

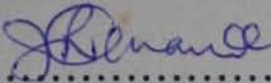
AN ARCHAEOLOGICAL INVESTIGATION
CONDUCTED AT OKAI KOI HILL (AYAWASO)
AND ITS SIGNIFICANCE FOR IRON
AGE ARCHAEOLOGY IN GHANA

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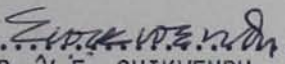
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DEDICATION

This work is dedicated to HIM, who is able to do above all that we ask for or think about. HE is the Alpha and Omega, the beginning and the end, the first and the last.

ABSTRACT

Archaeology in Ghana has a long and respectable tradition especially in relation to other areas in the West African sub-region. Despite this encouraging situation, significant gaps still exist in our understanding of the ~~early~~ history of some early societies in Ghana. The need to apply an archaeological research strategy holistic in approach as a means of reconstructing a general and broad history of ancient Ghanaian societies, to fill in the gaps, cannot be over-emphasised.

It is in this vein that this research on the Ga of the Greater Accra Region of Ghana was undertaken. The Ga, who occupy the western Accra Plains, founded early settlements some of which are in ruins, from the coast to a few kilometers inland. This research, focused on Ayawaso, the former capital of the Ga, which was referred to in early European written documents as "Great Accra."

Even though the research was site - oriented and the main data used was archaeological yet, other sources of information such as oral traditions, ethnography and early European written records served as supporting tactics that helped in the interpretation of the data. The combined evidence from the sources mentioned above therefore, helped to reconstruct the **early** history of the ancient Ayawaso society briefly as follows:

That between the early sixteenth century and late seventeenth century A.D, a complex society evolved, flourished and declined in the ancient Ayawaso area. This settlement which was characterised by a large territorial extent, various specialised workers, a ruling dynasty and perhaps a large population could be said to be urbanised at least during the seventeenth century A.D.

The accumulated evidence revealed that the Ga who lived in the ancient Ayawaso area, had trade and other cultural contacts with their Akan and Guan neighbours as well as the various European factors who established footholds on the Accra coast. Through these contacts, the Ga adopted certain cultural traits from their neighbours. For instance, the present political system of the Ga

was adopted from their Akan - speaking neighbours. Again, historical -linguistics research indicates that modern Ga language has been influenced by Akan and Guan languages.

The prosperity of the ancient Ayawaso area, came to an end towards the end of the seventeenth century due to Akwamu imperialistic drive. Between 1677-80, Ga oral traditions and early European written records have it that the Akwamu attacked and overran the ancient Ayawaso area. The defeated Ga, moved to seek refuge under the **cannon** guns of the European forts along the Accra coast, never to regain their past glory.

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I must emphasise however, that despite the acknowledged assistance given me by my supervisors, the views expressed here and any shortcomings are entirely mine. I do declare that with the exception of specified quotations and ideas attributed to specified sources in this work, any ideas or views expressed in this thesis resulted from my own observations and that they represent the true objective that I set myself to accomplish.

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.....
(BREDWA-MENSAH YAW)

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CHAPTER ONE

INTRODUCTION

This research was carried out at Okai Koi Hill (Ayawaso) to provide a corpus of archaeological data for the reconstruction of the past life patterns of the Ga, who today inhabit the western Accra Plains of Ghana (Map 1).

Ayawaso (5°40'N, 0°18'W) was the settlement early European writers referred to as "Great Accra", the traditional capital of the Ga located 21km north of modern Accra (Wilks, 1957; Berry, 1958). It must have been the same settlement mentioned by Reindorf as situated "inland of modern Ussher Town, as large as present James Town and Ussher Town multiplied by four, of at least 40 to 50,000 inhabitants" (Reindorf, 1960:24). This settlement was destroyed by the Akwamu in 1677.

Some amount of archaeological research has been carried out in the area previously (Owusu, 1957; Ozanne 1962a; Anquandah, 1978). Though these researches have contributed in no small measure to our understanding of the area during the Iron Age, yet they were limited in scope. All the excavations conducted during the researches were restricted to one particular rubbish mound (midden) located in the Obutu Quarter and described as the "largest on the site" (Ozanne, 1962a:53, Anquandah, 1982:121). Until the inception of this research, our knowledge about the past in the area was very limited. The study therefore, employed archaeological and

non-archaeological tools to obtain data that will allow a broader and detailed understanding of the Ga society that existed in the western Accra Plains during the Iron Age.

THE RESEARCH SETTING AND SCOPE

The research area falls within the Western Accra Plains of Ghana, a region inhabited by the Ga. However, the areas where field work was conducted comprise the abandoned site of Ayawaso and the modern settlements of Ayawaso, Ofankor, Nsakena, Pokuase (Kokoase), Ga Mashie, Afuaman and Manhean (Manhia) (Map 2). Modern Ayawaso, Ofankor, Nsakena and Pokuase are villages situated on the site. On the coast, twenty-one kilometers away from Ayawaso is modern Accra (Ga Mashie) originally the traditional capital of the Ga, which was moved from the inland site of Ayawaso to the present coastal location at the close of the seventeenth century A.D. The villages of Afuaman and Manhean (Manhia) are surviving Ga potting centres located thirteen kilometers away from modern Ayawaso.

The time scope of research begins from about the early sixteenth century A.D. when Ga oral traditions have it that a ruler of the Asere division of Ga Mashie succeeded in uniting some early Ga settlements into a centralized kingdom under his rule. It ends around 1680 when Ayawaso the capital of the "new" Ga kingdom collapsed under the pressure of Akwamu invasions.

STUDY OBJECTIVE

The objective of this study was to reconstruct the past of the Ga society as revealed by their material culture. Within this

context, the study addressed specific archaeological issues namely to:

- (i) carry out a study into the modern pottery industry and related behaviour patterns in the study area and ascertain what meaning can be given to the excavated pottery.
- (ii) investigate whether there was a pre-Iron Age occupation at the site. If any, examine the relationship between it and the Iron Age society under investigation and see how the relationship can be used to throw light on Ga origins.
- (iii) examine the nature of the society under study and the diverse factors that may have contributed to its prosperity and decline.

RESEARCH APPROACH AND METHODOLOGY

Archaeologist Lewis Binford has called for a proper balance between the techniques for obtaining archaeological data and the procedures for gathering facts that will throw light on the former. He writes:

"We would not know anything at all about the past, of course, if our energies were entirely devoted to developing a perfect research methodology and we failed to collect any archaeological facts about the past. Yet, on the other hand, if we had a complete archaeological record and no way to give meaning to it, we still would be no nearer knowing the past. Obviously, the two sides of archaeological research must necessarily develop together"(Binford, 1983:23).

The nature of the archaeological problems this study set out to address and the fragmented nature of material culture that normally turns up from excavations in this country, demanded that equal attention must be given to the two sides of archaeological research. The tropical climate experienced in this country, acidic soils and intensive micro-organism activities tend to favour the preservation of inorganic cultural materials more than organic materials. Again, it is impossible to observe directly the behaviour patterns that produced the tangible data from archaeological contexts. The wealth of data obtained through the use of excavation tools therefore, tend to be fragmentary and may not yield adequate data to handle effectively the problems that a researcher may set out to find solutions to.

In the research area, however, relics of ancient cultural practices are still extant. The contemporary modes of life, farming, fishing, hunting, trapping, local craft industries, social and political institutions are still traditional with very little exotic elements. The past can therefore, be understood by studying the present in the research area. In studying the **past**, it became necessary to look beyond archaeology for help from sources such as ethnography, oral traditions and linguistics to provide information that will assist in the analysis and interpretation of the archaeological data.

A multi-disciplinary approach was therefore, adopted as the research strategy. This approach recommends an overall survey of data available to other disciplines. It therefore, provides a means to accumulate abundant evidence relevant to archaeological research,

but it is not an end in itself, that is, it does not provide off-hand answers to research problems. In the analysis and interpretation sections of this work, a judicious selection of information was made out of the accumulated data from the non-archaeological sources to give meaning to the archaeological data and to find solutions to the research problems outlined above.

The archaeological research design drawn to gather data for this study was carried out in four phases between January, 1988 and February, 1989. The first phase which involved background studies to the research was carried out in two seasons. The first season (January - February, 1988) was used to gather data on physical and economic resources of the research area. The physical environment of a given area presents a peculiar set of problems or challenges which must be solved if the inhabitants of that environment are to survive.

The response of a group of people to their physical environment is *manifested* in a way by the traditional subsistence economy of that people. The inhabitants of the research area are no exception. To understand the mode of resource exploitation in the research area in the past, aspects of the physical environment and the various subsistence activities in existence today were studied simultaneously. A straight forward presentation of the data accumulated has been made in Chapter Two of this work.

The field work for the second season was carried out in March, 1988. It was devoted to the documentation of traditions on the seventeenth century A.D. Akwamu invasions which broke Ga power and

control of a major trade route from the Akan interior to the coast and the mode of Ga movement to their present settlement (Ga Mashie) on the coast.

The data gathering process on the background studies involved two main aspects: interviews and observations. After making a preliminary visit in the company of my supervisors to Ayawaso and Ofankor where I was formally introduced to the chiefs, elders and people of these villages, work on the background studies began. The interviews were started at Ayawaso. To supplement the data given by the elders of Ayawaso, the Asere Mantse and some elders from Ofankor were interviewed. The data collected from Ofankor served as a cross-check on that from Ayawaso.

Elderly Ga people from Ayawaso, Ofankor and Ga Mashie were interviewed to get data on resource exploitation. Interviews were conducted in the local Ga language and later on transcribed into the English language. To enable me understand the Ga system and the accumulated data better, I took a temporary residence in a Ga home at Ayawaso and Manhean for about fifteen (15) days. This gave me the opportunity to observe directly the daily life of the community.

The second phase of the field work was carried out during the Lent term holidays (April, 1988). The work done involved basically an intensive surface survey of the Ayawaso area. This was done to gain a general impression of the study area. With a small team of six (6) undergraduates, a foot survey was carried out to locate, identify and record the distribution of archaeological sites and to surface - collect artifacts within transect lines in the research area. The results of this work are presented in Chapter Five.

The third and fourth phases of the research involved the conduction of archaeological excavations at Okai Koi Hill and the final write-up of the report (thesis). The excavations were conducted at the beginning of the major dry season. In all, the excavation covered a period of thirty (30) working days; that was from mid-December to end of January, 1989.

OUTLINE OF PAST RESEARCH IN THE AREA

(a) Past Archaeological Research

The richness of the study area for archaeological research was made known when in the 1930s Margaret J. Field, an anthropologist, visited a couple of sites believed to have been Ga traditional settlements in the Accra Plains. These sites, now deserted, included Ayawaso, Wodoku, Podoku, Ladoku, Legon Hill, Kwabenya, Adzangote, Wodede, Wokpele, Lashibi and several others (Field, 1962:4-5) (Map 3). Field, whose main interest was to know how and why some Ga settlements came into existence and later became deserted, reported that these sites were old settlements on account of the abundant surface scatter there, of archaeological objects such as fragments of pottery, smoking pipes, grinding stones, beads, animal bones and shells.

Even though Field's work did not involve any systematic field survey, yet it has proved very useful. For instance, her work resulted in the **cataloguing** of some Iron Age sites in the Accra Plains and the drawing up of an inventory of associated cultural materials. Again, the work provided information on the on-site conditions at the time of her visit. Fifty (50) years have elapsed

since her visit and today the on-site conditions of some of these sites have changed considerably due to human activity. Her work therefore, serves as a guide to researchers who are interested in any of the sites covered by her.

Following Field's work, the historian Ivor Wilks in 1957, identified with some degree of certainty that the site of Ayawaso was that settlement which early European writers frequently referred to as "Great Accra, the traditional capital of the Ga located, four leagues inland at the foot of the Akuapem Hills" (Wilks, 1957:101).

The contribution of Wilks in the location and identification of the site of Ayawaso led to the conduction of archaeological excavations there. Between 1957 and 1976, archaeological excavations were conducted by three archaeologists of the University of Ghana, Legon at different times on the site. These excavations were however restricted to one particular midden (rubbish mound) about 3 meters in height and 20 meters across, located in the Obutu Quarter.

The first archaeological excavation was carried out at the site by Seth Owusu, in 1957. Owusu, who was at that time a Research Fellow of the then University College of Ghana, excavated a trench across the entire length of the mound (midden). The report of Owusu's excavation was never published because section drawings of the mound which were essential for the interpretation of the archaeological finds were not made (Ozanne, 1962a:53).

In 1962, Paul Ozanne, then a lecturer of the Department of Archaeology, University of Ghana, Legon followed up and excavated four (4) test-pits on the same rubbish mound. To make up ^{for} the _^

deficiency in the maiden excavations, Ozanne excavated the pits along-side Owusu's sections and obtained finds which according to him (Ozanne), were closely linked with those of Owusu. In his report, entitled, "Notes On the Early Historic Archaeology of Accra", published in the Transactions of the Historical Society of Ghana, Volume VI, 1962, Ozanne raised a number of interesting archaeological and historical issues some of which are re-examined in this thesis. For instance, he attributed the rise and growth of the Ayawaso settlement to the inception and expansion of European trade along the coast of the Western Accra Plains. On the basis of the remains of an early seventeenth century A.D. Hessian Sgraffitto plate he found close to the base of the excavated mound, Ozanne concluded that the Ayawaso settlement "can hardly have been founded before 1600" (Ozanne, 1962a:69). He asserted that the site was destroyed by the Akwamu through bombardment with **cannons**.

Perhaps, the major contribution of Ozanne's archaeological investigations at Ayawaso to the Iron Age archaeology of the Accra Plains was the use of locally manufactured smoking pipes from the site and other coastal sites as a chronological indicator during the past three centuries. The chronology for the typology he formulated for the Accra area has been reviewed in the light of new evidence obtained through this excavation.

In 1976, as part of the Accra Plains Archaeological and Historical Project initiated to conduct archaeological, historical and ethnographic research into the origins and cultural development of the Ga and Dangme peoples of the Accra Plains, Professor Anquandah of the Department of Archaeology, University of Ghana,

Legon, conducted a small-scale archaeological investigation at Ayawaso. As part of the investigation, he test-excavated the rubbish mound investigated earlier on by Owusu and Ozanne. The report, "Accra Plains Archaeological and Historical Project", published in Nyame Akuma, Number 15, 1979 and his book Rediscovering Ghana's Past, under a chapter title, "The Accra Plains: Civilization of Ga-Dangme", presents a holistic approach probing the Ayawaso settlement and its subsistence economy. The research revealed for instance that the ancient Ayawaso society **thrived** on a mixed economy based on both local and external resources. Locally, the Ga exploited resources such as freshwater molluscs, domesticated and wild animals, fruits and other plant parts in their daily lives. Externally, trade with European factors who visited the coast brought in exotic goods such as pottery, textiles, drinks, metal goods and beads.

(b) Other Researches

Apart from the archaeological researches in the area outlined above, several scholars have published systematic studies relating to Ga society in general, in a variety of intellectual disciplines such as history, linguistics, **ethnography** and historical - geography.

The most influential historical works include C.C. Reindorf's History of the Gold Coast and Asante (1895, 1960) and Irene (Quaye) Odotei's unpublished doctoral thesis, The Ga and Their Neighbours: 1600 - 1742 (1972). The sections which deal with the Ga in Reindorf's book basically provide oral traditions on their origins

and early migrations. Reindorf's acceptance of the oral traditions in their unrefined state in a way is beneficial for researchers studying the Ga past. His book gave some insights into the Ga past that were of interest to this work. For instance, his claim that when the ancient Ga settled at Ayawaso, the seat of government was established on the hill known as Okai Koi or Kplagon, the Aseres settled at Amamole and the Obutus on the west of that hill, seems to correspond well to the locations of five suburbs which present Ayawaso traditions mention as constituting the ancient Ayawaso settlement. Irene (Quaye) Odotei's work which draws on oral traditions and information from primary written sources is very important. Her discussions on the relationships between the Ga and their immediate neighbours before and after the establishment of various European trade factors on the Accra coastland are very crucial to this work.

Books and articles, ethnographic in nature, have been written on many aspects of the Ga society. In the early years of this century, contributions to Ga ethnography were made primarily by Ga writers and these appeared in either the Journal of the African Society (JAS) or the Gold Coast Review (GCR). In the former journal, there appeared several ethnographically useful papers on beliefs and religious institutions by Quartey-Papafio and essays on ethno-history and marriage customs by Bruce-Myers.

The most important ethnographic studies of Ga society however, are Margaret J. Field's descriptive monographs, Religion and Medicine of the Ga people (1937); Social Organization of the Ga People (1940), M.D. de Kilson's, Kpele Lala: Ga Religious Songs and

Symbols (1971) and D.G. Azu's, The Ga Family and Social Change (1974).

The authors have recorded an immense wealth of information on the Ga society ranging from the Ga social structure, politics and traditional medicine to religion and philosophy. Of these, Azu's stands unique in a sense that she has done more than contribute to an understanding of traditional Ga society. Being a Ga herself, she used her local status to a great advantage by exploiting knowledge of the Ga community to describe the traditional pattern of Ga kinship and to explore directions in which this institution is changing.

Another work of interest to this research is Professor Esther Kropp Dakubu's historical-linguistics study of the Ga-Dangme migrations. Her study focused on the use of linguistics to determine the origins of the Ga-Dangme and to reconstruct their early migrations. Her conclusion that Ga and Dangme are more closely related to each other than to any other language that belongs to Greenberg's Kwa sub-group of the Niger-Congo stock of languages, greatly influenced the historian Irene (Quaye) Odotei to suggest that the cradle of the Ga-Dangme speaking peoples was the Lower Volta basin (Odotei, 1972:13).

WHY THE CHOICE OF THE AREA FOR STUDY

The choice of the area for study was determined by a number of factors:

- (i) Although various works have been done on the Ga including some aspects of their history and a number of sites believed to have been Ga traditional settlements are known and have been located in the western Accra Plains yet, very little archaeological work has been done to obtain material culture with a view to reconstructing the early history of the Ga.
- (ii) The rapid growth of modern Accra into an urban centre due to the location of colonial and later national administrative authority and international commercial activities there, is causing inexorable destruction of the early Ga settlements located only a few kilometers away from the coast. Two sites are so far known by the writer to have suffered destruction - Legon Hill and Wodoku. The site of Legon Hill is now occupied by the tower and administration building complex of the University of Ghana, Legon. As regards Wodoku, part of the site is occupied by the Civil Aviation's Very High Omni Frequency Range (VOR) that directs air traffic to the Kotoka International Airport whilst the remaining part is in the process of destruction due to the springing up of residential buildings (Abrefa-Tawiah, 1988:1). This **unprecedented** urban development is encroaching upon the site of Ayawaso, the main focus of this research. It was therefore, selected for excavation and documentation to contribute to the understanding of early Ga history and also prevent a big chunk of the rich past of the Ga from being lost forever.

(iii) Another factor that strongly determined the choice of the area is the role of the site as the former traditional capital of the Ga. As the capital, it served as the centre of political, social and economic activities that involved the Ga, their immediate neighbours and the various European factors who traded on the coastal littoral. The **vestiges** of these activities are the material remains that form the archaeological data recovered during the research. The archaeological data from here therefore, might serve as a representative basis for the reconstruction of the early history of the Ga.

(iv) The closeness of the area to the University of Ghana, Legon and the location of the area close to the asphalt-surfaced Accra-Nsawam Road which makes the area easily accessible for research are factors that were strongly considered before choosing the area for study.

PROBLEMS ENCOUNTERED DURING THE RESEARCH

The collection of data for this research has not been without the imagined difficulties. The problems encountered included:

(i) The unwillingness of the local people to provide certain information relevant to the research. Even though I am a Ghanaian yet, being an Akan and worse of all unable to speak the Ga language fluently, attempts made by me to obtain certain relevant materials especially on oral traditions many

times met a negative or a not too-happy attitude from the respondents in the initial stages of the research. This probably stems from the jealousy innate in the Ghanaian in parting with some "secrets" of institutions which he considers to be part and parcel of his people especially when the information is to be recorded, preserved and disseminated for the benefit of anybody other than his own kith and kin. However, with the personal intervention of the Asere mantse, Nii Akotia Oworshika III, doors began to open and the needed information was readily provided.

- (ii) Interruption of work during the ground survey by concerned landowners. At certain stages of the survey, some landowners confronted the team to *find out* the rationale behind it. In areas where the land was in the care of tenant farmers, the team was refused access to it until permission had been sought from the real landowners or their representatives in the presence of the tenant farmers. The fear of the landowners was that the land was being surveyed for the traditional authority to take over ownership. This was a genuine fear indeed, because urban development of Accra is spreading towards the research area at a rapid pace and land is in high demand in the area for estate development. Anytime the team was confronted with this problem, a research permit issued by the **Museums** and Monuments Board was shown to the landowners. The team also took pains to explain thoroughly the rationale behind the survey to the farmers and the landowners. These incidents delayed the survey work.

(iii) Inaccessibility caused by dense vegetation in certain parts of the area and crop cover in the cultivated parts. This affected the comprehensiveness of the survey in a way. For instance, it was observed that in such areas artifact visibility was too low whilst in the areas where the vegetation had been newly cleared or was dry grass and often burnt off, artifact visibility was high.

ORGANIZATION OF RESEARCH RESULTS

Since the work is archaeological in nature, the results have been organized and presented to reflect that of an archaeological research. In accordance with the research objective, the work comprises six chapters.

The first chapter serves as an introduction to the work. It delimits the research area and sets forth the scope, reasons for the choice of the area for study, outline of past research in the area, the objective of the study (problem focus), the research approach and methodology and the problems encountered during the research.

Chapter two, deals with the physical and human resources of the research area. After an introduction, the chapter focuses on the description of the environment and ecology. As a background study, the chapter surveys the geology, relief, drainage, climate, vegetation and soils. As regard the human resources of the area, the concern of the chapter lies in an investigation of the agriculture, with special reference to the land tenure system, farming units in connection with labour supply, the system of cultivation and types of crops cultivated. In addition hunting,

trapping, fishing, collection and gathering of wild and semi-wild plant and animal resources, livestock rearing and local craft industries are described.

Chapter three deals with the traditional organization of the research area. The origins and **processes** of Ga migrations are considered here. Other important aspects of the Ga traditional society that are highlighted in this Chapter are, population, language, social organization, religious belief, political system and attempts to analyse the influences and changes that have taken place in Ga society as a result of the Ga coming into contact with their present neighbours especially the Akan and Guan speakers.

Chapter Four deals with the results of an ethnographic study into modern potting traditions of two Ga villages in the Densu Valley, south-west of the research area. The study which was undertaken to facilitate a comparison of the excavated pottery with the modern types gave insights into the processes of change and continuity in Ga society. The chapter ends with a brief evaluation of the future prospects of the potting industry in Ga society.

Chapter Five takes a look at the methodology applied to acquire and analyse the archaeological data. This is followed by observations made about the archaeological data.

Chapter Six concludes this research report. In this chapter, the research area is placed in a chronological setting. An attempt is made to discuss the research objective in the light of the archaeological findings. The chapter synthesizes evidence from oral traditions, ethnography and early European written records to throw light on the archaeological materials for the reconstruction of the early ██████ history of the Ga.

CHAPTER TWO

PHYSICAL AND HUMAN RESOURCES OF THE RESEARCH AREA

INTRODUCTION:

The study area forms part of the Accra Plains. Geographically, the Accra Plains belong to the South-East Coastal Plains of Ghana. The Accra Plains region differs in several important **aspects** from the other geographical regions of the country in its physical and human geography. As a background study, this chapter deals with the geology, relief, drainage, climate, vegetation, soils and aspects of the human resources of the research area. Information on some of these aspects cannot be traced in the archaeological record, but a knowledge about them will serve as flesh and blood to the bare skeleton of the archaeological data thereby serving as aids in synthesizing the archaeological data.

(a) ENVIRONMENT AND ECOLOGY

(i) GEOLOGY AND RELIEF

The underlying rock formations of the study area are of different ages and characteristics. There are basically three types of geological formations in the study area (Map 4). The **dread** immediately close to the southern end of the Akuapem Range is underlain by the Togo Series of Pre-Cambrian age. The rock types of this area consist of quartzite with smaller amounts of phyllites, schists, sandstone and shale. The rest of the study area, except the coast, is underlain by Dahomeyan rock types. They consist of acidic and basic gneiss which contain mainly mica, schists and numerous

quartz veins. Along the coast of Accra, occur Accraian shales, sandstone and mudstone of mid-Devonian age (Brahmmer, 1967:2).

The relief of the study area is gently undulating at less than 70 meters above sea level (Dickson and Benneh, 1973:18). The monotony of the Plains is broken in the hinterland region by the almost abrupt steep rise of the Akuapem Range and the Weija Hills above the surrounding Plains. The crest of the Akuapem Range lies generally 416-466 meters north of Aburi but to the south of Aburi towards the study area, the crest falls gradually to around 330m and then more abruptly to the Ofankor Gap through which the Accra-Nsawam asphalt-surfaced Road and the Railwayline pass. South of the Ofankor Gap, a discontinuous line of hills, (the Weija Hills) rises generally to about 116m, the highest point near Weija reaching 213m (Brahmmer, 1967:3). A few isolated hills and rock outcrops rise slightly above the surrounding country. These consist of **gneiss** and schists. Notable among these are Legon Hill which rises to 161m and Achimota Hill to 70m above sea level.

(ii) DRAINAGE

The study area falls within the Densu basin or catchment area. The main river that drains the area is Densu and its tributaries notably the Nsaki and Dobro. The Onyasia and Odaw are also major streams in the area. A common drainage feature observed in the study area is that valleys draining to the coast, end in lagoons. The Densu and its tributary valleys end in the Sakumofio lagoon whilst the Onyaisia and Odaw valleys end in the Korle lagoon. Many of the soils in the study area are impervious and

are subject to surface run-off during heavy rainfall. The moving sheet of water concentrates in the valleys causing extensive damages. The moving water serves to ~~increase~~ the size of the lagoons at the mouths of the rivers along the coast. In the dry season, the flow of the rivers and streams is often low. Densu, the main river in the study area, is greatly affected because water is extracted from it at Weija for supply to the Accra metropolitan area.

(iii) CLIMATE

The climate of the area is the Dry Equatorial Type. Temperatures are high throughout the year. The mean annual temperature is about 26°C. The highest mean monthly temperature of about 30°C occurs between March and April and the lowest of about 25.5°C occurs in August. The period July - August is markedly more cloudy than the remainder of the year.

The rainfall regime of the Accra Plains region is characterised by a double maxima. The first occurs between March - July and the second between September to early December. The second rainy season is less reliable than the first and may fail in some years (Brahmmer, 1967:8). The entire Accra Plains region receives an annual average rainfall of 762 millimeters, the least received in the country. As a result, this region is the driest in Ghana (Dickson and Benneh, 1973:34). The area close to the southern limits of the Akuapem Range enjoys a higher amount of rainfall - an annual average of 889 millimeters. The rain typically falls in thunderstorms of relatively short duration but high intensity. May

- June and October are the periods when such falls occur. The rain increases from the coast to the interior.

Two distinct periods of dryness are observed, a major one from December to February and a minor one in August. The dry seasons are punctuated by storms.

(iv) VEGETATION

The relatively low and sometimes erratic rainfall experienced in the study area favours a coastal scrub and grassland vegetation (Map 5). The vegetation is characterised by grassland with a variable development of dense scrub and scattered trees.

The common grass of the area that appears after the vegetation has been cleared for farming is Guinea grass (nto; Panicum maxicum). Others include species of Digitaria, Heteropogon and Pennisetum. Many of the thickets are scramblers or climbers. These are composed of Ehretia cymosa (Labasatso), Baphia nitida (abolobaatso), Uvaria chamae (anweda) and similar broad-leaved evergreens (Taylor, 1960:69).

Ground herbs which appear particularly around the margins of thickets include geophytes, like the genera, Haemanthus, Eulophia and Cuciligo (Lane, 1962:167-8). Another plant common in the research area is Chromolaena odorata locally known as Acheamong weed. It is a fast growing plant which has invaded the research area. This plant was introduced into West Africa from Southern Asia and Central America (Dokosi, 1981:92).

Trees are limited in numbers and species. Among the most conspicuous trees in the study area are: Antiaris africana

(kodzotso), Ceiba pentandra (onyaitso) and Bombax buonopozense (aheneyentso). Trees that are of economic value in the area include the coconut palm (akokooshitso, Cocos nucifera), baobab (shadzo; Adansonia digitata) and the oilpalm (nmetso, Elaeis guineensis (White, 1954:52-3).

It is possible that the present vegetation does not reflect the original situation. According to Dickson and Benneh:

"Reports from early European visitors to the coast (Accra) indicate that the area used to carry a more luxuriant vegetation - probably a drier and more open variety of the moist deciduous forest". (Dickson and Benneh, 1973:37).

This view is shared by J.B. Wills. Writing on the general pattern of land use in the Agriculture and Land Use In Ghana, he asserted that:

"The earliest 1:125,000 scale maps of the country (dated 1907-8) indicate that "forest" extended considerably further south and south-east than does the forest in 1959" (Wills, 1962:223).

The western Accra Plains are apparently becoming drier through human exploitation of the land. Much of the area has been destroyed by centuries of human activities such as the felling of trees, the clearing of land for farming, seasonal burning and grazing by livestock (Taylor, 1960:68; Church, 1962:73; Lane, 1962:167; Dickson and Benneh, 1973:37; Amoah, 1976:3).

In the research area, small tracts of land are set aside as consecrated fetish groves. It is a taboo to defile them by cutting or picking any plant from the groves. Transgressors are believed to

incur the curse and wrath of both the living and the dead. Because of the religious sanctions governing these groves, they have been protected against the destructive activities of man. The fetish groves which are remnants of the "forest" vegetation bear witness to the former presence of a more luxuriant type of vegetation.

(v) SOILS

There is a variety of soils in the Accra Plains due to differences in slope, parent material and ground-water conditions. In the study area, there are two major soil groups namely, the coastal savanna ochrosols and the lateritic sandy soils.

The coastal savanna ochrosols occur mainly on the gently undulating parts of the sandy area. They are red-brown and yellow-brown, well drained, friable, porous loamy soils developed over sandstones. These are acidic or mildly acidic (Dickson and Benneh, 1973:45).

The lateritic sandy soils develop over granite. They consist of red-brown (pale, coloured) sandy loam overlying red iron-stone concretionary clays. It is this layer of hardened clay at the bottom of the soil which impedes downward drainage and causes waterlogging and large sheets of surface run-off in the rainy season.

The soils produced by the decay of large refuse dumps that mark the site of Ayawaso are intensively utilised for cultivation. The refuse dumps are easily identified because they are colonised by a luxuriant type of vegetation. The richness of the soils of the dumps is known by the local people and so they are heavily cultivated with crops.

(b) ECONOMY AND SUBSISTENCE

The inhabitants of the study area engage in a number of economic activities. The main traditional economic occupations are: farming, hunting and trapping, fishing, collecting and gathering, livestock rearing, blacksmithing and potting.

(i) FARMING

Farming constitutes the main economic activity of the Ga who live in the inland settlements of the research area.

The system of farming is bush fallowing. This is a system whereby a piece of land is cultivated continuously for a number of years until fertility has been exhausted and is then abandoned in favour of a new plot. The abandoned plot in the meantime would be re-colonised by vegetation. Soil fertility is restored from dead vegetation until some years after, the plot is put under cultivation again.

Land is owned by the lineage family (we) by virtue of initial occupation by the ancestors. Farmlands are held in trust by the head of family (shia onukpa) on behalf of family members. Every family member has rights to the use of farmland provided it is lying fallow.

Another form of land tenure is communal. Communally-owned lands (manshikpon) are controlled by the chief (mantse) on behalf of the community. Individual members of the community have access to the use of the communal land after the consent of the mantse has been sought.

Farming tools and methods are simple and non-mechanised. The usual tools for farming are the cutlass (klante), the hoe (koi), the axe (lema) and the adze (sosoo). The tools are locally made although imported cutlasses are also available and are preferred by some farmers.

It is a traditional farming practice among the Ga, that a plot of land for an intended farm is selected and demarcated prior to clearing. Often land that is heavily overgrown with vegetation is viewed as more fertile than that with less heavy foliage.

After the farmland has been selected, it is cleared by slashing the bush with a cutlass. Selection and clearing take place in the dry season (aharabata) between December and February.

Preparation of the land for sowing begins with the burning of the slashed bush. Burning is done after the bush has been left to dry for about three to four weeks. Care is taken in the burning to avoid damage to neighbouring fields. A wind break (nakplamo) is prepared by clearing a space about two to three meters wide between the farmland and adjacent fields. At the time of burning, a torch (jaten), made from dry palm fronds is ignited and then used to light the dried bush. Ignition is done from the leeward direction towards the windward direction.

Agricultural labour is provided in three ways. One form is co-operative labour (noboa). It operates on an informal and highly flexible agreement between relatives, friends or neighbours. The work relations are well-balanced and reciprocal. In this system, there is no monetary reward except that the host farmer is expected to provide food for all during the period of work on his farm.

Another form is hired labour (apaafoi) otherwise called "by day". This attracts monetary reward. The third is familial labour. In this form of labour, every family^{member} except old people and children below the age of ten is expected to give a hand on the farm. Heavy work, like slashing and burning is done by men whilst women and children often do the planting and brushing under the cultivated crops.

Planting is done when rainfall commences. Mixed cropping is the traditional practice. This is done to ensure against total crop failure. The agricultural landscape presents a rich variety of cultivated food crops. The most widely cultivated crops are maize (abele; Zea mays) and cassava (duade, Manihot utilissima). Vegetables are also grown after maize and cassava have been planted. They include okra (enmoni, Hibiscus esculentum), garden-eggs (sebe; Solanum melegena), peppers (shito) - three kinds are cultivated; tono (Capsicum sp), kakpo shito (Capsicum annum) and Akwele wabii (Capsicum frutescens) and tomato (amoo; Lycopersicum esculantum). Muddy but less water-logged lands are utilised for the cultivation of sugar-cane (She; Saccharum officinarium) and banana (akwadu).

According to Ga traditions, millet (nmaa; Pennisetum typhoideum) was the the staple food of the Ga in ancient times. However, it is grown today only on sacred lands for ritual purposes. It is grown only for serving food to the traditional gods during the annual Ga Homowo festival.

Every farmer produces to meet the needs of the family and only a small part of the harvested crops may be sold. As a result, farm size is very small.

(ii) HUNTING AND TRAPPING

Hunting and trapping also **play** a significant *role* in the economy of the Ga. In the inland and smaller coastal settlements, almost all sections of the male working population practice a certain amount of hunting and trapping in addition to their regular occupations. The wooded savanna vegetation of the research area is a rich environment which contains plenty of game.

Hunting (gbobimo) is done both during the day and in the night. Today, Ga hunters use the long barrelled gun (tu) for hunting. Night hunting is done with the aid of head-lights. Ga traditions indicate that before the European long-muzzled loading guns freely circulated in **Ga** society through the ancient overseas coastal trade, the principal weapons for the chase were basically bows and iron-tipped arrows (mli bii gai) and spears (akplo). By experience, the hunters know the feeding times and places of certain animals. A common hunting technique is to go ahead of time to the feeding places and keep in wait for them.

Rituals and charms are very significant in Ga hunting expeditions. The Ga have a god for hunting called Akrama. To make a good kill, Ga hunters consult a mouth-piece or medium (woyo) who runs a centre for Akrama cult worship where their guns and bullets are "medicined" to make them unerring. For continued success in

hunting, Ga hunters build a small grove (aklabatsa) on the instructions of Akrama mouth-piece in their homes. This consists of a small round platform of sticks under which is placed a small pot with a bottle of drink (Otutu)(Plate 1). Before the hunter sets out on a hunting expedition, a ritual in the form of libation-prayer is made to Akrama and other Ga gods for protection and a good hunt:

Ataa Nyonmo!
Woke daan nee miishiwe shi woha bo
Ni woyaa nee ogbele gbe oha wo
Nii Akrama, Nii Omanye
Naa Afiyie, gbe heyoo
Naa Nsaki, Nii Gua
Nye fee nye ba hea eko nye nua
Ni woyaa nee, nye yea, nye bra wo
Tswa omanye aba!

Almighty God!
We pour you this libation
As we set out on this trip
Open up our way
Nii Akrama (god of hunting)
Nii Omany (god of Ayawaso)
Naa Afiyie (goddess of births) and protector of pathways
Naa Nsaki (goddess of Nsaki River)
Nii Gua (god of thunder and blacksmithing)
All of you accept some drink
As we go on this trip, let luck come our way
Hail blessings! Let there be blessings!

When a game is killed, the head (kooloyitso) and sometimes the hide (hewolo) are put on the aklabasta as a thanks-offering to Akrama.

There are risks in hunting and to protect themselves, Ga

hunters wear charms and amulets (ayala) for vanishing and against mischief. These may take any form: small pieces of animal hide, the teeth, horn-core and hairs of certain animals. According to Ga hunting traditions, a hunter who wears any of ~~■~~ these absorbs the strength, courage and cunning of the animals. Again, in case of any danger, a hunter may vanish into the thin-air or turn into an object like a tree or stone if he strikes on the charm.

Group hunting is not practised among the modern Ga. Today, a Ga hunter goes alone to the bush with his gun and a dog (gbee). Whenever, a big-game is killed, it is left in the bush while the hunter returns to get assistance in carrying the carcass home.

Trapping (tsonetsoo) is undertaken alongside hunting and farming. The Ga use a number of all season devices to trap game. These traps may be classified into two categories: tension spring traps and non-tension spring traps.

Tension-spring operated traps grip the prey captured with the use of the resilience of a strong bent stick which operate on a trigger and release mechanism. Two types of this trap called ashwo and asha are very popular in the research area (Fig. 1a, b). The non-tension spring traps employed in the research area operate on a trigger and release mechanism but do not depend on the resilience of a bent stick to capture the prey. Types of this trap operated in the research ^{area} are woya; akpa/anfoo and dzwao (Fig. 2 a-c).

To lure animals to the traps, Ga hunters place a variety of bait close to the traps. The commonly used bait include: cassava (duade), palmnuts (nme), sweet potatoes (atomo) and banana (akwadu).

The game in the research area consists of two groups of animals, each with a different origin. The wooded-savanna parts (ie. the dense scrub with grass) contain animals of open country whilst the area close to the southern limits of the Akuapem Range **contains** forest animals.

The forest animals that the Ga hunt and trap include three kinds of antelopes namely: the black duiker (dun; Cephalophus niger), the royal antelope (adowa; Neotragus pygamaeus) and the Maxwell's duiker (yoo; Cephalophus maxwelli). Other forest animals that are killed as game include the giant rat (obishi; Cricetomys gambianus), the Nile monitor (mampan; Varanus niloticus), the African civet (kakamadlako; Viverra civetta), the palm civet (ablebia; Nandinia binotata) and three mongoose - the small, grey long-nosed cusimanse (akajale; Mungos gambianus), marsh mongoose (odonkpo; Atilax paludinosus) and dwarf mongoose (kokobo; Herpestes sanguineus).

Animals from the open country that are hunted and trapped in the research area are: the cutting grass (kpin, Thryonomys swinderianus) which is a delicacy of the local people, the ground squirrel (sone; Xerus erythropus), the Togo hare (kpenkple; Lepus capensis zechi) and two kinds of bush fowl (afi; Francolinus bicalaratus/F. achantensis).

When a big game is killed, for instance, any of the antelopes, parts are shared among the hunter's relatives and neighbours and the rest is sold. In the past, the hind-legs (shwo), the intestines (musunnibii) and the heart (twii) of every big-game killed were given to the chief as Ga custom demand. But today, there is no strict compliance to this practice.

(iii) FISHING

Fishing (wuoyaa) is one of the major traditional economic occupations in the research area. Three types of fishing may be distinguished namely: river fishing; lagoon fishing and sea fishing.

(a) RIVER AND LAGOON FISHING

The techniques and gear employed in river and lagoon fishing in the research area are very similar therefore, the two will be considered together.

According to Ga traditions, river and lagoon fishing were practised by their ancestors before they learnt sea fishing. Thus, in the past river and lagoon fishing were more important than sea-fishing. Today, they continue to play an important part in the Ga traditional economy.

The main rivers in which the Ga of the research area fish are the Densu and Nsaki whilst lagoon fishing is done in the Korle and Sakumo Fio lagoons.

The techniques and gear employed in river and lagoon fishing are closely related. Corresponding to line, net and trap fishing are line fishing tackle, various nets and traps respectively. The fishing gear used by the Ga for river and lagoon fishing are made by themselves. It is amazing to note that despite the availability of imported nylon and synthetic materials, the Ga use natural twines and employ a selection of canes, palms, lianas and bark of plants in making certain fishing gear.

Ga traditions indicate that in the past, fishing nets were made out of twines from plants such as kaatso (Dichrotachys

glomerata and anansre - a pineapple-like plant. The process of making nets out of natural fibre was so cumbersome that imported nylon yarns have replaced the locally produced ones. Today, two types of nets - the dip net (atso) and cast-net (fanya/koni) (Fig. 3a) are employed in river and lagoon fishing in the research area. These nets are now made with imported nylon yarns. In the past, fish-hooks were carved out of the wood of the haatso tree (Fagara xanthoxyloides) but imported metal hooks have replaced them. Line fishing is carried out by using the hook and line (kpon) and hook long-line (Klunmo/sule). The former consists of a nylon cord with a metal hook tied to a short strong stick about 1m long and the latter, a number of metal hooks attached by short snoods to a main cord which may vary between 8-20m long for river fishing and 20-35m long for lagoon fishing (Fig. 4a, b).

Today, various parts of plants such as the rattan cane (Calamus deeratus and Ancistrophyllum opacum), odobe (Raphia vinifera) and nmetso (Elaeis guineensis) are used in making fish traps. The popular traps made are the funnel entrance trap (atse) and the fence trap (apla). The atse is a double chambered trap of woven rattan cane and strips of palm branches, cylindrical in shape with an entrance in the form of a funnel or non-return valve. The apla trap consists of a fence made of raffia palm branches and built across the river channel or to extend over considerable areas of the lagoon leaving spaces at the bottom where baited funnel-entrance traps are fixed (Fig. 3b, c).

Among the fish caught in the rivers and lagoons in the research area by the various techniques and gear described above

are: mflabedi (Hemichromis fasciatus), didee (Pelmatochromis quenthrei), mabli (Tilapia sp), obliki (Eleotris sp), mereke (Claris lazera) and lagoon grey-mullet (atumu-tsolo).

Most fish caught are consumed as family food and only a small quantity particularly Tilapias are either smoked or salted and sold.

Various species of edible crustacea are also caught from the rivers and lagoons in the area. They include edible land lagoon crab (kaa; Carbiosoma armata), mangrove crab (tsitsi, Goniopsis cruentata and river crab (okoto); Potamonantes anchieta).

(b) SEA FISHING

Today, sea fishing is extensively done by the Ga who live on the Accra coast. Ga oral traditions have it that sea fishing was introduced to Accra by Fante fishermen (Bosman, 1705:70; Brown, 1947:22-24, Field, 1937:88). There are certain traditional practices carried out by the Ga of the research area that confirm this fact. The occupant of the office of chief-fisherman (Woleiatse), for instance, is chosen from the Aboutsekuana family who are of Fante origin. Also, it is the custom among Ga fishermen to purchase charms (tsofa) from Fanteland if they are to make a good catch.

The oral traditions on sea fishing in the research area indicate that two Fante fishermen Nee Aboutsekuana and Ankonu from Mowule (Moure) introduced sea fishing to the Accra coast. A stool and a fetish, called Kukurutu, they brought along are said to be in Accra today (Brown, 1947:27).

The Ga engage in both inshore and offshore fishing. The

operational grounds of sea fishing in the research area are the shallow waters close to the shore and the deep waters off-shore. The techniques and equipment employed in sea-fishing by the Ga are therefore designed to suit fishing in both deep and shallow waters.

In both in-shore and off-shore fishing, dug-out canoes (lele) are employed. Three (3) types of canoes are distinguished: poli lele; ali lele and nkomenfa lele.

Poli lele is a large-sized canoe heavily built, less shapely and never carrying a sail. It is 9m long, 1.5-1.75m wide and 85cm deep. It is used purposely for in-shore fishing. Ali lele, which carries a sail is a medium-sized canoe 8m long, 1.45-1.65m wide and 75cm deep. It is employed in deep sea-fishing. Today, most fishermen fit out-board motors to this canoe. Nkomenfa lele, implies "one man use" or "myself". It is a small-sized canoe used by only one or two men. It is 6m long, 1m wide and 75cm deep. It carries no sail and it is employed for lagoon and inshore fishing.

Today, canoes are imported by the Ga from their Akan neighbours who live in the forest regions where superior soft-wood for making canoes such as wawa (Triplochiton scleroxylon and osese (Funtumia africana) **abounds**. However, in the past, traditions have it that the Ga made their own dug-out from the stems of trees like the baobab (shadzo; Adansonia digitata) and two types of silk cotton tree onyaitso (Ceiba pentandra) and aheneyentso (Bombax buonopeZense).

Techniques and gear for sea fishing may be divided into two categories: line and net fishing. Line fishing gear consists of nylon cords and metal hooks of various sizes (9,12,16,17 and 18).

There are two main types: hand-line (kpon) and long-lines (klunmo/sule). Handlines are employed in deep sea fishing whilst long-lines are employed in both shallow and deep waters. As regards net fishing, three (3) types of nets are employed. They are the seine net (adra yaa), drift net (ali/watsaa yaa) and cast net (fanyaa). Cast nets are employed for fishing in shallow waters. They are small spiral nets cast from small-sized canoes. The seine and drift nets are very popular and are used for big-catch. When a seine net is for instance cast, it may be left in the sea overnight with its ropes made fast ashore by tying them around coconut trees or boulders. In the morning, the net is dragged to the beach by two groups of men tailing each end of the ropes.

Table 1 below shows the major sea fish caught and the techniques and gear employed in catching them.

BIOLOGICAL/COMMON IDENTIFICATION	LOCAL NAME	LINE FISHING		NET FISHING		
		Hand Line	Long Line	Seine net	Drift net	Cast net
<u>Sardinella sp.</u>	Man			X	X	
<u>Parathumus obesus</u>	Odaa	X				
<u>Frigate mackerel</u>	Opoku	X				
<u>Umbrina sp.</u>	Nkanbli			X		
<u>Red mullet</u>	Blofotsukwe			X	X	
<u>Seabream (Dentex)</u>	Tsile/Afiti	X	X			
<u>Spade-fish</u>	Okposansa			X		
<u>Sea perch</u>	Odee	X	X			

<u>Glyphisodon sexatilis</u>	Obliki		X			X
<u>Caranx africanus</u>	Antuanu			X	X	X
<u>Flying fish</u>	Flikilo			X	X	X
<u>Ablennes hians</u>	Sense	X	X			
<u>Hyporhamphus cal.</u>	Senseni			X	X	X
<u>Elops larcerta</u>	Kpole			X	X	X
<u>Aruis latiscutatus</u>	Kokote	X	X	X	X	
<u>Scomber colias</u>	Saman		X		X	
<u>Callyodon hoefleri</u>	Yuuyua	X			X	
<u>Thread-fish</u>	Anteyaa	X		X	X	
<u>Priacanthus arenatus</u>	Odame	X	X			
<u>Moon fish</u>	Antele				X	
<u>Brachydeuterus aur.</u>	Booboi	X	X	X	X	
<u>Sardinella cameron.</u>	Antebo			X	X	
<u>Ilisha melanota</u>	Kanfla			X	X	
<u>Muraena helena</u>	Ablekui	X	X			
<u>Spicara sp.</u>	Odabletse	X	X			
<u>Trachinotus glaucus</u>	Lilee		X	X		
<u>Trigger fish</u>	Ewule		X	X	X	
<u>Spannish mackerel</u>	Saflo			X	X	
<u>Sardinella aurita</u>	Kankaama			X	X	

(iv) COLLECTING AND GATHERING

The collecting and gathering economy is based on the immense variety of wild and semi-wild plants and other resources that abound in the surrounding rich environment. Collecting which closely

supplements cultivation is never practised entirely on its own in the research area.

There is a variety of semi-wild food plants in the coastal scrub and grassland vegetation of the research area. One of such plants that enjoys an immense local popularity is the oil palm tree (nmetso; Elaeis guineensis). Oil palm trees are rarely deliberately cultivated. The nuts are disseminated by rodents and birds and their seedlings grow up in the bush. When land is cleared for farming, oil palm seedlings and other useful plants are left standing.

The oil palm is highly useful because various parts of the tree could be put to many uses. From the red, fleshy pericarp of its fruits palm oil (nmutsuru), the basis of much of the local diet, is obtained. Palm kernel oil (nmemu), an equally popular oil, is also obtained from its kernel. Like palm oil, the kernel oil can be put to many uses other than for cooking.

The popularity of the oil/^{Palm}tree undoubtedly depends on the fact that palm-wine (t_edaa/k_otse) could be drawn from it (Plate 2). To obtain the palm-wine a big palm tree is uprooted with an adze (sosoo). The tree is bereft of its fronds leaving few that protect the growing point. It is left in such a condition for about ten days then a hole about 2x 1.5cm is bored into the growing point. A small reed (ododoben; Olyra latifolia) is inserted to serve as a pipe through which the fermented sap (palm-wine) drops into a pot (saasen) set under to receive it. To draw the palm-wine in large quantities fire from a torch made of dry palm fronds (jaten) is

kindled at the growing point. The sparkling white foaming palm-wine is consumed in large quantities as food drink. It provides a valuable source of protein (Odamtten, 1988:21).

In addition to the oil palm, there are many semi-wild fruit trees that constitute important food sources. Among them is the coconut tree (akokooshitso; Cocos nucifera). Apart from a few that are cultivated around village settlements in the inland parts of the research area, they grow spontaneously on the Accra coastland. The fruit of the coconut tree is famous for the refreshing liquid and the soft flesh it contains.

The West African unimproved mango (mango; Mangifera indica) with small fruits and pawpaw (akpakpa; Carica papaya) are two other fruit plants utilised as food in the research area. They grow in a semi-wild state in the re-growth vegetation around the settlements and on the farms. The fruits, when ripe, are collected and enjoyed by adults and children.

A wide range of wild plants are made use of by the Ga of the research area. Notable among them is a tuber, the bush yam (koo mli ye; Dioscorea praehensilis) collected seasonally between early August and early October in the "forest" parts of the area close to the southern limits of the Akuapem Range.

The leaves of many plants are collected for spinach and flavourings. The leaves of the baobab (shadzo; Adansonia digitata) are used for soups and stews. The leaves of asegetete (Grenia carpinifolia) are also eaten in soups whilst those of blofo shwei (Tulinum triangularis) are used as spinach.

Two kinds of mushrooms are collected for food. One kind otweiahirode which belongs to the termitomyces are usually collected around termite mounds. The other kind akotoroko grow on dead palm trees. The mushrooms are cooked and served in soups.

Land snails form an important part in human diet in the inland parts of the research area. The snails are collected mainly from the thicket areas and the riverian vegetation. The main land snails collected are the giant snail waakpakpa (Achatina achitana and waa/opbri (Archachatina ventricosa).

The Ga eat five kinds of reptiles as food. They are the land tortoise (akokplonto; Kinixys belliana), water tortoise (osuplupu; Pelusios gabonensis) and the river turtle (sikanteklowa; Amyda triungius). The other two are marine turtles, the green turtle (hala; Chelone mydas) and the hawks bill turtle (ayikplonto; Chelone umbricata) which are caught in fishermen's nets.

Lastly a variety of molluscs is collected from the rivers, lagoons and the sea in the research area. Those that are collected from rivers and utilised as food are: gongomi (Natica marochiensis) bebeo (Eulina sp) and afani (Donax sp). Among the marine and estuarine molluscs exploited by the Ga of the area for food are: gblute (Donax acutangulus), kaklada (Pendalium amomoides) nshor mli waa (Cymbium cymbium), nshor mli adordey (Arca afra), afla (Tagelus angulatus), tsina muu (Cypraea steriolaria), shinnie (Arca senilis) and momochile (Tympanotus fuscata).

(v) LIVESTOCK

Livestock rearing is practised only as a subsidiary occupation

and does not contribute very substantially to the traditional economy of the Ga. Small numbers of sheep (guanten), goats (abotia) and fowls (wuei) are kept for their meat.

Most households have at least one or more sheep and goats. They are the West African dwarf types. The sheep is small, lean and long-legged whilst the goat is short-legged, small and sturdy. No special husbandry is practised. The animals live mainly by scavenging but they may be provided occasionally with herbage which includes spear grass (anaanu gai; Heteropogon contortus), Guinea grass (nto; Panicum maxicum) and cassava (duade; Manihot utilissima)

Fowls are kept by almost every family. The indigenous breeds are small and sturdy. They are normally allowed to scrounge for food for themselves. Once in a while, they may receive a handful of maize and small sugar-loaf termite mounds may be collected for the young chickens. The livestock are usually used in religious rituals, for entertainment of visitors and to supplement household supplies or sold for money.

(vi) LOCAL CRAFT INDUSTRIES

Today, the traditional craft industries practised among the Ga of the research area have lost some of their significance. However, according to Ga traditions, in the past when imported overseas goods were rare, pot-making, blacksmithing, basketry, broom and mat-making as well as the manufacture of soap and beads played a very significant role not only in the domestic needs but also in the economic, religious and social life of the people.

(a) BLACKSMITHING

There is evidence from traditions that the blacksmith craft was practised among the Ga in the past. But today, it is practised on a small scale by immigrants mostly Ewes. Oral evidence gathered from old Ga folks indicates that when their ancestors first arrived in the research area, they met Nii Gua, the god of thunder and blacksmithing in an ayawa (brass bowl) with a long chain suspending from the skies. It was Nii Gua who taught a section of the Ga this craft. This god, whose grove (aklabatsa) is still located on one of the hills on the Accra-Nsawam Road, close to Ayawaso and Pokuase, became the mythical master and genius of all Ga blacksmiths. Thus, according to Ga custom, all blacksmiths became devotees of Nii Gua and were recognised as a special class of people in Ga society. In the past, they worked in the night when Gua would visit them and instruct them on how to go about difficult tasks. Their dependence on such a supernatural power might have contributed to the mystery and fear that surrounded the person and craft of a blacksmith.

Among the items manufactured by the blacksmiths in the past were tools for cultivation such as cutlasses (klante) and hoes (koi) and those for hunting, for example, spears (akplo) and arrows (gai).

(b) POTTING

Pot making has almost lost its significance in the research area. Today, the potting centres are limited to a handful of small Ga settlements in the Densu Valley. These small potting centres are Afuaman, Manhean, Oblogo and Weija. Here, some Ga women are fully or as it is most often the case, only partly engaged in pot-making. In

other parts of the research area, pot-making is extinct. A detailed report on modern potting is presented in Chapter Four of this work.

(c) OTHER CRAFT INDUSTRIES

Other craft industries such as **basketry**, ~~()~~ and mat-making which are said to have remote antiquity are undertaken by a few people in the research area. They are carried out to meet domestic needs. The raw materials for these crafts are obtained locally from the surrounding vegetation.

Ga traditions mention the manufacture of soap and bark cloth with antecedents going back to very remote times. The cloth which was known as tekle was produced out of the bark of the kodzotso (Antiaris africana). It was said to be very popular. To produce the cloth, the bark of the tree was removed in long narrow strips, softened in water and beaten with sticks to become supple and several times larger than the original size of the cut bark.

Soap was produced by Ga women to meet domestic needs. It was produced first by collecting the fruits of ateatso (Cashew nut tree). The fruits were heaped at a particular place and burnt to ashes. The ash was then collected and mixed with other plant materials to obtain the soap.

The information presented in this section represents the physical and human resources of the research area. As pointed out earlier on (p.18) some of these things **may not be found** in the archaeological record. However, knowledge about them, accumulated from ethnographic observations and narrative history may provide clues that could be very vital in solving the archaeological and historical issues this study set out to resolve.

CHAPTER THREE

THE ORIGINS AND TRADITIONAL ORGANISATION OF THE GA

GA ORIGINS

The origins of the Ga remain obscure and much of the early history as narrated by the custodians of Ga traditions is a dubious myth. Ga oral traditions indicate that their ancestors migrated into their present place of habitation from external sources of origin.

According to one account, the Ga migrated to the Accra Plains with their ethnically-related neighbours the Dangme, from the present Togo-Benin-Nigeria area within the West African sub-region. The place of origin as mentioned in this account is Tetetutu or Sameh (Reindorf, 1895:3-4; Azu, 1926:242; Field, 1940:121). Reindorf, a Ga clergyman who recorded Ga oral traditions in the late nineteenth century described the cradle of the Ga as "a land between two rivers Efa and Kpola (Reindorf, 1895:6). N.A. Azu, on the other hand described Tetetutu or Sameh as "an island situated to the south-west of River Ogun adjoining Lada and Dahome" (Azu, 1926:242). These descriptions suggest two different areas of origin all within the present Togo-Benin-Nigeria area. Reindorf's description indicates a location in southern Nigeria whilst Azu's indicates a location in the Togo-Benin area. Traditions of this account agree that the Ga and Dangme were driven from their habitations by the continued hostilities of their neighbours and that after leaving their cradle, they crossed the River Volta and thereafter divided and spread over the Accra Plains. Reindorf,

points out that on reaching the Accra Plains, the Ga split into different groups and the Ga Mashies founded scattered settlements that stretched from the coast to a few kilometers inland. Some of these early settlements he mentioned are: Muko, Akpadepong, Pletekwegong, Anomle, Fanofa, Dokutse and Kushibiete (Legon) (Reindorf, 1895:12).

Another account claims that the Ga originally migrated from the Near and Middle East. According to this view, the migration from the Togo-Benin-Nigeria area, followed an earlier stage in their long migration which began in Israel to North Africa and then to the Central part of the continent from where they moved into West Africa. According to Bruce-Myers, the Ga "in a series of migrations, came all the way from the central part of the continent where they had been in contact with ancient civilizations" (Bruce-Myers, 1927-8:70). Another Ga scholar, Quartey-Papafio claimed that "when the Ga arrived on the Gold Coast, there were red-skinned people among them, who were no doubt, Phoenicians and Cutheans" (Quartey-Papafio, 1910:11:320-1). Bruce-Myers records that the Ga arrived in the Accra Plains in several groups. According to him, the first batch came by the coast (sea) under the leadership of a fisherman called Lakotey and his wife Larle Akile Adinan and settled on the coast and their descendants have been the custodians of the sea-god Nae. Other groups who arrived later, were inclined to farming and so moved inland to found a settlement called Nanso located in the present area between Kwabenya and Ajarnote (Adzangote) Hill. Here, they lived for a considerable number of

years till as a result of ethnic feuds they moved to Ayawaso (Bruce-Myers, 1927-8:168).

In both accounts, certain cultural similarities are pointed out as proof of Ga migrating from these regions. In the case of the Near and Middle East account, it is claimed that the Ga annual Homowo festival is a corrupt form of the Jewish Passover. During the Homowo, the Ga smear ochre (ntsuma) on their door-posts and this is claimed to be similar to the biblical narration of smearing blood on the door-posts by the Jews during the Passover. In addition, the dress and role of the Ga Chief-priest (Wulomo), it is claimed, recall that of the Levitical High Priest of the Jews (Bruce-Myers, 1927-8:70).

The Togo-Benin-Nigeria account, seems to be based on the claim that the Ga, Dangme and Ewe of south-eastern Ghana, generally conform to an observable cultural or linguistic pattern as part of a group of people in West Africa whose original centre of dispersion lay somewhere east of their present homeland. It is pointed out that the insignia of the early kings of Accra closely resembled those of Benin. Again, it is claimed that the "aggrey beads" known by the Ga as koli found in archaeological and non-archaeological contexts on the coastland of Accra are very much like those made at Ife and therefore, strongly support Ga migration from south-western Nigeria (Reindorf, 1895:18-19).

The basis of these accounts as given above has been attacked by some scholars who have researched on the Ga during the past decade. One of such scholars is the historian, Irene (Quaye) Odotei. She has dismissed the Near and Middle East account as

untenable. According to her, the adherents of this account firstly, ignore the fact that the physical characteristics of the Ga are typically Negroid and not Caucasoid. Secondly, the Ga language has no affinity with Hamito-Semitic languages. It belongs to the Kwa-group of languages spoken in West Africa. Thirdly, cultural similarities do not necessarily have to be evidence of previous connection. They could also arise from independent cultural evolution in separate areas (Quaye 1972:12-13).

As regard the use of certain cultural or linguistic similarities to link the Ga with certain ethnic groups in the Togo-Benin-Nigeria area, the historian Adu Boahen has argued that:

"The Ewe speak a language closely related to the Fon and Adja languages spoken in Togo and Dahomey (Benin) while the Ga, Dangme and Krobo speak virtually the same language. Not only are all the four languages quite distinctive and not only are all of them spoken in clearly defined continuous areas, but with the exception of Ewe, all the languages are spoken here in Ghana and nowhere else in the world. It was therefore, here in Ghana that these languages evolved and since it takes at least a thousand years for a language to break off from a parent language or a proto language and develop into a language of its own, it follows that at least some of the speakers of these languages must have been living in these regions for at least a thousand years" (Boahen, 1977:94).

He cites accounts of early European traders who visited the coast of Ghana (Gold Coast) as indicating that there was a maritime trade of slaves, cloth and beads organized by the Portuguese between the

coasts of Nigeria and Ghana in the late fifteenth and early sixteenth centuries, that this trade was probably pre-European in origin. The traditions of the Ga which claim they migrated from the Nigeria area may therefore, be distortions down the centuries of these trading connections.

It seems that the Ga migration accounts are based on an anxiety to link them with ancient well-known "civilizations". This is not surprising at all. It appears these claims were steeped in the mentality of indigenous and non-indigenous scholars of the first half of this century who had been schooled in a period the Hamitic race hypothesis was used to explain the origins of "civilizations", the trace of any remarkable technological feat and notable political organization in black (tropical) Africa. Thus, it was supposed by writers like Reindorf, Bruce-Myers, Azu and Quartey-Papafio who wrote on Ga culture history, that the ancestors of the Ga were remnants of "civilized" peoples who dispersed to this part of the West African sub-region, from the ancient "civilizations" of the Near and Middle East after their fall.

A current account of Ga origins states that they and their ethnically-related neighbours, the Dangme probably evolved in Ghana within the lower Volta Basin (Quaye, 1972:12-16; Boahen, 1977:94). This account is based on cultural and linguistic similarities between the Ga and Dangme. The Ga and Dangme are closely related languages and that the two are said to have diverged from a common ancestral language (Kropp Dakubu, 1972:89). The historian, Irene (Quaye) Odotei states that:

"It is wrong to **portray** the Ga-Dangme as an example of wholesale migration of people from a foreign country to their present territory. The Ga of today, are a complex mixture of peoples and cultures which had gradually fused into a system with distinct characteristics"(Quaye, 1972:13).

She has proposed two probable cradles for the evolution of the Ga-Dangme speaking peoples. The first, is the lower Volta where the Ga and Dangme evolved and the second, in the western Accra Plains where the Ga leaving the Dangme in the east absorbed other peoples and ideas particularly, Akan and Guan elements.

Oral traditions gathered during the field work for this study indicated that the ancestors of the Ga originated from a far away land in the east. According to the present Wulomo of modern Ayawaso, Nii Annan Mensah, the Ga did not migrate into their place of abode as a single group. Their ancestors, he claimed, came in different groups, some by sea and others by land. To buttress his claim, he burst into a traditional Ga song which said in part:

<u>Wodzeehe</u> <u>dzeke</u>	We came from a far away place
<u>Wodze</u> wuoyi ni	We came by the sea
Kooyi dzi <u>wono</u> ...	And the forest is ours ...

According to him, the section of Ga who founded the Ayawaso settlement (ie. the Aseres of Ga Mashie) came by land. From this far away land, they came to the Anum peninsula on the River Volta. Here, they crossed the river at a fordable point and after a series

of wanderings in the Accra Plains settled at the coastal town of Kokrobite (near Botianor) in the western Accra Plains. They later moved to the confluence of the Densu and Nsaki Rivers near Nsakena, utilizing the Densu Valley as a passage-way. Here, they encountered their traditional gods who led them to Ayawaso for a final settlement through their leader King Ayite.

It might be well to mention at this point that the issue of Ga origins as narrated by traditions is not clear and conclusive. The implications of archaeological research in the Accra Plains on this issue are considered in Chapter Six.

LANGUAGE

The Ga call themselves Gamei to distinguish themselves from the other ethnic groups in Ghana and they speak the Ga language. The language belongs to the Kwa sub-group of the Niger-Congo stock of languages. The Kwa grouping includes among others, languages such as Dangme, Akan, Ewe, Yoruba, Ibo and Nupe (Greenberg, 1966:8). Of the Kwa language group, Ga and Dangme together form a sub-group (Map 6). They are said to be fairly closely related languages, each being by far more closely related to the other than either is to any other language and that they diverged from a common proto-Ga-Dangme language (Kropp Dakubu, 1971:109-117; 1972:88; 1987:2; 1988:103; Apronti and Kropp Dakubu, 1972:35-46). (Fig. 5 below):

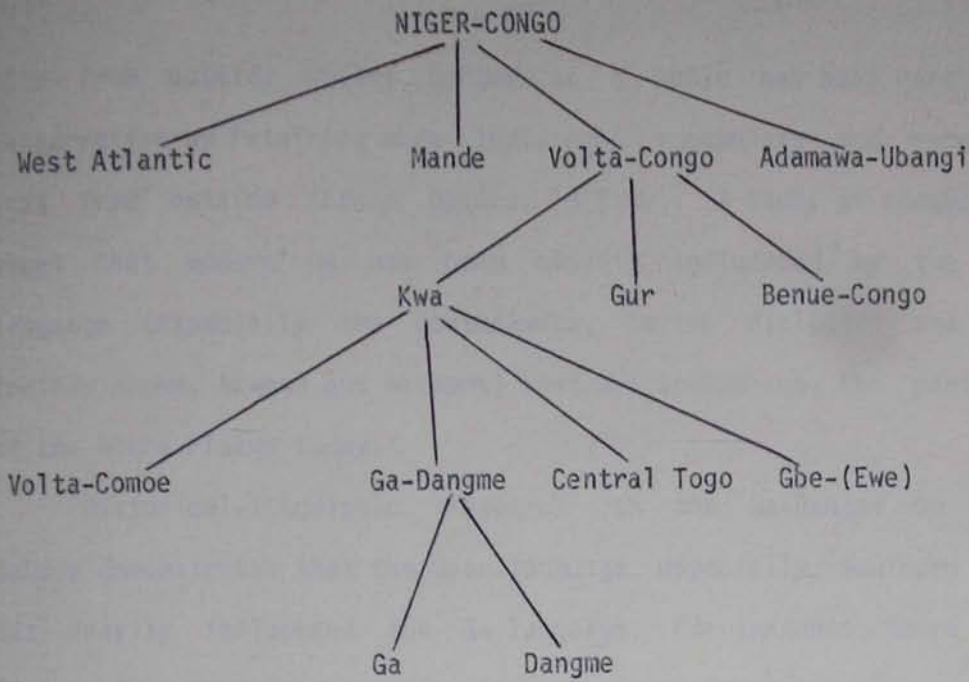


Fig. 5: Linguistic relationships between Ga and other related languages of the Niger-Congo stock (After Kropp Dakubu, 1987).

The linguist, Colin Painter, who applied glotto-chronological lexico-statistics (a method in linguistics for computing time elapsed since two or more genetically related languages, derived from a parent language ceased to be mutually intelligible) to Ga-Dangme, concluded that the two languages became different languages a little over a thousand years ago. According to him the parent language must have become separated from Akan, Ewe and the Central Togo languages more than a thousand years before Ga and Dangme also became separated (Painter, 1966:58-65).

Of the two languages (ie. Ga and Dangme), Ga seems to have lost more indigenous words of the ancestral Ga-Dangme and borrowed

more from outside whilst Dangme as a whole has been relatively conservative by retaining more indigenous vocabulary and receiving less from outside (Kropp Dakubu, 1972:89). A study of vocabulary shows that modern Ga has been heavily influenced by the Guan language (especially the Obutu/Awutu, Larteh dialects) and Akan (mainly Akyem, Akwamu and Akuapem) that are spoken on the periphery of the Accra Plains today.

Historical-linguistic research on the Ga-Dangme by Kropp Dakubu demonstrates that the Guan language especially southern Guan has heavily influenced the Ga language. For instance, there are a number of words that occur in Ga and Guan languages but not in Dangme (Kropp Dakubu, 1972:108).

<u>Ga</u>	<u>Guan</u>	<u>English</u>
obishi	obisi (Larteh)	rat
trema	ntrema (Awutu)	cowry
	ntremi (Larteh)	"
<u>obo</u>	<u>obo</u> (Awutu)	fill
	<u>obo</u> (Larteh)	"
kota	kota (Awutu)	fold

During the field studies on Ga oral traditions and ethnography for this work, information gathered suggests that Ga has been heavily influenced by the Akan dialects spoken in the northern littoral of Ga land. The influence is observable in the vocabulary related to institutions of authority, food and basic human concepts:

(a) Vocabulary related to statecraft (ie. institutions of authority)

<u>Ga</u>	<u>Akan</u>	<u>English</u>
Otseami	<u>Okyeame</u>	Spokesman (Linguist)
Mankralo	Mankrado	State father
<u>Asafoatse</u>	Asafohene	Military Commander
<u>Dzaasetse</u>	Gyaasehene	Chief Administrator

(b) Vocabulary related to economy

<u>opense</u>	<u>apese</u>	crested porcupine
adowa	adowa	antelope
<u>mle</u>	mmire	mushroom
amankani	mankani	cocoyam

(c) Vocabulary related to basic human concepts

susuma	sunsum	spirit (human)
kla	kra	soul (human)
<u>awereho</u>	<u>awereho</u>	grief

Ga is not a major lingua franca in Ghana. However, spoken in a region where the capital of Ghana is located, it has become a second language to many non-Ga people who live in the area. It is estimated that over half a million people speak Ga as a main language (Kropp Dakubu, 1988:115).

POPULATION

The region where the Ga inhabit with their ethnically-related neighbours - the Dangme is 3,245sq km in extent. The total popu-

lation of the region is 1,420,066 and the population density is 438 persons per square kilometer (Population Census, 1984).

In the research area, there has been the tendency for the population to increase. This is reflected in the population of Accra, the principal settlement in the research area. For instance in 1960, the number of people recorded was 388,400, in 1970, it was 564,194 whilst the recent 1984 census recorded 859,600 people for Accra. As a major city of Ghana and characterised by metropolitan development Accra, has job opportunities, social amenities and other city - life attractions that bring in people from the rural parts of Accra and other regions of the country. The drift of rural population into the big settlements of the region is illustrated by the 1984 Population Census in which 234,612 people about 16.5% of the total population are rural dwellers whilst 1,185,454 people about 83.5% of the total population of the region live in towns. The population of the research area is ethnically mixed, the largest of which is made up of Ga and Dangme, the indigenous inhabitants of the region. The rest who are immigrants comprise, Akan, Ewe, Guan, Mole-Dagbani, Gurma and others.

Among the indigenous population, those who live in Accra consider themselves as urban Ga whilst those who live in the rural areas (villages) are considered as rural Ga (koosee). The urban Ga who are concentrated mainly in the old suburbs of Central Accra (Ga Mashie), close to the ancient European forts engage in fishing and petty trading whilst the literate ones are employed in various government jobs. The rural Ga who live in fishing and farming villages (aklowai) are farmers and fisher-folks.

SOCIAL ORGANISATION

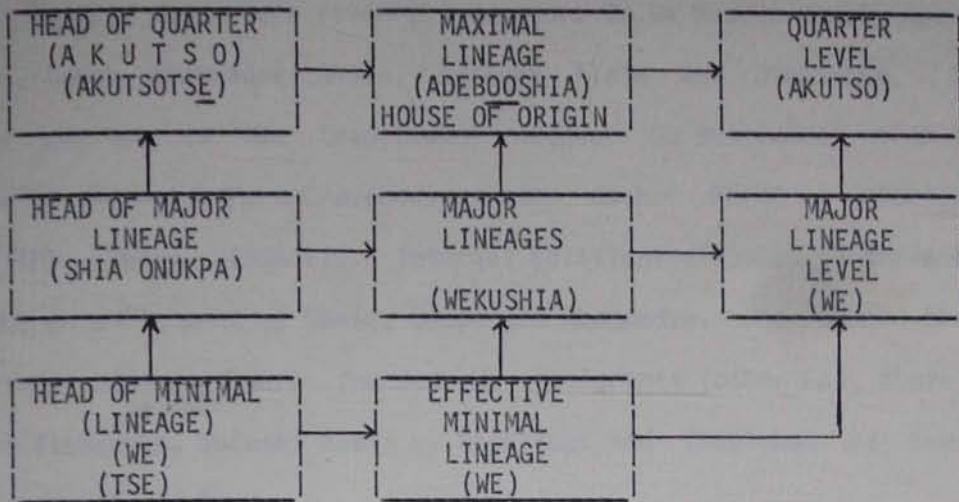
THE GA KINSHIP SYSTEM

In the Ga language, family is defined in terms of kinship relationship. The Ga term we is used to express this relationship and the Ga social organisation centres around it. The term we could be used to mean house, lineage or physical dwelling (abode) In whichever context it is used, the Ga understands it and knows what is being referred to (Azu, 1974:14).

The Ga kinship system is patrilineal, that is lineage members trace their ancestry to a common male ancestor. Lineage membership includes both the living and the dead for the Ga believe that, the dead continue to live in the afterworld and participate in the day-to-day activities of their lineage by blessing the morally good living members whilst the wicked ones are punished with various disasters.

In the research area, the social framework constitutes a three level lineage family system namely, the minimal lineage, the major lineage and the maximal lineage. The unity of this social framework is strictly retained through closely maintained blood ties (Fig 6 below).

Figure 6: Diagram showing Ga social system, the various ^{Lineage} levels and inter-relationships.



QUARTERS (akutsei)

Every major Ga settlement is divided into social sectors called quarters (akutsei /akutso singular). This corresponds to a maximal lineage. The maximal lineage or akutso, is made up of several major lineage families that trace descent through males to a known common ancestor. There is always "a house of origin" (adebooshia) to which all the constituent major lineages trace their ancestry.

Within these quarters, Ga traditions distinguish between the true Ga (Ganyo kron) and the other Ga. The Ga believe that many modern Ga people descended from non-Ga settlers. The true Ga are identified by traditions as the descendants of the Ga who before the mid-seventeenth century A.D Akwamu invasions lived either in Little Accra on the coast or in the inland settlement of Ayawaso (Great Accra). Originally, the nuclear Ga were called the Aseres. The other Ga, on the other hand, are Ga-speakers who descended from immigrant non-Ga settlers who became assimilated to Ga cultural standards.

Today, there are seven (7) quarters in Ga Mashie namely Asere, Gbese, Sempe, Akanmadze, Abola, Ngleshi Alata and Otublohum. The Asere quarter is the traditional nuclear Ga settlement which lay close to the Dutch Fort Crevecouer (later Ussher Fort) (Claridge, 1964:171, Berry, 1958:1). Internal political disputes in Asere led to the establishment of Gbese, Sempe and Akanmadze. The other three quarters however, were founded by immigrants (other Ga), Abola by Fante fishermen, Ngleshi Alata by Nigerians and Otublohum by Akwamu (Kilson, 1974 :6-7).

Each quarter has a head called akutsotse. The akutso as a social sector has both kinship and territorial dimensions. It does not only influence certain social aspects like rites of passage, ownership and inheritance but also the traditional political life. The akutsotse of each quarter together with the kingmakers of Ga Mashie form the traditional state council (akwaashon), the body that advises the mantse (chief). There ~~are~~ no physical demarcations to show where one quarter ends and another begins. The narrow streets of Ga Mashie have divided them but despite this, the Ga Mashie people by experience are able to determine the division.

The maximal lineage can further be broken into other lineages of shallower depth. The next higher lineage is the major lineage. This is made up of members of minimal lineages who share a common genealogical relationship through a common male ancestor. The major lineage is an exogamous unit and has a common lineage house (wekushia). As generations come and pass away, the lineage house becomes too small to accommodate its members so some members build their own houses nearby. The major lineage is headed by a male

elder (shia onukpa). He is usually a respected old man appointed within the elders of the lineage. Decisions on certain important issues concerning a member of the lineage or the lineage as a whole for instance, marriage and divorce, funerals and land allocation are taken by the shia onukpa in consultation with the family elders.

The basic unit of the Ga social system is the minimal lineage (we). Today, the residential structure of the we (house) depicts what Kilson terms as the "polar types", in which one is a model of the traditional residential system and the other, of the modern system (Kilson, 1967:83).

In the traditional system, the chief physical characteristic is the separation of the male compound (hiamli) from the female compound (yeiamli). In some cases, the two compounds are joined together by a common link door even though, each house has its own entrance and exit door linking to the outside. In other cases, the compounds may be close to each other though not joined together.

The male compound is composed of patrilaterally related adult men, young men and boys above the age of seven. The female compound is inhabited by women who are matrilaterally related, patrilaterally **affiliated** to the male compound and wives of men living in the men's section and their young children. Men and women are separated into different compounds to prevent menstruating women from defiling the lineage protective juju (medicine) kept in the men's compound and to keep men out of the petty quarrels of women (Kilson, 1967:83, 1971:11 Azu, 1974:20)

The minimal lineage is the main producing and consuming unit. Economic activities are corporately done according to assigned sex

roles. Men work at clearing and planting crops in the farms as well as fishing. Women also help on the farm, smoke and sell fish in addition to carrying out routine domestic duties like cooking and caring for infants. Within a household, the husband has authority over his wife and children but because a man does not have much jural, ritual or economic authority when his father is alive, the minimal lineage becomes submerged into a more inclusive segment with the father (tse) as head. This higher level is the effective minimal lineage.

Today, changes are apparent in the Ga social organization. An area, where there is an observable change is the pattern of marital residence. The traditional pattern of marital residence in which, married couples stayed apart in different compounds is gradually crumbling. A newly married Ga couple (particularly educated ones) usually establish a home outside the lineage house by renting a room in the expanding new suburbs or build their own house. Another aspect of the change, is observed in the composition of the members of the traditional compound. Today, there is no strict adherence to the traditional pattern of separate male and female residences. For instance, married women have moved into the male compound to stay in the same rooms with their husbands and children.

The reasons for these changes can be summed up in the term modernization. The rapid growth of Accra into a metropolis with modern industries, western education, improved communication systems, diversified local economy linked with international markets and alien religions, new opportunities for wider relationships have

been established in the research area thereby contributing greatly in weakening the Ga social system.

Despite these changes, the Ga social organization cannot be described as dead. It still survives. The whole Ga society is held together by the bond of blood ties expressed in the patrilineal kinship system. The modern Ga, for instance, know that a breach in social relations threatens the very survival of the traditional society. Therefore, setting up a home outside the traditional house does not mean relationship with the lineage is severed. In times of crises, such as when a lineage member dies, all members come together to their natal house to perform funeral rites and to share funeral expenses. This is an expression of lineage solidarity.

RELIGIOUS BELIEFS

If there is any aspect of the Ga social system that displays vitality despite modern influences, it is the traditional religion. The basis of Ga traditional religion is rooted in the philosophy of life, expressed in the belief that life for the individual and for the society is controlled by the supernatural. Occurrence of calamities of life such as sudden deaths, floods, epidemics and famine are said to be caused by supernatural powers. To the Ga the performance of ancient religious rituals, provides some kind of insurance against threats to life and disruption of the society.

The Ga believe in a Supreme Being:- God (Ataa Nyonmo) the master of creation, who is all encompassing. This Supreme Creator is believed to reside in the sky and could be reached through intermediary dieties (dzemawodzi).

Even though the Ga believe in a Supreme Being, the traditional religious life centres around intermediary gods, ancestral spirits and certain mystical beings who occupy the unseen world and affect the day-to-day activities of the individual and the society as a whole. Each Ga town has its own gods and ceremonies connected with the worship of these deities, ancestral spirits and mystical beings.

In the research area, the performance of religious rituals requires an intermediary to communicate with the spiritual world. An elder, particularly the shia onukpa or the akutotse serves as an intermediary at the lineage level (we). He performs certain ritual ceremonies for instance the pouring of libation to express the linking of the lineage with the spiritual world and to bring about good omen in the intervention of the spiritual into the physical world.

At the community level, various religious ceremonies are performed in the worship of the different gods and ancestral shades. In the quarters (akutsei) occupied by the nuclear Ga, the traditional religious rituals performed are represented in the Kpele cult. Kpele, involves the performance of periodic rituals to regulate almost every human activity aimed at ensuring long life and prosperity of the society. One area where this is evident is in the agricultural practices of the Ga in which an annual festival Homowo (which means hooting at hunger) is celebrated on separate days in August by various sections of the true Ga community. During the celebration of Homowo, libation is poured and ~~libation~~ kpokpoi (millet

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dumplings mixed with palm oil) - a traditional food is offered to Ga gods and ancestral spirits to ward off calamities and ensure good rainfall and abundant food supply.

According to Ga traditions, the performance of religious rituals is a matter of community concern. However, it is entrusted to two main specialists, a male chief-priest (Wulomo) and a medium either a woman (woyoo) or a man (wontse). The medium is possessed by the gods and acts as the mouth-piece of the gods, delivering messages from them. The chief-priest on the other hand, is not possessed and he officiates at public worship and pours libation to the gods on occasions. He is considered as the servant of the gods and interprets the will of the gods to the people. The principal dieties that perform Kpele are Nae, the sea god, Sakumo fio, the warrior and defender of the Ga, Nii Gua, the blacksmith and thunder god and Naa Korle, goddess of peace and trustee of Ga lands. Even though they are community gods, the performance of rituals are in the charge of specific quarters. For instance, the performance of rituals for Naa Korle and Sakumo fio is in the charge of Sempe and Gbese respectively.

The other Ga who are descendants of non-Ga settlers have their own gods and religious ceremonies. According to Ga traditions, the other Ga in the strict sense do not take part in any religious performance connected with Kpele. For instance, traditions collected from Otublohum quarter which consists of Ga speakers who descended from Akwamu settlers of Akan origin, indicate that they do not participate in the annual Kpele cult ceremony of corn planting. However, during this period, they send firewood to Sakumo fio the

warrior and defender of the Ga and Naa Korle, goddess of peace and trustee of Ga lands as a sign of submission and respect for the land which they now occupy.

The gods and religious practices of the Otublohum people for instance are of Akan origin. These are yam eating gods and among the principal ones are Oblafo and Dzame. The main religious ritual performed to worship these gods is yeleyeli (yam eating). This ritual is performed during the annual celebration of the religious festival called Odwira in July. The Odwira festival involves the performance of purification rites during which the people of Otublohum quarter and state regalia are cleansed. During the Odwira when the yeleyeli rite is performed, libation is poured and oto (a mixture of marshed boiled yam, palm oil and eggs) is offered to the gods by okonfo (priests), who act as intermediaries between the physical world and the supernatural. Also the mantse (chief) and elders during this occasion sprinkle oto on the tombs of the departed and ask for blessings and pardon for the living. The Odwira is a week-long ceremony but the Friday of the week set aside for the festival is considered the Odwira day. It is a day for social gathering. On this occasion the mantse rides in a palanquin and dances to the tune of Obonu drums after which he sits in state to receive homage from his people.

Today, the true Ga also observe certain religious customs and practices like the annual yam eating rite and stool consecration to venerate ancestral shades. These customs and practices are however, not original to the true Ga. They are the outcome of the adoption of Akan political system (see p. 64). During the performance of

this ceremony, ancestral ~~meals~~^{meals} are offered oto instead of fotoli or kpokpoi. The songs and appellations used to call the spirits of the departed are all Akan - a clear indication of Akan influence on the social organization of the Ga.

POLITICAL SYSTEM

The present political system of the Ga which entrusts political and priestly functions to two separate individuals is not original to them. Traditions have it that originally the Ga political system was theocratic, that is it was a rule by traditional priests (Wulomei). Thus, in this government both the religious and political offices were held by the chief-priest.

The Ga political system of today, is one in which secular rule is symbolised in a sacred wooden stool. At the centre of this political system is the institution of chieftaincy. According to Ga traditions, this system was adopted from their Akan neighbours. It is not known when the first stool was established. However, there seems to be a consensus among the elders of Ga Mashie that it was the Akwamu who lived on the Nyanao Hill near Nsawam who showed their ancestors "how to make stools". According to oral narratives, this political system was instituted when the Ga lived in the inland settlement of Ayawaso.

At the centre of this adopted political system is the mantse (chief) who, among other things, serves as a trustee for the ancestors and as the focus and symbol of unity and continuity. In exercising secular duties, the mantse is helped by a retinue of whom the akwaashontse (head of the state council), dzaasetse (chief

administrator), asafoatse (military commander), mankralo (state father), otsami (spokesman/linguist), shipi (commander of a military wing) and wulomo (chief-priest) are the principal officers.

The Ga adopted certain socio-cultural practices when they adopted the Akan political system. The stool, which is a symbol of office and related paraphernalia, for instance, the proverbial linguist staffs, state swords, gold studded head-gear and native sandals were adopted. Religious practices like stool consecration and the yam-eating rite (yeleyeli) performed to venerate ancestral shades were also adopted. The Akan court etiquette such as addressing the chief through the linguist and lastly Akan music notably adowa in which the atumpan drums feature prominently were also adopted.

There is no doubt about the oral narrative which says that the Ga adopted their present political system from their Akan neighbours. But it will be wrong to consider the Ga system as a carbon-copy of that of the Akan. There are small divergent features as well as some aspects that are unique to Ga. One of such divergent features is that of succession to office and inheritance to property. In the Akan system, succession to office and inheritance to property is matrilineal, that is through mother's brothers (uncles) but the Ga retained their patrilineal system of inheritance. Also, in the Akan political system there is a queen-mother (ohemaa) who represents the women in the community and plays a significant role in making and unmaking a chief. This office is however, completely absent from the political system of the true Ga.

A major function of the chieftaincy institution was the administration of justice - a pivot on which revolved Ga political and social life. The Ga administered justice through an established system of traditional courts. In the past, there were two main types of traditional judicial courts namely a civil court and a criminal court.

In the past and even today, all the quarters (akutsei) that constitute Ga Mashie have courts. The palace of the mantse of each quarter, served as the scene of the civil courts. This court consisted of the mantse and the akwaashon (councillors). The civil court served as the main source of sanctions, conflict-solving and decision-making. This court has survived the test of time and today, it operates only as an arbitration court.

According to Ga moral code, in the past crime of any kind was abominable and it was met with capital punishment. Criminal cases were tried in the Ga criminal court called Mojawe (literally "The House of Blood"). Being the only criminal court for the whole of Ga Mashie, all the seven quarters were represented. The court consisted of the following permanent members: the akwaashon (made up of seven members, one from each quarter), every shipi and asafoatse. The head of the court was the akwaashontse who was always the representative from the Asere quarter. In addition to the permanent members every prominent Ga Mashie man could attend and give his opinion as a listener.

The scene of the Mojawe court was a large open space in the vicinity of the Ga mantse's old palace. Here the court met and judged criminal cases like grave robbing, incest, sorcery and murder

through either physical or supernatural means. Any one found guilty was punished by death (either by drowning or by gun-shot). By the early years of this century, this court had become corrupt and unnecessarily bloody. In 1910, the court was closed by an order of the British Colonial Government. Today, the scene of the court is used only for social and other public gatherings.

TRADITIONAL MEDICAL PRACTICE

Investigations were conducted into the traditional medical system in the research area. The study revealed that the Ga have a sound and well-grounded herbal practice which goes back to ancient times. The practice of traditional medicine in the research area is in two basic forms: (i) a spiritual component which involves magico-religious practices or divinations and (ii) the actual process of using medicinal and nutritional herbs for healing and the promotion of health.

Anthropologist Margaret J. Field (1937), who wrote on Ga religious practices dealt solely with the spiritual component. This research focused on the latter. Rural Ga is a great store-house for acquiring knowledge into traditional medical practices. Old Ga people of different occupational background possess a good knowledge about plants and herbs that are used not only for curing diseases but also for nutritional purposes.

The information obtained is presented below. In the presentation, the names of the herbal plants used, mode of application and the health problems (diseases, and obstetrical) that they can cure or set right are indicated.

PLANT NAME	HEALTH PROBLEM	MODE OF APPLICATION
(i) Tatadua <u>Allophylus warneckeii</u>	(a) Snake bite (b) Diarrhoea	(a) Leaves ground together with the heart of a frog, mixed with alcohol and drank. (b) Roots cut into pieces boiled and decotion drank.
(ii) Kintso <u>Azardirecta indica</u> (nim tree)	Fever/Malaria	Leaves and stem bark boiled, the decotion is either drank or used as steam bath.
(iii) Gbekepii amadan <u>Cassia occidentalis</u> (children's plantain)	(a) Fever/Malaria (b) Heart disease (c) Stomach troubles	(a) Root bark boiled, decotion drank. (b) Dry seeds and root bark ground, boiled and decotion drank or applied as enema. (c) Leaves, root bark crushed and mixed with ginger and small salt, decotion boiled and drank.
(iv) Goa <u>Pisidium guajava</u>	(b) Diarrhoea/dysentry (b) Measles	(a) Roots crushed together with small ginger, decotion boiled and drank or applied as enema. (b) Leaves crushed together with small ginger, decotion drunk. Also applied externally.
(v) Akpakpa <u>Carica papaya</u>	Worm infections	Seeds crushed and taken orally for expelling round worms.
(vi) Tunyo <u>Elaeophorbia drupifera</u>	Guinea worm	Dry leaves boiled and decotion drank/and or fresh leaves crushed and mixed with salt and onion and applied externally to part infected by the worm.

B. OBSTETRICAL ISSUES

(vii) Gbekebii awuo <u>Heliotropium indicum</u>	Post-delivery bleeding	Leaves crushed together with white clay (kaolin), mixed with water and drank.
(viii) Haatso <u>Fagara xanthoxyloides</u>	Post-delivery pains	Root bark crushed, mixed with alcohol and liquid drank.
(ix) Fufo akpele <u>Kigelia africana</u>	Relief for diffi- cult and painful menstruation.	Fruits and roots cut into pieces, boiled together with tassel of plantain flower and then decotion drank.
(x) Nyambatso <u>Erythrina senega- lensis</u>	Barrenness	Bark and leaves crushed and mixed with palm soup to cure barrenness.

Table 2: Showing Medicinal Plants for Curing Diseases and Setting Health Problems right.

In the research area, herbal medicines are prepared in special pots known and called tsofa kukwei and likoliko (see p. 81). According to old Ga people, the potency of herbal medicines is maintained when prepared in clay pots.

The Ga are very particular about their diet. They exploit molluscs, fish, meat, edible leaves, mushrooms and a vast array of wild and semi-wild edible fruits in different combinations as food. Palm oil and palm kernel oil **play a major** role in Ga diet. The traditional Ga food like kpokpoi and kenkey are eaten with fish or meat. Stews made with plant leaves such as blofo shwei (Tulinum triangularis) and baobab (Adansonia digitata) are prepared with palm oil or palm kernel oil. Palm soup also plays a good part in Ga diet especially those in the rural areas. The exploitation of these food resources in different combinations provides the Ga with balanced diet thereby ensuring good health.

CHAPTER FOUR

MODERN POTTING TRADITIONS IN THE DENSU VALLEY OF THE RESEARCH AREA

INTRODUCTION:

This chapter discusses the findings from an ethnographic study of potting traditions of Ga village settlements located in the Densu Valley south-west of the research area where potting still survives. The potting centres are Afuaman, Manhean, Oblogo and Weija (Map 3.) Here, some Ga women are either ^{fully} or as it is often the case, only partly engaged in pot-making.

Traditions collected in the research area mentioned these villages as ancient Ga settlements where potting has a remote antiquity. These villages are remembered in traditions as supplying good quality ceramic vessels to other Ga settlements in the western Accra Plains. This study was undertaken to facilitate a comparison of the excavated pottery with the modern types. In so doing, it was hoped that insights into the processes of change and continuity could be observed to draw certain generalisations as regards the cultural history of the research area.

This is the first time such a study has been carried out in the western Accra Plains. But it is not the first of its kind in Ghanaian archaeology. The pioneering work may be credited to L.B. Crossland. In 1972, as part of the West African Trade Project (W.A.T.P) launched by the Archaeology Department, University of Ghana, Legon to investigate the ramifications of the Trans-Saharan

Caravan trade on the early Akan settlement of Begho in the Brong-Ahafo Region, he studied the traditional potting system in the Begho area and related the results to the pottery recovered from the Begho excavations. Through this study, certain important inferences which could have been difficult if not impossible to make through the application of rational explanations to ceramic interpretations were made (Crossland and Posnansky, 1978; Crossland 1989). Similar studies have since been carried out in the other areas of the country. In the Takyiman-Nkoransa area, Effah-Gyamfi (1980) documented potting traditions and related the results to excavated pottery from the old Bono capital of Bono Manso. In the Dangme-Shai area of the eastern Accra Plains, Anquandah (1987) and Osei-Tutu (1987) have done similar work.

During the research on potting in the Densu Valley, particular attention was paid to the production sequence. Investigations were focused on the processes of obtaining raw materials, preparing them for use, manufacturing techniques and mode of distribution. Attention was also given to the functional roles of the vessels, their eventual breakage and disposal when no longer useful in the domestic life of the people. Though these patternings cannot be observed directly through excavation procedures, yet they are relevant to archaeological investigations. According to Rye, such an approach is important because:

"It provides a pragmatic basis for identifying the important elements of pottery technology that will permit reconstructing the behaviour of potters in the past" (Rye, 1981:3).

The potting villages fall under the Ga Rural District Council Area with Amasaman as the district capital. Investigations were however, carried out in two of the villages namely Afuaman and Manhean. These two villages were selected for study for two main reasons. The first is the popularity of their products and the second, the accessibility and close proximity of one settlement to the other.

The two villages are located about 13km south-west of Amasaman. Afuaman is about one kilometer from Manhean. The two settlements are linked to the district capital and other villages in the area by third class roads and a network of foot-paths.

In the selected villages, potting is an entirely female affair. Production is on household basis and the pattern for learning this trade is by young girls observing from their mothers or grandmothers and experimenting on their own. Today, the once vibrant and lucrative trade is solely in the hands of a few aged women who during the dry season of the year earn their living solely on potting but combine it with farming during the rainy season.

THE PRODUCTION SEQUENCE

SOURCE OF RAW MATERIALS

Both settlements exploit two main clay sources. Smooth clay is collected from pits dug along the banks of the Densu Valley. According to the potters, vessels made solely with this smooth clay tend to crack during drying and firing. Another type of clay is therefore, exploited from termite mounds (gbotsui) which abound in the surrounding fields close to the settlements. This clay which is gritty-like is added as grog or temper to decrease the susceptibility

of the vessels to cracking during drying and firing. The potters in the Densu Valley do not re-cycle their broken pottery in the production sequence.

Potting is linked to the traditional religious practices of the research area. It is claimed that the Ga goddess, Naa Afiye is the custodian of the potting industry. For a successful potting and a good market, an annual thanks offering of drinks, a hen and fotoli or kpokpoi is given to Naa Afiye. In addition, certain taboos are observed from the collection of clay through manufacturing to the firing of the vessels. Clay is not collected on Wednesdays (Sho) and on Fridays (Sohaa), potters are forbidden by custom to engage in any job related to potting. Pregnant and menstruated women are prohibited to get near the clay source and even participate in the production processes. Clay collection is done by girls who have not reached puberty age and aged women who are in their menopause.

Clay is dug with hoes (koi) and in the case of termite-mound clay, an adze (sosoo) is also used. It is then transported home by head portage in baskets, wooden bowls and large plastic and metallic containers.

CLAY PREPARATION (Plate 3)

The collected clay is dumped on either stone-lined floors or large wooden boards obtained from abandoned dug-out canoes (lelekoi). All the potters observed, employ almost identical techniques in body preparation. They first mix small proportions of the two types of clay into a small pile (about 15-20 kilos) on a wooden board. Water is sprinkled on the mixed clay heap and the

body is blended by hand kneading. To bring the clay to a workable consistency, it is rotated systematically by rolling it on the board. The clay is then divided into two halves and one half is picked up and slapped onto the other half. This process is repeated until the potters judge from the feel and appearance that the clay lump has reached the required level of workability.

THE POTTER'S TOOL-KIT (Plate 4a-h)

The next stage of the production sequence is for the potter to fetch her tool-kit (normally an old broken pot or a metallic container) that contains all the tools necessary for the manufacturing process. The main tools employed in potting in the research area and their functions are described below:

- (a) Corncob (abeletso): About 12-16cm long and 4cm in diameter very often the surface is burnt leaving a hard and smooth surface. It is employed to mould and smoothen the vessel in the wet-stage.
- (b) Rolled beach pebbles (fobite): Length ranges between 6-8cm and 3-5cm in diameter. They have smooth surfaces. They are used for burnishing when the vessel is in the leather hard stage.
- (c) Fan palm fruit (wowoti): A small fan palm fruit about 10cm long and 7cm in diameter. It is employed for shaping and smoothening the vessel when wet.

- (d) Seedpod of Afzelia africana tree (papaa): A half seed pod of papaa about 10-14cm long and 6-7.5cm wide. It is used principally to scrape off excess clay on the vessel in the wet stage.
- (e) A piece of carved bamboo splinter (pamplotso): Bi-concave shaped bamboo splinter about 12cm long and 6cm wide. It is used to draw the vessel upward when wet.
- (f) A piece of coconut kernel (akokooshingongo): A piece of coconut kernel worked to produce prongs at one end. It is about 3-4cm long and the prong length is 0.8cm. It is used to make incisions in the inside of grating vessels.
- (g) A piece of metal (dade): An iron metal piece about 15cm long and 4cm in diameter. Employed to scrape off excess clay to achieve uniform wall thickness in the leather-hard stage.
- (h) A piece of rag (takoshwe): Measures not more than 20cm sq. It is employed for smoothening the body and inside of vessels when wet and in the leather-hard stage.

METHOD OF MANUFACTURE (Plate 5)

The process of manufacture is non-mechanised. The technique of moulding is the only means applied. A lump of clay is put on a mould support (monglo) which may be a carved circular wood or a piece of broken pot. The mould support is then placed on a wooden block (gblu). The clay is then opened by pushing the fist into it. The walls are refined by squeezing the clay between the hands while simultaneously pulling or stretching it upward. Whenever necessary bits of clay are added in the course of forming the vessel. A corn

cob (abeletso) and a carved piece of bamboo splinter (pamplotso) are employed to drag the walls and in shaping the vessel. A wet rag (takoshwe) is used to smoothen the walls of the vessel and to bring it to the desired shape.

At this stage excess clay is scraped off with the half seed pod of the Afzelia africana (papaa). The vessel is left on the mould support to dry before work can proceed again. If a large vessel, for instance, a storage pot is made, one half (usually the upper part) is made first and the lower half (that is the mid-body to base) is added with the aid of a concave-shaped wooden object.

In the leather-hard stage, the vessel is trimmed by using a sharp metal piece to obtain the desired wall thickness and to bring it to the desired shape.

DECORATIVE TECHNIQUES

The decorative techniques executed on the produced vessels can be grouped into 3 main categories: surface treatment, cutting and joining.

SURFACE FINISHING TREATMENT

Two main surface finishing techniques are employed by the potters in the research area. One is burnishing. This involves rubbing a smooth-surfaced beach pebble (fobite) against the leather hard clay to produce light reflecting qualities on the surface.

The other technique is slipping. Before firing, the potters first rub ripe oil palm fruits (nme) on the surface of some of the

vessels especially bowls. After this they apply a red or pink clay solution to the vessels surfaces. After firing the red slip often appears as a very thin coating, red-blood in colour on the vessels.

CUTTING

Incision and piercing are the main cutting techniques employed in the research area. In the former technique, a carved coconut kernel with prongs (akokooshingongo) is used to make incisions of different patterns in the inside of grating vessels. Incision here is executed for functional purposes.

Piercing is employed by using a tool with a pointed cylindrical or sharp end to produce holes of various shapes on the bottom part of vessels. This technique is used to create air spaces in brazen pots and circular holes at the bottom of steaming pots (ntaaso).

JOINING

The only joining technique employed is the applique (application) in which plastic clay is applied to the surface of a vessel for functional and decorative purposes. For instance, shaped pieces of plastic clay are affixed to the surface of brazen pots to serve as handles whilst clay embossments are applied to the body of ritual vessels (kulo).

FIRING

The open air or mixed firing is used to fire vessels produced in the research area. Firing is done in an open space outside the

settlements. Every potter has her own firing place (nishaahe). The potters begin the firing process by spreading dry oil palm tree husks (nme betsuma) on the ground to form a circle about 140-180cm in diameter. Pieces of small firewood (lai) are arranged on the palm oil husks. Dry coconut fibre is spread on the firewood to form a raised platform circular in shape. The ceramic vessels are then arranged upside down on the raised structure. Another set of firewood is heaped on the vessels. A new set of vessels is again arranged upside down on the firewood. This process is repeated until all the vessels to be fired are heaped in layers to form a conical or dome shape with each layer separated by firewood. The potters arrange the vessels in such a way that air spaces are left in the heap to facilitate free circulation of air. Pieces of dry fan palm (tsaakpoi, Borassus aethiopum) are arranged around the heap as a support structure. Blazing fire is then ignited to the heap from the bottom to the top. The firing process takes about one and a half hours to complete. A long pole is then used to take the fired vessels out of the fire.

It is the usual practice that the potters smudge certain vessel types (especially eating bowls and those used for the preparation of soups). If vessels are to be smudged, green leaves are heaped on the red-hot vessels after the flames have died down. Thick smoke is produced to engulf the vessels. The carbon produced enters and seals the pore spaces of the vessels thereby making the surfaces shiny black.

TRADITIONAL POTTERY TYPOLOGY

The traditional pottery typology in the study area is based on the forms and functions of vessels. The issue is not as simple as that because in some cases the typology is diffused. To the non-Ga, the typology can sometimes become difficult to understand. The Ga use the term gbe to refer to all kinds of pots but different names are also given to pots according to their specific functions. In all, four (4) main terms are used to describe the forms and functions of the vessels produced in the research area:

gbe; ka; kukwei and saasen (Figs. 7 and 8).

GBE

This vessel group is composed of large pots usually between 40-80cm high with rim diameters ranging between 20-40cm. Heights of pots are about twice the diameter of rims. Three (3) main sub-types are distinguished:

(a) Dido (Fig 7a)

A very large storage pot about 60-80cm high with rim diameter ranging 30-40cm. It is used to store water for domestic purposes. This vessel is kept in one place in the house compounds normally resting on the neck ring of an old pot or any large object with a hollow ring.

(b) Tsumli gbe (Fig. 7b)

A large water pot about 40-60cm high with rim diameter ranging between 20-30cm. It is used to store drinking water. Because it is used for this purpose, it is normally put in living rooms or very cool places in the house.

(c) Fanyaa gbe (Fig. 7b)

Another large pot with the same dimensions as tsumli gbe. The only difference is that fanyaa gbe is used to fetch water from the river-side. According to the potters, in the past, it was the only means of carrying water home. But today, one occasionally sees women and girls using this pot to fetch water. Plastic, enamelled bowls and aluminium containers are preferred.

KA

This group comprises shallow to relatively deep vessels about 8-20cm high. Rim diameter ranges between 10-35cm. In almost all cases, the rim diameter is greater than the heights. Two sub-types are distinguished by their functions.

(a) Ka (sub-type 1 - apotoyiwa) (Fig. 7c)

An open bowl with plain rim. The height ranges between 8-12cm and diameter between 15-25cm. The inside is designed with patterns of criss-cross incisions or other incised patterns. It is called

apotoyiwa and its main function is for grinding condiments for soups and stews. According to the potters studied, this vessel was not known in Ga society in the past. The Ga copied it from their Akan neighbours hence the Akan name used for it. In the past, the Ga used grinding stones called wiete for all grinding purposes.

(b) Ka (sub-type 2) Fig. 7d

This sub-type consists of a group of open bowls of either short incurved or plain rims with or without carinations. Heights range between 9-14cm and rim diameters between 16-30cm. The inside of these bowls is smooth and they are used for eating food and soups. These vessels are usually burnished. They are either coated with slip or smudged to shiny black.

KUKWEI

This group comprises all types of cooking vessels. They are often but not in all cases smudged. The outer surfaces are burnished. They are medium-sized vessels. Heights range between 18-32cm and rim diameter between 16-30cm. Four (4) sub-types may be distinguished on functional basis.

Aflata Kukwei (Fig. 7e)

Medium-sized, round-bottomed vessel with everted rim. Height ranges between 18-30cm and rim diameter between 16-28cm. It is used for cooking corn dough for the preparation of Ga kenkey.

Tsofa Kukwei (Fig. 7f)

Medium-sized, round-bottomed vessel with everted rim. Height ranges between 18-32 and rim diameter between 16-24cm. It is used for cooking herbal medicine (tsofa). It is also sometimes used for cooking food.

Wonu Kukwei (Fig. 8a, b)

Round-bottomed vessel with height ranging between 18-28cm and rim diameter of 16-30cm. There are two (2) sub-types. Sub-type 1 has rounded body with everted rim and sub-type 2 has a carinated body. These vessels are usually burnished and smudged. They are used for cooking soups.

Likoliko (Fig. 8c)

Medium-sized, round-bottomed vessel with plain inturned rim. Height ranges between 18-28cm and rim diameter between 16-30cm. It is burnished but not smudged and its main function is for cooking food. Sometimes it is used for cooking soup or boiling herbal medicines.

SAASEN (Fig. 8d, e)

This group consists of oval-bodied and round-bottomed vessels with or without low carination. The vessels of this group are

characterised by constricted necks. Height ranges between 20-24cm and rim diameter between 9-14cm. The main function of this group of vessels is for tapping palm-wine (teedaa/kotse).

There are other common vessels produced by the potters in the Densu Valley which do not fit into the above typology. These are presented below according to their specific functions.

Ntaaso (Fig. 8g.)

Round-bottomed vessel with everted or plain inturned rim. Height ranges between 8-16cm and rim diameter 12-30cm. The base of the vessel is perforated leaving a series of round holes. It is used solely for steaming marshed corn for preparing the traditional Ga food called kpokpoi.

Laate (Fig. 8h, i)

This is a movable hearth for cooking purposes. There are two (2) sub-types. Sub-type 1 consists of a set of three necked-vessels 20-40cm high and 15-20cm wide. There are three perforated holes at the bottom to facilitate lifting and also reduce heat concentration. When in use the hearths are turned upside down with the perforated round bottom up. (Fig. 8.h). Sub-type 2 is shaped like an arm-chair. It has a broad-back, an open space to accommodate fire and two adjacent projections to support the cooking vessel (Fig. 8.i)

Kulo (Fig. 8.f)

Round-bottomed vessel with either everted or inturned rim. Height ranges between 12-24cm and rim diameter between 16-22cm. It is characterised by a series of small clay knobs placed round the body. Sometimes these knobs could be placed in groups of three or more on the body region or the neck area of the vessel. It is used solely for ritual purposes.

DISTRIBUTION PATTERN

According to the potters in the study area, the market target of their ancestors as far back as they can remember was to meet the demands of Ga markets and those of their immediate neighbours especially those in the immediate north. Today, the market target remains unchanged. All the vessels described above are produced to meet the demands of Ga and non-Ga markets.

The potters in the research area seldom send their products to the market. Female traders travel from Accra on the coast and the neighbouring settlements to buy ceramic vessels. The vessels are loaded in large baskets to form a dome shape. The loaded baskets are covered with fibre nets (ntan). The potting centres are linked to Accra and Amasaman (the district capital) by motorable third class roads so some of the vessels are transported by vehicles. Traders from the neighbouring village settlements like Ayikaidobro, Ablekuma, Akramaman, *Obeyeyie* and Nsakena however, continue to cart purchased vessels by head portage along a complex net-work of footpaths that link these settlements together.

THE USE, LIFE-SPAN AND DISPOSAL OF VESSELS

Every household in the study area uses locally produced ceramics for domestic purposes. As noted earlier on, in the traditional pottery typology, every vessel form produced by the potters in the research area, is associated with a definite stated use or primary function hence the designation of forms like eating bowls, water storage vessels and so on. It must be pointed out however, that whilst in many cases, this set of ideal functions indicates actual usage, vessel forms can be put to numerous secondary uses. For instance, tsofa kukwei (medicine vessel), used to boil herbal medicines could be used to cook food whilst, likoliko primarily used for cooking food, could be used to boil herbal medicine when not needed for their primary functions.

The life-span of vessels, it was observed, depended on the frequency of use, portability and fragility (whether vessel walls were thick or thin). Large water storage vessels (dido) have a slow-turn over rate because they take a longer time to manufacture. They have very thick walls and are less frequently moved about in the compound and so they have a relatively longer life-span. The only vessel form that is modified in order to prolong use, is this large water storage vessel. It is maintained or sometimes repaired by applying cement mixed with sand to the external surface from the base up to the mid-section or even to the neck. It is not known when this practice began but the potters agreed that it is a recent phenomenon. Another vessel, the kulo (ritual vessel) is infrequently used because it is placed in shrine houses and it is used only during ritual periods especially at the time of

celebrating the traditional Ga Homowo festival. It has a comparatively longer life-span.

On the other hand, vessels like fanyaa gbe (water carrying vessels), cooking vessels (wonu kukwei, aflata kukwei etc) and eating bowls (ka) that are used in everyday domestic activities and as a result are frequently moved about, have shorter life-span.

Almost all vessels are used, broken and finally discarded within the household and the entire village settlements.

Some of the vessels broken during firing or in the process of usage are put to other uses. One of such secondary uses which is of archaeological interest is that the broken vessels are normally crushed to smaller pieces and mixed with mud to build residential dwellings. According to some old men interviewed at Afuaman and Manhean, houses built with a mixture of crushed pottery and mud are not only strong but have a long life-span because they can withstand the agents of erosion. Collapsed buildings in the two villages leave rectangular foundations that are marked by protruding pottery pieces that are hard and well-set in the building remnants (Plate 6).

Broken vessels that are not utilised in house building may be completely discarded. Every household and its surroundings are swept clean at least once everyday with brooms. Debris accumulated from daily chores which may include vegetable peels, meal left-overs and broken pottery are swept everyday and dumped on community refuse mounds located a few distance away from the settlements. Manhean, which is a village of about sixty (60) small houses, has four refuse dumps currently being used. Dumping is normally done on the nearest grounds to one's compound but that is not the rule. For instance,

due to blood ties, a particular household may choose to share common dumping grounds with other family members who may be living in another sector of the settlement.

The effect of this pattern of dumping is that large rubbish mounds accumulate and these are usually abandoned when the settlement develops towards the dumping grounds. This patterning has led to the formation of old refuse mounds some of which are heavily eroded and are located in the middle of the Manhean and Afuaman settlements. This mode of refuse accumulation can be said to have a remote antiquity among the Ga and that the refuse mounds of various sizes that mark the site of the Ayawaso settlement may have resulted from different households sharing common dumping grounds at different parts of the settlement.

THE FUTURE OF THE POTTING INDUSTRY

The potting industry in the Densu Valley is beset with two major problems. One main problem is stiff competition with imported plastic and metallic containers. These imported vessels are more durable and affordable too. Tastes are also changing especially among the Ga youth. The youth prefer to use imported vessels than the locally produced ceramic vessels and this is gradually helping to erode the basis of this important local industry. All the same, in the Ga traditional set up, the use of locally produced pottery for cooking, conveying and storing water and for ritual purposes is still of some importance especially among the rural Ga.

Perhaps, a more serious problem is the attitude of the female youth towards this industry. They have ignored this trade. In

fact, they consider it as "yeimei anitsumo" (old women's job) and presently it is solely in the hands of a few aged women. The problem here, is that when these few aged women pass away, this trade may cease to be in existence. Unlike the Dangme-Shai area of the eastern Accra Plains where the industry is said to continue to enjoy patronage by the Dangme female youth and so has a bright future (Osei-Tutu, 1987:169), that of the Densu Valley in the western Accra Plains, has a bleak future.

CHAPTER FIVE

EXCAVATION AND DATA ANALYSIS

INTRODUCTION

This chapter takes a look at the methodology applied to acquire and analyse the archaeological data for this study. The research objectives as outlined in Chapter One (p2-3) proposed the collection of **representative** archaeological data which involved the use of all the methods of data acquisition - surface survey, sampling and excavation.

SURFACE SURVEY

In April, 1988 a surface survey of the Ayawaso area was carried out with a team of six (6) undergraduates. The aim of the team during the survey was total coverage of the whole Ayawaso settlement. This approach was adopted because past researches in the area were limited in scope. The survey exercise was therefore, carried out to gain a general impression of the Ayawaso area. Specifically, the surface survey was carried out to:

- (i) Locate, identify and record the distribution of possible undocumented archaeological sites.
- (ii) Surface collect artifacts within transect lines to gain knowledge about the spatial distribution of archaeological remains in the settlement.
- (iii) Delimit the size (extent) of the Ayawaso settlement.

The Spoked-Wheel Model of the transect interval sampling or Radial Transect Method, was employed in the survey. This technique involves extending a selected number of radiating transects outward from a datum point along which surface interval sampling can be done (Redman, 1974:17; Chartkoff, 1978:48). Artifact samples were collected from measured units along the transect lines and where artifact distribution declined in frequency and eventually ceased, the site was deemed to have terminated. The extent or size of the site could therefore be determined. This technique provided a way of observing data on the surface and afforded the opportunity of collecting artifacts from the site surface. The survey was directed from a datum point (temporary bench mark) erected at the modern settlement of Ayawaso. Archaeological sample units were arranged along eight transect lines evenly distributed around the sample universe (site) at every 45°, and radiating out from the datum point. Each sample unit measured 40 x 20m. Two members of the team demarcated the sample units with a measuring tape. Four members each placed five meters from the next, walked forth and back over the sample units collecting artifacts and observing surface features. In laying the transects in the field and demarcating the sample units, the pathways of the team members were carefully laid out by a prismatic compass.

RESULTS OF THE SURFACE SURVEY:

The surface survey yielded fruitful results. In all five (5) sites were recorded by the survey. They are:

- (i) Okai Koi Hill - recognized by traditions as the seat of government and residence of the Ga royalty.
- (ii) Nii Akotia - residence of a wealthy merchant and a member of the Ga royal family.
- (iii) Ayawaso Central - residence of the main Ga populace
- (iv) Obutu Quarter - residence of the Guan-speaking Obutu people.
- (v) Market Place - the main trading centre.

Three of the sites, Okai Koi Hill, Nii Akotia and the Market Place were newly discovered by the survey team. Before this research was undertaken, the other two sites namely Ayawaso Central and Obutu Quarter were known by past researchers to constitute the Ayawaso settlement. Ga oral traditions collected at modern Ayawaso confirmed the existence of these quarters and their identification was made possible by these traditions. Reindorf, a Ga historian described the pattern of the ancient Ayawaso settlement and his description seems to correspond well to the results of the surface survey. According to him when the Ga settled at Ayawaso, the seat of government was established on the hill known as Okai Koi or Kplagon, the Aseres (nuclear Ga) settled at Amonmole and the Obutus on the west of that hill (Reindorf 1960:20).

In the course of the survey, a topographical map of the area at a scale of 1:50,000 was used to control the survey and to plot the location of identified sites (Map 7).

As regard the extent of the site, the measurements obtained for the transects laid in the field were as follows:

(i) North	- South traverse	1510m	= 1.5km
(ii) East	- West	2340m	= 2.3km
(iii) Northeast	- Southwest	2640m	= 2.6km
(iv) Northwest	- Southeast traverse	2560m	= 2.6km (approx).

From the results of the traverse measurements, the ancient Ayawaso settlement can be said to have extended approximately 2.6 x 1.5km. The results of the survey have vindicated Ozanne's crude estimation of the site which he said "extended for a mile along the southern bank of the small River Nsaki, and across the stream to the modern village of Amanfro, and the surface scatter of pottery and iron slag covers a much larger area" (Ozanne, 1962a:52). In fact, the traverse which ran roughly through the area Ozanne described was the Northwest-Southeast which measured approximately, 2.6 kilometers.

THE EXCAVATION

Archaeological excavation was carried out at the Okai Koi Hill Site (Ayawaso) between December, 1988 and January, 1989. The choice of this site for excavation was on non-probabilistic sampling basis. The selection was largely by the author's personal judgement based on one main consideration namely that, during the ground survey, it was observed that the four other sites, Ayawaso Central, Obutu quarter, the Market Place and Nii Akotia quarter, all lying in the lowland parts of the area had to some extent been impacted through farming activities. For instance rubbish mounds (middens) have been spread out to merge into one another covering large areas of the sites. This has resulted in the obliteration of the sites. On the

other hand, Okai Koi Hill which lies at a height of 80m above sea level has been less intensively farmed and a few mounds stand undisturbed. Archaeological materials obtained from here will therefore allow correct analysis and interpretations to be made.

LOCATION

The Okai Koi Hill is located about 800 meters south-east of Ayawaso Central. The site is straddled on top of a hill named after king Okai Koi, the fourth ruler of the Ga dynasty. This Hill stands at 80 meters above sea level and it is part of the discontinuous chain of hills that mark the southern limits of the Akuapem Range. The Accra-Nsawam asphalt surfaced Motor Road and Railway line lie at the foot of this hill.

ECOLOGICAL SETTING AND ON-SITE CONDITIONS

The vegetation of the study area is a dense coastal scrub characterised by sparse grass and scattered trees (see page 21). However, the on-site vegetation at Okai Koi Hill is grassland except along the slopes especially the eastern, north-western and south-western slopes that are covered by a variable dense scrub. Another feature of the vegetation up this hill is the presence of large baobab trees (Adansonia digitata) and a few fan palm trees (Borassus aethiopum). (Plate 7).

Like the other sites within the ancient Ayawaso settlement, Okai Koi Hill site is marked by rubbish mounds of different sizes. The ruins of the site have been farmed. As a result, some of the mounds have been destroyed. There are a few of the mounds that stand intact.

SELECTION OF AN AREA FOR EXCAVATION AND SAMPLING TECHNIQUES

The selection from this site of an area for excavation was bound to be largely arbitrary. This approach was adopted because of the intensity of farming activities that has caused the destruction and spread of a number of rubbish mounds. An undisturbed area roughly 1200m. sq. was chosen for excavation.

After the area for excavation had been chosen, grids of 3-meter squares were laid out with the aid of a prismatic compass, a steel tape, a stadia rod, a quickset and pegs. A contour map (Map 8) was then drawn to represent the excavated area and to serve as the basic spatial control in all records of provenience.

Total excavation of the selected area was impossible due to limited time and money. In situations where interpretations about a large site are to be made from a small sample population, probabilistic sampling is said to be a more effective and appropriate excavation strategy (Fagan, 1981:183) because it produces data that stand a better chance of being representative of the total data pool (Sharer and Ashmore, 1979:202). Sample or selective excavation was therefore, considered appropriate and accordingly employed. To choose the units to be excavated, the simple random scheme was adopted. As a first step, all the units were labelled and given reference numbers (see Map 8). In all, 133 units were allocated to the selected area, each sample unit measuring 9 sq m. Four (4) test-pits were randomly selected for excavation and this represented 3% of the selected area within the Okai Koi Hill site.

EXCAVATION TECHNIQUES AND STRATIGRAPHY

Once the 4 test-pits to be excavated were randomly selected, excavation commenced. One (1), 3 x 3m unit designated M118 and located approximately at the apex of a well preserved mound 30m long, 20m across and 5m high and three (3), 2 x 2m units (D142, E139 and V127) located on level ground were excavated. The excavation was controlled vertically by arbitrary 20cm spits using the south-western corners of all the units as control points for vertical and horizontal measurements.

The 3 x 3m unit (M118) was not wholly excavated from top soil to bedrock. A series of steps 1.5m in length and 30cm thick were left as from level 5 onwards (Plate 8). This was done to prevent chunks of soil in the upper levels from dropping into the pit as excavation progressed and also to provide an easy means of carrying soil out of the pit.

Profiles of the South and West walls of unit M118 and the west wall of unit V127 are shown in Figures 9 and 10 respectively.

The profiles of unit M118 clearly show that the mound was accumulated by successive dumping of debris from different households and artisan workshops. It appears the rubbish was dumped at different times on different parts of the mound. This process of dumping resulted in creating varied layers of short and discontinuous ashy lenses and loose or compact organic earth mixed with cultural materials.

On the basis of the distribution of locally made smoking pipes, the stratigraphy of this unit was divided into two main sections: A and B.

Section A (Layers 1-12) contained various types of locally made smoking pipes, pottery, iron slag, clay crucibles, various metal objects, animal bones, molluscs and imported European materials.

Section B (Layers 13-27): The first 1.6 meters of the deposits above the bedrock were devoid of European imports. These deposits contained pottery similar to the other layers, iron slag, tuyere pieces, animal bones and molluscs. The remaining deposits of this section contained imported European materials, clay crucibles cuprous objects as well as the other materials mentioned above except locally made smoking pipes.

The occupational deposit of the units located on the level ground was up to 1.8 meters (figure 10). Five cultural layers were distinguished:

Layer 1 - Black loose humus with numerous grass rootlets containing few pottery.

Layer 2 - Dark-brown sandy loam containing numerous pottery, few locally made smoking pipes, iron slag, fragmented animal bones and shells.

Layer 3 - Brownish loam with specks of charcoal, fewer pottery and fragmented faunal remains.

Layer 4 - Red-brown loose laterite containing specks of charcoal with very little cultural materials.

Layer 5 - Compact yellowish brown clay devoid of cultural materials.

ANALYSIS OF ARCHAEOLOGICAL MATERIALS

The four (4) excavation units produced over 17,000 specimens

with the total being divided between ceramic and non-ceramic archaeological materials. (Tables 9 - 12).

CERAMIC MATERIALS

The ceramic materials recovered from the excavation are: pottery, smoking pipes, crucibles, tuyere pieces and a terracotta head (Tables 9 - 11).

POTTERY ANALYSIS

Approximately 11,753 potsherds were recovered from the Okai Koi Hill site (Ayawaso). Of these, over 7,000 specimens proved to be almost useless for further study since they were either too small to be viewed properly or else weathering or some other erosive agency had obscured their important attributes. Consequently, some 4,042 sherds were left for this analysis.

CLASSIFICATION

There are two formal schemes for archaeological pottery classification namely, the devised or formal classification and the ethno-taxonomic or folk classification (Rice, 1987:275). Archaeologists commonly approach their classificatory operations from these two directions. However, the choice to apply any of these schemes in pottery classification depends on the purposes or particular problems to be answered (Hole and Heizer, 1969:167, Sharer and Ashmore, 1979:287-88;309).

THE PROBLEM

The ethnographic study conducted into Ga traditional economy for this thesis, revealed a surviving Ga potting tradition with antecedents going back to remote times (see Chapters 2 and 4 of this work). Again, it has been observed by Ozanne that the pottery from Ayawaso is similar to that from sites like Oklu, Opa, Korle Gonno, Wodoku, Ajenkotoku, Abochiman and Nyanaose (Ozanne, 1962a:63).

If these observations are correct then:

- (i) it was expected (from the first observation) that the excavated pottery from Okai Koi Hill should compare well with the modern ones in terms of technological, shape (form) and stylistic attributes.
- (ii) (following the second observation), the mineralogical composition of pottery from the sites mentioned should be common and if common, does the similarity suggest a Ga concept of pottery making?

THE APPROACH

The type-variety scheme of the devised classificatory approach was adopted. The definition of this scheme as given by Prudence M. Rice has been applied to this study. According to Rice, the type-variety scheme is a "hierarchical system of classification in which varieties are the smallest unit recognised and are subsumed within types" (Rice, 1987:283). A type applied here is considered as an aggregate of ceramic attributes which make a given category of pottery different from all others. However, within a type, varieties may occur due to differences in the ideas which produce

them and the limits of accuracy of reproduction that exists in the manufacturing process. Hence, the concept of type-variety.

Since this classification exercise is problem - oriented (see above), an attempt has been made to reconcile the results with that of the traditional classification observed during the study into modern potting traditions in the research area. This has been done to facilitate a comparative study that may not only lead to valid conclusions but also create types that are culturally or traditionally meaningful.

As a first step, the categories of attributes to be used in this classification exercise were established. The attributes which appeared to be characteristic of the Okai Koi Hill pottery were: (i) surface colour, (ii) fabric or temper (iii) vessel forms (iv) decorative patterns and (v) base forms. It must be noted that these attributes were combined in different ways depending on the stage or step reached in the classification exercise (Tables 13 - 17).

The potsherds were initially sorted into clusters on the basis of surface colour and temper and the following type-varieties were produced:

Colour attributes	Temper attributes	
	(i)	(ii)
Plain	Grit-grog tempered	Muscovite-tempered
Pink/Red slipped	" " "	" "
Smudged	" " "	" "

Table 3: Showing initial classification of pottery from Okai Koi Hill (Ayawaso) into type-varieties.

At this stage, the sorted potsherds which simply looked alike were examined under a simple microscope to see what they shared in common. It was observed that the grit-grog tempered sherds were greater in number than the muscovite-tempered sherds and that each group differed from the other in terms of the established attributes.

Samples of potsherds from each of the established groups and three of the sites mentioned by Ozanne (Wodoku, Opa and Ajenkotoku) were presented to the Geology Department of the University of Ghana, for mineralogical study. The selection of these sites was done arbitrarily. The petrographic analysis was done to identify the physical and chemical composition of the various rock minerals in the potsherds and also to recognise the probable source region of the clay materials from which the pottery was manufactured. The exercise, did not only contribute to a proper classification but also helped in solving the working problems stated above and in recognising two ware types designated Okai Koi Ware and X-ware.

THE CASE FOR WARE IDENTIFICATION

According to the Report (Appendix A) on the mineralogical analysis of the samples presented, the samples were characterised by quartz, hornblende, biotite, feldspar and muscovite. The source materials come from weathered rocks of the Togo series made up of quartzites, phyllites and schists of the western Accra Plains. The results of the mineralogical analysis were confirmed when the paste of all the remaining sherds from Okai Koi Hill were visually studied under a simple microscope in the work room at the Department of Archaeology, Legon.

Having established that the source region of the materials used to manufacture the Okai Koi Hill pottery was the western Accra Plains, the author set out to study closely the pottery from the site (Okai Koi Hill) with particular reference to the established attributes.

On the basis of surface colour, fabric (temper), vessel forms, decorative patterns and geographical location, two major wares were identified:

- (i) Okai Koi ware (grit-grog tempered)
- (ii) X - ware (muscovite tempered)

The use of the term ware is common in archaeological ceramic studies. In Ghana for instance, various wares have been identified based on aspects of composition, manufacture, technology, surface treatment, geographical location and function. These include Silima Ware (York, 1973), Begho Ware (Crossland, 1976, 1989). Bono Ware (Effah-Gyamfi, 1978) and Shai Classic Ware (Anquandah, 1987).

The term ware as used in this classification refers to a large class of pottery whose members share similar technology, fabric and surface treatment. A ware member may however, vary stylistically and be representative of a number of type-classes.

The grit-grog tempered pottery has been identified with the Ga of the western Accra Plains on ethnographic parallels. It has been observed that modern Ga potters of the Densu Valley add a gritty-like clay from termite-mounds (gbotsui) as temper to reduce the incidence of cracking in the vessels during the drying and firing stages. This gritty-like clay has been identified as sericite in the grit-grog tempered pottery. The presence of sericite

(gbotsui) in the grit-grog tempered pottery and the exploitation of the same by modern Ga potters probably demonstrates continuity in Ga potting practices hence, the designation of the grit-grog tempered pottery as Okai Koi ware.

Again, the gritty-like clay is also present in the potsherds from Opa, Wodoku and Ajenkotoku. These sherds including the grit-grog tempered from Ayawaso share common decorative patterns whilst surface treatment and fabric are similar. All these sites are Ga, therefore the similarities indicate a Ga concept of pottery making.

The absence of sericite in the muscovite-tempered pottery probably indicate that this pottery was made by a different group of people (yet to be identified) who lived in the western Accra Plains region or beyond. Hence, its identification as X-ware.

ATTRIBUTES OF OKAI KOI WARE

Okai Koi ware formed the dominant group of sherds among the classified number from Okai Koi Hill site. It numbered 3,909 which was 96.6% of the total sherd count accepted for the classification.

CONDITION AND SURFACE TREATMENT

By visual inspection, the condition of sherds is fresh and good. The sherds were found to be burnished or polished by using a small rolled beach pebble (fobite) leaving a glossy surface or unburnished, indicating a coarse surface.

Surface colour ranges from plain to red and pink slipped and **shiny** or dull black. The blackened surfaces were achieved through the deliberate process of smudging.

PASTE AND FABRIC

The fabric of sherds is hard and well-fired. The texture ranges from fine to relatively coarse clay. Microscopic analysis shows that the paste **contains** quartz, hornblende, biotite, feldspar and muscovite with clay minerals, sericite and iron oxide forming the main cementing materials of the paste.

DECORATIVE PATTERNS

Seven decorative patterns were recognised and treated here under two (2) categories of decorative treatments: those that displace or penetrate the surface and those that involve additions to the surface. The two categories were not mutually exclusive and frequently two or more decorative patterns were combined and applied on different parts of some sherds.

The recognised decorative patterns were designated as: simple striations, punctates, stamping, applied plastic decoration, channelling, fine multiple grooving and perforating. Table 4 shows the numerical and percentage distribution of the recognised decorative patterns on sherds admitted to the classification.

Technique of Execution	Type of Decoration	Number %
Impressed	Simple Striations	150 6.5%
	Punctates - wedge-end	85 3.7%
	Punctates - blunt-end	65 2.8%
	Punctates on channelling	85 3.7%
	Stamping - finger stamping	30 1.2%
	Applied plastic decoration	100 4.3%
Cutting	Channelling - single channelling	85 3.7%
	Channelling - multiple channelling	310 13.4%
	Fine multiple grooving	1,400 60.3%
	Perforating	10 0.4%
TOTAL		2,320 100%

Table 4: Decorative patterns on Okai Koi Ware

Simple Striations (Figure 11, a-d)

This decorative pattern was achieved by impressing a soft or relatively coarse natural object like a beaten fibre on the neck parts of pottery particularly Jars B and D in the wet stage of the manufacturing process. This motif was recognised on 150 sherds, that is 6.5% of the total number of decorated sherds (Table 4).

Punctates (Figure 11, j,k and e,i)

Two forms of punctation were recognised: wedge-end and blunt-end punctates. Impressions were punched at an oblique angle into the pottery with a sharp or pointed instrument, triangular in section to produce triangular-shaped impressions when the vessel was in the wet-stage (Figure 11, j,k). This motif was found associated with Jars A and B.

In another form, a blunt-ended tool was used to create shallow punctates on the neck and rim parts of some sherds (Figure 11, e,i). This decorative pattern was very common on Jar G.

Wedge-end punctates on incised channelling represented 3.7% (85 sherds) of the total number of decorated Okai Koi ware. This decoration was found associated with Bowl B. (Figure 13, a-d).

Stamping (Figure 11, h,l,m)

This decorative pattern was achieved by jabbing the finger into added plastic clay on the body of the vessel when the clay was still wet to produce shallow depressions. This decorative pattern was found on a small number of sherds (30) which formed 1.2% of the decorated sherds (Figure 11 h,l,m). This decorative pattern was associated with Jar I.

Channelling (Figure 12 a-e)

A broad, pointed instrument, with a smooth rounded edge was pulled over the surface of the wet clay before firing to produce single or multiple channels generally deep and U-shaped in cross-section. This decorative pattern appears on inner rim, shoulder and body sherds. They are common on Bowl forms D, E and Jar forms F and H. Single channelling represented 3.7% (85 sherds) whilst multiple channelling formed 13.4% (310) sherds of the decorated Okai Koi ware (Figure 12, a-e).

Fine Multiple Grooving (Figure 12, f-i)

A sharp pointed instrument was used to create a band of

circumferential lines that are narrow, generally shallow or deep and have a V-shaped cross-section. These multiple incised lines were executed on the inner rims, necks and bodies of vessels especially Jar forms A,C,E and Bowl forms A and B. This is the commonest decorative pattern on Okai Koi ware. It occurred on 1,400 (60.3%) of the total number of decorated sherds admitted to the classification.

Applied Plastic Decoration (Figure 13 f,g)

Applied plastic embellishments in high relief were executed on 100 (4.3%) sherds of Okai Koi ware. These embellishments in high relief appeared to depict naturalistic motifs such as a bunch of plaintain and reptiles. They appeared on smudged and slipped bowls. They were common on Bowl form B.

Perforating (Figure 13 i,j)

This ~~perforating~~ pattern was executed with a pointed cylindrical or sharp-ended tool to cut through the entire vessel wall, thereby removing portions of the clay to create a series of holes at the bottom or the entire body of the vessel. Often the clay is plastic or leather-hard when this is done. This pattern was found on a small number of sherds 10 (0.4%) of Jar J. This pattern was found in the ethnographic setting to be functional. It is done on pots that are used today, in Ga communities to steam kpokpoi (maize dumplings).

BASE FORMS

The total number of base sherds from all the excavated units

numbered 795 and represent 19.7% of the total number of sherds admitted to the classification. Base sherds have been analysed separately because during the excavation no complete vessel forms with the bases attached were recovered. Six separate base forms have been recognised. These have been designated as Base forms A - F and are illustrated in Figure 14. Table 5 below also shows the numerical and percentage distribution of the bases.

Type	UNITS								Total Number %	
	M118		D142		E139		V127			
A ₁	20	2.5%	5	0.6%	-		7	0.9%	32	4.0%
A ₂	100	12.6%	8	1.0%	5	0.6%	15	1.9%	128	16.1%
B	25	3.1%	3	0.4%	2	0.3%	5	0.6%	35	4.4%
C	18	2.3%	10	1.2%	-		4	0.5%	32	4.0%
D	8	1.0%	-	-	2	0.3%	3	0.4%	13	1.7%
E	183	23.0%	22	2.8%	10	1.2%	38	4.8%	253	31.8%
F	246	30.9%	12	1.5%	14	1.8%	30	3.8%	302	38.0%
TOTAL									795	100%

Table 5: Showing the distribution of base forms (Okai Koi Ware) according to units.

BASE - A

This basal form is a ring base. It is a circular band of clay surrounding the bottom of the vessel. There are two sub-types. Sub-type 1, is broad-based with a diameter measuring about 11cm. It has a concave bottom measuring about 14mm deep. The inside also has a concave profile (Figure 14 a¹). The total from all the units is 32 and

represent 4.0% of the total number of base sherds (Table 5). Sherds of this sub-type are plain, burnished or unburnished and undecorated. Sub-type 2 is narrow-based with a diameter of about 6cm and a concave bottom measuring about 10mm (Figure 14 a²). Sherds of this type are highly burnished and smudged. A total number of 128 (16.1%) sherds were recovered from all the four units.

BASE - B

This is a solid, concave base with an irregular concave depression. The body of the vessel stands on a low platform devoid of flanges. It measures about 7cm in diameter. Sherds of this type are either burnished or unburnished and undecorated (Figure 14b). All the excavated units produced a total of 35 (4.4%) out of the total number of base sherds (Table 5).

BASE - C

A low pedestalled disc base with sharply articulated angular end points projecting from the bottom of the vessel. It has a flat horizontal surface but some are characterised by a very shallow concave bottom about 2mm deep. The total from all the units is 32 and represent 4.0% of the total number of base sherds (Table 5). They are undecorated (Figure 14c).

BASE - D

This is a flat base and it has a horizontal surface. The side of the vessel projects in a straightline from the base (Fig. 14d). Three of the four excavated units produced 13 (1.7%) of the

total number of base sherds (Table 5). Three of the sherds are red slipped and the rest are smudged.

BASE - E

A high pedestalled conical base. The base is attached to the body of the vessel at the smaller end of the cone. The broad end of the cone measures about 12cm in diameter. It has a concave depression at the bottom which measures about 2.5cm. All the four units produced 253 (31.8%) out of the total number of base sherds. They are plain coloured and undecorated (Figure 14e).

BASE - F

Another high pedestalled conical base. As in base form E, this base is attached to the body of the vessel at the smaller end of the cone. The broad end of the cone measures about 9cm in diameter. This base type is hollow and has holes with diameters measuring between 1.5cm - 2cm pierced through it. The sherds that constitute this type are burnished and smudged. Others are plain, burnished or unburnished. The plain sherds are decorated with horizontal fine grooves. The four excavated units produced 302 sherds which represent 38.0% of the total number of base sherds. (Fig. 14f).

VESSEL FORMS

The excavation did not yield any complete or almost complete vessel. Reconstruction of vessel forms was therefore, done from large rim sherds present in the recovered pottery. It was also

impossible to identify which basal form should match with a particular reconstructed vessel. As a result, all the vessel forms have been presented here with round bases (Figures 15 - 21).

In the initial stages of the classification, the smallest observable feature on the rims was taken into consideration. This resulted in the creation of many cluster units, some of which were small and others large. However, as a detailed knowledge about the various classes of form was obtained, some of these cluster units were lumped into others to form larger clusters. Finally, the variety of forms maintained were grouped into two main categories namely; JARS and BOWLS.

JAR FORMS

Out of the total number of sherds admitted to the classification, 1,282 (31.7%) sherds represented reconstructable jar forms (Table 18). A jar is defined as a vessel with its orifice diameter markedly smaller than the maximum body diameter and the maximum height equal to or greater than the maximum body diameter. The recognised jars are identified as Jar A - J.

JAR - A

A spherical body jar with a constricted neck. The rim is everted with a very sharp angle on the side of the mouth. The diameter of the rim varies between 28-38cm. Rim thickness varies between 15-20mm and body wall is very thick averaging 15mm. Rim and body wall thickness indicate vessels of this type were very large. Vessel height is estimated to fall between 60-80cm (Figure 15a).

The outer surface is imperfectly burnished. The inner rims are decorated with multiple, circumferential grooves. A few are decorated with simple striations on the outer neck parts whilst the majority have multiple fine grooves on the neck and body parts sometimes matching with wedge-end stamping.

This form compares favourably with the Ga traditional water storage pot (Dido) for domestic use, in rim style and external profile. Again, the rim diameter and estimated height of Okai Koi ware Jar A, fall within the same for the Ga traditional water storage pot. Both are burnished on the outer surfaces but whilst the excavated form is decorated, the modern traditional form is undecorated.

JAR - B

This form is globular with rims being short and slightly everted. Rim thickness varies between 10-15mm. The diameter of the rim ranges between 20-30cm. Estimated height varies between 38-60cm (Figure 15b).

The outer surface of body is burnished and surface colour is mainly plain. Inner rims are decorated with concentric multiple grooves whilst neck regions have simple striations as the main decorative pattern. A few sherds were decorated with wedge-end stamping.

This vessel form is similar to the Ga traditional pot for storing drinking water (Tsumli gbe) in both rim and body configuration.

JAR - C

A globular body jar with a short everted rim. The diameter of the rim ranges between 18-22cm. Rim thickness varies between 6-10mm. Rim variations are either rounded or even with grooved lips (Figure 16c).

The inner rim, neck and body parts are decorated with multiple circumferential grooves. This jar form cannot be identified with any of the traditional forms. The body part is blackened, probably resulting from the use of the vessel on open hearths. This claim is made on the basis that the black colour is not well fixed on the sherds. It could be possible that it was used for cooking.

JAR - D

This form has a spherical body. Maximum body diameter is greater than rim diameter. The rim is everted with a sharp angle on the inside of the mouth. Rim diameter ranges between 20 - 24cm. Rim thickness ranges between 8-12mm and height is estimated between 38 - 45cm (Figure 16d).

Outer body parts are burnished and inner rims decorated with concentric fine grooves. The neck regions are also decorated with simple striations. The colour of the outer surface is basically plain. A few are slipped with pink or red clay colour.

This vessel is similar to the Ga traditional pot for water conveyance (Fanyaa gbe). Necks are constricted to facilitate spilling and vessel body walls are medium-size making the vessel light for easy transportation of water.

JAR - E

It has a globular body. Maximum body diameter is slightly greater than rim diameter. The rim is short and everted. Rim diameter ranges between 16-20cm. Rim thickness varies between 8-10mm indicating the vessel had medium wall thickness. Estimated height ranges between 18-22cm (Figure 17e).

Outer surfaces of some of the sherds are rough whilst others are imperfectly burnished. Decoration is mainly bands of concentric or circumferential grooves on the neck and body parts. Vessels appear to be of plain colour but spots of black colour imperfectly fixed are on the outer surfaces. This is probably due to the use of the vessel on open hearths.

This jar form compares very well with the Ga traditional pot for preparing herbal medicine (Tsofa kukwei) both in rim style and body profile.

JAR - F

This jar form has a globular body with long everted rim. Maximum body diameter is almost the same as rim diameter. Rim diameter ranges between 18-28cm. Rim thickness is between 5-8mm. Body profile shows a slightly squat form. Estimated height is between 15-20cm (Figure 17f).

Inner and outer surfaces of vessel are highly burnished. A large number of sherds belonging to this vessel form is smudged to shiny black. Others appear to be plain even though black spots, probably resulting from the use of vessel on open fire, are present. The inner parts of rim are decorated with single or multiple fine

grooves. The neck and body parts have deep channels U-shaped in cross-section.

This jar form is similar to the Ga traditional pot for **making** soups and stews (Wonu Kukwei). The long everted rims, a slightly squat body profile, the highly burnished inner and outer surfaces and the channelling decorations observable in the two compared vessels confirm that they are similar. However, in the modern form, some of the vessels are carinated but no carinated type was recognised among the excavated collection.

JAR - G

A round-bottomed, nearly oval-bodied jar with a markedly constricted neck. Rim diameter ranges between 8-12cm. Estimated height ranges between 18-12cm. (Figure 18g).

Top body part is burnished but the bottom body part is left rough. Some of the vessels of this form are smudged to **shiny** black and the others are left plain or pink coloured. The commonest decorative pattern is a band of concentric grooves on the neck parts. Others are decorated with either wedge-end or blunt-end stamping.

This compares very well with the Ga traditional pot for storing drinks like palm-wine. The vessel is called saasen. The constricted neck, rim stance and body profile are similar in both the excavated and contemporary Ga forms.

JAR - H

It a spherical constricted jar form with a carinated neck.

Rim diameter is markedly less than body diameter. Body profile is gentle flowing and follows a fairly even curve. Rim diameter ranges between 15 - 18cm. Rim thickness is between 6-9mm indicating the vessel is light weight. Estimated height ranges between 18 - 24cm (Figure 18h).

Outer surface is burnished and surface colour mainly plain. The only decorative pattern is a band of multiple concentric channels restricted to the rim parts of vessel.

A similar form was not confirmed in contemporary Ga traditional setting.

JAR - I

This jar form has either a globular or a carinated body. Rim is either everted or plain. Maximum body diameter is greater than rim diameter. Rim diameter ranges between 15-22cm. Estimated height ranges between 17-22cm (Figure 19i).

Outer body surfaces are burnished. Some of the sherds of this vessel form are smudged and others appear to be plain coloured. This vessel form is elaborately decorated with single concentric channelling either in the rim part or on the body. This is often matched with simple striations and wedge-end stamping. A common decorative pattern characteristic of this vessel form is applied embossments of clay knobs placed on the body of the vessel. Other sherds are decorated with finger stamping.

It is similar to the Ga traditional ritual vessel (kulo) in rim style, body profile and decoration especially the clay knobs attached to the vessel's body.

JAR - J

It has a globular body with either everted or *inturned* rim. Maximum body diameter is greater than rim diameter. Rim diameter ranges from 18-24cm. Estimated height varies between 14-20cm (Figure 19j).

Outer body surface is either burnished or unburnished. Vessel colour is mainly plain. Inner rim parts are decorated with circumferential fine grooves. This vessel is characterised by a series of round holes pierced through either the bottom or entire body of vessel.

Compares very well with the traditional Ga steaming pot called Ntaaso in rim and body configuration. Again the series of punched holes on the bottom or entire body of vessel in the excavated type and the contemporary Ga form indicate similarity. The perforated holes are functional. In the ethnographic setting, this vessel is used to steam ground corn for the preparation of kpokpoi (a traditional Ga food).

BOWL FORMS

Quantitatively, bowl forms are very popular than jar forms (Tables 18, 19). But in terms of shape, the variation range in bowls is smaller than jar forms. Reconstructable bowl sherds numbered 1,832 which is 45.2% of the total number of sherds admitted to the classification (Table 19).

A bowl is defined as an open-mouthed vessel with its maximum height less or sometimes equal to the maximum body diameter.

BOWL - A

A large hemispherical shallow bowl with long everted rim thickened to the exterior and flattened horizontally on its top edge. The long everted rim forms a thin flange protruding to the outside. Rim diameter which ranges between 22-26cm is slightly greater than maximum body diameter. Estimated depth is between 4-5cm (Figure 20a).

Outer and inner surfaces are burnished. Some of the sherds representing this bowl form are smudged to shiny black. Others are left either plain or pink slipped. The only decorative pattern is a band of concentric grooves in the inner rims of the vessel.

A similar form was not identified during the study into potting traditions in the study area.

BOWL - B

A large hemispherical deep bowl with a T-shaped rim thickened to the exterior and the interior. The rim is flattened horizontally on the top edge. Rim diameter is greater than maximum body diameter and it ranges between 22-26cm. Estimated depth is between 6-9cm (fig. 20b).

Both the inner and outer surfaces are highly burnished. Some of the sherds are smudged. A few are either pink slipped or plain. This bowl form is decorated with circumferential fine grooves on the inner rim parts. A few of them are decorated with multiple channels on the body. Another common decorative pattern on this vessel form is applied plastic motifs in high relief depicting naturalistic objects. Plastic clay handles are affixed to some sherds of this vessel form. No identical form was found in modern Ga traditional setting.

BOWL - C

A large, deep hemispherical carinated bowl with a slightly inturned rim. Rim lips are either rounded or flattened. Rim diameter is greater than maximum body diameter. Rim diameter varies between 20-28cm. Estimated depth ranges between 6-8cm (Figure 20c).

The interior and exterior surfaces of this bowl form are burnished. They are mainly smudged but a few are plain or pink slipped.

This bowl form compares well with the Ga traditional eating bowl (ka) sub-type 2 in rim style and body profile. This bowl is used for eating all kinds of food.

BOWL - D

Large, deep hemispherical bowl with slightly inturned rim. Rim diameter is greater than maximum body diameter. Rim diameter varies between 24-30cm. Estimated depth ranges between 6-10cm (Figure 20d).

Outer surfaces of some of the sherds are rough or imperfectly burnished. But a large number of the sherds is highly burnished to a reflecting lustre. The sherds with rough surfaces are decorated with a broad single channelling along the rim. The highly burnished sherds are either smudged or red slipped.

This bowl form is similar to the Ga traditional eating bowl (ka) sub-type 2, used for communal (group) eating.

BOWL - E

A large, relatively deep carinated bowl with inturned rim. The carinated part is thickened at the widest point of the side

wall. Rim diameter varies between 18-22cm. Bowl depth is estimated between 6-8cm (Figure 21e).

All the sherds representing this bowl form are burnished on both the interior and exterior surfaces. Decorative patterns range from single to multiple circumferential channels on the rim parts. Others are undecorated. No identical form was found in modern Ga traditional set up.

BOWL - F

A small, shallow bowl with carinated inturned or plain rim. Rim diameter ranges between 6-10cm. Rim diameter is greater than maximum body diameter. Estimated depth ranges between 3-4cm (Figure 21f).

Interior and exterior sherd surfaces are burnished. Some sherds are red slipped and others smudged. A few sherds are plain. All sherds of this bowl form are undecorated.

Similar form was not recognised in the research area during the ethnographic study into potting traditions. However, when specimens were shown to the modern potters, they identified their functional role in the past. According to them, in the past these small vessels were utilised as containers for various fats used as ointments. Again, during traditional festive occasions like initiation ceremonies for traditional priests and installation of chiefs, white clay (ayilo) was put in them, mixed with water and smeared on celebrants to signify joy, peace and prosperity in the years ahead.

BOWL - G, H (Lids and Handles)

A shallow semi-hemispherical bowl with simple rim. Rim diameter varies between 12-22cm. Some have small knobs on the inner curvature of the vessel to facilitate handling whilst in others the knobs are located on the exterior curvature of the vessel profile. Probably they were used as bowl lids or covers (Figure 21g).

A small number of plastic clay handles were attached to some bowls. Two main types can be distinguished. One is the horizontal loop type attached to both sides of the bowl and the other type, a solid flat piece also attached horizontally to the upper sides of bowls. The loop types are burnished and smudged whilst the solid flat piece is imperfectly burnished and plain coloured. (Figure 21h.)

ATTRIBUTES OF X - WARE

The pottery designated X - ware constituted a small group of sherds among the total number admitted to the classification. In all, approximately 80 sherds of this ware group were obtained from the excavation. This number represented 1.9% of the total number of sherds admitted to the classification table.

CONDITION AND SURFACE TREATMENT

Generally, the condition of sherds is fresh and sherds do not exhibit erosive surfaces. The interior surfaces of sherds are rough and the exterior surfaces range from imperfectly burnished to smooth and highly burnished. The high smudge characteristic of Okai Koi Ware is absent in this ware group. Some vessels of this group are plain and others are either pink or red slipped.

PASTE AND FABRIC

The fabric of sherds is hard and well-fired. Petrographic analysis indicated that the paste is made up of quartz, biotite, muscovite and feldspar with clay minerals and iron oxide forming the matrix of the paste.

DECORATIVE PATTERNS

The range of decorative patterns is very limited. Four (4) decorative patterns were recognised. They are, simple striations, multiple circumferential grooves, multiple channels and grooved multiple arcs over single channels. (Figure 22a - d).

Table 6 below shows the quantitative and percentage distribution of the decorative patterns.

Tech. of execution	Type of Decoration	Number	%
Impressed	Simple Striations	12	20%
Cutting	Multiple circumferential grooves	24	40
	Multiple channels	8	13.3%
	Grooved multiple arcs over single channels	16	26.7%
TOTAL		60	100%

Table 6: Quantitative and percentage distribution of decorations on X- ware.

Simple Striations

As in Okai Koi ware, this decorative pattern often occurs on neck parts of vessels. However, in this ware group (X-ware) it is also depicted in a crescentic shape on the body of jars especially jar form A (Figure 22 a,b).

Multiple circumferential grooves

This decorative pattern is depicted on inner rims of vessels especially Bowl form B and Jar A. As in Okai Koi ware, this is the dominant ornament. It was found on 24 sherds representing 40% of the total number of decorated sherds.

Multiple Channelling

This decoration involved the use of a pointed instrument with a smooth rounded-edge on the neck parts of vessels to displace clay in the leather-hard stage of manufacturing. It was very common on Jar C and it formed only 13.3% of the total number of decorated sherds (Figure 22c).

Grooved multiple arcs over single channels

Another common decoration probably achieved by the use of an instrument with a round edge to displace clay on the body parts of vessels in the leather-hard stage. This process leaves grooved multiple arcs superimposed on single concentric channel over the body parts of vessel. This was very common on Bowl A (Figure 22d).

VESSEL FORMS

Out of a total of 80 sherds belonging to this ware group 25 (31.3%) were reconstructable. Table 25 shows the quantitative distribution of vessel forms of this ware group according to levels in unit M118.

Range of variations in both jar and bowl forms is very minimal. Three jar ^{forms} and two bowl ^{forms} were recognised and they are described below:

JAR - A

Is a large globular body jar with an everted rim. Rim diameter ranges between 26-36cm. Maximum body diameter is greater than rim diameter. Rim thickness varies between 10-15mm. Estimated height ranges between 40-60cm (Figure 23a).

Outer body surface is imperfectly burnished. Sherds of this vessel form are plain. Common decorative pattern is simple striations of concentric shape on vessel's body. The inner rims of some sherds are decorated with multiple circumferential grooves.

JAR - B

Another large globular jar with everted rim. Rim diameter is less than maximum body diameter. Rim diameter ranges between 24-32cm. Rim thickness varies between 9-12mm. Estimated height is 42-65cm (Figure 23b).

Sherds belonging to this vessel form are burnished and therefore have smooth surfaces. Vessels are plain but a few are pink slipped. Some sherds of this vessel type are decorated with grooved multiple arcs over single channel. This pattern is executed on the body part of vessels.

JAR - C

It is a large jar with an everted rim thickened to the exterior and flattened horizontally on the top edge. Rim diameter is less than maximum body diameter. Rim diameter ranges between 18-26cm (Figure 24c).

Exterior body surface of vessel is imperfectly burnished. Majority of sherds of this form are red slipped and the rest are plain coloured. The main ornament is a band of horizontal channels in the neck parts of vessels.

BOWL - A

A necked bowl with an everted rim of an inner angular profile. The diameter of rim is slightly less than the maximum body diameter. Rim diameter ranges between 18-28cm. Estimated depth is between 12-15cm (Figure 24a).

Exterior body surface of vessel is burnished and undecorated.

BOWL - B

A carinated hemispherical open bowl with an inturned rim. Rim diameter is almost equal to maximum body diameter. Rim diameter varies between 18-24cm. Estimated depth ranges between 6-8cm (Figure 24b).

Outer parts of sherds of this vessel form are burnished and plain or pink in colour. The only decorative pattern executed on this vessel form is a band of circumferential grooves in the inner rim part of the vessel.

SMOKING PIPES

Eighty (80) pieces of locally made clay smoking pipes appearing to represent some forty-eight (48) pipes and one (1) rough-out were recovered from the excavation. Thirty-six (36) out of the total was complete or near complete enough to be typed.

A typological analysis of clay pipes from the research area and other parts of the Accra Plains, has been done by Ozanne (1962a, 1976). According to this scheme, three basic pipe types (Types I, II and III) and two varieties of types I and II evolved sequentially when smoking was introduced on the coast by Europeans at about 1640 A.D. Each type is placed within a range of absolute dates deduced from the association of the pipes with an early seventeenth century A.D. European sgraffito plate (Ozanne, 1962a:54). Below is a summary of Ozanne's typology:

TYPE Ia	1640-55	"Round-based" pipes in which the cross-section of the lower part of the bowl is elliptical.
TYPE Ib		Round-based pipes with a hook bridging the angle between the bowl and the stem.
TYPE IIa	1655-80	Flat-based pipes in which the cross-section of the base is flat, not including examples of type 3.
TYPE IIb		Flat-based pipes with a hook between the bowl and the stem.
TYPE III	1700	Flat-based pipes of which the plan of the base and or of the stem-terminal is a variation upon a square with a round projection at each corner.

Soon after Ozanne proposed this scheme, it was replicated in cross-dating the site of Yendi-Dabari (Shinnie and Ozanne, 1962:95:97) and also to revise Shaw's dating of the Dawu mounds (Ozanne, 1962b). Archaeologists who excavated Later Iron Age sites in Ghana, where locally made clay pipes were recovered as from the 1970s, referred to Ozanne's typology to aid in placing the newly excavated sites in chronological sequence. Two groups of archaeologists can be distinguished here. The first group are those who worked in the northern sector of Ghana including the Akan forest lands - New Buipe (York, 1973), Begho (Afeku, 1976) Bono Manso (Effah-Gyamfi, 1978, 1981), Wenchi (Boachie-Ansah, 1986). The second group are those who carried out excavations on the coastland and the immediate hinterlands - Twifo Heman (Bellis, 1972) and Nyanaoase (Keteku, 1981). Among this group should be added Tim Garrard who used evidence from early European records to revise the late sixteenth century AD date for the beginnings of the Dawu mounds which was suggested by Ozanne on the basis of his (Ozanne's) pipe typology.

The archaeologists who worked in the northern sector of the country suggested the possibility of a local development of smoking independent of European influence. Commenting on the application of Ozanne's typology to Later Iron Age sites in the interior regions of Ghana, Effah-Gyamfi wrote:

"The evolutionary sequence applicable to the Accra area is not applicable to the Bono Manso area and most probably to the interior as a whole". (Effah-Gyamfi, 1981:90).

On the other hand among those who worked on the coastland, Bellis, accepted Ozanne's scheme as valid for the Twifo-Heman area some 100 miles west of Accra and commented that:

"It (Ozanne's typology) ranks as the most productive chronological indicator to be developed in the archaeology of post-European contact Ghana" (Bellis, 1977 :78).

However, three years later, Tim Garrard called for a revision of Ozanne's 1640-50 date for the introduction of smoking to the coastland of Ghana. He suggested on the basis of evidence from early European written records that "it seems reasonable to place the first occurrence of smoking on the coast in the 1620s" (Garrard, 1980:95).

This was the state of affairs at the commencement of this research. Attention was therefore given to smoking pipes during the excavation because a study of them might help to determine the validity of Ozanne's typology in terms of sequence and deduced range of absolute dates assigned to it.

A detailed study of the recovered smoking pipes was made. As a first step, the complete pipes were classified on the basis of Ozanne's typology. With the exception of five (5) pipes, all the rest fitted well into Ozanne's types I and II. The five pipes have star-shaped bases otherwise called foliate pipes. To give a meaning in terms of typological sequence and chronological placement, the author set out to plot the pipes along the stratigraphy on a large-scale graph sheet according to their provenience (Figure 28). It was observed that Ozanne's type I pipes occurred between levels 12 and 7 whilst the two sub-types of type II occurred between levels

4 and 1. The newly discovered foliate pipes occurred between levels 7 and 4. In other words, they were sandwiched between Ozanne's types I and II pipes. Due to the small number of the new finds and the fact that the excavation was restricted to only one suburb (quarter) of the settlement, they have been considered as part of Ozanne's type IIa pipes till more discoveries are made to justify putting them in a different type-class.

THE ANALYSIS

The analysis was based on attributes identified and used by other researchers (Ozanne, 1962a, 1976; Shinnie and Ozanne, 1962; York, 1973; Afeku, 1976; Effah-Gyamfi, 1978; Boachie Ansah, 1986; Shinnie and Kense, 1988). The attributes used relate to the relative parts of the pipes. They are: (i) the base (ii) the bowl (iii) the stem (iv) the bowl-stem part and (v) decorations.

Thirty-six (36) complete or near complete pipes out of the total number, exhibited the attributes mentioned above. They were therefore, analysed and then divided into two main groups with one group having a sub-type. The groups into which the pipes were categorised were designated as Type I and Type II a and b.

TYPE I (Figure 25 Numbers 1-8)

Round-based pipes with no pedestal. The lower part of bowl is elliptically-shaped. This type is said to have been an imitation of European briar (Ozanne, 1962a; Boachie-Ansah, 1986; Effah-Gyamfi, 1978, 1981). The bowls of this type are either hemispherical (nos. 2,3,4,5,6 and 8) or flared (nos. 1 and 7). The collars of the pipes

could be wide and plain (nos. 1,2,5 and 6) or wide and rounded (nos. 3 and 4). Decorations vary: black, burnished with shallow grooves (no.1); mottled, grey and pink-brown decorated with grooves and black and burnished (nos. 7 and 8). The pipes of this type are not different from Ozanne's type I. They are the earliest locally-made pipes in the research area. However, archaeological work in the interior parts of the country has demonstrated that they occur in contexts that indicate they are the most recent type of smoking pipes at least in the interior region (Afeku, 1976; Effah-Gyamfi, 1978, 1981; Boachie-Ansah, 1986; Shinnie and Kense, 1988).

TYPE II (Figure 26 Numbers 1-3; Figure 27 Numbers 1-12)

There are two (2) varieties of this type of pipes. These are designated Type II a and b.

TYPE IIa (Figure 26 Numbers 1-3; Figure 27 Numbers 1-7)

Ring-based pipes in which the base section is flat. The bowls of pipes of this type-variety are either flared (nos. 1,2,3,4,6 and 7) or drum-shaped (no. 5). Pipes of this group are similar to that of Ozanne's type IIa. Decorative patterns executed on the pipes vary: lightly burnished, red-slipped pipes, decorated with comb-impressed motifs and deep circular impressions on the stem (nos. 1 and 2); black and highly burnished pipes, decorated with deep incisions (nos. 3 and 4); grey-brown, plain pipes (no.7); brown decorated with wide grooves on the bowl (no. 5).

In addition, five (5) pipes designated foliate-based or pipes with star-shaped lobes were recovered. Because a small number (5)

of them was recovered and also due to the fact that the excavation was restricted to only one suburb (quarter) of the settlement, they are considered as belonging to Ozanne's type IIa pipes. The lobes at the bases of the pipes vary in number. Among the specimens recovered, the highest number of lobes counted on a pipe was eight whilst the lowest was five. The bowls of these pipes are flared. The bases with stems have sharp collars. Two of the pipes are red-slipped (nos. 1 and 2) and the other is black, decorated with deep bands of grooves (no. 3). These pipes occurred immediately after the type I pipes. (Figure 26 nos. 1-3).

TYPE II b (Figure 27 Numbers 8-12)

Flat-based, pedestalled pipes with a hook between the bowl and the stem. Bowls of pipes of this type are separated from their bases by segmented parts. The pipes that belong to this type are similar to Ozanne's type IIb pipes. Decorative patterns on the pipes vary: red-slipped highly decorated with alternating zones of comb impressions and deep wide grooves (no. 9); black, burnished and decorated with wide furrows on the bowl (no. 10).

CHRONOLOGICAL PLACEMENT

The next issue considered was the chronological placement of the pipe typology. This exercise was undertaken as a result of Tim Garrard's call for a revision of Ozanne's 1640 date for the beginning of smoking on the coast and also the position of the type I pipes in relation to dateable European imports recovered during the excavation.

Evidence based on radio-carbon age estimations obtained from the excavation, dateable European goods associated with the pipes, early European written records and estimated accumulation rate of the mound deposits from which the pipes were recovered, was used in this exercise.

According to Ozanne, smoking was introduced to the coast of Accra about 1640-50 A.D. He argued for this date on the basis that regular European trade with the Accra coast began in the 1640s when the Dutch entered into a trade agreement with the King of Accra (Ozanne, 1976:37). This date has been questioned by Tim Garrard on the strength of an earlier historical evidence for smoking on the coast. Garrard, pointed out that Michael Hermmersam, who reached the coast in 1639, gave a detailed description of pipe smoking by the local coastal people. He further pointed out an earlier documentation of smoking by some sailors and a chimpanzee on the coast in 1625. He therefore, suggested that "it was reasonable to place the first occurrence of smoking on the coast in the 1620s" (Garrard, 1980:95-98).

This date seems to correspond well with two dateable European imports recovered during the excavation. A piece of brown Rhenish salt-glazed stone-ware or Bellarmine tankard probably made in Cologne and dated between 1550-1625 A.D. and another, a piece of Rhenish blue salt-glazed stone-ware dated between 1600-1625 occurred between 120cm and 60cm respectively below the first smoking pipes (type I) recovered from the excavation (Figure 28). Allowing an average of twenty (20) years for the manufacture of the wares in Europe, shipment and their breakage and eventual discarding at Okai

Koi Hill (Ayawaso), a 1620 date is suggested for the levels from which the first smoking pipes occurred (Type I pipes).

A question may be raised concerning the period the Type IIa and b pipes came into vogue. To place these pipes in the chronological sequence, there is the need to understand the build-up of the mound and apply a growth-rate to determine their chronological placement. Early European written records indicate that the ancient Ayawaso settlement was destroyed by the Akwamu between 1677-80 (Wilks, 1957:106; van Dantzig, 1978:65). Considering this terminal date and the 1620 date suggested for the evidence of smoking for the Accra coast, the 240cm deposits of Section A of the mound containing smoking pipes would have formed over a sixty (60) year period, circa 1620-1680 A.D. This gives an accumulation rate of 30cm every seven and a half ($7\frac{1}{2}$) years assuming a constant rate of accumulation. This rate of accumulation compares well with Ozanne's three feet (90cm) in twenty years for the mound he excavated at the Obutu quarter (Ozanne, 1962b:121).

Applying the accumulation rate of 30cm every seven and a half years for the 240cm deposits in the upper limits of the mound, then the type I pipes which occurred between levels 12 and 7 (100cm) would have been in vogue between circa 1620-1640 A.D. The lower extremes of this date correspond well with the date of the European materials associated with the pipes in levels 12 and 7. The type IIa pipes which occurred between levels 7 and 3 (80cm) would have replaced the type I pipes between circa 1640-60 whilst the type IIb pipes which occurred between levels 3 and 1 (60cm) would have been in vogue between circa 1660-80 (Figure 28).

On the basis of the remains of an early seventeenth century A.D. Hessian sgraffito plate Ozanne found one foot (30cm) to the base of the mound he excavated, he concluded that the Ayawaso mounds can hardly have been accumulated before 1600 and that the rise and growth of the Ayawaso settlement was due to the inception and expansion of European trade along the coast of Accra. In the excavation at Okai Koi Hill, as noted above, a 1600 date was obtained from European imports for the middle levels. This date was obtained from objects which occurred at 180cm and 240cm above the base of the mound. The positions of these finds and the assigned date make Ozanne's seventeenth century A.D. date unacceptable.

In fact, Ozanne did not notice that records of European trade on the Accra coast go beyond the seventeenth century date to the early years of the sixteenth century A.D. In 1517 a Portuguese emissary, Nicolao Garcia was sent to the kingdom of Akara (Accra) at the eastern edge of the Mina (Elmina) coast where he presented gifts to the king of the region. This opened trade links between the Accra coast and the Portuguese factors at Elmina. Trade links were maintained to such an extent that when in the 1550s, English and French interlopers arrived on the Accra coast and a lively trade ensued, the Portuguese became offended and sent an armed force of soldiers to punish the Accra people. The expedition burned the coastal settlements in the Accra region and drove the people into the foot-hills to the north (Ayawaso?) (Vogt, 1979:83,125-6). If Accra by this time was described as a kingdom then it means that Ayawaso was in existence before 1517 because Ga oral traditions ascribe the institution of kingship or chieftaincy to King Ayite, the founder of the Ayawaso settlement.

Taking this written historical evidence into account, it is suggested that the formation of the Okai Koi Hill (Ayawaso) mounds may have begun between 1500-1520 A.D.. This date compares favourably with the lower extremes of the calibrated radio-carbon age estimation (1480-1680 A.D.) obtained for the lower levels of the mound (see below). If the 1500-1520 date for the beginnings of the mound is accepted, then the 300cm deposit (Section B) of the mound could have taken place over a one hundred and twenty year period, circa 1500-1620 A.D. Assuming a constant rate of accumulation, this gives a growth rate of 30cm every twelve (12) years.

The upper limit of the mound accumulated faster, that is within a comparatively shorter period than the lower part (Section B). This could be explained in terms of the European factor on the coast. The upper limit coincides with the period 1600-80 in which as many as four different European factors (Portuguese, English, Dutch and Danes) established footholds on the Accra coast. Trade therefore, increased during this period and could have been a strong positive factor for the expansion of the Ayawaso settlement and a quick build up of the upper limits of the mound.

Two (2) radio-carbon age estimations were obtained for the middle and lower levels of the excavated mound (M118).

Lab code *	C-14 age B.P	Level	Calibrated A.D. date at 2 sigma Level
Deb - 1231/2	335 \pm 50	Middle	1454 - 1646 A.D.
Deb - 1233/4	264 \pm 50	Lower	1480 - 1680 A.D.

* (See Appendix Bi - iii)

Too much cannot be pressed out of these radio-carbon age estimations for a precise dating. The estimation for the middle levels turns out to be older than the lower levels. There could have been some operational problems in the analysis of the materials in the dating laboratory or the sample perhaps got contaminated by an unknown reason. This estimation (1454-1646 A.D.) is also incompatible with the 1600 date obtained for the European objects for the same levels. As regards the 1480-1680 calibrated date for the lower levels, there seems to be a favourable correspondence with the lower extremes (that is the 1480 date) with the 1500 date suggested for the same level.

From the discussion made above, the following dates may be assigned to the revised chronology for the locally-made smoking pipes in the research area:

Type I pipes - circa 1620 - 1640 A.D.

Type IIa pipes - circa 1640 - 1660 A.D.

Type IIb pipes - circa 1660 - 1680 A.D.

Placing each type of smoking pipes into a definite time period does not mean that once a new style came into vogue the old style was abruptly dropped. It was observed, for instance, that as type IIa pipes came into vogue, type I pipes were still in use even though the type I pipes found in type IIa contexts were very few. The same observation was made concerning type IIa and IIb pipes (Table 28). This is an indication that human tastes do not change easily.

On the whole, this exercise has vindicated Ozanne's observation that smoking pipes in the research area underwent stylistic changes and that the earliest locally-made clay smoking

pipes were probably an imitation of the European briar. This work does not reject Ozanne's typology. The typology as formulated by Ozanne for the Accra area is valid, however, the chronological sequence has been reconsidered in the light of new evidence obtained from early European written records, dateable European imports and radio-carbon age estimations.

TERRA COTTA HEAD

One (1) piece of a terra cotta figurine was recovered from the excavation. (Plate 9). It came from level 18 of the mound unit, M118. The object which is disc-shaped represents a human head. It is made of well-baked clay and appears to have been attached to something (probably a pot). It is about 6cm high and 5.5cm wide. A series of miniature bowl motifs about 1cm in diameter probably representing a head-gear or a hair-do, cover the head. There are deep **striations** or marks on the face. The meaning of these marks is not known. It may or may not represent an early form of ethnic marks (donkoyo) made on the face of children who are thought to come from the spirit-world to be born and immediately die and come back to be born again.

The presence of this object in the research area and similar ones reported at Wodoku (Shaw, 1961:55) and Ladoku (Anquandah 1978:27) bring the early Ga and Adangme of the coastal Accra Plains into the group of local communities in southern Ghana, for instance, the Asante, Fante, Sewfi and Kwahu of the Akan linguistic group who are known for their plastic art in clay. It is difficult to determine from this single specimen whether the terra cotta

represents a local (Ga) origin or an Akan influence. However, certain characteristics of this specimen, for instance, the disc-shape of the object, the meeting of the eye-brow to form an **m**-shape and the bowl-like motifs are reminiscent of Akan influence. But one important thing that cannot be determined is the function of the object. The Akan types are known to have been designed and utilized in diverse forms especially during funeral ceremonies (Nunoo, 1957:12-47; Calvocoressi, 1969; Bellis 1972; Anquandah, 1981). However, the presence of the Ayawaso head in a rubbish mound makes it difficult to assign such a functional role to it.

CLAY CRUCIBLES

Twenty (20) fragments of fired clay crucible were recovered from unit M118. Their distribution was limited to the upper section of the mound between levels 16 and 6 (Table 9). This distribution pattern accords well with the distribution of cuprous objects. Complete or near complete specimens were not recovered. However they seem to measure 5cm high, 1cm in thickness with internal diameter of 3.5cm. Clay crucibles were reported as part of the materials recovered by Shaw at Dawu in the Akuapem Hills (Shaw, 1961:59-62).

TUYERE PIECES

A number of tuyere pieces were recovered from all the four excavated units. The distribution of tuyere was fair through out the layers. Some of them had bluish to greenish glassy material on their surfaces. This may be bloom. The presence of tuyere pieces

in the stratigraphy indicates that there were iron smelters in the ancient Ayawaso settlement.

NON-CERAMIC OBJECTS

In this section non-ceramic archaeological materials recovered during the excavation are described:

STONE OBJECTS

Fifty (50) stone objects, mainly grinding and grooved stones, were obtained from the excavation.

GRINDING STONES

A total of 45 grinding stones were recovered from the excavation. The stones, mainly from metamorphosed rocks, were composed of quartzite, gneiss and schist. They measure between 1.5cm - 3.cm. They are of various shapes and vary from those with a flat surface on one side to some that are rounded, rectangular and nearly oval. One characteristic feature of the stones is their well, worn smooth surfaces which suggest evidence of having been used for grinding or rubbing purposes (Figure 29, 1-4).

GROOVED STONES

Grooved stones also form part of the artifact inventory from the excavation. Five (5) pieces, made from fine grained sandstone were found with grooves of rounded cross-section 3mm-5mm wide along the entire length of the stones. The largest is roughly rectangular 4.5cm long and 2cm wide. (Figure 29, 5-6).

INVERTEBRATES

Two groups of invertebrates that belong to the classes Gastropoda and Bivalvia were **obtained** from the excavation. These represent two types of land snail and over a dozen aquatic molluscs.

AQUATIC MOLLUSCS

A total of 450 shells of aquatic molluscs was obtained from the mound unit (M118). Those recovered from the other units were too fragmented to be analysed. The shells from the mound unit were analysed at the Zoology Department, University of Ghana. According to the analysis, the shells represented fifteen species of shell-fish exploited from marine, lagoon and estuarine environments (Table 26). The shells were distributed throughout the entire levels of the mound. Of the fifteen species identified only one, Natica maronchiensis, could be obtained in the nearby Nsaki River where they occur in great numbers today. The other species occur in the sea and lagoons on the coast, twenty-one kilometers away from the site. This indicates that the ancient Ga who lived at Ayawaso walked a distance of 21 km to exploit the lagoon and marine resources. All the species identified are edible. Their presence in such a large quantity seems to suggest that they were exploited for no other purpose than consumption. The most commonly exploited species were Arca senilis (22.7%), Pecten (16.4%), Natica marochiensis (10%), Donax acutangulus (8.9%), Tympanotus fuscata var radula (7.6%) and Carduim costatum (6.2%) (Table 26, Plates 10,11).

LAND SNAIL

45 shells of two types of terrestrial snails, the giant snail (Achatina achatana 44.5%) and Archachitina (55.6%), were obtained from the excavation. The total number of 45 shells represents 10% of the total number of invertebrate shells recovered (- an indication that land snails ranked high among the exploited molluscs) (Table 26; Plate 11c).

The Ga of the inland settlements continue to collect and eat snails from the thicket and "forest" parts of the research area.

PALM KERNELS

Carbonised palm-nuts were recovered from the excavated units. Some of them were very fragile. The importance of the oil palm-tree in contemporary Ga communities especially the rural Ga, has been pointed out in Chapter Two. The presence of the palm kernels in the units excavated shows the importance of the plant in the past. Inferring from the presence of palm wine pots, snails and shell-fish in the archaeological record and their functional roles in contemporary Ga dietary system, it is possible to say that in the past, palm-wine (tēdaa) was produced for domestic consumption whilst snails and shell-fish made a good combination with palm-nut soup in Ga homes.

BEADS

A variety of beads totalling ninety (90) ~~were recovered~~ from the excavation. They were made of different materials namely stone, shell and glass. They may firstly be classified into natural beads

and glass beads on the basis of the material used. A detailed classification of these two categories of bead is presented below on the basis of other criteria namely shape, colour and technique of manufacture. The distribution of beads according to types and stratigraphical levels is presented in Table 26.

NATURAL BEADS

TYPE I - STONE BEADS (Plate 12a - c) (Table 27)

- Type Ia Thick disc beads of bi-conically pierced quartz stone. Probably cut and filed by hand. Diameter is 3.5cm and perforated hole diameter is 0.5cm.
- Type Ib Tubular disc beads of red or dark brown bauxite ore. Diameter is between 0.3-0.5cm and length, 0.4-0.6cm
- Type Ic Long rectangular beads of translucent quartz stone. Diameter ranges between 0.9 - 12.cm and length 1.2-1.8cm.

TYPE 2 - SHELL BEADS (Plate 13 a-f) (Table 27)

- Type 2a Large rectangular beads of marine shell. They are white in colour and their surfaces are enamel-like. Diameter is 1.0-1.6cm and length 1.5-3.2cm.
- Type 2b Long tubular beads of marine shell white in colour and enamel-surfaced. Diameter is 0.5cm-0.8cm and length 1.0-2.0cm.
- Type 2c Long, small prism-like beads of marine shell. Diameter is 0.3-0.5cm.

- Type 2d Tubular disc beads of marine shell. Diameter ranges between 0.4-0.6cm and length 0.2-0.4cm.
- Type 2e Disc beads of marine shell with spiral designs. These beads were probably cut from the crest of conus shells and then polished smooth creating spiral discs.
- Type 2f Long beads of marine shell made of the mollusca Olivancillaria hiatula. Diameter is 0.5cm-0.7cm and length 2.5-3cm.

TYPE 3 - GLASS BEADS (Plate 14, a-h) (Table 27)

- Type 3a Short wound chevron beads with a core of blue glass and outer longitudinal, striped, multi-colours of blue and yellowish green. Diameter is 1.2-1.5cm and length 1.0-1.6cm.
- TYPE 3b Short wound chevron beads of red glass core and outer decoration of multi-colour stripes: - red, white and blue. There are 2 specimens: - a larger and a smaller. Larger specimen - diameter 1cm, length 1.5cm. Smaller specimen - diameter 0.5cm, length 0.8cm.
- TYPE 3c Short wound beads with a foundation of black glass decorated with longitudinal stripes of yellow colour leaving an alternating black and yellow stripes. Larger specimen - diameter 1cm, length 1.5cm. Smaller specimen - diameter 0.6cm, length 1cm.

- TYPE 3d Long tubular beads with red foundation. Decorated with bands of alternating longitudinal white, red, white colours. Diameter is 0.4-0.6cm and length 3.0-4.0cm.
- TYPE 3e Long tubular monochrome beads. Coloured varieties are grey and blue. Diameter is 0.5-6cm and length 2.5-4.0cm.
- TYPE 3f Short translucent beads. Single coloured beads of greyish opaque vitreous paste. Diameter is 0.5cm and length 0.8cm. They are gooseberry beads.
- TYPE 3g Long tubular beads of blue glass core. Decorated with longitudinal stripes of white colour. Diameter is 0.3-0.4cm and length 0.8-2cm.
- TYPE 3h Long tubular beads of white glass core. Decorated with narrow parallel stripes of red/brown colours. Diameter is 0.4-0.5cm and length 0.9-4.3cm.

PERFORATED OBJECTS OF TEETH AND BONES (Plate 15, a-i)

Twelve (12) perforated teeth and bones were recovered from unit M118. They occurred between levels 17 and 2. One of the perforated bones has been identified as a human phalange and the other seven (7) are believed to be the vertebrae of fish. All the perforated teeth **are** believed to belong to undomesticated animals. A number of these perforated objects strung on a string could be worn

as a necklace or pendant. These could be worn as "medicine" (tsofa). It is a belief among Ga hunters of today that, a hunter absorbs the strength, courage and cunning of the animals they hunt if a tooth or a bone necklace of the animals is worn by the hunter.

CARVED OBJECTS OF BONE AND IVORY (Plate 16, a-e)

Six (6) pieces of carved bone and ivory objects were recovered from the excavation. These are described under their functional headings namely; bangles, hair pin and knife-handle.

BANGLES (Plate 16, d,e)

2 broken pieces of ivory bangles were obtained. One specimen (e) is 1.5cm in diameter and 0.3cm thick. It appears this specimen was decorated because at one broken end, there is a decorative pattern of drilled dots enclosed in a series of connected rings. The other specimen (f) is 0.8cm in diameter and 0.3cm thick. This specimen has a highly polished, undecorated surface.

HAIR-PIN (Plate 16, a,b)

A small ivory hair pin and another believed to be a hair pin but the prong end broken off were obtained from the excavation. The small hair pin (b) has four prongs each 3.5cm long. The entire length of the pin is 4.4cm long with a diameter of 1.5cm. The head of the pin is decorated with a pattern of three narrow alternating longitudinal lines 1mm in diameter, leaving ridges 0.2-0.3cm standing. These ridges are divided into two equal parts by a single narrow line. The other specimen (a) is 1.6cm in diameter and 5.6cm

long. The prong part is broken off. Both the inner and outer surfaces are decorated with drilled dots enclosed in a series of connected rings.

KNIFE HANDLE (Plate 16,c)

One (1) broken carved knife handle made of bone was recovered from level 22 of unit M118. It is 1.2cm in diameter, 6.5cm long and 0.3cm thick. Three holes, 2cm apart have been drilled longitudinally through the bone. The outer surface is smoothly polished and decorated with incised eye motifs arranged in a pyramidal form.

METAL OBJECTS (Plates, 17, 18)

A number of cuprous and iron metal objects were obtained from the excavation. They came from all the four excavated units.

IRON OBJECTS

A number of iron objects or fragments came from the excavation but majority of them were heavily rusted with accretions. Their original form could not be determined easily. However, sixteen (16) pieces out of the lot were relatively well preserved. These can be seen in Plates 17 and 18. The recognizable objects were: a knife blade, arrowheads, an adze-blade and bangles.

KNIFE BLADE (Plate 17a)

One (1) knife blade of flat and narrow tang in line with the blunt edge of a straight blade was recovered from level 3 of unit V127. The blade is 2cm in diameter at the mid-point and 17cm long.

ARROW-HEADS (Plate 17, b-f)

Five (5) arrow-heads were recovered from the excavation. Four (4) came from levels 17 and 11 of unit M118 and one (1) from level 4 of unit V127. The tangs of the five arrowheads are round in section. The blade is thin and almost *symmetrical* in shape. Each of the arrowheads has two barbs.

ADZE - BLADE (Plate 17g)

A small adze-blade with a socketed-head was obtained from level 11 of unit M118. The adze-blade is 1.5cm in diameter and 5cm long. The diameter and length of the socket is 1.3cm and 3cm respectively. The adze was probably used for wood working (carving).

BANGLES (Plate 17 h,i)

Two plain iron bangles came from levels 21 and 17 of unit M118. Specimen (h) has an internal diameter of 3cm and it is 0.9cm thick. Specimen (i) also has an internal diameter of 4cm and 0.5cm in thickness.

OTHER IRON OBJECTS (Plate 18, a-g)

A small number of iron objects whose function could not be **determined were** also recovered during the excavation. Specimens (b) and (e) appear to be nails (?) whilst (a), (c) and (d) are objects beaten to flat elongated shapes.

SLAG AND IRON ORE

Iron slag pieces and small lumps of ferriferous ore were

collected during the excavation. All the four units produced these materials. The distribution of slag and iron ore accords fairly well with that of iron objects. The ore which abounds in the research area probably served as the raw material base for local iron smelting whilst the slag pieces were the by-product of iron-smelting.

CUPROUS OBJECTS (Plate 19 a-f)

12 pieces of cuprous metal were recovered from unit M118. They occurred between levels 14 and 4. The surfaces of all the recovered objects were covered with green copper oxide salt. Laboratory resources for metallurgical analysis were not available so the objects were subjected to visual examination. The dirt and mineral impurities that covered the **objects** were cleaned mechanically to facilitate easy identification of the colour of the metal which in turn gave possible clues to the type of metal used to manufacture them.

Specimen a: A piece of metal sheet yellow in colour. Probably part of a brass bowl. Measurements 6cm long and 4cm wide.

Specimen b: Fragment of a yellowish alloy. It appears to be part of a brass scoop (spoon). It measures 4.5cm in diameter.

- Specimen c: Five pieces of small pins of a yellowish alloy probably brass pins with knobbed heads. They are the same as the small pins recovered by Ozanne in the 1962 excavations and reported by Garrard as "brass pins (that) have distinctive spirally wound globular heads" (Garrard, 1980:133). According to Tylcote, cited in Garrard, pins of this type were made in Europe from the sixteenth to the nineteenth centuries. They are 1mm in diameter and range between 5.5-6.0cm in length.
- Specimen d: A long needle of a yellowish alloy (probably brass). The top part of the needle "eye" is broken. It is 1mm in diameter and 7cm long.
- Specimen e: A semi-hemispherical cuprous object (yellow coloured). Appears to be a brass bangle or a ring of bangle size. Internal diameter is 3.8cm and 0.4cm thick.
- Specimen f: A piece of brass cut and shaped in the form of a bird. Probably used as a goldweight. It is 1cm in diameter, 1.8cm long 0.2cm thick.

FAUNAL REMAINS

A large collection of faunal remains was made from the excavation. The bones recovered from three of the units namely D142, E139 and V127, were too fragmentary and undiagnostic to be of any use. However, the specimens from unit M118 were well preserved and so they were presented for study. The analysis was done by

Mr. Bosman M. Murrey of the Department of Archaeology, University of Ghana, Legon. The report presented below is taken as representative of the Okai Koi Hill site (Ayawaso).

The analyst used the total count method in which total counts of the number of bone specimens were taken and then sub-divided into class units to identify and quantify them. The faunal remains presented for study totalled 4,800. The identifications given in Table 8 and Appendix C indicate that the total counts of the specimens from the different classes were as follows:

CLASS	NUMBER OF SPECIMENS	% OF INDIVIDUAL CLASS TO TOTAL COUNTS
Mammal	2,201	45.9
Fish	2,133	44.4
Crustacea	30	0.6
Bird	408	8.5
Reptile	28	0.6
T O T A L	4,800	100%

Table 7 Identified Classes of Animals From The Specimens recovered from the excavation.

Below is the detailed presentation of the identified animal species from the site. Table 8 gives the common and scientific names of the various identified faunal groups as well as the number of bones identified to each animal. The percentage is expressed to the total count of the specimens of a specific animal class, to which each animal belongs. The fish specimens were not identified

to species because of lack of reference materials. The same was true for the bird remains except chicken and turkey. Many of the mammal remains in most cases were identified to species whilst the reptile bones identified were from turtles and tortoise.

CLASS	COMMON NAME	SCIENTIFIC NAME	NO. OF SPECIMENS IDENTIFIED AND % OF INDIVIDUALS	
MAMMAL	Cow	<u>Bos</u>	452	20.5%
	Sheep/Goat	<u>Ovis aries/capra</u>	838	38.0%
	Pig	<u>Sus scrofa</u>	3	0.1%
	Dog	<u>Canis familiaris</u>	50	2.3%
	Cat	<u>Felis domestica</u>	15	0.7%
	Black duiker	<u>Cephalophus niger</u>	170	7.7%
	Royal antelope	<u>Neotragus pygamaeus</u>	158	7.2%
	Maxwell's buck	<u>Cephalophus maxwelli</u>	164	7.5%
	Bush buck	<u>Tragelaphus scriptus</u>	100	4.5%
	Grasscutter	<u>Thryonomys swinderianus</u>	160	7.3%
	Giant rat	<u>Cricetomys gambianus</u>	43	1.9%
	Ground squirrel	<u>Xerus erythropus</u>	20	0.9%
	Marsh mongoose	<u>Atilax paludinosus</u>	10	0.5%
	Dwarf mongoose	<u>Herpes sanguineus</u>	8	0.4%
Mole	-	10	0.5%	
BIRD	Chicken	<u>Gallus domesticus</u>	100	24.5%
	Turkey	-	50	12.3%
	Other birds	Aves	258	63.2%
CRUSTACEA	Crab (river)	-	20	66.7%
	Crab (lagoon)	-	10	33.3%
REPTILE	Land tortoise	<u>Kinixys sp</u>	12	42.9%
	Water tortoise	<u>Pelusios gabonensis</u>	6	21.4%
	Turtle	-	10	35.7%
FISH	Fish	Pisces	2133	100%

Table 8: Showing individual species among identified faunal classes.

ARCHAEOLOGICAL ASPECTS OF THE FAUNAL REMAINS

The analysis of the faunal materials from the excavation as summed up in Table 7, 8 and Appendix C gives insights into the traditional economy of the ancient Ga.

It can be inferred from Table 8 that the ancient Ga exploited both domesticated and wild animal resources. The domesticated animals in the list are the cow, sheep/goat, the dog, cat, pig, chicken and turkey. All these, except the dog and the cat, served as food sources for the ancient Ga. Oral traditions and ethnographic study indicate that the dog served and continues to serve as a hunting companion to Ga hunters whilst the cat is kept to keep away mice from Ga homes. The presence of their bones at the site therefore, did not mean they were exploited for food.

Mammal bones accounted for approximately 45% by total bone count of all the faunal materials recovered. Sheep/goat followed by cow, grasscutter and the four kinds of antelope were the most commonly exploited mammals and they served as the main sources of meat supply to the ancient Ga (Table 8).

The species of the reptile class and that of the Crustacea class representing 0.6% each, did not seem to represent important food sources even though they formed part of the diet of the ancient Ga people.

Fish did provide a significant amount of meat. By bone count, approximately 44% of the bones from the excavation were fish. Even though, the fish specimens could not be identified to species, the remarks column on fish in Appendix C shows that some of the species represented both marine and riverine fish. This signifies that the Ga exploited fish from the rivers, lagoons and the sea of the research area.

In conclusion, the ancient Ga who inhabited the site, appear to have relied on mammals. Also they considerably used fish resources. Their meat diet included a variety of species from these two animal classes and some birds. Some meat was also obtained from reptiles and invertebrates.

EUROPEAN POTTERY AND SMOKING PIPES

A number of European trade goods mainly kaolin smoking pipes and ceramics were recovered during the excavation.

CERAMICS (Plate 20, a-n)

Sixteen pieces of various European ceramic materials were obtained from the excavation. Notes about them are presented as follows:

(a) STONE WARE

Two pieces of the recovered ceramics from the upper limits of section B of unit M118 were identified by the Victoria Albert Museum as parts of a Rhenish blue salt-glazed, stone-ware made in the Westerwald area of Germany and dated to 1600-1625 A.D.

One piece was also identified as part of either a brown Rhenish stone-ware dated to 1600 - 1625 or a Bellarmine tankard with a human face embossment dated to 1550 - 1625.

(b) UNGLAZED WARE

Three pieces of pottery too small to be identified precisely

but reddish-brown in colour, perhaps parts of large ceramic containers for storing wines, were also recovered from the excavation. Dates of manufacture and source could not be determined.

The other seven pieces of ceramics were too small to be identified.

KAOLIN SMOKING PIPES (Figure 25, 1-3)

Three pieces of kaolin smoking pipes of European source were obtained during the dig. They all came from levels 1 and 3 of unit M118. Drawings and photographs of the pipes have been sent to Stedelijke Musea, Gouda in Holland for identification and dating but at the time of writing no report had been received. But their presence in the first three levels of the mound indicates that they were probably seventeenth century European pipes since the settlement was destroyed between 1677-80.

SOME OBSERVATIONS ABOUT THE ARCHAEOLOGICAL MATERIALS

This section concludes the chapter and it is devoted to a brief discussion on some general observations about the recovered archaeological materials. A detailed discussion of the archaeological materials and their implications for the understanding of the Ga society are highlighted in Chapter Six.

The material evidence from the excavation and the dates obtained for the site (See Chapter Six) indicate a short chronology for the settlement: spanning a period less than two centuries. The absence of European imports in the lower 1.6

meter deposits above ^{the} sterile ^{probably} indicate that the foundation of the ^{layer} settlement began before the Accra coast came into contact with European traders.

The range of archaeological materials recovered and discussed in the foregoing pages shows that the site was a Later Iron Age settlement. The excavation did not reveal any pre-Iron Age occupation. However, this does not mean that an occupation pre-dating the Iron age era may not exist in the Ayawaso area.

A distinction can be made between the materials that were made locally and those that reached the site as a result of the European presence on the coast. Archaeological objects like stone and shell beads, clay smoking pipes, pottery, bones of domesticated animals such as sheep/goat, cow and iron objects reflect exploitation of materials from the local environment for either domestic use or internal exchange. Materials like the kaolin smoking pipes, stone wares, glass beads and copper/brass pins which are foreign imported goods bear testimony to the flourishing international trade between the ancient Ga and the various European traders whose ships berthed at the Accra coast for trade during the sixteenth and seventeenth centuries.

Two main types of pottery designated Okai Koi ware and X-ware were recognized by this research. Not only were the two types of pottery different from each other but also they were consistent and homogeneous throughout the stratigraphies of the excavated units. The various characteristics of the two types of ware have already been considered above and need not be repeated here. It is very obvious that the X-ware was manufactured by a different group of

people and perhaps through some exchange mechanism, they reached the site. The other ware was local to the site and has been identified with the Ga. From Tables 9, 19-24 which show the stratigraphical distribution of Okai Koi ware including bases, it is perfectly clear that there are no radical changes or sudden basic introductions in the ware. The potsherds from basal layers or levels of the site belong to the same range as the rest. The archaeological materials from the previous researches deposited at the Department of Archaeology, University of Ghana, Legon have been observed and there is no difference between them and those recovered during this research.

Comparative analysis of modern pottery produced in the study area and the excavated ones show a favourable correlation in terms of technology and form. Technologically, both the modern pottery and the excavated types contain termite-mound clay temper locally called gbotsui. In terms of form, most of the modern ware compared well in rim and body configuration with the excavated types. However, a hundred percent (100%) correlation was not obtained. Out of twelve (12) pottery functional types found in present day Ga ethnography, nine (9) were recognised from the excavated pottery to have been in production in the past. These are:

<u>Ethnographic</u> <u>Type</u>	<u>Excavated</u> <u>Type</u>	<u>Function</u>
(i) <u>Dido</u>	Jar A	storing domestic water.
(ii) <u>Tsumli gbe</u>	Jar B	storing drinking water.

(iii) <u>Fanyaa gbe</u>	Jar C	water conveyance pot.
(iv) <u>Tsofa kukwei</u>	Jar E	pharmaceutical preparations.
(v) <u>Wonu kukwei</u>	Jar F	preparing soups and stews.
(vi) <u>Saasen</u>	Jar G	storing/conveying palm-wine.
(vii) <u>Ntaaso</u>	Jar J	steaming maize flour.
(viii) <u>Kulo</u>	Jar I	ritual pot.
(ix) <u>Ka</u>	Bowl C,D	eating bowls.

This study has vindicated the results of earlier researches by Crossland (1976,1989), Effah-Gyamfi (1980), Osei Tutu (1987) and Anquandah (1987) that ethnographic study has a great potential for archaeologists in reconstructing a fairly accurate picture about past potting traditions and also making important inferences about functional roles of excavated pottery.

CHAPTER SIX

DISCUSSION, SUMMARY AND CONCLUSION

In the foregoing Chapters, the background information to the research and analysis of the archaeological materials obtained from the excavation have been presented in some detail. In this Chapter, the research area is placed in a chronological setting. An attempt is made to discuss the research objective in the light of the archaeological findings by applying the systems approach. Evidence from oral traditions, ethnography and early European written records have been used to shed light on the archaeological materials for the reconstruction of the early ~~history~~ history of the Ga before the Akwamu destroyed Great Accra (Ayawaso) by the turn of the seventeenth century A.D.

CHRONOLOGICAL TRENDS

There is no question about the terminal point of the ancient Ayawaso settlement. Early European written records indicate that the settlement was attacked and destroyed by the Akwamu between 1677 and 1680 (Wilks, 1957:106; van Dantzig, 1978:65). The problem, however, lies with the date for the beginning of the settlement. This issue was considered in Chapter Five where the chronological framework of Ozanne's smoking-pipe typology has been revised. Below is a summary of the assessment.

Even though the radio-carbon age estimations obtained from the excavation were not useful in dating the foundation of the ancient

Ayawaso settlement precisely, yet on the basis of sufficient evidence based on early European written records, dateable European trade goods and estimated rates of refuse mound accumulation, a 1500-1520 date was suggested for the founding of ancient Ayawaso. When this date is considered in the light of the calibrated radio-carbon age estimation of 1480-1680 A.D. for the lower levels of the excavated mound, there is a fair correspondence with the lower extremes at two sigma level.

As regards the middle levels, the lower and upper extremes of the calibrated radio-carbon age estimation of 1454-1646 A.D. at two sigma level compares unfavourably with the 1550-1625 and 1600-1625 A.D. dates obtained for the European trade goods recovered from the middle levels of the excavated mound. As pointed out in Chapter Five, there seems to have been some flaw in the laboratory analysis or some contamination of the materials for dating before collection. However, using the dates of the trade goods and allowing an average of twenty (20) years for the manufacture of the wares in Europe, shipment and their eventual breakage and discarding in ancient Ayawaso, a 1600 date is suggested for the middle levels of the excavated mound.

Given the corroborative evidence of early European records, estimation of mound accumulation rates, dateable European trade goods and radio-carbon age estimations, the following approximate dates are suggested for the ancient Ayawaso settlement:

Upper Levels	-	1640 - 1680 A.D.
Middle Levels	- circa	1600 - 1640 A.D.
Lower Levels	- circa	1500 - 1520 A.D.

DECODING THE ARCHAEOLOGICAL DATA FOR THE UNDERSTANDING
OF THE ANCIENT AYAWASO SOCIETY

Oral traditions collected in the research area and early European written records indicate that the ancient Ayawaso area was inhabited by the Ga. The origins and early migrations of the Ga have been considered at length in Chapter Three. So far three views have been expressed on this issue. Two of the views claim the Ga originated from external sources and mention the Near and Middle East as one source region and present Togo-Benin-Nigeria area as the other. A third view indicates that the Ga originated from the lower Volta basin. None of these views has been proved archaeologically. However, archaeological research conducted into early sites indicate that the western Accra Plains have been inhabited since the first four millenia B.C. Archaeological work carried out at Christian's Village close to the University of Ghana, Legon campus revealed ruins of Late Stone Age village settlements of the Kintampo Complex traditions characterised by stamped pottery and cigar-shaped palettes (Davies, 1964:239; Anquandah, 1982:115). Again, there is archaeological evidence to show that a Middle Iron Age tradition characterised by iron-working, pottery decorated with comb stamp and roulette impressions, grooves and high relief pattern and shell-fish subsistence economy existed at such village settlements as Weija, Gbegbe and Ormsby Road. The location of these Iron Age sites in the western Accra Plains is said to coincide with areas which oral traditions and present-day ethnic distribution associate mainly with the Ga (Anquandah, 1982:115). The excavation at Okai Koi Hill did not reveal any pre-Iron Age occupation. The range of archaeological materials recovered and the radio-carbon age estimations place the

site in the Later Iron Age. However, this does not imply that an occupation pre-dating the Iron Age era may not exist in the Ayawaso area. Any situation otherwise, may be in sharp contrast to what pertains to other parts of the western Accra Plains. On the whole, as regards the origins of the Ga, the emerging picture as revealed by present archaeological research, seems to disagree with the view that the Ga originated from external sources.

In decoding the archaeological data to throw light on the ancient Ayawaso society, some questions may be asked: (i) What was the nature of the society as revealed by the accumulated data? (ii) What are the clues in the archaeological data on the local (internal) and external factors that facilitated the development of the area?

In order to provide answers to these questions, it is necessary to study the Ga society by applying the systems approach. According to this approach any past human organization (society) can be studied as a system (Kirch, 1982:108; Sharer and Ashmore, 1979:520; Binford, 1962:217-225; 1964:425-441, Trigger, 1971:321-336). The system is composed of interacting sub-systems namely the ecological (environmental), cultural and social sub-systems. It is possible therefore to break the system (Joachim 1979:77-117) into minute components and *assess* as far as possible the performance measures of each in relation to the total system.

It is implied from the above, that the ancient Ga society can be reconstructed meaningfully by interpreting the archaeological data in terms of knowledge about its environmental, cultural and social systems. Data on these systems *have* been presented in Chapters

Two, Three and Four whilst Chapter Five **dealt** with the inventory and description of the archaeological data. Thus, in an attempt to reconstruct the ancient Ayawaso society, the discussion combines the archaeological evidence with that on environmental, cultural and social systems.

A combination of evidence from the archaeological data, ethnography and early European written records **portray** the nature of the ancient Ayawaso society as nothing but a complex one.

Archaeology has thrown light on the nature of the ancient Ga society during the Later Iron Age. The excavation revealed a pre-European phase of the ancient Ga society. This phase was represented in the lower 1.6 meter deposits above sterile of the excavated mound. The pre-European phase deposits produced archaeological materials devoid of European goods whilst the rest of the mound deposits contained European imports.

The archaeological materials obtained from all the excavated units throw light on the economic and industrial life of the ancient Ga during the sixteenth and seventeenth **centuries**. The excavation revealed that the Ga society thrived on a mixed economy. Evidence was found of large quantities of pottery, tuyere pieces, slag wastes and the finished products of iron implements like arrowheads and a small adze. Ivory objects of intricate patterns such as bangles and hair pins were also recovered. Bones of domesticated and wild animals, shells of land snail and fresh-water molluscs, carbonised remains of palm kernel and fish bones reveal a Ga subsistence economy based on a variety of local resources.

Information gleaned from Ga ethno-historic narratives and the archaeological evidence on subsistence economy seem to suggest that there were farmers who probably combined farming with animal rearing in the Ga society by the sixteenth century A.D. There is also evidence of the presence of a number of specialised groups of people who may be identified as potters, blacksmiths, hunters, fishermen, palm-wine tappers, carvers, cloth-workers and medicinemen or priests. Thus, there were two broad categories of people who were engaged in economic pursuits vital for growth and expansion. Those who engaged in secondary economic activities like blacksmithing, traditional medical practice, potting, carving and cloth-making provided expertise services vital for economic expansion. The other group engaged in primary economic activities. They provided food and their services sustained the whole community. Probably, food surplus was guaranteed through the agricultural practices of mixed cropping and bush fallowing. Also the provision of metal implements from the blacksmith's workshop could have made it possible for farmers to produce food in excess than the needs of their households by cultivating large hectares of land.

Oral traditions and early European records make references to the Ga political structure that exercised power and control over the ancient Ayawaso society. The traditions have it that originally the ancient Ga political system was theocratic in which political and religious power was wielded by a traditional Chief-Priest (Wulomo). However, the exigencies of a society that was becoming more complex called for the adoption of a centralised type of political system in which power was vested in a secular ruler called Mantse (Chief/King).

The dynastic history of the Ga as revealed by traditions mention Ayikushie, Ayite, Nikoi Olai, Owura Mampon Okai and Okai Koi as the first five secular rulers. The new political system may have rested on the sanction of military power to ensure stable and peaceful conditions in which the members of the community engaged in various economic pursuits could produce of their best. Early European written records referred to the sixteenth and seventeenth century A.D. Ayawaso area as the "Kingdom of Akara/Accara" (Vogt, 1979:83, van Dantzig; 1978:66) and described the ruler of the area as a paramount chief or a king. They again mentioned^a number of officers who assisted the king in his rule. Reference was made to officers like "Caboceers", who constituted the state-council, "Paij Macardo", the kings chief treasurer and the "Mansebos", who were not officers as such but constituted the youngmen of the society from whom the king built his army (Quaye, 1972:38-40).

The ancient Ayawaso settlement could be said to be very large. It was referred to in early European records as "Great Accra" (Wilks, 1957:106; Berry, 1958). The use of such an adjective as a prefix to the name of the settlement **portrays** its importance. Also it gives an idea about the size of the settlement in relation to other Ga settlements of the same period. For instance, the coastal village settlement of Little Accra was differentiated from this large inland settlement in this way to show how important ancient Ayawaso was in size and function. Ga oral traditions refer to Ayawaso as a large settlement having at least five suburbs (quarters). These suburbs are named as:

- Okai Koi Hill - the seat of government and residence of the king and members of the royal family.
- Nii Akotia - residence of a wealthy merchant and a member of the royal family.
- Ayawaso Central - residence of the main Ga populace.
- Obutu Quarter - residential quarter of the Guan-speaking Obutu people.
- Market Place - the main trading centre.

Archaeological surface survey conducted to find out the extent of the Ayawaso settlement revealed that this ancient settlement stretched from the Okai Koi Hill and extended across the Nsaki River to the modern village settlements of Odumase, Amanfrom and Amamole encompassing an area about 2.6 x 1.5km. The results of the survey confirm what early European written documents and Ga ethno-history say, that the ancient Ayawaso settlement was large.

The population that lived in such a complex society as the ancient Ayawaso settlement could have been very large. Presently, much cannot be said in absolute terms about the palaeo-demography of the Ayawaso society. In recent archaeological studies in this country, attempts have been made at population estimates. Professor Posnansky, on the basis of a total house mound count of one thousand (1,000) and extrapolating by an average of ten (10) people per every household in the village of Hani, estimated the past population of Begho town at its height to around ten thousand (10,000) (Posnansky, 1979:22-35). Effah-Gyamfi, also used the distribution and concentration of pottery and house-mounds to suggest populations of

various sizes for the three phases of the Bono Manso settlement (Effah-Gyamfi, 1978:377-80). The methods applied by the two researchers are not without their flaws, yet the estimates provided a picture about the population in their research areas.

Unfortunately, no house mounds were identified during the research at Okai Koi Hill and also most of the rubbish mounds in the area have been destroyed due to intensive farming activities over the years. These shortcomings could not permit the application of any of these methods to the area. In any case, estimating ancient populations by formula, to a great extent depends on precise ethnographic analogy (where possible), careful control of the archaeological data and a considerable excavation of areas of the site. The limitations of this research in terms of the last condition mentioned above could not permit the estimation of the population of the area.

Reindorf, using ethno-historic evidence, estimated the population of ancient Ayawaso to between 40,000 and 50,000 people (Reindorf, 1960:24). Marion Johnson, writing on the population in the Accra region, touched on the population of ancient Ayawaso during the seventeenth century A.D. Basing her estimates on figures provided by published accounts of seventeenth century and nineteenth century A.D. travellers, archival materials on European trade on the Accra coast, missionary records and Colonial government documents, she used the 1970 Population Census of Ghana as a base year and worked back into the seventeenth century A.D. According to her, Great Accra could raise between 15-16,000 armed men. This number, she said expressed the size of men who could be raised by the Ga

kingdom for war but could be converted to population figures for the whole kingdom by using an appropriate multiplier which she gave as four (4) for the Accra Plains. In absolute terms therefore, Great Accra in the seventeenth century had a population around 40-50,000 (Johnson, 1977:272-294). The population figures as estimated by Reindorf and Johnson seem to be too large for the ancient Ayawaso settlement. But when allowance has been made for due exaggeration and when the territorial extent of the ancient Ayawaso settlement and the extensive scatter of rubbish mounds and archaeological materials are considered, one can guess that the population of ancient Ayawaso was indeed large.

Evidence drawn from a combination of environmental, ethnographic and archaeological studies indicates that the ancient Ayawaso society thrived on a number of specialised industries. One of such specialised industries was potting. Ethnographic studies conducted in the Densu Valley of the research area revealed that a potting industry with antecedents going back to the remote past exist in the study area. The environment of the study area is characterised by unfavourable climatic and geological conditions as far as agriculture is concerned. The annual rainfall of 762 millimeters of the area is very meagre. Again, the friable sandy loam soils underlain by impervious clay deposits produced from the basic rock system of the Togo Series, all combine to make the study area not very suitable for agriculture.

The climatic conditions in the area have not changed much. Both oral traditions and early European written records show that the Ga have been victims of droughts, bad harvests and famine. Ga

ethno-historic narratives mention a famine which hit the Ga society so severely that the end of the famine was marked by a thanks-offering feast to the ancestral shades. This marked the beginning of the Ga annual festival known as Homowo (meaning, "hooting at hunger") (Anquandah, 1982:19). In the mid-seventeenth century A.D. the Director-General of the Dutch West Indian Company of the Gold Coast reported of the ancient Ayawaso area:

"The bad harvest again at Accra from which it is feared much will perish ... it appears that the traders were so improverished through the famine and not six marks gold a month has been received." (Jacobsen, 1640 to the Assembly).

Despite the relatively unfavourable environmental conditions, the underlying rock system (Togo Series) in the area made up of basically quartzite with smaller amounts of phyllites, schists, sandstone and shale produces fine clay deposits. Together with clay from termite-mounds that abound in the research area, these clay deposits provide the raw material base for potting. The local people have since ancient times, exploited these clay deposits to produce pottery some of which were exported to other parts of the western Accra Plains and the immediate forest hinterland. A comparative analysis of the excavated pottery from the Okai Koi Hill (Ayawaso) and modern pottery from the Densu Valley settlements of the study area shows that out of the twelve (12) pottery functional types found in present-day Ga ethnography, at least nine (9) were in production during the sixteenth and seventeenth centuries. These include the following ceramic types:

- (i) Dido - for storing domestic water.
- (ii) Tsumli gbe - for storing drinking water.
- (iii) Fanyaa gbe - water conveyance pot.
- (iv) Ka - eating bowls.
- (v) Tsofa kukwei - for pharmaceutical preparations.
- (vi) Wonu kukwei - for preparation of soups.
- (vii) Saasen - palm-wine pots.
- (viii) Ntaaso - for steaming maize flour.
- (ix) Kulo - ritual pots.

This pottery designated Okai Koi Ware has not only been found at other early Ga sites like Korle Gonno, Wodoku, Oklu, Opa, Ajenkotoku and Abochiman but also at Nyanaoase, the capital of the Akan-speaking Akwamu (Ozanne, 1962a :63; Anquandah, 1982:122). Archaeology has confirmed that pottery made in the ancient Ayawaso area was not distributed to Ga markets alone but also to neighbouring ethnic communities perhaps through trade.

Evidence from oral traditions, written European records and archaeology indicate that the ancient Ayawaso area was linked first to their local neighbours and second to the wider world through trade. Oral traditions collected from modern Ayawaso indicated that ancient Ayawaso was an important market centre. The elderly people of modern Ayawaso pointed out one of the suburbs of ancient Ayawaso as the Market Place. This claim is yet to be tested archaeologically. However, the archaeological data obtained from Okai Koi Hill, provided evidence that point towards internal trade. Stone beads made of ox-blood or dark-brown bauxite ore and pottery designated X-ware (which is different in style and technology from the locally-made Okai Koi Ware) were among the archaeological finds. Ga traditions have it that the ^{Ga} obtained these bauxite ore

beads from their Akan-speaking Akyem neighbours. Today, the Ga wear bauxite ore beads which they call Akyemte (meaning "Akyem stone"). Mr. Arthur Peters (Geology Department, University of Ghana, Legon), confirmed that the nearest source of bauxite ore to the research area is the Akyem area (personal communication). The pottery, designated X-ware was different in shape, form, technology and decoration from the locally-made Okai Koi Ware. The presence of X-ware at Ayawaso could be attributed to some form of exchange. In return, the ancient Ga may have provided their neighbours, especially those in the interior forest regions, with smoked fish, salt, cattle and pottery.

The seventeenth century A.D. was the high water mark in Ga history. It was a period that witnessed an increase in trade which made the ancient Ayawaso society prosperous and powerful. The nature of the Ayawaso society during this period is reflected in the archaeological materials recovered from the middle and upper levels of the excavated mound. Exotic goods like European smoking pipes, various glazed and unglazed earthen wares and glass beads in addition to local materials like pottery, domesticated and wild animal bones, shells of land snail and fresh water molluscs, stone beads, smoking pipes, iron objects and intricately designed ivory objects all attest to a prosperous society.

The prosperity and growth of the ancient Ayawaso society could be explained in terms of the development of the coastal overseas trade. During this period, the Dutch, English, and Danes gained footholds on the Accra coastland and built forts and lodges. The scramble to build forts and lodges for trade by these major European

nations on the Accra coast indicates the importance of the Ayawaso area as a lucrative trading centre. The Accra coast supplied the various European factors with gold, ivory and slaves. In return, the local peoples received European manufactured goods such as flint guns, various knives, clothes, alcoholic drinks, copper/brass materials and iron bars. The Accra area was referred to in early European written records as "where one finds the best gold" (de Marees, 1602:43; Brun, 1624:34-35).

The prosperity of the Ga kingdom depended on how best this coastal trade could be controlled. To this effect the kings of ancient Ayawaso, instituted measures to control the trade. Whilst before the seventeenth century A.D, traders from the inland regions who brought gold and ivory were allowed to trade with the Europeans on the coast (Little Accra) and the Ga acted as interpreters and middlemen in these transactions, by the middle of the seventeenth century A.D., this policy had been changed. This change in policy is well described by Olfert Dapper, who visited the Accra coast in the seventeenth century A.D. He noted that:

"The king of Akra (Accra) suffers none of Aquemboe and Aquimera to come through his country and trade with the whites, but reserves that freedom to his own subjects only, who carry the wares bought from the Europeans to Abonce and exchange them there with great profit" (Dapper, 1670:435).

Abonce, referred to in early European records as A.B.C or Abonce was an inland Ga market town located at two hours journey behind ancient Ayawaso. Here, the Ga exchanged European goods such

as guns, knives, glass beads, drinks, copper/brass basins, iron-bars and locally produced Ga goods like salt and smoked fish for gold, ivory and slaves with the Akan traders. By so doing, the Ga were able to control the coastal trade and levy taxes on transactions. The market at Abonse, according to Ga oral traditions, was well organised and the king's representative was charged with the responsibility of regulating prices and levying taxes on traded goods.

The factors that contributed to the growth and prosperity of the ancient Ayawaso society are not far to seek.

The environment of the Ayawaso area presents different conditions and a vast array of resources. The coastal scrub and grassland vegetation contains numerous game and plants that are of nutritional and medicinal value. Game such as grass-cutters, giant rats, partridges and many more abound in the area. Numerous plants like the oil palm, baobab, coconut tree, pawpaw, Tulinum triangularis and the West African dwarf mango occur naturally in the area. The rainfall in the area even though meagre and the soils are not all that rich in nutrients, yet they support the cultivation of crops like yams, , cow-pea, onion, pepper and garden-eggs. The underlying rock material of the area is made up of fine clay deposits and laterite which provide good raw materials for potting and iron-working. These provided the basis for growth.

Another key factor in the growth and prosperity of the ancient Ayawaso society is the existence of a long tradition of nutritional and medical practices. Ethnographic studies revealed that the ordinary Ga knows herbs that could be used to treat environment-

linked diseases such as malaria, fever and worm infestations as well as obstetrical issues. The Ga exploit various fruits, plant leaves, mushrooms and molluscs that abound naturally in their environment as food. Oil obtained from the palm nut is exploited in various combinations in Ga diet. Modern Ga potters produce special pots for brewing herbal medicines. These pots are called Tsofa Kukwei and Likoliko. Quite a large sample (5.9%) of the excavated pottery was recognised as Tsofa kukwei (Table 17). The presence of this special pot for brewing herbal medicine in the archaeological materials attests to traditional medical practice by the ancient Ayawaso people. One way in which modern Ga attempt to promote and maintain community health is by the keeping of community refuse dumps away from settlements. The numerous refuse mounds that mark the ancient Ayawaso settlement could have come about as a result of the concern of the ancient Ayawaso people for community sanitation and health. The traditional practices of nutrition and medicine probably helped to reduce mortality and at the same time promote longevity.

The strategic location of ancient Ayawaso played a major role in the growth and prosperity of the society. Located partly on a hill close to a major gap (the Ofankor Gap) and the Nsaki Valley, the ancient Ayawaso settlement was strategically placed. The Ofankor Gap and the Nsaki Valley separate the southern limits of the Akuapem Highlands from the Coastal Plains and they would have served as ancient trade routes for the various ethnic groups which lived in the Coastal Plains and those in the interior forest regions. The control of such major trade routes would have brought prestige, wealth and power to the ancient Ayawaso people.

DECLINE OF THE ANCIENT AYAWASO AREA

The decline of the ancient Ayawaso area was due to the imperial policy of the Akwamu people (Wilks, 1957:107; 1971:368; Ozanne 1962:53). The Akwamu were the northern neighbours of the Ga who lived on the Nyanao Hill, a few kilometers north of Ayawaso. By mid-seventeenth century A.D., the Akwamu had managed to control part of the hinterland gold trade (Wilks, 1971:367). The trade policy of the king of ancient Ayawaso which restricted non-Ga traders to the inland market of Abonse did not seem to promote Akwamu interest.

The opportunity to break the control of the Ga over the coastal overseas trade came when the Ga king, Okai Koi circumcised an Akwamu prince Odei, who was in the court of the Ga king. According to Reindorf, the king was tricked into this by his councillors led by Nikoi Olai to foment trouble between the Ga and Akwamu in revenge for the murder of Nikoi Olai's son by one of the king's sons (Reindorf, 1960:32). The conspirators promised the Akwamu that in case they attacked they would not raise any opposition. When war broke out in 1677, the Ga army, it is said, shot their bullets into the air. The Akwamu defeated the Ga at the Battle of Nyantrebi near Ofankor. King Okai Koi died during the battle.

According to Ga traditions, Ga society was hit by crisis after the death of Okai Koi. A number of pretenders to the throne each backed by armed supporters fought against each other. In the wake of this came Akwamu oppression. The Ga fled to seek refuge under the forts of the various European factors.

Internal political weakness was another factor that led to the decline of the ancient Ayawaso area. The conspiracy hatched by the king's councillors spearheaded by Nikoi Olai is a clear indication that loyalty to the political authority had become weak. The political crisis that hit the Ayawaso society is another manifestation of the internal weakness. Instead of the Ga turning to ward off the Akwamu invasions, they were engrossed in a protracted power struggle that culminated in the final defeat of the whole area in 1680.

EFFECTS OF EXTERNAL CONTACT ON THE ANCIENT AYAWASO SOCIETY

Writing in his book, Rediscovering Ghana's Past (1982:126), Professor James Anquandah stated that:

"Great states and civilizations hardly ever grow in isolation. They give and take. They make discoveries of their own. They learn and adopt from others. They adapt what is adopted".

In a sense, this is true of the ancient Ayawaso society. The ancient Ga, had external contacts through trade with their local neighbours as well as the wider world through the various European trade factors who visited the Accra coast during the sixteenth and seventeenth centuries. The contacts led to the introduction of external ideas and materials into Ga land.

The multi-disciplinary approach to this study has provided some glimpses into the past Ayawaso society and as a result the effects of external contact on the ancient Ga can be determined to some extent.

One effect of the external contact especially the contact with European trade factors on the coast was perhaps ~~an~~ increase in population which may have contributed to urbanization and state formation in the Ayawaso area. Even though, it was not possible to determine the population of the Ayawaso society yet, the extent of the site (2.6 x 1.5km), the wide surface scatter of rubbish mounds and large quantities of archaeological materials, the presence of specialised workers like farmers, fishermen, potters, blacksmiths and traders and a dynastic secular authority, all indicate that the Ayawaso settlement was urbanised. Direct archaeological data related to state formation ~~were~~ not obtained. The present state of knowledge about state formation is provided by oral traditions and early European records. J.J. Sticker, an early seventeenth century European trade factor ~~in~~ the Gold Coast recorded that the territories of the King of Accra stretched to Latebi (Larteh) in the foothills of Akuapem Ranges and to Little Accra (on the coast), Labadi, Ningo and Small Bereku (Sticker, 1624-38 to the Assembly). Reindorf, a Ga historian, recorded that during the reign of king Okai Koi, the Akwamus, Akuapems, and Obutus were under the rule of Great Accra (Reindorf, 1960:30). The areas Sticker and Reindorf described as falling under the rule of the king of Accra encompassed three different ethnic groups namely the Ga, the Guan-speaking Larteh and Obutu and the Fante, Akwamu and Akuapem who speak Akan. That Guan and Akan-speaking peoples were listed as vassals of Great Accra is an indication that there was a Ga state or kingdom made up of different ethnic groups.

The coastal overseas trade that linked the ancient Ayawaso area with the outside world gave rise to a new class of people in Ga society. Gold, slaves and ivory were among the principal commodities supplied by interior traders through the Accra coast to European traders. In return, the local peoples also received commodities such as cloth, various iron knives, flint guns, gun powder and alcoholic drinks. The Ga participated in this trade as middlemen who acted as brokers, interpreters or canoe-men. Ga oral traditions mention the names of some prominent Ga merchants who founded quarters (akutsei) close to the European forts after the fall of ancient Ayawaso. Those mentioned include, Saku Olenge, Oshamra, Ayikai Osiahene, Osu Kwatei, Anyama Seni, Amantiele Akele, and Tete Kpeshi (Reindorf, 1960:38).

Smoking was another novelty brought about by the external contact on the ancient Ayawaso society. All the smoking pipes recovered from the excavation occurred in seventeenth century A.D. deposits with European imports. The sudden appearance of smoking pipes, the earliest ^{of} which are similar to the European briar (Ozanne, 1962a:54) probably suggest that smoking was introduced to the Accra area by the Europeans. An issue that has generated discussion among scholars but is still unresolved is whether these locally-made smoking pipes were used for smoking tobacco (New World tobacco) or some local weed (See Shaw, 1961; Ozanne, 1962a; Afeku, 1976). It appears the introduction of smoking to the Accra area was independent of its introduction to other parts of Africa (Ozanne, 1962a:60). In the interior parts of this country, it has been suggested that smoking and tobacco may have been introduced from the

Middle Niger area (Afeku, 1976:36). In both cases no archaeological proof has been provided. Of course, it is difficult to obtain such an organic matter as tobacco or any local weed suspected to have been smoked from the archaeological contexts. However, if smoking was introduced into the Accra area by Europeans and the local people adopted it resulting in the **manufacture** of locally-made clay pipes, then it would not be unreasonable to assume that once the local people acquired the smoking habit, the European traders included tobacco in their merchandise or introduced the tobacco plant itself for cultivation in the Accra area. The introduction and cultivation of the plant could have been restricted initially to the so-called kitchen gardens established by the Europeans to cultivate both local and temperate food crops. Perhaps, its initial cultivation was meant to meet the needs of the Europeans but gained widespread cultivation because of the popularity of smoking among the local people. On the other hand, the possibility that the local people smoked a local weed cannot be ruled out.

Another effect of the external contact on the ancient Ayawaso society was the building of forts on the Accra coast. It has been estimated that two-thirds of the number of European forts and castles built in West Africa were located on the coast of Ghana. The Accra coast had three forts which are still extant. The Accra coast attracted European traders because gold brought here by traders from the inland Akan regions was said to be the best on the Gold Coast. The first attempt by a European power to build a trade-post on the Accra coast was made by the Portuguese in 1578. This trade-post was however, attacked and its fortifications razed

down by the people of Accra perhaps due to some mischief on the part of the **Portuguese** (Vogt, 1979:126; Wilks, 1971:366). The mid-seventeenth century A.D. witnessed an increase in trade along the Accra coast. This is evidenced in the scramble by four major European nations (the Dutch, Danes, Portuguese, and English) to build forts on the Accra coast. By signing agreements with the king of Great Accra, the Dutch erected a lodge in 1642 at Little Accra and later converted it into an armed fortress called Fort Crevecouer. The Danes also constructed Fort Christianborg in 1661 whilst the English built James Fort in 1673. The building of these trade-posts brought wealth and prestige to the kingdom of Great Accra. The Ga sold the pieces of land on which the Europeans built their trade-posts and collected monthly rents from them in recognition of the king's sovereignty over the land on which they occupied. The English, for instance, paid 200 oz of gold to the king of Accra for the land on which they built their fort in 1673 and every month paid 2 oz. in recognition of the king's sovereignty. The Danes also paid 50 benda of gold (3,200 florins or £400) to king Okai Koi in August, 1661 for a piece of land on which the Danish fort Christianborg was built (Norregard, 1966:43). These trade-posts served as depots for both European imports and the locally produced commodities. Decisions that were taken at these places affected the trend of development of local commerce. The big **cannon** guns that stood at vantage points in these structures served as security to the local people in case of ethnic attacks. The Ga, sought refuge under the protection of these trade-posts when the Akwamu hostilities broke out between 1677-80. Even today, the

influence of these buildings is felt all over the country. Christianborg Castle has served as the seat of governments in this nation. Decisions governing major issues like law and order, the economy of the country and many more are made by governments from here. Ussher Fort (formerly called Fort Crevecouer) now serves as the prison premises of the Ghana Prisons.

The Ga of the research area were influenced by their local neighbours. The influence is evident in the modern Ga political system and the Ga language.

The present Ga political system in which authority is vested in a chief was adopted from their Akan neighbours. Originally, Ga traditions have it that their political system was theocratic where authority was entrusted to traditional priests (Wulomei). The Ga adopted certain socio-cultural practices when they adopted the Akan political system. For instance, the stool which is a symbol of office and related paraphernalia like state swords, linguist staffs, native sandals and gold-studded headgear were adopted. When the Ga adopted this Akan political system, they adapted it to suit their cultural system. For instance Ga kinship system is patrilineal whilst the Akan system is matrilineal. In matters of inheritance, the Akan inherit their uncles through mothers but succession to an office or inheritance in Ga society is through patrilineal blood ties. These systems are therefore opposite. In order not to erode one of the major props on which the Ga society is built, the Ga adapted the Akan political system to suit their culture by maintaining succession to the various political offices through patrilineal blood ties.

Another local influence on the ancient Ayawaso society is evident in the modern Ga language. Linguistic study by linguist Kropp Dakubu of the Institute of African Studies, University of Ghana, shows that the Ga language has been influenced heavily by the languages of their surrounding neighbours. For instance her research indicated that the southern Guan dialects (Larteh and Awutu) spoken in the Akuapem and Winneba areas respectively, have influenced the Ga language. Certain Ga words such as obishi (rat), trema (cowry), obo (to fill) and kotamo (to fold) are southern Guan, which were borrowed by the Ga. Also information gathered during the field studies on Ga oral traditions and ethnography for this thesis revealed that the Ga language has been influenced by the Akan dialects spoken in the northern littoral of Ga land. For instance the influence is observable in the vocabulary related to institutions of authority, subsistence economy and basic human concepts (see Chapter Three page 52). These linguistic influences may have come about as a result of trade and other cultural contacts between the Ga and their neighbours.

SUMMARY AND CONCLUSION

This research drawing from relevant sources and combining with data obtained from archaeological contexts has demonstrated from the foregoing discussions that:

The beginnings of the Ayawaso settlement go back to the sixteenth century A.D. This shows that the foundations of the settlement go back a century earlier than the seventeenth century A.D. date claimed by previous research. Evidence from the sixteenth century contexts reveal that the Ayawaso society thrived on a mixed

economy based on local resources. The absence of European trade goods in the sixteenth century A.D. contexts is perhaps an indication that the settlement was founded before the Europeans arrived on the coast of Accra.

The excavation did not reveal any pre-Iron Age occupation. This however, does not imply that an occupation pre-dating the Iron Age era may not exist in the Ayawaso area. The range of archaeological materials obtained and the early sixteenth century A.D. to late seventeenth century A.D. dates obtained for the site could not be used to shed light on the origins of the Ga. However, when archaeological evidence obtained from the Kintampo Complex settlements at Christian's Village and the Middle Iron Age settlements at Weija, Gbegbe and Ormsby Road is considered then, the emerging picture seems to be that the external origins as claimed by Ga traditions cannot be acceptable.

Two types of pottery were recognised by the research. A small group of pottery with hard fabric, a limited range of vessels with dominant decorative patterns of either circumferential grooves or multiple grooved arcs on single channelling designated X-ware is believed to have been introduced to the site may be through trade. The other pottery type is the dominant group composed of a wide range of vessel variations. Jars are large and angular whilst bowls range from shallow to deep forms usually smudged to shiny black. Vessels of this group are well-fired and decorated with circumferential grooves. This group is called Okai Koi ware. A comparative analysis of modern pottery from the research area and the excavated Okai Koi ware indicated that out of twelve (12)

pottery functional types found in present-day Ga ethnography nine (9) were in production during the ancient times. The functional roles of some of the Okai Koi ware were recognised through this comparative study.

The ancient Ayawaso society was a complex one. The Ayawaso settlement was very large extending approximately 2.6 x 1.5km. The population of this settlement could have been large indeed. There were specialised workers who were engaged in different occupations such as farming, potting, blacksmithing, hunting, palmwine tapping, trading and fishing. Law and order was maintained through a centralised political system as revealed by Ga traditions.

Trade, both internal and external, played a vital role in the growth and prosperity of the ancient Ayawaso settlement. The Ga, through the internal trade with their local neighbours, received goods like stone beads, pottery and perhaps certain forest commodities. In exchange the Ga may have given to their neighbours goods like salt, cattle and smoked fish.

Another key factor that played a role in the growth and prosperity of the Ayawaso settlement was the long tradition of traditional nutrition and herbal medical practice attested in the production of special pots for brewing various herbal medicines called Tsofa kukwei and Likoliko. The Ga also have a sound nutritional practice of eating various leaves as pot herbs and also exploiting edible natural fruits as food sources. One specific plant Tulinum triangularis (blofo shwei) which is eaten as a potherb by the rural Ga is said to have high protein and mineral contents

(Appiah-Kubi, 1986:36). The indigenous practices of herbal medicine and nutrition could have played an important role in reducing mortality rate and at the same time promoting longevity.

Through trade and culture contacts the Ga society was influenced. Out of these contacts the Ga adopted certain cultural practices from their neighbours. For instance, smoking which was probably introduced by European traders was picked up culminating in the manufacture of locally made smoking pipes. Also the Ga language by current research is known to have been influenced by the languages of the Ga neighbours.

The foregoing presentation has demonstrated the use of ethnography, written records, oral traditions and archaeology to throw light on the nature of the ancient Ayawaso settlement and the factors that helped in its growth. However, there is much left to be done, the other suburbs mentioned by oral traditions must be tested archaeologically so that more light can be shed on the ~~the~~ history of the Ga during the sixteenth and seventeenth centuries.

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TABLE 9: STRATIGRAPHICAL DISTRIBUTION OF
ARCHAEOLOGICAL FINDS UNIT M18

LEVELS	POTT-ERY	PEDAS-TALLED BASES	SMOKING-PIPE		METAL WORKING					IVORY WORKED			STONE OBJECT		FAUNA	MOLLUSCS		TERRA-COTTA HEAD
			LOCAL	IMPOR-TED	IRON	COPPER/BRASS	SLAG	CRUCI-BLES	TUVE-RE	OBJECTS	BONE	BEADS	RUB-BING STONE	GROO-VED STONE		LAND SNAIL	MARINE, LAGOON, etc.	
1	200	12	5	2			3						2		188		10	
2	298	25	8		4		6				1		4		112	2	31	
3	816	49	9	1	4		10						5	4	620	4	28	
4	660	40	6		3	2	5			2				1	520	2	24	
5	518	45	5		4		15			1			7		415	2	30	
6	618	50	12		5	2	18	4			1		8	2	679	3	33	
7	400	22	7		3		4			3			9		79	1	26	
8	310	24				3	5	2			1		7		129	4	30	
9	412	36	6		2								8		126	2	18	
10	512	30	11			2	20	5					5	2	198	2	18	
11	470	31	7		2		18			4			5	4	238	2	21	
12	390	20	4		4	1		3					6	8	34		20	
13	240	15			3		4			2	1		4		83	2	30	
14	166	13			2	2	3						6		45		16	
15	198	8			4		8	4		2			4		76	3	16	
16	252	15					4	2					7		269	1	15	
17	332	19			2		2					1	5		82	2	10	
18	276	18			4		10			3			6	3	169		15	1
19	356	17			4		20								85	4	12	
20	276	20			2								3		74	1	9	
21	176	17			2		16						1		61	2	6	
22	258	10			3		8			5	1				52	1	9	
23	304	18			4		11						3		58	2	8	
24	188	16			5		5			3			1		17	2	8	
25	200	18			6		4						4		49	1	7	
26	194	15			3		20								30			
27	88	7					6						2					
TOTAL	9,108	600	80	3	75	12	225	20	25	5	1	90	45	5	4,800	45	450	1

TABLE 10: STRATIGRAPHICAL DISTRIBUTION OF
ARCHAEOLOGICAL FINDS - UNIT E139

Level	Pottery	Iron Objects	Tuyere Parts	Slag	Stone balls	Molluscs	Fauna
1	34	-	-	3	-	2	-
2	79	5	-	6	1	8	-
3	195	3	1	8	-	6	1
4	45	-	3	4	1	4	3
5	39	2	-	-	1	-	-
6	42	-	2	10	-	2	2
7	30	-	3	14	-	-	3
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
TOTAL	464	10	9	45	3	22	7

TABLE 11: STRATIGRAPHICAL DISTRIBUTION OF
ARCHAEOLOGICAL FINDS - UNIT D142

Level	Pottery	Iron Objects	Tuyere Parts	Slag	Stone balls	Molluscs	Fauna
1	40	-	-	6	-	-	-
2	200	2	-	3	-	5	2
3	352	6	3	5	-	4	10
4	180	-	2	7	2	6	6
5	85	3	-	4	1	3	-
6	42	1	1	2	-	-	2
7	23	3	-	3	1	2	1
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
TOTAL	922	15	6	30	4	20	21

TABLE 12: STRATIGRAPHICAL DISTRIBUTION OF
ARCHAEOLOGICAL FINDS - UNIT VI27

Level	Pottery	Iron Objects	Tuyere Parts	Slag	Stone balls	Molluscs	Fauna
1	160	-	-	3	-	2	2
2	520	3	3	5	3	8	8
3	436	2	3	8	-	6	6
4	58	3	-	4	-	3	2
5	32	1	2	1	2	2	1
6	35	1	-	2	-	-	1
7	18	-	-	2	-	2	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
TOTAL	1259	10	8	25	5	23	20

TABLE 13: FREQUENCY OF VESSEL PARTS ACCORDING TO SURFACE
TREATMENT - UNIT MI18 (OKAI KOI WARE)

Vessel Part	Smudged		Pink Slip		Red Slip		Plain		TOTAL
	Dec	Undec	Dec	Undec	Dec	Undec	Dec	Undec	
Rims with neck	476	8	176	3	68	8	682	28	1449
Rims with carination	263	86	89	6	31	5	29	16	525
Plain Rims with body	133	180	36	1	29	11	256	97	743
Other Rims	135	82	84	24	45	15	63	13	461
Body sherds	98	1706	34	992	18	56	101	2325	5330
Bases	240	179	35	59	24	20	17	26	600

TABLE 14: FREQUENCY OF VESSEL PARTS ACCORDING TO SURFACE TREATMENT - UNIT D142 (OKAI KOI WARE)

Vessel Part	Smudged		Pink Slip		Red Slip		Plain		TOTAL
	Dec	Undec	Dec	Undec	Dec	Undec	Dec	Undec	
Rims with neck	21	3	19	3	10	2	17	-	75
Rims with carination	6	3	7	-	3	-	10	-	29
Plain Rims with body	11	3	3	4	-	2	4	2	29
Other Rims	10	4	7	-	4	2	14	4	55
Body sherds	30	161	36	145	3	31	26	242	674
Bases	10	13	7	7	3	2	5	13	60

TABLE 15: FREQUENCY OF VESSEL PARTS ACCORDING TO SURFACE TREATMENT - UNIT V127 (OKAI KOI WARE)

Vessel Part	Smudged		Pink Slip		Red Slip		Plain		TOTAL
	Dec	Undec	Dec	Undec	Dec	Undec	Dec	Undec	
Rims with neck	54	17	8	-	-	-	103	6	188
Rims with carination	27	10	4	1	-	-	11	1	54
Plain Rims with body	13	20	13	1	-	-	25	8	80
Other Rims	12	15	45	9	-	-	9	-	90
Body sherds	62	238	54	169	-	-	86	378	987
Bases	47	12	2	2	-	-	25	14	102

TABLE 18: COMPARATIVE FREQUENCIES OF OKAI KOI WARE JAR FORMS
AS % OF THE TOTAL NUMBER OF SHERDS FROM ALL UNITS
ADMITTED TO CLASSIFICATION

UNITS		A	B	C	D	E	F	G	H	I	J	
M118	NO	70	101	60	150	217	153	76	163	24	7	
	%	1.7	2.5	1.4	3.7	5.3	3.7	1.8	4.0	0.6	0.2	
D142	NO	2	5	4	9	-	8	1	22	-	-	
	%	0.04	0.1	0.1	0.3	-	0.2	0.02	0.6	-	-	
E139	NO	7	2	8	5	-	14	2	41			
	%	0.2	0.04	0.3	0.1	-	0.3	0.04	1.0	-	-	
V127	NO	11	20	21	17	24	23	-	15	-	-	
	%	0.3	0.5	0.5	0.5	0.6	0.6	-	0.4	-	-	
TOTAL	NO	90	128	93	181	241	198	79	241	24	7	1282
	%	2.2	3.1	2.3	4.6	5.9	4.9	1.9	6.0	0.6	0.2	31.7%

TABLE 19: COMPARATIVE FREQUENCIES OF OKAI KOI WARE ^{BOWL} FORMS
AS % OF THE TOTAL NUMBER OF SHERDS FROM ALL UNITS
ADMITTED TO CLASSIFICATION

UNITS		A	B	C	D	E	F	G	
M118	NO	491	183	163	243	406	22	30	
	%	12.1	4.5	4.0	6.0	10.0	0.5	0.7	
D142	NO	25	2	1	18	2	3	-	
	%	0.6	0.04	0.02	0.4	0.04	0.07	-	
E139	NO	30	3	3	14	3	5	-	
	%	0.7	0.07	0.07	0.3	0.07	0.1	-	
V127	NO	60	19	21	41	39	5	-	
	%	1.5	0.5	0.5	1.0	1.0	0.1	-	
TOTAL	NO	606	207	188	316	450	35	30	1832
	%	14.9	5.1	4.6	7.8	11.3	0.8	0.7	45.2%

TABLE 20: STRATIGRAPHICAL DISTRIBUTION OF VESSEL
FORMS (OKAI KOI WARE) UNIT M118

LEVELS	JAR FORMS									
	A	B	C	D	E	F	G	H	I	J
1	-	3	2	2	5	4	1	6	3	-
2	1	3	1	4	4	-	-	3	-	-
3	5	8	4	13	28	5	7	15	1	1
4	3	7	7	10	15	14	8	11	-	-
5	-	7	-	7	14	4	8	10	-	1
6	3	9	2	9	23	12	8	7	-	-
7	-	2	1	8	12	3	4	8	2	-
8	-	-	2	9	3	2	2	-	-	-
9	2	6	1	5	10	8	4	5	-	-
10	1	6	-	7	10	8	5	10	-	-
11	3	11	7	4	8	6	3	4	1	-
12	4	4	4	6	8	4	1	3	-	-
13	-	4	3	1	5	2	1	3	-	-
14	1	3	1	3	1	2	-	-	2	2
15	-	3	2	2	6	-	2	2	-	-
16	6	6	-	7	4	3	1	6	1	-
17	5	4	-	4	7	8	4	7	-	-
18	4	3	1	3	7	4	4	6	-	-
19	7	-	3	3	7	14	1	10	-	-
20	6	3	4	7	10	8	1	7	2	1
21	1	1	2	3	4	5	1	4	-	-
22	4	-	3	7	5	9	-	6	2	-
23	10	4	3	10	10	13	6	8	2	-
24	3	2	6	5	5	4	3	3	2	-
25	4	2	1	5	2	5	1	9	5	1
26	-	-	-	3	3	5	-	6	1	-
27	-	-	-	-	-	1	-	3	-	-
TOTAL	70	101	60	150	217	153	176	163	24	7

TABLE 21: STRATIGRAPHICAL DISTRIBUTION OF VESSEL FORMS
(OKAI KOI WARE) UNIT M18

LEVELS	BOWL FORMS						
	A	B	C	D	E	F	G
1	12	3	5	14	15	2	3
2	13	3	1	7	18	-	2
3	50	12	17	44	56	-	2
4	45	19	11	27	32	4	2
5	29	9	17	24	31	2	-
6	41	8	14	22	31	2	2
7	23	11	5	12	24	3	3
8	10	9	4	8	19	-	-
9	27	7	7	9	28	1	1
10	19	7	11	7	22	-	-
11	25	10	13	13	24	2	2
12	17	4	11	3	18	-	1
13	15	5	4	5	13	1	-
14	7	2	7	4	6	-	1
15	8	5	4	4	11	2	1
16	9	13	6	7	7	-	-
17	14	12	13	7	6	-	2
18	8	10	6	5	6	-	-
19	22	12	7	4	3	-	1
20	14	6	-	2	5	1	2
21	14	3	-	1	2	-	2
22	24	4	-	-	6	1	-
23	11	2	-	4	6	-	1
24	19	5	-	1	7	-	-
25	11	1	-	3	3	1	2
26	-	1	-	3	4	-	-
27	4	-	-	3	3	-	-
TOTAL	491	183	163	243	406	22	30

TABLE 22: STRATIGRAPHICAL DISTRIBUTION OF VESSEL FORMS (OKAI KOI WARE) UNIT V12/

LEVELS	JAR FORMS									
	A	B	C	D	E	F	G	H	I	J
1	1	2	1	2	1	-	-	1	-	-
2	6	12	9	9	10	13	-	8	-	-
3	2	5	6	5	10	5	-	4	-	-
4	2	1	1	1	3	5	-	-	-	-
5	-	-	3	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	1	-	-
7	-	-	1	-	-	-	-	1	-	-
8	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-
TOTAL	11	20	21	17	24	23	-	15	-	-

LEVELS	BOWL FORMS						
	A	B	C	D	E	F	G
1	6	2	2	10	10	2	-
2	30	5	8	14	14	1	-
3	18	12	8	14	14	-	-
4	3	-	2	3	3	2	-
5	3	-	1	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
TOTAL	60	19	21	41	39	5	-

TABLE 23: STRATIGRAPHICAL DISTRIBUTION OF VESSEL FORMS (OKAI KOI WARE) UNIT D142

LEVELS	JAR FORMS									
	A	B	C	D	E	F	G	H	I	J
1	1	1	-	1	-	-	-	-	-	-
2	1	4	3	3	-	5	1	2	-	-
3	-	-	1	2	-	1	-	4	-	-
4	-	-	-	-	-	1	-	-	-	-
5	-	-	-	1	-	1	-	2	-	-
6	-	-	-	2	-	-	-	6	-	-
7	-	-	1	-	-	-	-	8	-	-
8	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-
TOTAL	2	5	4	9	-	8	1	22	-	-

LEVELS	BOWL FORMS						
	A	B	C	D	E	F	G
1	-	-	-	2	-	-	-
2	6	1	-	4	-	2	-
3	14	1	1	8	-	-	-
4	1	-	-	1	-	-	-
5	2	-	-	-	-	-	-
6	-	-	-	2	1	1	-
7	2	-	-	1	1	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
TOTAL	25	2	1	18	2	3	-

TABLE 24: STRATIGRAPHICAL DISTRIBUTION OF VESSEL FORMS (OKAI KOI WARE) UNIT E139

LEVELS	JAR FORMS									
	A	B	C	D	E	F	G	H	I	J
1	-	-	1	-	-	-	-	-	-	-
2	1	-	-	-	-	5	-	2	-	-
3	5	2	3	5	-	6	2	12	-	-
4	-	-	4	-	-	2	-	6	-	-
5	-	-	-	-	-	1	-	6	-	-
6	-	-	-	-	-	-	-	8	-	-
7	1	-	-	-	-	-	-	7	-	-
8	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-
TOTAL	7	2	8	5	-	14	2	41	-	-

LEVELS	BOWL FORMS						
	A	B	C	D	E	F	G
1	5	-	3	1	-	1	-
2	5	1	-	1	-	-	-
3	13	2	-	6	2	3	-
4	3	-	-	2	1	-	-
5	1	-	-	3	-	-	-
6	-	-	-	1	-	-	-
7	3	-	-	-	-	1	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
TOTAL	30	3	3	14	3	5	-

TABLE 25: STRATIGRAPHICAL DISTRIBUTION OF VESSEL
FORMS (X - WARE) M18

LEVELS	JAR FORMS			BOWL FORMS	
	A	B	C	A	B
1					
2					
3	2				
4					
5		1			2
6					
7				2	
8		1			
9	1		1		
10					
11				1	
12	1				
13					
14		2			1
15				1	
16	2				
17			1		
18			1		
19					
20	1				
21		1			
22	1				
23				1	
24					
25		1			
26	1				
27					
TOTAL	8	6	3	5	3

TABLE 26: FREQUENCY DISTRIBUTION OF MOLLUSCS AS
% OF THE TOTAL NUMBER OF EACH CLASSES
FROM UNIT M18

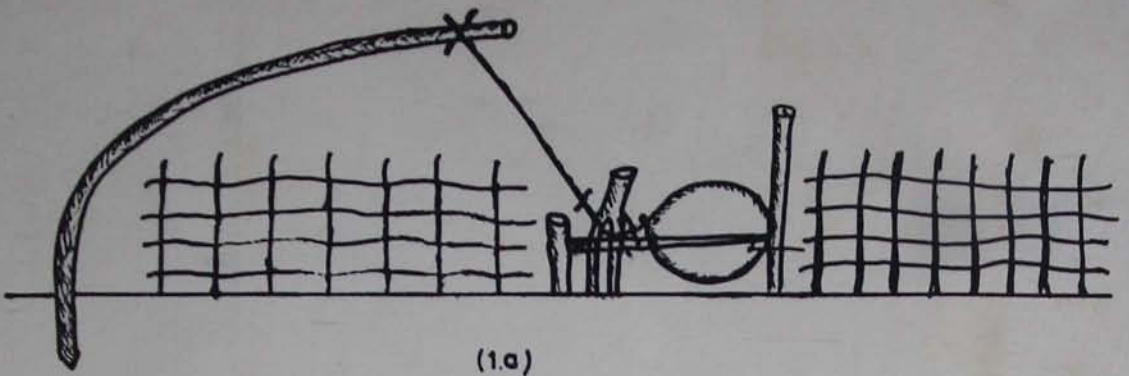
ECOLOGY	CLASS	BIOLOGICAL NAME	L E V E L	TOTAL	%
AQUATIC	Bivalvia	Arca senilis	1,2,3,5,6,7,8,9,10,11,12, 13,14,16,17,18,19,20,25	102	22.7
a)Marine	Gastropoda	Cassis testiculus	5, 6, 15, 17	10	2.2
b)Lagoon	Gastropoda	Olivancillaria hiatula	1, 2, 3, 4, 5, 6, 15	16	3.6
c)Estuarine	Gastropoda	Natica marochensis	1, 2, 4, 5, 6, 12	45	10
	Bivalvia	Arca geissei	1, 4, 5, 10, 13	13	2.9
	Gastropoda	Cypraea stercoraria	1, 2, 6, 8, 11	27	6
	Bivalvia	Donax acutangulus	2,4,6,7,8,9,10,11,12,13,18, 22,23,24	40	8.9
	Gastropoda	Tympanotus fuscata	1,2,3,4,5,6,7,8,9,10,13,18, 22,23	34	7.6
	Bivalvia	Cardium costatum	4,5,6,8,9,10,11,12,13,14, 18,25	28	6.2
	Bivalvia	Donax pulchellus	3, 5, 8, 19	15	3.3
	Gastropoda	Pachymelania aurita	4, 6, 11, 23	16	3.6
	Bivalvia	Pecten	1,2,3,4,5,6,8,9,12,13,18,20 21,23	74	16.4
	Bivalvia	Arca afra	4, 8, 13, 24	15	3.3
	Gastropoda	Thais haemastonia	2, 3, 8, 13, 19, 20	15	3.3
DRY LAND	Gastropoda	Achitana achitana	1,4,5,8,9,11,13,15,22,24,25	20	44.4
	Gastropoda	Archachitana ventricosa	1,3,6,7,10,11,13,15,16,17, 19,20,21,23,24	25	55.6

TABLE 27: DISTRIBUTION OF BEADS ACCORDING TO TYPES
AND STRATIGRAPHICAL LEVELS (UNIT M118)

TYPE	LEVEL	TOTAL	%
1a	9, 10	4	4.4
1b	5, 7, 9	7	7.8
1c	7, 9	5	5.6
2a	3, 5, 6, 9	6	6.7
2b	6, 7, 8	8	8.9
2c	2, 5, 8, 10	5	5.6
2d	6, 7, 8, 9	4	4.4
2e	2, 5, 8	6	6.7
2f	5, 6, 12	5	5.6
3a	3, 6, 7	4	4.4
3b	11, 12, 13	10	11.1
3c	3, 6, 11	8	8.9
3d	15, 17	3	3.3
3e	15, 16, 17	4	4.4
3f	10, 11, 16	5	5.6
3g	15, 17	3	3.3
3h	14, 16	3	3.3
TOTAL		90	100

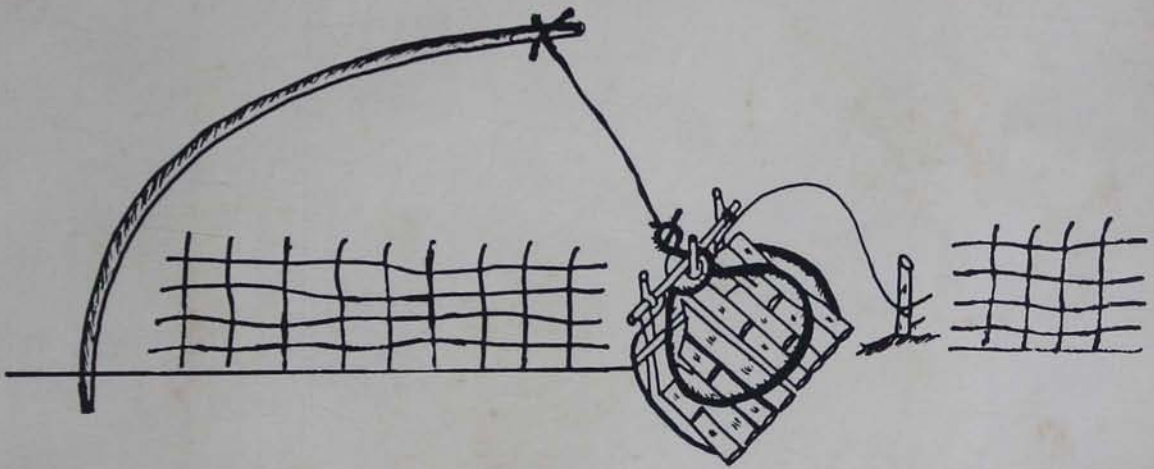
TABLE 28: STRATIGRAPHICAL DISTRIBUTION OF COMPLETE OR
NEAR COMPLETE LOCALLY-MADE SMOKING-PIPES
IN THE UPPER SECTION OF UNIT M18

LEVEL	TYPE I	TYPE IIa	TYPE IIb
1		1	3
2		1	1
3		2	1
4		4	
5		4	
6			
7	1	1	
8	3		
9	4		
10	5		
11	3		
12	2		
TOTAL	18	13	5



(1.a)

ASHA



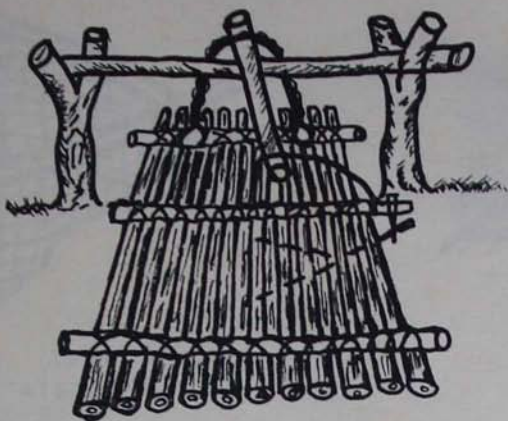
(1.b)

ASHWOO

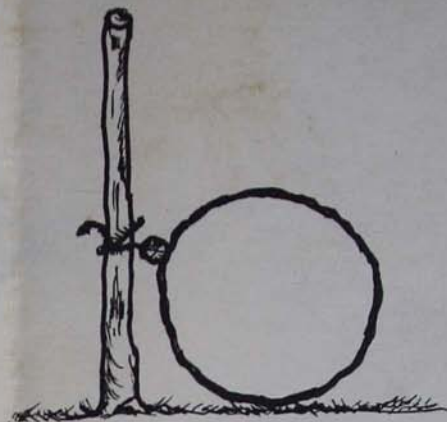
TENSION - SPRING TRAPS

FIG. 1

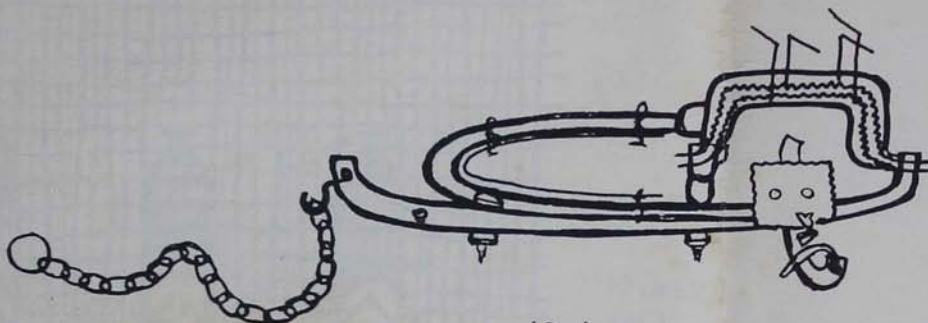
NON - TENSION SPRING TRAPS



(2.a)
AKPA/ANFCC



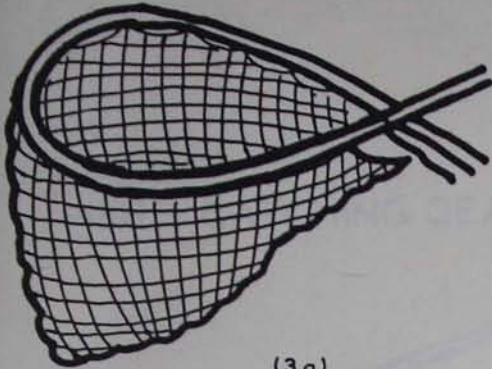
(2.b)
WQYA



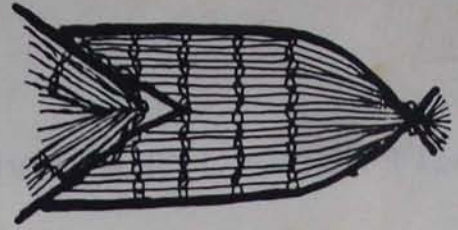
(2.c)
DZWAO

FIG. 2

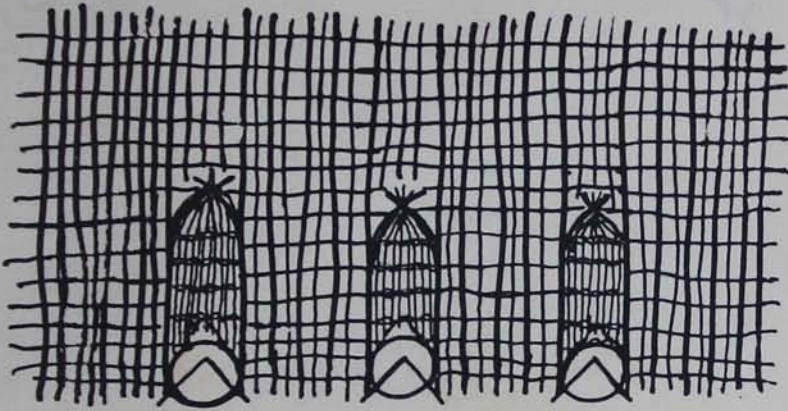
FISH-CATCHING GEAR IN RIVER AND LAGOON FISHING



(3.a)
ATSO



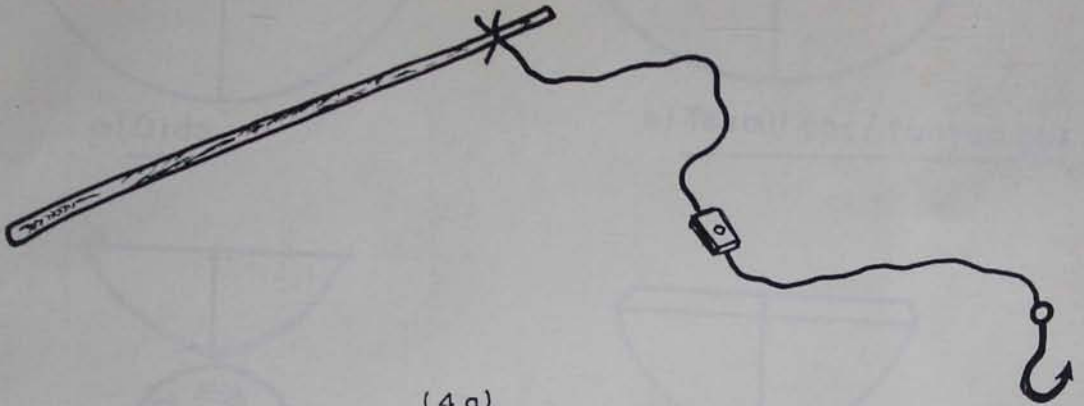
(3.b)
ATSE



(3.c)
APLA

FIG. 3

FISH - CATCHING GEAR IN RIVER AND LAGOON FISHING



(4 a)
KPON



(4 b)
KLUMO/SULE

FIG. 4

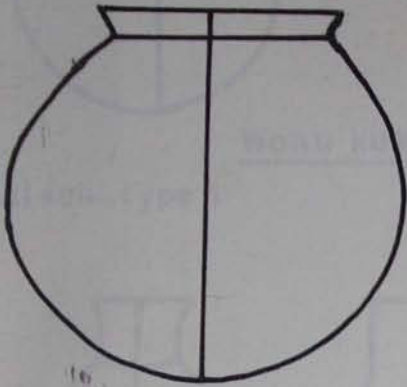
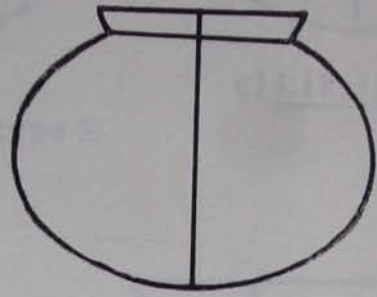
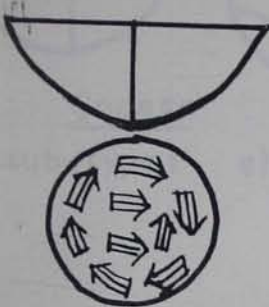
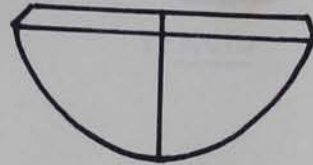
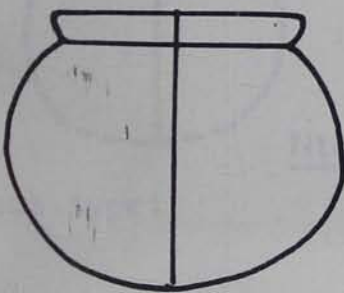
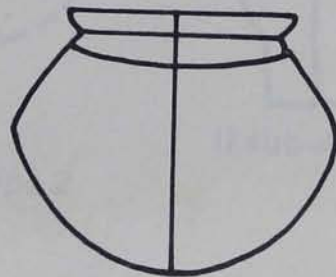
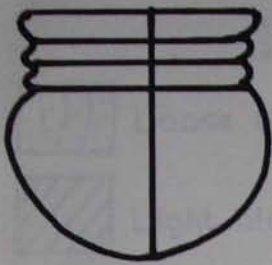
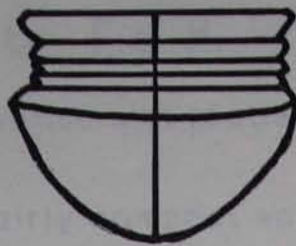
a) Didob) Tsumli gbε / fanyaa gbεc) Ka (apɔɔyiwa) sub-type 1d) Ka (sub-type 2)e) Afllata kukwɛif) Tsofa kukwɛi

FIG. 7: TRADITIONAL VESSEL FORMS

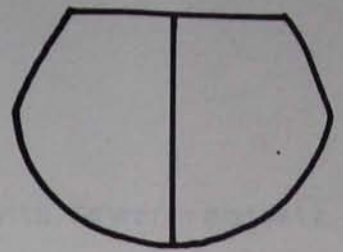


a) sub-type 1

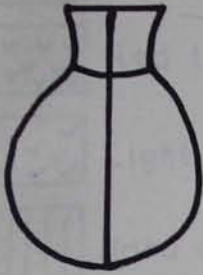


b) sub-type 2

Wonu kukwei

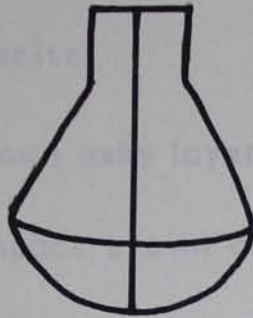


c) Likoliko

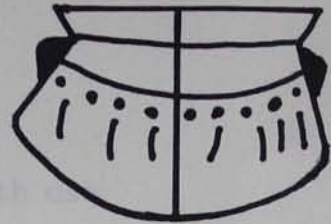


Saasɛn

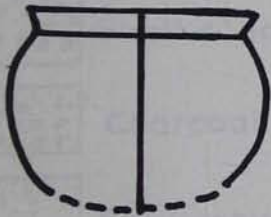
d) sub-type 1



e) sub-type 2

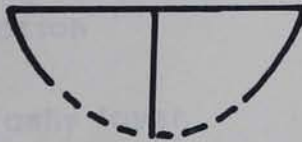


f) Kulo

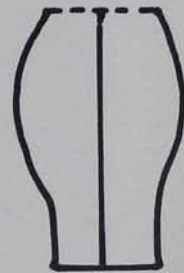


g) sub-type 1

Ntaaso

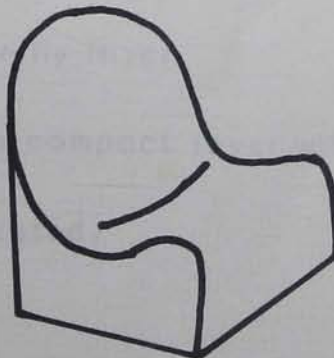


h) sub-type 2



Laate

i) sub-type 1

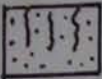

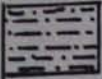

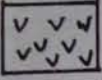
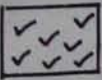
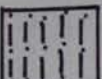

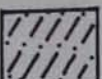

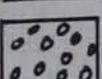

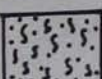
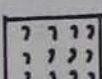
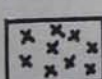
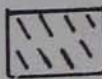



Laate

j) sub-type 2

FIG. 8: TRADITIONAL VESSEL FORMS,

Key to Fig. 9

-  Loose black humus with rootlets
-  Light black fairly compact sand with fewer rootlets
-  Brown ashy layer
-  Black ashy layer with charcoal
-  Red laterite
-  Light-brown ashy layer
-  Hard compact brown clay with ash
-  Red-brown loose laterite layer
-  Ashy layer with charcoal
-  Charcoal concentration
-  Shell concentration
-  Charcoal and ashy layer
-  Grey ashy layer
-  Dark brown compact layer with charcoal
-  Light brown gravelly layer
-  Yellowish-brown compact layer without finds
-  Sterile (unexcavated)

OKAI KOI HILL (AYAWASO)

UNIT M11B

SOUTH AND WEST WALLS

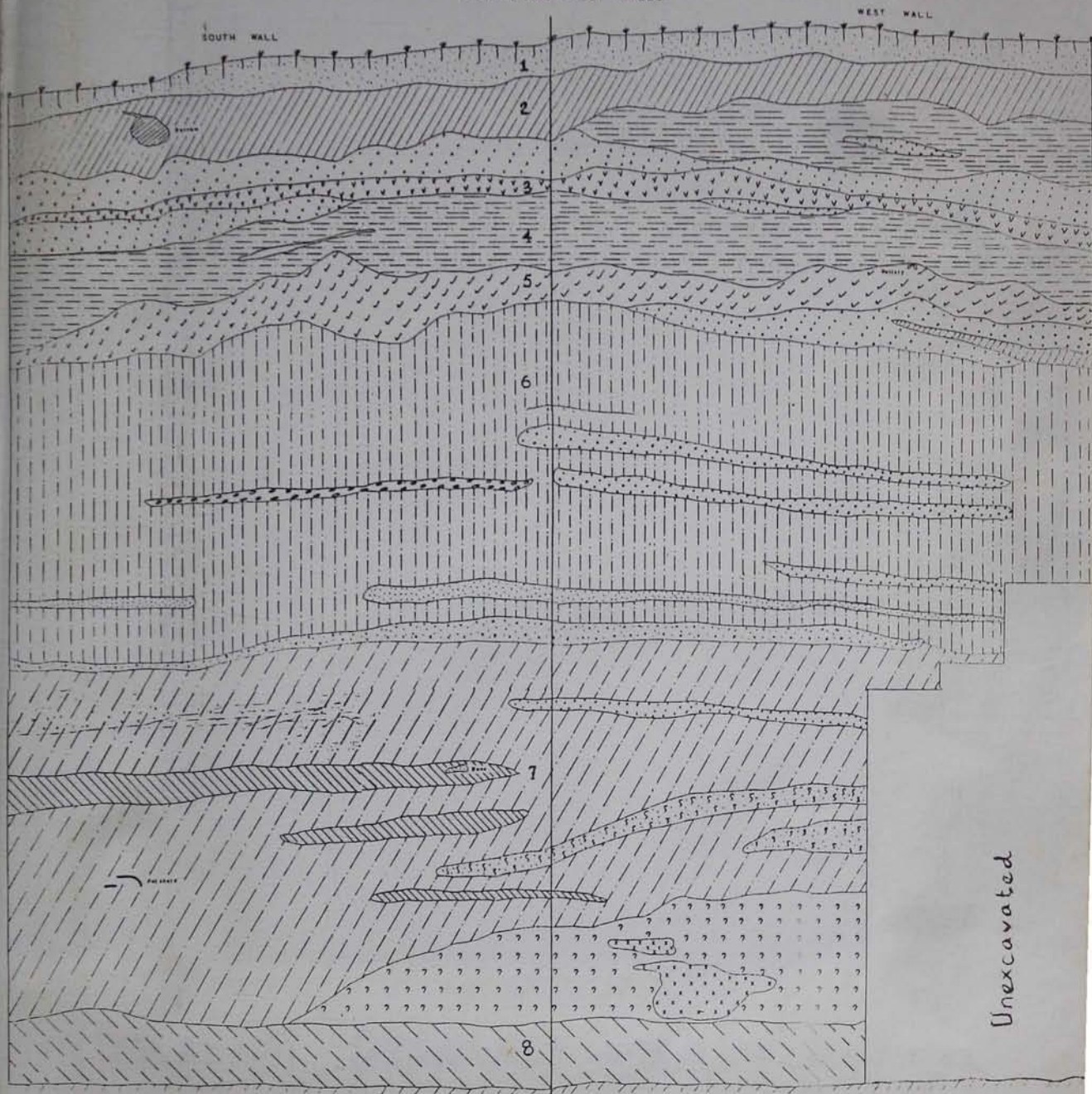
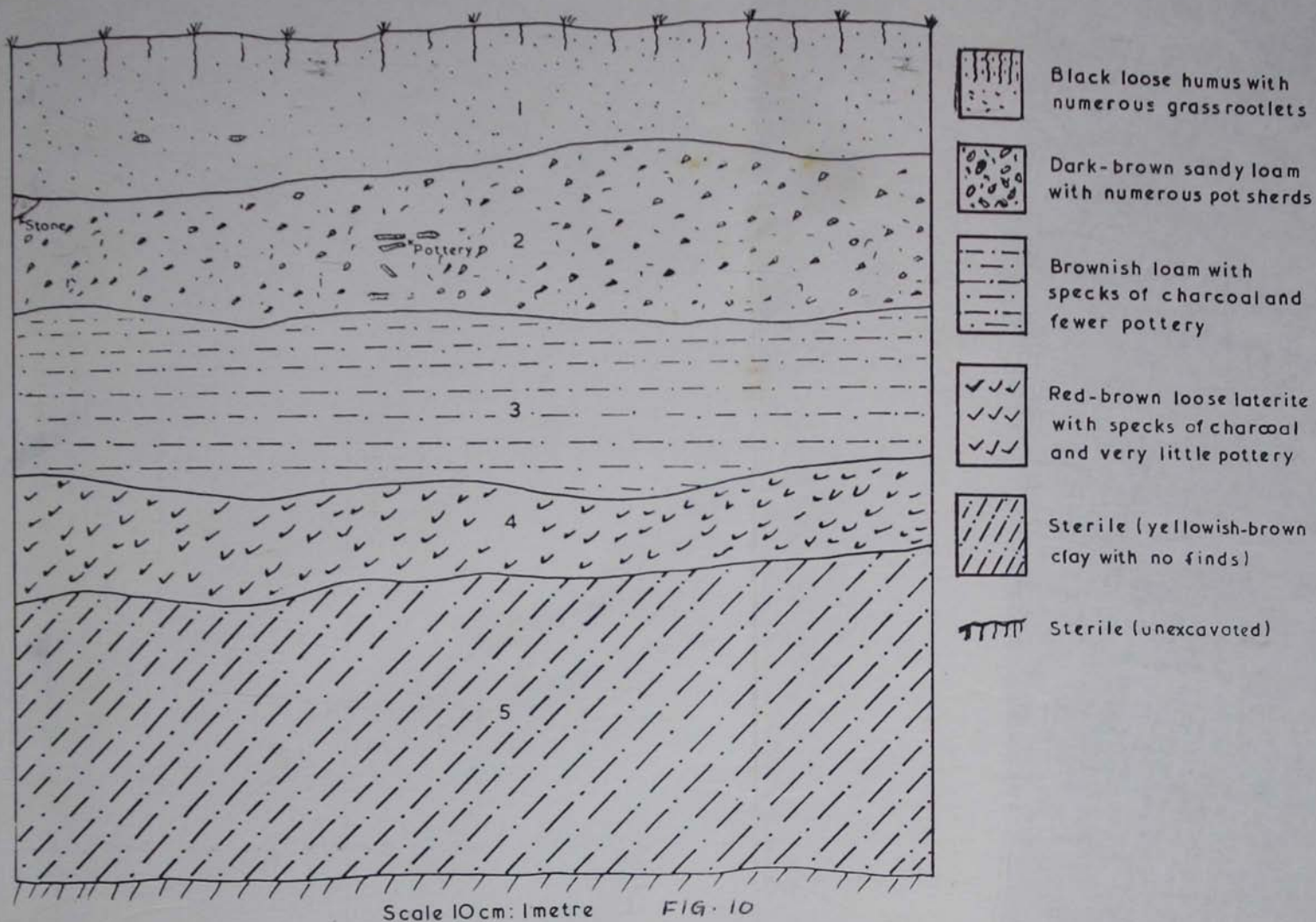


FIG 9

SCALE 10CM=1METER
1:10 cm

Unexcavated

OKAI KOI HILL (AYAWASO)
UNIT VI27
WEST WALL



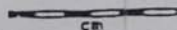
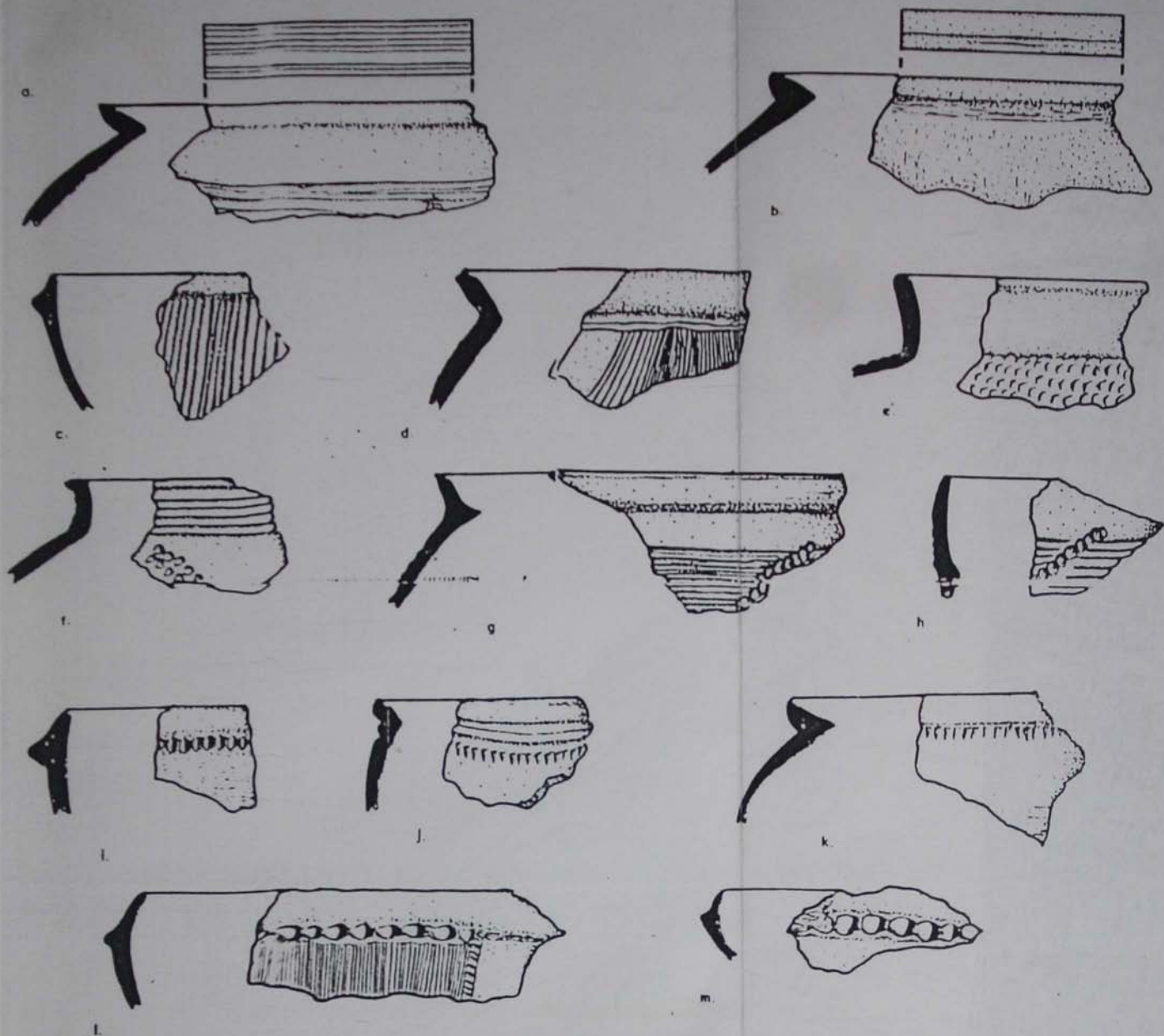


FIG. II. DECORATIVE PATTERNS ON OKAI KOI WARE (Ayawdso)

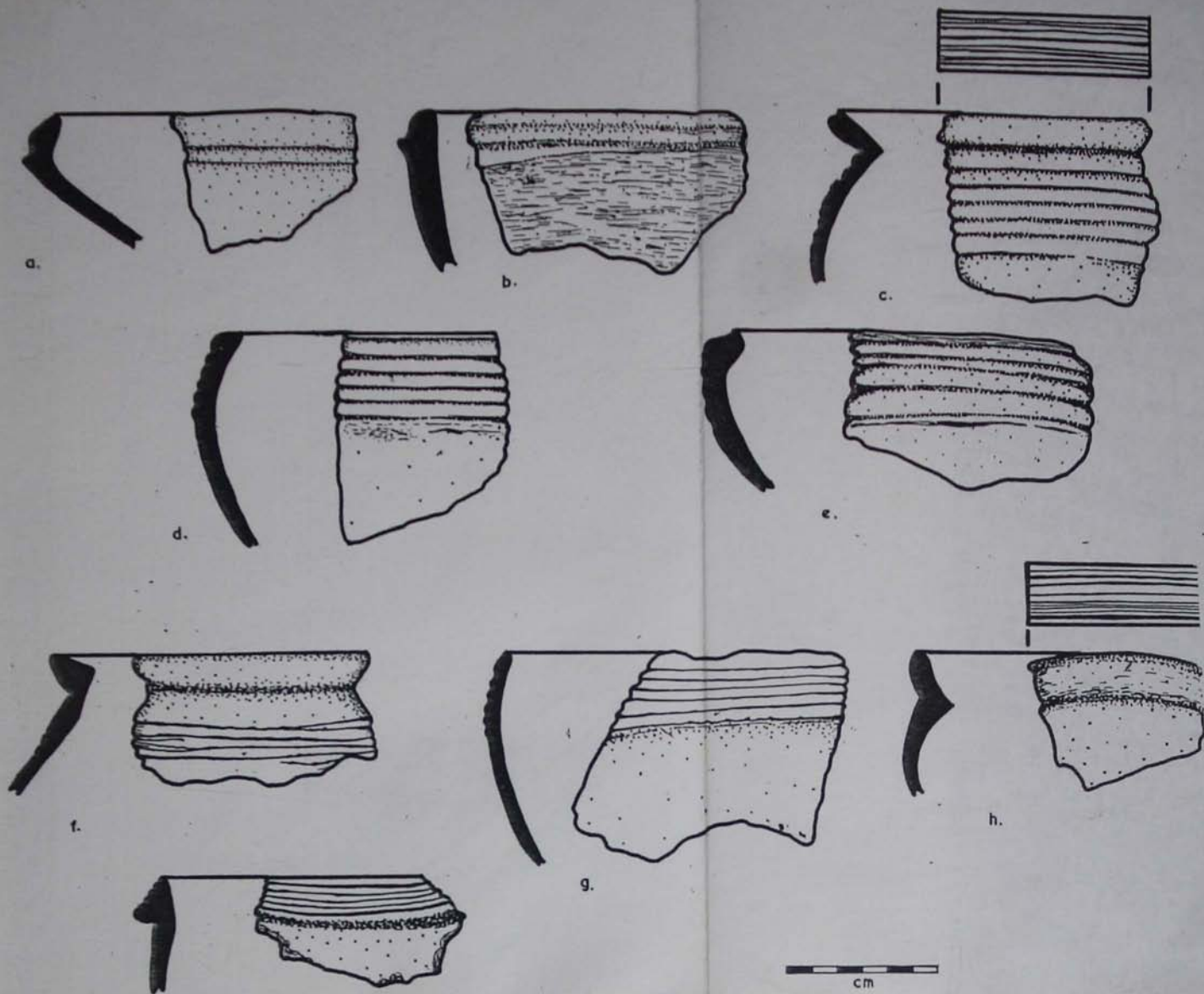


FIG.12. DECORATIVE PATTERNS ON OKAI KOI WARE (Ayawaso)

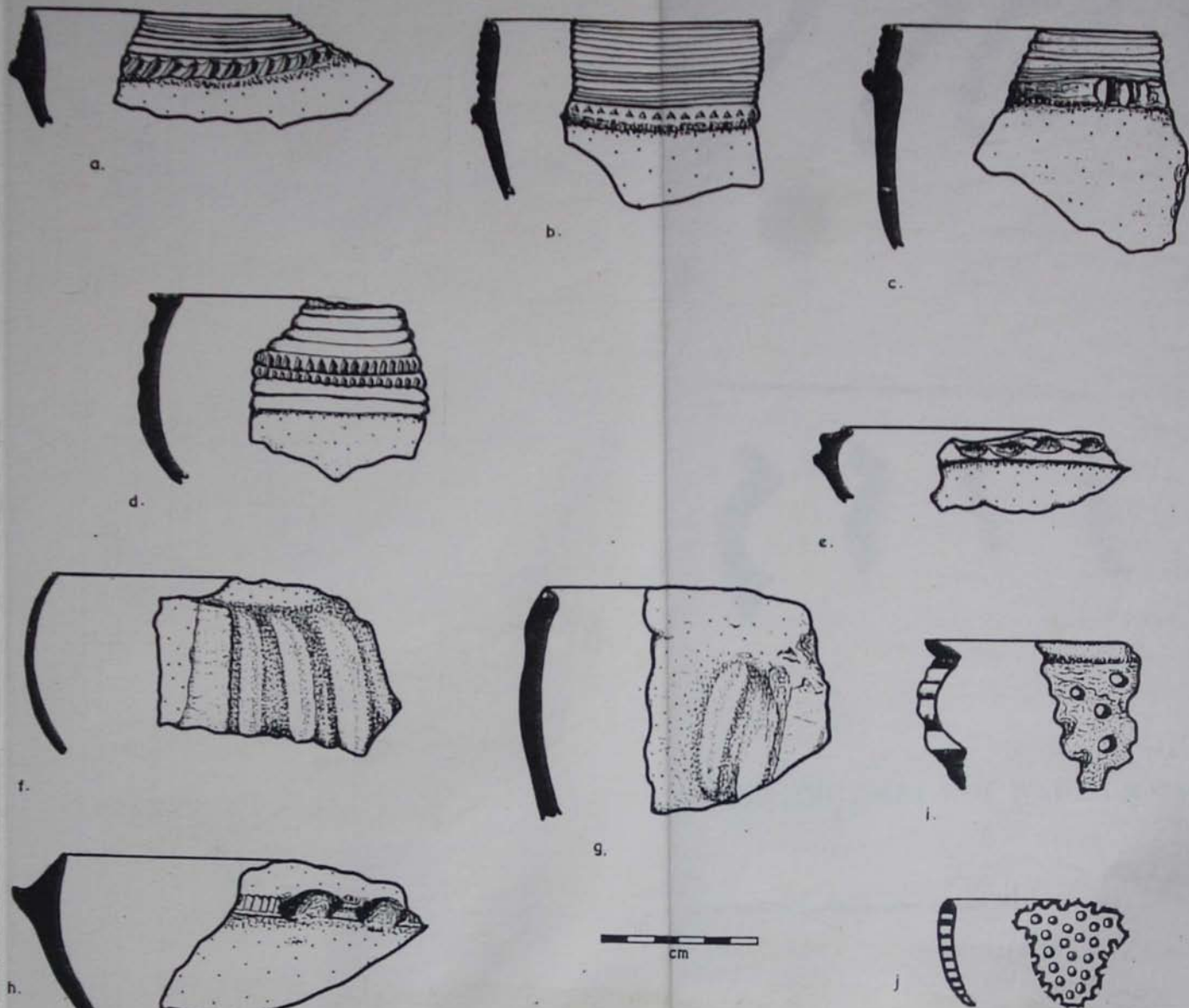


FIG.13. DECORATIVE PATTERNS ON OKAI KOI WARE (Ayawaso)

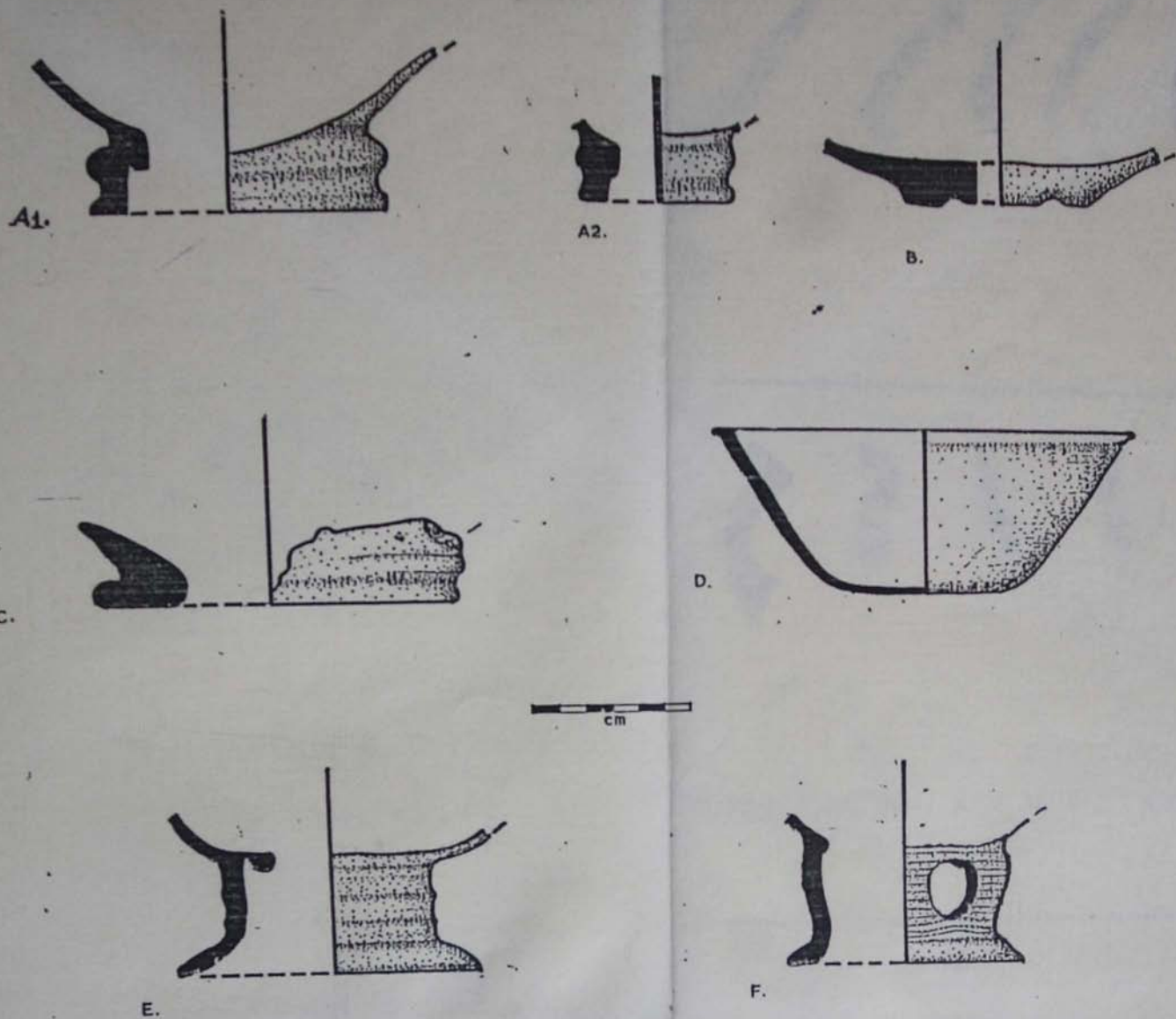
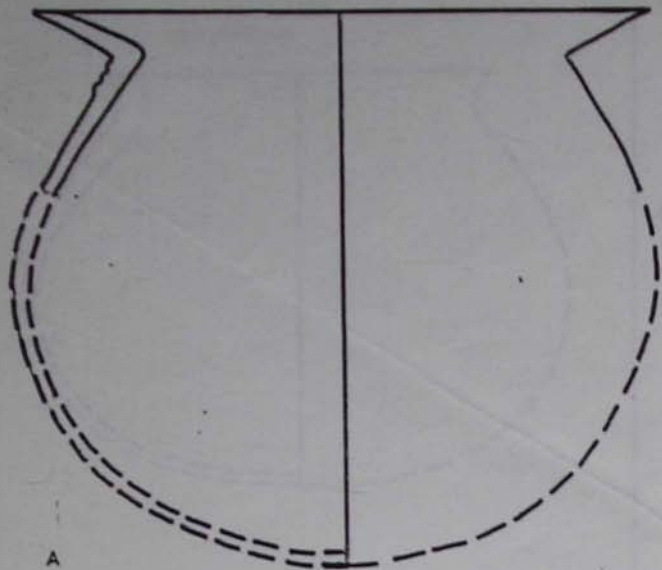
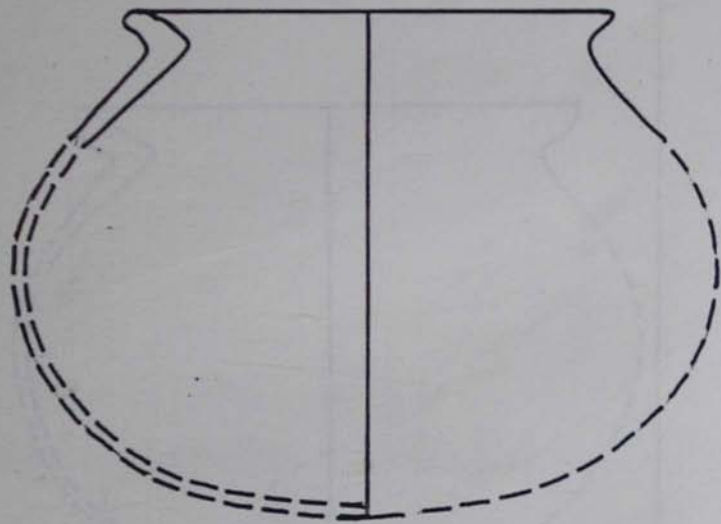


FIG. 14. OKAI KOI WARE - BASES



A

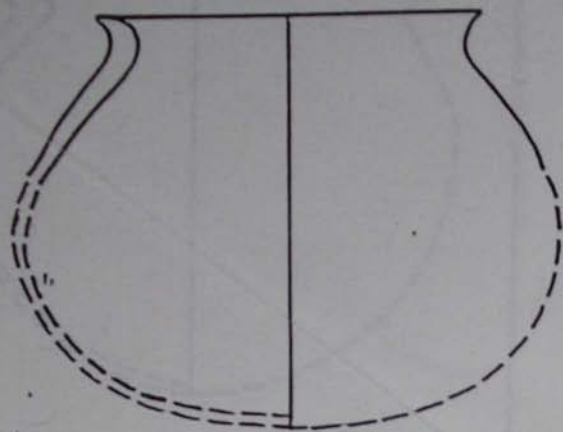


B



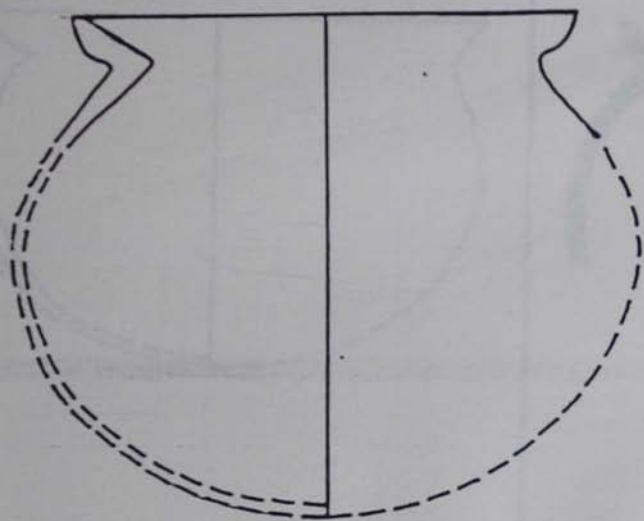
FIG. 15. ATTRIBUTES OF OKAI KOI WARE (Ayawaso)

JAR FORMS



C

VARIATIONS OF RIM AND LIP



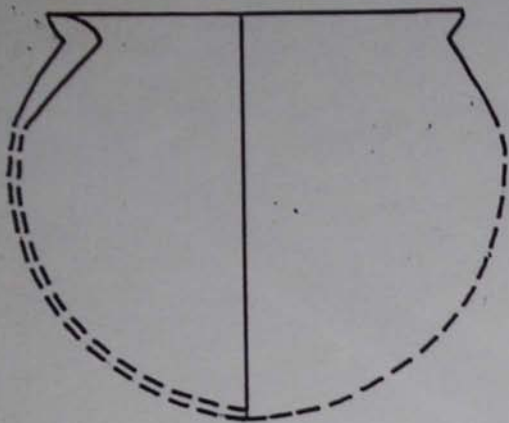
D



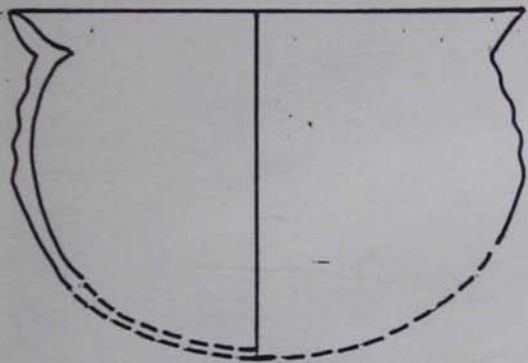
FIG. 16. ATTRIBUTES OF OKAI KOI WARE [Ayawaso]

JAR FORMS

VARIATION OF RIM AND LIP

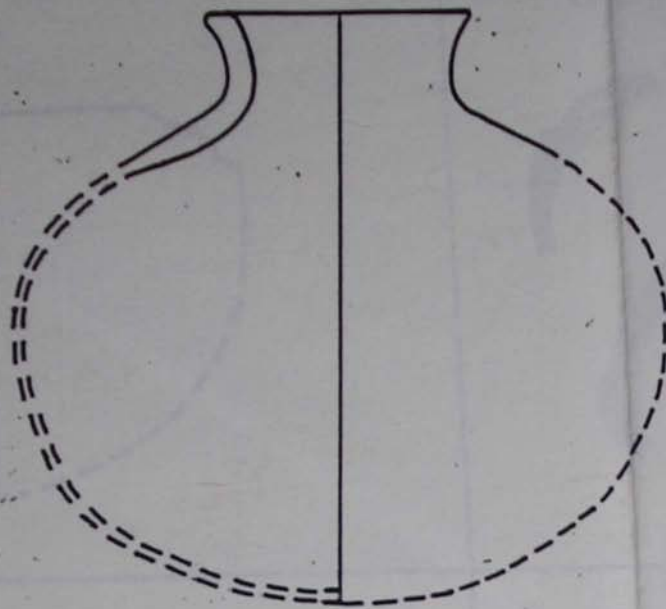


E

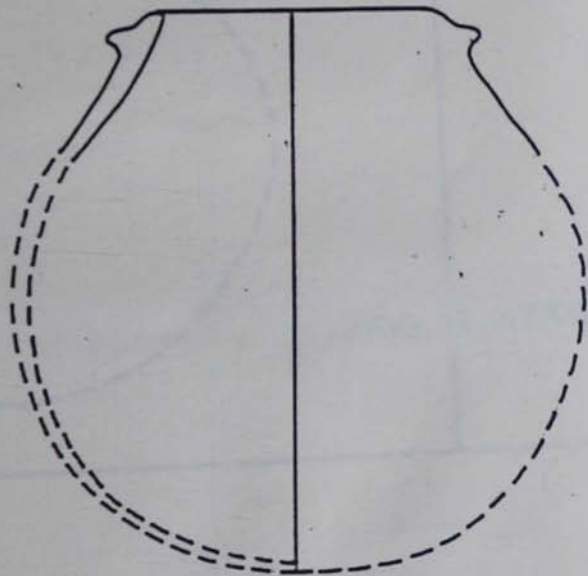


F

FIG. 17. ATTRIBUTES OF OKAI KOI WARE (Ayawaso)



G.



H.

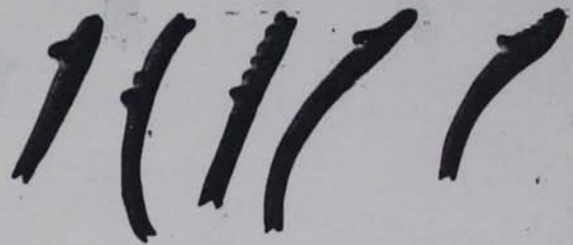
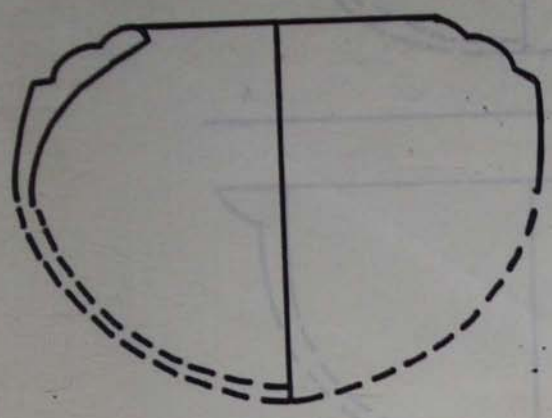
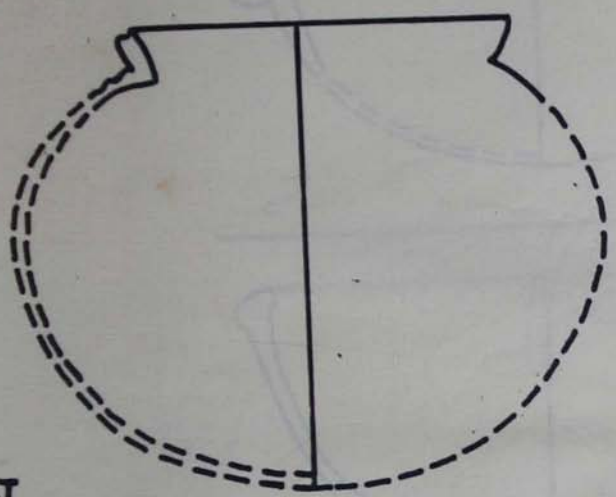


FIG. 18. ATTRIBUTES OF OKAI KOI WARE (Ayawaso)

JAR FORMS



I



J

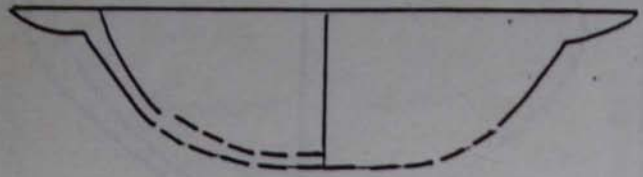
VARIATIONS OF RIM AND LIP



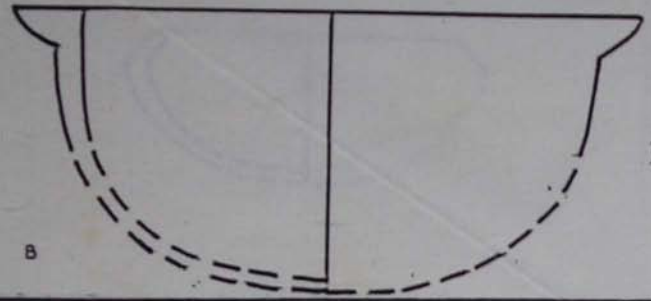
FIG. 19. ATTRIBUTES OF OKAI KOI WARE (Ayawaso)

FIG. 20. ATTRIBUTES OF OKAI KOI WARE

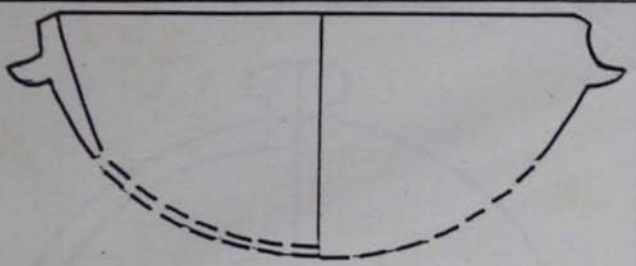
BOWL FORMS



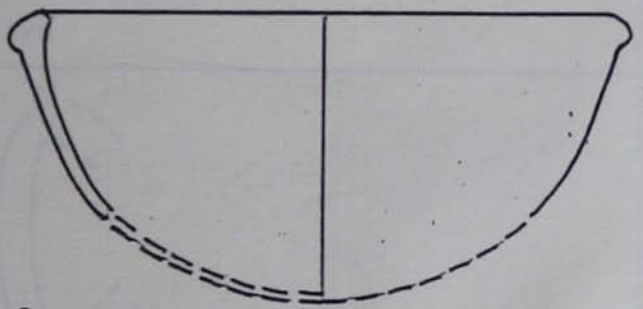
A



B



C



D

VARIATION OF RIM AND LIP

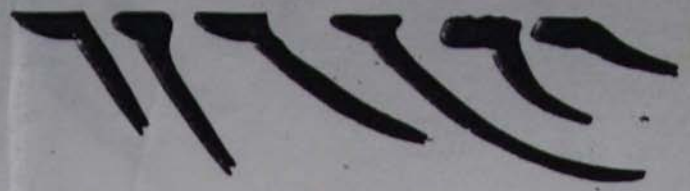
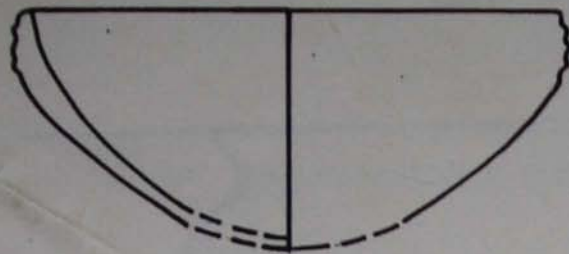
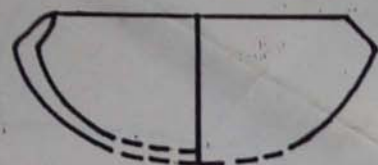


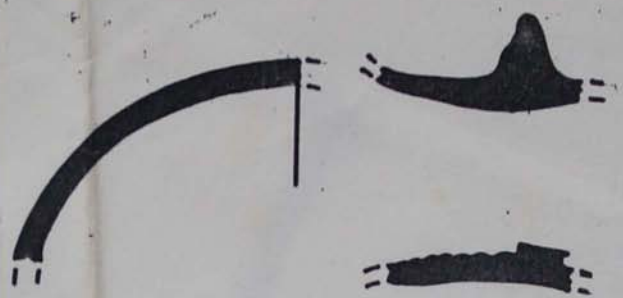
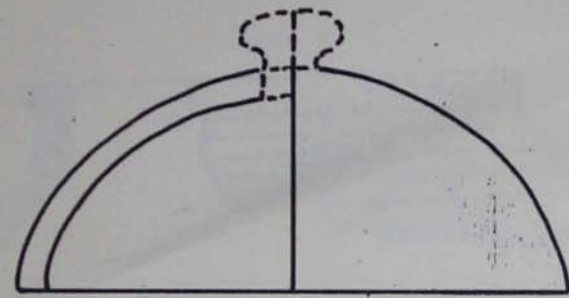
FIG. 20. ATTRIBUTES OF OKAI KOI WARE (Ayawaso)



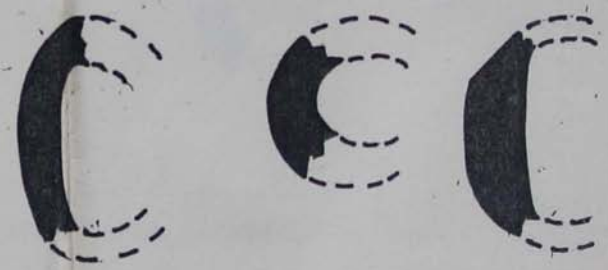
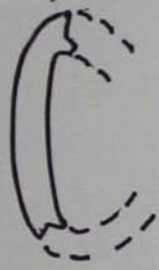
E



F

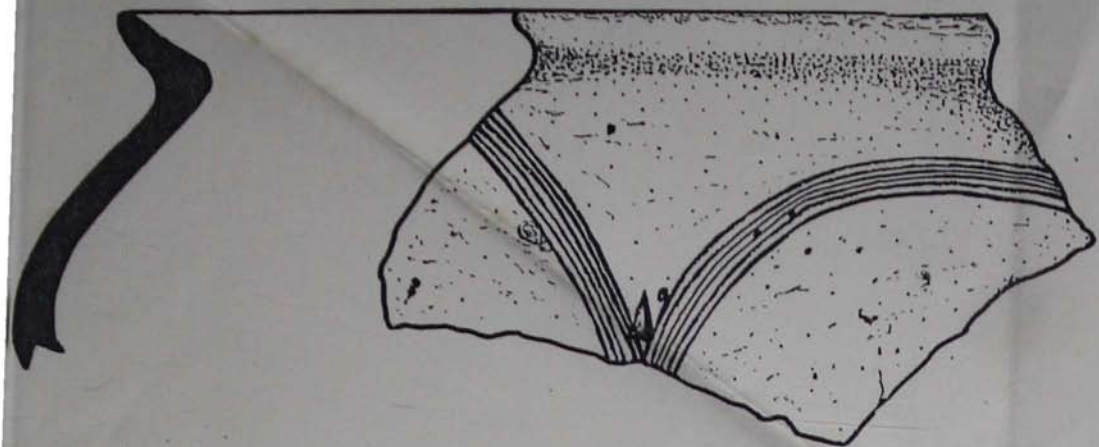


G
BOWL LIDS

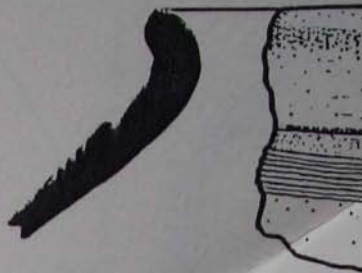


H
HANDLES

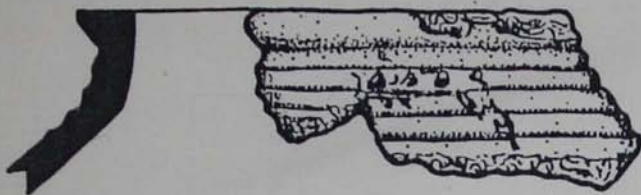
FIG. 21. ATTRIBUTES OF OKAI KOI WARE (Ayawaso)



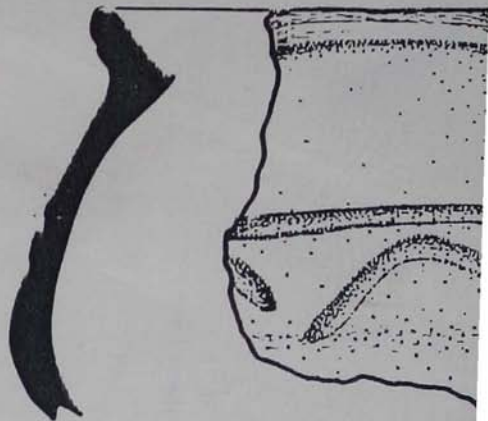
a.



b.



c.



d.

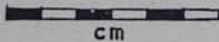
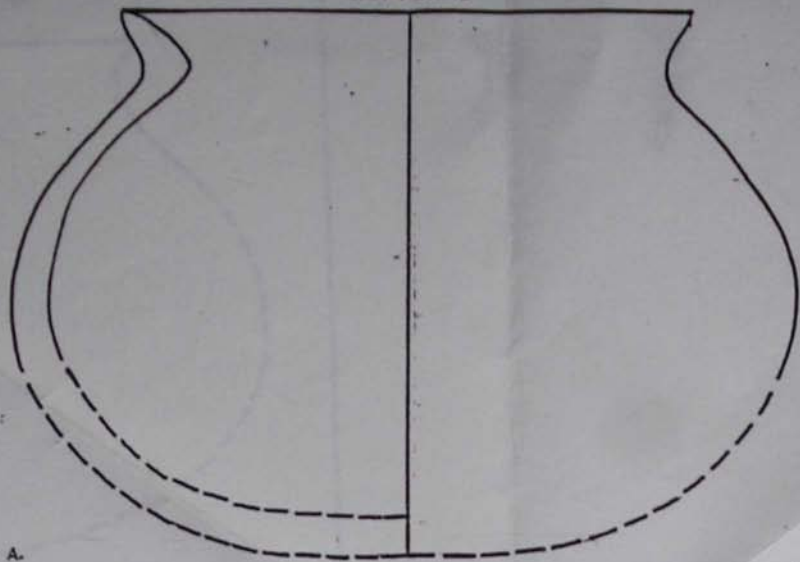
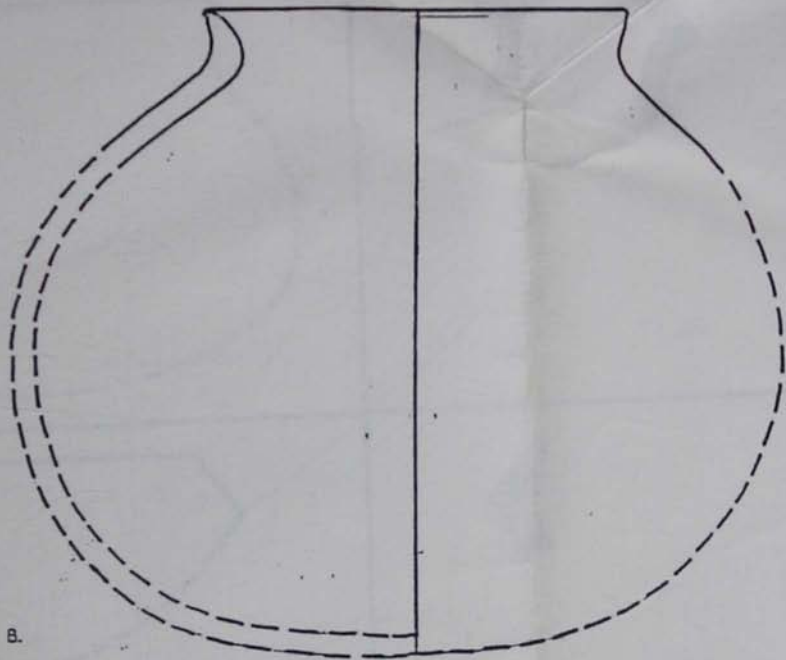


FIG 22 DECORATIVE PATTERNS ON X-WARE, OKAI KOI HILL (AYAWASO)



A.



B.

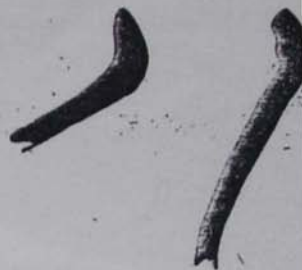
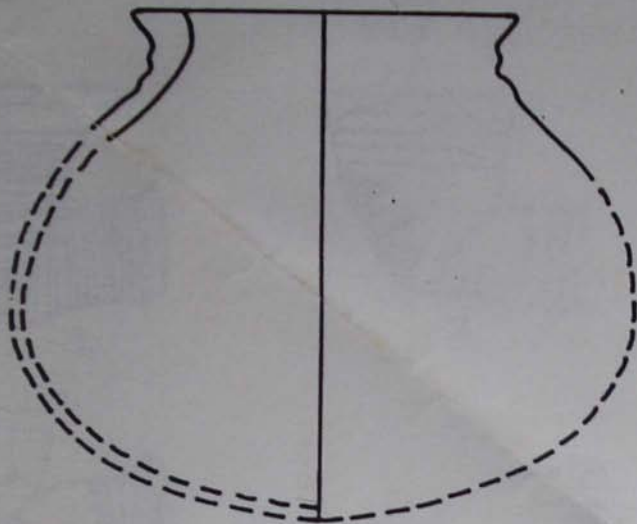


FIG. 23 ATTRIBUTES OF X-WARE, OKAI KOI HILL (AYAWASO)

JAR FORM

221

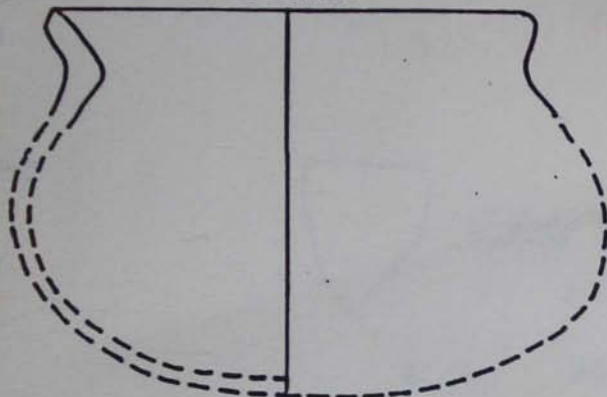
VARIATION OF RIM AND LIP



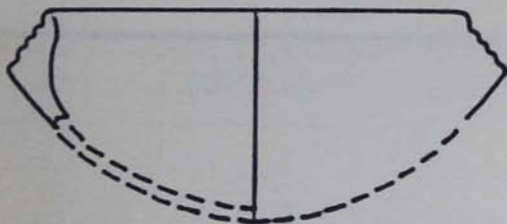
C

BOWL FORMS

VARIATION OF RIM AND LIP

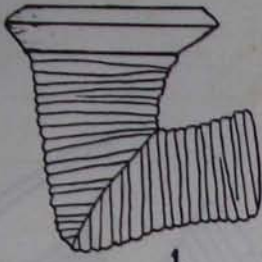


A

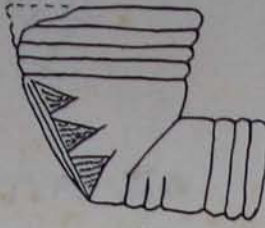


B

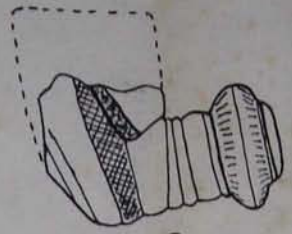
FIG 24 ATTRIBUTES OF X - WARE, OKAI KOI HILL (AYAWASO)



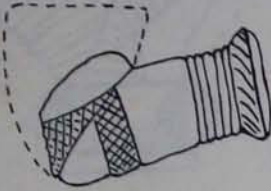
1.



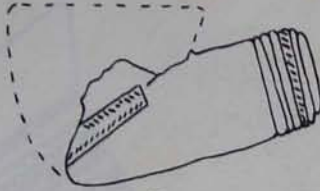
2.



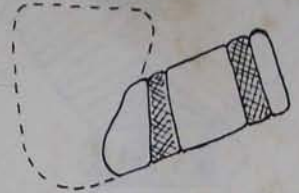
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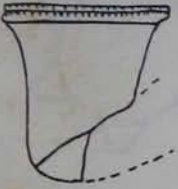
4.



5.



6.



7.



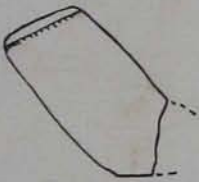
8.

OKAI KOI (AYAWASO)

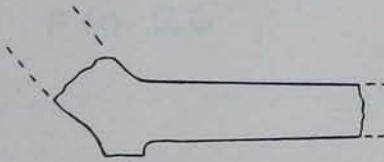
SMOKING PIPES



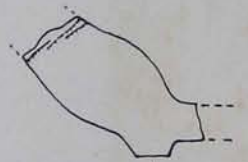
Type I



1.



2.



3.

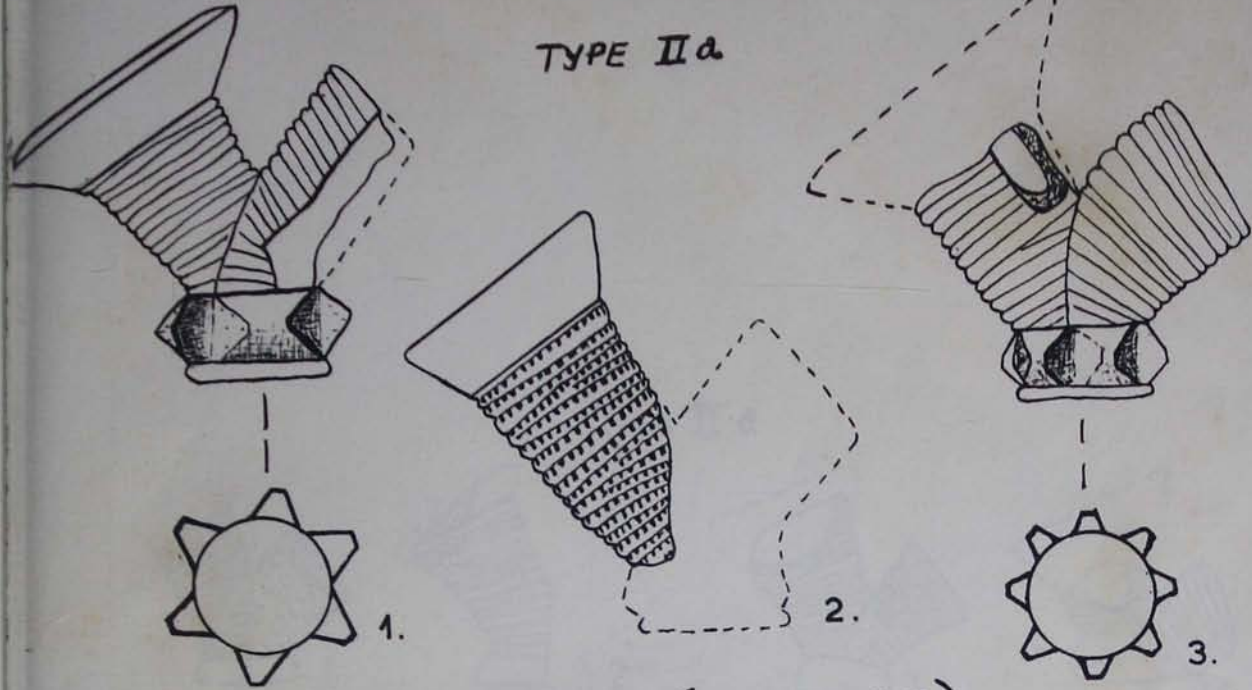


OKAI KOI (AYAWASO) IMPORTED SMOKING PIPES



FIG. 25

TYPE IIa



OKAI KOI (AYAWASO)

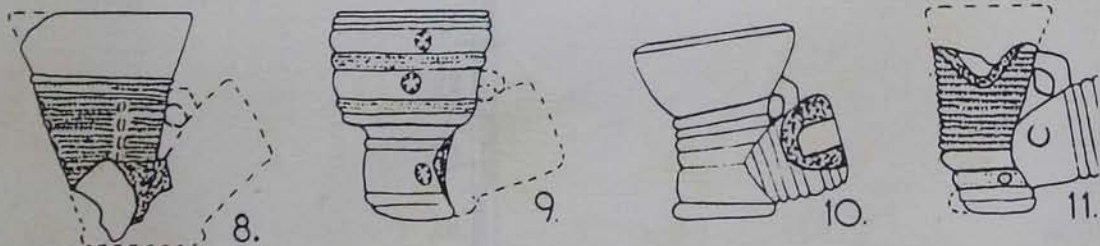
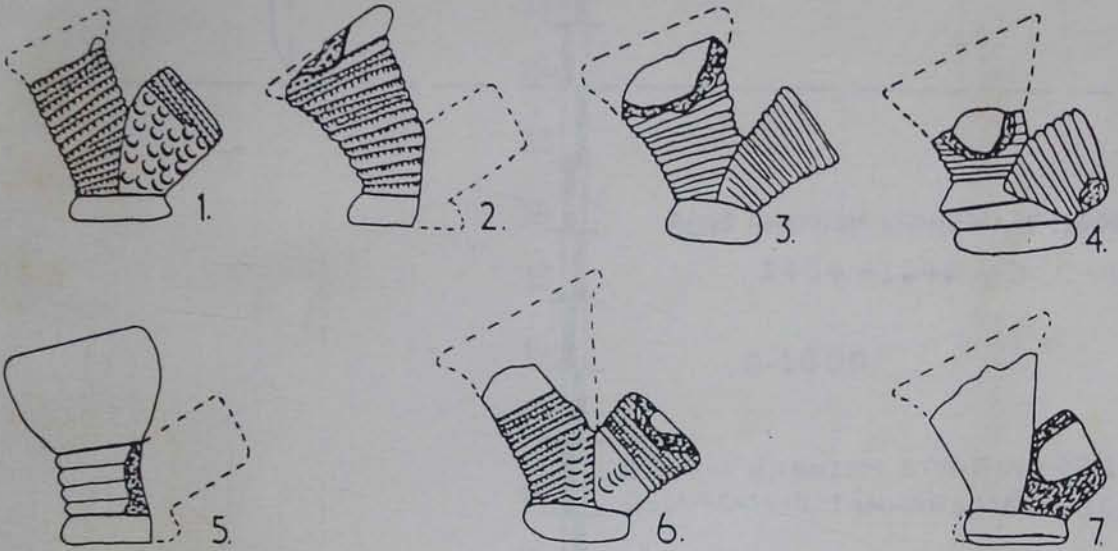
SMOKING PIPES

TYPE IIa

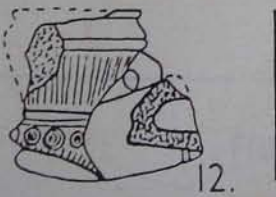


FIG. 26

Type II a



Type II b



OKAI KOI (AYAWASO)

SMOKING PIPES



FIG 27

Ozanne's
Type II
a & b
(1655-80)

TYPE IIb

1660-80

TYPE IIa

1640-60

Ozanne's
Type I
(1640-55)

TYPE I

1620-40

1677-80
IMPORTED KAOLIN SMOKING PIPE

IMPORTED KAOLIN SMOKING PIPE

BLUE RHENISH STONWARE: 1600-25
1454-1646 A.D (C-14)

C. 1600

BROWN RHENISH STONWARE: 1600-25
BELLARMINE TANKARD: 1550-1625

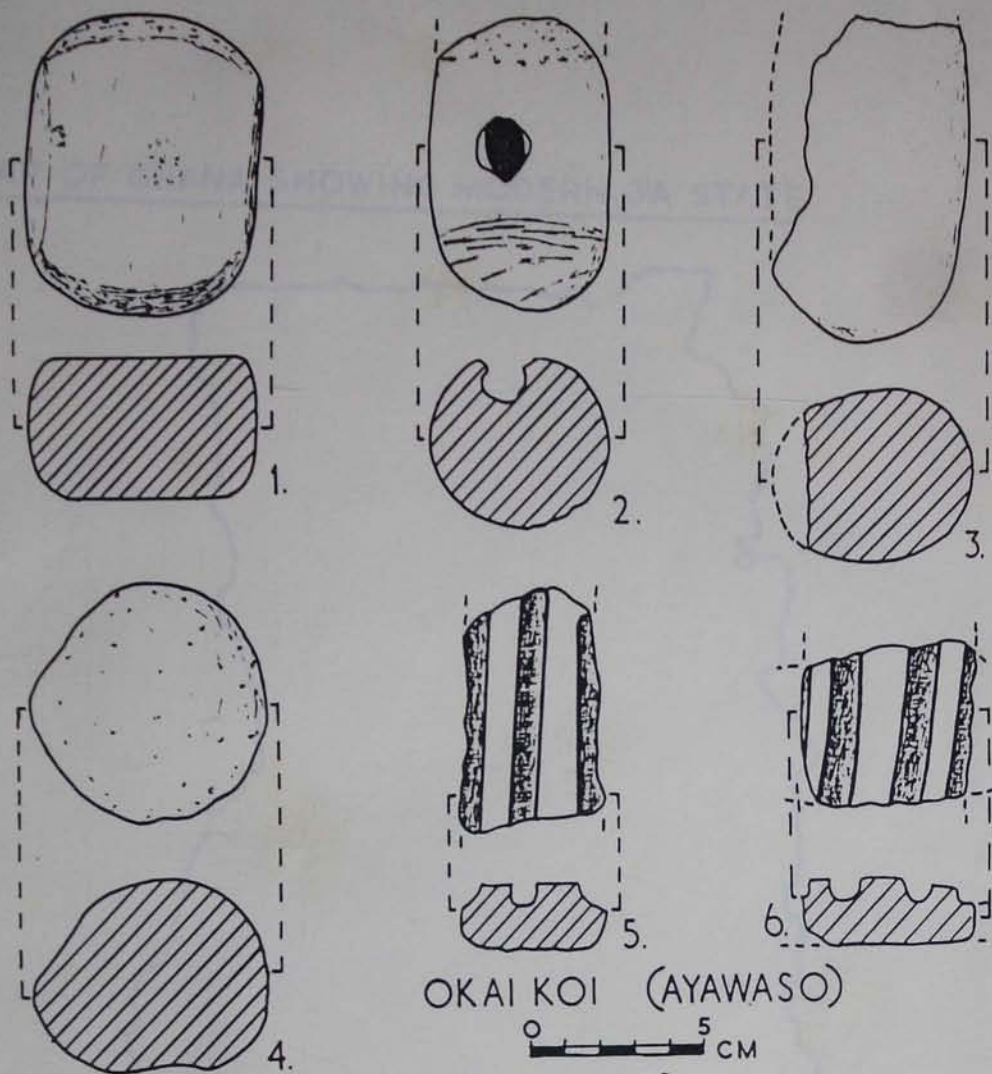
1480-1680 A.D (C-14)

C. 1500 A.D

YBN

1 cm : 20 cm (scale)

FIG. 28 Chronological placement of site and pipe typology.



OKAI KOI (AYAWASO)

0 5 CM

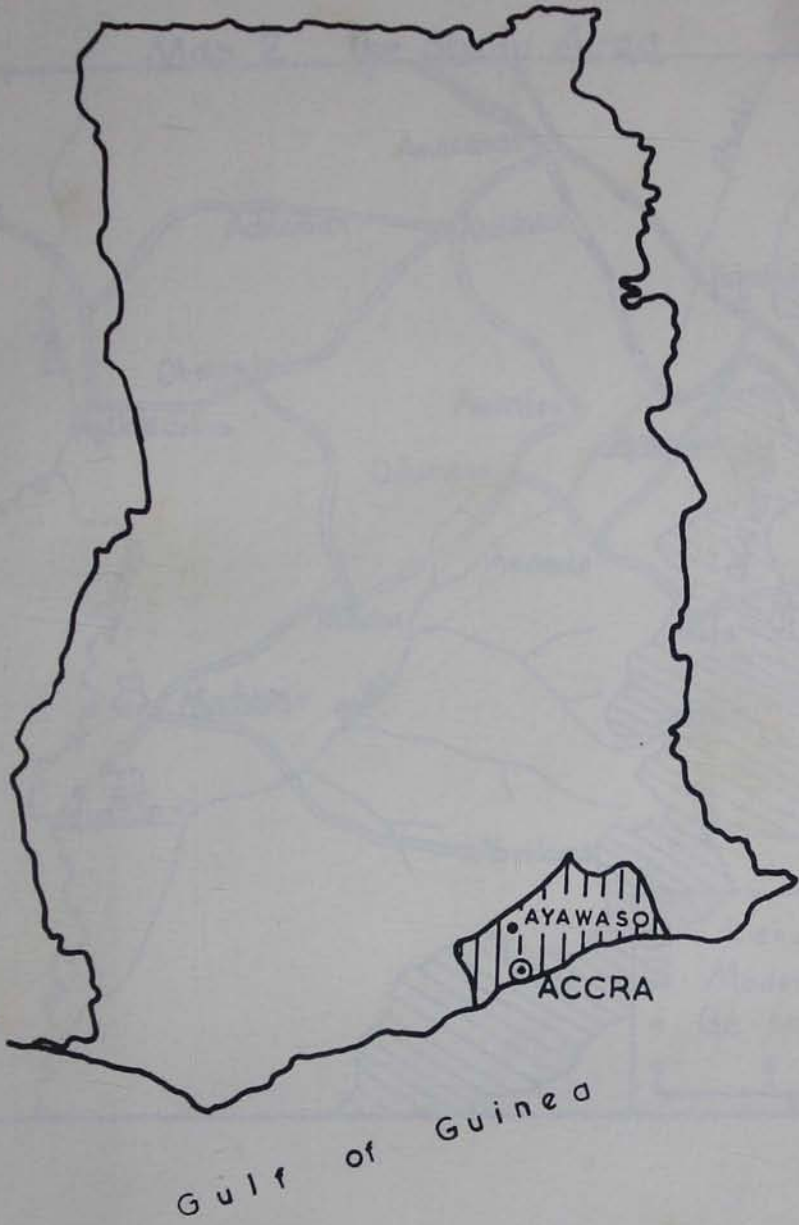
STONE OBJECTS

1-4 Grinding Stones

5+6 Grooved Stones

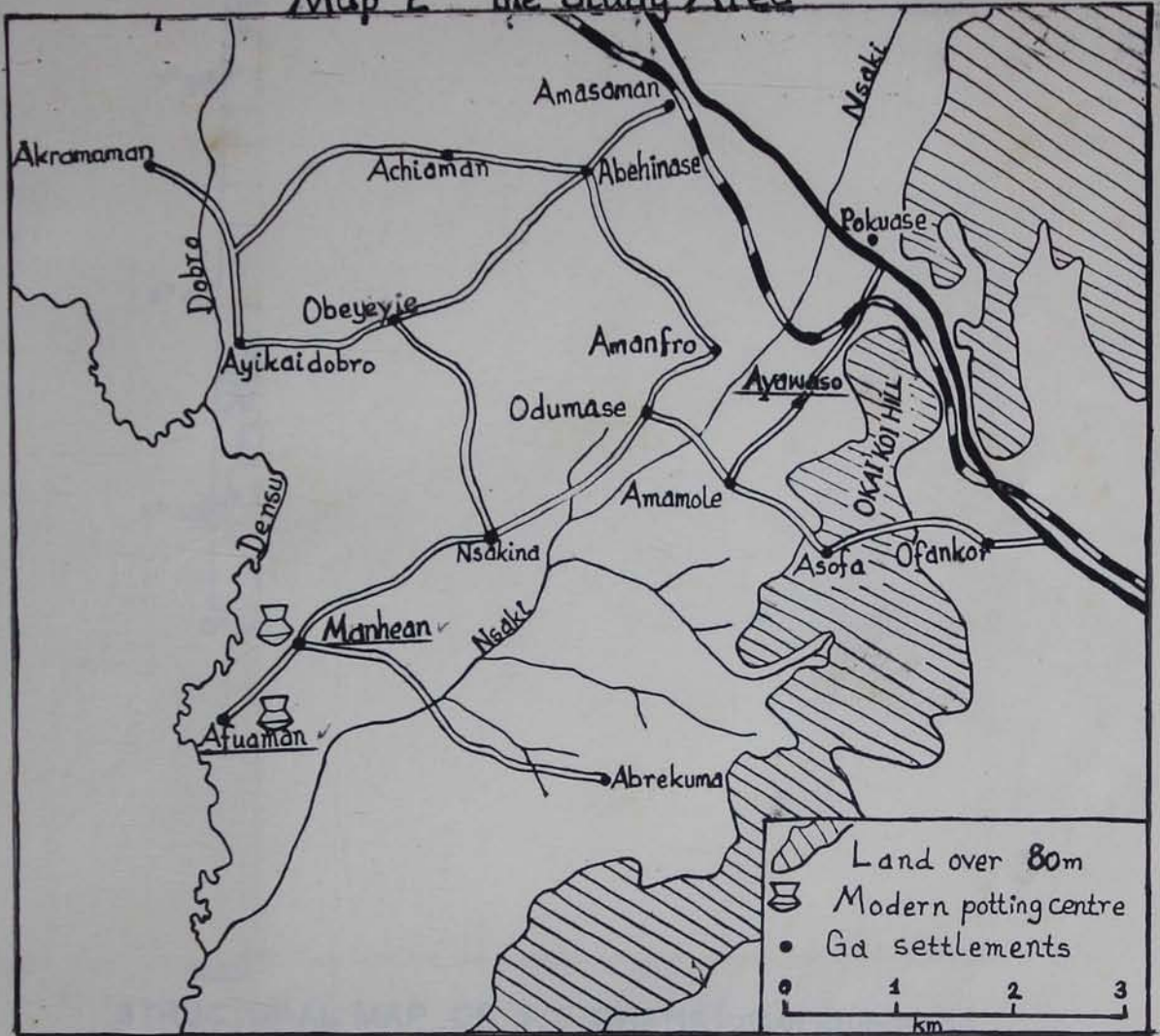
FIG. 29

MAP OF GHANA SHOWING MODERN GA STATE

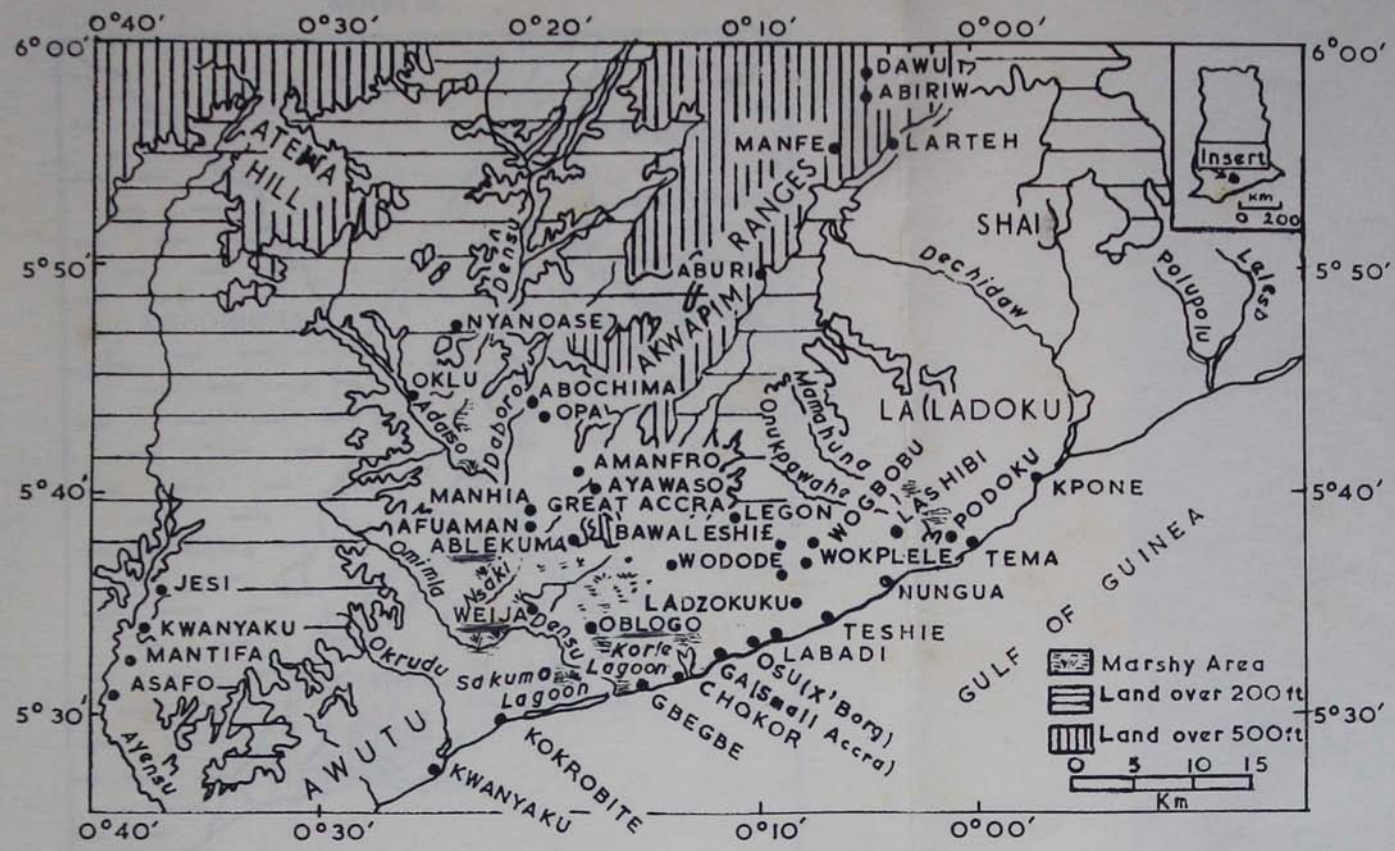


MAP. 1.

Map 2 The Study Area

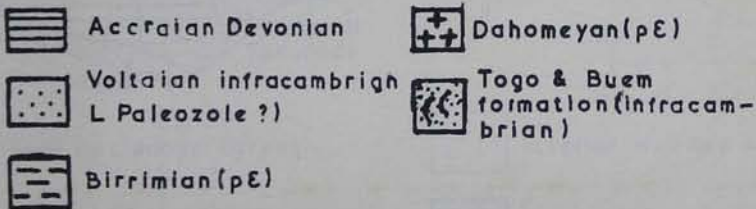
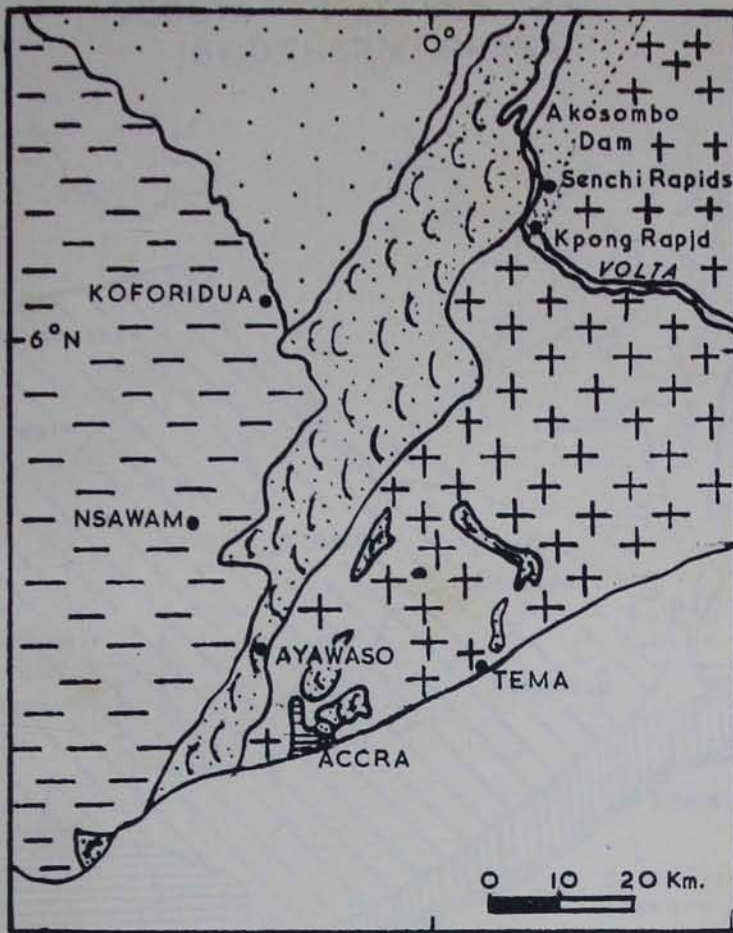


EARLY SETTLEMENTS OF THE ACCRA COASTAL PLAINS



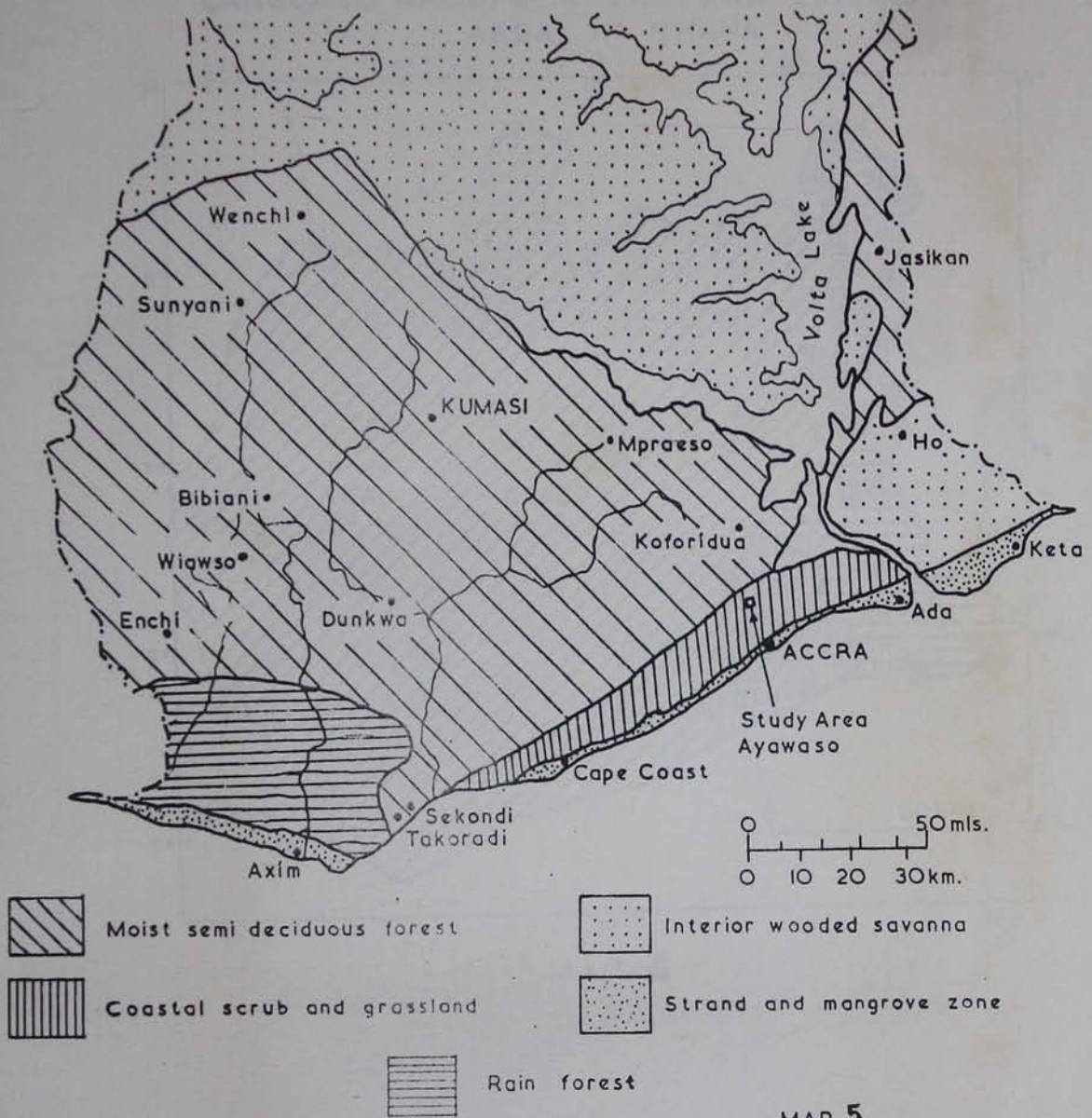
MAP. 3

MAP. 4



STRUCTURAL MAP OF S. E. GHANA (after Bondeson and Smit 1972)

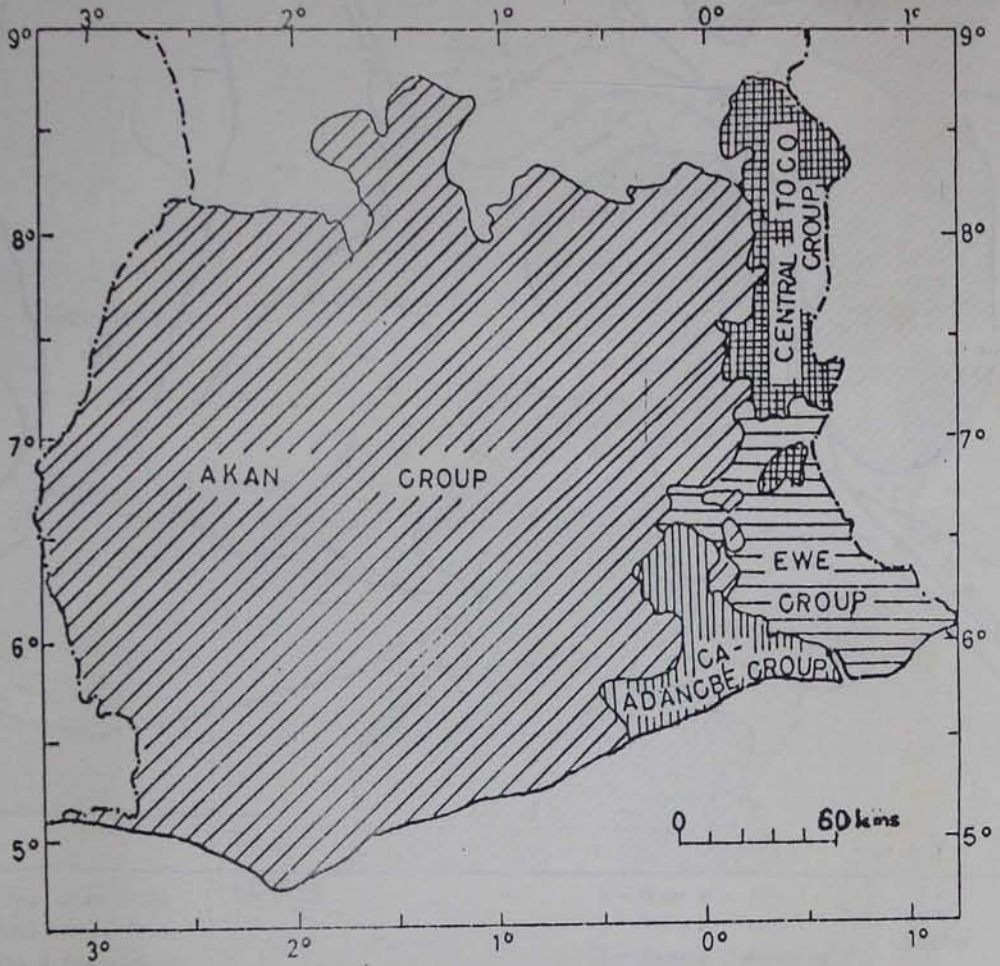
VEGETATION TYPES OF SOUTHERN GHANA



MAP 5

(After Dickson and Benneh, 1973, P.38)

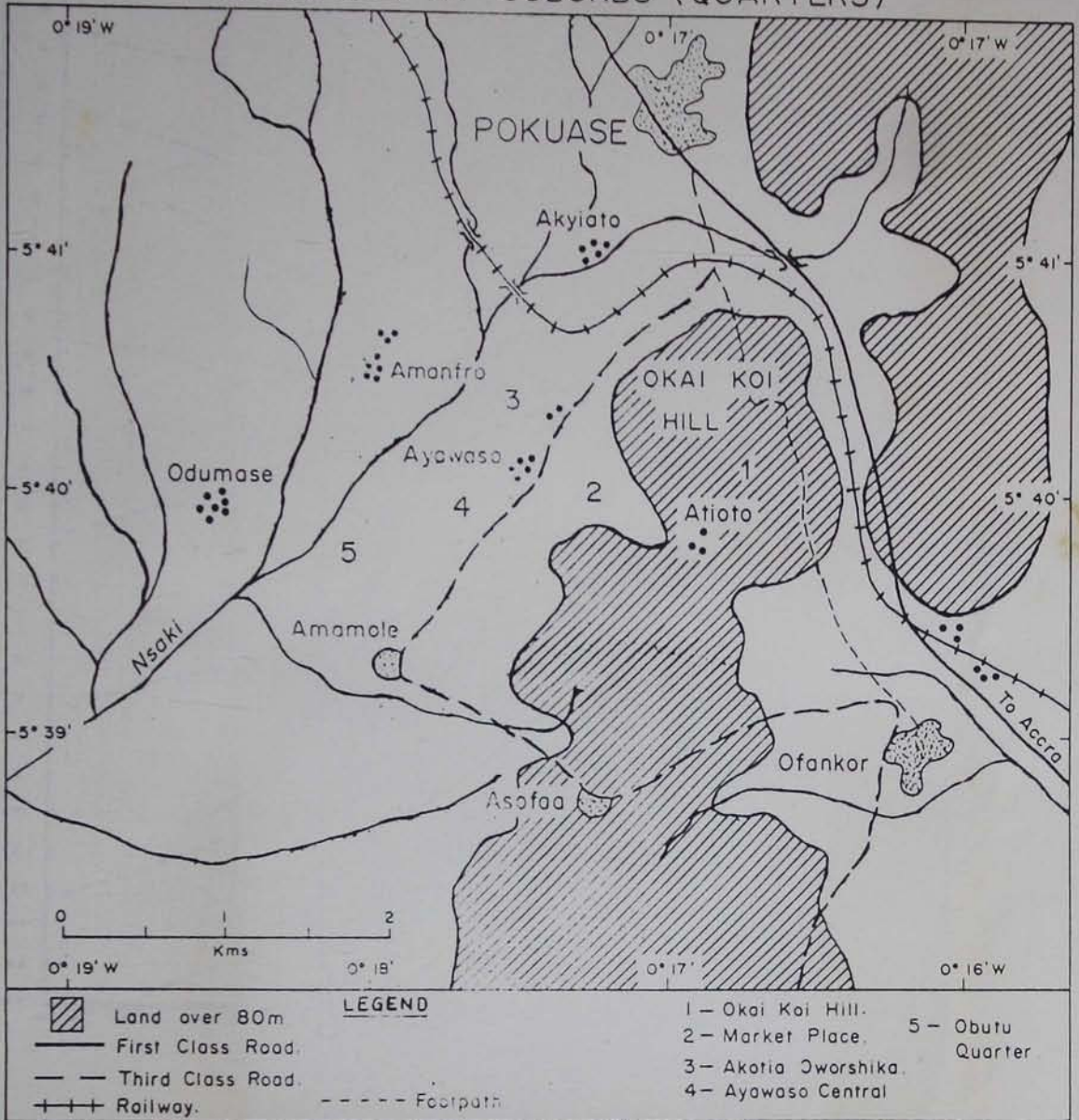
LANGUAGE GROUPS IN THE KWA LINGUISTIC
AREA IN GHANA



MAP 6

MAP 7

A MAP OF THE STUDY AREA SHOWING APPROXIMATE LOCATIONS OF SUBURBS (QUARTERS)



OKAI KOI HILL (AYAWASO) SITE MAP

MAP 8

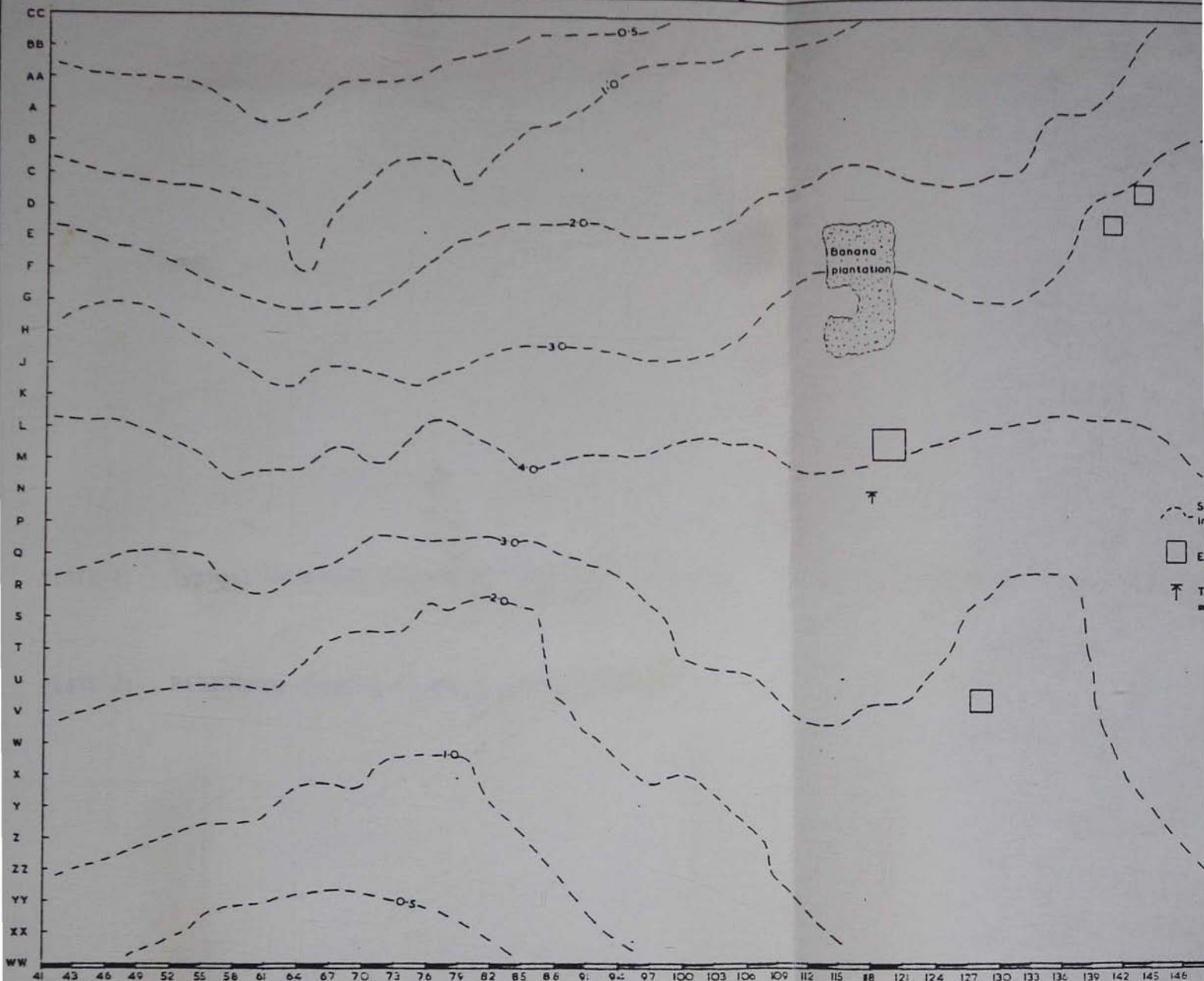


PLATE 1: Typical Ga hunter's grove (Aklabatsa)

PLATE 2: Palm-wine Tapping in the Research Area X

1



2



PLATE 3: Mode of Clay Preparation

PLATE 4: The Potter's Tool-kit

3



4

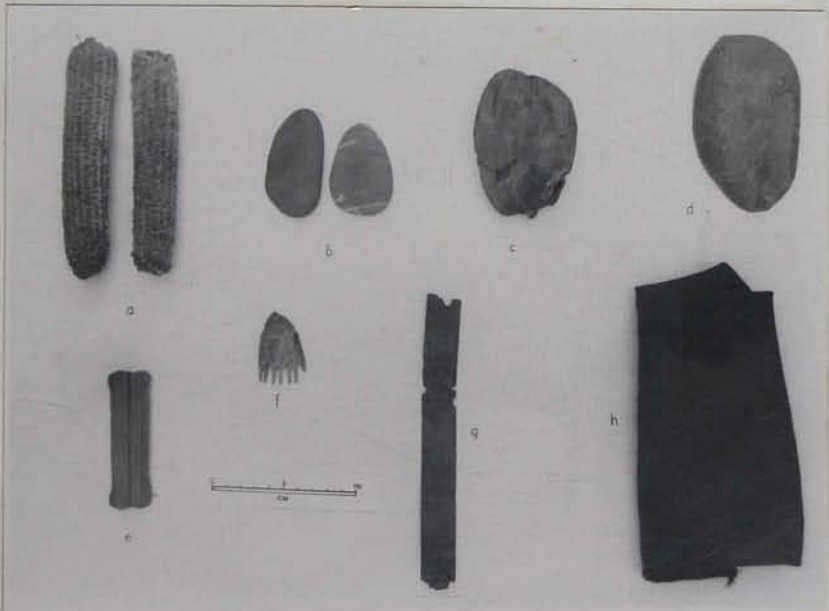


PLATE 5: Method of Pottery Manufacture

PLATE 6: House foundation at Manhean showing broken pottery
fixed into mud-foundation.

5



6



PLATE 7: On-site Vegetation and General view of Site

PLATE 8: Stratigraphy of Mound Unit M118 showing Unexcavated
Parts left as Steps.

7



8



PLATE 9: Terracotta Head, Unit M118

PLATE 10: Molluscs

9



10

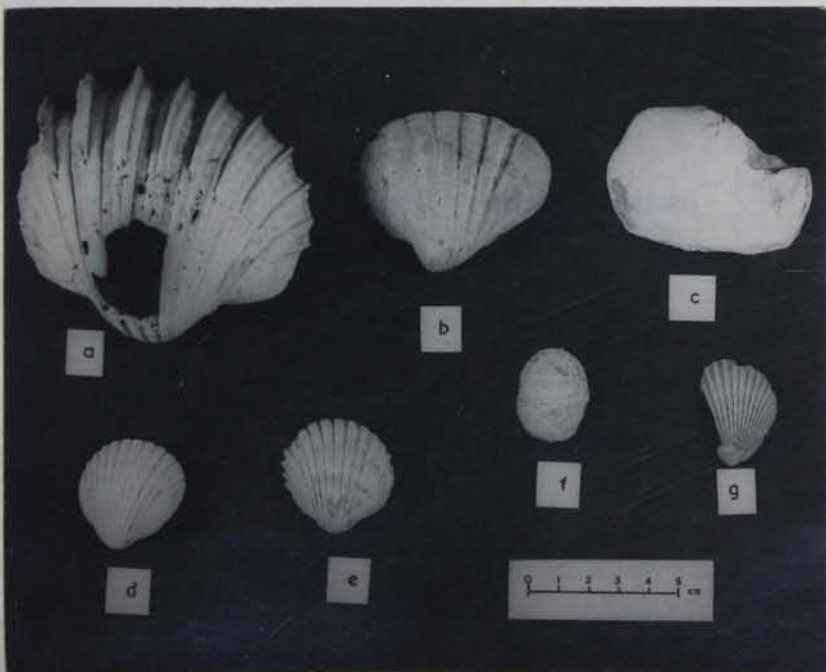
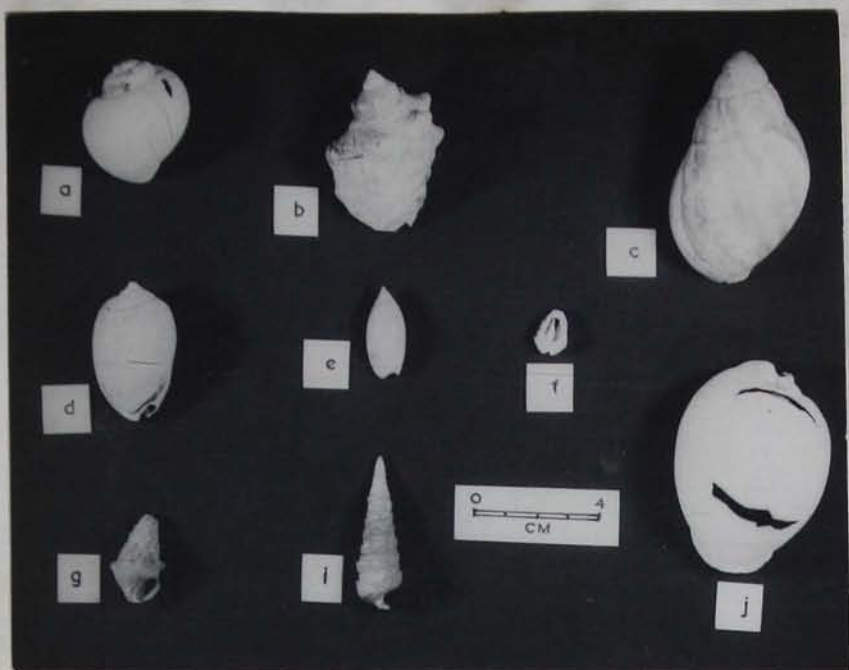


PLATE 11: Molluscs

PLATE 12: Stone Beads

11



12

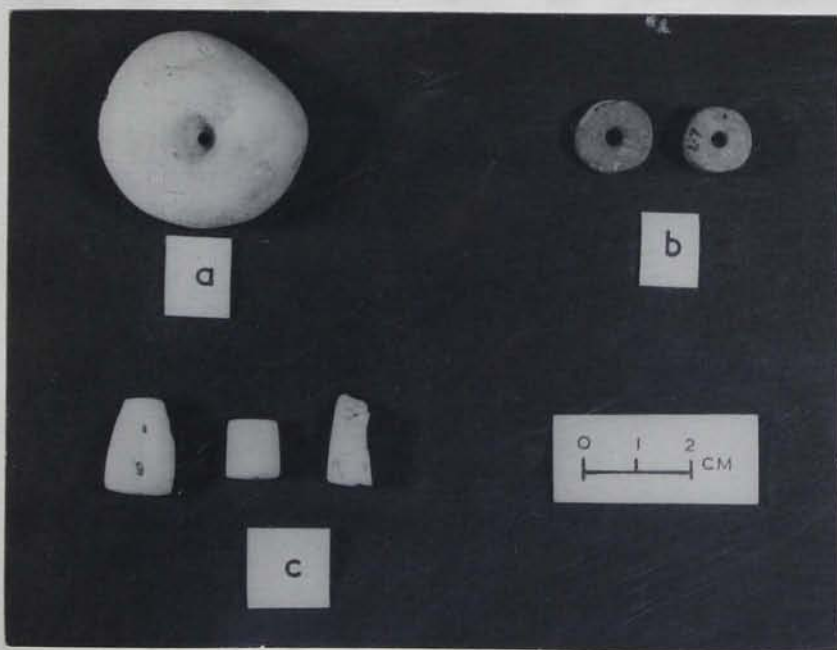
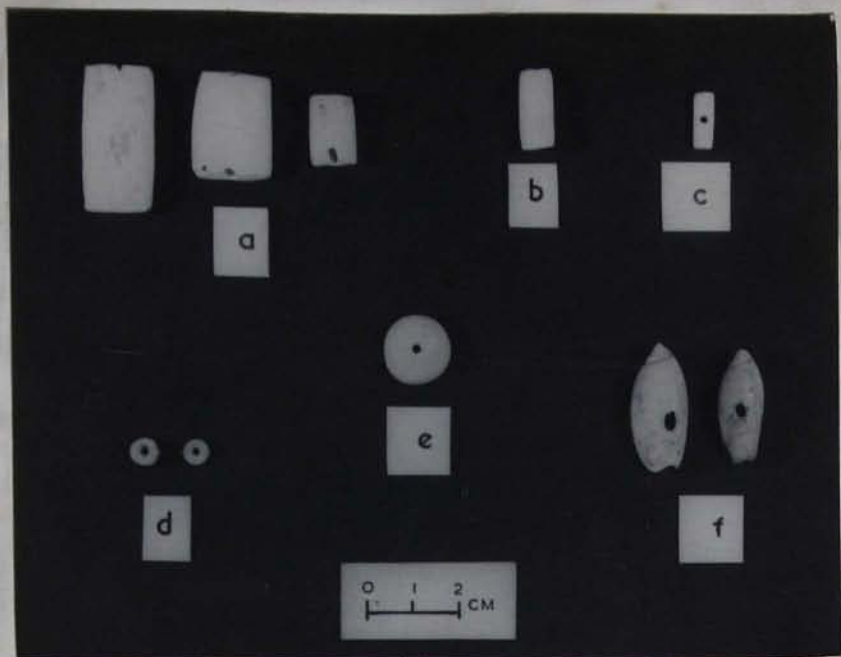


PLATE 13: Shell Beads

PLATE 14: Glass Beads

13



14

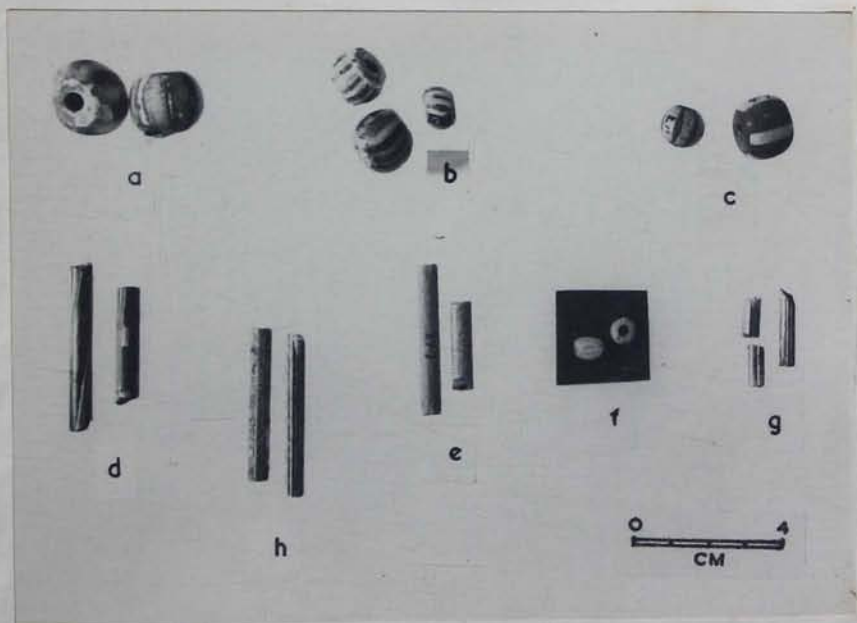
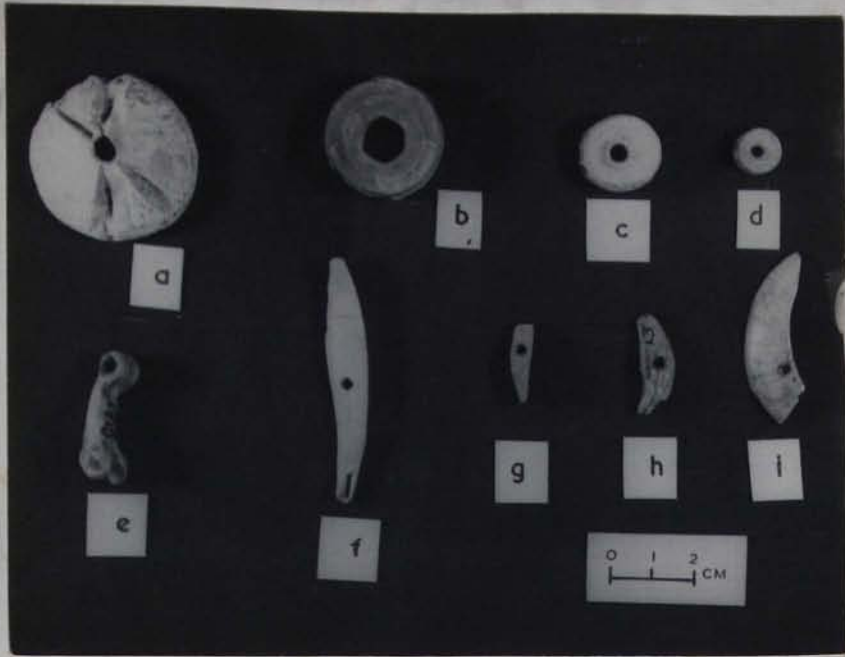


PLATE 15: Worked Bone and Teeth

PLATE 16: Bone and Ivory Objects

15



16

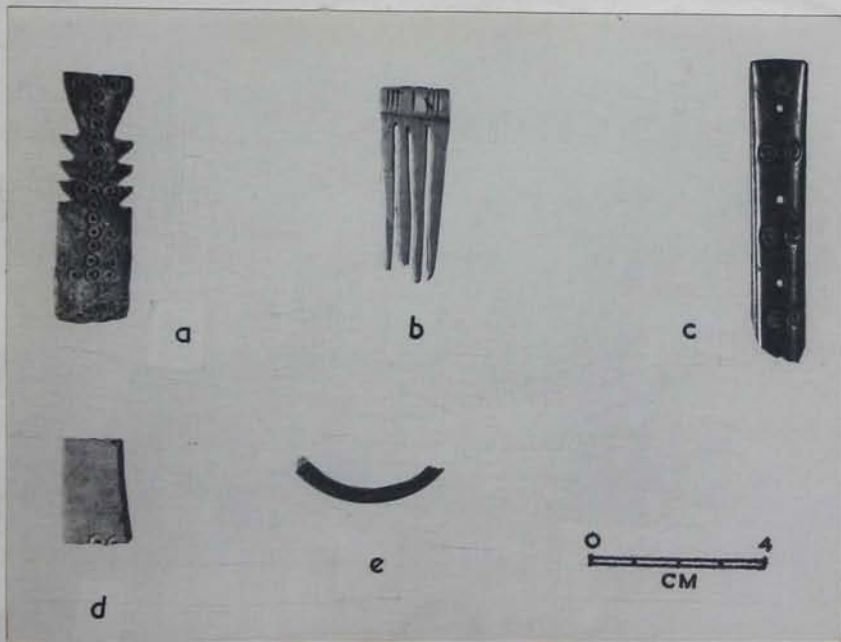
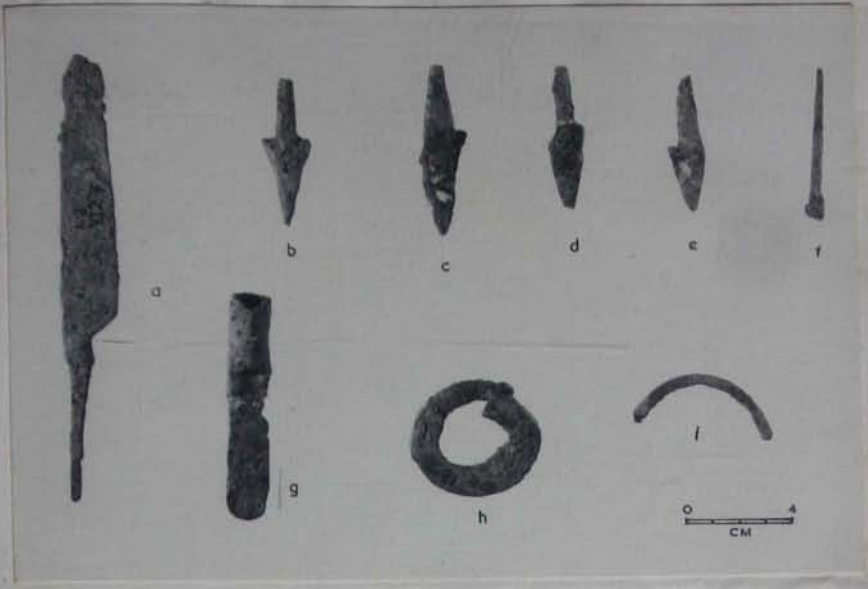


PLATE 17: Iron Objects

PLATE 18: Iron Objects

17



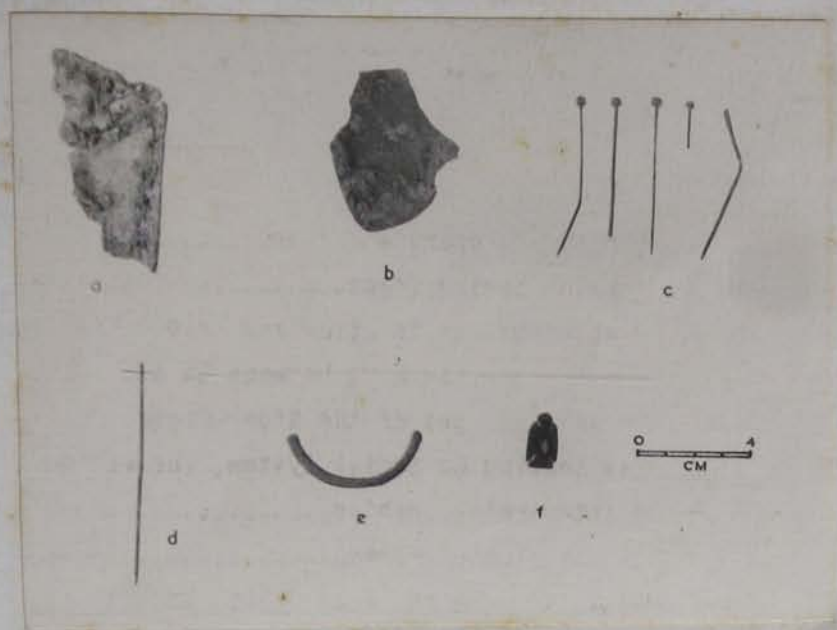
18



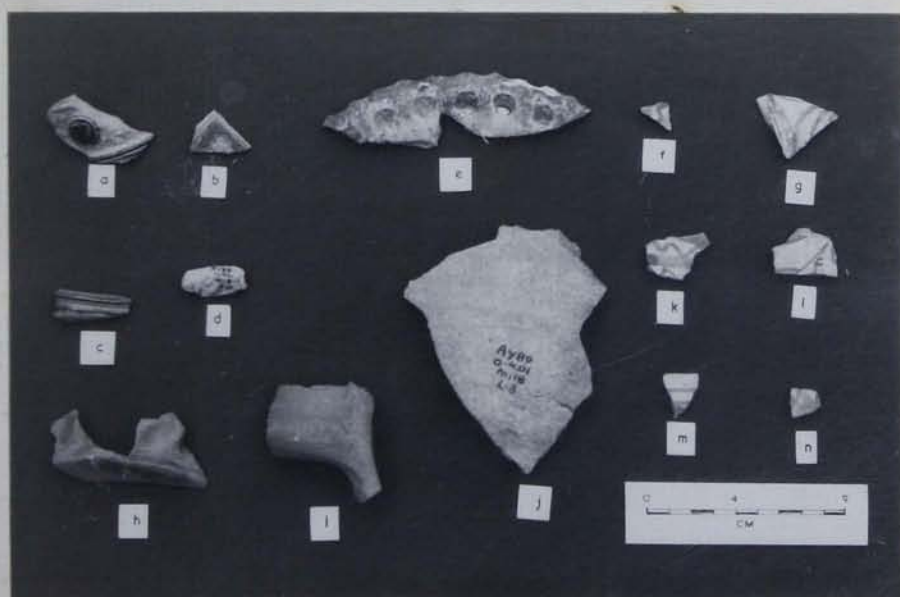
PLATE 19: Cuprous Objects

PLATE 20: European Pottery

19



20



APPENDIX A
PETROGRAPHIC ANALYSIS OF POTTERY SAMPLES FROM OKAI KOI
HILL (AYAWASO) AND OTHER SITES IN THE WESTERN
ACCRA PLAINS

SAMPLE NUMBER & SITES	MINERAL CONTENT	CHARACTERISTICS	R I
AY/CA - 1 OKAI KOI HILL (AYAWASO)	Quartz Hornblende Biotite Muscovite Sericite Plagioclase feldspar (Albite) Iron oxide Clay minerals	Shows wavy extinction, colourless in thin section. Light green in thin section with extinction angle of 16°. Two cleavage planes making an angle of 62°. Brown in thin section, has parallel extinction. Colourless in thin section with perfect cleavage and has parallel extinction. Colourless in thin section, occur in minute shreds. Shows albite twinning with extinction angle of 12.5°. Reddish brown in thin section	May be c teration or musc Clay mi oxide ar the mat
AY/CA - 2 OKAI KOI HILL (AYAWASO)	Quartz Hornblende Biotite Muscovite	Colourless in thin section, shows wavy extinction. Light green in thin section with extinction angle of 18°. Has two cleavage planes making an angle of 67°. Yellowish brown in thin section, has parallel ex- tinction and perfect cleavage. Colourless in thin sectio, has parallel extinction and perfect cleavage.	

SAMPLE NUMBER & SITES	MINERAL CONTENT	CHARACTERISTICS
AY/CA - 2 OKAI KOI HILL (AYAWASO)	Sericite Plagioclase feldspar (Albite) Microcline Iron oxide Clay minerals	Colourless in thin section, occur in minute shreds. Colourless in thin section shows albite twinning with an extinction angle of 15.5° . Colourless in thin section. Shows polysynthetic twinning. Reddish brown in thin section. Light brown in thin section.
AY/CB - 2 OKAI KOI HILL (AYAWASO)	Quartz Biotite Muscovite Plagioclase feldspar (Oligoclase) Iron oxide Clay minerals	Colourless in thin section, shows wavy extinction. Yellowish brown in thin section and make up about 70% of sample. It has parallel extinction. Colourless in thin section with parallel extinction and perfect cleavage. Colourless in thin section albite twinning with an extinction angle of 10.2° . Reddish brown in thin section.
AY/CB - 1 OKAI KOI HILL (AYAWASO)	Quartz Biotite Muscovite Plagioclase feldspar (Oligoclase) Iron oxide Clay minerals	Colourless in thin section, shows wavy extinction. Yellowish brown. Has parallel extinction. Colourless in thin section with perfect cleavage. Has parallel extinction. Colourless in thin section, shows albite twinning with an extinction angle of 13.5° . Reddish brown in thin section.

WO/K120 - 140 (WODOKU)	Quartz Hornblende Muscovite Plagioclase feldspar (Albite) Microcline Sericite Iron Oxide Clay minerals	Colourless in thin section, shows wavy extinction. Light green in thin section with extinction angle of 14.4° . and two cleavage planes making an angle of 64° . Colourless in thin section, shows albite twinning with an extinction angle of 12° . Colourless in thin section, shows polysynthetic or cross hatch twinning. Colourless in thin section appear in minute shreds. Reddish brown in thin section. Dark brown in thin section.
OP/1466 - 1 (OPA)	Quartz Biotite Hornblende Muscovite Sericite Plagioclase feldspar (Albite) Iron oxide Clay minerals	Shows wavy extinction, colourless in thin section some crack due to pressure. Brown in thin section, has parallel extinction. Light green in thin section with extinction angle of 15° . Two cleavage planes making an angle of 60° . Colourless in thin section with perfect cleavage and has parallel extinction. Colourless in thin section, occur in minute shreds. Shows albite twinning with extinction angle of 16.40° . Colourless in thin section. Reddish brown in thin section. Light brown in thin section.

AJ/53 - 1
(AJENKOTOKU)

Quartz	Colourless in thin section, showing wavy extinction	
Hornblende	Light green in thin section with extinction angle of 20°. Shows two cleavages separated by an angle of about 62°.	
Biotite	Brown in thin section shows parallel extinction and perfect cleavage.	
Plagioclase feldspar (Oligoclase)	Colourless in thin section. Shows albite twinning with an extinction angle of 10°.	
Iron oxide	Reddish brown in thin section.	Clay min
Clay minerals	Dark brown in thin section.	oxide an
Sericite	Colourless in thin section, occur in minute shreds.	the ceme of the s

CONCLUSION:

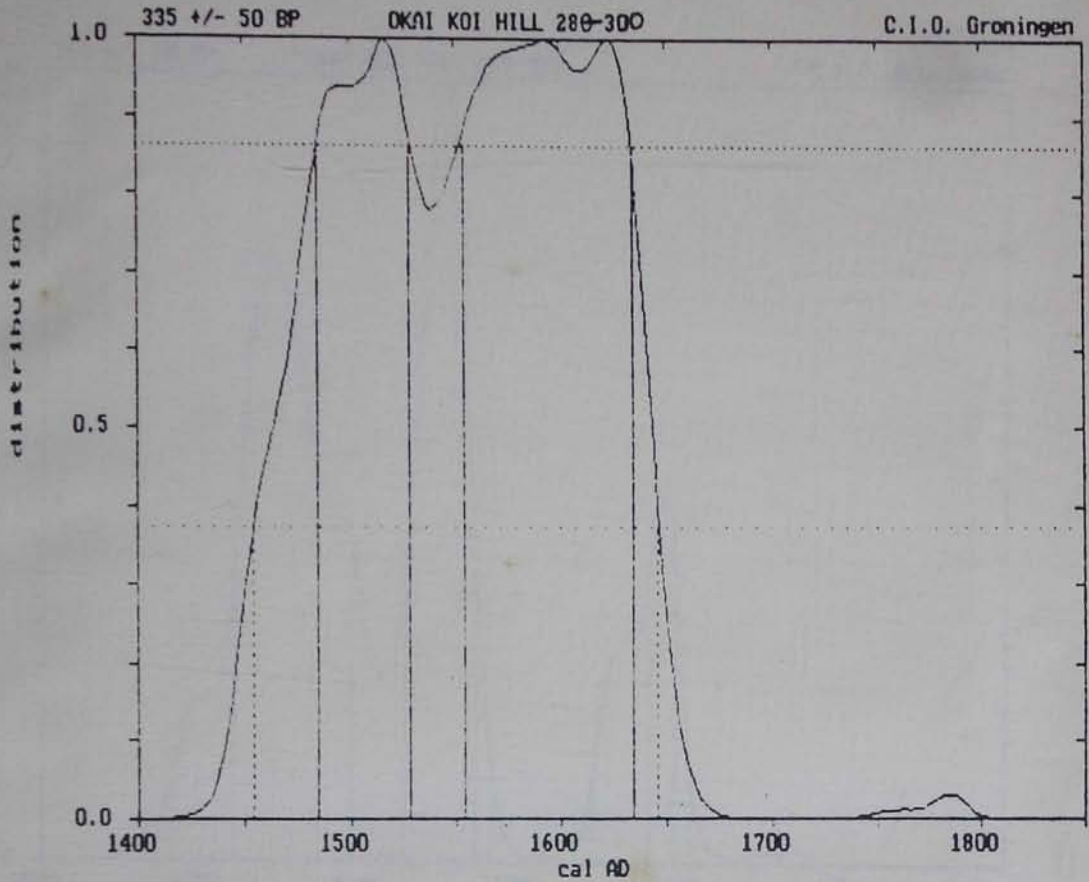
From the mineral compositions, samples AY/CA-1, AY/CA-2, WO/K120-140, OP/1466-1 and AJ/53-1 come from the same provenance. Samples AY/CB-1 and AY/CB-2 also come from a different provenance. Also judging from the mineral content of all the samples, the source rock from which they were made possibly comes from weathered rocks of the TOGO SERIES made up of Quartzites, Phyllites and Schists of western Accra. The absence of any garnet minerals rules out rocks from the eastern Accra Plains

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GEOLOGY DEPARTMENT,
UNIVERSITY OF GHANA,
LEGON.

Conventional radiocarbon dates /BP/

Lab. code	name	$\delta^{13}\text{C} [\text{‰}]_{\text{PDB}}$	Radiocarbon age BP
Deb-1231	OKAI KOI HILL 280-300/1	- 25.16	327 \pm 60
Deb-1232	OKAI KOI HILL 280-300/2	- 25.39	343 \pm 60
mean	OKAI KOI HILL 280-300		335 \pm 50
Deb-1233	OKAI KOI HILL 460-480/2	- 25.30	295 \pm 60
Deb-1234	OKAI KOI HILL 460-480/2	- 25.37	232 \pm 60
mean	OKAI KOI HILL 460-480		264 \pm 50

Appendix B-i



ANALYSIS OF PROBABILITY DISTRIBUTION :

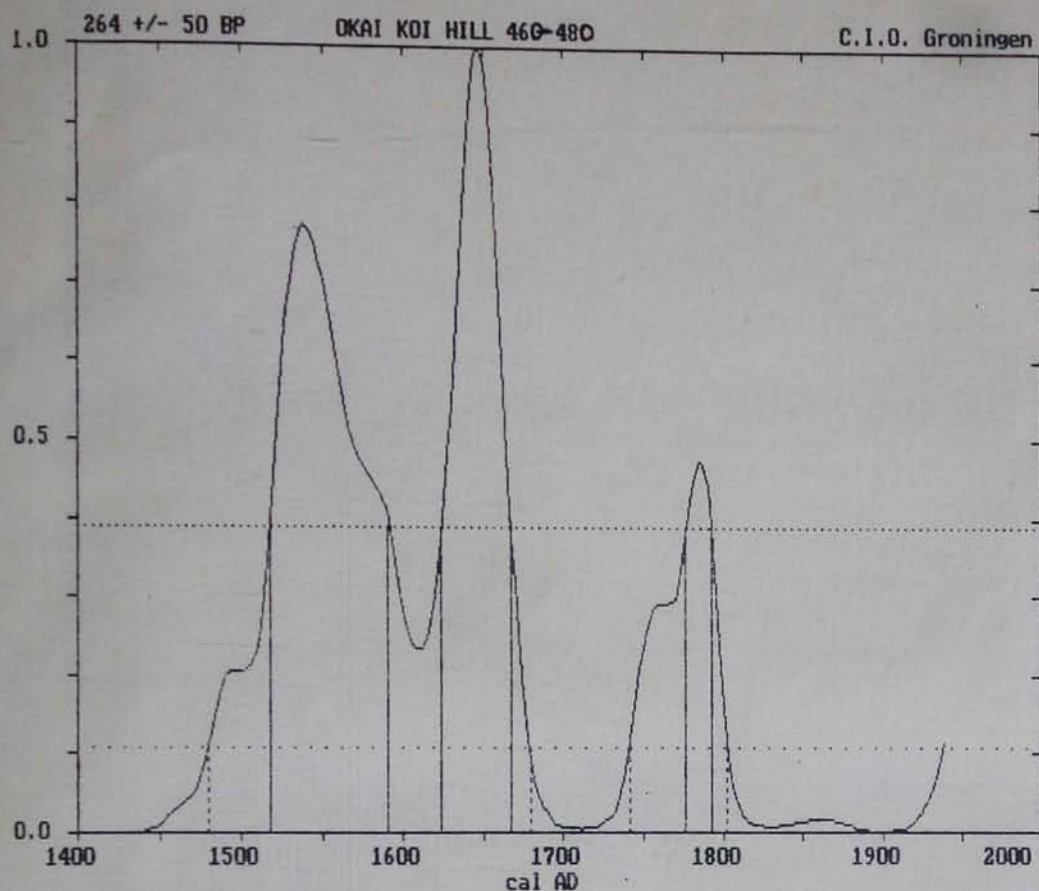
68.3 % (1 sigma) confidence level yields the following ranges :

1484 cal AD ... 1528 cal AD
1554 cal AD ... 1604 cal AD

95.4 % (2 sigma) confidence level yields the following ranges :

1454 cal AD ... 1646 cal AD

Appendix B-ii



ANALYSIS OF PROBABILITY DISTRIBUTION :

68.3 % (1 sigma) confidence level yields the following ranges :

1518 cal AD	...	1590 cal AD
1624 cal AD	...	1668 cal AD
1776 cal AD	...	1792 cal AD

95.4 % (2 sigma) confidence level yields the following ranges :

1480 cal AD	...	1680 cal AD
1742 cal AD	...	1802 cal AD

Appendix B-iii

APPENDIX C: SAMPLE SHEET*
REPORT ON FAUNAL MATERIAL FROM OKAI KOI HILL
(AYAWASO) UNIT M18

LEVEL	FAMILY	PART NAME	NUMBER OF BONE	REMARKS
1 0 - 20cm	Bos (Cow)	Femur	2	Proximal and distal ends; distal with butchery marks.
		Scapulo lunar	1	Complete
		Phalange	1	Complete
		Vetebra	1	Fragment
	Bovid (goat/sheep/ antelopes)	Vetebra	10	3 complete; 7 fragments
		Metacarpal	2	1 complete; 1 fragment
		Radius	3	fragments
		Humerus	3	fragments
		Tibia	2	fragments
		Ribs	11	9 fragments, 1 near complete, 1 charred
		Scapula	7	fragments
		Lower jaw	1	no teeth
		Teeth	5	2 molars; 2 premolars, 1 incisor
		Phalanges	4	2 complete; 2 fragments
		Astragalus	1	complete
		Naviculo-cuboid	1	complete
		Fibula	1	distal end.
		Femur	2	fragments
Bone shaft undiagnostic	8 5	fragments Too fragmented to be identified.		

LEVEL	FAMILY	PART NAME	NUMBER OF BONE	REMARKS
1 0 - 20cm	Aves (Birds)	Tarso-meta tarsus	2	Complete of cockerel
		Tibio-tarsus	4	fragments
		Femur	2	1 complete of hen, 1 fragment
		Ulna	1	fragment
		Radius	1	fragment
		Sternal rib	1	complete
		Undiagnostic	2	Fragmented beyond identification
	Pisces (Fish; freshwater and marine)	Vetebra	16	5 marine species; 2 freshwater species
		Spikes	11	fragments
		Lower jaw	9	3 with teeth, 6 without teeth but showing sockets of teeth.
Skull fragments		70	fragments.	
2 20 - 40cm	Bos (Cow)	Radius	2	1 fragmented into 2 pieces
		Rib	3	fragments
		Lower jaw	1	fragment no teeth
		Naviculo-cuboid	1	complete
		Phalange	1	complete
		Vetebra	3	fragments; 1 with butchery marks.
		Scapula	1	fragment with butchery marks.
		Teeth	1	molar
	Undiagnostic	1	fragmented beyond identification	
	Bovid (goat/sheep/ antelopes)	Scapula	4	1 complete; 3 fragments
		Lower-jaw	1	Complete with molars of Royal antelope
		Rib	12	fragments
		Vetebra	16	2 complete; 14 fragments; 1 with butchery marks.
		Skull	3	2 complete of sheep/goat; 2 of black duiker (?)
Metacarpal		3	fragments	

LEVEL	FAMILY	PART NAME	NUMBER OF BONE	REMARKS
2 20 - 40cm	Bovid (goat/sheep/ antelopes)	Phalange	3	fragments
		Radius	1	complete
		Tibia	2	fragments
		Undiagnostic	15	fragmented beyond identification
	Aves (Birds)	Humerus	1	nearly complete
		Tarso-meta tarsus	1	nearly complete
		Ulna	2	complete of a large bird (turkey)
		Femur	2	nearly complete
		Fibula	1	fragment
	Pisces (Fish)	Lower jaw	8	2 with teeth, 6 without teeth
		Spikes	13	2 complete, 11 nearly complete
		Vetebra	12	11 nearly complete, 1 without processes.

*This represents only a sample of the analysis.