AN ARCHAEOLOGICAL SURVEY OF SHIRA ABANDONED SETTLEMENT SITES IN BAUCHI STATE, NIGERIA.

BY

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CERTIFICATION

An Archaeological Survey of Shira Abandoned Settlement Sites in Bauchi State by Ahmed. Asma'u Giade (M.A./ARTS/00715/2006-07) has been approved for the Department of Archaeology, Faculty of Arts, Ahmadu Bello University, Zaria in partial fulfilment of the requirements for the award of Master of Arts (M. A.) degree in Archaeology.

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This research work is dedicated to my husband late Adamu Shehu who was thoughtful enough to let me enrol for this degree but never lived to see the finishing point (*Allah ya jikanka da Rahamarsa, Amin*).

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TABLE OF CONTENT

TITLE PAGE _____ i

CERTIFICATION _____ iii

DEDICATION _____ iv

ACKNOWLEDGEMENT _____ v

LIST OF CONTENT _____ vi

TABLE OF CONTENTS _____ vii-xii

LIST OF MAPS _____ xiii

LIST OF PLATES _____ xv

LIST OF FIGURES _____ xvi

LIST OF TABLES _____ xvii

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

1.1 Introduction _____ 1

1.2 Statement of Research Problem _____ 1

1.3 Aim and Objectives of Research _____ 2

1.4 Scope of Research _____ 2

1.5 Significance of the Study _____ 2

1.6 Research Methodology _____ 3

(i) Oral Tradition _____ 4

(ii) Archaeological Reconnaissance _____ 5

(iii) Survey _____ 6

(iv) Ethno-archaeological Studies _____ 7

(v) Written Sources _____ 8

CHAPTER TWO

ENVIRONMENTAL AND HISTORICAL BACKGROUND OF SHIRA

2.1 Environmental Background _____ 13

2.2 Location of the Site _____ 14

2.3 Climates _____ 16

2.4 Vegetation _____ 17

2.5 Geology and Soil _____ 20

2.6 Settlement Pattern _____ 22

2.7 Settlement Pattern in Shira _____ 23

2.8 Economy _____ 25

2.9 HISTORICAL BACKGROUND

2.10 Tradition of Origin _____ 26

2.11 Chronology of Tradition of Origin _____ 26

(a). Pre-Islamic Era _____ 26

(b). The Shirawa Period _____ 27

(c). The Jihad Period _____ 28

CHAPTER THREE

RECONNAISSANCE SURVEY OF SHIRA ABANDONED SETTLEMENT SITES

3.1 Introduction _____ 31

3.2 Birji Abandoned Settlement Site _____ 33

(a) Rumfar Jirgi _____ 33

(b) Shrine _____ 36

(c) Pottery Vessels _____ 37

3.3 Gwadan-gwadan Abandoned Settlement Site _____ 40

(a) Burial Site _____ 39

(b) Iron Slags _____ 42

(c) Dyeing Site _____ 43

(d) Feature of a Human Face _____ 44

(e) Defensive Wall _____ 45

(f) Ruwan Kirci _____ 47

(g) Potsherds _____ 47

3.4 Shirawa Abandoned Settlement Site _____ 48

(a) Rumfar Shanu 49

(b) Isolated Human skeleton 50

CHAPTER FOUR

CLASSIFICATION AND ANALYSIS OF FINDS AND FEATURES FROM SHIRA SETTLEMENT SITES

4.1 Introduction 52

4.2 Classification of Pottery Sherds from Gwadan-gwadan Settlement Site 54

1). Classification Based on Paste Characteristics 55

2). Classification Based on Vessel Parts 56

(A) Body 57

(B) Neck 57

(C) Rim 58

(D) Handle 58

(E) Smoking pipe 59

3) Classification Based on Rims 59

4) Classification According to Vessel Forms 60

(A) Pots 61

Form 1 61

Form 2 62

Form 3 62

Form 4 63

(B) Bowls 64

Form 1 64

Form 2 _____ 65

Form 3 _____ 65

5) Classification of Potsherds into Surface Finish _____ 66

6) Classification Based on Decorative Motifs _____ 67

Motif A _____ 70

Motif B _____ 71

Motif C _____ 72

Motif D _____ 73

Motif E _____ 74

4.3 Analysis of Surface Collection from Birji Abandoned Settlement Site _ 75

1). Classification Based on Paste Characteristics _____ 75

2) Classification Based on Vessel Parts _____ 75

3) Classification Based on Rim/Vessel Forms _____ 75

a) Form 1 _____ 76

b) Form 2 _____ 76

c) Form 3 _____ 77

4) Classification According to Surface Treatment _____ 78

5) Classification According to Decorative Motif _____ 79

4.4 Discussion _____ 80

4.5 ANALYSIS OF OTHER FINDS AND FEATURES

Introduction _____ 83

a) Iron Slags _____ 83

b) Rock Paintings _____ 84

c) Defensive walls _____ 85

d) Dyeing _____ 86

e) Human Remains _____ 87

CHAPTER FIVE

INTERPRETATION OF FINDS AND FEATURES

5.1 Introduction _____ 89

5.2 Types or Sources of Analogy _____ 90

(I) Historical Analogy _____ 90

(II) Ethnographic Analogy _____ 91

(III) Experimental Analogy _____ 92

The Finds and Features _____ 93

(a) Iron _____ 93

(b) Rock Paintings _____ 94

(c) Defensive Walls _____ 95

(d) Dyeing _____ 97

(e) Human Remains _____ 98

CHAPTER SIX

6.1 Introduction _____ 101

6.2 Summary _____ 101

6.3 Conclusion and Future Expectation _____ 105

Bibliography _____ 108

Appendix 1 _____ 119

Appendix 2 _____ 120

LIST OF MAPS

Map 1: Nigeria Showing Bauchi State _____ 12

Map 2: Bauchi State Showing Shira Local Government Area _____ 15

Map 3: Nigeria Showing the Vegetation Zone _____ 20

Map 4: Topographic Map Showing Shira Settlements _____ 21

Map 5: Sketch Map Showing Location of Finds and Features _____ 32

LIST OF PLATES

Plate 1: Geology and Vegetation of the Birji Abandoned Site ____ 33

Plate 2: Entrance to Rumfar Jirgi ____ 34

Plate 3: Painted Images on the Ceiling ____ 35

Plate 4: A close-up view of the Rock Paintings ____ 35

Plate 5: Interior view of the Shrine ____ 36

Plate 6: Exterior view of the Shrine ____ 37

Plate 7: A Pot at the first Rock Shelter ____ 38

Plate 8: Alignment of Three Pots ____ 38

Plate 9: Outside view of the one of the Pots ____ 39

Plate 10: the Largest Pot ____ 39

Plate 11: Topography and Vegetation at Gwadan-gwadan Abandoned Settlement __ 40

Plate 12: Showing one of the Broken Pots at the Burial Ground ____ 41

Plate 13: Exposed Bones ____ 41

Plate 14: Bone exposed by the Erosion ____ 42

Plate 15: Iron Slag ____ 43

Plate 16: Dyeing Site ____ 44

Plate 17: Human-like Face ____ 45

Plate 18: Defensive Wall ____ 46

Plate 19: Another Section of the Wall ____ 46

Plate 20: Potsherds on the Ground of Gwadan-gwadan ____ 48

Plate 21: Entrance to Rumfar Shanu ____ 49

Plate 22: Two of the Painted Cattle ____ 50

Plate 23: Two Other Painted Cattle _____ 50

Plate 24: Fragments of Bones exposed by Erosion _____ 51

Plate 25: Erosion with Fragment of Bones _____ 51

Plate 26: Showing Stamping _____ 70

Plate 27: Showing Groove _____ 71

Plate 28: Showing Roulette with Notching _____ 72

Plate 29: Showing Cord roulette with Banded Horizontal grooves __ 73

Plate 30: Showing Stamping with Horizontal Groove _____ 74

Plate 31: Showing Horizontal Groove _____ 80

LIST OF FIGURES

Pots from Gwadan-gwadan:

Fig. 1: Showing Everted rim with Flat Lip _____ 62

Fig. 2: Showing Straight necked Sherd _____ 63

Fig. 3: Showing Straight necked Rim with thick lip_____ 63

Fig. 4: Showing slightly Everted Rim with round Lip _____ 64

Bowls from Gwadan-gwadan:

Fig. 5: Showing slightly Everted Rim _____ 65

Fig. 6: Showing Straight-necked Rim with Round Lip_____ 65

Fig. 7: Showing Everted Rim of globular Vessel _____ 66

Pots from Birji:

Fig. 8: Showing Everted Rim with Tapered Lip_____ 77

Fig. 9: Showing slightly Everted Rim_____ 77

Fig. 10: Showing Straight-necked Rim with Flat Lip_____ 78

LIST OF TABLE

Table 1: Summary of Finds collected from the Shira Abandoned Settlement Sites 53

Table 2: Summary of Vessel Parts from Gwadan-gwadan Site 58

Table 3: Summary of Vessel Forms (Pots) from Gwadan-gwadan Site 61

Table 4: Summary of Surface Finish from Gwadan-gwadan Site 67

Table 5: Summary of Decorative Motifs from Gwadan-gwadan Site 69

Table 6: Summary of Vessel Parts from Birji Site 75

Table 7: Summary of Vessel Forms (Pots) from Birji Site 76

Table 8: Summary of Surface Finish from Birji 79

CHAPTER ONE

1.1 Introduction

Archaeological data represents the major source of information about the human past. It does not only make significant contribution to our understanding of man's remote past but also more recent periods (Shaw 1975). In Nigeria, the scale of archaeological research is uneven (Ogundiran 2006) and very tentative and sporadic archaeological researches have so far been carried out in the north-western part of Bauchi State Nigeria where the Shira abandoned settlement sites are located. However, this is not to say that the archaeological potentials of the area (Bauchi State) have not been long recognized but the archaeological research in the area have been largely limited to few areas such as Kariyo-wuro and Yankari in Bauchi State. While at the same time researches in the Shira area have been dominated and limited to the rock paintings found at the site. The current research on Shira abandoned settlement sites in Bauchi State is an attempt to bring out and articulate the vast archaeological potentials of the area. Thus, one of the main points of this research will be to have a more comprehensive cultural record of the archaeological finds and features from the Shira abandoned settlement sites which will lead to an understanding of the population groups responsible for these settlements in the past.

1.2 Statement of Research problem

The problem associated with this study is the insufficient information on the cultural development of Shira abandoned settlement sites before the 19th Century. The few available documents on the Shira area concentrate more on the rock paintings, linguistics and tradition of origins of the people than on other aspects of the cultural history of the area. The Shira rock painting sites are one of the four known areas in north-eastern Nigeria which boast of rock paintings (Seidenstickers 1997). Unfortunately, this feature has dominated and

overshadowed the cultural history of this region. Not much attention is given to the study of the abandoned settlement sites in Shira from an archaeological perspective. It has therefore become necessary that an archaeological survey of this nature should be conducted.

1.3 Aim and Objectives of the Research

The aim of the present research work is to document settlement evidence on the Shira abandoned settlement sites as a prelude to a more in-depth archaeological study of these abandoned settlement sites that will lead to a better understanding of the people that occupied these sites.

Specific objective of the research include:

(i) To identify the abandoned settlement sites in the study area.

(ii) To document evidence of human activities on each of the sites.

(iii) To collect, analyze and interpret the material finds, with a view towards understanding the population groups responsible for the settlements in the past.

1.4 Scope of the Research

The research will cover the three identified abandoned settlement sites; two on the hills and its surroundings and one on the plains of Shira. The study will focus on the material culture of the former inhabitants on these identified abandoned settlement sites. This will give the research the much needed data for understanding the extent of the human activities in the area of study.

1.5 Significance of the Study

The significance of the Shira abandoned settlement sites to the archaeology of North-eastern Nigeria is of extreme importance. The Shira area has a lot of undocumented cultural history which have not yet been fully exploited but more have been known about

these abandoned settlement sites from their rock paintings. This study articulates the archaeological potential of the Shira area through the study of three abandoned settlement sites which have a lot of cultural materials in addition to the rock paintings which seem to have dictated researches in the Shira area. Simply put, the archaeology of Shira will provide additional data for a better understanding of the early settlements in this area and significantly adds to the knowledge of the lifeways of the people of the abandoned settlements.

1.6 **Research Methodology**

Archaeology has tremendous scope in terms of subject matter and yet with all the difficulties of the survival of evidence, the archaeologist must still attempt to reconstruct events of the past by acquiring the best body of systematic techniques that will help to achieve the stated aim and objectives (Cole 1972). Thus, research methodologies connote the principles that guide any scientific research and experimentation. The essence of a methodology is to ensure that research work is organized, efficient, and valid (Redmond 2007, Andrefsky 2003).

The research will utilize these valuable archaeological methods of investigation that includes background research of the site through documentary sources, reconnaissance, survey, oral tradition and ethno-archaeology. These archaeological techniques, according to Hume (1975), can be applied to any period, no matter how recent and above all, they are non-destructive (Heizer et al 1967). The research will thus be primarily concerned with what can be seen and is visible on the surface of the earth that will indicate, directly or indirectly the human activity in this area of study. The fieldwork will be based mainly on surface inspection and sampling of finds and features within these abandoned. This will entail studying these artefacts by purely archaeological means such as recording the site in which they were found,

deciphering and describing the shape of the artefacts, ascertaining the dimensions and so on of the finds and features (Iskander 2002).

(i) Oral Tradition

Like most abandoned settlements in West Africa, Shira abandoned settlement sites have no written history. Thus, this necessitates reliance on oral tradition to reconstruct its history. Oral tradition is one of the few available sources that is used to recover and interpret past social formations in non-literate societies and even the existence of written document in literate societies does not exclude the exploration of oral traditions in the reconstruction of the past of such societies. It is often overlooked that oral tradition lies at the root of all human transmission and that when tracing back the chain of written evidence for examples those early antiquarians relied to a great extent on not only manuscripts and archaeological materials but also on variety of oral sources ranging from popular traditions to personal recollections of the elderly and aged (Hampate-Ba 2002). In the end when we dig deep into all those documented historical works; we shall find its origin in oral testimony. No matter the situation, oral tradition plays an important role in archaeological research. It has become one of the fruitful ways to gather information or make enquiries about the background potentials of a study area.

The collection of oral tradition about the Shira abandoned settlement sites was through one on one interview with knowledgeable local informants such as the elderly and the youths, other custodians of history such as Malams, the ward heads and those in specialized field of interest. People were interviewed on tradition of origins, settlement history, on political history and on climatic conditions prevailing in the study area. To record the oral traditions, drawn-up question guides were used for the interviews (app. II) and the medium of communication was Hausa. The use of this common language (Hausa) and shared

cultural identity of the researcher and informants (the researcher is also from the same zone as the people of Shira) was an added benefit, which facilitated the sharing of information. It is important to emphasize that interviews were conducted over a short period of time (two days).

(ii) Archaeological Reconnaissance

The use of reconnaissance as a research tool is not limited to archaeology. In military service according to Kaufman (2007) it is intended for the exploration or examination of an area to gather information, especially about the strength and positioning of enemy forces, while the Encarta encyclopaedia (2007) defined it as the preliminary inspection of an area to obtain geographic data prior to a detailed survey. In archaeology, reconnaissance has been defined as the systematic attempt at discovering and identifying the location of archaeological finds and features on a site (Sharer *et al* 1979, Andrefsky 2003).

The Reconnaissance carried out at the Shira involves walking around the area looking for cultural materials on the surface (White 2004). Doing such exploration helps pinpoint areas of interest. To the archaeologist engaged in reconnaissance, the actual process differs from research to research, but there are some overriding principles that govern most processes. At the basic level, reconnaissance is generally investigative in that they aim to discover the kinds of artefacts and features present (or absent) over an extensive region and its uses a wide range of techniques to record evidence of human activity. To Grant *et al* (2002) there are about two broad and complementary categories of methods used in reconnaissance. The first involves scouting out different parts of the environment to get a general impression of the cultural material base of the area. This method allows a quick assessment of the artefact potentials of the area. Secondly, walkers are spaced at

regular intervals across the field, thereby covering a representative area. Whatever method is chosen depends on the kind of space to be covered during the investigation.

The method of reconnaissance used in this research is field walking. Three different towns were visited searching for scattered artefacts or irregular features of importance that will indicate human activities. The towns were visited on different occasions over a period of twelve days and a decision was finally made to carry out the research in the Shira area. This decision was made based on the rich archaeological potential of the abandoned settlements in the Shira area. The reconnaissance of the Shira settlement abandoned sites was conducted with the assistance of three guides who are residents of contemporary Shira settlement and are intimately familiar with the terrain. The reconnaissance involved walking on foot, searching for abandoned sites with the guides. Two of the abandoned sites that is *Birji* and the *Rumfar Shanu* abandoned settlement sites were known to the local guides and one additional abandoned settlement and finds with features, hitherto unknown to the guides were also discovered during the reconnaissance in the Shira area.

(iii) Survey

Survey has to do with recording as much as possible the identified sites without excavation (Andrefsky 2003). This may include photographing and mapping of features such as houses foundation, Sampling and collecting manufactured article such as potsherds and so on within a site for later analysis at a laboratory. This is why Mosley defined survey as a stock-taking of all the remains in an area and their description in the form of notes, plans and photographs in as full detail as possible without excavation (Sharer *et al* 1979). In essence, Survey in archaeology is meant to record archaeological data by documenting finds and features through photography, mapping, probing, and surface collection of artefacts (Andrefsky 2003). The purpose of such precise recording is to allow the sites to be

reconstruction on any future occasion even without the researcher been present (Cole 1972).

The survey of the Shira abandoned settlement sites was carried out using measurement tape, ranging pole, a scale and a digital camera. Photographs were taken of all the significant cultural and natural features seen at the abandoned sites. The potsherds at each identified abandoned settlement were sampled on the basis of the researcher's opinion of the relative "output" of different areas. The areas with high concentration of potsherds were subjected to a grab-sample strategy which removes samples of the material from the abandoned settlements when seen on the surface. The finds and features surveyed during the course of this study include large pots, rock paintings, defensive walls, dyeing sites, and human burial mounds among others.

(iv) Ethno-archaeological Studies in Contemporary Settlement

Ethno-archaeological techniques has to do with seeking analogous materials widely used in communities in an attempt to understand the technology, function, the purpose of structure, the significance of artistic expression and so on of the archaeological data collected during the course of investigation (Cole 1972). It is a field method that combines ethnographic processes with those developed by archaeologists to pinpoint features of modern-day traditional way of life that might be useful as correlates for the interpretation of ancient material culture collected from the archaeological record.

The ethnographic survey included being a participant observer in pottery making, interviews with potters, recording pottery construction methods through photographic inventory and measuring the vessels. A variety of new information was thus gained as, for example, the key role which pottery seems to play in burial processes. Oral tradition where possible were also collected. The fieldwork gave detailed information of the peoples' resource

positioned among the hills, which surround it on all sides, leaving only a narrow path from north-west and south, otherwise there is no wall. This document not only provided us with the earliest written record about this settlement but gave us idea about the existence of the settlement accurately describing much that remains unchanged today such as mud-walled towns, the main crops were guinea corn and millet supplemented by groundnuts, beans and sugarcane. Crafts observed by Barth are still practised in some village for example pottery and weaving.

Sixty years later in 1911, Falconer, J.D in his book *On Horseback through Nigeria*, noted that the Shira settlement was large and protected by a double fortification and ditch. Describing his first view of the town he mentioned passing between two huge rounded granite boulders which at one time had been barred by an earthen wall. Descending a gentle sandy slope into a narrow plain, he saw the town. To him the town was set and completely shut in by a circle of granite hills which surrounded it. This book provided information about the mountainous area, hills, town boundary, and town walls of Shira and its surroundings.

Prior to this written work by Falconer (1911), Fremantle in 1910 gave account of the oral history of three kingdoms which are often viewed as separate but are said to have been founded around 1211 AD by three brothers known as Shira, Auyo, and Teshena, sons of Marghi king from Borno. By contrast, Migeod (1924) is sceptical of the latter legends and states that Shira, Auyo, Teshena, with their followers came out of Yemen but concludes that there is considerable mix-up in these legends, pointing out that Temple (1922) was of the view also that Shira, Auyo, and Teshena are Marghi, or came from Bagirimi territory and founded the three settlement around the year 1211 A.D (Schuch 1987, Seidensticker *et al* 1997). Despite this inconsistency in the oral traditions, all agreed that there is a common

link between Shira, Auyo, and Teshena and that prior to the 19th century they seem to have shared a history of simultaneous fraternal founding.

Various dates have also been suggested regarding the arrival of Shiraka or Shira (founder of the contemporary Shira settlement) to the settlement. The arrival of this trio has been placed to early 940 A.D. whilst 1400 A.D. have also been given as the probable date. However, Micheal Bross in 1997 stated that the move from Marghi probably took place during the reign of Mai Dunama of Bornu which would place the migration during the first half of 12th Century. He (ibid) also noted about how Shira was conquered in 1807 by the Fulani Jihadist, Malam Zakiyo Ibrahim, a famous teacher and military leader, better known as Malam Zaki.

Most of the earliest written sources especially those from the early to mid-nineteenth century onward examine the available linguistic data from Shira, Auyo and Teshena. It recognizes that Shira, Auyo and Teshena not only shared early history and ethnic identity but also a close linguistic link. The linguistic evidence complied through the ages by Temple (1922), Migeod (1924), Harris, P.G. (1924), Russell G. Schuh (1987), Bross Micheal (1997) all pointed out that Shira, Auyo and Teshena have the same language, or at least were very similar and a fairly extensive wordlist of Teshena language was collected by a British colonial official, Harris, P.G in the 1920's and a very short list of Auyo collected by Migeod (1924) show these languages to be closely related to, if not dialects of Bade. No data on Shira was available when this paper was written, though colonial records suggested that it was closely related to Teshena. A recent research by Michael Bross *"Some remarks on the history of the extinct languages Auyo, Shira, and Teshena, 1997"* has a wordlist of Shira collected by Harris in 1921.

The early 1960s witnessed the overflow of written sources on the Shira rock paintings. The rock paintings at the Shira abandoned settlement sites represent two traditions of rock paintings; the naturalist and anthropomorphic figures. The later paintings at the time of discovery portray a whole new style of art which do not seem to be noticeably similar in technique or subject matter to the known rock paintings sites at Bauchi and Birnin Kudu in Jigawa state. The rock paintings were first reported in 1959 by Bernard Fagg in an article *"Rock Gong Complex Today and in Prehistoric Times"* which he later published in the journal of the Historical Society of Nigeria. A detailed analysis and review of some of the rock painting sites against the background information of known sites was carried out by Seidensticker, (1997) in the article '*The Rock Paintings and Rock Gongs of Shira'*, he gave a detailed account of the rock paintings of six out of the ten sites in Shira which have been registered by the staff of the Nigerian Department of Antiquities in 1964. Today, the Shira rock paintings sites along with that of Birnin Kudu and Bauchi are now inscribed on the National List of Historical Monument in Nigeria by Department of Antiquities (Now National commission of Museums and Monuments) (Seidensticker *et al*, 1997).

Rock paintings of similar nature has been studied and documented by Vaughan, J (1962) and Njidda (1986) in several small villages at Uba Local Government in Borno State. In describing these rock art paintings, it was noted that they are anthropomorphic representation of human and animal figures and are connected to some ritual activities in and around Marghi settlements. Generally, this article will be used to draw analogies for comparative study with those paintings found in the Shira abandoned settlement sites.

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Map 1:12 Nigeria showing Bauchi State.

CHAPTER TWO

ENVIRONMENTAL AND HISTORICAL BACKGROUND OF SHIRA AREA

2.1 Environmental Background

With the most diverse ecological zones in Africa, Nigeria presents a complex geographical and cultural landscape (Ogundiran 2006). The region has three distinct ecological regions: the densely forested coastal region, the open savannah region, and a northern region of semi-desert. These diverse ecologies and climatic regimes have conditioned, if not determined, the cultural historical manifestations of the Shira abandoned settlement sites. The word 'environment' is a phrase that is given different meaning(s) by different scholars at differing situations (Sowunmi 1987, Alabi 2005). It is both a natural and cultural heritage of man and has been described by Sowunmi (1987:134) as"... the biologically inhabitable and inhabited part of the earth, and the living organisms within it". It is thus the total surrounding of man.

Interpretations on the significance of the environment to man are guided by two determinants, these are the environmental determinism and open system views. The environmental deterministic school of thought sees a direct relationship between the environment and man. It argues that the change in the prevailing natural environment during the Holocene led to changes in the way man interacted with his surroundings. But Stahl (1984) in critique of environmental determinism has questioned the causal relationship between climatic changes and changes in the environment and suggest that should a correlation exist, it would not explain why these changes occurred. The open system view on the other hand argues that the natural environment is just only one of the many factors that determine a people's culture and whether the environment is considered the driving force in

cultural change, or merely a factor in cultural development, that the characteristics of any component of a system cannot be understood in isolation (Stahl 1984).

2.2 Location of the Settlement

The Shira abandoned settlement sites are located within the vicinity of present day town of Shira in Shira Local Government Area of Bauchi State. It has a land area of about 1,321.38 square kilometres and a population of between 182,301 to 234,014 at 2006 census (Mamman *et al* 2000, Wikipedia 2010). Its geographical co-ordinates are latitude 11° 27' 20"E and longitude 10° 02' 40"N. It is bordered in the north and north-east by Azare in Katagum Local Government, in the south by Ningi and Ganjuwa Local Government, in the north-west by Jama'are and South-west by Gwaram Local Government of Jigawa State (see Map 2:15). To locate two of the identified abandoned settlement sites of Birji and Gwadan-gwadan abandoned settlement sites from contemporary Shira town. It is about one and a half kilometre East of Shira-Azare road while the *Rumfar Shanu* abandoned settlement is about two kilometres North West of the Shira - Azare road.



Map 2:15 Bauchi State showing Shira Local Government Council: Bauchi State Ministry of Lands and Survey.

2.3 Climate

The climatic condition in any given area is instrumental to the cultural history of a people. According to the research compiled by Food and Agricultural Organisation (F.A.O) of the United Nations the local knowledge of climatic patterns, their variability in space and time, and the ways in which it is predicted, forms an indispensible part of the information utilised by society for its survival. The main climatic belt north of the equator runs east and west across the expanse of West Africa conveniently dividing the region into forestland, grass land and the desert (Onwubiko 1967). The climate of the Shira settlement site is influenced by two prevailing winds that blow from north-east and south-west depending on the season of the year. Consequently, the settlement is hot and humid all the year round with the rain coming from the Atlantic Ocean through the south-westerly wind which are warm and contain moisture. This is the wind that is responsible for bringing the rain that occurs between April and October.

The survey by the acdep networking for development in the northern region of Nigeria (2009) observe that the region is tropical with temperatures ranging from as low as 14 degrees Celsius at night during the harmattan season to as high as 38 degrees Celsius during the hot dry season. The rains begin lightly in April and rise steadily to a peak in August and September and gradually decline by the end of October. The dry harmattan winds engulf the whole region between December and February. In recent years the rains have been starting late in May and peaking later in September and ending in October - November. The inhabitants of Shira further identify and classify other climatic conditions not based the above variation but rather on climatic variability and agricultural activities. Climatic predictions are based on observation of meteorological conditions such as changes in air temperature or movement of certain birds known to the local inhabitants as *samuwa/sambuwa;* the migration

of this bird into the locality signify the onset of rains or beginning of wet season. Seasonal variations are distinguished in the Shira area in five (5) ways. These are:

i. *Bazara*- this is the windy period just before arrival of the rain characterised by windy and high in temperature.

ii. *Damina*- This is the wet season which starts around April to October.

iii. *Kaka'a*- This refers to the harvest period from October to December.

iv. *Funturu*- This is the hazy time of the harmattan cold season.

v. *Rani*- this is the dry and hot season characterised by high temperature.

This climatic variations reflects how the people of Shira organized their agricultural (farming and herding) activities. The climate greatly influenced the economic activities of the people; for example, the wet season is the busiest time of the year for the people due to farming activities and the regularity of these activities is controlled by the amount and distribution of rainfall as well as the length of the season. While the dry and usually dusty period is for such economic activity as shredding of farm produce, clearing of farmland for next rainy season and other activities like crafts and arts (Maiwada Sani, personal Communication April 2008.).

2.4 Geology and Soil

Over a greater part of north-eastern Nigeria surface rock are of precambian, basement complex with crystalline rock. The older granites appear on the surface in the form of inselbegs (Morrison 1976). The Bauchi region which Shira settlement is located is mainly underlaid by igneous and metamorphic rocks and some belong to the lower paleozoic complex, although Jurassic intrusion of younger granites are also noticeable (Mamman *et al*

2000). The geological features of the Shira settlement is made up of many hilly eruptions scattered over the surface of the landscape. These hills include granite inselbergs, flat topped hills and rocks with a variety of igneous and metamorphic rocks (Plate 1:33). These hills and rocks are an important part of the human geography and history of this area. The hills have served as natural fortification and as refuge centre for the past settlement of Shira settlement but still serve as part of the economic income of the contemporary people through stone quarrying.

Soil which is very important in archaeological studies provides a source of information about the past climate, vegetation and animals (ecofacts), as well as man-made artefacts such as ancient metal tools, coins and so on. It can preserve all kinds of things for thousands of years and it strongly influence the cultural record of the past and have become an invaluable indicator of the nature and history of the physical and human landscapes (Holliday 1993). Over time, bits and pieces of cultural material from the past get buried under layer upon layer of soil. A close visual study reveals the soil cover of Shira settlement to be grey and sandy. This sandy soil has granite and schist. This makes the soil cover of the area very fertile. This favours the production of cereals such as maize, guinea corn, millet, sorghum, and others. Cassava and yam are not cultivated on any significant scale because of the length of the rainy season but are however farm for limited domestic use.

2.5 Vegetation

The vegetation of an area is greatly influenced by the climatic condition prevailing in a region for example the variation in rainfall pattern gives the region its distinct vegetation outline. Vegetation is simply defined as the plant cover of the earth consisting of assemblages of plants. Together with physiography, it constitutes the most observable element of the landscape. Vegetation expresses and reflects environmental conditions, particularly climate.

(http://www.onlinenigeria.com). Today, six major climatic and vegetation zones are identifiable in West Africa (see Map 3:20). This ranged from forest to savannah belt and to Sahel-Savannah which gradually gives way to semi-desert in the far north (Onwubiko 1985, Shaw 2002, Andah 1995, Casey 2005). The zones are the Sahel, Sudanic savannah (the Sudan is the belt of open grassland savannah on the northern fringes of the equatorial forest); Guinea savannah, Rainforest; and the Mangrove and Deltaic swamp (Ogundiran 2006). These vegetation bands are for the most part a reflection of the distribution of rainfall as determined by the interactions between two air masses: the cool humid south-westerly Atlantic air and the dry northeast continental wind from across the Sahara (Sowunmi, 1981).

The vegetation of the Shira settlements falls within the Sudanic savannah (Falconer 1971, Ogundiran 2006). and is characterised by trees, short grasses and shrubs scattered over an expanse of grassland. The area is characterised by such economic trees as;

Adansonia digitata (Baobab/*Kuka*) whose parts are used for different purposes

Vitex Diniana (*Dinya*) as fruit

Molinya Oraiferra (*Zogale*) for soup

Tamaridus indica (Tamarind/*tsamiya*) for refreshing drink

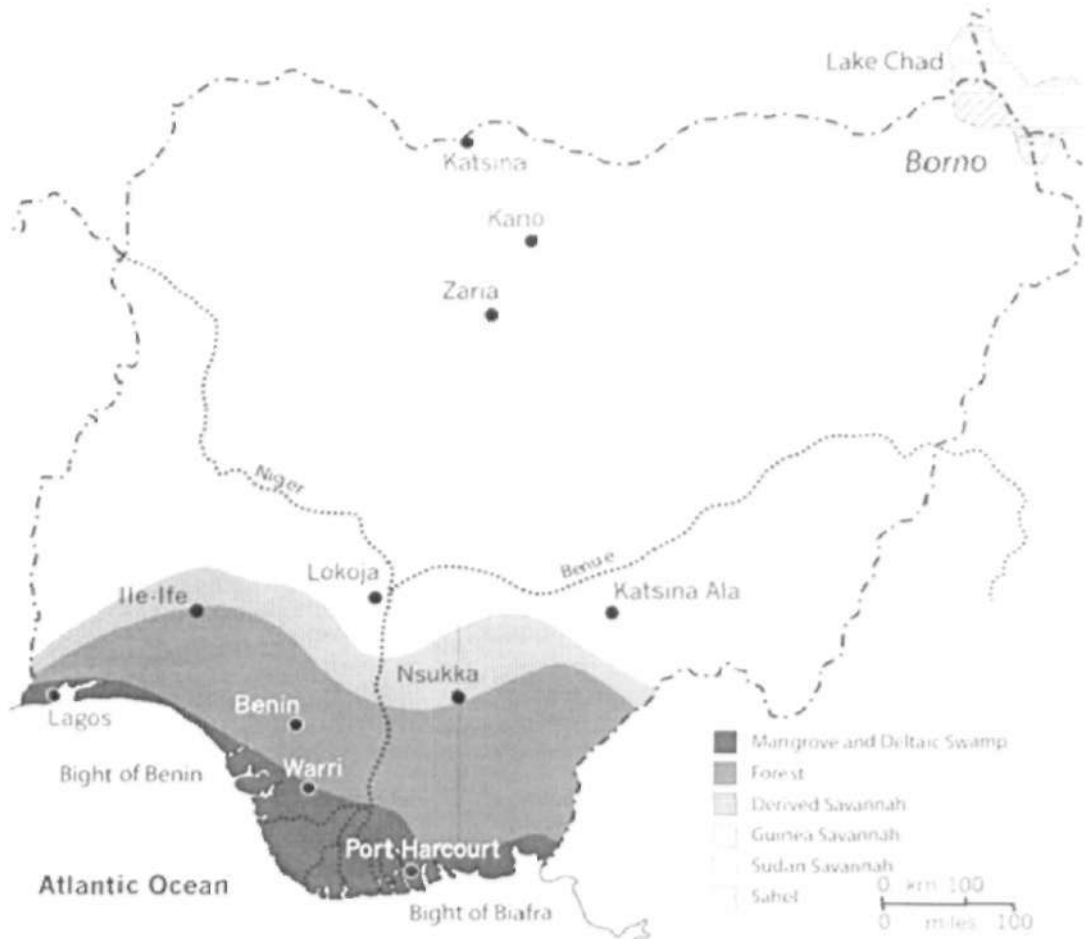
Phoenix reclinata (Date tree/*dabino*).

Magnifera indica (mango)

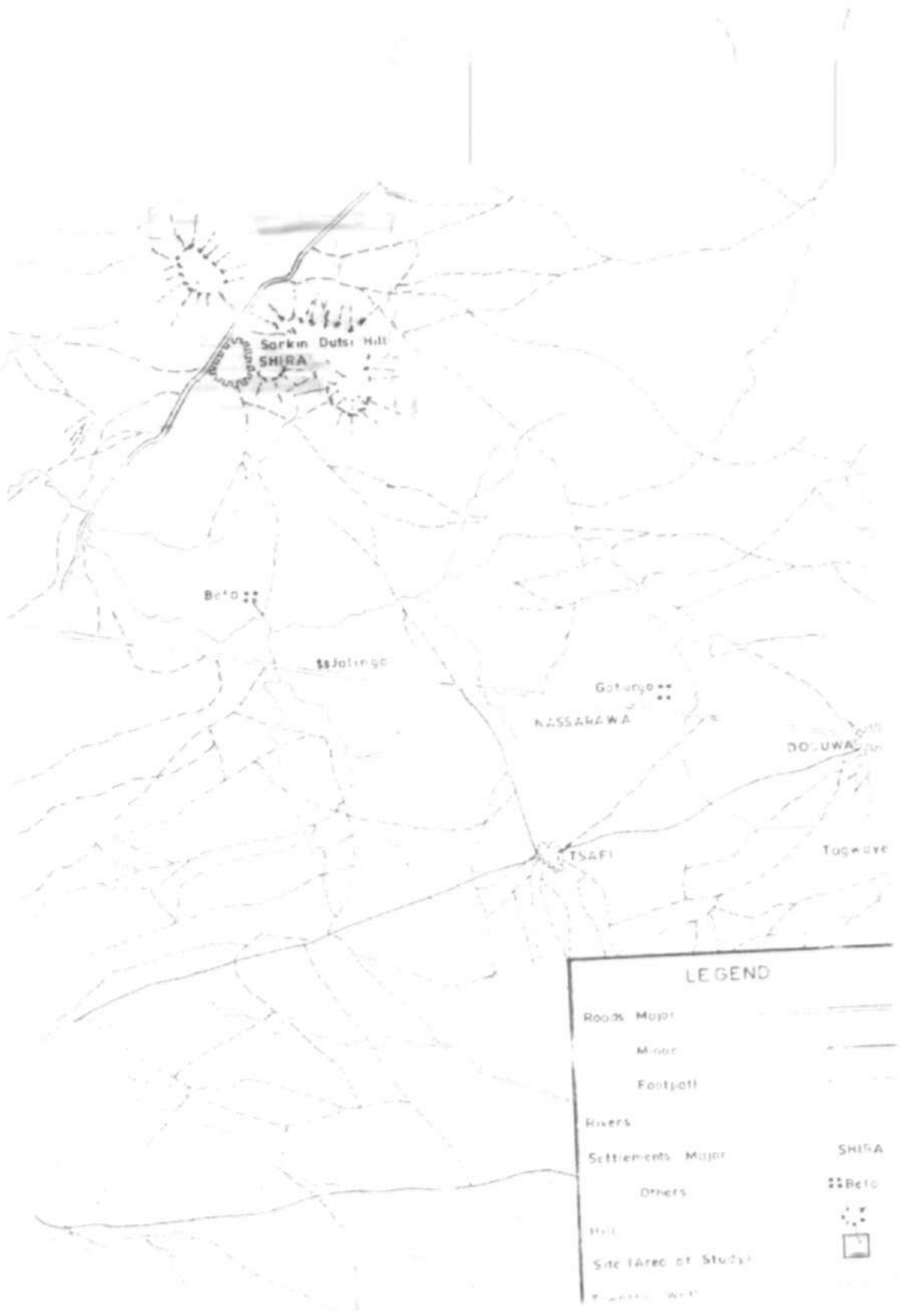
The leave on trees, grasses and shrubs are green during the wet season but gradually turn dull brown or yellowish as the grasses and shrubs dry up and finally the trees shed their leaves during the dry and dusty season. During this period it is only such trees as the baobab

(*Kuka*), tamarind (*Tsamiya*) and grasses along well watered course ways of rivers and streams which maintain their greenish colour.

The Shira settlement shares the same variety of species with other Sudan Savannah belt. Few large animals are found in the area, some of the most popular ones include various breeds of monkey (Obioha 2008, www.nationsencyclopedia.com). There are also several types of poisonous insects like mosquitoes. Reptiles such as lizards and snakes of many species are also found. Only a few collections Birds are found here. This includes species that migrate seasonally to the area.



Map 3:20 Showing the Vegetation Zones in Nigeria (Ogundiran, 2006)



Map 4:21 Shira and Environs: Topographic Sheet 107; Scale:1:100,000

further divided into rooms of either round or rectangular shape. The compound is surrounded by a rectangular raised wall or enclosure of mud or thatch materials usually having one entrance door at the front of the compound. The second type of settlement is the dispersed settlements which are the scattering of isolated dwellings without any central organizational point. This settlement best describe the prehistoric settlement pattern found in Shira hills.

2.7 Settlement Patterns in the Shira Area

Investigations into the traditional village organization and settlement reveal that villages in the area were occupied over a period of time and even when abandon, oral traditions became a reliable source of information on these sites. This is despite the fact that oral tradition as a tool for interpreting the past has its limitations, it is an invaluable source of thought provoking model that provide a starting point for archaeological inquiry (Wickler 2002). The enquiries into the settlement pattern prevailing in the Shira settlement reveal that houses play an important role between man and the physical environment. Housing is a powerful way of revealing one's culture and aesthetic beliefs which was usually expressed by physical nearness (ibid).

It was also established that kinship is an important determinant of the structure of the settlement pattern in this area. The household organization which is very common is one in which two to three families are sharing the same residence. Although this is not unique to Shira alone but to the whole of the North-eastern Nigeria, the kinship is traced paternally. The organization or the grouping of buildings or houses is around an enclosure called *Tsakar gida*. The number of rooms in a compound varies depending on the number of people in it and the need of the household. The buildings which are grouped around the enclosure are usually small and they were used mainly for sleeping and for storage. The *Tsakar gida* or courtyard is used by all members of the families as the place for socialization, as children's

playground, a place for washing, cooking and eating. In most of these courtyards one finds a tree such as baobab (*kuka*) or tamarind (*tsamiya*) located within the courtyard area. The importance of suitable source of water is demonstrated by the presence of a Well or *rijiya* tunnelled either at the centre or tucked away at one corner of the courtyard. Each spouse of a kin keep a medium or large sized clay pot known as *Randa* at the frontage of her room for storage of drinking water and sometimes for bathing during the hot season.

A typical household or *Gida* in Shira area like in most of the towns in North eastern Nigeria consists predominantly of rectangular or sometimes circular shaped rooms with conical thatch roofs made of sword grass or *Zana* (imprerata cylindrical) or zinc roofs. A compound is subsequently divided into a number of important domestic buiidings (*dakuna*) as;

- ***Zauren kofar gida*** which is the entrance to the house.
- ***Dakunan Barci,*** are domestic accommodations with a room, *Turaka* designated for the head of the compound built most often near the entrance of the house.
- ***Dakin girki,*** which is the kitchen usually placed at the centre of the compound and within reach of the female folks in the household.
- ***Bayan gida,*** which is the bathing area with a pit latrine. It is usually an enclosure with a door cover, most often it is not roof and is found at the back or side of one of the women's bedrooms. The bathing area is often used by the whole household.
- ***Rumbu,*** this is the granary in form of a small room. It is for the storage of food surplus.

- ***Akurki***, this is the small room or an overturned medium-sized pot, broken at an angle to be used for entrance into the interior by the birds. The hole is covered when the bird have entered for the night.

- ***Turke***, this is an open area meant for tying of domestic animals such as goats and sheep. Bigger animals such as cattle are not kept within living quarters'. It is situated on any unused space in the household.

- ***Juji***, this is the household rubbish dump. It is located either inside or behind the wall enclosing the housing units but away from the living quarters.

2.8 Economy

The economy in the Shira area is based on land and its exploitation by farming to produce sufficient food for the people. The economic basis of this settlement is mixed farming. The criterion for choosing sites depends on the basis of exploitation of the environment which includes good arable and glazing lands. The people of Shira cultivate such crops as Guinea corn (*Dawa)* sorghum bicolor, millet (*gero*) pennisetum bulrah, groundnuts (*gyada*) voandziea subterranean, beans (*wake*) and so on. Beside been an agrarian economy, hunting appears to have provided a small portion of the people's meat diet. Small animals such as goats and sheep are also kept in the households. The keeping of these animals not only serve as meat diet and source of income but also as a shield against evil. The Shira people are known to have a belief that any misfortune or evil which is directed towards a livestock owner gets redirected onto the animals. Thus, every house hold keeps some kind of animal or birds.

The Shirawa (inhabitants of Shira settlement) also specialise in such economic activities as pottery, blacksmithing, wood carving and raffia weaving which complements the farming activities.

2.9 HISTORICAL BACKGROUND

2.10 Tradition of Origin

The evidence of human existence in this area comes through the finds and features on the sites which are made up of ruins and remains of settlements, rock paintings and industrial sites. Our earliest source for tradition of origins of the Shira abandoned settlements however comes largely through the oral traditions and writings of European explorers and colonial administrators. One of such document was compiled by the District officer of Katagum zone in 1924. It has collection of oral history about the earliest settlers of the area.

2.11 Chronology of Tradition of Origin

The history of the inhabitants of Shira abandoned settlements are loosely organized into three scenarios. This chronology is based on oral political history collected from the contemporary Shira people. These periods are; the pre-Islam era (*Habe* period), the Shirawa period and the jihad period *(Fulani* periods).

(a) Pre-Islamic Era

The pre-Islamic era or the *Habe* period in the tradition of origin of the Shira settlement is based on two basic waves of influxes; the *Karawa*, who were established on the hilltops and the *Kare-kare* which consists of a number of small tribes living together on the plain. The tradition of origin claim these small tribes of settlers were an agglomeration of populations in four fortified settlements walled together with each of the four settlements having a smaller defensive wall and a gate separating it from the others (Adamu 1993).

Today, the only indications of its former occupants is the presence of a rich vegetation, a landscape covered by Baobab trees, a dense concentration of pottery sherds, many broken pieces of grinding stones, scattered iron slag and dyeing pits. Now there is a dispute about whether the people of the hills and those of the plain co-existed together. However material evidences collected through oral traditions and site survey indicates that both the plain and the hills were occupied by human inhabitants.

(b) The Shirawa Period

The history of migration of this period has been linked with Borno Empire. The contemporary Shira settlement is said to have come into existence about nine-hundred and ninety seven years (997 years) before Othman Dan Fodio's Jihad of 1804-1809 (Adamu 1993). The tradition of origin on arrival of the Shirawa claim that Shiraka who is the founder of present Shira settlement arrived in the area with his two siblings; Auyo and Teshena and settled about seven kilometres from contemporary Shira settlement. Another tradition maintain that these three children of a certain king in Marghi in Borno state, Shiraka, Auyo and Teshe were driven out by their uncle and came weswards with their followers to Shira. They found the Karawa inhabiting the hills of Shira and that in the beginning they settled peacefully with them. Later the newcomers overcame the Karawa and wipe them out to establish the town of Shira. The two other brothers; Auyo and Teshe were said to have later moved away and founded the town of Auyo in Jama'are Local Government Council of Bauchi State and Teshena town in Jigawa State. These *Habe* dynasty among which Shiraka was the first ruler had seventy-one rulers, the last of which was called Kuna whose rule ended in 1807 when Mallam Ibrahim Zaki conquered the town for the jihadist The remains of the palace of the Kuna could still be seen some couple of years ago near a certain village east of Shira town called Gwadan-gwadan (Adamu,1993).

(c) The Jihad Period

Shira area was conquered in 1807 by the Fulani jihadists (Fremantle 1910). It is said that even before this Fulani conquest and as far back as 1450-1465 AD, there were about fifteen hundred muslims at Shira (Falconer 1911). So much had been written about the jihad by scholars and so much is still been written about it. But one thing that is peculiar to most of these documents is that the Jihad was fought not because there were no muslim presences but that the Shehu was not happy about the way rulers' syncretised the practice in the economic, political, and even ritualistic spheres (Garba 2002).

However, this section is not so much concerned about the war fought but about how the period characterised a change of settlement history in the Shira area. The oral tradition mentioned that the contemporary Shira settlement was conquered in 1807 by Mallam Ibrahim Zaki who was given the flag of leadership by Othman Danfodio but he was said to have given leadership of the settlement to his nephew known as Muhammad Dan Kawunsa who ruled around 1816-1846 AD (Adamu 1993). He was however said to have been responsible for unifying the settlements on the plain and enticing those on the hilltop to come down and fight with him. One unique aspect of this phase in the settlement history of Shira was the change of settlement from the old site to the present contemporary settlement. This was necessitated by the need to defend the settlement from hostile neighbours. The act was actually carried out by the son of Malam Zaki, Abdurrahmanu Zaki who was given the throne after the death of Muhammed Dan Kawu in 1846 (Adamu 1993). His concern for the security of the settlement led to the choice of contemporary Shira settlement, a site that could easily be defended due to the hilly nature of the sites. The new site is ideal because it was located on a relatively hilly terrain with numerous rocky protrusions forming an angle on the north-eastern side with the

most prominent of the hills called *Babban Dutse*. To the west is a plain and it is within this plain that the new settlement of Shira was found.

The oral tradition collected from Malam Mannir Shira has it that the location was picked out of two areas which Abdurrahmanu Zaki felt were good for the formation of the new settlement. The tradition claims that to chose between the two locations, he tied a cow each at Gwadan-gwadan village and in the Shira area. The cow at Gwadan-gwadan village died while that of Shira area survived. This experiment is said to have indicated to him that Shira area was more suitable to human adaptation than Gwadan-gwadan village. Oral tradition also said about twenty-eight people ruled for a total of about two hundred and fifty years, eight days (250 years; 8 days) under the jihad period (Adamu 1993). At the time of compilation of these names only twenty-two rulers were identified.

s/no	Names of Rulers	Date
1	Mallam Ibrahim Zaki	No date
2	Muhammad Dan Kawunsa	No date
3	Abdurrahmanu Zaki	No date
4	Yasufa Ibrahim Zaki	No date
5	Ismai'ila Malam Zaki	No date
6	Mamman Haji	No date
7	Malam Abdulkadir	No date
8	Muhammadu Barinde	No date
9	Usmanu Abdurrahamanu	No date
10	Muhammad Gaje	No date
11	Suleman Gaje	No date
12	Amadu Gaje	No date

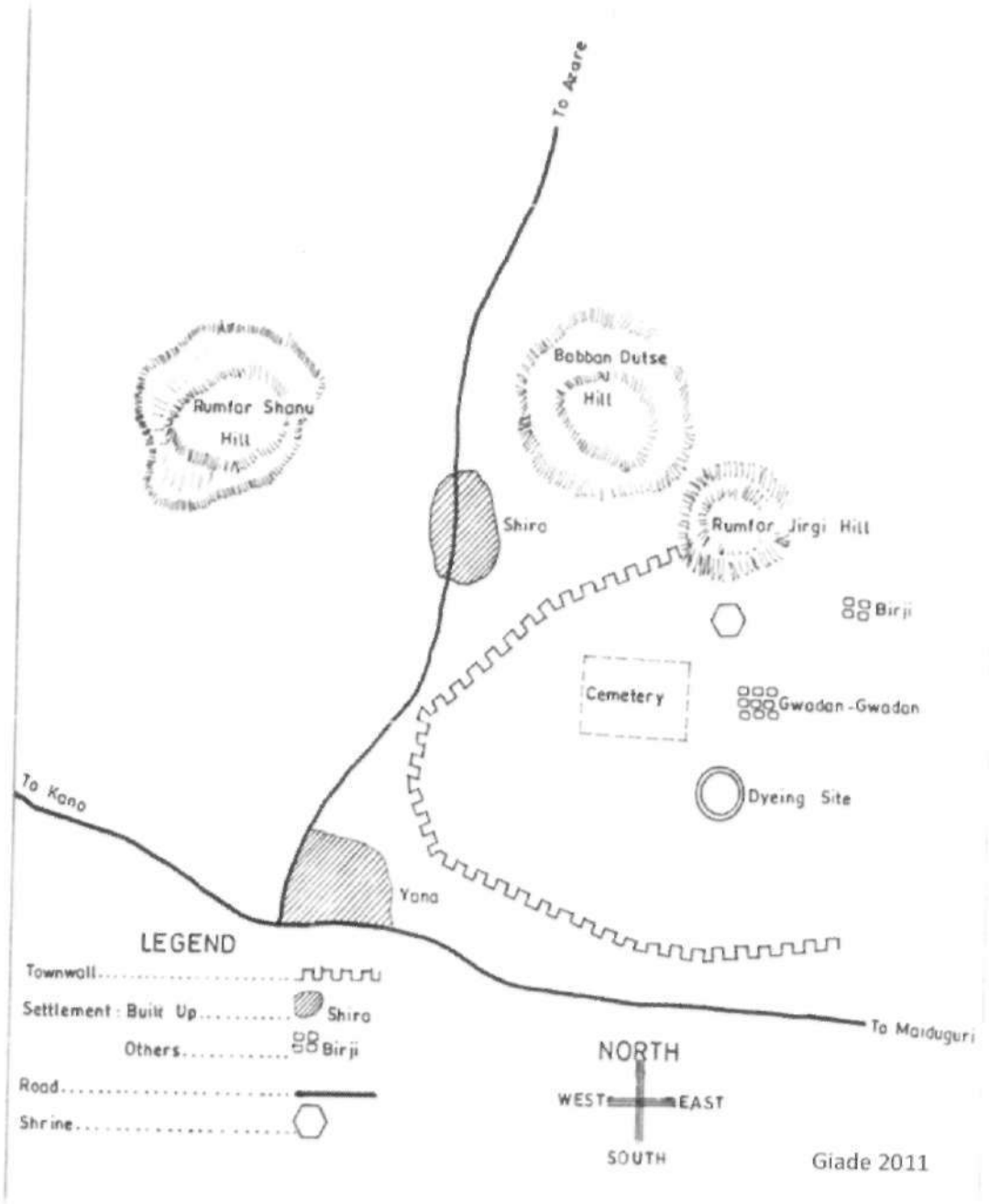
13	Muhammad Gaje	No date
14	Alu Amadu	ruled for seven (7) years
15	Amadu Amadu	ruled for two (2) years
16	Halilu Mohammad	No date
17	Muhammadu Abdulkadir	ruled for thirteen (13) years
18	Umar Faruk Abdulkadir	1947-1961
19	Muhammad Abdulkadir	1961-1968
21	Muhammadu Kabir	1981-1992
22	Aliyu Abdulkadir	1992-To date

CHAPTER THREE

RECONNAISSANCE SURVEY OF SHIRA ABANDONED SETTLEMENT SITES

3.1 Introduction

Reconnaissance is one of the stages taken in an archaeological investigation. It has to do with the physical examination of the surface of a site done with the main aim of determining the importance and richness of a site in terms of cultural materials. It enables a researcher to not only get acquainted with the area under study but allows a quick assessment of artefact potentials for the area. Almost all the landmass of the Shira settlement was occupied at one time or other in the past. This is evident from the widespread pottery sherds seen at the sites. The reconnaissance survey in the area was done through field walking, sampling of pottery sherds in areas of high density and photographing of the archaeological evidence on these abandoned settlement sites were also done. During the field walking three sites were identified and given names based on the contemporary villages which are near the abandoned settlement sites. These abandoned settlements are Gwadan-gwadan, Birji and Rumfar Shanu abandoned settlement sites. A sketch map of the abandoned settlements and their finds and features is given below and details of the reconnaissance survey in each of the abandoned settlement sites is discussed on the pages below;



Map 5:32 Showing Sketch of Shira and Environs

3.2 The Birji Abandoned Settlement Site

This site is situated at the north-eastern axis of contemporary Shira settlement about two kilometres east of Shira-Azare road. The site is characterised by such trees as baobab and tamarind. The site lies about less than 100 metres west of Birji village. The word '*Birji*' is a clayish white soil that is present in the soil cover of this settlement. This kind of clay is mostly found at the sterile layer when digging a well and just before reaching the water level.



Plate 1: Showing the geology and vegetation of the Birji abandoned site.

(a) *Rumfar Jirgi*

Rumfar Jirgi is an overhanging rock shelter found on a hill to the north of Birji village. There are several rock paintings which to the local inhabitants looked like rough drawings of aeroplanes in the roof of the rock-shelter. It is from paintings that the rock shelter derives its name (Plate 3 & 4:35). The composition of the rock boulder, seems to be granite.

The entrance measured 10 meters at its greatest width and it slant downward to about one metre at its lowest end. The rock-shelter is entered by crawling down on both knees to

document rock paintings. The floor of the rock shelter consists primarily of loose rubble of stones with some areas of exposed earth with dry grasses (indicated by the scale on Plate 2 below).

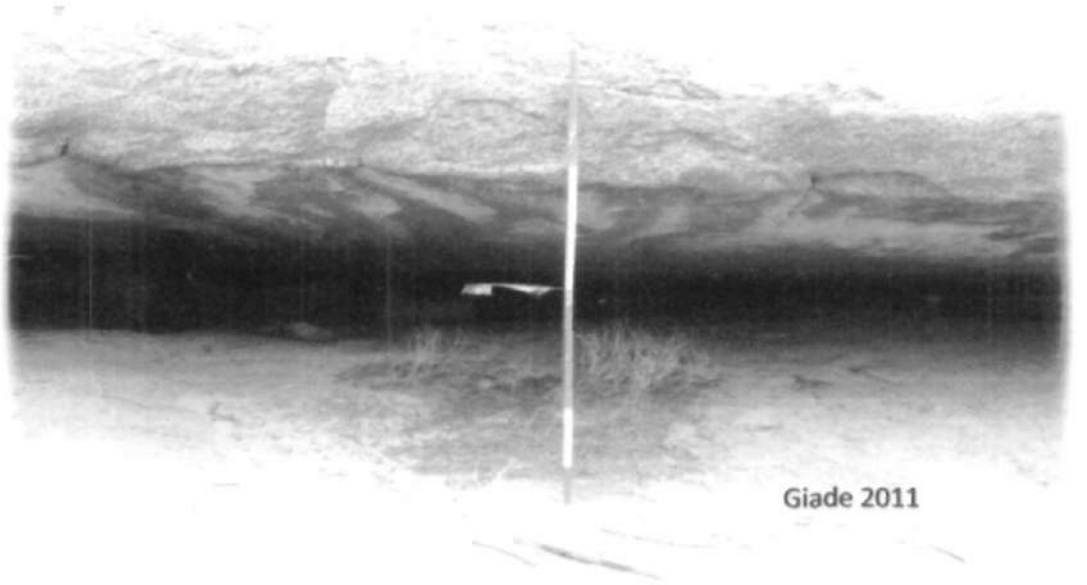


Plate 2: Showing entrance to *Rumfar jirgi* (the paintings are found on the ceiling of the overhanging boulder).



Plate 3: The Painted Images on the Ceiling.



Plate 4: Showing more of the Rock Paintings at *Rumfar Jirgi*

(b). *Shrine*

A small shrine was discovered at the foot of *Rumfar Jirgi*. (see Plate 5 & 6 on page 36 &37). It is small enclosure of overhanging rocks, filled in some places with mud and stone wall. The wall is still attached to rock it was originally built on. It is made of stones, broken potsherds, straws and mud (see plate 6 below) and there is a stone foundation in the place that the wall had fallen. The inside of this hanging rocks (see plate below) have what looked like a snort-like head of an object, made up of clay and debris. It has a measurement of about 2 by 3 metres and a height of about 4 metres. No studies have reported the existence of sacred areas, but there exist oral tradition which claims that the *Habe* people of Shira settlement used to close up their aged kings in a particular shrine until they die.





Plate 5 and 6: Showing the Interior and Exterior view of the Shrine. Notice the rocks embedded into the wall on plate 6.

(c). *Pottery Vessels*

Four of what are identified as storage pots were found in the two rock shelters on the hill known to the local inhabitants of Shira as *Babban Dutsen*. These four pottery vessels measured about 1.40 metre in height with a circumference of 37 cm at the neck. At their thickest part, which is the middle section of the pots they measure 48 cm while the base measured 40 cm. The pots are unburnished, undecorated and unfired except from the inside where there are indications of dark traces of firing. The pots contain some fibre/grasses which the researcher believes was the temper used in the making of the pottery. All the pots are broken at the base (plate 7:38). Three of the pots are situated at one rock shelter (see plate 8:.38) with just enough space to enclose them while the fourth is in a different rock shelter (see plate 9:39).

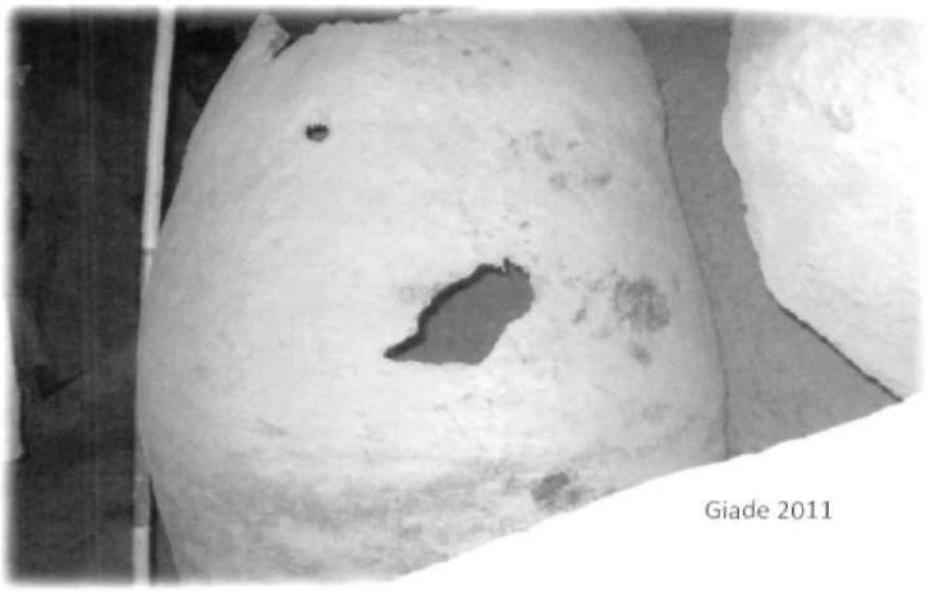


Plate 7: The Pot at the First Rockshelter



Plate 8: Alignment of the Three Pots found at Second Rockshelter



Plate 9: One of the Pots in the Second shelter, notice the Rock Boulder that is used as the Base of the Pot.



Plate 10: Showing the Largest of the Four Pots.

3.3 The Gwadan-gwadan Abandoned Settlement Site

This site is found about one and half kilometre on the south-eastern axis of contemporary Shira town and few metres west of Gwadan-gwadan village. The site is situated on a vast plain, characterised by farmlands in the south while the north-western area is characterised by hills. This site is one the of the three settlement sites visited and is classified as an industrial site as a result of the evidence of iron smelting, abandoned dyeing sites, the presence of thick potsherds and dried water course way. The nature of the site as well as the finds and features seen at this site are described below;



Plate 11: The general Topography and Begetation at Gwadan-gwadan Abandoned Settlement

(a). *Burial Site*

One abandoned burial site, exposed by erosion was identified at Gwadan-gwadan village. At burial ground which lies west of the contemporary settlement exposed bones fragments identified as that of human were photographed (Plate 12:41). The graveyard orientation was east-west. Several big sized potsherds were noticed (see Plate below). This

burial site is identified as an old Muslim burial ground. This is inferred from the Muslim burial tradition that uses pottery in its burial rites. Broken pots and potsherds are usually scattered around and over the dead body of the deceased.



Plate 12: Showing one of the broken Pots at the Burial site.



Plate 13: Showing the Burial Site with Bones exposed by erosion.

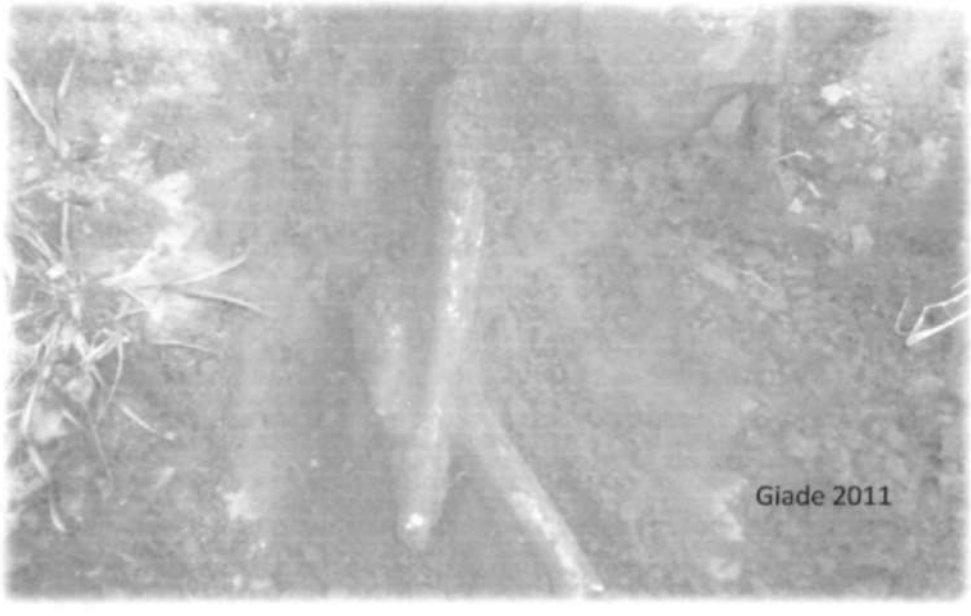


Plate 14: Showing bones exposed by the researcher.

(b). ***Iron Slag***

Pieces of Iron slag were found at Gwadan-gwadan about 20 metres east of the dyeing ground (see plate below). The Encyclopaedia Britannica (2010) defined slag as a by-product form during smelting, welding, and other metallurgical and combustion processes from impurities in the metals or ores being treated. Archaeological research of early iron production usually depends on the debris in the site to figure out the technology and working process of metal working.



Plate 15: Showing the iron slag at Gwadan-gwadan abandoned settlement sites

(c). *Dyeing Site*

Among the archaeological features identified at Gwadan-gwadan abandoned settlement site is a dyeing site situated south-east of Gwadan-gwadan village. No dye pits were seen but fragments of the remains of the dye pits were seen and some potsherds were collected. The mountain of ash at the site was also photographed (Plate 16 below). The potsherds collected from the dyeing site were covered with ash.



Plate 16: The abandoned dyeing site at Gwadan-gwadan

(d). *Feature of a Human Face*

What made the Abuja *Zuma* rock popular was the feature of a human face on the surface of the rock. Here in Shira hills, there is a rock with similar feature. It seems like a two-third facial expression of a human face. The nose, mouth and eyes can be clearly seen from a distance of about 30 metres but once one is close to it the feature blends with the rock and becomes undiscernibly (see plate 17:45). Oral tradition said the feature was that of a man who had offended God and was punished by been turned into stone for eternity. The tradition is however silent about the type of offence committed. Some of the local inhabitants do offer prayers to God for forgiveness for the repose of the soul of the victim when passing this site (Mannir Shira, pers. Comm. April 2008).



Plate 17: The human-like face south of Gwadan-gwadan.

(e). *Defensive Walls*

One of the prominent surface features identified at the Gwadan-gwadan site is the remains of a defence walling system made up of stones and mud. The height of the remains is measured in some places to about 30 cm while at some point it raised to more than one metre. Oral tradition has it that the settlements on the plain were walled with the walls going up the hills and coming down to enclose all small settlements that make up the community. It is said to have had four main entrances with each having its own gate. The defensive walls surrounding these abandoned settlements are on the verge of disappearance as a result of human activities. The people are removing the mud to make bricks for building construction and the stones which make up part of the defensive walls are chipped into smaller particles as gravel for commercial purposes. The sign of these activities is seen and noticed as one approaches this territory. However, some parts of the walls still visible were photographed (Plate 18 and 19 below).

f). *Ruwan Kirci*

Water is one of the most essential elements for life. It covers about 70% of the earth and its availability has always been one of the criterions for the choice of settlement landscape in the past (Swartz, 1958). It accessibility or scarcity accounts for the unstable nature of human settlement, for the incessant comings and goings of people and has been known to lead to the making or abandonment of settlements in the past (Mabogunje, 2002). *Ruwan kirci* is an all year water source which was utilised by the past inhabitants of Shira settlement sites. It is patronized even today by people from near and far according to my informant for its healing powers. The people of contemporary Shira settlement believe the water from the water from *Ruwan Kirci* cures several kinds of ailments or illnesses especially skin diseases. The word *kirci* is a Hausa word meaning a skin disease. It is named so because the present inhabitants of Shira today believe the water cures this skin disease. The *Ruwan Kirci* is an underground water source which gently flows out from the rock bottom. There is a prohibition about visiting the water on Fridays, legend has it that the last people who visited the place on such a day found the place covered up with a white sheet and a huge snake standing guide around it.

(g) Potsherds

Potsherds are by far the most ubiquitous type of artefact collected in the Shira abandoned settlement sites and due to its widespread all the abandoned settlement it is treated as one. See sampling of the concentration of potsherds from one of the abandoned settlement on Plate 24:48. Pottery sherds are not only relatively in abundance on archaeological sites due to the fact that it is very durable but holds clues to past lifeways. Its durability is attributed to the fact that well-baked clay breaks down slowly through time and it can last for thousands of years, whether buried in the ground or lying on the surface without decaying. Thus, this

accounts for its principality and sometimes the largest data found in most archaeological record. The fact that clay pots were usually the primary (and, oftentimes, only) means of storage, cooking, and transport in ancient as very little reuse value after breaking unlike metal makes it one of the abundant cultural materials found in archaeological records (Waselkov 2009).



Plate 20: Showing potsherds in Gwadan-gwadan abandoned settlement site.

3.4 Shirawa Abandoned Settlement Site

This abandoned settlement site is located about three kilometres north-west of the Shira-Azare road in contemporary Shira settlement. The abandoned settlement site was fairly difficult to reach because of the bushy and hilly paths but the particular site visited by the researcher was not very high up in the hill. The site was visited purposely to see the paintings found in this abandoned settlement and of interest with regard to this site, is the fact that there is no settlement in the vicinity which is unlike all the other abandoned settlements surveyed.

(a) *Rumfar Shanu*

Rumfar Shanu is a small and shallow rock-shelter that housed a depiction of rock paintings of four scene of cattle with calves. The four calves are sucking at their mother's udder (Plate 22 and 23 on Page 50). The paintings have faded to the point that water had to be splashed on the rock surface before the paintings can be photographed. This fading may not be unconnected with two factors; one is the seasonal rains which continually fall on the surface of the rock measuring about 140 cm in length. The paintings are found just at the entrance to a shallow rock shelter (see Plate 21 below) and secondly, it was gathered that the nomadic Fulani scratch the surface of the paintings for ritual purposes.



Plate 21: Entrance to *Rumfar Shanu*



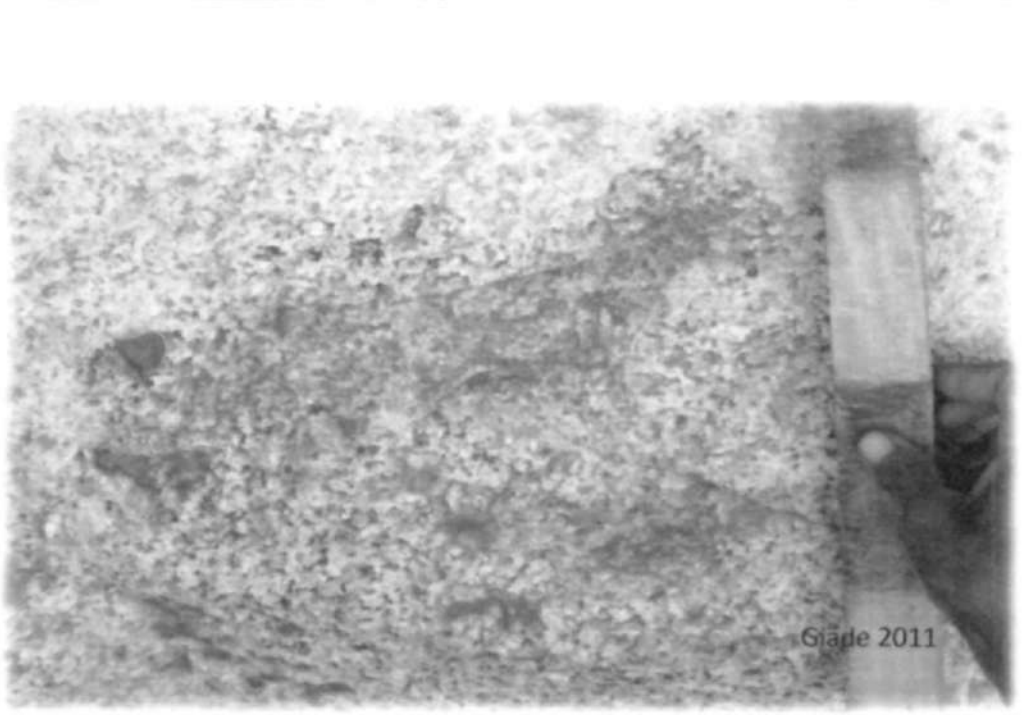


Plate 22 and 23: Showing four out of the eight depictions of cattle.

(b) ***Isolated Human Bones***

A second skeletal remain exposed by erosion was also photographed at a location west of Shira contemporary settlement about 150 metre east of *Rumfar Shanu* (see plate 24 below, Plate 25:51). The surface area of the site is devoid of any other human presence. No

potsherds were also noticed. The skeletal remain is however identified as human, the skull area as well as frame of a body were noticed.



Plate 24: Showing bone fragments exposed by erosion

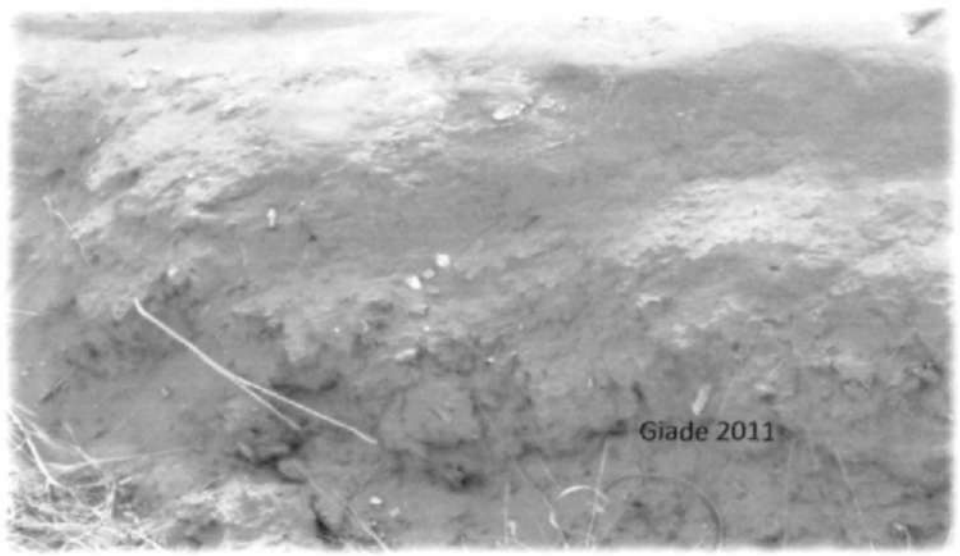


Plate 25: Showing fragments of the skeletal bones.

CHAPTER FOUR

CLASSIFICATION AND ANALYSIS OF FINDS AND FEATURES FROM SHIRA SETTLEMENT SITES

4.1 Introduction

Classification of data is an important part of any scientific study, including archaeology and like other scientists; archaeologists classify artefacts left by past people on sites into categories based on their attributes. This grouping of data based on their attributes not only reduces their complexity but helps the archaeologists to identify and examine the relationships between different types of data from a site. The rationale behind classification and analysis is meant to arrange the archaeological materials in an order permitting a reasonable description of materials found. From this order it should be possible to determine with a minimum of effort the complete range of variation of all products in the life of a community or region depending upon the scope of the particular problem under discussion (Bayers and Johnson, 1940). One should however be aware that wrongly assigning the artefact to a class other than where it should be can defeat the whole essence of the investigation. In other words, artefacts of the same attribute should be grouped together.

When analysing data in archaeology, there is no one standard methodology that must be followed by all archaeologists (Andrefsky, 2003). However, many archaeologists try to standardize the data collected by utilizing a method of analysis common to others in the same region that could be used, if the need arises for comparative analysis between sites. The three of the most useful attributes used in pottery sherds analysis are raw material (stone, metal, glass, ceramic, etc.), morphology (form, including size, shape, design, etc.), and the kind of design etched or stamped on the surface (style, decoration, (Ward et al, 1999). Identifying these attributes has become increasingly important over the last century. Providing

archaeologist with information on many aspects of the past, including chronology, trade and technology (Orton 2000).

The classification and analysis of the archaeological materials from Shira abandoned settlement sites is based on the finds and features collected from Gwadan-gwadan and Birji abandoned settlement sites. A total number of one hundred and sixty-two (162) potsherds, three fragmented tuyeres, two smoking broken pipes and an unidentified clay object were collected during the reconnaissance survey at the Shira abandoned settlement sites. The Gwadan-gwadan abandoned settlement site produced one hundred and eleven potsherds while fifty-two potsherds were collected at Birji abandoned settlement site. The Rumfar Shanu abandoned settlement site was devoid of any potsherds. Thus, none was collected from this abandoned settlement site. This provided seventy-three point six percent (73.6%) as body parts, fourteen point nine percent (14.9%) rims, seven point one percent (7.1%) neck parts and one point one (1.1%) handles. Below is a summary table of the quantity and percentage of the finds and features collected from the Shira abandoned settlement sites.

S/NO	Vessel parts	Quantity	Percentage
1	Body	123	73.6%
2	Rim	25	14.9%
3	Neck	12	7.1%
4	Handles	2	1.1%
5	Smoking pipes	2	1.1%
6	Tuyeres	3	1.7%

7	Unidentified	1	0.5%
Total		167	100%

TABLE 1: Summary of the finds and features collected from the Shira abandoned settlement sites.

4.2 Classification of Pottery Sherds from Gwadan-gwadan Abandoned Settlement Site:

The classification of the pottery sherds from Gwadan-gwadan abandoned settlement site not only describes artefact types, such as different forms of clay objects but also reveal the relationships among different objects of a common type. The first step towards the classification and analysis of the potsherds from this abandoned settlement is cleaning. The cleaning is done by washing the potsherds with water and brush. After the washing, the artefacts are allowed to dry for about three hours; however it can be left longer when necessary. While they are being washed, and at every step in the recording process, care was taken that the artefacts do not get mixed up and that they retain their association with their archaeological context (Waselkov, 2009). After the potsherds were dry, they were bagged according to the sites they were collected for analysis at Ahmadu Bello University, Zaria.

The basic concepts that underline the classification of the potsherds is their attributes. Attributes are those physical characteristics of artefacts that can be isolated or defined with another object (Andah *et al* 1994). This observable individual trait makes it possible to say something meaningful about the artefacts. The potsherds from the site were classified based on three attributes. These attributes are:

1) Stylistic or surface attributes such as decoration and colour.

2) Form attributes such as dimension, shape and size.

3) Technological attributes such as the raw material. The use of the above method helps to identify the different types of potsherds and create a dataset that we can use to look for patterns based on the classified pot types (ULAS, 2007).

The reconnaissance survey at the Gwadan-gwadan abandoned settlement site produced a total number of one hundred and eleven potsherds (111 potsherds). Out of these potsherds four basic parts were identified from the potsherds assemblage. These parts consist of rims, neck, body sherds and handles. It is known that a pottery vessel is composed of five main parts and these consist of rim, neck, body, handle and base (Hodges, 1976). At such the potsherds collected from the site were grouped and separated into these four main parts.

The potsherds from the Gwadan-gwadan abandoned settlement site were classified based on the following headings;

1) Classification based on Paste Characteristics.
2) Classification based on Vessel Parts.
3) Classification based on Rims.
4) Classification according to Vessel Forms.
5) Classification into Surface Finish.
6) Classification based on Decorative Motifs.

1) Classification Based on Paste Characteristics

The classification of the potsherds finds from Gwadan-gwadan abandoned settlement site commenced with visual identification of the paste characteristics of the potsherds. Most prehistoric pottery and even contemporary pottery have certain class of particles added to the

clay paste. These materials called temper or aplastics materials are added to paste clay by the potter to counteract excessive shrinkage, insure uniform drying and prevent cracking and breakage during firing. The vast majority of the Gwadan-gwadan pottery sherds assemblages are plain with red slip and the exterior of the potsherds are well-smoothed. In order to however determine the inclusions in the clay paste, few of the sherds were broken along one edge and carefully observed. It should be noted that the size of the temper can vary significantly, but as a general rule, pieces of temper will be in the range of 1-3 mm, so they can be seen with the naked eye. This visual examination shows that almost all the potsherds fell within fined sand temper with occasional inclusions of coarse-sized sand grains. Other materials known to have been used by early man as temper includes such materials as volcanic ash, grit and bone (McMorrow, 2008). Some of these materials are used in their original condition, others are ground, crushed, or pulverized and then added to the clay paste to reduce or increase plasticity.

2. Classification Based on Vessel Parts

After the identification of the secondary inclusions present in the potsherds collected from Gwadan-gwadan abandoned settlement site, they are further sorted into the different body components. This type of classification is based on the identification of the principal component that constitutes a pottery vessel. These different parts exist together to make-up a pottery vessel with none existing over or above the other. This means that these parts, taken apart do not constitute a vessel. They do so only by taking on a form in a vessel. Ideally, the potsherds collected should represent all parts of the vessel- the base, the body, the rim, and in some cases a neck which has a much smaller diameter than the body. However, it is only four parts (rims, body, handles and neck) that were identified from the assemblage. No obvious base fragments, such as a flat-surfaced sherd or a "corner" sherd, were found among the

almost 111 potsherds examined. This strongly indicates that all vessels either had rounded or pointed bottoms, fragments of which would be curved just like all other body sherds. Even those vessels identified as bowls must have had round bases. This fits the findings of researchers in other region, who have highlighted this trait as one of the key factors separating for example the Rockport ceramics from those of other areas, particularly locations farther up the coast around Galveston Bay and on into Louisiana (Austin, 2009).

(A) ***Body*:**

The 'body' is the principal part of the vessel. It is the middle section which serves as the storage area of any vessel. It is the largest portion and is mostly made in spherical shape. The body begin from the point at which the base is formed and extend to the neck area. The number of body sherds far outnumbered all other parts combined in the Shira potsherds collection. A total number of eighty-two (82) potsherds out of the one hundred and eleven (111) potsherds collected during the reconnaissance survey were body parts. This represents over seventy percent (70%) of all vessel parts collected during the reconnaissance survey at Gwadan-gwadan abandoned settlement sites.

(B) ***The Neck*:**

The 'neck' is the connecting tissue that joins the rim to the main body of a vessel. The 'neck' is usually found inverted or everted and is described as short, high, narrow or wide. Its size and length varies from vessel to vessel in accordance to the function it served. It is generally less thicker than the body part and terminates just below the rim (Joukowsky, 1980). It will however be good to note here that some pots do not have necks. Out of the total number of one hundred and eleven (111) potsherds, ten potsherds were classified as neck parts. These represent about nine point zero percent (9.0%) of the total potsherds collected.

(C) ***The Rim***:

Rim sherds are analyzed in greater detail than normal body potsherds since they generally provide better indication of the form and shape of the vessel (Campell 1962). The rim is found at the very edge of the vessel and is the main or point of entrance of any vessel. It is attached directly to the neck. It is the point found at the uppermost part of the vessel above the neck. Rims are known to flare outward, slope inward, or are simple, plain and vertical. The rim-lips of a pot are also associated with certain treatments. Thus, a rim-lip may be considered squared, rounded or pointed. It is also measured by its thickness and diameter. Sixteen point two percent (16.2%) that is 18 potsherds were classified as rims.

(D) ***Handles***:

Handles are additional parts applied or attached to the body of a vessel, mostly the side of a vessel. It is good to note that most pots do not have handles but it has been known to provide easier and safer way of handling or lifting the vessels that have them. It is interpreted based on its function or non-functionality and sometimes based on the method of attachment that is whether they are vertical or horizontal (Joukowsky 1980). Below is a summary table of the Vessel parts from the Gwadan-gwadan abandoned settlement site.

s/no	Vessel parts	Quantity	Percentage
1	Body	82	73.9%
2	Rim	18	16.2%
3	Neck	10	9.0%
4	Handle	1	0.9%
Total		111	100%

Table 2: Showing the Vessel Parts from Gwadan-gwadan Abandoned Settlement Site.

(E) ***Smoking Pipe:***

Two smoking pipes partially broken were recovered from Gwadan-gwadan abandoned settlement sites. The pipes were plain, thick elbow pipe with an accentuated heel. One of the smoking pipe bowls has a 24 mm orifice diameter and 4 mm thick bowl wall and the stem tapers slightly to the bit end. The second is a fragmented stem of a smoking pipe.

3) Classification According to Rims

In addition to sorting the potsherds by paste and the components that make up a vessel, the potsherds from the Gwadan-gwadan abandoned settlement site were further separated into rim sherds. A rim is not only an element of style but it is also functional (Grace-Bishop 2006). It gives the archaeologist information on the type of vessel, its diameter and general shape. A total of eighteen (18) rim sherds from the site were examined. Twelve of the rims were classified as belonging to the pots category while six rims were identified as belonging to bowls. Seven rim type variations were identified from the assemblage. These are illustrated on Figures 1-7 (Pages 62-66). A rim as discern from the potters in Garande village is applied to strengthen the orifice and for functional purposes such as pouring, lifting, and retaining liquids.

Rims are shaped, reinforced, and elaborated in many ways, taking on a variety of forms and the rim forms identified from this site are either everted, inverted or vertical. The everted rim sherds show evidence of an outflaring both internally and externally while few are slightly everted. The rims (everted) exhibit collars several centimetres beneath the rim. The inverted rim sherds on the other hand show evidence of inflaring (inverted). The vertical rim sherds exhibited sides that were less flared and looked well burnished on both the exterior and the interior.

The rim-lips were also recognized to be rounded, flat or tapered. Two decorative treatments were documented from the rims found from Gwadan-gwadan: This are lip notching and lip grooves. The lip notching occurred as a shallow V-shaped or square depressions impressed using the tip of the finger into the top of the rim. Lip grooving is represented by deep, short and sharp line placed on the top of a thick flat lip. The line is oriented across the long axis of the rim.

4) Classification According to Vessel Form

The eighteen rim sherds were also examined to determine their vessels forms and these fell into two main categories: pots and bowls. Twelve out of the eighteen rim sherds are identified as pots while four are bowls. To find the above recognised vessel forms, the rim sherds were sorted out by their degree of the rim finishing. Potsherds with rim diameter shorter than their projected or vertical height were identified as pots. These specimens usually show evidence of a slightly constricted neck area that then flared outwards towards the rim while potsherds with larger rim diameter than their projected or vertical height were identified as bowls, such potsherds tend to have less pronounced curvature than pots (Greer, 1981). A probable function of the vessel can also be inferred from its shape. Generally a large, wide-mouth jar, with orifices between 40 and 50 cm in diameter manufactured by the potters in Garande were storage containers, while bowls with smaller mouths were recognized as cooking vessels (Austin, 2009).

The rimsherds from Gwadan-gwadan abandoned settlement site had four rim morphology classified under pots while three rim morphologies were classified under bowls. A profile illustration to give a clear-cut picture of the rims profiles can be seen on page 62-64. This profile illustration does not only give better perspective view, but it also shows variations in

form that may not be appreciated from an exterior view. A table showing the distribution of pottery sherds according to vessel forms (pots) can be seen below:

S/No	VESSEL FORM	QUANTITY	PERCENTAGE
1	Form 1	2	16.7%
2	Form 2	5	41.6%
3	Form 3	2	16.7%
4	Form 4	3	25%
TOTAL		12	100%

Table 3: Summary of Vessel Forms (pots) from Gwadan-gwadan abandoned settlement.

POTS:

Form 1:

The two rimsherds that were identified as Form 1 are everted with flat lips (see Fig. 1 below). These rim-sherds have sharp angle of curvature externally and the rim thickness is measured at 12 mm while the rim diameter measured 18 cm.

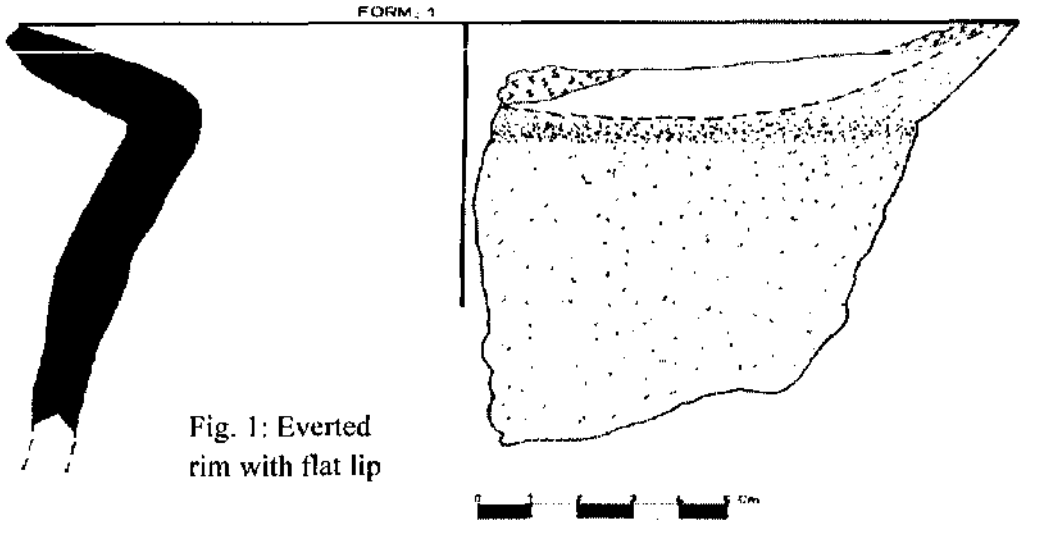


Fig. 1: Everted rim with flat lip

Form 2:

There are five samples of these rim form (see page 63). These are straight necked vessels with an angle of curvature measuring about 3.5 cm away from the lip. The curvature slops outside gently. The rim thickness ranges from 11 mm to 16 mm and have a rim diameter of 30 cm to 32 cm.

Form 3:

These are straight necked vessels. They have very thick lip probably used for carrying the vessel. The lips are flat (see below). The rim thickness falls averagely within 11 mm and

the rim diameter is measured at 40 cm.

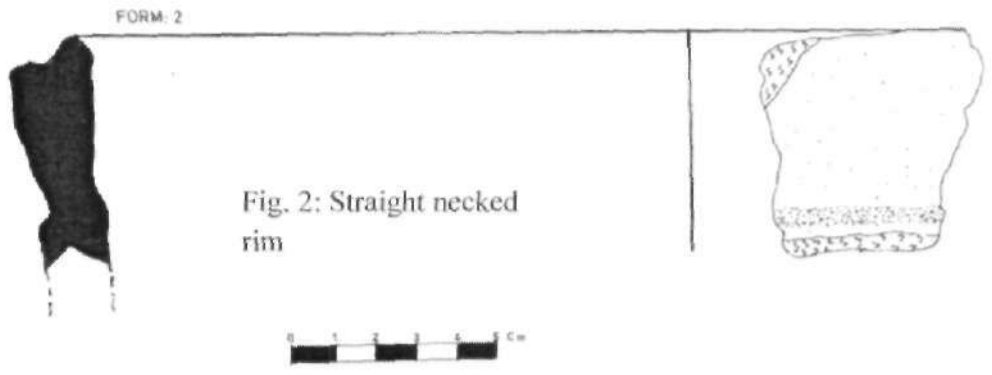


Fig. 2: Straight necked rim

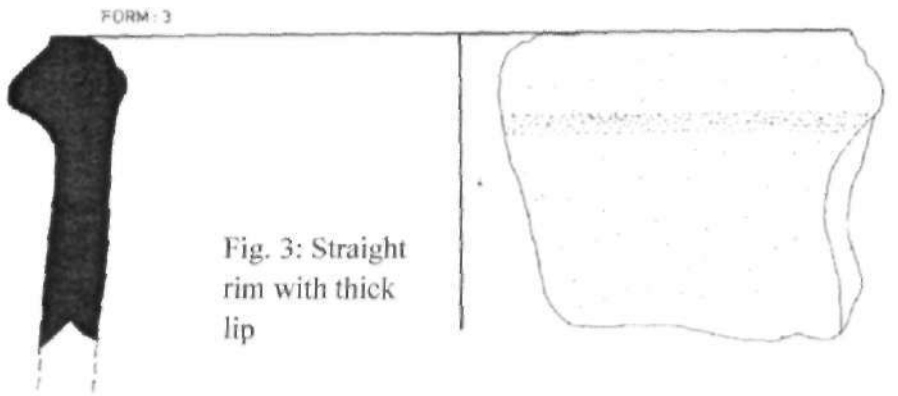


Fig. 3: Straight rim with thick lip

Form 4:

Three of these rim profile were identified as Form 4. These rim sherds are slightly everted with round lips (see page 64). The rim thickness is measured between 7 mm to 9 mm and has a rim diameter of about 18 cm to 20 cm.

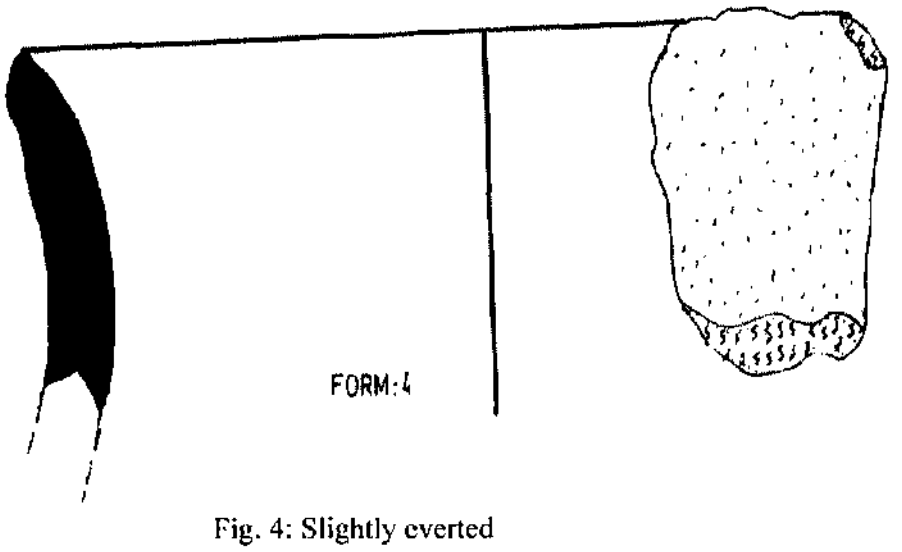


Fig. 4: Slightly everted rim with round lip

BOWLS

Seven rim sherds in the Gwadan-gwadan pottery sherds assemblage were identified as bowls. The profile measurements are discussed and illustrations of the rim profile as well as that of the body thickness are given in the pages below:

Form 1:

Two samples of this morphology were identified as Form 1. The rim sherds are slightly inverted with rim thickness of about 9 mm to 11 mm and the rim diameter was measured at 24 cm. (page 65 below).

Form 2:

These are straight necked vessels with round lips with rim thickness of 9 mm to 11 mm. The rim diameter is measured at between 32 cm to 34 cm (see below).

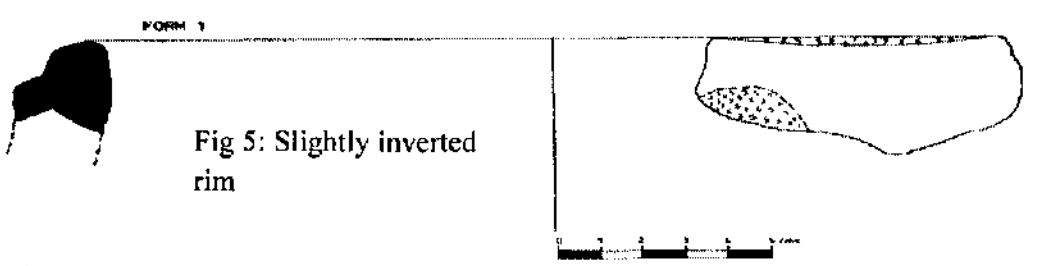


Fig 5: Slightly inverted rim

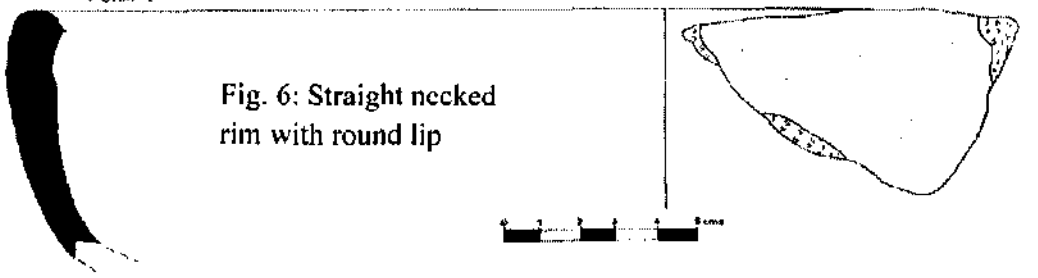


Fig. 6: Straight necked rim with round lip

Form 3:

These are everted rims of globular vessels with rim thickness of 6 mm to 9 mm. The rim diameter falls within 12 cm to 22 cm (see page 6 below).

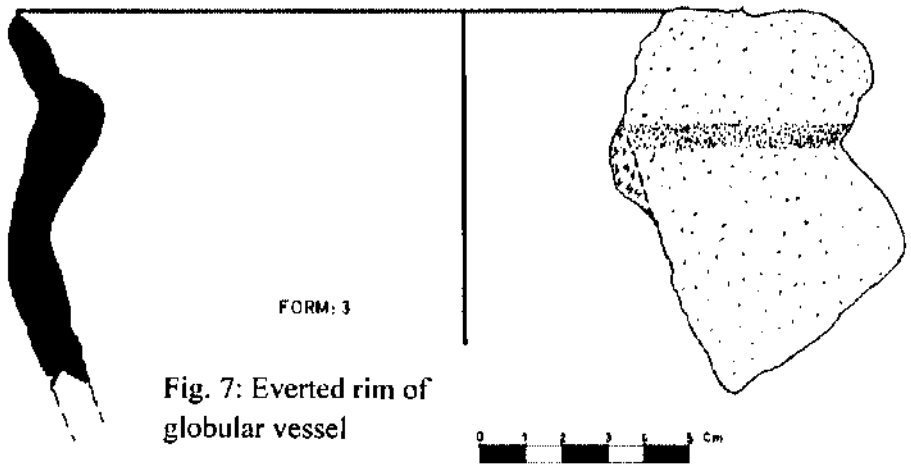


Fig. 7: Everted rim of globular vessel

5) Classification of Pottery Sherds into Surface Finish

The classification of the potsherds from Gwadan-gwadan into surface finish has to do with those finishing touches such as the polishing and smoothing that occurs while the vessel is being shaped to obtain uniformity. According to Sherpard (1980) the term "surface finish" is used to designate all surface features that results from the manner in which a vessel is evened and smoothed during the shaping process and subsequently. The exterior surface

treatment of the potsherds collected from Gwadan-gwadan abandoned settlement site vary from smooth to roughly textured body. Majority of the potsherds from this abandoned settlement site were found to be burnished and about 18% were un-burnished. There were however 12 potsherds that were found to be burnished and have some form of decoration on them. Some of the above potsherds were also found to be both burnished but un-decorated and while some of the un-burnished ones were decorated

Burnishing as seen in contemporary pottery making societies is achieved by rubbing down the surface of a leather hard vessel with a smooth, hard and round faced tool like the surface of a calabash or simply the stick of the maize or guinea corn stack as used by the Garande potters in the Katagum zone. This act in effect not only compact the surface of the clay but also gives a smooth and polished surface. Now when the surface of a vessel is simply left in its rough or coarse state that is without further treatment after manufacture, it is referred to as un-burnished (Browne 1975). Below is the summary of the Surface Finishing seen on the potsherds collected at the Gwadan-gwadan abandoned settlement site.

s/no	Surface Finish	Quantity	Percentage
1	Burnished decorated	12	10.8%
2	Burnished Undecorated	79	71.1%
4	Unburnished undecorated	20	18.0%
Total		111	100%

TABLE 4: Summary of Surface Finish from Gwadan-gwadan abandoned settlement site.

6) Classification Based on Decorative Motifs

The classification of pottery based on its decorative motif has to do with the ornamentation, pattern or design made on a vessel during it leather-hard state or in the course of production (Aleru 2006). There are two types of decorative motifs which have been identified from the potsherds collected from the Gwadan-gwadan abandoned settlement site. These are the additive and non-additive. The additive decoration is achieved by attaching more wet clay to the surface of a vessel while leather hard and there is the relief decorative motif whereby an object or pattern is impressed into the surface of a vessel while also in the leather hard stage. These artistic compositions found on potsherd vessels are done when the clay vessel is leather hard at the early stage of production. This is when clay paste can be manipulated and worked upon to improve its surface. However, a vessel can be decorated upon even after it is fired. Each state offers certain advantages. However, the moist paste is easier to work than the dry (Sherpard 1980).

The creative compositions found on potsherds also come in various forms and differ from one community to the other and from culture to the other (Browne 1975). Hence a vessel may be painted, incised, roulette, stamped, or elaborately carved out with finger indention or even sprinkle with mica (Willet 1967). The bulk of the 111 potsherds from the Gwadan-gwadan abandoned settlement site were undecorated. However, the search for evidence of intentional decorations and/or surface alterations basically produced five main decorative groups: (1) stamping, (2) grooves, (3) cord rouletting with notching, (4) cord roulettes with banded horizontal grooves and (5) stamping with horizontal grooves. These are thought to represent intentional decorative motifs that were produced on the surfaces of Shira settlement pottery vessels. Each potsherd analyzed was photographed to provide a visual record of forms and designs. The photographs tried to capture the profile of the vessel as well as design variation

over each of the potsherds (see Motifs on Page 70-74) and summary of the artistic compositions found in the Shira potsherds assemblage can be seen below.

S/NO	TYPE OF MOTIF	QUANTITY	PERCENTAGE
1	Motif A	3	27.27%
2	Motif B	1	9.09%
3	Motif C	4	36.36%
4	Motif D	2	18.18%
5	Motif E	1	9.09%
Total		11	100%

TABLE 5: Summary of Decorative Motifs from Gwadan-gwadan abandoned settlement site.

(ii) MOTIF B:

One potsherd is identified with a single fine groove line running across the body surface. This pattern is achieved by the use of a blunt object or a carving on a wood and rolled down over the surface of the vessel while it is still leather hard.



Plate 27: Showing Motif B (Groove)

(iii) MOTIF C

This potsherd has multiple decorations that have been identified as cord roulette decoration with notching (Plate 28 below). The rouletting is achieved by rolling a small textured tool held against a leather-hard pot to give it continuous or regular row of crisp texture or pattern. Roulette has several variants that are achieved by rolling over the object quickly to avoid clogging with the damp clay pots (Daniel Rhodes 1959, Greer 1981, Haour, 2003). The roulette can be object carved from wood or corn cob as seen in contemporary Garande society. This second decorative motif identified as notching is a roped-line decoration that is achieved by lightly taping or pitching the added clay paste with the tip of the finger at interval across the body surface.



Plate 28: Showing Motif C (Roulette with notching)

(iv) MOTIF D

There are two potsherds of this roulette variant, identified as cord roulette decoration with banded horizontal grooves. The cord roulette is achieved by rolling a twine or rope over the surface of the leather hard vessel. The grooves start at the point where the roulette panel ends. The potsherd is well fired to the state of being dark.

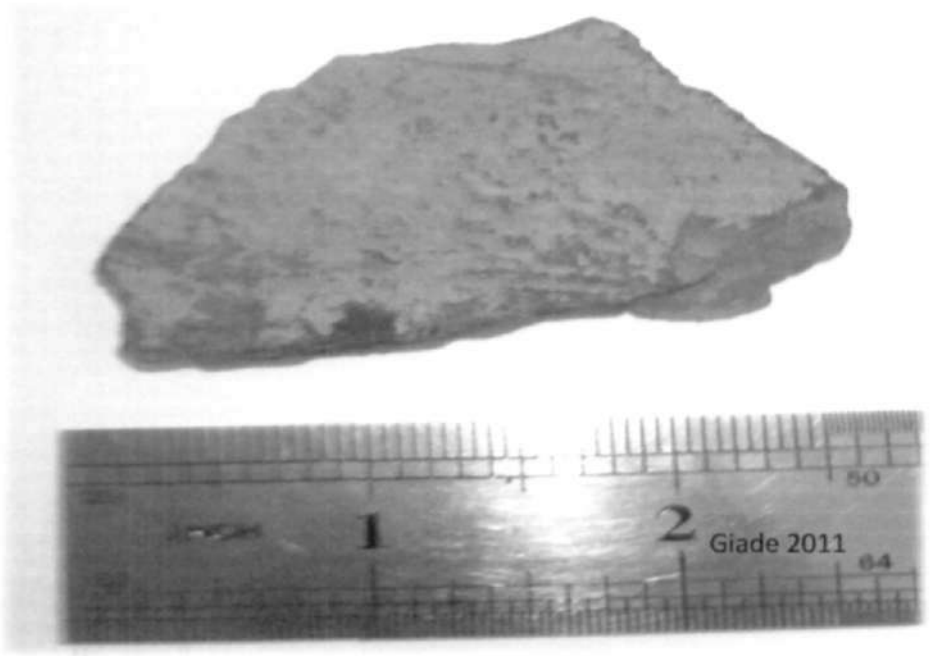


Plate 29: Showing Motif D (cord roulette with banded horizontal grooves)

(v) MOTIF E

This single potsherd was identified as having multiple decorations. The sherd has one single thick line with a series of dots below it. This motif has been described as stamping with horizontal groove (see plate below). The stamping motif is achieved by pressing a pattern already carved out or made on another object. This is placed on the surface of the leather hard vessels to achieve the desired pattern. This act produces an exact replica of the impression already on the object.

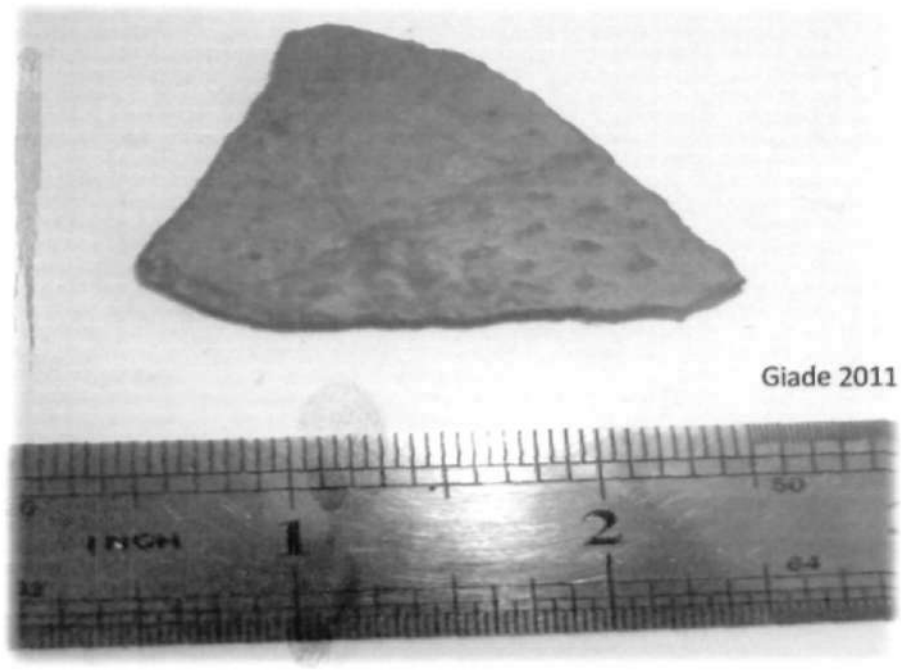


Plate 30: Showing Motif E (stamping with horizontal groove)

4.3 ANALYSIS OF SURFACE COLLECTIONS FROM BIRJI ABANDONED SETTLEMENT SITE:

1. Classification Potsherds Based on Paste Characteristics:

A total of 51 potsherds were collected from the Birji abandoned settlement site. Fine sand grains were recognized as the basic matrix of the sherd, and were referred to as "primary inclusions" in the paste. However some of the potsherds were noticeable tempered with sand or coarse sand and there are few sherds tempered with crushed quartz particles.

2. Classification Based on Vessel Parts

s/no	Vessel Parts	Quantity	Percentage
1	Body	41	80.3%
2	Rims	7	13.7%
3	Neck	2	3.9%
4	Handle	1	1.9%
Total		51	100%

Table 6: Showing Classification based on Vessel Parts from Birji Site

3. Classification According to Rim/Vessel Forms:

The seven potsherds from this were examined large enough to determine Vessel Form, and these fell into seven main categories. Attributes for these vessels are presented in the Tables below. The profiles were reconstructed from sampled rimsherds and the profiles shape indicates that pots were most common vessel form in the Birji assemblage. The vessels are large pots with orifice diameters that range from 20 cm to 32 cm. The quantity and

percentage of rims collected from Birji abandoned settlement site can be seen in the Table below;

S/NO	VESSEL FORM	QUANTITY	PERCENTAGE
1	Form 1	4	57.1%
2	Form 2	1	14.2%
3	Form 3	2	28.5%
TOTAL		7	100%

TABLE 7: Summary of Vessel Forms (pots) from Birji abandoned settlement site.

Pots from Birji Abandoned Settlement Site:

Form 1:

These are everted rim sherds that have tapered lips. The rims have gentle angle of curvature both internally and externally. The rimsherds measurements fall between 10 mm to 14 mm and the rim diameter was measured at about 26 cm to 32 cm. They are four samples of Form 1 (see page 77 below).

Form 2:

This potsherd was identified as an everted rimsherd with an angle of curvature that curved gently both internally and externally. It has round lip with a diameter of 32 cm and a rim thickness of 9 mm. Only one sample of this morphology was identified (on page 77).

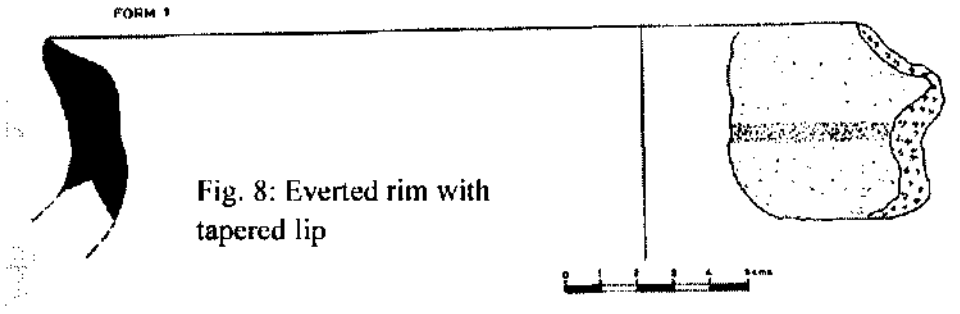


Fig. 8: Everted rim with tapered lip

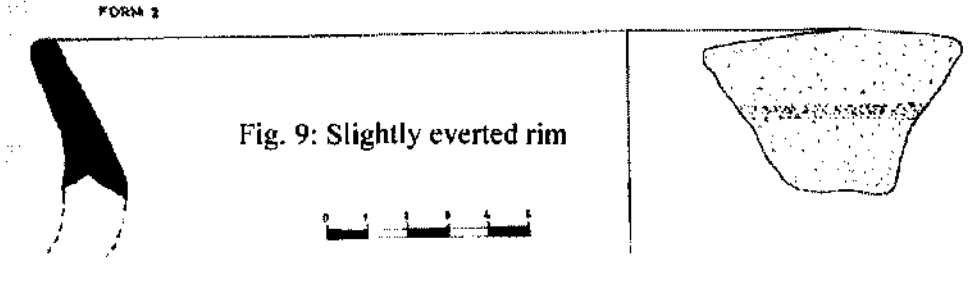


Fig. 9: Slightly everted rim

Form 3:

These are straight necked vessels with flat lips (see page 78 below). The rim neck joint is about 65 cm from the lip. It has a slight angle of curvature around the lip, both internally and externally. It has a rim diameter of 20 cm and a rim thickness of between 8 mm to 9 mm.

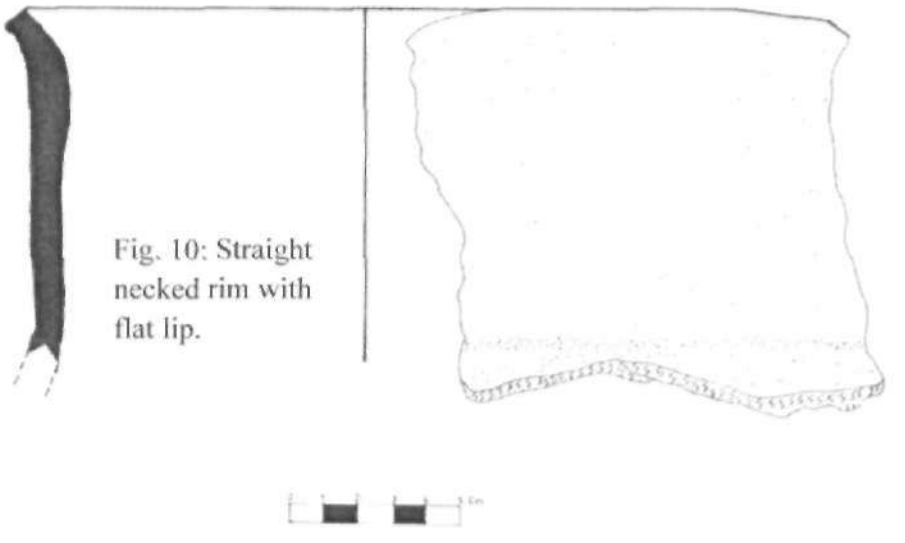


Fig. 10: Straight necked rim with flat lip.

4. Classification According to Surface Treatment

The potsherds from the Birji abandoned settlement sites are mostly polished, plain and undecorated. All the potsherds have some sort of slip applied to the body. A slip is essentially a thick paint or slurry of clay in water having a consistency of thick cream. This paste is applied to the surface of the vessel. The type of clay used for slips is usually chosen for specific properties, essential for the colour that will result upon firing. Apart from deliberate smoothing of the body of the leather hard vessels, the slips also make the surface of the vessel very smooth.

Plate 31: Motif A (Horizontal Groove)

4.4 Discussion:

Pottery sherds give us insight into how people in the past adapted to their physical environments. Among all other objects, potsherd is the most significant material remains used in archaeology for the reconstruction of human behaviour. This is because potsherd is not just an archaeological material remains but it is the end product of the interactions of raw material, culture, and technology (Shrotriya, 2007). Often well-preserved, potsherd can be a source of information about the human past and even the smallest fragments of pots can reveal to the archaeologists how for example it was made and used. More importantly, archaeologists use potsherd to help date sites, and to reconstruct patterns of prehistoric economy, social organization and cultural contact across a region for instance the shapes and sizes of the potsherds as well as the dimensions such as the height, length, and thickness give indication of the form and function of a vessel for example vessels used for storing solid and liquid foods were typically large with wide mouth openings, so that contents could be easily scooped out just like the four pots found at *Babban Dutse* cave. Generally speaking, thicker vessels were put to more utilitarian purposes than thin-walled vessels.

Analyses on potsherds reveal clues about its manufacturing tradition or the cultural behaviour of the people that made them for example the decorations found on potsherds are often described. Some form of decoration includes surface treatments such as painting, slips, glazes, incisions, and excisions. This decoration of the exterior surface indicates cultural values and may be used to date the pot stylistically. This is done when pots of similar decorations and styles are found from other similar sites of close proximity; this can provide a probable date for the pottery ware. The potsherds collected from Shira abandoned settlement sites have the red slippings and vessel shapes are dominated by bowls and pots.

They are mostly well burnished and undecorated. Those that are decorated are mostly with a single or multiple groove, notching and corn-cob roulette.

An ethno-archaeological survey of pottery production was conducted by the researcher in Garande, the only village around contemporary Shira settlement that still produces pottery. This was done because despite the availability of pottery substitutes such as metal, plastic, and glass, the people of Shira settlements were noticed to still need and use pottery objects on a daily basis for culinary purposes, storage of water and so on. Secondly, there was the need to find out about a source and link for the abundant pottery sherds seen and collected from the abandoned settlement sites in the Shira area. This can be used to address critical issues like social interaction, exchange and trade networks between abandoned settlement sites. The objective here is to undertake a technical study aimed at understanding the way in which the raw materials for pottery production were used at Garande village. It is hoped that this will help the researcher understand the form or nature of social interactions that took place on these abandoned settlement sites and between the abandoned settlement sites.

Two elderly female potters in the village and one elderly man were interviewed about a possible link between the Garande settlement and the Shira abandoned settlement sites. The female potters in Garande provide most Shira residents with their pottery, and many households in Garande village have women who are active potters. The source of the raw materials and production techniques of the pottery making was also sourced.

Two possible clay sources for ancient and current pottery production was recorded as well as the technique for the manufacturing of pottery. What was noticed is that the Garande pottery production relies on hand-building, rather than wheel-made construction techniques (Longacre, 1981, Stark *et al,* 2000). Large pots are used to store water while medium size

pots are used for cooking. The potter also uses red slip for Surface finish on the pots. There was no possible link between the people of Garande and those of the Shira abandoned settlement sites as oral tradition collected indicate that the people of Garande claimed their ancestral home to be Borno State and still speak some form of Kanuri language. The people have their own separate abandoned settlements independent of the Shira town.

Comparisons at this level of the investigation is based on reliance on surface finds and features such as potsherds collected from the Shira abandoned settlement sites. The widespread distribution of potsherds at the Gwadan-gwadan and Birji abandoned settlement sites indicate that it was commonly used even though the amount of pottery from the Birji abandoned settlement site is not great in comparison to the nearby abandoned settlement site of Gwadan-gwadan. The Birji potsherds are largely like those collected from the Gwadan-gwadan abandoned settlement sites are undecorated, though few had some sort of decoration on them. This similarity is looked upon as representing cultural elements which have been diffused between the two areas and suggest that both sites have been occupied most probably at the same time.

It must be emphasized that at the moment the Shira cultural material has no chronological resolution. The reliance on surface features such as potsherds is not enough data for understanding settlement history and definitions of the site sizes. First, reliance on surface features alone exclude early deeply buried sites and secondly, site sizes are systematically underestimated when based on surface finds alone. It is only through future excavation of selected sites that we will be able to understand better the cultural history of the people of the abandoned settlement sites at the Shira area.

4.5 ANALYSIS OF OTHER DATA

Introduction

Data analysis is not unique to archaeology but it is considered a vital part of archaeological research and a necessary preparatory step towards making interpretations about past human cultures. Archaeologists analysed their data because it is a reflection of human behaviour and an indication of man's interaction with his environment. It offers the opportunity to penetrate beyond the superficial to the fundamental, to recognize aspects that would not otherwise be appreciated. It has been defined as the examination, description, and identification of material cultures, as well as consideration of its broader meaning (Shepard 1985). Data analysis is conducted after fieldwork is completed and it is a necessary preparatory step to making interpretations about past human activities.

a. Iron Slag

Iron working in Africa has long attracted attention from researchers both in terms of its technology and its symbolism (Schmidt, 1996). Given its resistance to weathering, slag is usually well preserved in archaeological site. Slag is the silicate complex formed in a bloomery process when iron ore is reduced in a smelting furnace (Friede *et al.* 1983). They provide useful information for archaeologists to deduce, characterize and reconstruct the early iron working process and technology. The composition of the slag found at Gwadan-gwadan abandoned settlement site does not just reflect component of raw material source, but also the technology and working process of the human behaviour involved in its manufacture. When properly studied, the slag will provide clues to the technical aspects and processes used by the past people that worked the iron.

The information about ancient iron production technique can be obtained from the remains of its slag for example because there are different kinds of slag just as iron ores have different kinds of impurities in them and the mode of removal of slag after production gives it a unique morphology that can be used today to differentiate between the different techniques that was used in the production of ancient iron making techniques. This slag patterning arises as a result of the reducing conditions and production processes iron ores are subjected to during manufacturing of iron implement. The analysis of iron slag is based mainly on the chemical composition, size and shape or its external appearance. The external appearance of slag can reveal the technical process undertaken to process the iron for example, Blast furnace slag is usually glassier in appearance and lighter in colour. Slag from the bowl furnace tends to be smooth because the slag is molten during the smelting process and has not been tapped. This is because the hot and liquid slag is removed along a channel, and cooled outside the furnace. Thus, this method is a valuable tool with which to reconstruct the iron working technology of individual cultures, allowing for an insight into the methods and practices of past smelters. The iron slag which was found in the Gwadan-gwadan abandoned settlement site appears to have a flowing surface with large bubbles (See plate 15:43).

b. Rock Paintings

The subject matter of the *Rumfar Jirgi* rock painting site found at Birji abandoned settlement is a rare occurrence in the rock paintings sites found in Bauchi State. The paintings portray a whole new style of art never seen before in the state. The rock paintings in this site differ greatly in technique and subject matter from other rock paintings found in Bauchi State and is found in only one other state in the whole of the North-eastern region of Nigeria. Basically, the paintings are composed of anthropomorphic motifs, whose meaning at the

moment eludes the researcher. It appears there are no oral traditions alive today in the Shira area with regard to their meaning.

The Shira rock paintings complex also has cattle rock paintings tradition. The animals are in scene of four figures of cattle and calves and the calves appear to be nursing. The existence of the cattle painting traditions can help to date the rock painting complex. Researchers over the past decades have placed this subject matter to between 5000 and 1000 BC (Shriedter, 1984). It is rare to find both the anthropomorphic paintings and the cattle paintings tradition existing in the same location and most of the paintings which have been discovered in other rock painting sites in the north-eastern Nigeria are those of the animal traditions. The Shira settlement rock paintings sites are the only documented rock painting complex to contain both traditions.

The subject matter of the rock paintings in the area of study can thus be grouped as animals, human and symbols in dark red monochrome. (Plate 22 & 23: 50).

c. Defensive Walls

Features such as walls or fences, ditches and banks have been built in ancient times for a variety of reasons and their functions in the society are found to differ from one society to the other. According to Jacobsen (1981) the fencing of a society by a wall or fence differs in purpose from one society. The function of the presence of such feature may be symbolic that is to create a sense of community or functional for instance to keep people or animal in or out. Whatever the reason may be, the need for defensive walls has since disappeared with the occupation of the British in West Africa in the beginning of last century. Human settlements today have no fortifications and are usually founded on choice locations on the plains rather than on hilltops. The walls of Shira area, which circumnavigate the abandoned settlement at Gwadan-gwadan according to oral tradition have outer and inner wall and that

the outer wall had four gates. But we have not yet discovered these gates due to poor preservation of the ramparts owing to modern human activities like farming and so on (Ogundele *et al,* 2006).

Oral tradition claims the defensive walls of Shira were not built until the late 19th century during the brief reign of the daughter of Abdullahi Kuna, the last of the *Habe* ruler of Shira settlement who was holding the throne for her father who had travelled. It is claim that she heard of a raid been organised to their settlement and gathered her people to fortify the settlement within a day. Thus, by the time the raiders came to the settlement they could not gain entrance due to the raised walls. The walls are now in a form of mound of about 2.5 in height with a thickness of 1.7 in some sections while some sections have been measured to the height of about three metres.

d. Dyeing

According to the 'Dyetext article' in Appropaedia (2007) the technique of dyeing predates written records and in Nigeria, the art of the primitive dyeing evidently predate the coming of the European as Heinrich Barth (1857) observed not only the cultivation of indigo plants in Baghirmi but gave a list of villages most famous for the production of this dye during his travels.. He also noted the high quality of dyeing in Kano and the effective manner of the art of the dyeing process. During his travels in Adamawa State of Nigeria, he noted the way the people built and mixed the indigo in the dyeing pits. He noted how the leaves and twigs are taken from plants which were cultivated by the natives. After the leaves and twigs have been dried and pounded they are added to water. All these indicate that the industry of gathering plants and extracting the dye and the art of dyeing itself was older than the period of Henrich Barth's visit in 1857. The Gwadan-gwadan abandoned dyeing site is surrounded by a mount of wood ash measuring about 1 metre in height with a width of about 3-4 metres.

e. Human Remains:

The investigation of cemeteries and other burial practices have long been an aspect of archaeological research that has inspired very diverse responses from archaeologists and the general public alike (Williams 1997). These have ranged from uncertainties regarding the correct procedures for excavation and processing to ethical and religious beliefs. Anyone who embarks upon the investigation of human remains should have a basic knowledge about the societal ethical beliefs to avoid any controversy and extensive field photography is a must (Gruspier 1989).

When people started burying their dead is not known but there are sites containing signs of the first simple but purposeful burials in graves dating to as early as 40,000 years ago in Europe and Southwest Asia (Sue 2000). This information collected from the study of human remains is valuable to not only archaeologist but anthropologists and other scientists because it provides unique direct data and because it allows us to answer questions about prehistoric human life in great depth from many different perspectives. It offers a direct, tangible evidence of our history, how we have become biologically suited to the many environments in which we live, and how we behave (Landau *et al* 1994).

Analysis of human burial remains according to Jones (1984), involves three major areas: graves and associated structures, grave goods, and human remains. Each of these categories have its own distinctive way of analysis. The analysis of graves and associated structures for example involves the study of grave shapes and sizes in relation to the burial - too large or small? Measuring the depth, fill, profile of grave cut and looking at the type and position of graves goods were available. Apart from the above methods one has to also keep a catalogue of the structure such as the burial mounds and finally interpret the burial position and the associate goods. The analysis of grave goods on the other hand involves some or all of the

following keeping a detailed catalogue of all objects by grave or by type/function, including finding parallels from other sites, and if possible dating, drawings or photographing of all objects of interest

The analysis of the human remains in the Shira abandoned settlement sites is based on burial sites found at Gwadan-gwadan abandoned settlement site and that found at the Rumfar Shanu abandoned settlement site. The burial site at Gwadan-gwadan contained about eight individuals, all adults and no infant grave was noticed at this site. This may be due to decay and decomposition which is effected by the acidity of the soil, damaging and destroying skeletons in specific areas, but not others. Other factors according to Antoine, (2008) that can have an impact on the number and/or distribution of skeletal remains is that out of the "total dead population", only a proportion is likely to have been buried at one site. All the graves were aligned east-west with heads to the east, some had large potsherd still visible. The burial pattern at the Gwadan-gwadan burial ground indicates organized or formal burial. The vast percentage of scattered pottery sherds on the site also indicate that the proportion of the site may be greater than what have been seen.

The burial custom that was registered at the *Rumfar Shanu* abandoned settlement site differs from that of Gwadan-gwadan abandoned settlement. It consists of a solitary body exposed by erosion. No potsherd was evident here and the orientation of the grave was north-west. It was not possible to ascertain the original form of the grave or the individual due to erosion.

CHAPTER FIVE

INTERPRETATION OF FINDS AND FEATURES

5.1 Introduction

Interpretation is the most important step in archaeological research. It has to do with putting together all the data gathered or collected during the background research, reconnaissance, survey, excavation and laboratory analysis into a coherent account that makes meaning (archaeology.com). To reconstruct the relationship between human and their artefact is not an easy task; it needs not only logic and reliable hypothesis but also involves a set of tools and techniques to effectively offer a realistic pattern of past human behaviour or cultural changes. One of such tools developed by archaeologist is the principles of uniformitarianism which allows the archaeologists to assume that the physical and behavioural properties of materials, plants and animals have not changed from the past to now, so that what we observe now will hold also for the past (David 1992, Shrotriya 2007). This is to say that events in the past should be explained by processes observable in the present for example if A is related to B in the present and in the past it is also observable. Then if you find B, then you can reconstruct the relationship to A.

Other methods developed over the years include ethno-archaeological approach which gives an extremely valuable insight into prehistoric life ways by observing contemporary human behaviour. It has been described as an approach in which archaeologist figure out the unknown by beginning with the known and until modern times it was regarded primarily as the only kind of technique used for interpreting the past (White, 2004). What is assumed is that contemporary primitive societies represent examples of past stages of human culture and as relics of earlier stages of cultural development; analogies between contemporary societies and ancient societies can yield important information to construct realistic models of ancient

societies and their functions (Cunningham 2003). This methodology otherwise known as analogy allows the archaeologists to look at the past and present day data to find a broader meaning that will shed light on the data analysed by linking them to other available knowledge. This method has been used to infer the identity of, and relationships among archaeological data based on comparison with similar phenomena documented in living or historic human societies (Andah and Okpoko 1994). In archaeological investigation, analogies help us understand a phenomenon by asserting that it is like another one, even if it is something that is not clearly identical. Archaeologists disagree as to whether analogies prove something or whether in the end they are an inspiration for our interpretations but despite it inadequacies, the value of ethnographic analogy to archaeological theorizing is now widely accepted (Wylie 1985, Roscoe 2000).

6.2 Types and Sources of Analogy

Three main sources for analogy building have been identified by (Andah and Okpoko 1994). These include historical/documents accounts, ethnographic studies, and duplicative experiments or experimental archaeology. All the above three sources are similar in theory but differs in context. They are similar in the sense that each deal with ways of interpreting archaeological artefacts or features by comparing them to similar artefacts in use today where a direct historical relationship is known to exist between the archaeological remains and the present day societies.

(I) *Historical Analogy*

Historical analogy is regarded as the strongest form of analogy by Brian Hauden (2003) and many other archaeologists. Many parts of the world have lots of direct historic links or apparent continuity most especially in the literate societies. The idea is that a rich ethno-history and continuities of populations and cultural phenomena increase the likelihood

of certain behaviours having been at work in the archaeological past as well. In historical reconstruction, archaeologist often relies on literary sources to identify archaeological remains, but in pre and proto-historic context archaeologist must rely on inferences using analogy (Sharer and Ashmore 2000). The first historical or documented accounts of the past go back to the very origin of writing and this account are always available as sources of interpretation and reconstruction (Fage 1989), but can only apply as analogy material where it is proven that historically the past and the present meet at some level.

In this approach the archaeologist first collects the historical data that is useful to explain ancient material remains and the people associated with them. Those journals and letters written by early European travellers and explorers about the peoples they encountered can be used for historical analogy. For example, the travels of Dr. Henrich Barth in Northern, western and Central Africa in 1848 which he published in 1857 in German and English in five volumes, is one of the most important work ever written on the districts of sub-Saharan African which have illuminated past life ways in these societies. These works are of immense value as being almost the sole record of a state of things at that time. Although he was primarily interested in studying the plant and animal life of this area, he took time to write down his impressions of the cultures of the people he met along the way. Today, more than 150 years later, his observations are important clues for archaeologists, historians, and contemporary societies interested in learning about how people lived in the past.

(II) *Ethnographic Analogy*

In using ethnographic analogy, archaeologists compare ethnographic data and analogous archaeological data to explore the possibilities of some resemblance between living culture and past culture (Shrotriya 2007). The products of such studies, a combination of data and the interpretation of data which permit more explicit linkages between particular

observation of the archaeological record and general theories about the past, are termed as ethnographic investigation (Susan 2005). One way ethnographers interact with the people they wish to understand is as participant-observers. In this role, ethnographers participate in activities (if possible) along with the individuals and groups under study. While this information does not provide direct proof of the function of archaeological materials, it offers invaluable assistance in determining how certain artefacts and structures may have been used by their makers. This inadequacy however made archaeologists to come up with Ethno-archaeology studies to counteract some of the abuses of ethnographic analogy. What in essence ethno-archaeology means is that the archaeologist is doing the ethnography, studying living peoples but with special attention to the relationship of behaviour and the material remains (White 2004).

(III) Experimental Analogy

This is the attempt to replicate past human behaviour, usually specific technologies that are of interest to the researcher for example building local houses out of local raw materials; or making pottery out of clay from the riverbank and using prehistoric techniques and designs (White 2004). Over the last several decades, archaeologists have increasingly recognized that what is discovered during investigation is not always representative of what is actually present. This brought about the need to carry out experiments to provide practical evidence on how cultures develop phenomenon by experimenting with ideas. The aim of experimental analogy according to the Encarta encyclopaedia (2005) is to identify certain activities with certain traces in the archaeological record by attempting to recreate the circumstances and methods of those activities. This technique provides archaeology with a broad range of behaviour that is the way of manufacture, and use associated with the archaeological material. For example, different kinds of stone tools have been copied, and

used for specific tasks, so that the resulting traces and wear-patterns can be assessed and compared with those on archaeological specimens.

In the end regardless of the nature of analogies used, the fundamental challenge is to make a meaningful sense of the past from what little has been recovered and collected from abandoned settlement. A properly handled analogy constitutes the very basis of archaeological interpretation (Andah and Okpoko 1994). Interpretation according to Tilden (1975) is revelation based on information which combines method, intent, significance, and meaning to artefact. It has to do with putting meanings into the archaeological finds and features collected during the course of investigation. It is in a sense a synopsis of the historical, archaeological analyses (of the preceding chapters) and the researcher views of those elements that make up the social and historical background on the area of research and its past inhabitants.

a. **Iron**

The discovery of iron brought important changes to people's lives. Early man did not only used iron to make stronger and more durable tools than they had before but it made work such as farming faster and easier. They also made swords and other weapons for defensive purpose. The study of early iron-working technology in Sub-Saharan Africa has been overshadowed by the problem of origins, diffusion of technique with insufficient attention been paid to the possibilities of independent invention (Wilfrid 1935). But contrary to this long-standing debate over the origins of iron smelting in sub-Saharan Africa, it has finally been resolved in favour of those advocating independent invention (Alpern 2005). A point in favour of the independent origin of iron-working among African societies is the nature and similarity of the ritual rites associated with the working of iron, and the presence of ritual and prohibition in connection with the blacksmith's craft in most of the societies that practice it.

Iron technology was no doubt a powerful force in the histories of Shira settlement. The discovery of the scattered iron slag and other iron-related implements such as the fragmented tuyeres meant that the people had worked or used iron though where they obtained the ore also remain a mystery though a future test to examine the mineralogical content of the soil may unravel the mystery. The Shira settlement is alleged by oral tradition to have been producer and trader of iron in the region, controlling as it did large areas of land containing all the necessary ingredients for successful iron production (Connah 1996; Roscoe 1923; Tosh 1970). The site where the iron slag was discovered seem to have the conductive atmosphere needed for iron smelting procedure; a seasonal river course, scattered iron slag and the availability of fuel supplied by the trees, which covered the undulating plains. Oral tradition also supports the existence of a complex smelting practice that only vanished virtually a century ago, but left its allied blacksmithing industry flourishing (Sule 2006). Today, most of the iron implements used by the Shira settlements are made by blacksmith using other steel objects.

b. Rock Paintings

Most of the rock paintings in Nigeria are found in the savannah, mainly due to the abundance of rock outcrops (Irac 1998). The rock arts of Northern Nigeria forms a significant but so far somewhat poorly studied known body of rock paintings in the sub-Saharan (Seidensticker 1997). This is somewhat attributed to the fact that they are much less spectacular in contents, quantity, and artistic elaboration than the rock art of the Sahara sites. In a related study, Seidensticker (1997) has given detailed descriptions of about six of the rock painting sites. The rock paintings are severely neglected and the contemporary society does not realize the importance or significance of such paintings. As far as the people are concerned the paintings are just part of the eco-system which surrounds them and there have

been cases of secondary usage of the sites by the contemporary people for wedding ceremonies.

Traditional interpretations associate the Shira rock painting sites with two traditions. One relates to the cattle tradition which is the most common subject matter of paintings in Birnin Kudu (Jigawa State) situated about sixty kilometres away and that of Geji and Sha da Wanka rock painting sites in Bauchi State. The second tradition has been affiliated with those of Wamdeo and Uvu1 in Borno State (Seidenstickers 1997). This interpretation also finds support from historical fact. The Shira settlement area until the beginning of the 19th century when it came under Fulani rule was under Borno administration. Moreover, the location of the paintings is similarly viewed in the light of the subject matter, style and techniques which appear to be the same. This indicates a possible link between Shira rock painting sites and those of the Wamdeo and Uvu1 rock paintings.

These rock paintings help us to establish the types of animals and the importance the community attaches to them. They also inform us on not only the occupation of the people but their creative ability. All the rock painted figures are in dark red monochrome; made on steep rock face or roof of boulders. The *Rumfar Shanu* paintings share similar characteristics with those of Geji rock paintings. The explanation may be that the same inhabitants migrated from Geji to Shira or vice versa. Whatever the case, the paintings indicate that the people responsible for these paintings share similar cultural values.

c. Defensive Walls

Defensive walls are fortifications that were built to protect a settlement from potential aggressors. The presence of such fortification to according Mabogunje 1968; Obayemi 1973; Sutton 1976b, 1993; Haour 2005; Abubakar 2010 expresses societal complexity and symbols of autonomy in the these societies. Drawing on modern ethnographies, it is noted that these

walls are erected to not only prevent entrance into the settlement but to protect the settlement from external enemies and such fortifications when encountered send powerful messages, that of numbers, impregnability to outsiders, of solidarity, of fear and possibly a strong leadership but above all it signifies social boundaries (Arkush and Stanish (2005).. Ethnographers have illustrated over the years that warfare and tribal movements in the past brought pressure to bear on settlements to fortify their settlements against such attacks and external visitors (Gat 1999, Heider 1979, Keeley 1996, Shankman 1991, Vayda 1976). Thus, the construction of defence/enclosure walls around the settlement suggests the priority of communal solidarity against "outsiders" (Ogundiran 2006).

The practice of building defensive wall to surround settlement was a common practice among the societies of northern Nigerian for example the Zaria city wall remains one of the best preserved among city walls in Nigeria. However, the practice of building defensive fortification to ward off attack began centuries before those found in Northern Nigeria. One famous wall described by Homer in the epic poem 'Iliad' was that surrounding the city of Troy which withstood the onslaughts of Greek armies for ten years before being breached. The Berlin wall was erected by the East Germans in 1961 to keep people in and there is also the wall of china which date from the 7th through the 4th century BC.

The defensive walls of Shira were built by the great-grand daughter of Shiraka and a daughter of the last *Habe* rulers of Shira. Oral traditions claim that she was left on the throne when her father went to war. She is said to have heard of a raid being organised to attack the settlement by surprise. Oral tradition maintains that the wall was built in one day and when the invaders came to raid the town, they could not defeat them because of the strong defensive wall they had around them. The remnants of the wall of Shira abandoned settlement sites are still seen today. It is simple in structure. It was built of mud, stone, and

grass. Its height ranges from 4 to 8 metres while in some place is just a mound of sand. Oral tradition informs us that there are about four outer gates enclosing the settlements. The ancient walls of Shira though not as impressive as those of China were built for defence against invaders. Today, most of what remain of it is being chip away by the contemporary people for building or road construction work.

Although a date is not given for this reconstruction, it clearly could not have been built earlier than 1851:227 when Henrich Barth visited the then Central Sudan. Barth described Shira as "a considerable place, fortified by nature, its position among the rocks, which surround it on all sides, leaving only a narrow approach from north-west and south, otherwise there is no wall," However, giving the walls a relative dating with other contemporary settlement which had such similar features such as that of Turunku, Kano, Zaria and other Hausa states, we can say that it was built as early as the 15^{th} and 16^{th} century (Sule 2006). The remnants of the Shira walling systems attest to the existence of an important political class with well organised state administration. The manifestation of such feature in any society signifies an expression of power in that specific place, emphasizing the value of sedentary human life.

d. Dyeing

Traditional dyeing methods though extinct in the Shira settlement sites, still survive in some contemporary cities such as Kano, Zaria and so on. The act of dyeing is an ancient art whose practice cut across all societies in the past and was practiced at one time almost throughout the Northern part of Nigeria. This is evident from the remains of dyeing pits around most abandoned settlements. Today, there exist a tradition of natural dyeing technology using natural dyes and mordant, still widely practice around the country. This gives us abundant information about the nature of dyeing practices in the past. It provides us

with a wealth of information about plants which will yield their colour for the purpose of dyeing and many have been used since antiquity. Natural dyes have also received worldwide attention, mainly due to their unique and high quality colourings. Prior to the discovery of the first aniline dye in 1856, all colours applied to textiles came from natural origins (India 2001). These natural dyes are obtained from plants, animals and minerals. Some natural dyes, indigo for example, will fix without the aid of a mordant; these dyes are known as 'substantive dyes'. Mordants are applied before, during or after dyeing

Unfortunately, the art of dyeing is practically non-existent in the contemporary Shira settlement but systematic knowledge on local natural dyeing process from such societies as Kano shows us that the processes involved in the art of dyeing. The Kano dyers are credited with having knowledge for the art of dyeing, which have been maintained through antiquity to the present day. The process of dye making processes involves about five (5) stages: preparation, water infusion, ash adding, scooping and pile removal (Dean 2009). The clothes are dipped in the dye mixture which has been left in the pit for twenty-four hours before use. The cloths are left in the mixture until it acquired the desired colour.

The pits constructed are wells about three to five metres deep. The inside of the pit is cemented by applying clay to the surface. In the pits, a mixture of dark blue fluid giving off an offensive odour when stirred can be seen every time. The fluid in the pits was not considered fit for use until it had been stirred and allowed to ferment for about five to ten days.

e. Human Remains

Most of archaeological investigations are concerned with materials that has been accidentally left behind by past generations. Human biological remains however constitute one of the few purposeful depositions available to the archaeologist (Andrich 1988) but despite a substantial number of burial locales, skeletal remains are few in number (Williams

1997) and there is no abundant archaeological evidence as yet of very early human biological remains in sub-Saharan Africa. This lack of data may be attributed to the nature of the soil which decays organic materials within a short period.

In interpreting death and burial in the past, there are certain factors which archaeologists need to consider. The archaeologist when making a decision about whether or not to carry out a research about archaeology of the dead must take into consideration the present day attitudes to death. Different cultures believe different things about death and the afterlife. It is an extremely sensitive matter and must be taken very seriously. Thus, the archaeologist must consider how this cultural heritage to which human burial belongs in that society affects the interpretations. What death means to a society determines the forms of reactions and the society's burial practices (Okpoko 2006). An archaeologist must also take into account the future of a grave or cemetery because more often than not ancient cemeteries and graves are threatened by building development, natural disasters, environmental changes, and vandalism (Jones 1984).

There is very little known information about the disposal of the dead before the coming of Islam in Shira settlement. However, Sub-Saharan Africans have been known to be generally receptive to existing external customs of native cultures and adapting them to their own needs and Islamic cultures are known to have brought a wide range of changes to the cultures of the earliest inhabitant of the Northern Nigeria. It is however, likely that much of the burial ritual was unchanged and that the landscape of the dead in prehistoric Shira may not have been much different from that of the present. Today, various practices appear to be common, for example,

- Graves are custom dug for the individual.

- ❖ People were buried in simple earth graves, lined with wooden or stone lining inside rather than in coffins. Individual are covered with broken pieces of potsherds (intentional broken for this purpose) and mud before the earth is placed in upper fills of graves.
- ❖ The body is normally straightened before it becomes rigid.
- ❖ Orientation of the grave is often east-west, with the corpse placed on its right side, with the face towards the east. A large potsherds packing is placed around the head.
- ❖ Dress fittings are common and people are buried fully dressed in plain white cotton cloth. Generally man is wrapped in three clothes and a woman in five.
- ❖ No sexual division in type of burial is ever made. All sexes, both young and adults are buried at the ground.

When the people of Shira settlement started to bury their dead is unknown, however what is known is that there was a change in burial customs which have been directly linked to the coming of Islam. Human skeletal remains usually supply us with the most direct information available on past populations but *"early"* finds at graveyards also have their own life all over the world. The Gwadan-gwadan burial site and the present burial custom had more or less similar burial customs in the past and in the present. The orientations of the graves suggest a homogeneous afterlife concept as most of the graves have west-east orientation or its varieties. Unfortunately, the depths of the graves were not measured but measurement of the shape and size is between 50 cm and 80 cm. One aspect of the burial customs that is unique to both past and contemporary settlement is the presence of the ceramics.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 Introduction

This dissertation is the result of an extensive reading, research and analysis of the material and non-material culture of Shira settlement sites. This brief review is not intended to rehash in detail everything contain therein in this dissertation but is meant to act as a guide note for what has been written, to "fill in the blanks" on the definitions and concepts and especially to understand how they can be integrated with each other.

The research was undertaken on an archaeological survey, which involved the use of archaeological methods and historical data in order to obtain insight into the life ways of the past people of Shira settlement. To do this, the thesis was divided into six chapters, which essentially focused on issues of environment, oral tradition, methodology and application, analysis and interpretation.

6.2 Summary

Chapter one dealt primarily with archaeological theory and method that will assist us in an understanding of the investigation. This section is an examination of conceptual issues employed in the cause of this investigation. The purpose is to establish a basis of understanding with prospective readers especially those from other disciplines. It will also provide the basis for the methodology to be employed in the case of the analysis that will be presented later in the dissertation. The primary goal of the chapter is to outline the key elements of the archaeological theory and methods. The chapter begins with a summary detailing how the Shira settlement finds and features came to limelight. It then moved to place the geographical location of the settlement on the map.

198654

Second part of chapter one provides an overview of archaeological works which employed similar approaches to mine or whose research was on the same site. The section examined similar kinds of archaeological studies, not necessarily within the same geographical area but studies that deal with comparable subject matter. This does not provide an exact framework, because situations may be different in important respects from the present work but the common link is the identification and recognition of archaeological remains. In doing this, I examined the works of other authors in order to assess what were their successes and failures, what "tools" they have used, and how they have used them. These should prove to be useful in the final analysis, in that they provide ideas as to what to look for in the archaeological materials, and how to proceed with the analysis of the archaeological data collected.

Chapter two is about an overview of environmental features that prevails in this region. The chapter brought out the diverse ecologies and climatic regimes that have conditioned, if not determined, the cultural historical manifestations in this region. This ecological diversity is of interest to any critical understanding of the character of innovations, changes, and continuities in the cultural history in Shira. The chapter recognise the fact that the environment is unique and vary from one region to the other.

The second part of this chapter concentrated on the tradition of origin of the people. The history of migration is divided into three stages of influxes into the Shira settlement; the pre-islamic, the Shirawa and the Jihad period. The need for documentation of traditions of origin has become more urgent as traditional leaders, elders and so on pass away without transmitting traditional knowledge to the next generation and many of the new generation no longer see the importance of these traditions or are even remotely interested in these traditional knowledge as they become more interested on success in business.

Chapter three draws our attention to the power of photographic visual imagery for archaeological investigation. The chapter contains the pictorial documentation of the finds and features at Shira settlement sites. It involves use of camera for photographs of existing features that do reflect the past or the author's view of the past. Photographs are claimed to be useful aids to the scientific enterprise of archaeological practice and as an objective record, as a trace of reality. It provides authentic, unselected, uninterrupted record that the archaeologist was really there and really did see the material cultural remains. This method of documentation is also very important in providing clarity to work of archaeological research and provide an opportunity for someone to experience, to see the data with different eyes and even participate in the interpretative process. Despite the wide range of materials considered, the common thread that exist between them, is that they not only contribute to archaeological analysis in the preceding chapter but the pictures should be seen as objects of a text that can be read and reread depending on the perspective from which the text is studied. Furthermore, one of the goals of this investigation is to put objects into their broader social contexts rather than just basing their interpretation on the object's appearance or singular use. This approach would give objects greater significance and provide those who study them with a greater appreciation for the item, its uses, its meanings, and roles in society. More particularly, it would provide readers with a greater understanding of how the society itself worked. Thus, there is a feeling that they contain room for something else to be observed.

Chapter four comprises the actual case analysis which has been drawn for study from the material finds and features at Shira abandoned settlement. The chapter is a mixture of description, analysis and interpretation of the material finds and features of the Shira abandoned settlement. The chapter tries to take issues of theory and method and applies them to specific case materials in this case the potsherds and other finds and features collected

from the site. The chapter concludes with an evaluation or interpretation of all the finds and features encountered during the course of this investigation.

This dissertation is about archaeological findings and chapter five of this dissertation is about archaeological explanations, and how much such explanations can tell us about the past. The material culture collected during the course of this investigation offers the greatest possibilities for insights into the behaviour of our forebears. This is because these materials culture or is the remains of man's interactions with the physical world and by product of his behaviour. Given a relationship between artefacts and behaviours, the possibility exists that we can gain an insight into the lifeways, the behaviours and the lives of our ancestors through their material remains. Thus, the chapter tried to examine the ethnographic materials that are analogous with what was found in archaeological record. The chapter deals mainly with details of the researcher's observations of certain craft and how the people undertake certain daily activities to enhance their living. Consequently, the ethno-archaeological approaches were applied in this investigation with the sole purpose of understanding material culture found in archaeological contexts (Ogundiran, 2005).

This chapter is particularly important because of the rapid economic and cultural changes which are increasingly threatening the traditional lifestyles of these inhabitants. The chapter thus seeks to record and preserve orally transmitted knowledge of daily crafts which one might come across in archaeological records. The chapter covers everything from how the people sought for their material, to the treatment the material are given and how finally the said material is manipulated into an object of beauty, style and function. As far as this chapter is concern, it has provided valuable information as to how the society utilize its environment parameters for the betterment of it lives. While I do not take this research to be the definitive record of the way the past people of Shira had used the environment. The

information is still useful for the reconstruction of socio-economic life of the people of this settlement.

Chapter six summarized the archaeological investigation of Shira abandoned settlement. The chapter provided a recap of the information in the research. First of all, it dealt at length with the division of the whole research work. To that end, this chapter included a brief discussion and recommendation to enrich further investigation into this abandoned settlement site.

6.3 Conclusion and Future Expectation

Archaeology recognised the need to assimilate material evidence from many disciplines that will result in a unified fusion. Thus this investigation though archaeological in subject matter but the approach in write up was also historical. It utilized knowledge from Oral claims, geography, linguistics, archaeological studies and political organisation and so on. In using such approach or methodology in the reconstruction of cultural history of the Shira abandoned settlement, the author of this research work recognised that each field of study is only part of a puzzle which provide pieces of the needed synthesis that has been missing.

The little that have been known about the Shira abandoned settlement comes from oral claims or linguistic evidence and not much is known archaeologically about the earliest inhabitants of its inhabitants until this archaeological work. Hopefully, the investigations have provided us with answers for questions of origins as well as with information on the missing archaeological periods. While the amount of pottery collected was not much in comparison to the amount seen at the site, the widespread distribution of potsherds at the shelter suggests that it was commonly used. The investigation however fails to find evidence/source of the clay used because the practice of pottery manufacture is extinct in the

contemporary settlement. The presence of slag remains, show the importance of iron industry in this region during the historical period. However, information could exist in unexcavated areas or the most plausible explanation for finding the pottery would be that they were probably obtained from the nearby villages.

The rock painting of Shira abandoned settlement would fit well into "Marghi ritual rock painting traditions". Geographically, the closest find-spot of this cultural material to the Shira abandoned settlement sites is perhaps the rock paintings of Birnin Kudu, approximately 80 km south-east of Shira area. Here the tradition of the animal paintings was utilised, the Birnin Kudu rock paintings has been associated with high frequencies for the use of red ochre, a pattern inconsistent with the composition of the Shira rock paintings. Moving further afield, we may draw parallels with the similarity which have been noted by other researchers at several locations around Marghi land in Borno State.

Finally, the intriguing theme of this research relate to settlement strategies. As already mentioned in the tradition of origin, the earliest part of occupation of this site is not known, what we have been able to gather is that the site has been continuously occupied for several decades. Virtually all evidence of occupation of this site comes from potsherds analysis and much of the site has shown sign of being occupied. The discovery of African-type smoking pipe at the abandoned settlement provides another avenue to cautiously date the site as pre-seventeenth century; the African smoking pipe predates European smoking pipes of the 19th (nineteenth) century.These types of settlement sites are extremely useful to archaeologists because they have often been occupied for hundreds of years and thus, if well investigated will provide a clear ceramic chronology. Excavations at such type sites can be extremely important in gathering information about the length of settlement in a region, and in demonstrating the complexity of west African political systems thousands of years in the

past (Lawson, 2001). It is hoped that excavations would be conducted in this area in the nearest future in order to get a full picture of the settlement history of the people of this settlement.

This archaeological investigation of Shira abandoned settlement sites have provided some useful information about the cultural finds and features found in the settlement abandoned settlement sites, but much more work will be necessary in both Shira and adjacent settlement of Auyo and Teshena to understand the relationship between the abandoned settlement sites. In the near future, archaeological work at Shira settlement sites is expected to be carried out in three phases. the investigation will be carried out in three phases. Phase I involves (1) reconnaissance of the site with a view to determining its spatial extent, as well as mapping features such as the defensive walls and other none moveable features; this will create the first primary site plan map of the area (2) systematic collection of surface cultural materials from the identified abandoned sites; Phase II will involve controlled excavation at selected sites at Shira, Auyo and Teshena with a view towards identifying the distinctive cultural phases and the characteristic traits in each of these settlements.. Phase III will entail laboratory analysis of cultural materials collected during the course of investigation. Finally, the research will try to find out not only the subsistence-settlement systems of the occupants of the sites but their socio-cultural adaptations and the age of the site. This will be followed by a comprehensive documentation of the sites findings in a form of dissertation.

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Appendix 1

LIST OF INFORMANTS

s/no	Name	Age	Information
1	Alhaji Abdulkadir Dan Lawan	60	Political History
2	Malam Mannir Shira	41	Settlement History
3	Malam Abdu Wawa	50	Oral Tradition
4	Shehun Zamani	47	Tradition of Origin
5	Indon Katagum	33	Pottery Making
6	Inna Abba	57	Pottery Making
7	Aminan Kwarga	48	Guide
8	Maiwada Sani	40	Climate
9	Malam Bala Muhammadu	46	Settlement History
10	Ahmadu Sabo Giade	29	Field Assistant
11	Safiyanu Muhammed	27	Field Assistant
12	Sagir Abubakar	27	Guide
13	Usman Garba	25	Field Assistant
14	Yusuf Dan'asabe	30	Guide
15	Alh. Muhammadu Gwadan-gwadan	49	Tradition of Origin
16	Mamman Garande	38	Ethnography
17	Adamu Shira	25	Guide

Appendix II

QUESTION GUIDES

The questions to be asked of the sites and area of study is not standardized but an archaeologist must be sure to exploit these questions to the fullest by asking series of questions, determined by his material finds (Cole, 1972:235). The all important question that needs answer here is

- Who are the original inhabitants of Shira hills and its abandoned settlements?
- How did inhabitants interact with the environment?

(A) TRADITION OF ORIGIN

(i) What is your name?

(ii) How old are you?

(iii) Are you from Shira settlement?

(iv) Do you live here in Shira settlement?

(v) Who are the Shirawa?

(vi) Are you the original inhabitants of this area?

(vii) If yes? What led to the choice of Shira plain for the present inhabitants?

(viii) If no? Do you know the people who occupied this area before you?

(ix) Is this your first settlement?

(x) If yes, how long have you stayed here?

(xi) In no, where is your former settlement?

(xii) How long did they stay in the area they first settled

(xiii) How did the new settlement emerge?

(xiv) What led to the migration to the new sites?

(xv) Did you meet any other group of people when you first came here?

(xvi) If yes, who are these people?

(xvii) How similar or dissimilar are you to this people?

(xviii) Are these people still living in the settlement?

(B) ECONOMY AND TECHNOLOGY

(i) What is the principal source of income for the residence of shira settlement

(ii) What is the basic element of your economy?

(iii) What type of crafts or technology is practice in your settlement today?

(v) Is the present inhabitant practicing pottery?, blacksmithing?, dyeing?

(vi) Do you have any other specialised skills?

(vii) What is the procedure for procurement of the raw material use?

(viii) Are these craft industries still part of the people's economy?

(ix) What is the process and stages of making the above materials?

(x) How do you dispose the finished crafts?

(xi) Do you have a market in your settlement?

(xii) Do you practice division of labour?

(C) SETTLEMENT PATTERN

(i) Can you describe how your settlement developed?

(ii) What was the reason for the choice of this site settlement?

(iii) Can you estimate the size of this settlement?

(iv) What is the nature of the occupation of this site- was it a permanent or seasonal settlement?

(v) Did your people ever live in caves or rock shelters?

(vi) If yes, can you show them to me?

(vii) If no, who inhabited the caves and rock shelters found on the hills?

(viii) What led to the change in living quarters - from caves to house building?

(ix) Can you described the mode of your building in your settlement

(x) Does the mode of building differ from that of earliest inhabitants?

(xi) Do you have any space created for the dead in your settlement?

(xii) Do you bury the leader of your settlement in the same burial ground with the common people?

(D) RELIGION

(i) What is the belief system in your settlement?

(ii) Who do you worship as the Supreme Being?

(ii) What are the essential elements of your religious ?

(iii) What are the major regular festivals in your religion?

(iv) How many times perform- Annually, monthly, weekly of daily?

(v) Has this religious festival been observed since antiquity?

(vi) If no, what were the norms practiced by the ancient people?

(vii) Do you have any space created for these religious activities?

(viii) Do you have any significant religious activities associated with rites of passage- for example birth rites, rites of entry into adulthood, rites of death etc?

(ix) How do you bury your dead?

(x) Where do you bury the dead in this settlement?

(xi) Do you have any ritual or symbols used in communicating with the Supreme Being?

(xii) What are the paths or ways to spiritual enlightments in your religious belief?

(E) POLITICS

(i) What type of political structure do you have in the Shira settlement?

(ii) Do you have a leader?

(iii) Who is your leader?

(iv) How do you choose your leaders in this settlement?

(v) Does your leader have any judicial powers?

(vi) What is the structure of your political setup?

(vii) How many rulers did history indicate ruled this settlement?

(viii) Is it possible for a person with mental or medical problem to be elected a leader?

(ix) How long does a leader rule?

(x) How is your succession to rule?

(xi) Are women allowed to rule?

(xii) If yes, mention the name of those that have ruled?

(xiii) If no, can you give me a reason why?