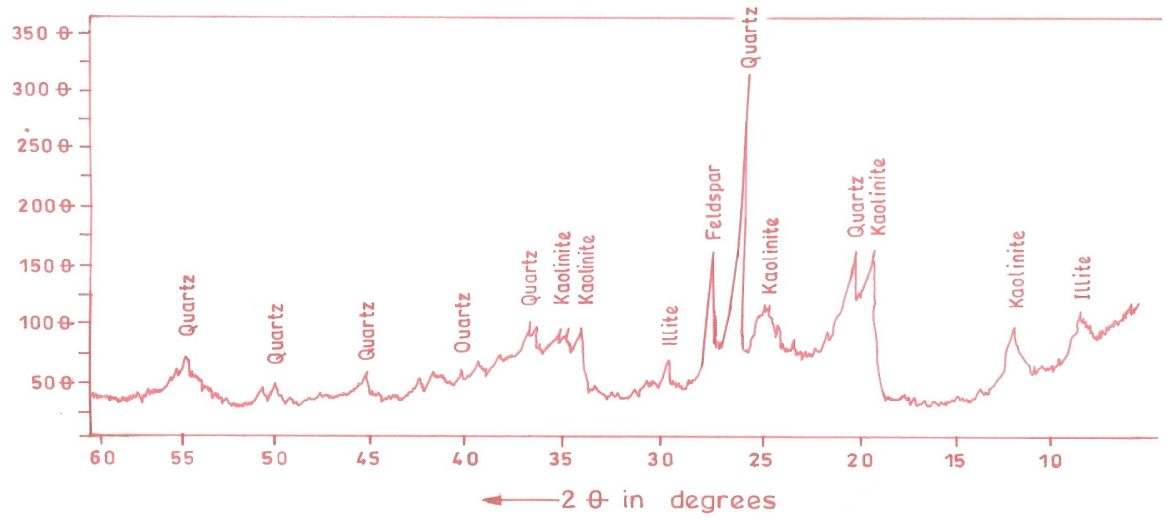


Fig. 17: Sample E – X-Ray Diffractogram of Potsherds Collected from the Oldest Layer (100 – 120 cm)

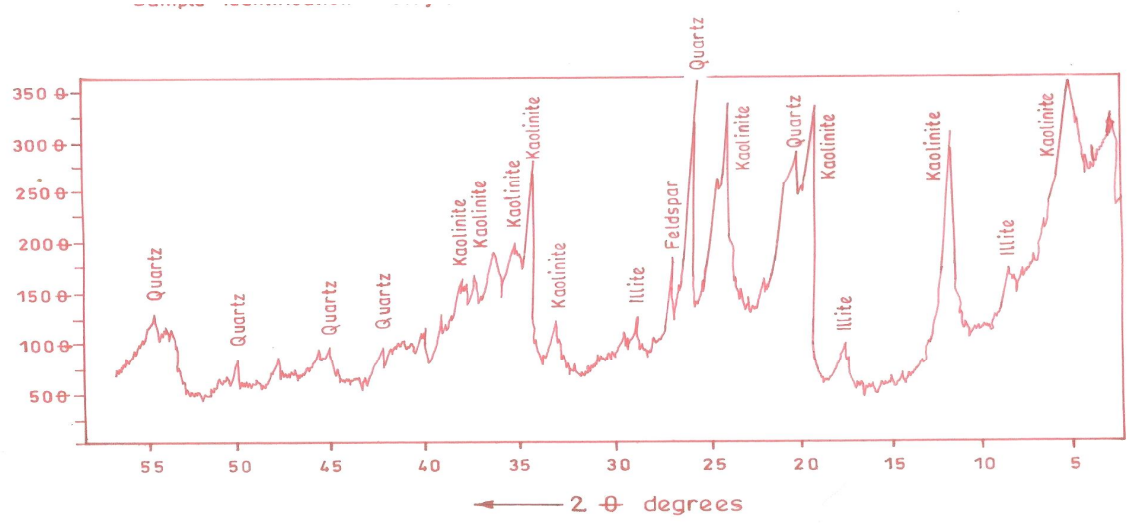


Fig. 18: Sample F – X-Ray Diffractogram of Potsherds Collected from Ugwuegu Site, Afikpo (AF.75.2)

Source: Laboratory Work (2013)

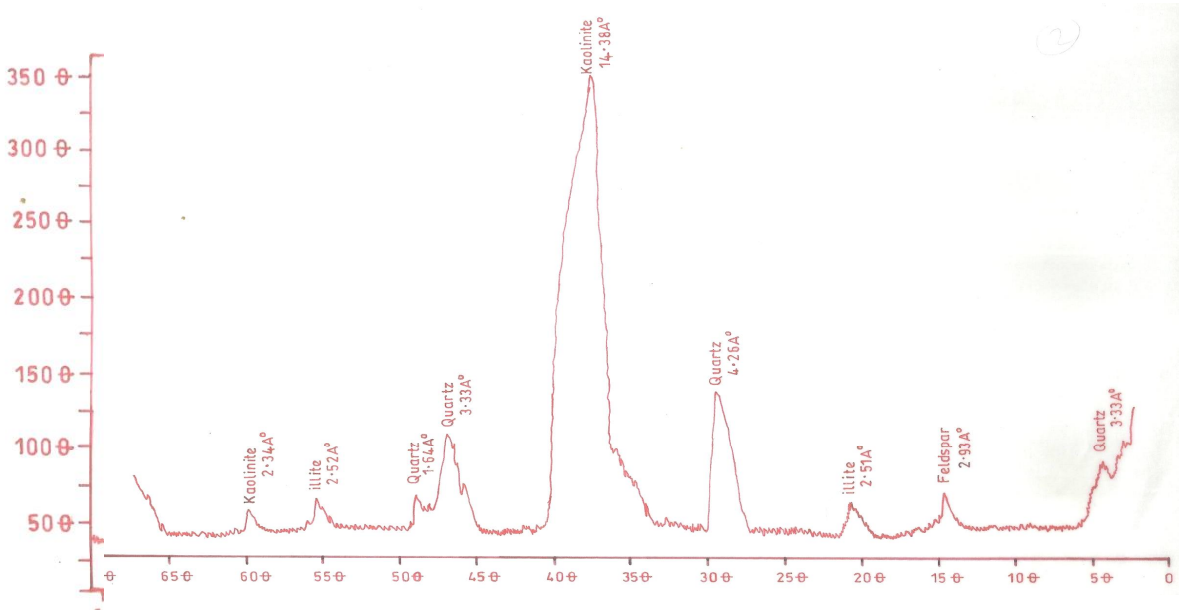


Fig. 19: Sample G – X-Ray Diffractogram of Potsherds Collected from Ukpa Rockshelter Site, Afikpo

Source: Laboratory Work (2013)

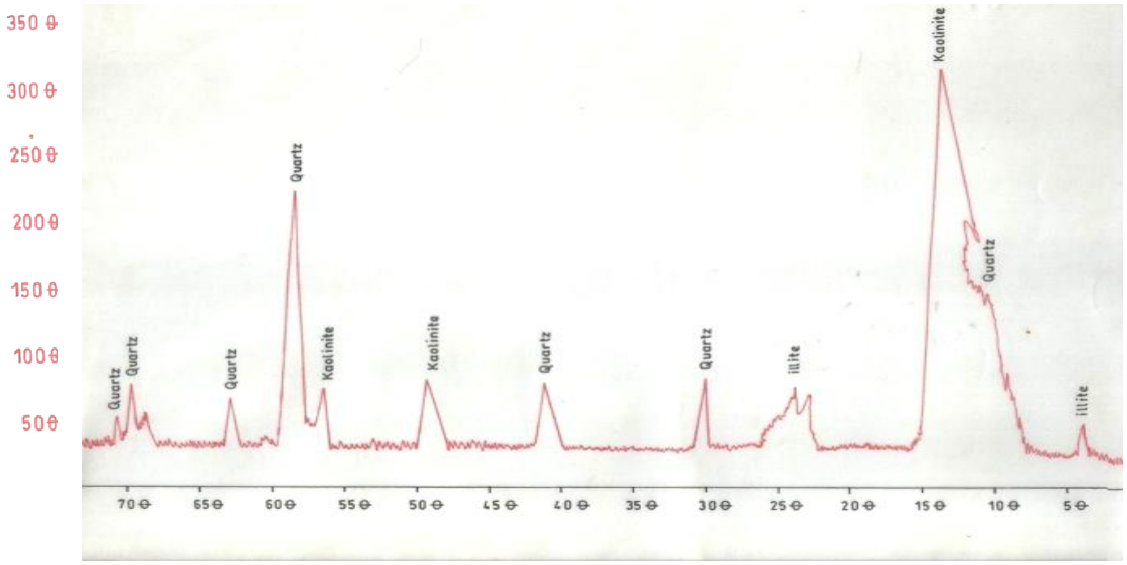


Fig. 20: Sample H – X-ray Diffractogram of Clay (Raw Materials Used by Potters in Ozizza Area)

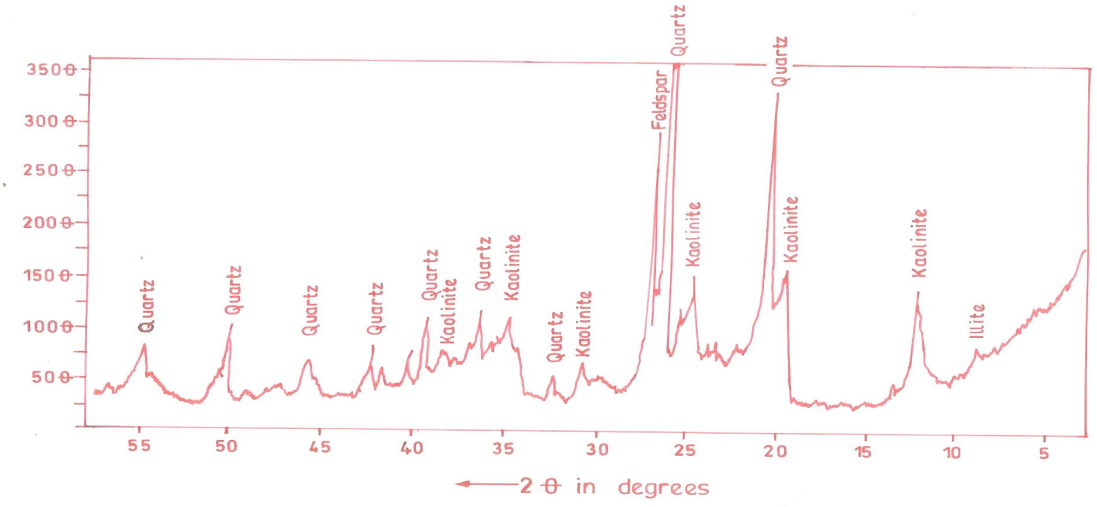


Fig. 21: Sample I – X-Ray Diffractogram of Temper Material (Used by the Potters in the Ozizza Area)

Source: Laboratory Work (2013)

4.6.2 Result of the Minerals Analysis

XRD analysis of selected samples at Afikpo sites distinguished the peaks of the various minerals such as quartz, feldspar, kaolinite and illite at their primary (highest), secondary (middle) and tertiary (lowest) peaks.

Quartz is original mineral which metamorphosed into quartzite with the formula SiO_2 owing to tectonic action (Wikipedia encyclopedia). It is either known as quartz cement (crystalline) showing colours such as white, gray, pink and red or quartz matrix (aggregate). It is one of the extreme stable clay silicates mineral and most abundant in sedimentary rocks or sandstones (Weller, 1960; Read *et al*, 1962, Dunbar, 1958 and Boggs, 2009). The constituent point is its resistance to both physical and chemical weathering. Boggs (2009) posits that its relative abundance in sandstone is not only its resistance to chemical weathering, but its resistance to mechanical abrasion during transport. In the study area, just like kaolinite, quartz was second in abundance with percentage occurrence of about 26.39% and appeared in all the samples under XRD analysis. The peak was picked using the vertical axis of light while the Ø in the horizontal axis indicate point occurrence.

From the resultsobtained, quartz was evenly distributed in all the samples, although their relative abundance in the samples differs (Plates 20 -28 and Figures 13 -21). In sample A, the relative abundance of quartz was lowest, unlike in Sample B where quartz and kaolinite are found in equal amounts, although they ranked second to feldspar in the sample. The least quantity of quartz was found in sample D, although it was cumulatively in abundance as the element was evenly distributed within the sample.

Feldspar is the most abundant silicate of mineral species, but the most abundant mineral is quartz. Feldspar make up about 10-15 percent of average ancient sandstone, but their reported abundance in sandstones ranges from zero to as much as 60 percent (Boggs, 2009). In sandstone, where the percent of feldspar is up to or even more than 25 percent, it is said to be feldspar rich. It is classified into three:

The K (alkali) feldspar is a complete solid solution series from (Orthoclase, Microcline, Sanidine) $K(AlSi_3O_8)$ to anorthoclase $Na(Al\ Si_3O_8)$. The richness of potassium is common in first group of alkali feldspar, each marked with the name K-spar which is easily distinguished from quartz light colour or crystalline by staining.Orthoclase is cloudy, and can be twined or untwined and stained. Sanidine has similar characteristic with orthoclase, but occurred in volcanic rocks and with high temperature, and is fewer than orthoclase (Boggs, 2009).Microcline is identified by its grid twining or cross-hatch twining. Some are untwined (Nesse, 1986). Carefulness is the key word since untwined microcline can be confusing with either orthoclase or quartz (Boggs, 2009). However, microcline can be differentiated from both, in that it contained some soda (Mennell, 1913).The last K-spar, anorthoclase, is not very common in sandstone. It has been identified with its finer scale cross-hatch twinning. That is, it has grid twining that is much finer than microcline grid twining. Both orthoclase and microcline are most abundant potassium feldspar in sandstone region. Examples of K-feldspar are:

Microcline: potassium, aluminum silicate ($KAlSi_3O_8$)

Sanidine: potassium sodium aluminum silicate ($KAlSi_3O_8$)

Orthoclase: potassium aluminum silicate ($KAlSi_3O_8$)

The plagioclase feldspars are complete solid solution series ranging from the albite ($NaAlSi_3O_{8)}$ to anorthite ($CaNaAlSi_3O_8$). Plagioclase feldspars are common in sandstone made from volcanic and metamorphic rocks, although it can be derived from plutonic igneous rocks, those found in igneous rock display zoning. However, Plagioclase is also identified by either twined or untwined, but can be easily distinguished from alkali feldspars by extinction angles or staining or by large 2v (Boggs, 2009). Examples of K-feldspar are as follows:

Albite: Sodium Aluminum Silicate ($NaAlSi_3O_8$)

Oligoclase: Sodium Calcium Aluminum Silicate ($NaCaAlSi_3O_8$)

Andesine: Sodium Calcium Aluminum Silicate ($NaCaAlSi_3O_8$)

Labradorite: Calcium Sodium Aluminum Silicate ($CaNaAlSi_3O_8$)

Bytownite: Calcium Aluminum Silicate ($CaAlSi_3o8$)

Anorthite: Calcium Sodium Aluminum Silicate ($CaNaAlSi_3O_8$)

Scientists such as Mennell (1913) and Nelson (2008) classified feldspar into three end members:

Potassium feldspar (K - spar) end member ï $Kalsi_3O_8$

Albite end member ï $NaAlSi_3O_8$

Anorthite end member ï $CaAl_2Si_2O_8$

Interestingly, microcline and plagioclase are two major types of feldspar present in the studied area with 8.55% occurrence in petrographic microscope (Table 9). Microcline, a type of

K-spar and albite, Na-plagioclase feldspar occurs in sedimentary rocks while Ca-rich feldspar does not occur in sediments. Feldspar generally weather to clay minerals.

Table 9: Average Petrographic Modal Composition of given samples

Sample no	Kaolinite	Quartz	Feldspar	Illite
A	60	28	8	4
B	58	29	10	3
C	66	22	10	2
D	52	28	12	8
E	95	30	8	3
F	64	22	9	5
G	57	30	8	5
H	60	30	8	2
I	62	28	7	3
Total	**574**	**247**	**80**	**35**
%	**61.32%**	**26.39%**	**8.55%**	**3.74%**

Table 10: Types of Feldspar Found in the Study Area

Sample	A	B	C	D	E	F	G	H	I
Plagioclase	6	6	7	8	4	4	4	6	5
Microcline	2	4	3	4	4	5	4	2	2

The peak was picked using the vertical axis that is indicative of the wavelength of light and corresponding to the abundance of the element in the sample while the Ø in the horizontal axis indicated the angle of diffraction in the media.

Kaolinite is a fine crystal popularly known as Kaolin or China clay (Pohl, 2001; Schroeder, 2003) with chemical formula $Al_2Si_2O_5(OH)_4$. It is one of the abundant clay minerals found in mudstones and shale, as well as found in sandstone. Mudstones and shales accordingly make up to 50 percent of all sedimentary rocks which are mostly found around marine regions. It forms under strongly leaching conditions such as abundant rainfall, good drainage, and acid water as well as in marine basin which tends to be concentrated near shore (Potter *et al*, 1980). Although SiO_2 example quartz is the most abundant chemical constituent clay silicate minerals in shale and sandstone or mudstone, aluminum ranks second in abundance thereby making kaolinite very high and called high alumina shales, constituting <20 percent Al_2O_3 (Boggs, 2009). This most likely is the reason behind the highest percentage of kaolinite as clay silicate minerals in the study area (61.32%). The peak was picked using the X-ray Diffraction Fluorescence. Kaolinite was second to illite in abundance in sample A, having the fluorescence of about 150Ø on the vertical axis at a diffraction angle of 5Ø on the horizontal axis. Kaolinite

was fluoresced between 50Ø – 150Ø on sample B at diffraction angles of 75Ø and 48Ø and is fourth in abundance, but was peaked only on two spots on the pottery material just like in sample C which was fluoresced between 75Ø ï 150Ø at a diffraction angle of 25Ø 13.5Ø but is equal in abundance to feldspar while quartz had the highest abundance in the sample. However, kaolinite was well distributed within sample D and was fluoresced between 50Ø ï 100Ø at diffraction angles of 75Ø, 58Ø, and 10Ø. In sample E, the light intensity (fluorescence) of kaolinite was observed between 75Ø ï 125Ø at diffraction angles of 12Ø, 18Ø, 25Ø, 34Ø and 35Ø, ranked second in the mineral abundance of the pottery clay mineral and was highly distributed within the sample just like in samples F and I; that is, a pottery material collected from Ugwuegu site in Afikpo and a temper material from the Ogba-eju site respectively.The implication is that the samples must come from people of the same ancestral descent, and that the samples must have been excavated from the same level in order to possess the same attributes. Sample E, therefore, had the same layered structure with samples F and I when viewed from the X-ray diffraction, meaning that sample E from Ogba-eju site could be compared favourably with Ugwuegu site and could have fallen within the same period (3, 000 ï 5, 000 BP). It also showed that the producers of pottery from the two areas made use of the same temper material (sample I) in pottery production. The fluorescence of sample F was between 125Ø – 350Ø at diffraction angles of 37Ø, 38Ø, 35Ø, 34Ø, 24Ø, 18Ø, 12Ø and 5Ø. The light intensity (fluorescence) of kaolinite in sample G was 50Ø and 350Ø at diffraction angles of 60Ø and 37.5Ø respectively. The thicknesses are 2.34Å and 14.38Å respectively. The kaolinite peaked at 350Ø fell within the diffraction angle of 40Ø ï 30Ø and thus had the highest abundance in the pottery material, as was found on the raw clay collected from the Ogba-eju site (sample H) which had the light intensity fluorescence between 100Ø ï 350Ø at diffraction angles of 57Ø, 49Ø, and 13Ø.

Finally, the kaolinite in sample I was fluoresced between 50Ø - 125Ø at diffraction angles of 38Ø, 35Ø, 30Ø, 150Ø, and 125Ø and is the second most abundant mineral element in the sample.

Illite is the non-expendable micaceous clay mineral which existed from smectite hydrated expandable clay during burial. It is the most abundant clay mineral in shale, and was derived from pre-existing shale. Illite is a dominant clay mineral in the Paleozoic shale (Grim, 1953). It later alters to muscovite during diagenesis (Boggs, 2009; Potter *et al*, 1980). It is also very common in many types of clay, mostly in marine sediments and shale (Shephard, 1985). Its chemical formula is (KH_2O) (Al, Mg, Fe,)$_2$ (Si, Al)$_4$ O_{10} $(OH)_2$ (H_2O). It contains excess water (H_2O^+) of the normal 4.5% aluminum dioctahedral potassium micas (Foster, 1964; Hower and Mowatt (1966). Illite can be used either as micaeous clay generally or a composition of muscovite or hydromuscovite owing to its structure (Bird, 1927; Carroll, 1927; Hey, 1950; Charlesworth, 1953 and Hay, 1976). It occurs commonly in soils and argillaceous sedimentary rocks as well as in some low grade metamorphic rocks (Wikipedia Encyclopedia; Grim *et al.*, 1937).

Illite, based on the view of the above authors, was a very important constituent of much clay but the percentage occurrence was lowest among the four groups of minerals found in the study area (3.74%) from the petrographic modal composition.

The result of thin sectioning revealed that illite was present in all the samples (A-I) at various quantities. The relative abundance of illite in samples A and B could be compared favourably in terms of their relative abundance, although illite was only found in one spot in the x-ray diffractogram.

4.7 Hardness Test: Strength of Pottery Materials

Resistance to breakage is a significant property that affords a means of assessing the utility of pottery or any other material, and is useful in making comparative studies when measured satisfactorily. Hardness test carried out on the potsherds samples collected from the various excavated sites in Afikpo showed differences in the strength of the samples. According to Shephard (1985), the force required in breaking an edge with pliers or the ring of sherds as they are tossed on a table often convinces one that there are consistent differences between types.

Furthermore, these simple tests are unsatisfactory for comparative studies as they are not standardized as well as beinginsensitive to experimental methods. Shephard (1985) posited that breaking sherds does not enable one to assess reliably the variations in wall thickness and length of break, and that ring is affected by density which is not identical to strength. Thus, strength is influenced by texture of the paste, particle size and composition of the clay, method of preparing the paste, technique of building the vessel, rate of drying, temperature and atmosphere of firing, size and shape of the vessel, and alteration after discard. At Ozizza Site, although the mineralogical analysis showed that the different layers had similar clay mineral composition, the difference in the strength of the materials could be attributed to differences in firing or that the clay used for production of the pots was randomly collected from different sites having different mineral formations.

Samples A and D represented by surface layer and middle layer collections had no feldspar as observed in the XRD analysis (Figures 13 and 16), but there was significant difference in their hardness tests which further suggested that the differences in the strength of

the potsherds could only be attributed to firing and eodiagenesis (earlier or oldest changes that take place in a sediment as a result of increased temperatures and pressures that cause rocks to form). Likewise, it has been observed that the greater the amount of temper, the weaker the body although there is considerable difference in the effect of different kinds of temper depending on shape and surface characteristics of the particles (Shephard, 1985).

Also, the distribution of clay size particles such as feldspar, kaolinite and illite as well as quartz silicate mineral (cement) in the potsherds indicated that the clay used in the pottery making was randomly collected from different sources, either within the Ozizza enclave or its surroundings.

Table 11 behind showed that there were no significant differences ($p<0.05$) in samples D, E, and F, implying that the clay used for the production of the pots was from sites with similar or the same mineral compositions, and since samples A, B and C were collected from the same site as in D and E. It is pertinent to assume that the differences in both mineral composition and hardness test could be traced to site collection of clay and firing respectively. This assumption is supported by Shephard (1985) who postulated that firing method affects strength because it determines the degree of sintering or vitrification that is attained with a given paste.

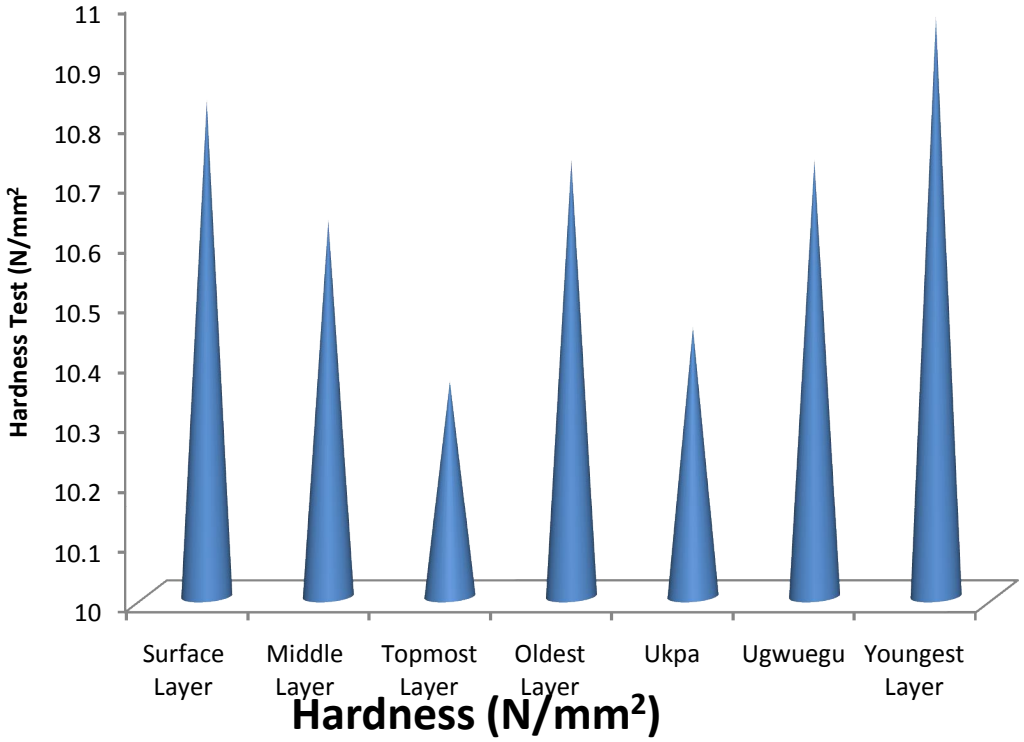


Fig. 22: Hardness Test of Pottery Materials

Source: Laboratory Work (2013)

Table 11: The Results of Hardness Test (5% Level of Significance)

S/No.	Samples	Mean Separation	Designations
1.	Surface layer collection	10.83 ± 0.23^{ab}	A
2.	Middle layer collection	10.63 ± 0.12^{abc}	D
3.	Topmost layer collection	10.36 ± 0.38^{c}	B
4.	Oldest layer collection	10.73 ± 0.06^{abc}	E
5.	Ukpa site collection	10.45 ± 0.01^{bc}	G
6.	Ugwuegu site collection	10.73 ± 0.03^{abc}	F
7.	Youngest layer collection	10.97 ± 0.43^{a}	C

Key: Letters along the column with different superscripts (number of duplications = 3) are significantly different at 95% confidence limit ($p<0.05$)

Source: Laboratory work (2013)

The firing atmosphere as well as temperature must be taken into consideration because reduction affects some fluxes that promote vitrification. In particular, excessive firing reduces ferric oxide to ferrous, and sudden chilling of the vessel on removal from the fire may cause strains and flaws, but the risk is reduced by the high porosity of low-fired wares.

Weathering has effect on the strength of a ware as exposure to leaching by acid soil water, repeated heating under the sun and cooling may also weaken the strength of a pottery material.

4.8 Palynological Study

Palynology is the scientific study of pollen and spores. It is believed that the high phosphate got in the soils is an indication of human/ animal use and / or decay (Ibeanu, 2000:20). This aspect is necessary, considering the fact that palynology is a tool for paleoecology and paleoclimatic changes (Adrian *et al.,* 2009) thus, suitable for identification and determination of the level of activities such as natural, human and other lower animal activities with regard to the

rock shelter deposit in the area. However, in line with Sowunmi (1981a, b and 1985), pollen and spores are well preserved in caves and rock shelters. This was because of their humidity and constant temperature (Renfrew and Bahn, 2000) more especially those rock shelters and caves facing due north owing to its shielding effect from direct rays of the sun and thus makes it habitable for man and wild animals. Most rock shelters and caves facing either due east or west are being avoided by man and animals as the sun rays penetrate the open spaces during either sunrise or sunset respectively. Also, such places poorly preserve pollen and spores, which can be cumbersome in archaeological interpretation. The recorded pollen was possible owing to the favoured sediments of the Ogba-eju rockshelter and its location north of the equator. The Ogba-ejurockshelter also preserved wide varieties of palynomorphs attributed to the low acid of the environment pH (6.4-6.6). This palynological study was used to date the sites (Mohr *et al.,* 1992; Masure *et al.,* 1998; Nair *et al.,* 2010) as well as in making extrapolations.

The aim of this study is to use palynological analysis to throw light on the occupation of the area using vegetation. Some of the plant species are extinct while some are still growing in the area and its surroundings. This gave ample opportunities to know the ecological niche(s) man lived in and exploited in the past (Ibeanu, 2000). Plant study in environmental archaeology is on the level of exploitation for subsistence and otherwise. Interestingly, the area under study, probably as a result of excessive flooding and high relative humidity, preserved a variety of pollen materials. The pollen gave room for to the various vegetation cover in Ozziza, Afikpo. Similar works have been carried out at both Okigwe in Abia State and Karia Wuro in Bauchi State (Ibeanu, 2000 and Sowunmi and Awosina, 1991). But that of Iwo Eleru Rockshelter (Shaw and Daniel, 1984) produced little or nothing in terms of pollen. The reason might be that they are

enveloped within the soil matrix (Ibeanu, 2000) or owing to alkalinity and fire outbreak in the area (Dimbleby, 1985). Volcano eruption and fire do not favour palynomorph remains.

Ogba-eju, Ozizza in Afikpo just like Okigwe has similar ecotone, being of sandstone but with series of rock shelters. In the investigation, clay silt was lower in composition of soil samples compared to fine and coarse sands (**Fig. 39**), yet it possessed a large quantity of pollen. The soil pH value classified as 6.6 H_2O and 5.4 Kcl found at Ogba-eju, Ozizza is (**Fig 34**.) compared with Okigwe 3.73 and 4.71 by Ibeanu (2000), which also favoured preservation of pollen. Due to the high acidity of the Okigwe site compared to Ogba-ejusite, not many palynomorphs were recovered because high acidic environment affects the preservation of pollen and spores. Ogba-eju in Ozizza and Okigwe sites soil pH thwart the report of Sowunmi and Awosina (1991) 4.0, which destroyed palynomorphs at Karia Wuro site in Bauchi State. The pollen studies and its percentage of occurrence were shown in Table I3 the pollen micrograph and Plate 29, while the palynomorph stratigraphy and palynomorph distributions were in Tables 14 and 15.

This study would be incomplete without discussing some of the taxa used as found in the work of Mohr *et al.* (1992), Couper (1953), Dettmann (1963) Umeji *et al.* (2013), Dettmann and Playford (1968 and 1969), Filatoff (1975), Norvick and Burger (1975), Burger (1980) and Backhouse (1988). Also vegetation cover identified would be explained as well in the discussion of the result.

Spores: Spores are major dispersal agents of ferns. They carry the essential genetic material for sexual reproduction of ferns (Makgomal, 2006) as well as mosses. They can grow in every habitat and have the capacity to grow in moist, shady woodland, rockshelters and tropical zone.

Spores are grouped into four zones: Alete, Monolete, Fungal and Trilete (Campbell, 1987, Stone *et al.,* 1999; Makgomol, 2006 and Umeji *et al.,* 2012). Makgomol observedmonolete and trilete as two known commonest spores. According to Makgomol, monolete spores are bilaterally ï symmetrical and mostly ellipsoidal with a linear aperture. Trilete spores are radially symmetrical, with a triradiate aperture. Bothmonolete and trilete spores were abundant in the study area (**Plate 29**). Tree fern spores such as *Leptolepidites tumulosus* (10.13%) *Punctatisporites major* (0.63%) and *Gleicheniidites* sp. (0.63%) grew favourably, and some still growing with moss spore. Fossil palymomorph such as Baculate spore (4.11%) was abundant at the youngest Spit levels (20-40cm) up to the middle layer (40 ï 60cm), while moss spore such as *Stereisporites* sp. (0.26%) and *Nymphaea lotus* (2.11%), a liverwort was at the oldest layer (80 ï 100cm).

Pollen: This is classified into gymnosperm and angiosperm. Gymnospermsare Gymnospermae non-flowering seed bearing plants. They derive from Greek word *gymnospermous* meaning ñnaked seeds,ò and refer to the naked nature of the seeds under production. They are less abundant compared with its Angiospermae. Most abundant in the studied area were *Cyathidites minor* (Cyathaceae) and Araucariacea with 39.59% and 0.84% respectively. Their diversification in the area might be as a result of wind or insect activities. The dominant ones in the study area were *Inaperturopollenities crisopolensis* (8.87%), *Araucariacites* sp. (0.31%), *Mauritidites* sp. (0.10%), M*onoporites sp* (0.63%), *Arecipites* sp. (0.21%) and *Psilastephanocolporites laevigatus* (0.84%). These conifer pollens dominate the area and grow favourably with ferns. They were found mostly at the oldest and youngest layers with break-up at the middle layer. Angiosperms evolved from gymnospermous ancestor, that is, it is a flowering plant. Angiosperms originated during the Early Cretaceous, approximately between 140 ï 135 million years ago (Brenner, 1974, Gubeli *et al*., 1984; Hughes and McDougall, 1987; Thusu *et al.*, 1988) and rapidly

diversified and radiated worldwide (Wang *et al*., 2009; Moore *et al.,* 2010). This origin of angiosperms was based on the analysis of Cretaceous palynofloras by Crane and Lidgard (1989) and Lupia *et al.* (1999) regarding increase in abundance and diversity in that period (Early Cretaceous to Late Cretaceous (99 ï 70 Ma.) that floristically dominated in middle and high latitudes of the northern hemisphere **(**Mejlaï Velasquez *et al.,* 2012) and the tropical African. Their assertions, therefore, suggested that there is high variety and diversification of angiosperm plants in the studied area. The most abundant was *Dictyophyllidites harrisii* (13.62%, Fig.35). The pollen conifers were shrubs and herbs used even up to the present time as curative agents for the treatment of many afflictions such as rheumatism pains, malaria etc.

Laboratory: Soil samples for this study were taken to the Department of Archaeological Laboratory, University of Ibadan to study the pollen grains so as to throw more light on the site.

Table 12: Results of Pollen Study

	Sample No. Palynomorph Species	**Spit I 0-20cm**	**Spit II 20-40cm**	**Spit III 40-60cm**	**Spit IV 60-80cm**	**Spit V 80-100cm**	**Spit VI 100-120cm**
1	*Cingulatisporites ornatus*	23	41	6	2	2	1
2	*Inaperturopollenitess crisopolensis*	31	53	-	-	-	-
3	*Leptolepidites tumulosus*	33	63	-	-	-	-
4	Baculate spore	17	21	1	-	-	-
5	*Laevigatosporites* sp.	41	32	-	1	-	3
6	*Dictyophyllidites harrisii*	53	72	4	-	-	-
7	*Cyathidites minor*	167	206	-	-	1	1
8	*Araucariacites sp*	2	6	-	-	-	-
9	*Nymphaea lotus*	-	-	-	-	9	11
10	*Pyramidosporites traversei*	-	2	-	-	-	-
11	*Tricolpites* sp.	1	-	3	-	-	4
12	Amaranthaceae	-	-	3	-	-	-
13	*Mauritidites* sp	**-**	**-**	**-**	**1**	**-**	**-**
14	*Monoporites annulatus*	-	-	-	1	-	-
15	*Nyssapollenites peusdocruciatus*	-	-	-	4	-	2

16	*Arecipites* sp.	-	-	-	-	2	-
17	*Stereisporites*sp.	-	-	-	-	2	-
18	*Psilastephanocolporites laevigatus*	1	-	-	-	3	1
19	*Punctatisporites major*	-	2	4	-	2	-
20	*Gleicheniidites* sp	-	-	-	-	4	2

Table 13: Pollen Studies and its Percentage of Occurrence

	Sample No. Palynomorph Species	**Spit I: 0 – 20cm**	**Spit II: 20 – 40cm**	**Split III: 40 – 60 cm**	**Spit IV: 60 – 80cm**	**Spit V: 80 – 100cm**	**Spit VI: 100 – 120cm**	**Total sum**	**% Occurrence**
1	*Cingulatisporites ornatus*	23	41	6	2	2	1	75.00	7.91
2	*Inaperturopollenites crisopolensis*	31	53	-	-	-	-	84.00	8.87
3	*Leptolepidites tumulosus*	33	63	-	-	-	-	96.00	10.13
4	Baculate spore	17	21	1	-	-	-	39.00	4.11
5	*Laevigatosporites* sp.	41	32	-	1	-	3	77.00	8.13
6	*Dictyophyllidites harrisii*	53	72	4	-	-	-	129.00	13.62
7	*Cyathidites minor*	167	206	-	-	1	1	375.00	39.59
8	*Araucariacites* sp	2	6	-	-	-	-	8.00	0.84
9	*Nymphaea lotus*	-	-	-	-	9	11	20.00	2.11
10	*Pyramidosporites traversei*	-	2	-	-	-	-	2.00	0.21
11	*Tricolpites sp*	1	-	3	-	-	4	8.00	0.84
12	Amaranthaceae	-	-	3	-	-	4	3.00	0.31
13	*Mauritidites* sp	-	-	-	1	-	-	1.00	0.10
14	*Monoporites annulatus*	-	-	-	1	-	-	1.00	0.10
15	*Nyssapollenites peusdocruciatus*	-	-	-	4	-	2	6.00	0.63
16	*Arecipites* sp.	-	-	-	-	2	-	2.00	0.21
17	*Stereisporites* sp.	-	-	-	-	2	-	2.00	0.21
18	*Psilastephanocolporites laevigatus*	1	-	-	-	3	1	5.00	0.52
19	*Punctatisporites major*	-	2	4	-	2	-	8.00	0.84

20	*Gleicheniiditessp.*	-	-	-	-	4	2	6.00	0.63

Table 14: Stratigraphy of Palynomorph

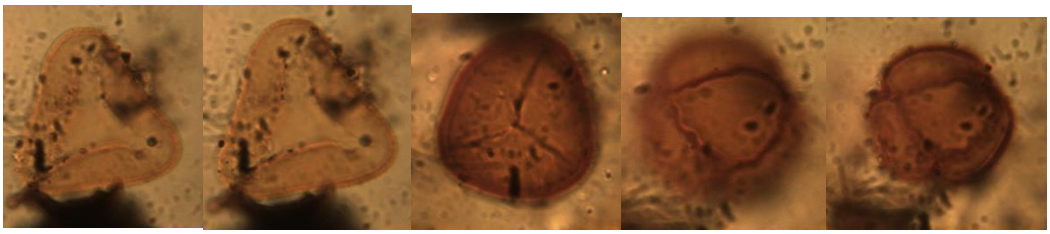
	Sample No. / Palynomorph Species	Spit I 0-20cm	Spit II 20-40cm	Spit II1 40-60cm	Spit IV 60-80cm	Spit V 80-100cm	Spit VI 100-120cm
1	*Cingulatisporites ornatus*	X	X	X	X	X	X
2	*Inaperturopollenitess crisopolensis*	X	X	-	-	-	-
3	*Leptolepidites tumulosus*	X	X	-	-	-	-
4	Baculate spore	X	X	X	-	-	-
5	*Laevigatosporites* sp.	X	X	-	X	-	X
6	*Dictyophyllidites harrisii*	X	X	X	-	-	-
7	*Cyathidites minor*	X	X	-	-	X	X
8	*Araucariacites* sp	X	X	-	-	-	-
9	*Nymphaea lotus*	-	-	-	-	X	X
10	*Pyramidosporites traversei*	-	X	-	-	-	-
11	*Tricolpites* sp.	X	-	X	-	-	X
12	Amaranthaceae	-	-	X	-	-	-
13	*Mauritidites* sp	-	-	-	**X**	-	-
14	*Monoporites annulatus*	-	-	-	X	-	-
15	*Nyssapollenites peusdocruciatus*	-	-	-	X	-	X
16	*Arecipites* sp.	-	-	-	-	X	-
17	*Stereisporites*sp.	-	-	-	-	X	-
18	*Psilastephanocolporites laevigatus*	X	-	-	-	X	X
19	*Punctatisporites major*	-	X	X	-	X	-
20	*Gleicheniidites* sp	-	-	-	-	X	X

Table 15: Palynomorpy Distributions

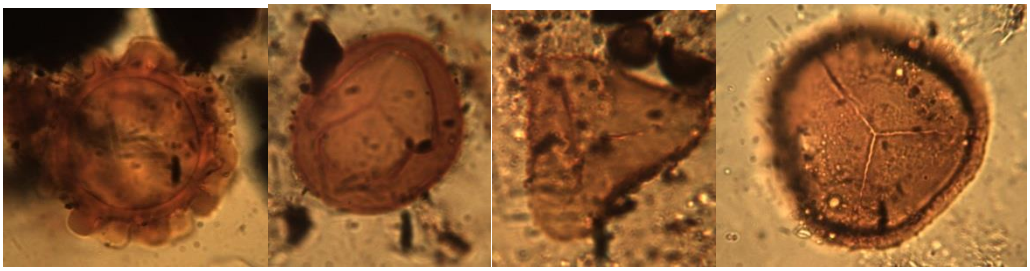
Playnomorph Species	Classification	Family	Type
Cingulatisporites ornatus	Tree ferns(spore)	Cyathaceae	Gymnosperm
Inaperturopollenitess crisopolensis	Conifer pollen	Taxodiaceous/inpressaceae	
Leptolepidites tumulosus	Spore		
Baculate spore	Trilete(fossil spore	Osmundaceae	
Laevigatosporites sp	Tree ferns(spore)	Polypodiaceae	Gymnosperm
Dictyophyllidites harrisii	Tricolpate(spore)	Dicksoniaceae	Angiosperm
Cyathidites minor	Tree fern(spores)	Cyathaceae	Gymnosperm
Araucariacites sp	Palm tree pollen(shrubs)	Araucarriacea	Gymnosperm

Nymphaea lotus	Fern(liverworts spore)	Hepaticeae	Angiosperm
Pyramidosporites traversei	Spore	Loranthaceae	Angiosperm
Tricolpites sp.	Tree pollen	Cenomania	Angiosperm
Amaranthaceae	Herbs(pollen)	Amaran	Angiosperm
Mauritidites sp	Palm pollen	Mauritia	Angiosperm
Monoporites annulatus	Grass pollen		Angiosperm
Nyssapollenites peusdocruciatus	Pollen	Nyssaceae	Angiosperm
Arecipites sp.	Tree pollen	Palmae/Arecea	
*Stereisporites*sp.	Moss spore	Sphagnaceae	Gymnosperm
Psilastephanocolporites laevigatus	Pollen		Angiosperm
Punctatisporites major	Tree fern (spores)	Anomopteris	
Gleicheniidites sp	Tree fern (spores)		

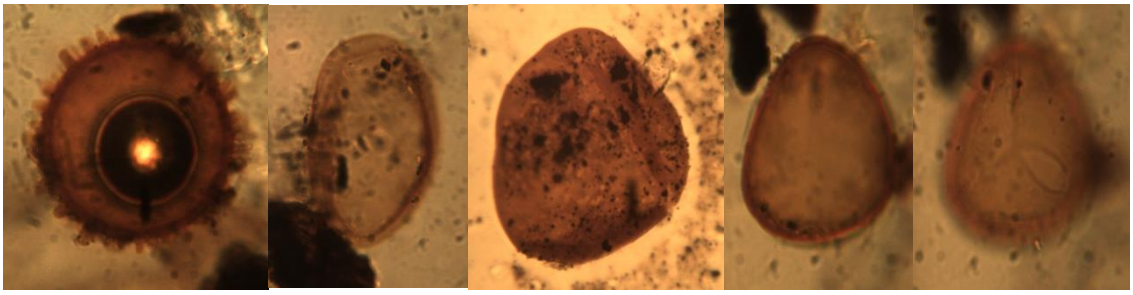
Spit I&II: 0-40cm



1 2 3 4 5



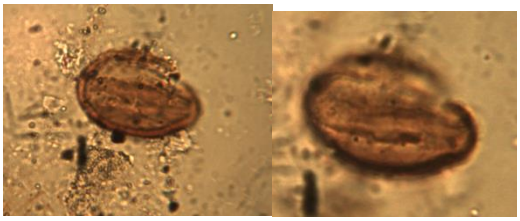
6 7 8 9



10 11 12 13 14

Spit I&II: 1-2. *Cyathidites minor*, 3.*Stereisporites*, 7. *Punctatisporites major*., 4-5. *Droseridites*, 6. *Distaverrusporites* sp*/Pteris* sp,7.*Ericipites annulatus Gonza* 8. *Dictyophyllidites harrisii*, 9. *Cingulatisporites*., 10 *Numulipollis neogenicus*, 11.*Laevigatosporites discordatus Pflong*., 12.*Araucariacites* sp., 13-14. *Stereisporites* sp.

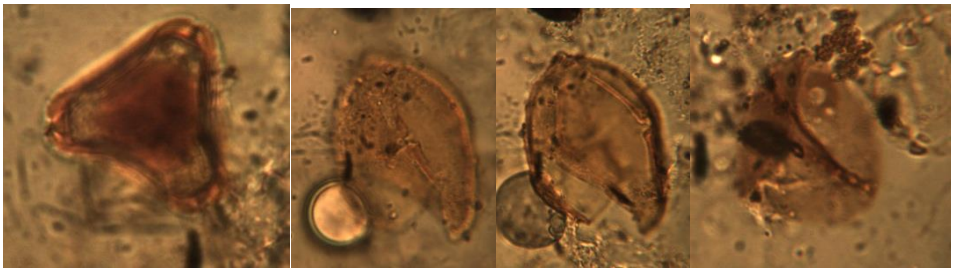
Spit III: 40-60cm



1 2

Spit III: 1-2: *Psilastephanocolporites laevigatus*.

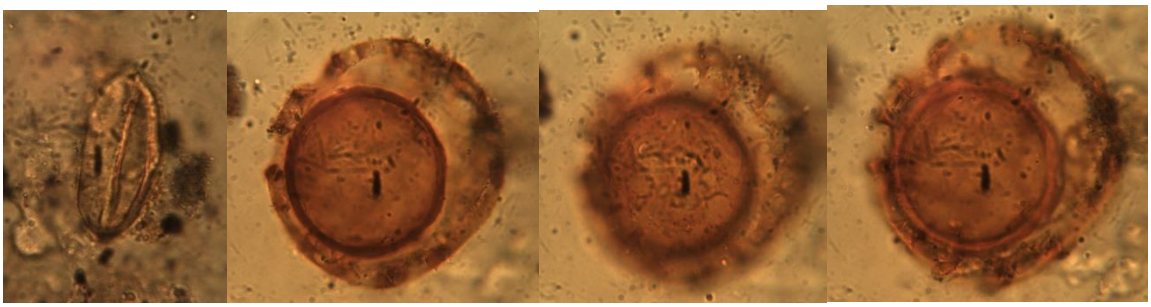
Spit IV 60-80cm



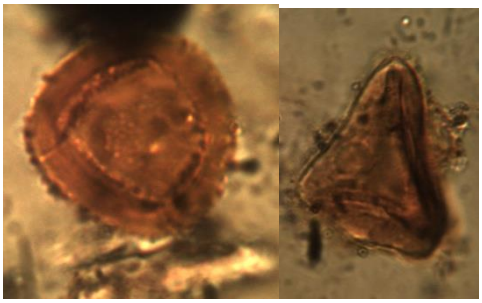
1 2 3 4

Spit IV: 1.*Gleicheniidites* sp, 2-3. *Mauritidites* sp, 4.*Monoporites annulatus*

Spit V&VI: 80-120cm



1 2 3 4



5 6

Spit V&VI: 1.*Psilastephanocolporites laevigatus*, 2-4: *Nymphaea lotus,* 5. *Cingulatisporites ornatus*, 6. *Gleicheniidites* sp

Plate 29: The Pollen Microscopic Picture

Source: Laboratory Work, 2013

CHAPTER FIVE

DATA ANALYSIS

5.1 Pottery Analysis

Pottery is the forming of clay into pots by men and women. It is the oldest tradition among the inhabitants of the Cuesta in Eastern Nigeria. Oral tradition in Ameata, Ozizza with other sites in Afikpo suggest pottery making as a continuous indigenous technology generated from their inhabitants called *ndiegu*. However, our classification (attributes and forms) among the three sites in Afikpo and with the knowledge of the present-day pottery making becomes the tools in our analysis and interpretation of pottery recovered from our site, Ogba-eju. This will aid in the comparative studies of the sites and also decipher the similarities and differences as well as their continuity or otherwise of human occupation in Ozizza, Afikpo by the same or related people. Information regarding this claim was gathered based on ethnographic study at the potting tradition at Amaeta Village in Ozizza. Again, documented data from Oyeoku, (1976 and 1999),

Ibeanu (2000) and Ali (2009) were also looked into. During the reconnaissance at Amaeta pottery making, cognisance was taken into the following:

1. The processes of potting tradition.

2. The decorative techniques and motifs.

3. The classifications and uses of pottery wares.

4. The distribution patterns in Afikpo and elsewhere.

We noticed therein that pots in Ozizza are a replica of other Afikpo wares. For this claim to be solidified mineraology and petrographic studies were conducted to enhance our claim.Therefore, the inclusion found in the clay material suggests socio-cultural changes which operated and is still operating either by trade, human migration or resource exploitations in the study area and its environs (Ibeanu, 2000).

5.1.1 Collection of Raw Materials

The collection of clay was simply by digging by the potters at *Isekpe* - a place where clay is got which is restricted only to women and is done during the dry season. The clay was grey in colour, and according to oral tradition, is called *Uria*. It was very plastic when wet, and this plasticity helped the porters to produce the pottery under pressure and thus prevent cracking as well as retaining its new shape even when the pressure is removed (Ali, 2009 and Oyeoku, 2000). The temper material was called *Ezeuria* ï crushed sandstone (Oyeaku, 2000) which is coarse, sandy material, yellowish in colour, and scraped from the surface of outcrops of

sandstone (Chukwu, 1981). Put differently, *Ezeuria* is a fine, yellowish sandstone dug alongside with clay by women in readiness for pottery making.

Plate 30: (a) ***Uria*** **(b)** ***Ezeuria***

Source: Fieldwork (2012)

Although old women mine, younger girls and boys still in their adolescent ages were engaged in carrying/transporting both Ezeuria and Uria from *Isekpe* to their homes. The only taboo in pottery making is that men are not allowed to collect the *Uria and Ezeuria* meant for pottery making. Implements for mining are knives, hoes, diggers, oblong baskets (Ukpa/Abo) and iron. The women can either kneel or squat, during the process of digging, just to ensure that enough clay is collected for pottery making.

5.1.2 Clay Preparation

The dug and collected lump of are clay are dried for about 3 ï 4 days based on the atmospheric condition. Impurities such as stones, leaves, roots, sharp objects (iron and bones) are separated during the process of drying. After separation, the clay, (*uria)* become smooth and soft enabling preparation to be hitch -free during kneading. Kneading can be done by hands or feet while water was added during crushing and kneading. The temper material called *Ezeuria* is added into the clay in order to achieve workability. Ishiagu people use *Ujiji,* grog, as well as fine sand which can also be added where *Ezeuria* is not available or during an urgent demand, especially during severe crisis or war. Other parts of Igboland use different temper material, such as quartz, volcanic ash, ground potsherds (grog) and mica. Inyi and Nrobo people use grog (ground potsherds) as temper material (Okpoko, 1982); Okigwe (Isuochi) people use ground potsherds only as temper (Ibeanu, 2000). In Ghana, precisely at Krobo, Takyiman potters do not use temper materiel, but can add tiny quartz and mica during the process of pounding clay (Gyamfi, 1980/81). The Chukwuasi and Jimasaugi riverside dwellers in Ghana use only micaceous material without grog as temper (Mathewson, 1974) material.

Plate 31: Clay Preparation

Source: Fieldwork (2012)

Okpoko (1982) and Ibeanu (2000) recognized that the addition of temper or a plastic material is to enable the pottery to reduce clay plasticity during working. Temper material acts as the stabilizer to the clay and prevent the pot from cracking, shrinking and damaging soon after production. It makes the pot strong and elastic. While *Uria* and *Ezeuria* give structure and shape, *Ezeuria* serves as temper material.

5.1.3 Formation of the Pot

Unlike Ishiagu, where pottery formation was designated within some localities and a structure (house) set aside for the industry, Amaeta-Ozizza in Afikpo has no special workshop. Potters reside within their residence and create space for their business arena. These places can be in a living room, open spaces, under the trees, or around their residential building. In forming pot at Amaeta in the past, fresh Ogirisi (*Newbouldia laevis*) leaves were assembled and used as the base. In the recent time, water proof (polypropylene or Polyvinyl chloric) is now used as base. The use of water proof (polythene) superseded *Newbouldia laevis* because it is stronger and plastic in nature. According to oral information, *Ogirisi* leaves do not enhance durability of the pot. The leaves would allow water not to drain within the pot. Therefore from the demonstration of some potters, polythene has overtaken the position of *Ogirisi leaves* to enhance its durability (Mrs. Egwu Ude, 2011).

Soon after base formation is over, moulding by coiling starts. The potters use their hands to make coils by rolling the clay beneath fingers to produce elongated structure. With the stripe formed, the Amaeta- Ozizza potters would use little pinch or lump of clay to form the flat base,

and the rest is by coil pot. The potters use their hands to smooth the inside and support their formation.

(a) Pot Formation **(b)** Preformed and Fired Pot

© Freshly Produced Pot **(d)** Smoothening **(e)** Neck Formation

Plate 32: Pot Formation in Relation to Preformed Pot

Source: Fieldwork (2012)

The potters walk around the pot as they form the body and add the neck when it is absolutely necessary that the body can carry the neck (Ibeanu, 2000). Amaeta potters use many instruments in smoothing/scrapping the body of the pot. Tools such as small knives and soaked dried leaves (*Ohihiha*) are used for smoothing the rim. *Mgbisite* ï a piece of wood made from raffia palm frond or bamboo for body smoothening is also used. Others are calabash shell (Oba), smooth roundish pebbles, stone (*Okwukwo*), shell of a fruit and very flattish *Ukwuagba* are also used for both smoothening and burnishing. These tools are always packed in small calabash box in readiness for use by the potters any time. The type of pot formed and preference are largely determined by individual demand. As soon as the potters finish decoration, they allow them to dry and get ready for firing.

5.1.4 Technique of Decoration

The technique of decoration centres on *Ogboroaru/Ohihiha* (dried leaf), and is used for dual purposes: for smoothing and for decoration. As the potters smoothen the rim with *Ohihiha* (soft dried leaf), they place their thumb on the dried leaf on the rim, and create incision and other decorations. Likewise, pointed objects (*mkpịsị*) are also used to create incision. Burnishing is achieved by an ironstone rubber or piece of gourd. Amaeta pottery, like other Afikpo wares, is finely circulated owing to the elaborately decorative patterns. Simplest and commonest decorations are burnished, grooves, incisions, triangular engraving, dotted lines, wavy lines and applique. The decorations, although scanty, are well elaborate on the rims and off shoulders of their wares. Burnishing commands the highest cherished motif while grove and others follow. Engraved triangular motif stands as a trademark for some of the potters, and these are equally

found on their houses. Thus, there is little or no difference between the present pottery from the excavated ones. The large pot recovered from spit level 6 was similar in form and decorative motif with the contemporary ones. Coloured pots were noticed at Amaeta that served aesthetic reasons, according to Mrs. Iya Beatrice. *Ogboro-aru and Ohihiha*are dried stocky head of coconut palm frond employed to derive the colouring on the pots. Therefore, decoration is one way through which one identifies the maker of a ware (Oyeoku, 2000). Decoration enhances the aesthetic and symbolic attributes of the pot among the Igbos and elsewhere in the globe (Ali, 2009). In all Afikpo, pottery technologies are just the same, probably owing to the fact that the art came from similar source, *Ndiegu* people. But there is a sharp difference between pottery decorative makings of Afikpo from Ishiagu. Ibeanu (2000:114) summarised the differences in his work thus:

> ñAmong the Ishiagu potters, the technique of decoration is diversified and as a result, their products are not limited to utility wares. The decorative technique includes *nchara* clay and plant parts to paint or impact shape on pottery wares. Also pointed or two pronged sticks, quartz pebbles, pieces of calabash and twisted palm frond (now made with plastic used in binding bales of stock fish and other imports). Decorative motifs ï burnishing, incision, grooving, roulette, perforation and painting etc. painting are by red clay *nchara* mixed with water and rubbed on the pots. This produces a red hue when fired. Others are vegetable ship, applied on the pots by Ishiagu potters. The process is by boiling together leaves of Indigo (Annuu) ï loncharpus cyanessens leaves and the bark of *agba* tree ï (Gossweillerodendron balsamiferum) or any other plant that produces dye.

> The products rub carefully on the desired portion of the pots ï rims and bowlsò(p. 114).

Roulette is one of the commonest patterns in Ishiagu and is not found at Amaeta, Ozizza in the present pottery or from the Ogba-eju site. Reasons could be attributed to the basic fact that the introduction of art of pottery may never have originated from the same source. Ishiagu pottery was introduced by Adaeke, a widow, who claimed that *Okpala-Uro*, the goddess, handed her the technique, while Amaeta-Ozizza and entire the Afikpo learnt the art from *Ndiegu* popularly referred to as ó*Ego*ô people. The different descendants dwell on their specialization and unique manner of pottery technology.

5.1.5 Drying of Pottery

Pots are dried in a low temperature before firing which minimizes the rate of cracking. Hot sun is not allowed during drying because hot sun generates high temperature that could denature the surface of the pot, and cause uneven distribution of heat during firing and thus cause breakage. Thus pots are normally kept in a warm room, either very close to the firing environment or at a designated area chosen by potters. Days of drying depend on the size of the pots. Informants confirmed that larger pots (*Mgbuku, Uguru-onu,* etc) dry longer than both smaller and cooking pots. Examples are *Ite-ohe*, *Oku* (bowl), *nja* (sacrificial pots) and *Oshishi* (for serving cola nut). Drying in the rainy season at Amaeta is not necessary because potters of Amaeta form pot only in dry season. Hence pot making in Amaeta is seasonal.

5.1.6 Firing of Pottery

The area for pot firing in Amaeta is in an open air bonfire called *Ohuhu ite* and Ishiagu calls it *Onunu ite (*Ali, 2009). This method is against Kiln technique that is very familiar with our potters in Afikpo. Oyeoku (1994) classified kiln as the use of electric or gas; wood fire and oil fired kilns. Open air bonfire technique is the traditional method handed down from their forebearers, while kiln method is modern method of pottery firing. Traditional method is more preferred owing to its economic purposes. Kiln (electric or gas and oil) is too exorbitant. Wood kiln generates uneven distribution of heat, and is reduced by loading the kiln, thus creating flame channels in the chamber (Oyeoku, 1994). Roofing the wood kiln is also a problem to the potters as water droplets during rainy season might penetrate inside the chamber and thus reduce the amount of heat needed to prevent uneven firing that can cause breakage. It would not tolerate heat to be lost to the atmosphere.

Firing in Amaeta ï Ozizza, Afikpo is the last stage in pottery-making. The *ohuhu ite* was located at the outskirts of the residential area, and firing is being done twice yearly, precisely in February and April.The *Ohuhu ite* is also located out on the residential area, normally inside the bush. This is done to prevent curious seekers from watching, especially the men folk, as well as for safety, in case of fire accident. Materials used for firing are dry grasses mostly from *eta* (*Impereta cylindrica*), bundles of woods (coconut palm stock), twigs and other firewood. The use of *eta* could be attributed to the large quantities of the grass in the area. No wonder oral tradition had it that the name óAma-etaô (meaning area covered by *Impreta cylindrica*) was derived from the large quantities of *eta* in the area. Firing in Amaeta was a community-based responsibility as

all women are bound by tradition to participate in the yearly ritual. Dried palm fronds called *ekirika* are spread on the ground and pots laid on top of the *ekirika* are covered with other dried grasses. Typologies of firing are determined by the number of the pots laid. The use of *nkoite* ï long bamboo for controlling and adjusting wares during firing and for removing wares out of firing site was employed. As the fire goes down, more dry grasses are thrown in for rekindling while the temperature is traditionally controlled. The normal temperature is between 600^0C to 700^{oC} (Oyeoku, 2000; Igwilo, 1983 and Ali, 2009). Ali (2009) identified five stages in firing pot: loading, pre-heating, full firing, cooling and offloading. Lastly, special attention is paid to the pots meant for the storage of *Kaikai*. These pots are fired with fresh leaves, according to oral information. After constant inspection by the women and satisfaction assured, they stop rekindling the fire, and pots are allowed to cool. Finally, *nkoite* (long bamboo) are used to bring them out. Natives of Amaeta allow their wares to stay overnight at *Ohuhu ite* before taking them to the market.

5.1.7 Taboos in Pot Making

1. Men do not dig or collect *Uria* and *Eziura* (clay and temper material).

2. Men do not mix the raw material.

3. Men cannot reach or go near the firing spot - *Ohuhu ite*. Reasons for all these taboos are same: if men do all these, their scrotal sacs become enlarged and they would become impotent. There is not yet any scientific evidence to prove this (Fieldwork, 2012).

5.2 Marketing and Decline in Pot Making

Oral information from Amaeta, Ozizza in Afikpo explains that there is a long-aged trade between them, Cross-River, Cameroon and Abia State. Traders dealing in dry gin (*Kaikai*) come from Itu, Akpanyam and Ikwofam in Calabra (Ibibios). Cameroonians and Ngwa people from Aba who prefer Afikpo wares for the storage of their dry gin also come to the area. Reasons were that pottery from Afikpo is best for ethanol storage. Other prominent buyers are ritualists who are cultural diehards, sticking more to cultural norms of earthen wares in offering sacrifices to the earth goddess. These groups also make preference of pottery for oath-taking during any covenant. These were observed at Ogba-eju farm land, at both the boundaries between Amaeta in Ozizza and Akpaoha communities as well as the shrine of *Ihe-akwukwo* where sacrifices were made to the gods for enabling planting season and successful cultivation. Items of sacrifice were loaded inside *nja* pot and bowl and placed at the area of the *Ihe-akwukwo.* Potters acknowledged huge sells of *nja* pots and bowls for sacrificial purposes, especially for rituals, covenants and for mysticisms. The most sellable pots are the water pots: for fetching water and for water storage, and *nja* pots. The use of pots for fetching of water could be attributed, probably, to the undulating nature of the land surface since land within the settlement areas had little space to accommodate giant modern plastic containers. Therefore, the use of large pots which served as water storage tanks are still in vogue owing mainly also to its cooling nature. The pots (*mgbuku or uguru-onu)* are highly demanded since they perform the function of refrigerator that could not be transported into the area mainly owing to poor road network. Secondly, Amaeta is far removed from the rest of Afikpo, and most of their economic activities are transacted through their neighbouring Cross-River via boat in crossing the river.

a b

Plate 33: (a) Covenant Shrine between Akpoha and Ozizza Communities (b) *Ihe-akwụkwọ:* A Sacrificial Site Heralding the Commencement of a New Farming Season

Source: Fieldwork, (2012)

Mgbuku (water storage pot) summarized the rationale for its prototype recovered from spit level vi at Ogba-eju rockshelter Ten. The archaeological interpretation admitted that the pot was used for water storage by either the farmers or other users of the rockshelter, or used for either oath-takers or sacrificial men at *Ihe-akwukwo* shrine. It is worthy to note that other reconstructed miniature bowls, *Oshishi, Ite-ohe* and *nja* are still used in this present time for kola nut, soup and storing of charms which suggests high sales within and outside the community. It is the utility purposes of these pots that still sustain the pottery making in Afikpo despite the effects of modernity and globalization.

The decline in the traditional industry is observed through the potters demonstrations and oral information. The following reasons are factors deduced that bring about the decline of pottery in Afikpo:

a. Transport System

The only means of transport and transporting wares to Calabar, Cameroon and Aba is by canoe via Cross-River. The highly undulating nature of Amaeta-Ozizza does not allow modern transport more so as the government has done nothing about it; as such, the inhabitants load their wares in the local oblong basketry and trek down the river where they have to load them again inside canoe onward to the market in Calabar. The long and tedious processes that have been the practice since time immemorial encourage breakages during the loading and off-loading processes. These breakages frustrate potters a great deal, leading to the decline in pottery and boom in fishing, since large quantities of fish are caught in their rivers and tributaries with subsequent huge sales.

b. Presence of Alternatives

The prospective buyers of pottery in Amaeta-Ozizza in Afikpo are mainly dealers in hot drinks while others prefer it as alternative to cooling drinking water especially during the dry season as well as serving as an object for fetching water. However, the presence of plastic containers and refrigerators has gradually led to the decline in pottery demand. Most of these modern plastics are lighter compared with earthen wares. Most of the large pots which were used for storage and fermentation break easily during their transportation. Plastic wares are more durable both in storage and for fermentation.

c. Neglect by the Youth (Youth Behaviour)

Pottery making which was handed down by *Ndiegu* to the present inhabitants of our area of study is now left only in the hands of old women. Young females are no longer interested in the profession. The reasons may be attributed to western influence, white collar jobs and the tedious nature of the processes involved in the production. Men, who would lend assistance, are

forbidden by tradition to the detriment of the pottery industry. Firing is also a very tedious task left to the women alone, and this gives credence to the reasons for the decline in pottery making. Very soon, the few old specialists would die with their knowledge, and the consequences would be the extinction of pottery as is the case with the Krobo potters in Ghana (Gyamfi, 1980/81).

d. Traditional Firing Method

Kiln should long have been given to the potters by the Ebonyi State Government via Afikpo Local Government to the various localities where pot making flourishes. Kiln helps to minimize stress involved during firing. But since potters still adopt their old methods, this attitude will not encourage younger ones to get involved in the industry.

e. Stereotype

Looking down on the profession by young girls had caused great decline in the production and sale of the product, and thus hinder innovation in the art. Preference for other industries like Nollywood and entertainment industry, oil industry and street showing has added to the neglect of the profession, and thus pottery is left for aged women. In the past, wine carrying was done by the number of kegs of palm wine. Pots full of palm wine determined the success of marriage ceremonies, after which the bride takes home one small pot to the husbandôs house. No wonder the Bible, Revised Standard Version, in John chapter 2 verse 6 to 9 refers to the use of water pots for carrying of wine as is in Igbo culture area. According to John 2: 6-9:

> ñAnd there were set there six waterpots of stone, after the manner of the purifying of the Jews, containing two or three litres apiece. Jesus saith unto them, Fill the waterpots with water. And they filled them up to the brim. And he saith unto them, Draw out now, and bear unto the governor of the feast.

> And they bare it. When the ruler of the feast had tasted the water that was made wine, and knew not whence it was: (but the servants who drew the water knew) the governor of the feast called the bridegroomò (pg 877)

The cultural practices of carrying palm wine in water jars (pots), cements the marriage in Igbo land. Wine carrying in kegs of palm wine is gradually replacing jelly cans in the area, resulting in decline in pot making.

5.3 Analysis of Potsherds Recovered from Ogba-Eju Rockshelter 10

Decoration and classification of potsherds are shown in Tables 16 and 19 (A and B) below. In this research, a total of 153 sherds were recovered, recorded and counted as either belonging to decorated or undecorated potsherds, or to both. The total plain recovered was 37.908% while the total decorated sherds had 63.092% of the total sherds. Meanwhile, the decorations were similar; the similarities demanded merging of motifs. The following are the body decorative of the pots: burnishing, plain, punctuate, applique and combination of one or more decorative types. Burnishing had 41.76470% as body sherd, punctuate and Applique both had 0.813008% while plain with red ochre had 37.908496% of the total sherds. Other combinations recovered had the following: grooves with criss-cross and punctuate had 1.30718%; plain, punctuate and incision had 0.813008%; plain with wavy incision had 1.307189%; burnished with Dotted line had 0.813008%; half- moon/crescent stamp with

horizontal excision had 0.813008%; while burnished with plain body had 0.813008%. Also, the rims of the pottery were not left out. The decorative types were combined. For instance, we recovered plain rims which were about 1.307189% of the total sherds; plain with horizontal excision had 1.960784%; plain with dotted lines and slight burnished had 0.813008%; vertically or curvilinear or obliquely with burnished had 3.267973%; vertical with plain, groove, multiple incision and perforation had 1.960784% while those aligned horizontal with vertical incision, rectangular groove had 0.813008% of the total recovered of rim sherds.

Finally the neck of the recovered pottery had 0.813008% as combinations of alignment with horizontal, crescent/half- moon stamp, plain and impressed with crossing line. All these percentages of body, rims and neck of the recovered pottery are as shown in Table 16.

Table 16: Ogba-ejuRockshelter (RS/10) Distribution by Decorative Motives

Decoration	**Surface**	**0 – 20cm**	**20cm – 40cm**	**40cm – 60cm**	**60cm – 80cm**	**80cm – 100cm**	**100cm – 12cm**	**Total**	**%**
Body									
Plain	2	12	27	2	6	9	-	58	37.908496
Burnished	1	17	28	3	9	5	-	63	41.176470
Punctuate			1					01	0.813008
Groove, Punctuate and criss-cross			2					02	1.307189
Plain, punctuate and incision			1					01	0.813008
Excision & criss-cross			1					01	0.813008
Plain, incision (multiple) and criss-cross			1					01	0.813008
Plain, cross			3					03	1.960784

hatched and criss-cross									
Groove and horizontal excision			1					01	0.813008
Plain and wavy incision					1	1		02	1.307189
Burnished + dotted line				1			1	01	0.813008
Half-moon/crescent stamp + horizontal excision								01	0.813008
Appliqué with vertical incision							1	01	0.813008
Burnished + plain	1						1	01	0.813008
RIM									
Plain		1			1			02	1.307189
Burnished									
Plain with horizontal excision	-	-	-	1	-	1	1	03	1.960784
Plain with Dotted and slight burnished	-	-	-	1	-	-	-	01	0.813008
Vertically or curvilinear or obliquely with burnished	-	5	-	-	-	-	-	05	3.267973
Vertical plain + Groove + multiple incision + peroration	2	1						03	1.960784
Aligned horizontal + vertical incision + Groove	1							01	0.813008

rectangular groove									
Neck									
Aligned horizontal + crescent/half-moon stamp + plain, impressed with crossing							1	01	0.813008
Total A (Plains) {BODY+RIM +NECK}									**37.900849 6+1.30289 = 39.215685**
Total B (other Decorative Motives	07	36	65	08	17	1.6	04	153	**60.895898**

5.3.1 Pottery Typology: Classification by Attribute

We gathered from oral tradition and observation that pottery classifications were on both attributes and functions in Ozizza, Afikpo. The first category which is captioned type A and B in Table 17a is the globular/oval or spherical necked pot called *mgbuku/uguru-onu*. These belong to pots in Figures 24 and 34, and are characterized by thickness measuring 6cm and 9cm respectively. They have heavy and sturdy rim sherds with average diameter of 18.5cm and 21cm respectively. These vessels are similar to Ibeanuôs work at Okigwe, Uhuchukwu cave and Ihube (Ibeanu 2000). The set also has pitcher pots with the rim thickenings measuring 2cm and 3cm and diameter as 7cm and 9.5cm respectively. They are heavy with funnel mouths (See fig 30 and 31). The second category is the hemispherical wide and semi-wide neckless pots called *mgbuku/uguru-onu* as well as neckless bowl called *oku* or *ite-ohe*. Others in these categories are *nja and oshishi* miniature pots and bowls. Type C represented by the bowls has similar criteria with the pots in Figures 25a and b, 121and 27 are heavy, sturdy and biggest in sizes. The rim

thickenesses are 4.5cm, 2.7cm 3.3cm and 2.4cm with diameter as 15cm, 8cm, 7cm and 9cm respectively. These vessels have inverted rounded rims. Other types of bowls are captioned type Ci and Cii in Figures 32 and 33. Type Ci is medium-sized with thickness and diameter measuring 2cm and 4cm respectively while type Cii is the smallest fun of bowl with thickness and diameter 1cm and 2cm respectively. Surprisingly, type Cii is heavier and more roundish than type Ci. Both have inverted rims and carvinated at the shoulders.

Tradition ascertained that some of the hemispherical wide and semi-wide neckless pots and bowls were handless in the past. Modernity which had influenced so much in the potting tradition in the area, results in the introduction of not only handle but covers, spouts and flats based on both the globular/oval or spherical and hemispherical wide and semi-wide neckless pots and bowls (Ali, 2009). In the making of both unique types, Oyeoku (1999 and 1976) observed that the use of Discs made of wood or bottom of broken pot which enable potters to whirl round the pot. Therefore, these attributes were reconstructed from the rims or bodies. In the words of Orton (1980), rim sherds and body sherds are two possible ways to reconstruct pottery. Asakiskpi (2001) asserted that rim sherds are easier to reconstruct than body sherds and results prove worthy and successful. Asakiskpiôs assurance was generated in Aleru (1988), Oyelaran (1991), Garlake (1977), Ibeanu (2001) and Okpoko (1982) in their various excavation works in Nigeria. This was observed with reference to vessel type, their profile and diameter. Based on these, therefore, the study maintained the combination of rim sherd, plain and body sherds in the reconstruction in order to give a clear picture of the study of pottery in the studied area (Figures 24 -34, 35 and 36). Each spit level was used more especially the bigger sherds, and the smaller sherds were eliminated to avoid guesswork (Table 17a and b). Total number of 3 sherds was eliminated and 10 rim sherds were used to reconstruct the vessel of Ogba-eju. Rim sherds that

numbered four are pots, and are classified as globular/oval or spherical pots. An example is the large pot recovered at spit Level vi measuring 100-120cm, while the other two are water cooling pots as well as one pitcher pot. Other eight rim sherds are hemispherical wide and semi-wide neckless bowls. These two potteries (pots and bowls) are further classified into types and designations: A and B and C in the Table below (Table 17a and b).

Table 17a: Classification (attributes) of Ogba-eju Pots by Spits Level

Type	Surface	0– 20cm	20cm – 40cm	40cm – 60cm	60cm – 80cm	80cm – 100cm	100cm – 12cm	Total	% occurrence
A and B	1	1	-	1	-	-	1	04	30.769230
C	2	5	-	-	1	1	-	09	69.230769
Total	3	6	-	01	01	01	01	13	

1. **And B**: Pot and Pitcher**,**

C: Bowl

Table 17b: Classification (attributes) of Ogba-eju Pots by Spits Level after Elimination

	Surface	0 - 20 cm	20cm ï 40cm	40cm ï 60cm	60cm ï 80cm	80cm ï 100cm	100 cm ï 12 cm	Total	%
Type									
A and B	1	-	-	1	-	-	1	3	30%
C	2	3	-	-	1	1	-	7	70%
Total	3	3	-	1	1	1	1	10	

5.3.2 Classification by Functions

The classification by function in the study area as exactly same with what Chikwendu did at Ugwuegu as well as what happened in other places in the Igboland. In Amaeta in Ozizza, the hemispherical wide and semi-wide neckless pots called *mgbuku/uguru-onu* as well as neckless bowl called *oku* or *ite-ohe* are used for water storage and making soup. Others in these categories are *nja* served as sacrificial pots and bowls and *oshishi* used for serving cola-nuts. Therefore, for further clarification, pottery wares identified at Ugwuegu and Ukpa rockshelters were from the rims which were heavy stroage vessels (Hartle, 1966, Chikwendu, 1975 and Andah and Anozie,

1976). Chikwendu further classified pottery function based on his findings at Ugwuegu into three, namely, pots, bowls and vessels on pedestals and perforated ones. Pots at Ugwuegu, according to Chikwendu, were globular either necked or neckless with everted thick rims and round bases, made in both big and small sizes used for variety of purposes such as water storage and ritual purposes. The other types were the hemisphical neckless bowls with flared rim/everted rim decorated with ñshallow grooves around the rim and shoulder, having a common characteristic of a wide mouth and rounded baseò (Chikwendu, 1998). The last was the bowls set on the pedestals. This type and perforated Afikpo vessels differentiates Chikwenduôs pottery from that of Ukpa and those found in Ameate in Ozizza. But they have similarities in decorative motif such as grooving, burnishing, incision in the Afikpo and Igbo-Ukwu. Modernity has also affected the usage in this contemporary time. What it means is that pots can be used for any purpose as long as the type meets with the purpose (Fig 23). Tables 18 and 19 below are the classification of pottery forms among Ozizza, Ugwuegu and Ukpa.

Table 18: Pot Group (Mgbuku/Oguru-onu or Ite)

English name	**Native Name/Locality**		
	Ozizza	**Ugwuegu**	**Ukpa**

Water pots	Mgbuku/Oguru-onu/Itemini	Ite mini	Ite mini
Soup pots	Ite ohe	Ite ohe	Ite ohe
Cassava processing pots	Ite iwa	Ite iwa	Ite iwa
Wine pots	Ite mai/Ite Okpogo	Ite Okpogo	Ite Okpogo
Ritual pots	Ite erusi	Ite erusi	Ite erusi
Ceremonial wine pots	Ite mgbere/ite ekpuruku	Itemgbere/ite ekpuruku	Ite mgbere/ite ekpuruku

Source: Modified after Ali (2009)

(a) (b)

Fig. 23 (**a and b): Fired spherical or globular pots (Modern Afikpo ware in Amaeta,Ozizza)**

Source: Fieldwork (2012)

Table 19: Bowl Group (Nja or Oku)

English name	**Native Name/Locality**		
	Ozizza	**Ugwuegu**	**Ukpa**
Bathing bowls	Oku	Oku	Oku

Eating bowls	Njaohe	Njaohe	Njaohe
Storage(red oil) bowls	Nja manu	Nja manu	Nja manu
Washing bowls	Oku	Oku	Oku
Oil lamp bowls	Mpaleka	Mpaleka	Mpaleka
Kolanut bowls	Oshishi	-	-
Ornament bowls	Oshishi	-	-
Ritual bowls	Nja erusi	Nja erusi	Nja erusi

Source: Modified after Ali (2009)

Reconstruction of Potsherds (Rims)

Surface collection = 0-12cm

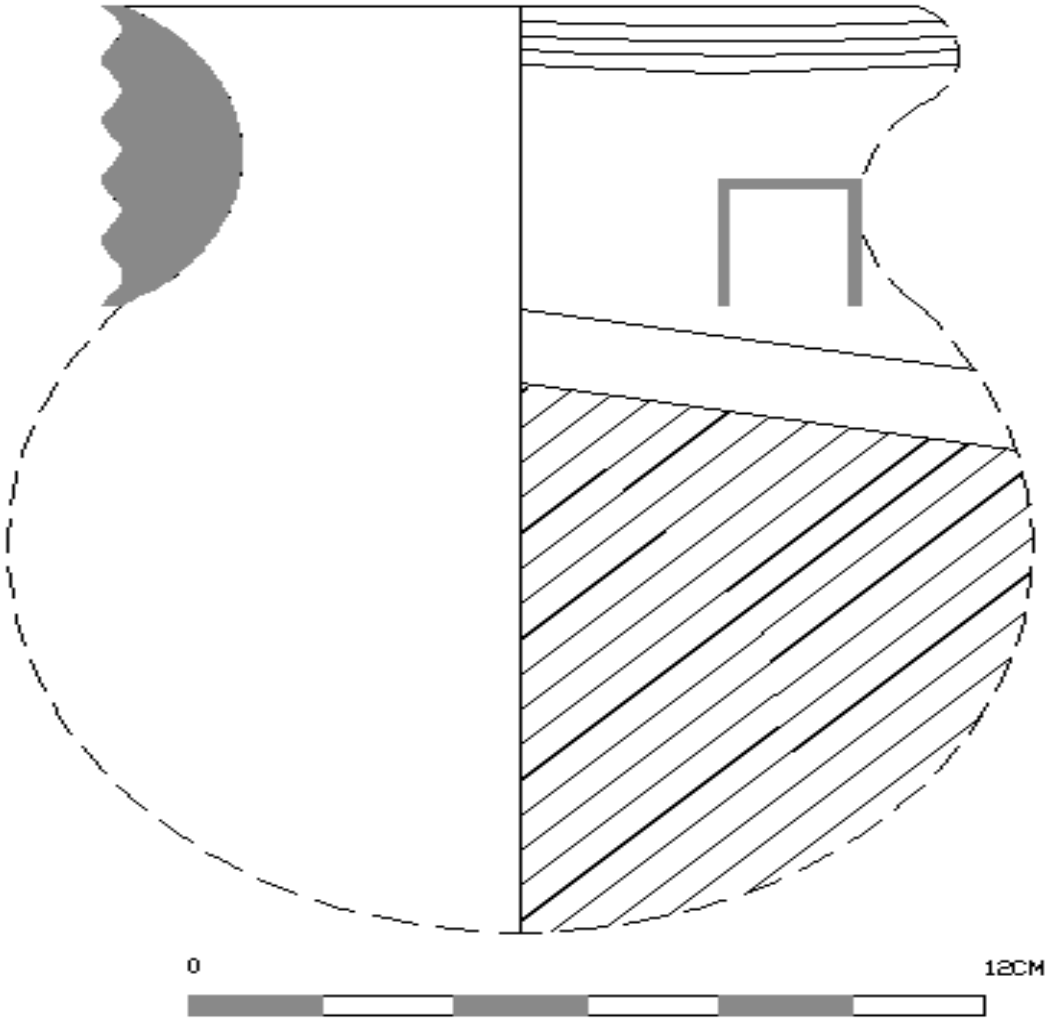


Fig. 24: Water Cooling Pot with Groove Neck, Trade Mark and Incision

Source: Fieldwork, (2012)

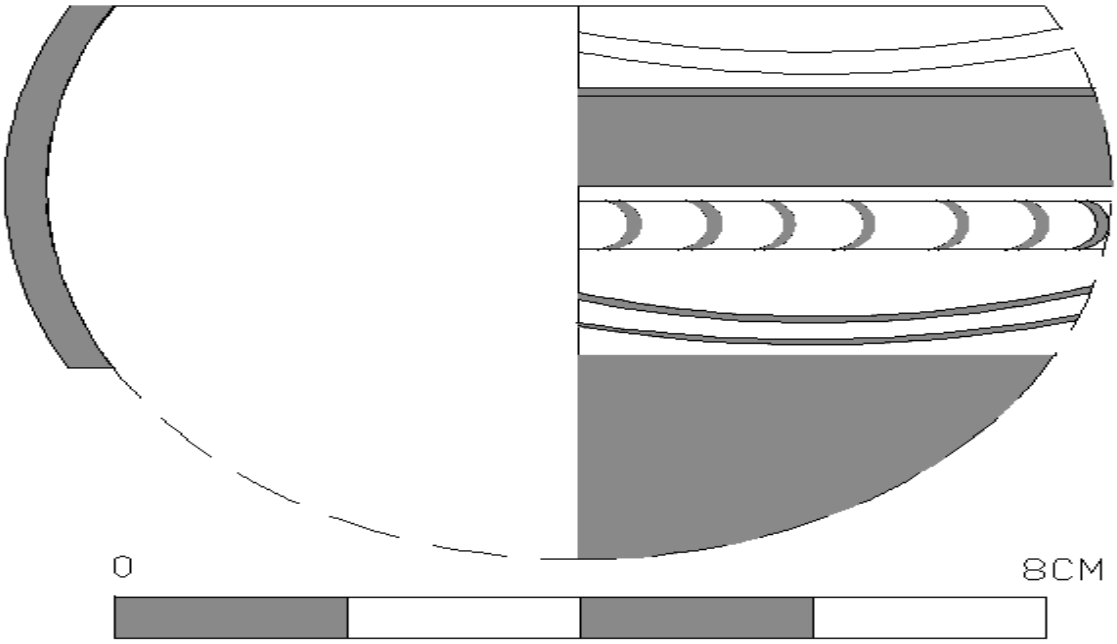


Fig. 25(a): Surface Collection (Bowl)

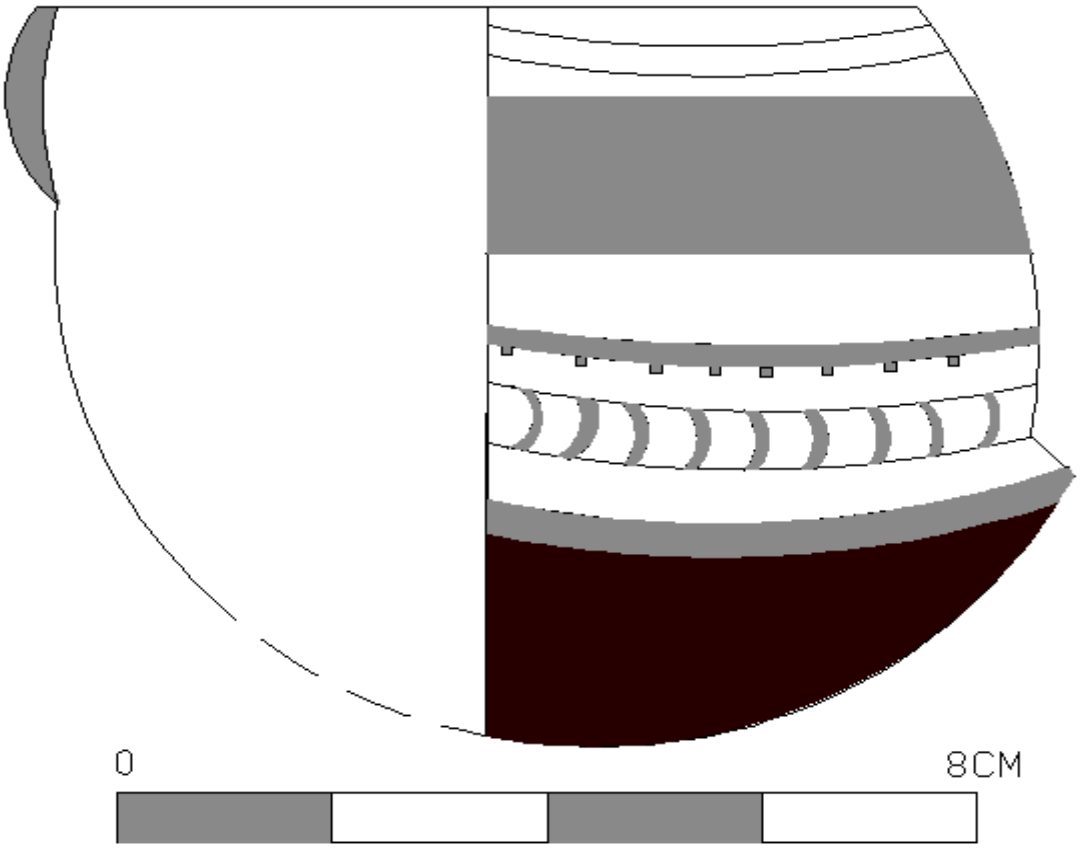


Fig. 25(b): Surface Collection (Bowl)

Source: Fieldwork, (2012)

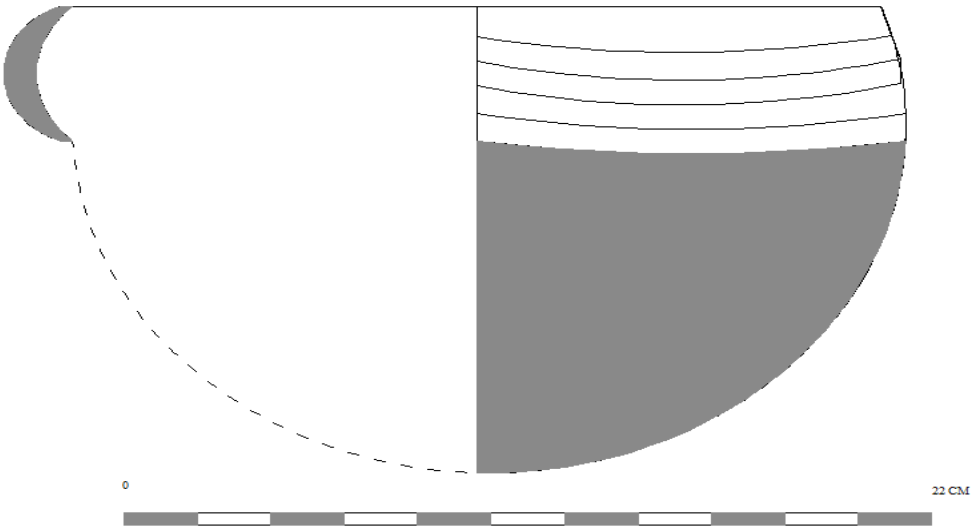


Fig. 26: Spit Level 1 (Large bowl)

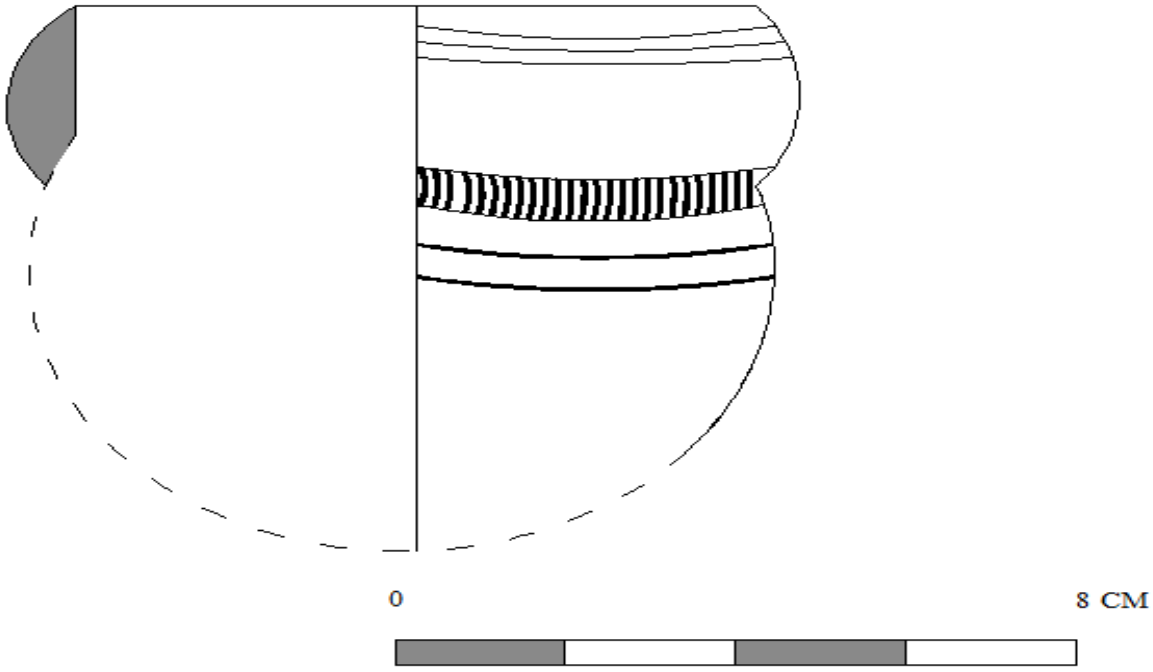


Fig. 27: Spit Level 1 (Medium bowl)

Source: Fieldwork, (2012)

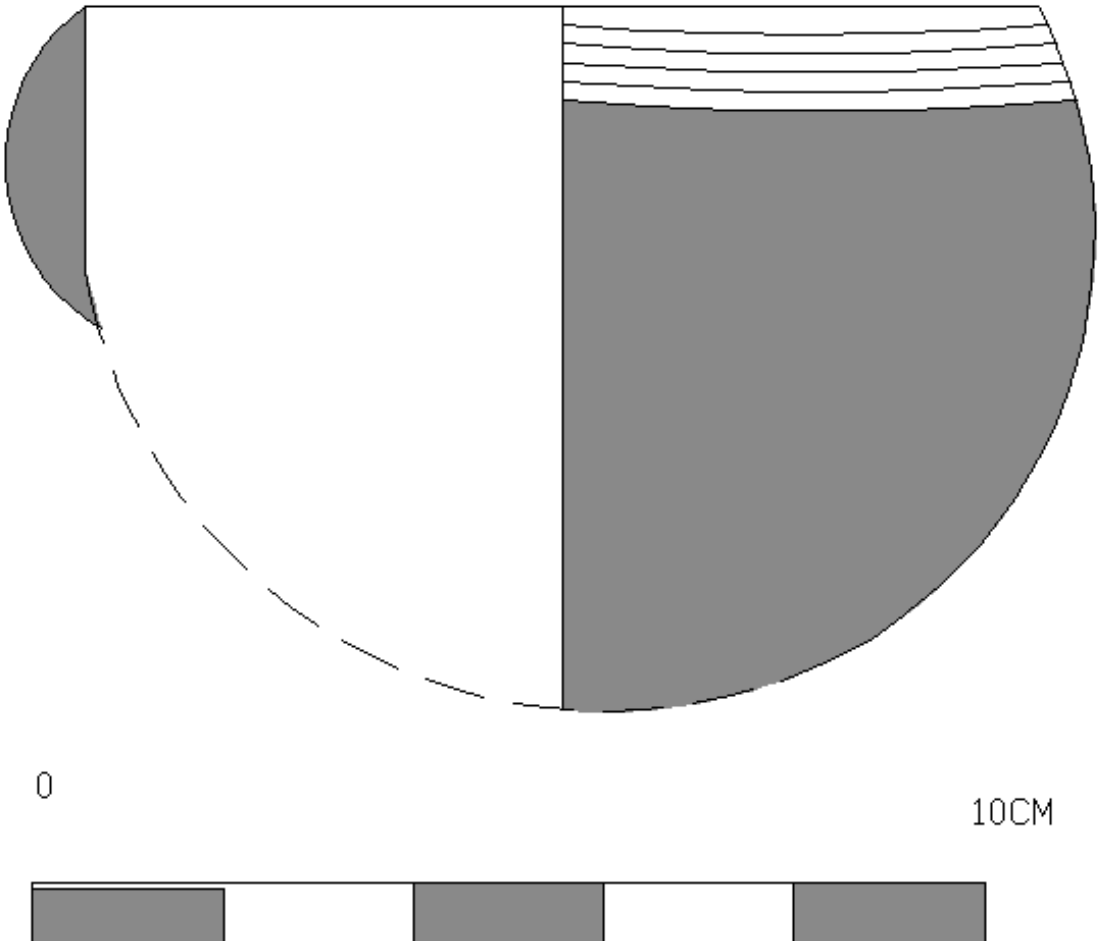


Fig. 28: Spit Level 1 (Medium Bowl)

Source: Fieldwork, (2012)

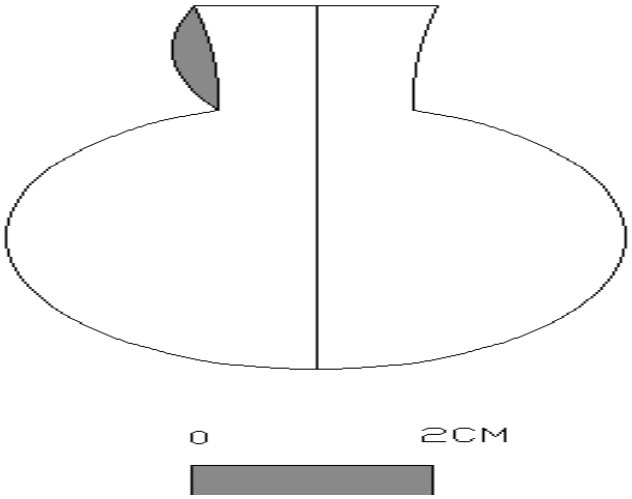


Fig 29: Spit Level 3 (Pitcher Pot)

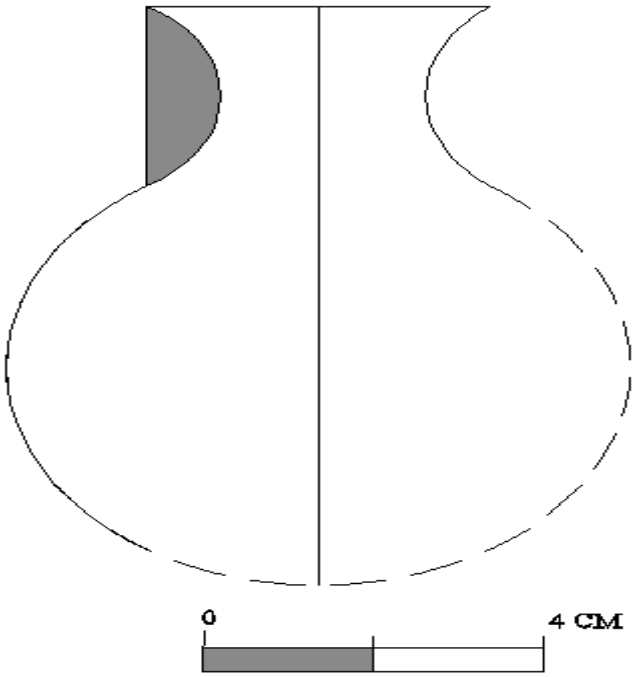


Fig 30: Spit Level 3 (Medium Water Pot)

Source: Fieldwork, (2012)

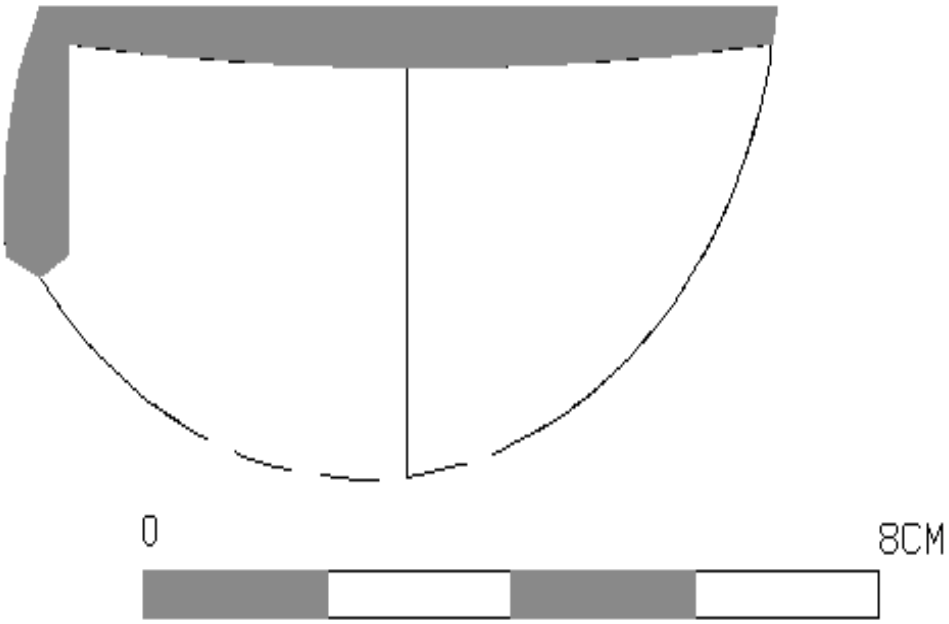


Fig 31: Spit Level 4 (Medium Bowl)

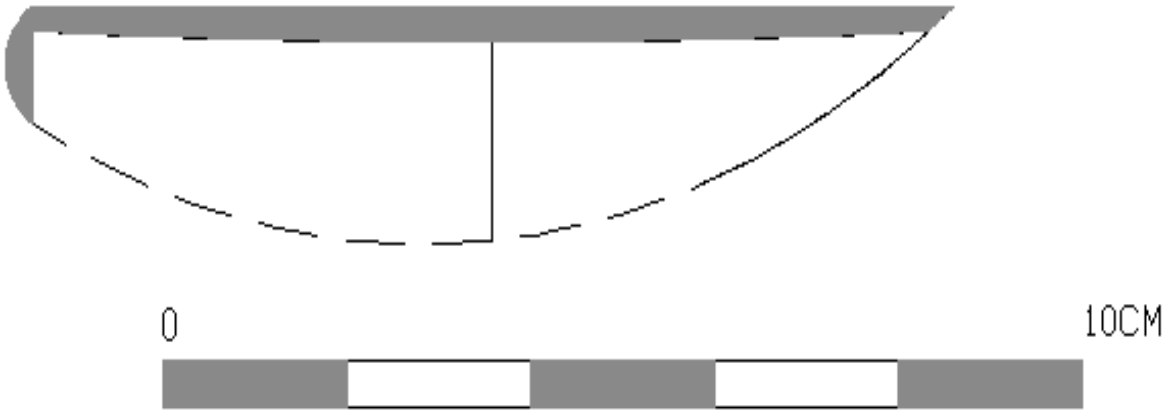


Fig 32: Spit Level 5 (Pitcher Bowl)

Source: Fieldwork, (2012)

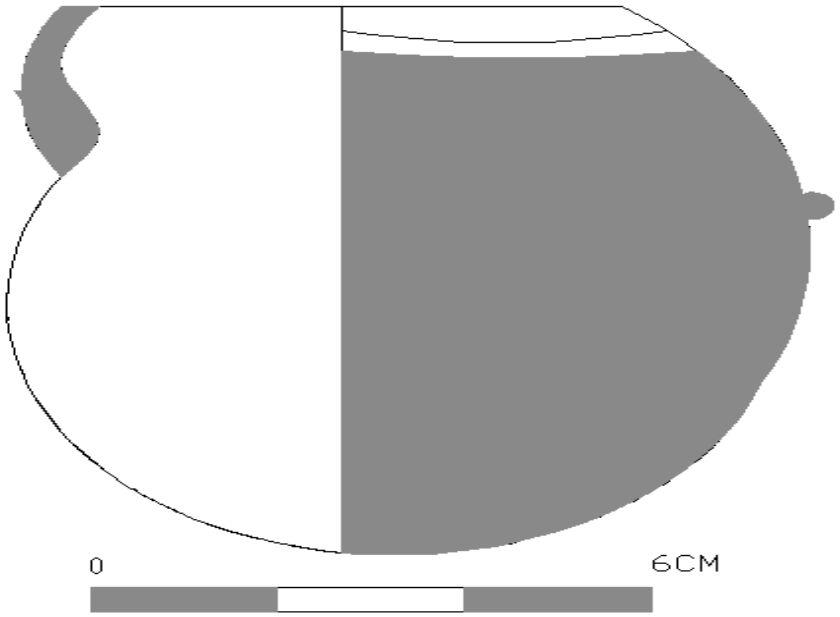


Fig 33: Spit Level 5 (Large Bowl)

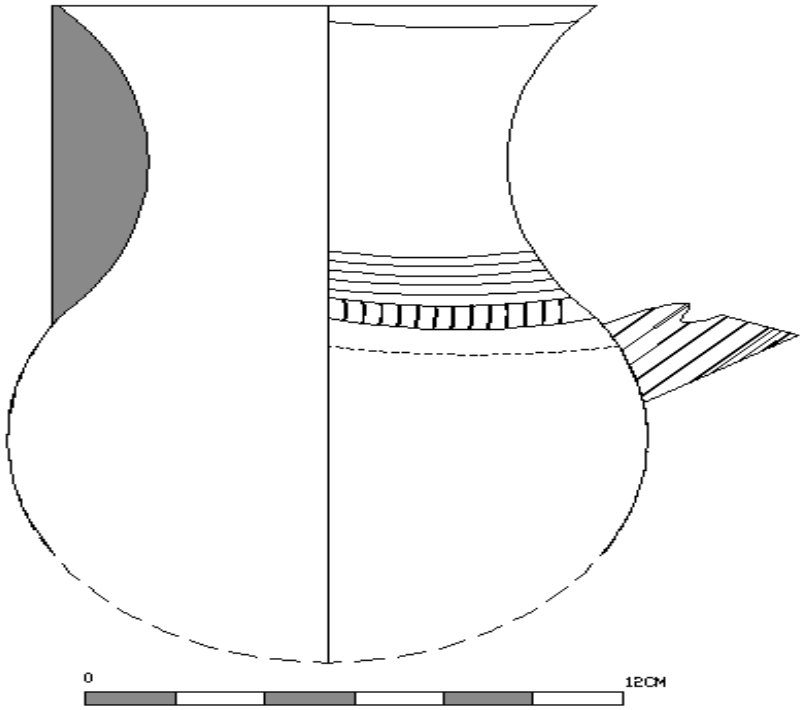
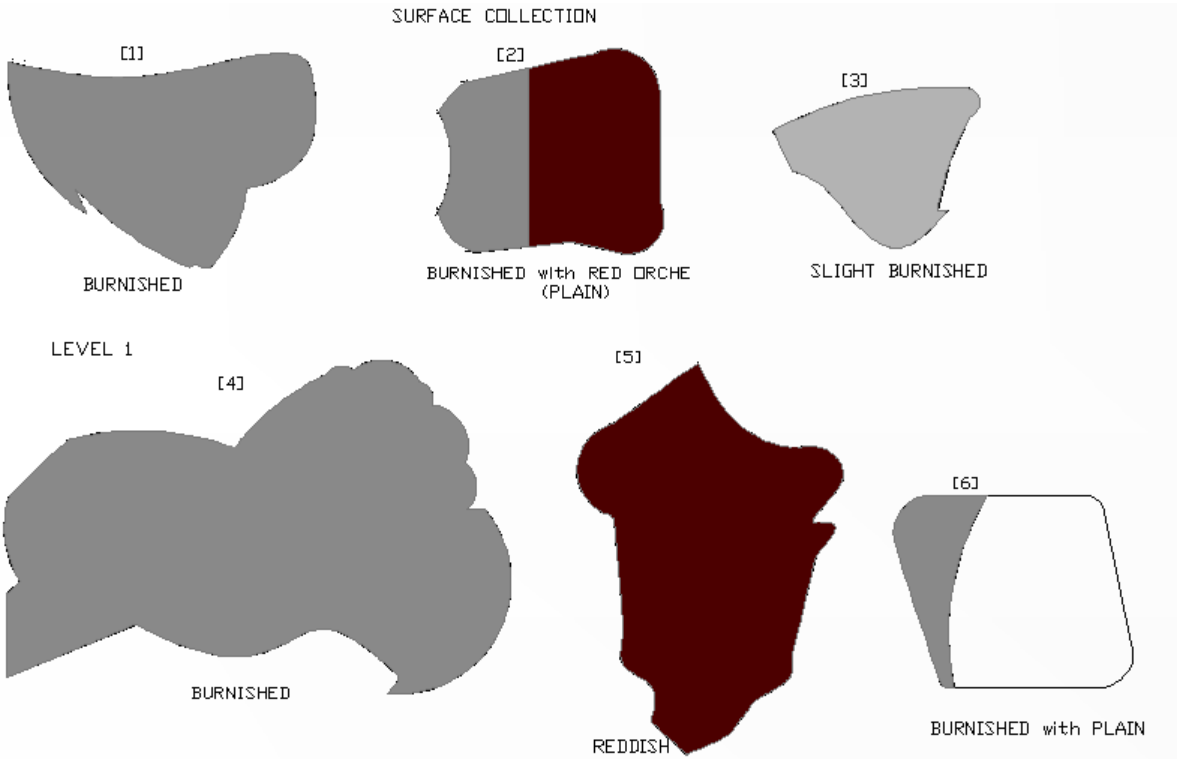
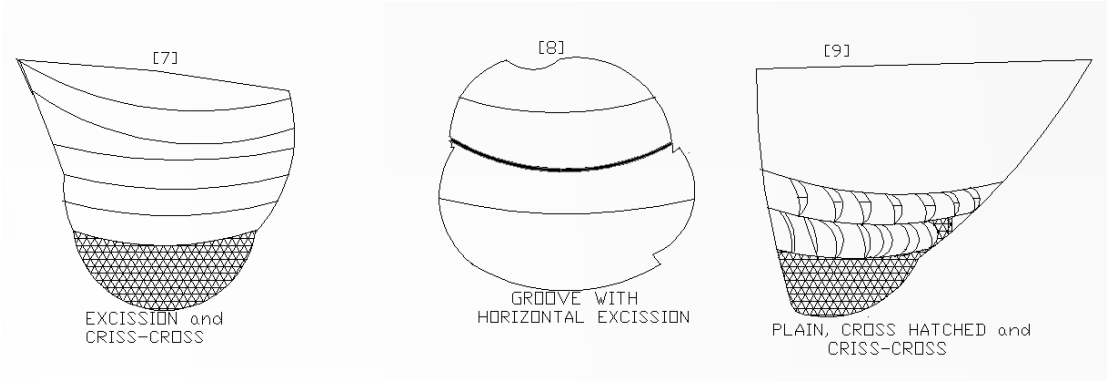


Fig 34: Spit Level 6 (Large Water Pot Recovered)

Source: Fieldwork, (2012)

Reconstruction of Potsherds (Body)





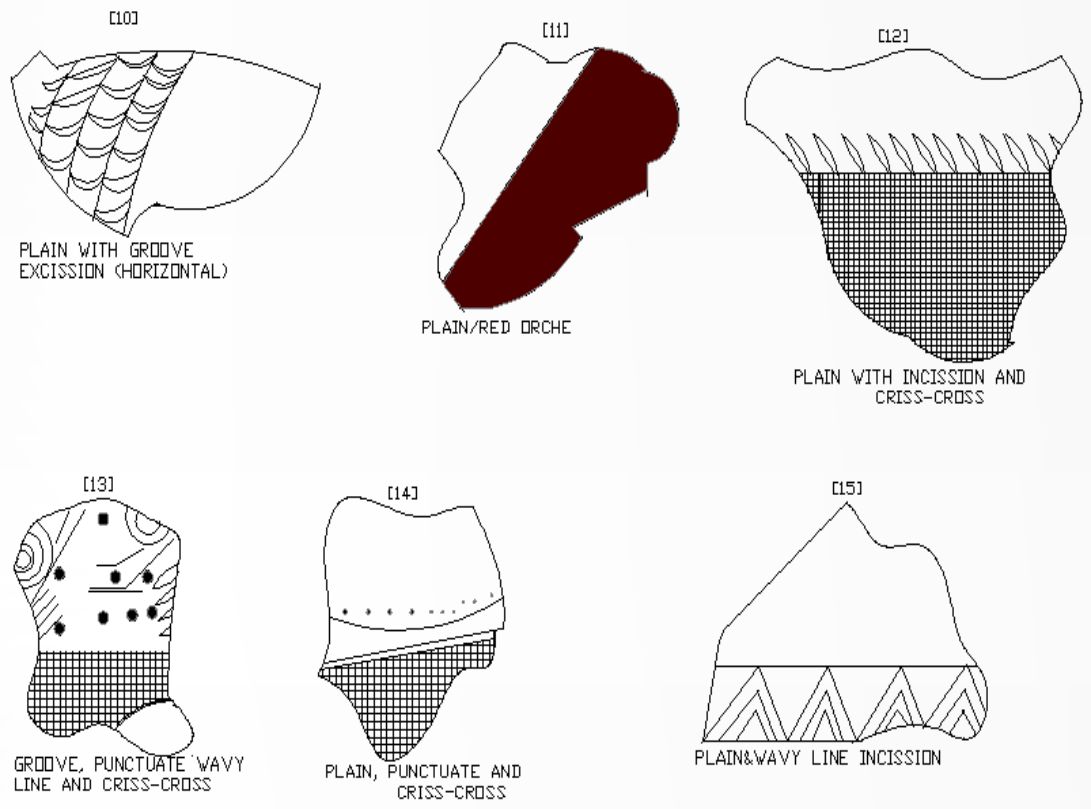


Fig 35: Samples of Potsherds Recovered

Source: Fieldwork, (2012)

A

B

Fig 36: (A) Recovered Pot (B) Its Reconstruction

Source: Fieldwork, (2012)

5.4 Sedimentological Analysis

Without sediments, there would be no archaeological sites. Sediments are composed variously of particles of disaggregated rock, dust from whatever source, bits of dead animals and plants, and chemical precipitates (Dincauze, 2000). Invariably, sediment in archaeological study is the combination of physical, mechanical and chemical remains found in the given environment which are called the archaeological sites as piles of artifacts, ecofacts and features used by man, left behind and buried beneath the earth million years past. Soil samples from Rockshelter (RS/10) were analyzed by Soil Science Department, University of Nigeria, Nsukka. This was meant to initiate the level of human activities and environmental changes. Six samples on each level were submitted and the results of the raw data were as shown in Appendix 2a- c, while the statistical analysis as shown in Figures 37, 38-39 below shows the composition of minerals and other organic and inorganic components in Ogba-eju excavated site.

According to Sharer *et al*. (2003), phosphorous is an important part of food, refuse, guano and other substances common in human settlement, and it normally forms relatively large amounts of phosphate compounds in soil of occupied areas. The presence of phosphate in the six spit levels indicated that there had been human occupation or activites in the area. Tools such as polish stone and handle used for cracking palm kernels, fish nets were found at the surface. Other artifacts such as kernels and its shells, seed husk *irvingia gabonensis* (*Ogbono*), snail shells *Achatina fulica* shells, and ash lens on the wall of the shelter as well as bats indicated impact of man. However, the variation in the amount of phosphate deposits found in the rockshelter proved that, at a certain time, there was minimal human activity in the shelter at Spit levels (ii) and (iii). In Spit Level (iv), human activity was most paramount, followed by Spit levels (i, v) and (vi). The result obtained showed that there was transitory occupation in the shelter. This agreed with

oral information that proved that during dry seasons, the Ozizza farmers normally go there to farm and hunt, taking shelter in the rockshelters while, during rainy seasons, the place would be deserted owing to flood.

Organic carbon and inorganic minerals decreased with depth in all the six levels. This indicates weathering sequence that has not been disrupted by irregular additions of parent materials (Blair, 2010). Sodium salts caused soil particles to disperse and cause clog pores. The effect of sodium ion (Na^{+}) on soil structure could be ascertained owing to its tendency to seal soil surfaces when wet slows infiltration and permeability rates. This effect can be seen in the rockshelter section where sodium ion was in Spit level (iii) that had abundance of loamy-sandy soil deposit and thus possesses good aeration. The mostly affected sterile area Spit level (ii) and (vi) could be attributed to the abundance of sodium ion in the spit levels.

Calcium ion improves soil structure by causing aggregation and increasing pore size, thereby improving permeability and infiltration. The unusual high content of sodium ion in spit level (i) was balanced by high content of calcium ion, thereby making it the best zone for alluvial deposits and lifeactivities unlike in Spit levels (iii), (iv) and (v) where the low sodium ion had equally low content of Ca^{2+} and this causes poor permeability and infiltration in the soil. Iron and aluminum oxides are crystalline and very low in cation exchange capacity and fixation of phosphorous in the soil.

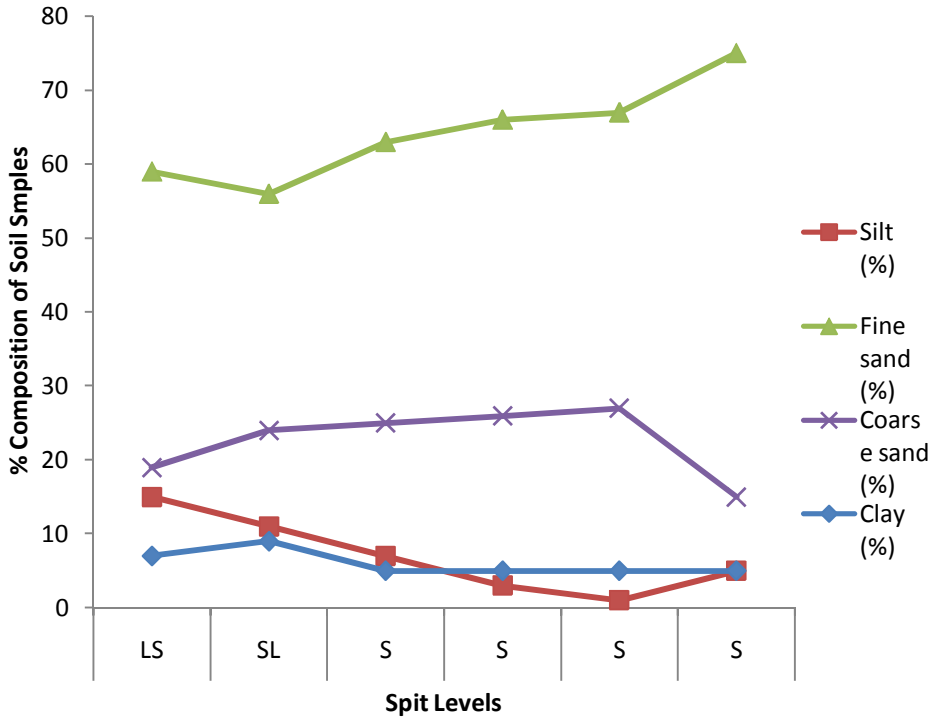


Fig. 37: Spit Levels Showing the Soil Structure

Source: Laboratory Work, (2013)

Zinc is a macro element needed for the synthesis of substances for plant growth enzyme system and in the promotion of certain metabolic reactions (Blair, 2010). It is also necessary for the production of chlorophyll and carbohydrates. From the study, it was observed that the milligram equivalence of zinc was 3.4 unit in Spit level (i) where soil organic deposit is high and 4.2 meq/100gatSpit level (ii) and then decreased to 1.8 meq/100g at Spit level (iii) and (iv), but at Spit level (v) and (vi), there was an observed increase in zinc content to 2.8 meq/100g. The observed zinc content at the different levels could be explained in terms of the occupation of the rockshelter. At the topmost/upper Spit level, soil erosion washed some of the zinc mineral away

from the surface leading to a decrease in the value of zinc content compared to its high content in the Spit levels (ii). However, at Spit levels (iii) and (iv), there was minimal or no human occupation which resulted in the low zinc content observed and little zinc content present at this level was as a result of percolation of water leaching into the subsoil, thereby carrying along with it some minerals in the form of zinc, but at Spit levels (v) and (vi), increased human occupation led to an increase in the quantity of zinc mineral analyzed.

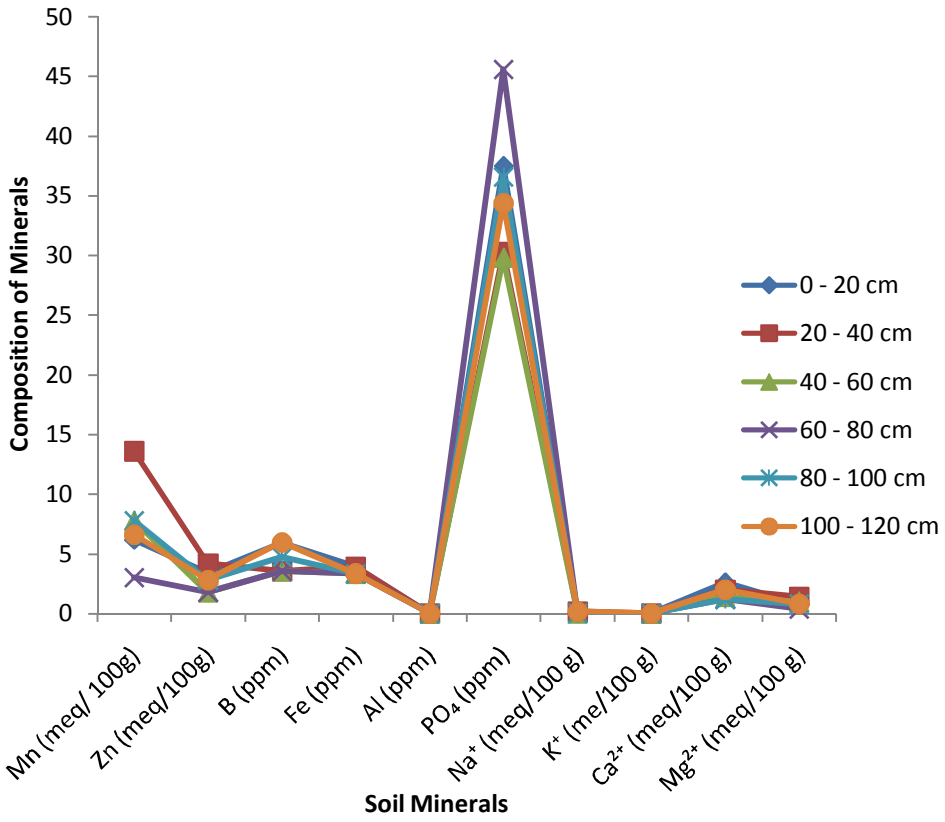


Fig. 38: Spit Levels showing some of the Mineral Compositions of the Various Soil Samples

Source: Laboratory work, (2013)

Key:

Meq = Milligram equivalent

Na^{+} = Sodium ion

Zn^{+} = Zinc ion

B = Boron

Fe = Iron

Al = Aluminum

PO_4 = Phosphate

Mn = Manganese

K^{+} = Potassium

Ca^{+} = Calcium ion

Mg^{+} = Magnesium ion

Magnesium, according to Blair (2010) is actively involved in photosynthesis and is a constituent of chlorophyll. Since magnesium ion (mg^{2+}) is involved in phosphate metabolism, plant respiration and as an aid in the activation of many enzyme systems, an increased quantity of

magnesium in the soil could result in a corresponding increase in the amount of phosphate. This could be seen in the result obtained for magnesium ion (mg^{2+}) (me/100g/s) and phosphate (ppm) in the soil. The accumulation of calcium just above contact with sterile soil is a result of leaching of bases with infiltrating water and depositing them when the water slowsas it reaches sterile contact. The trend observed in zinc was also seen in the content of boron mineral (ppm) in the soil samples.

Finally, the essence of these analyses was that it pointed to the fact that the features (rockshelter) were inhabited by agricultural people that had ceramic (pottery) as occupation. The result of the mineral analysis which introduced variation in the distribution of mineral elements and cation related to the variation in human population mobility in the rockshelters as represented in the Spit levels. It also implied that early populations had occupied the rockshelters relatively more frequently than later ones, thus indicating a level of seasonal mobility in the occupation of the rockshelter. Therefore, sedimentological study, for example, the soil textural composition indicated how long ago man occupied the ecological setting of Ozizza- Afikpo.

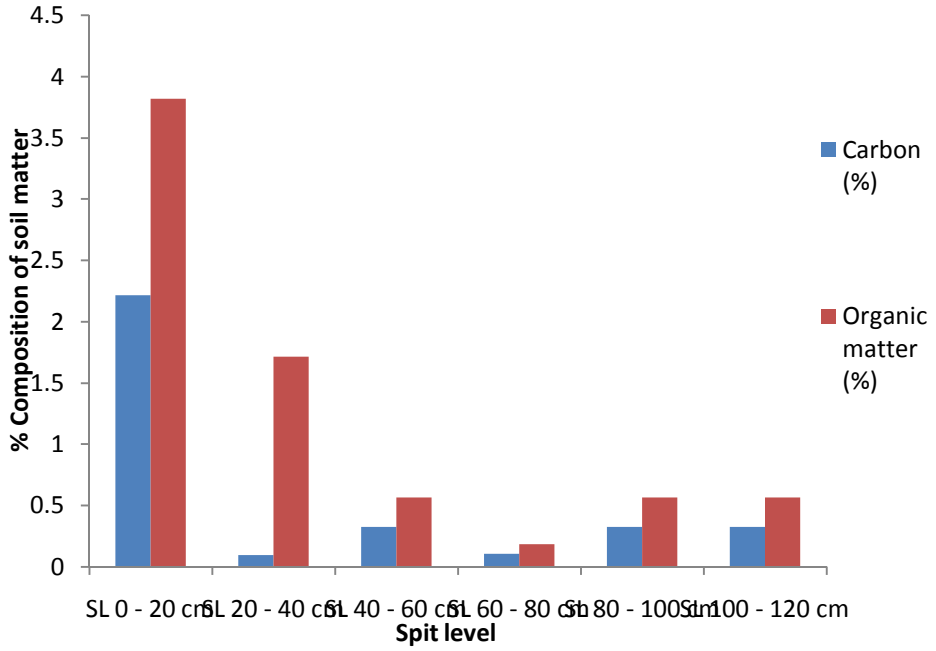


Fig. 39: Spit Levels Showing the Organic and Inorganic Components of the Soil Samples

Source: Laboratory Work, (2013)

Key:

C = Inorganic matter

OM = Organic matter

SL = Spit levels

5.4.1 pH of Soil Samples

Soil samples were collected from the different spit levels excavated from Ogba-ejusite and analysed to determine their pH. Results obtained showed that when the soil samples were moistened with distilled water, the pH values slightly acidic and falls within 6.4 ï 6.6, but when

it was moistened with potassium chloride to determine its total acidity, the pH was acidic and fell within the pH range of 5.2 ï 5.4.

pH is the negative logarithm of hydrogen ion concentration to base 10. It is calibrated from 0 ï 14. Values from 0 ï 3.5 are highly acidic, 3.5 ï 4.5 are moderately acidic, and 4.5 ï 5.4 are acidic while 5.4 ï 6.9 are slightly acidic pH ranges. Results obtained (Fig 40) for the soil samples collected at different Spit levels showed that the pH of the soil ranged from 6.4 ï 6.6, while the total acidity ranged from 5.2 ï 5.4 (determined using KCl solution). Dinacauze (2000) observed that the destruction by soil acid has long been recognized as limiting the preservation of archaeological record. High acid soils enhance rapid soil formation (pedogenesis), destroy macrofossils and inhibit oxygenation of bacteria. But acidic and slightly acidic soils encourage preservation of pollen grain. The pH of soilsfrom Ogba-ejusite (6.4 ï 6.6) resulted in good preservation conditions for pollen grains, as was obtained in the palynological analysis.

According to Dinacauze (2000), soils with high pH are poor environments for the preservation of pollen, but are excellent for preserving bone and shell. Soils that developed in forested environments are mostly acidic. Grassland soils have a higher cation exchange capacity than forested soils, even as vegetation serves as an erosion buffer that affects soil depth and the level of exposed soil to the forming factors (Brady, 1984). Ogba-ejusite was mostly a rock shelter enclave with depositional erosion covers. The site encouraged both pedogenetic and diagenetic processes, and thus served as an array of biological and chemical processes that influenced the environment.

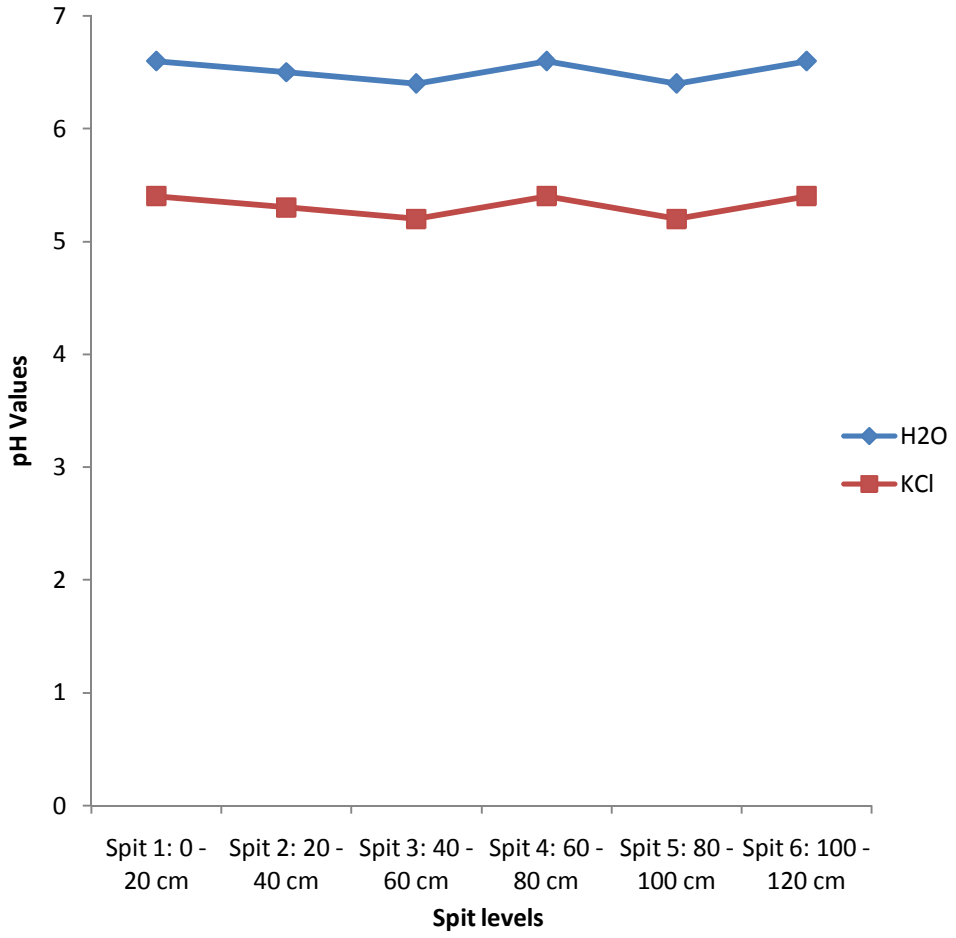


Fig. 40: pH Values of Excavated Ogba-eju Soil Samples

Source: Laboratory Work, (2013)

5.5. Nearest-Neighbour Analysis (NNA) and Site Catchments Analysis (SCA)

Nearest Neighbour Analysis- Nearest-neighbour analysis (NNA) or Nearest-neighbour search (Wikipedia encyclopedia) can be known as vicinity/connection/closest point search. It is defined as a statistical calculation of spatial uniformity in archaeological sites or artifact distribution pattern (Ezeadichie, 2000). The first to utilize this method in calculating the spatial uniformity in

archaeological sites or artifacts distribution patterns are Clark and Evans (1954). Nearest-neighbour analysis is a statistical calculation in recording archaeological sites and findings during archaeological field wor. The purpose of the study according to Clark and Evans (1954) is to provide a measure of the non-randomness of a point distribution by comparing the mean of the distance from each point to its nearest neighbour with the mean distance predicted by a random hypothesis. Therefore, the nearest-neighbour analysis allows quantitative comparison of patterns among areas, as well as help to eliminate the effect of scale (Rossbacher, 1986). Many authors have propagated formulars towards achieving this analysis. For instance,

Clark and Evansô (1954) formula stands thus: $r_n = \times {}^{N}ri/N$

Hodder and Orton (1976) formula f (w/o $\Leftarrow$ W $\Leftarrow$ C) = e^{-} w/i^{-c-} c) where w = r^2 (r =nearest neighbour distance), c =constant or chosen limit of w and this is to be estimated from the site density format (Caption in Ezeadichie, 2000).

Rossbacher (1986) formula was **RN = 2d $\sqrt{}$ (n/a)**

Where RN = nearest neighbour value/ description of distribution

2d = mean distance between the nearest neighbour (km)

n = Total no of finds/points.

a = area under study (km^2)

Among these authorsô formulas, the most simple and cherishable is Rossbacherôs (1986).

Many authors had applied the Nearest-neighbour analysis in describing different kinds of features in archaeological studies. Examples are Vitek (1973a and b) in his studies of patterned ground and Mound field; Clark and Evans (1954) in vegetation pattern studies; Barre *et al*. (1971) in their spatial distribution of towns; Smalley and Unwin (1968), Trenhaile (1971), Drumlins and Getis (1963) and Ezeadichie (2000) in their studies of settlements and caves.

The formular above (Rossbacher, 1986) was used to calculate the distribution of rock shelters and the degree of their aggregation in the sampled site. The analysis of the Nearest-Neighbour in Ogba-ejurockshelter was carried out using measurements obtained in the site.

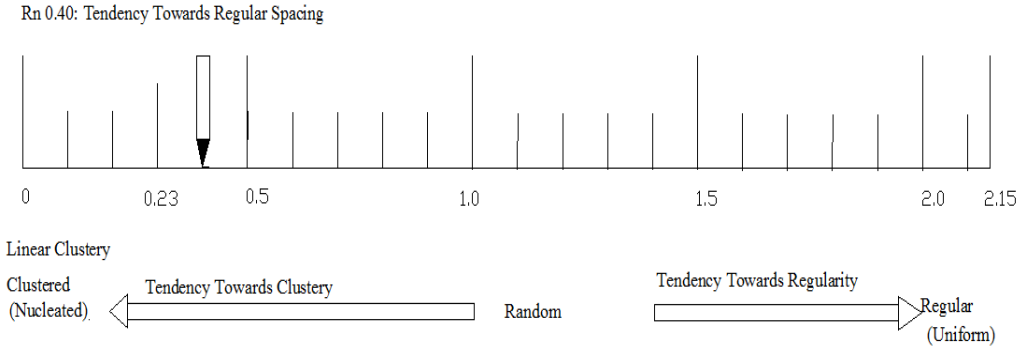


Fig. 41: Nearest Neighbour Diagram

Source: Modified After Vitek (1973a)andRossbacher (1986)

The above figure shows the possible values of Rn, ranging from 0.00 (maximum cluster) through 1.00 (a random pattern) to 2.15 (a regular pattern). Therefore, NNA (nearest neighbour analysis) measures the extents to which a particular pattern is clustered/nucleated, random or regular/uniform. The benchmark was that 0 to 0.13 means linear clustering; 0.5 stands for

clustered/nucleated neighbourhood; 1.0 to 1.4 stands for random; while 1.5 to 2.5 stands for regular/uniform. From the figure above, 3 and above is considered high regular spacing.

The method adopted the following steps:

1.The rock shelters in the study area were located (the minimum number recommend for NNA is 10). Each was given a number (Rock shelter 1-10)

2.Application of NNA formula: This was to find the mean distance from one rock shelter to another, which is nearest neighbour, hence:

3. **RN = 2d $\sqrt{}$ n/a**

Length = from 1st bridge to Ogba-eju = 1.65km

Width of Ogba-eju to Amaeta = 2.22km

Area (Lxw) of the studied place = 1.65 x 2.22km = 3.66km^2

Rock Shelter No.	**Nearest neighbour**	**Distance**
1	1	0.03
2	1	0.026
3	1	0.017
4	1	0.009
5	1	0.082
6	1	0.028

7	1	0.050
8	1	0.020
9	1	0.029
10	1	0.134
	10	**0.43km**

Area = 1.65 X 2.22 = 3.66km^2

0.43 = n/a = 0.12

3.66

2 x 0.12 = 2d =0.24

1. $\sqrt{\frac{10}{3.66}}$

1. $\sqrt{2.73}$ = 0.24 x 1.65 2271

= 0.40

The nearest neighbour analysis showed that there is linear cluster of Rockshelters in Ogba-eju, Ozizza. This result (Rn = 0.40), in effect, shows that the original inhabitants of Ogba-eju stockshelter lived in close proximity with each other, and must have known each other very well. No wonder they have homogenous cultural identity in the area. It must be noted that nearest neighbour analysis of settlement patterns must indicate at least 30 nearest neighbour points. However, in this study of rockshelters, it was observed that they are located in-situ with some

having entrance and exit points, while others have only one point for entrance and exit. As a result, the ten (10) rockshelters were taken as nearest neighbours (n n) and were used for computation and analysis. The map (Fig. 36) below shows the total number of points/distributions in Ogba eju.

5.5.1 Site Catchments Analysis (SCA)

This is very relevant when dealing with the environment. It draws a link between natural resources and its utilization by the earliest settlers at the site. The study adopted sitecatchment analysis to make a comparative description between sites with the natural resources, bearing in mind that early settlement and landscape usage were determined by the availability of natural resources. These are the reasons for the bunch of archaeological materials and sites in the study area. Ozizza, Ukpa and Ugwuegu in Afikpo as well as Okigwe rock shelters were identified as part of these resources and adopted for this study. This type of analysis was introduced, used and adopted in Natufia site of Palestine precisely around Mediterranean region popularly called Mount Carmel which was studied in the 1970s by renowned archaeologists, Vitaï Finzi and his colleagues. Their results identified limitations to the use of potential resources accessible to the occupations of a given site or groups of sites (Vitaï Finzi et al., 1970 quoted from Ezeadichie, 2000). Since the 1970ôs adoption of site catchment analysis, many researchers coined the idea and modified it in their various works, analyzing the relationship between human behavioural patterns with natural environment as is coined from Hamble (1978), Clarke (1972), Ellision and

Harvis (1972) and Ezeadichie (2000). Analogy between SCA and STA (Site Territories Analysis) was done by Bailey and Davidson (1983). According to them, SCA studies the empirical nature of catchments from on-site data, while S.T.A studies the arbitrary definition of site exploitation of territories. Based on this, therefore, Higgs and Vita-Finzi (1972) defined STA as ósite territoryô or as ñan area habitually exploited from a single siteò and óSite Catchmentô as embracing ñ the terrain covered by occasional forays in search of raw materials for tools and other purposesô

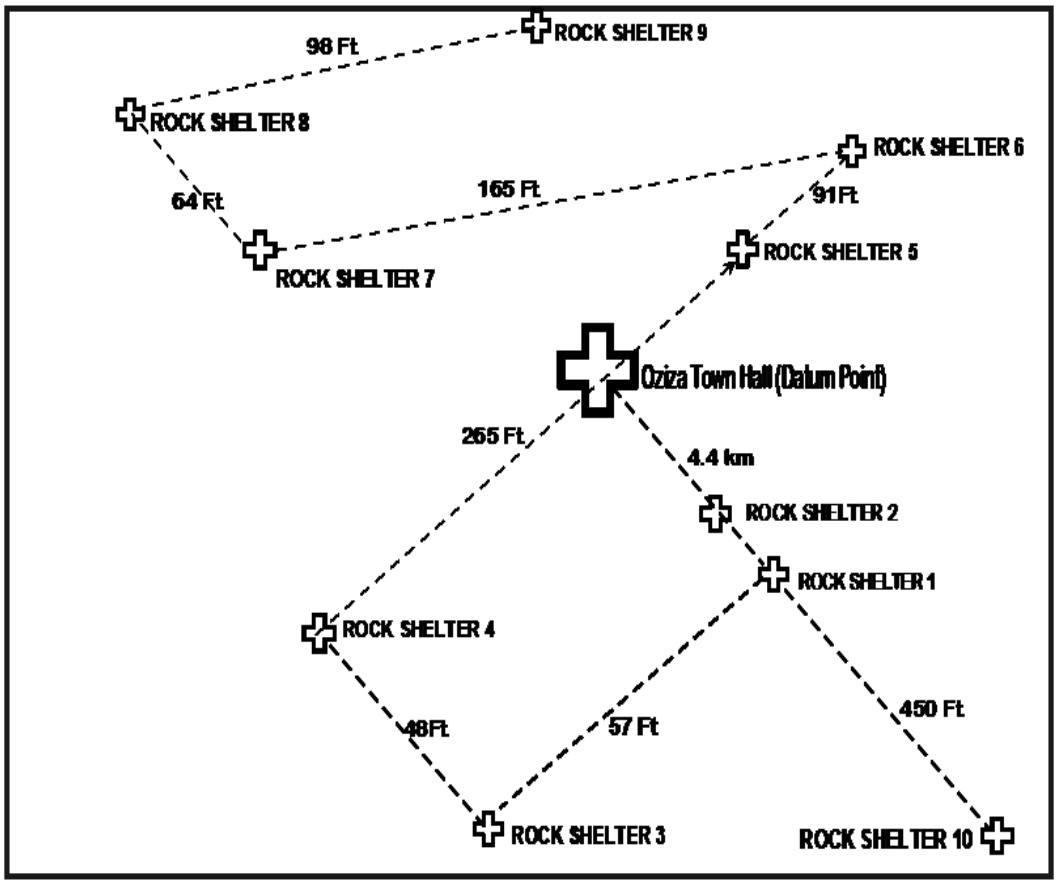


Fig 42: Map Showing the Nearest Neighbour Distributions

Source: Fieldwork (2012)

Ezeadichie (2000) clearly differentiated SCA and STA, and put forward that SCA basically refers to regional scale which reveals information regarding long-distance economic interactions, while STA is restricted to localize relationships which focus more on the examination of individual sites. The S.C.A usage had, right from the outset, proved a high degree of success for scholars who adopted it in their various fields of research.

SCA, being a multiple technique, has one major aim, which is the study of archaeological sites sequel to the surrounding natural environments. Ezeadichie (2000) adopted it successfully in Eastern Nigeria to reconstruct the spatial land use in Nsukka and Okigwe envrions. Bailey and Davidson (1983) also used it to reconstruct the micro-environment around a site or group of sites as a clue to variation in the environmental data present in the area. It was also used to reconstruct the social and economic relationship between sites as members of regional settlement systems. However, since SCA has been successfully used by researchers in comparing the relationship between sites location and natural environment, the recent studies embraced the line of the application and modified it to some extent. At both Mount Carmel and present Cuesta studies, the researchersô focus is aimed at identifying and finding the ratio of prehistoric exploitation of cereal and economic strategies at Natuficatian and Nsukka plateau respectively. In the current study, the delineation of pottery in Afikpo and Okigwe suggests a degree of exploitation by prehistoric dwellers in the area as well as their enhanced economic strategies. Basically, the analysis centres on the assessment of archaeological and geographical data in Afikpo-Okigwe zone. In the archaeological data, Ezeachichie (2000) had done extensive work in Nsukka-Opi ï Ukehe and Okigwe plateau. It is in line with his work that the S.C.A in this study was embedded and modified. As observed in the map below, Afikpo and its environmentôs site distribution

pattern became possible owing to the characteristics of Cross River and its numerous tributaries. The sites depict elements of clustering which seem to suggest that the prehistoric dwellers in Afikpo really exploited the environment for pottery and food processing. The delineation of pottery in Ugwuagu Site I and Amaeta ï Ozizza were for economic adaptation. However, Okigwe, having a similar ecotone with Afikpo displays sites clustering just like Afikpo. Figure 43 show that Okigwe dwellers used the environment for iron smelting and other resources in food production and processing. In the final analysis, the Site Catchment Area displayed similarity and uniqueness in the usage of natural resources content, settlement patterns and exploitation of resources. Although little evidence for pottery making was found in Okigwe, there were no traces of iron smelting found in Afikpo, yet both prehistoric dwellers made use of landscape for their local technology, which of course indicated archaeological sites localization.

However, the mountainous zones of Afikpo are characterized by narrow steps and foot hills. It is also made up of watershed, making possible prehistoric livelihood full of activities in pottery making and in Okigwe, iron smelting. The topographical resources made individual sites function effectively within site localities.

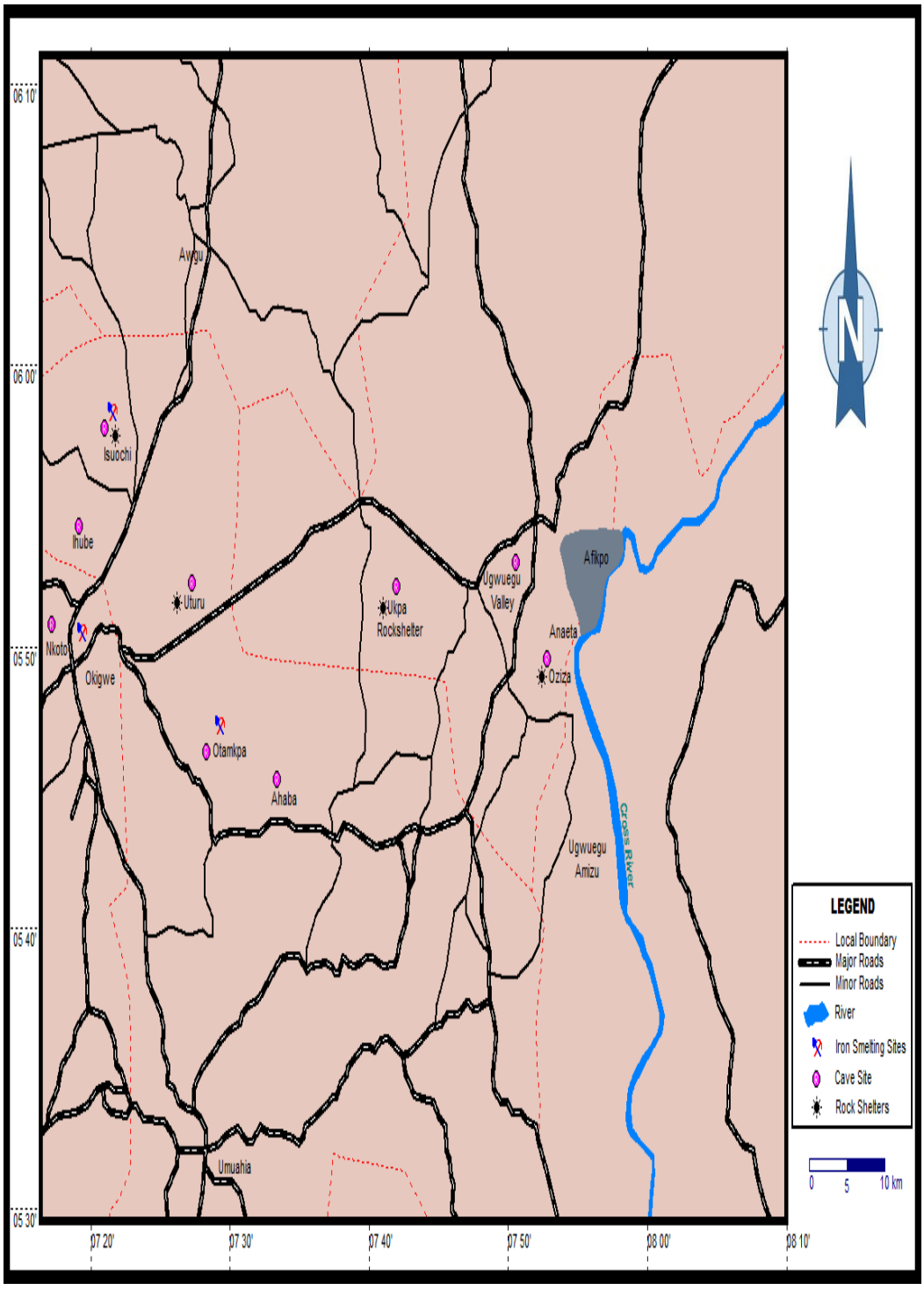


Fig 43: Map of Afikpo and Environs Showing Some Archaeological Sites

Source: Google Map Library and Authors Field Work 2014.

CHAPTER SIX

INTERPRETATION OF FINDINGS

The interpretation of findings commences after the site has been dug and findings have been analysed (Drewelt, 1996). Thus, it is an on-going process during the course of research work which is reconstructed under the following:

1. Cultural progression through time
2. Impact of cultural material on the environment
3. Reconstruction of the local environment of the site to identify how the people lived
4. Reconstruction of Paleo-vegetation from Pollen Analytical Results
5. Impact of the features and cultural materials to tourism

6.1 Cultural Progression through Time

As observed from the cultural stratigraphy in chapter four, significant cultural materials were recovered in Ogba-eju, Ozizza, such as potsherds, pot, rock-out crop, snail shells and kernels shells at the different spit levels (i ï vi). Layers ii identified Rock boulder/rock outcrop, thus suggesting the possibility of the rock shelter engaging into fissure (long narrow crack/opening within the rock). This is probably due to aging resulting in a situation in which part of the rock may fall to the ground and is buried owing to denudation activities on the soil surface. This projection has no cultural phase, but is only recorded within the middle cultural layer. The other cultural materials such as potsherds, pots, snail shells and kernels/shells, have

one cultural phase that points to food production which suggests Late Stone Age. The decorative motifs centre mostly on burnishing or combination of burnished with incision, groove, plain criss-cross, etc (see Table 16). These techniques appeared in almost all the levels. The pattern points to the uniqueness and simplest pattern of decoration with the present Amaeta pottery makers. The technique also has similar motives with other Afikpo wares recorded in Ukpa and Ugwuegu. However, this suggests one ancestor as having originated from Ndiagu, the originator of pottery in Afikpo.

A close look at the excavated large water-pot stabilized with three stone tripod stands at layer vi brought contrasting arguments regarding the pot buried at the level of 100 ï 120cm. The first impression was simple; the pot was meant as a water coolant used by farmers on transition during the farming season. Secondly, oral information from our local guide and some elders in the communities ascertained that the pot might have been used for water storage by the users of the rockshelters such as farmers, hunters, fishermen and oath-takers. According to informants and from cultural remains observed in the area, these various people came to the rock shelter for different purposes. For instance, farmers utilized the environment to cultivate food crops, and they normally relaxed in the shelter when the sun becomes unbearable. They (farmers) also make use of the area for sacrifice during the farming season. Yam must not be planted except sacrifices are performed at the *Ihe-akwuko* shrine just a pole to the excavated rock shelter. Items such as fowls and sheep are slaughtered, and their blood smeared at the altar of the *Ihe-akwuko* shrine, while the meat is eaten by the celebrants. Hunters also hunt in the area and also relaxed in the rock shelter. Fishermen adapt to the environment during the flooding season for fishing, and people visit the area for oath-taking during any disputes. These reasons merely buttressed by the informants are likely motives behind the pot being kept and buried there for many years.

Archaeologically, the pot was used for either sacrifices or for oath-taking. This could be a possible explanation considering the fact that the rock shelter contained plants such as *anyasi* (*glyhaea brevis*) and *nkwu* palm tree (*Elaeis guineensis*). Instances abound in Igbo culture area where the trees, especially *Anyasi* (*glyhaea brevis*), are used for land boundaries and for instituting a shrine. As such, it can be deduced that the pot stored water for such purposes.

However, most other people simply believe that the pot was meant for water storage by farmers. In the final analysis, the pot had no negative impression; farmers used the environment as a transitory dwelling zone and, as such, may have used the pot for water storage for drinking during water scarcity in the area. The pot found beneath the earthôs surface may also have been as the result of denudation that the stone tripod acting as stabilizer to the pot, and the pot became buried. Inside the pot was covered by fossilized soil which has taken the shape of the pot. The pot was so fragile that it broke soon after it was excavated from the earth crust. The pot recovered did not differ much with Afikpo contemporary pots.

Neverthless, the presence of these minerals (quartz, feldspar, kaolinite and illite) in both the XRD and petrography speaks volumes about the pottery tradition in Ozizza as well as other Afikpo sites. The uniqueness of minerals is such that the environment is a flood area and not a marine zone. It was believed by many authors that marine possed clay mineral than non-marine or that some mineral like kaolinite had disappeared into montmorillonite or illite which makes kaolinite properties of non-marine and illite a marine deposit (Murray, 1953 and Dunbar, 1958). Also, kaolinite appears to be 50 percent clay found more especially in California Coast (Millot, 1949; Grim *et al.*, 1949). The study site is non-marine area that contains mixture of quartz, feldspar, kaolinite and illite. Kaolinite is most abundant in Afikpo, even though quartz is the most abundant mineral in the soil and illite is also the less abundant in the area. Feldspar is the

most abundant silicate mineral species just like kaolinite and illite. Significantly, Afikpo is rich in kaolinite and followed by quartz and yet the area is non-marine. Keller (1953) supports this position by saying that certain zones in the Morrison formation (Jurassic) are rich in kaolinite, others in illite and montonrillonite, although the whole of the Morrison is regarded as non-marine. Weller (1960) reported kaolinite clay mineral as not found in open sea marine strata but lagoon deposits. Its high percentage occurrence indicates most probably by excessive flooding attributed to be the reason why illite, especially as it was not calcareous, constitutes the least percentage mineral in the sites. The abundant nature suggests the reason behind pottery making and its continuity in Afikpo. Kaolinite can be hard if dry but soft if wet = *Nzu*. Potters utilized it as the main component for pottery making. It is the matrix, binding the aggregates. Illitethat contains crystallization (H_2O^+) makes clay more plastic when mixed with kaolinite and quartz (two cement minerals,). Temper with feldspar reduces the plasticity of the clay, and makes it finer for pottery wares.

Interestingly, the proficient pottery tradition in Ozizza as well as other Afikpo sites is based on the presence of quartz and kaolinite (cement minerals) and other two clay minerals, illite and feldspar. Feldspar, which weathers easily to clay minerals, is good enough for pottery making. Quartz and kaolinite help to minimize the pots from deformation because of their rigid nature except if not well fired. Their presence also helps to retain the structures and textures of the pot. These are most probably the reasons behind the recovery of the big water pot in Spit level (vi). Finally, from the result, microcline is a K ï feldspar while plagioclase is Na-Ca feldspar. This means that plagioclase contains sodium and calcium. Fortunately, both types (plagioclase and microcline) found in the area were used in the making of the pottery wares. Both are also alkali minerals that constitute (i.e. calcium oxide, potassium oxide and sodium

oxide) principal active ingredients for clay mixture and firing processes. Microcline alkalis feldspar improves product hardness, durability and resistance to chemical corrosion (rusting). Feldspar is also used for K ï Argon dating (thermo-luminescence). This obvious fact about feldspar from thin section was strengthened by XRD analysis. Although Feldspar was the most abundant silicate number of mineral species in sandstone (Mennell, 1913; Herz and Garrison, 1998), it was not the most abundant in the study area. In fact, it was not found in samples A (surface collection), D (middle layer) and in H (clay minerals). The findings suggest that the potsherds from the surface collection are inclusions mostly from farmers, hunters from Ozizza and its environs (Cross River State) as well as Fulani pastoralists who still found the Ogba-eju rockshelter site as a habitable place and a shade, especially during periods of intense sunshine. Those not found within the clay material and at middle layer but found at other layers of the site and in the temper material and other sites in Afikpo indicated that clay used by the early potters must have been brought from another area. The abundance of these minerals as the principal constituent in all the samples could be the reason for the continuity of pottery tradition and its distribution within Afikpo environs and beyond precisely Okigwe, Aba and Calabar.

Both the micrograph and thin sectioning of the samples showed that samples A (potsherds collected from the surface), D (potsherds collected from the middle layer) and H (raw material used by the potters) are similar owing to the absence of feldspar in the analyzed samples. Since the potsherds collected from the surface (contemporary material) had similar mineral constituents with that collected at the middle layer of the stratigraphy and that of the raw clay, the implication would be that the present-day potters made use of the raw clay material in the production of the pots. However, the presence of feldspar in the cementing or temper material did not support the assertion since the temper material and the clay must be mixed in

right proportion for pottery production, or that reactions within the clay matrix and the level of firing led to conversion of feldspar to other elements, thus the absence of feldspar in the samples. Samples B, C, E, F, G, and I had similar mineral constituents as analyzed. The implication had been that these samples came from the same people. The difference in the abundance of clay minerals could be attributed to differences in topography that results in differences in erosional and clay mineral reactions within the earthôs surface. In effect, the area whereby the clay mineral or temper material was collected within the Afikpo area, therefore, influenced, to a large extent, the depositional abundance of the clay mineral within the area, and thus had effect in its abundance in the pottery produced.

From the foregoing, it is pertinent to note that two groups of pottery products were recognized from the area (pottery products without feldspar and those with feldspar) which could have resulted from the level of firing or because the source of raw material from one of the group was got from outside the Afikpo geological area. Also, the presence of kaolinite in all the samples is indicative of soil with poor mineral constituent for agricultural production. Kaolinite is often more of a hindrance to agricultural soil use. According to Velde and Meunier (2008), there is a general relation between soil fertility and kaolinite content because kaolinite has neither a significant cation exchange capacity, where useful cation can be attracted and adsorbed by plants and is also devoid of potassium.

Apart from the fact that no dating was recorded at Ogba-eju site in Ozizza, the radiocarbon date by Hartle from Ukpa Rockshelter was traced to 5000 ï 3000BP; Andah and Anozie, was dated 2100 ï 2000Bp and at Uhuchukwu, Okigwe by Ibeanu was dated 3464± 104, all indicated agricultural and human activities in the past. Despite the problem from their dating, it was generally believed that the date, especially those dated by Hartle was a proof of early

agricultural practices in Igboland. Hence, the pottery in Ogba-eju Rockshelter was extrapolated with other dates in Afikpo.

6.2 Impact of Cultural Materialon the Environment

Two hundred and ninety four (294) archaeological materials were retrieved from the Ogba-eju trench. These materials were washed, labelled and bagged accordingly. They were later counted and the percentages of occurrence worked out. The results of the findings from Table 4 show that one hundred and four, representing 35% of all available organic findings, were recorded. Lithic materials found was twenty-four, representing 7.85% of total findings while metallurgy and ceramic was ten (10) and one (1) representing 3.41% and 0.341% respectively. Pottery findings total 155 representing 52.90% of the total results of excavated materials. From the results, it was evident that the majority of the excavated artifacts were made of pottery materials followed by organic materials. The results were a pointer to the fact that the original inhabitants of the rockshelters made use of pottery and that pottery is indigenous to them while the presence of charcoals was evidence of food procurement in the area.

Cultural materials such as pottery from ethnographic studies had different sizes, shapes and functions. Both the present-day wares with the recorded shreds from Ogba-eju, observation and oral tradition concentrated on the name and usage. The pots and bowls are classified by function into four: The large, medium, small and microwares. The large pots *ite/Udu* are specifically used for water and wine storage. It is called *Ite mini* and *Ite mia/ite okpogo*. This characterised the large pot recovered at layer vi (Fig. 34). The medium pots (*Ite/Udu*) are used for making soup, processing cassava and musical instruments. They are also called *Ite ohe, Ite*

iwa, and *Ite egwu*. The small pots (*Ite/Udu*) are used for smoking fish and other grains, as water for flasks, ritual and ceremonial wines and are known as *ngiga, nja mini, Ite erusi and ite ekpurukpu* respectively. The microtypes called *nja Ogodo* (pitcher pot) are used for sacrifices, gift, and for decorations (Fig 29).

Bowls were also recovered at Ogba-eju. From the present-day information, the large hemispherical bowls are called O*ku/Nja* and are used for washing, oil processing and kolanut storage. The medium *oku* is used for bathing and collecting water for cooking. The small type is used for eating, serving kolanuts, rituals, as saucer and for washing hands. The bowls are generally called *Oku*, but oil lamp, eating bowls and saucers are called *Njaotie/njamanu, mpaleka and nja-erusi* respectively.

The comparison of the contemporary Afikpo pottery with the recovered Ogba-eju wares was based on the thickness and decorations as well as technique of production and temper materials. The rims of the recovered pots (Table 17a) were characterized by thickness ranging from 10cm ï 12cm, hence heavy and sturdy, just like the modern Afikpo wares, possessing thickness of 5cm ï 20cm. Their pot production in the past is still the same with the modern-day pottery. Both the recovered pottery and the modern types have simple decoration motifs as well as used for the same *ezeuria* as temper materials. This suggests that pottery technique had only one descendant ï *Ndiegu.*

Currently, the inhabitants of Afikpo are still making use of pottery vessels. Oral tradition claims that titled men and elders possess the vessels for offering sacrifices, storing palm wine and keeping kolanuts. All are meant for libations to gods and ancestors. This was noticed at the shrine of *ihe- akwukwo* at Ogba-eju environment as the vessels were meant for keeping charms

at Amaeta- Ozizza, Afikpo. The percentages of their occurrences are shown in Table 3. The distribution of decorated and undecorated pottery findings shows that burnished one had 40.91%, while plain had 37.66%. It also shows simplicity in pottery decoration. This explains why the contemporary pottery makers in Afikpo depend much on making their wares with little decorations, but pay more attention in symbolizing wares with trademarks, using mathematical symbol such as circle, triangle, square and so on. This serves as point of identification and aesthetics values. Other decorations are scanty combination of one type of motifs and the other, while many wares were undecorated (plain).

Other cultural materials like seed husk, charcoal and snail shells suggested sedentary activities in Afikpo as early as before the 18th and 19th centuries.

6.3 Reconstructionofthe Local Environmentofthe Siteto Identify Howthe People Lived

Most interestingly, reconstructing sites from past to present are most obvious. ñThe past lives in the present; the past is not dead, it livesò (Itanyi and Agu, 2012: 234). Basically, the sites in Afikpo are located very far away from the present inhabitants, but the sites happened to be the initial abode of their fore-fathers. At present, the sites are used for farming and hunting. The sites are quite some distance, taking long walking crossing rough, undulating or densely overgrown landscape. For instance, the site in Ozizza takes the distance of about 4.44km from the Amanyieme Town Hall, the starting point. In the study, Afikpo is observed to be hilly, with valleys and solid geology (sandstone ridges). From pollen study, palaeo-vegetation changes have made some water valley dry up and some miniature springs cease overflowing during the peak of

dry seasons, while water normally floods the site during rainy season. The flood came as Cross-River and overflowed its bank. This poses a big threat as some artifacts in the site are washed away into the river to unknown zones (See Fig. 1). All the sites excavated at Afikpo, including the present researcherôs site, have characteristics based on the effects of Cross River and its tributaries.

Ozizza, like other Afikpo sites, has numerous caves and rockshelters.The historic cave in Ozizza is believed to be the source of their existence and so restrict strangers and researchers. To have free access to them, one has to be initiated into the community shrine before he/she is qualified to enter the shrine. The people believe that the historic cave (shrine) and its rockshelters constitute a great mystery owing to its connotation of the existence of *Ohaodus and the* Ndiegus*/Egos.* They all showed evidence of habitation, and most importantly, the small *Ujii* (rock hollows) that were found on the rocks were believed to be the sitting position for the *Ohaodu* peoplethat had tails. The holes were meant to hide their tails since they are shy. They, therefore, put their tails into the holes during market hours to prevent people from the hinterland from noticing them. Oral tradition had it that they came to the market first and left last so that their identity (the tail issue) would not be discovered. This group of people (*Ohaodu)* was believed to be the missing link in the human evolution. The history of Ozizza cannot be told without the *Ohaodu* peopleas they left a curse on the environment they inhabited for decades because normal humans (*Ndiegu* people) poured palm sludge in the holes where they put their tails during market hours in a quest to find out the reason behind their early arrival to the market and their unusual sitting positions. The palm sludge attracted insects and termites that bit them, and they left the market in anger, cursing the place as they ran away. This explains why nobody has inhabited the place till now. This story of the *Ohaodu* people*,* the presence of historic cave

(shrine) and Ezemairo cava in Ozizza corroborate the existence of cultural belief system that enhanced their continuity, which, according to Ali (2009), constitutes the stimulants that kept alive the cultural and religious systems of the society that must be perpetuated.

6.4 Reconstruction of Paleo-Vegetation from Pollen Analytical Results

The principal purpose of this pollen study is to evaluate the source of vegetation in Afikpo as it relates to other Igboland. Pollen results/stratigraphy (Table 13, 14 and 15) were produced, showing the percentage of spores and pollen of particular taxonomy. From the abundance and diversity of spores (ferns and herbs) such as *Cingulatisporites ornatu, Dictyophillidites harrisii*, *Laevigatosporites* sp, *Amaranthaceae* etc were the striking features of the micro flora. Pollens like *inaperturopollenitesis crisopolensis* and *arecipites sp*. were also in abundance. With these, therefore, Table 16 reconstructed modern classification/distributions of vegetation which identified four different environments in the area of study, significantly suggesting humid to arid and finally humid region (wet ï dry ï wet condition). The environments identified were as follows: **rainforest** was represented by N*yssaceae* (8.00%) at the middle layer and dominated by wind pollinated plants (Angiosperm). Others include *Tricolpites* and *Psilastephanocoloprites*. All these pollens expose the area more especially the upland part of the Cross River bank as rainforest zone. Secondly, the site shows evidence of **secondary forest** vegetation with dominant pollen *Arecipites* (0.21%), *Araucariacites* sp. (0.84%), *and Inaperturopollenites crisopoloensis* (8.88%). Both *Psilastephanocolporites laevigatus* and *Tricolpites sp* indicate rainforest at the oldest and middle layers and re-merged at the upper layer within the secondary forest. Again, the **open vegetation** is dominated by grasses, pigweed,

liverworts and mosses. Examples are *Monoporites* sp. (0.10%), Amaranthacea (0.31%) and S*tereisporites* (0.21%). Finally, **fresh water** swamp as identified at the site was represented by *Mauritidites* sp. (0.10%), *Gleicheniidites* sp. (0.63%), *Nymphaea lotus* (0.21%) and P*yramidosporites traversi* (0.21%). Others are *Numulipollis neogenicus*. Based on these fresh water pollens, the site was compared with Brouse and Bonaparte Basin in Central Australia (Macphail, 2007) where fresh water plants dominated tremendously.

The evidence from the four paleo-vegetation covers mentioned above which centres on spores and pollens characterized the actual forest forming plants and woods were utilized long ago by Ozizza people in Afikpo. These were extrapolated with other Afikpo (Ahuagbe people) and Okigwe neighbouring communities (Hartle, 1967, Chikwendu 1976, Ibeanu 2000 and Umeji, 2012). The climax vegetation of the Ozizza during the late Neogene to Holocene can be reconstructed to be primarily belonging to rainforest being mixed up with freshwater condition. The paleo-climatic condition was cool and humid. Similar modern *Arecipite* sp*, Cyathidites minor* and Baculate *spore(Trilete)* are severally forming canopy and very tall examples were conifer, palm tree, ferns etc. Other potential modern weeds like *Monoporites*, Amaranthaceae, etc are being used as chief edible vegetable (green) and local medicine for malaria and other ailments. The forest was also characterised by angiosperm and gymnosperm woody plants/herbs. The Angiosperm trees are smaller, but noticeable and significant in the Ogba-eju forest area of Ozizza, Afikpo. There were also terrestrial ferns such as liverworts and mosses that dominated in the forest too. These favoured water logging and humid/moisture micro environments (Mohr et al, 1992).

From the pollen result, conifer forest growing on the upland of Ogba-eju Rockshelter in Ozizza, Afikpo has been partially replaced by fungus (evergreen secondary tropical rainforest).

The conifer forest and ferns have co-dominated heath vegetation along the bank of Cross River. Also, evidence of extensive freshwater swamps was equally experienced in the vegetation cover. The rightful agent of these changes is human. Human impact in the area of clearance for cultivation, domestic and construction works, probably made the area wet and flooded. In the pollen result (Table 13), the percentage of both secondary and open forest pollen is very high at the youngest/upper levels than the middle and oldest levels. This indicates that human impact is still very common leading to clearance of rainforest plants. In line with the above, therefore, Delcourt (1979), sourced from Traverse (2007), shows that data have relative abundance of different sorts of pollen in this present day. The surface sediment of Eastern-North America can be compared directly with forestry data with abundance of trees of the same species in the forest. Better still, the percentages of taxonomic diversity of spores were very high in the youngest samples (0-40cm) and later decreased due to time. Conversely, the percentage of conifer pollen and palm pollen has the highest sample; conifer appeared at the youngest layer with little increase in the oldest layer (80 ï 120cm), while palm pollen appeared in both the youngest, middle and oldest layers. Herb spores increase at the oldest layer (80 120cm) and decrease at youngest layer and middle layer.

The differences and changes of these percentages of spores and pollens may be attributed to denudation processes and due to excessive flooding in the area. Burger (1988) attributes the changes to climatic changes. Mohr and Gee (1992) observe that the change is due to selective preservation action, even as Michalik *et al.* (2000) submitted that the change is as a result of the increasing intensity of chemical weathering in the hinterland owing to increasing humidity, especially attributed to spores. Most probably, therefore, this might be the reason behind the recovering of a big water pot at 100 ï 120cm, well positioned with fossilized sediments.

Humidity brought heavy rainfall which, in turn, caused flooding and denudation in the area under study. The increase in Trilete andTricolpate spore seems to be a global paleo-climatic signal. Evidence was in the depositional sporomorphs of L*aevigatosporites* sp*,* Baculate spore *(*Trilete*)* and *Dictyophyllidites harrisii (*Tricolpate*),* in which Mecesk Mountain in Southern Hungary is superimposed by a local paleo ï environmental change from fluvial to swamp condition. The changing evidence, that is, from the palynological analysis of the study area these days not withstanding, the area is still characterized with analogous situation between wet and dry seasons. The wet season resulted from the action of flooding and denudation which favour liverworts, mosses, herbs, fossil spores and palm pollen as represented by Baculate spore*, Dictyophylidites harrisii, Mauritidites harrisii, Mauritidites* sp. and *Stereisporites* sp. Dry season favours growth of conifer pollens and palm tree pollens as represented by *Araucariacites* sp*., Inaperturopollenites crisopolensis, Nyssapollenites peusdocruciatus, Arecipites* sp., etc.

Moreover, ferns, shrubs, herbs, palm pollens and conifers are still present nowadays in Ozizza, Afikpo, exploited by the present people, who occupy similar niches as with the past inhabitants of the community. The interesting points about these changes are due to the intervention of wet and dry seasons as well as impact of man as represented by pollen activities. Finally, it is vital and possible to plot Afikpo present-day vegetation correspondent with the environmental requirements of the dominant species at the various spit levels. The Ozizza Site belongs to late Neogene to Holocene. The 5 000 ï 3 000 Bp Ukpa in Afikpo (Hartle, 1967) and 4691 ï 78 Bp at Uhuchukwu cave sites and 2305 ï 130 +90 BC iron smelting site in Okigwe (Ibeanu, 2000 and Umeji *et al*, 2012) have closest analogy to Ozizza. This period was the period of food production and Iron smelting in Afikpo, Okigwe and the entire Igboland. It, therefore, eroded hard woods, and is replaced by palm bush and shrubs.

6.5 Impactofthe Features, Cultural MatterialsandotherResourceson Tourism

The various archaeological sites, cultural materials and other resources, including scenic features, should be preserved for cultural and aesthetic purposes. The preservation of the site can lead to the empowerment of the local community and enhance cultural tourism.

The values of this archaeological and cultural heritage in the area of study are sited through the Consumer Centric Marketing (CCM) (Buhalis and Costa, 2006). This constitutes a factor for attraction, not only for the tourists but also for a number of investors who may wish to liaise with the government and the local community to boost economy of Afikpo through investment in industries and other developmental projects. The fundamental question has been how a particular site could be located without information about the place. This question calls for the use of information communication technology, the creation of awareness through publications, and exposition of research findings which this paper intends to achieve.

Caves and rockshelters alone cannot sustain tourists for more than three or more days. Cultural foods, festivals, scenic places, other indigenous technologies and the security of the place should be inclusive. Afikpo is known for rice production. Most of the rice processed in Abakiliki in Ebonyi State is cultivated in Afikpo. Ozizza is not left out. They have large expanse of land for rice production which has led to the presence of a parboiling centre beside the Urrah Beach. Though Ozizza is located on a hilly and slopping highland, the presence of big forests and central barns for yams (common in the olden days) on top of the hills is prominent. The women thus form groups to fetch firewood on top of the hills that are at the outskirts of their habitation. The firewood is brought to a central location on the hill where a Land Rover comes to

take it down the beach where it is used for parboiling of rice. The beach is a centre of attraction, and owing to its strategic importance, a police station is located in the area to police the movement of people from Afikpo (Ozizza) and the neighbouring Cross River State people. Canoes are seen conveying people from either side of the divide in droves. The neighbouring communities from Cross River State saw Afikpo as a veritable environment for business activities thereby encouraging their youth, including *Okada* riders, to cross the river by boat to engage in such trades. Likewise, the route is the shortest distance from Aba to Afikpo, through Urrah, Ozizza Beach. Therefore, traders from Aba carrying bails of second hand clothes (*Okirika)* come to Afikpo with ease without any disturbance from security agencies.

Plate 34: People Crossing from Cross River to Ozizza, Afikpo

Source: Fieldwork, (2011)

However, a prominent feature in the beach side is a ship that had berthed in the place for years now. The ship was meant to be used for easy transportation ï connecting Afikpo to Cameroon via Cross-River State. However, poor maintenance culture and neglect had grounded the boat. It is believed that through tourism enhancement, it could be resuscitated for use.

Plate 35: A Ship Anchor at Urrah Beach in Ozizza by the Nigerian Government for Transportation in Afikpo and its Environs

Source: Fieldwork (2011)

One of the key factors considered in tourism is the security of the visitors. Ozizza, like other Afikpo communities, is a serene environment with peace loving people, and the presence of a police post in Ozizza makes it the front burner for tourism. From the interviews and group discussions held among the police personnel along the beach, they were ready to work with tourism managers to ensure that Ozizza cultural resources and archaeological sites are conserved. The beach cannot be developed without security. The various raw and processed foods alone cannot serve the intents and purposes of tourists; likewise the various pottery making techniques which would serve as souvenirs to tourists cannot flourish without security.

Cultural landscapes in Ozizza, Afikpo support the relationship that human societies can have with their natural environment. Nature and culture are very closely related as can be seen with the varied trees, forests, rocks, hills and mountains, rivers and waterfalls and sacred caves in

Ozizza, Afikpo. These elements which they believe are present before the appearance of man are associated with the spirit world. Thus they are usually respected, and sometimes even venerated as seen in shrines and in the historic caves which the researcher was prevented from entering owing to its spiritual connotations in order to ensure a harmonious cohabitation. Some of these elements, specifically the caves and rockshelters, are attached to the local mythology, and should be preserved and maintained.The*Ezemairo* cave surveyed in Amorie Village in Ozizza is believed to be the house of *Ibin Ukpabi* before he migrated to Arochukwu. According to our informant, an iron staff was found lying in the middle of the cave which oral tradition maintained belonged to *Ibin Ukpabi* who used the cave as his abode. Attempt to retrieve this óstaff of officeô was not possible because of fear of the mythical python believed to inhabit the cave. Thus, caves and rockshelters in Ozizza illustrated some key episodes in the creation of the world, or the acts of bravery of certain divinities faced with the forces of evil. In some locations, as can be ascribed to their ancestral cave, which according to Chief Eleja, ówe cannot see the cave with an ordinary eye, but need a third eye to see it.ôIt is said that it is possible to establish a contact between man and the spirit world, to consult the ancestors or to call upon a particular divinity and it will manifest inside the cave.

The development of tourism in the area of our study will enhance mutual economic gain and aid to the preservation of archaeological sites. This would project and protect the culture of the people as well as their natural environment. Tourism is used to address preservation of the resource for future generations and to contribute to environmental protection, limiting negative socio-economic impacts, and benefiting local people economically and socially, which addresses the concern for environmental sustainability as was one of the fears expressed by the leaders of the communities.

At present, visitors to Ozizza, Afikpo archaeological and natural sites could be described under the following three types:

Clique tourists: These are tourists or groups who tour or travel specifically for educational purposes and/or to take part in environmental or cultural projects, such as wildlife monitoring. So many students from various institutions within the South-Eastern States have made visits to the archaeological sites for study purposes, as well as visits to the beach for pleasure.

Group tourists: These are tourists who visit protected or cultural areas to understand local, natural and cultural history. In effect, they are researchers seeking information. This research work falls under the scope of such tourists.

Casual tourists: This group of tourists considers natural and cultural travel as an incidental component of a broader trip.

The transportation network in the area is poor especially during the rainy season. This requires travelling to a neighbouring community to go by boat. The people of Ozizza demonstrate the capacity of craftmenship. They produce objects which serve both their functional needs, aesthetical and symbolical value. Many objects deserve to be preserved and valorised, as they represent the creative genius of a people. Such objects when preserved can serve many purposes and following functions:

1. Aesthetic and technical function resulting from a particular know-how, such as in pottery and fish net making.

2. Religious symbols preserved on archaeological findings as can be exemplified by a statue depicting the ancestors, or a ceremonial weapon (see the figure below).

3. Historicsymbols as depicted by the tail-rock hollows of *Ohaodu* peopleand the historic shrine cave in Ozizza.

4. Identity-relatedpurposes**:** carvings are locally based; example, a carved door in a style particular to an ethnic group, a pageantry costume, etc would reveal beliefs of the owners.

Anyone of these reasons can justify the importance of preserving such objects because, in general, all valorised objects possess several qualities. It is not surprising, therefore, that the masks captured our priority attention since they testify to the know-how of a sculptor,to his artistic talents, and expose his spiritual inspiration. Finally, the masks most vividly exposed the style that illustrated a historical period and the group of people to which it belonged. It is important to have object collections that represent one particular artistic style or one particular civilization. Civilizations, indeed, are not represented by the accomplishments of a single individual. Other persons, by following their inspiration, have produced comparable objects that are not identical. It is such collections as a whole that make it possible to appreciate the creative capacities of a given civilization.

Plate 36: Ceremonial Artwork in a Cultural Field of Display

Source: Fieldwork, (2011)

Based on the above presumptions, the development of tourism in Ozizza, Afikpo would be justified owing to the wide variety of cultural, natural and archaeological findings that would be integrated into a system as Lazlo and Kripner (1998) asserts as follows:

> ñThe concept of ósystemô serves to identify those manifestations of natural phenomena and process that satisfy certain general conditions. In the broadest conception, the term connotes a complex of interacting components together with the relationships among them that permit the identification of a boundary-maintaining entity or process**"** (p. 51)

Ozizza, Afikpo is associated with a cultural legacy that has passed down from generation to generation, and had made it possible for them to place themselves within timelessness. This had conferred a distinctive characteristic to her territories, and constituted the base of the construction for her common cultural identity. An example is the harmonious relationship established between man and nature in Ozizza, Afikpo. The serene beach environment, the mountains, the rock-shelters, and fountains all attest to these. These are places in which a good environmental and land use planning could allow a certain balance between the need for exploitation and the need for renewal and conservation of biodiversity, which is essential for survival of Ozizza Community. And for these to be effective, encroachment by Fulani cattle grazers should be discouraged as that does damage to the ecosystem.

Plate 37: Cattle Reared by Fulani Herdsmen at Ogba eju

Source: Fieldwork, (2012)

CHAPTER SEVEN

SUMMARY, CONCLUSION, RECOMMENDATION FOR FURTHER RESEARCH AND CONTRIBUTION TO KNOWLEDGE

7.1 Summary

In the preceeding chapters, attempt had been made, based on archeological survey and ethnographic data collection as well as palynolgical studies, petrology and mineralogy studies,to link connectivity between Ukpa, Ugwegu and Ozizza, Afikpo communities. Oral tradition was adopted in achieving these objectives. Okpoko (1982) observed that oral tradition is used to establish direct historical continuity between the past and the present inhabitants in a studied area. Cultural materials recovered during oral information collection attested to the much of what is known about the people. Although microlithic was not found at Ogba-eju, oral tradition characterized *Ujii* as a rock hollow on the sand stone ridge which was used to link *Ohaodu* first settlers in Ozizza in agricultural origin with that of Ukpa about 5000 ï 3000Bp (Hartle, 1967). Based on the palynological studies, the site was dated withinLate Neogene to Holocene period. The area was, therefore, dated earlier than Okigwe (Holocene period) and comparable with Hartleôs date of 5000 ï 3000 Bp (550 ï 1050 Bc) and Chikwenduôs date 2580 ï 80 Bp 2220 ï 80 Bp (1020 + 90 BC) in both Ukpa and Ugwuegu in Afikpo sites respectively. The palynormph studies showed that the underscored area had impact of man and was dominated by Baculate spore, *Cyathidites minor*, *Dictyophyllidite harrisii*, Amaranthaecae, *Monoprites* etc.

The uniqueness of the palynomorphical assemblages of the area at present can be divided into two: the dry and wet vegetation. The dry vegetation pattern was dominated by spores/ferns

Punctatisporites sp etc., while the wet pattern was dominated by pollens and spores. Examples were *Cyathidities minor,* Baculate spore, *Tricolpites* etc. The wet period always promotes flooding in the area and the intersection of these seasons contain coal assemblages, the reason behind littering of pieces of coal at the sand stone hill along the hill in proximity to Cross River and close to Amaori sub-group of villages in Ozizza.

The three sites in Afikpo have the same cultural affinity. Also, in the area of ethnographic resources (fishing, hunting, communication skill and festivities), they are equally the same. That suggests some degree of interaction among the three sites. The interaction was started and initiated from ñ*Ndiegu* ï successors of ñ*Ohaodu*ò (the missing link in Ozizza). There were other connectors such as dietary pattern of the past. This inference came from both snail shells and seed husks recovered from the three excavations conducted so far at Afikpo.

7.2 Conclusion

This research attempt has been able to x-ray the archaeology of Ozizza Community/people in Afikpo scarplands. Features and sites such as Ezemairo Cave, Ogba-eju rockshelters, *Ujii* (*rock hollows*) were located and investigated. Other natural landscapes like sand stone hills, rivers, miniature waterfalls, springs, vegetation and swampy zones were also located.The peopleôs earliest inhabitants were agriculturalists with their ceramic stratigraphy. This was ascertained based on cultural materials at the site. Although coal deposits were caused by the sedimentary nature of the rock, Umeji *et al*. (2012) observe that Afikpo possessed syncline sedimentary rock that was formed by the overlain sanitarian and cretaceous (Danian) deposits. This perhaps was the cause of the coal deposits found on top of sand stone ridges at

Amaori Village. Despite the coal deposits, Afikpo never practised iron smelting, since there was lack of evidence of slags, bellows, lumps of baked earth (that is, furnace walls) and Tuyere in the three Afikpo excavated sites. What that portends is that Afikpo inhabitants (past and present) are self-reliant communities that concentrated only on food production and procurement. This became the reason behind farming, fishing and hunting activities that formed the peopleôs subsistence, as revealed from oral tradition and ethnographic data.

Again, pottery production in Afikpo is a veritable resource. The products are exchanged for monetary value among the Cameroonians, Calabar, Aba and Imo people. The transaction came through canoe transportation from Afikpo across Cross-River to Calabar. Better still, their homogeneity in terms of cultural setting/relics was made intact through pottery making, hunting expedition, fishing with netting, festivals and masquerading which feature prominently in Afikpo and depicts element of solidarity. All these were the binding force over millions of years past in Afikpo. Their solidarity and identity were portrayed in the prehistoric Afikpo pottery communities. Forms, patterns and decorations of pottery making were the same, reflecting and pointing to one descendant ï *Ndiegu*. No wonder the three communities had similar correlation in agriculture, origin, names, settlement structures and patterns, patrilineal affiliation, etc.

The study had revealed high activites of man, human habitation, Palaeo-vegetational and climatic changes, extensively done in these rockshelters. The information was shown from the cultural materials excavated at Ogba-eju Rockshelter 10 (RS/10), with mineralogical and petrographical studies conducted using samples of potsherds. Others were sedimentological studies such as palynological studies and soil samples analysis, clay hardness test, nearest neighbour analysis and site catchment analysis. Also, rock hollows (*Ujii),* from its usage for food processing, points Late Stone Age, which characterized occupation from prehistoric times.

The pottery study joined with mineralogical and petrographical studies had shown cultural similarities and continuity of human occupation in the site in Ozizza with other sites in Afikpo.

In tourism studies, the landscape base on the sporomorph and other analyses mentioned would generate tourism from various fields of life, such as archaeologists is to determine the level of utility of plants by man; geologists is to determine the formation of the rocks and age; biologists is to study micro-environment and bacteria, and botanists is to study the extinct flora and climatic changes.

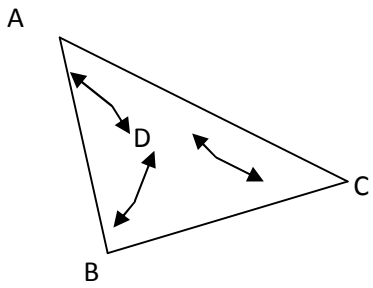
7.3 Recommendation forFurtherResearch

There is need for further research work in the Ogba-eju rockshelters. The further attempt would be to excavate the remaning rockshelters numbered 1,2,3,4, 5, 8 and 9 since they recorded high deposits and cultural materials at the surface.The result would be compared with Ogba-eju rock shelter ten (10) and when it is done, the claim about human settlement and impact of man would be complete. Evidence of pollen sporomorph in the Ogba-eju Rocksheleter (10) now calls for urgent research collaboration between archaeologists and other scientists such as geologists, botanists, zoologists and soil scienctists to look into the samples that would be collected from these Ogba-eju rock shelters 1,2,3,4, 5, 8 and 9 when they are /would be excavated. It is going to be an interdisciplinary research work that wouild aid in Intrepreting the paleoecological changes and climatic changes not only in the Afikpo sites but Igboland as a whole.

Nevertheless, it is obvious that the rock shelters in the Afikpo sites have not been developed for tourism, though many of them have been archaeologically investigated and

documented by different archaeologists, their findings were kept under lock and have kept the sites in state of dilapidation and encroachment. It is, therefore, recommended that the following should be done to safeguard the sites.

Tourism attraction stands the best and easiest opportunity for preserving and protecting the archaeological sites in Afikpo. During tourism planning, host communities ï custodian of the sites must, as a matter of fact, be incorporated and offered opportunities as local guards, interpreters and sites managers. Incorporating the local people will give room for effective and uninterrupted functioning of the sites. This is in-line with Renfrew and Bahn (2000) who stated that the host communities should be involved even during any field work that takes place. Therefore, host communities, archaeological sites and ethnographic results should form the equilibrium triangular in Afikpo tourism development. Mathematical ideaology will be used to illustrate œequilibrium triangularô in achieving effective functioning of tourism system as follows:



A + B + C = D

Where, A = Host community

B = Archaeological sites for development

C = Ethnographic resources for development

D = Equilibrium (effective functioning) that generates and enhances cultural tourism in action.

This would lead to the generation of enormous benefits (socio-economic) in Afikpo.

Again, the curriculum of Nigerian educational system should be reviewed to incorporate rock shelters and archaeological excavation as one of tourists /excursion trips for school children in primary and post primary schools. This, when done, would aid in the promotion of public archaeology ï sector designated for promotion of archaeology among the public. Both schoolchildren and their teachers would have ample opportunity in learning and appreciating the various stages of human occupation and their impact on their economy. Ezeadichie (2000) had narrated stages of human endeavours which started from wild foraging culture of Holocence era to a food production and settled economy in a micro-area. Hence, the tourists, children and teachers would observe and understand what happened when excavation is going on that identifies the stages of human endeavour.

Invariably, tourists, children and others should understand different soil samples: colours and texture dug up from various levels of excavated pits. Soil sample analysis educates tourists on the impact of climate change, settlement patterns and level of human occupation. By and large, other cultural analysis such as pottery technology and usage would be projected to the tourists. This would be generated if pottery houses or factories should be provided as well as potters encouraged to produce miniature pots with beautiful designs in large quantities for souvenir. Potters should also be educated on how to produce locally made clay water filters meant for filtering drinking water as obtainable in Cambodia or Nicaragua in Asian countries

where ceramic water filters are produced (Roberts, 2003, Van-Halem, 2006 and Ezeh and Nwadiaru, 2012). The local potters of Amaeta-Ozizza, Afikpo should be taught the various stages of making the clay water filter, as well as how to manipulate some of the machines involved. Most of these machines are already available in the market. Machines like feed hopper/grinding machine, weighing balance and hydraulic press are used for grinding clay and rice husk for large quantities of clay and rice husk and for pressing the clay in the die moulded to form the shape of the mold. For this new form of pottery to be productive, government (federal, state and local governments) should assist the local potters by re-fashioning these machines to suit the test of the production of locally made clay for water filters. This local and affordable clay water filters would encourage tourists to visit Ozizza in Afikpo and consequently generate revenue for the local people. In Cambodia or Nicaragua today, this traditional-modern wares support greatly the economy of Asian countries.

Finally, based on the mineralogical and petrological studies carried out in Afikpo sites, clay minerals such as quartz, kaolinite, feldspar and illites were evenly distributed. These mineral finds points to the traditional belief that pottery tradition had their ancestral origin from the Ndiegu. Ndiegus were believed to have crossed from Cross River with their pottery technology. It is therefore recommended that further research should be carried out to investigate the linkage between the migrations of Ndiegu from Cross River State to Afikpo with their pottery tradition.

7.3 Contributionsto Knowledge

This research through its findings has made obvious contributions to knowledge by establishing that:

1. there were evidence of human occupation and activites in Ezemairo Cave, Ogba-eju rockshelters and *Ujii* (rock hollows) in Ozizza, Afikpo.

2. oral traditions and ethnographic data from the site helped to validate the analysis from archaeological materials, pointing to the fact that the study area had long ancient human occupation;

3. the study area had witnessed four Paleo-vegetation covers such as rain forest, secondary forest, open vegetation and fresh water swamp;

4. the way of life of the earlier inhabitants in the study area was identified;

5. there were cultural similarity and continuity between Ozizza, Ukpa and Ugwuegu in Afikpo; and

6. cultural features and ethnographic resources identified in the area would aid policy makers/tourism planners in making decisions in the development of the area.

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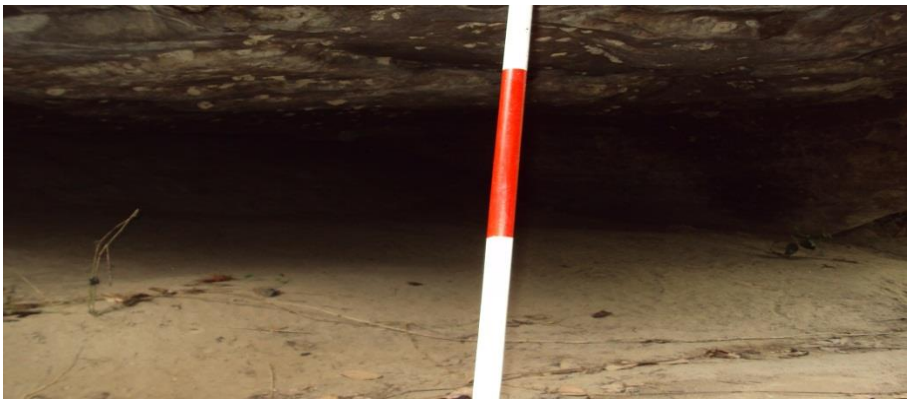
LIST OF APPENDIXES

Appendix 1: Ezemairo Cave

Sources: Field Work (2009)

Appendix 2:Ogba-eju Rockshelters 1 to 10

Rockshelter 1



Rockshelter 2

Rockshelter 3

Sources: Field Work (2011)

Rockshelter 4

Rockshelter 5

Rockshelter 6

Rockshelter 7

Sources: Field Work (2011)

Rockshelter 8

Rockshelter 9

Rockshelter 10

Sources: Field Work (2011)

Appendix 3: Raw data for Soil Samples Analyses

Appendix 3a: Data showing the Soil Structure

UNIVERSITY OF NIERIA, NSUKKA.DEPARTMENT OF SOIL

SCIENCE.

RESULT OF SOIL ANALYSIS.

Spit Level	Text class	Clay (%)	Silt (%)	Fine sand (%)	Coarse sand (%)
0 - 20 cm	LS	7	15	59	19
20 - 40 cm	SL	9	11	56	24
40 - 60 cm	S	5	7	63	25
60 - 80 cm	S	5	3	66	26
80 - 100 cm	S	5	1	67	27
100 - 120 cm	S	5	5	75	15

Appendix 3b: Data showing Munsell Soil colour Characteristics

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RESULT OF SOIL ANALYSIS

Spit Level	Text class	Soil Colour Chart)

0 - 20 cm LS Hue IOYR 6/1 Brownish Gray

20 - 40 cm SL Hue IOYR 6/1 BROWNISH GRAY

40 - 60 cm S Hue IOYR 8/1 LIGHT GRAY

60 - 80 cm S Hue IOYR 7/3 DULL YELLOW

80 - 100 cm S Hue IOYR 8/2 LIGHT GRAY

Appendix 3c: Raw data, showing thepH Value

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RESULT OF SOIL ANALYSIS

S/No	**Sample Description**	**Text. Class**	**Particle Size %**				**pH Value**		**Organic Matter %**		**N**	**Exch. Base me/100 g**				**CEC**	**Base Salt**	**Exch Acidity me/100 g**	**P**
			Clay	Silt	Fine Sand	C. Sand	H_2O	KCl	C	OM	%	Na^+	K^+	Ca^{2+}	Mg^{2+}	Me/100 g			ppm
Spit level	1: 0 ï 20 cm						6.6	5.4											
Spit level	2: 20 ï 40 cm						6.5	5.3											
Spit level	3: 40 ï 60 cm						6.4	5.2											
Spit level	4: 60 ï 80 cm						6.6	5.4											
Spit level	5: 80 ï 100 cm						6.4	5.2											
Spit level	6: 100 ï 120 cm						6.6	5.4											

Chief Technologist: Date: _____

Sources: Laboratory Work (2012)