

Water, Culture and Identity:

Comparing Past and Present Traditions in the Nile Basin Region



# **Water, Culture and Identity:**

## Comparing Past and Present Traditions in the Nile Basin Region

**Terje Oestigaard (ed.)**

Nile Basin Research Programme

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## *Preface*

The research group "Water, Culture and Identity" was part of the Nile Basin Research Programme during the spring semester of 2008 at the University of Bergen, Norway. Researchers from five Nile basin countries and Norway came together in Bergen to conduct research on cultural issues related to the Nile and the use and cultural implications of water. Academically the researchers in the group varied from archaeology to media and ethno-hydrology. Subjects studied varied from traditional water management in the Congo River to Stone Age archaeology along the River Nile in the Sudan and royal myths and rainmaking rituals in Rwanda.

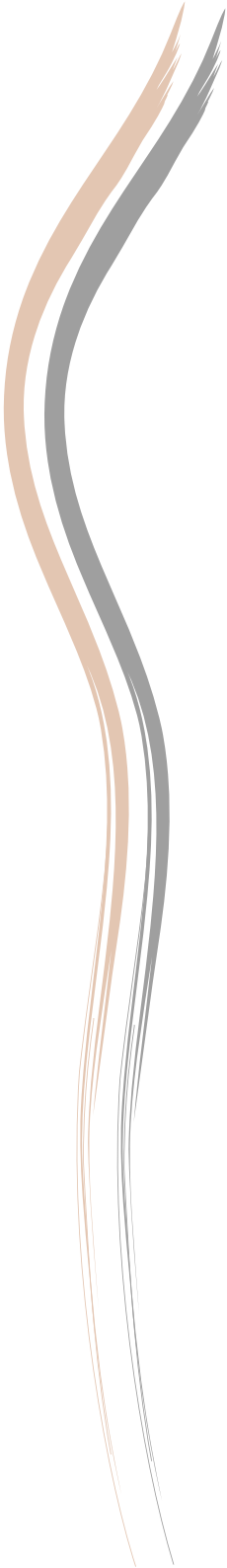
The common element in the following papers is water and how water structures ideology and society as well as the role of water and rivers for the development of societies from the past to the present along the River Nile. The River Nile runs through some of the driest areas in the world but also through some of the most hospitable and lush landscapes in the world. Traditions and cultures have been shaped through a succession of migrations and the everlasting merging of cultures. This dynamic picture is evident in the multitude of cultures found along the River Nile today.

The Nile Basin Research Programme is a guest researcher programme located at the University of Bergen. It is funded by the Norwegian Ministry of Foreign Affairs and is structurally linked to Nile Basin Initiative with head office in Entebbe, Uganda. From 2007, the programme has each year offered up to 20 guest researcher positions at the University of Bergen within different academic fields varying from semester to semester. In the spring semester of 2008 the theme was "Water, Culture and Identity". The semester ended with a three day seminar with presentations by all participating researchers and invited guests in Gisenyi, Rwanda. This publication is based on the seminar including comparative studies from other African contexts emphasising the social and cultural role of water in society and religion.

The programme wishes to thank all contributors to this volume and a special thanks to the Editor, Dr. Terje Oestigaard, for his tireless work both as an editor of this volume and as scientific coordinator for the group during the spring semester of 2008.

Bergen, October 22nd 2009

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Participants at the “Water, Culture and Identity” Workshop August 8-10, 2008, Gisenyi, Rwanda. Front row from left: Raphael M. Tshimanga, Intisar Soghayroun Elzein Soghayroun, Randi Haaland and Rose Marie Mukarutabana. Second row from left: Tore Saetersdal, Bertram B.B. Mapunda, Azhari Mustafa Sadig, Timothy Insoll and Terje Oestigaard.



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## *Chapter 1*

# **Water, Culture and Identity:**

## *Comparing Past and Present Traditions in the Nile Basin Region*

Terje Oestigaard

### *Introduction*

From the past to the present, in hunter-gatherer societies, tribes, chiefdoms, states and civilisations, among nomads, pastoralists and agriculturalists; nobody has been indifferent to the water-world in which they lived, although fewer studies have analysed the pervasive role which water has always had and still has in society and religion. Water is not only a physical substance, biological necessity or scarce resource, but also an intrinsic part of people's identities, cultures, worldviews and religious perceptions of themselves and the Otherworld or the life thereafter. Water in its many facets matters for humans, while the social, cultural, ideological and religious roles of water include deep ontological relations and identities ranging from personal perceptions and gender relations, to rainmaking and fertility rites for the benefit of the whole society as well as perceptions of cosmological realms and religious beliefs. How and to what extent water constitutes and creates identities and social values and how different and changing water-environments and water-worlds have impacted traditions and cultural values are crucial to know in order to understand cultural change in a historic perspective. Without incorporating water as a relevant variable for understanding people's identities, cultures and religions in the past and present, one misses crucial aspects of historical agencies and structures at work in society and religion with implications for future developments.

### *Objectives*

The overall aim is to study a) why, how and to what extent water has formed and still constitutes parts of people's identity and core value sys-

tems in past and present regional traditions, societies and religions in the Nile Basin region in contextual and comparative contexts, and b) how and why water as a structuring agency has been institutionalised in various societies, giving legitimacy to continuity or change in cultures and traditions throughout history. This involves

a) particular case studies with regards to how people have used and still use water, and how different types of water have been and still are institutionalised in different ecological zones and in specific cultural and religious contexts,

b) analyses of how presence and absence of different water has been and still is used as symbols and attributed cultural significance and religious values, perceived as a fundamental source of life and prosperity, but also of death and devastation, and how and why water constitutes different identities and at which levels,

c) analyses of how water is institutionalised in different types of social organisations, creating continuity in societies and how rights to water and symbols of water are actively used to challenge existing hierarchies and structures, thereby creating cultural changes, and

d) a comparison of different sub-regional identities, where water is a basis for unity or conflict transcending or dividing other political units and social organisations in the Nile Basin region as a whole and its different ecological sub-regions.

Thus, by analysing water in the Nile Basin region, the main objective is to shed new light onto fundamental matters for humans by analysing parts of the processes which constitute people's identities and lives, aiming to provide a better understanding of the dynamics of continuity and change in the past and present with implications for the future. An understanding of how and why water constitutes identities and forms cultural values will enable new knowledge with historical importance which also renders possible other solutions and alternatives to today's challenges in the Nile Basin region.

### *Types of fresh waters*

Fresh water – the essence of life – occurs in many forms and hence, it is necessary to identify and distinguish what kinds of fresh water are where

at a given time in order to understand the role of water in history and development. Following the Nile from the south to the north, it is possible to distinguish between at least seven bodies or main sources and appearances of water in different ecological zones:

- 1) Rain in general, with a particular emphasis on rainforests and the seasonal rains.
- 2) Lakes, particularly the natural lakes such as the Great Lakes in Central Africa and artificial lakes such as Lake Nasser.
- 3) Swamps, in particular the Sudd in Sudan.
- 4) Rivers, as tributaries to the Nile and to the lakes.
- 5) Rivers, the White Nile, the Blue Nile and the Atbara River as separate rivers in different ecological zones.
- 6) The Nile as a single river, particularly in desert regions with emphasis on the annual inundation.
- 7) Oases, wells and groundwater in desert regions.

These main categories of water may exist exclusively in one region or there may be a combination of different water bodies at a certain place or in a region. Thus, in order to deepen the knowledge and understanding of the Nile Basin region as a whole and its sub-regions, it is crucial to identify and analyse what the past and present regions and traditions of water-worlds were and still are, how they differ and how they relate to each other.

### *Identity and regions*

The development of the Nile Basin region and its water challenges in the past as well as in the present and for the future is not only an economic or political question of distribution of limited water, but also involves people's identities and cultural and religious dimensions of water. Although engineering projects such as dam-building and development strategies procuring and securing sufficient and safe water are often seen as mere technological activities phrased in economic, health or welfare terms, interferences in the water-worlds also include changes in identities, traditions, cultures and religions. Various types of water have been culturally and religiously institutionalised and incorporated as part of peoples' lives in particular ways and in specific contexts in the different regions, traditions and water-worlds. Hence, in order to understand the economic and

political role of water and the development of the whole Nile region, it is necessary to include cultural and religious variables which highlight the importance of water, define different types of water and analyse the role of water in creating and maintaining identities, and for the development of societies.

People's ideas of themselves and their waters in the various water-worlds are not restricted and limited to national identities, but include a range of ecological zones transcending national borders. Therefore, identities where water is a fundamental component may today represent trans-national regions and broader cultural spheres, and the identification of such regions has not yet been undertaken. With such an undertaking it is possible to illuminate how and why water as a socioeconomic and cultural variable and identity either transcends or divides nations. In other words, to what extent does water represent a supra-identity transcending national identities, or at which level and regional basis does water play a fundamental role in identities, unifying or dividing people across today's national borders and other political units in the past? The ecological diversity of the Nile Basin region with its inherent varied worlds of water renders it impossible to identify certain shared values that can be used as symbols of identity uniting different populations living in the whole Nile Basin region, but it facilitates analyses of several distinctive water traditions in the basin's sub-regions, since different types of water are given particular values and importance. Both the usage of water and the degree of scarcity or abundance at a given time enable particular ecological adaptations, possibilities and problems. Hence, have the identities founded in the various water-worlds been and are they still the solutions to the development of the whole Nile Basin region, or have they been and are they still the problems for unity and sources of conflicts, since water is fundamental for everyone and deeply rooted in culture and tradition? Through a broad multi-disciplinary approach, it is possible to analyse these questions by comparing past and present water traditions in the Nile Basin region.

### *The importance of various types of water*

Although water is a scarce resource for the majority of the people concerned, the importance of which type of water and for what purposes it is used depends upon a wide range of industrial, economic, energy, cultural and religious practices. Albeit it is physically the same water, holy

water for rituals such as baptism, ablution or purification is in a different category than the Nile's annual inundation for irrigation, nomads' needs for oases or water stored in dams for hydro-electrical purposes. This highlights the importance of addressing how different types of water are attributed with specific characteristics and why. Water represents the one and the many at the same time, and the plurality of cultural institutionalisations and perceptions puts emphasis on water's structuring principles and processes. The life-giving water is one category of waters which have such structuring qualities.

The life-giving waters are in a special category because it highlights the human's essential and vital need for a specific type of water at a particular time whether for religious purposes, agriculture or daily survival. Thus, analyses of the importance of water in society have to incorporate the cultural and religious traditions through which humans act and reconstitute themselves and society.

What the crucial and life-giving waters are, why, and which type of water is available in a given society, are dependent upon but not limited to different types of organisations of societies, modes of subsistence or agricultural practices. Nevertheless, the climate, topography and hydrological circle – ecological variables which are beyond the control of humans, but which they nevertheless have to react upon – create diverse water-worlds where not only the amount of water but also the type of water varies. Some regions and places receive most or exclusively all of their waters from the river Nile; others receive most of the waters from the great lakes or as rain, or from a combination of these sources of water together with water from rivers, whereas oases and groundwater may be the only water source in desert regions. Hence, both the amount of water and how it annually reoccurs as rain, river or being present in lakes and oases influence and affect the way water is incorporated into people's lives and worldviews. Consequently, the ways in which the various water-worlds or waterscapes are used practically, interpreted symbolically and assigned values according to local and regional traditions and norms are a result of humans' continuous and meticulous interplay and mediation of cultural and natural variables.

### *Absence, presence and the first waters*

The absence and presence of different types of water sources and water bodies are of utmost importance to understand in order to grasp the cultural significance of water. The absence rather than the presence of water is equally or even more important and structuring in a given society or region. However, not all water is the right water and the problem is not restricted to the mere presence or absence of water. Too much water at the wrong time of the year is as bad as too little water when it is really needed. Neither in the social nor the natural world is water a single and uniform matter of life or phenomenon. The world of water often consists of a combination of various water bodies, and the interrelatedness and seasonal variability of these different types of water constitutes the waterscape in which people are living. Thus, different waters are attributed with specific qualities, capacities and values according to both ecological variables and cultural traditions. People's ideas of water and the way water is crucial for identities and values in a broader culture have to be seen in relation to which types of waters are absent and present, or in which combinations they occur at a given time, because the different waters and constellations are actively incorporated into the collective body of knowledge since water matters for humans at personal, societal and religious levels.

Total absence or presence of water through the whole year is of utmost importance when analysing water's structuring role in society. However, such situations are often anomalies, apart from e.g. in deserts, since absence is often followed by presence and this puts the emphasis on the first waters. The occurrence of the first waters in the hydrological circle and annual cycle, whether as rain or inundation, normally attains a special and particular role in societies and humans' perceptions of water, and this highlights the absence and presence of which type of water and when. In those sub-regions where there is scarcity and/or seasonal availability of water, e.g. the first rains or the Nile's annual inundation, such scarcity and limited availability give water extra socioeconomic reliance and significant cultural values. Hence, in different sub-regions of the Nile Basin, various types of water are incorporated into society and religion and the absence, presence and first occurrence of these water types are given particular meanings and structuring roles which enable one to identify different waters in regional, trans-national and ecological zones.



### *Water in culture and society*

Hydrologically, these bodies of water are interlinked since e.g. the amount of water in the rivers depends upon the annual precipitation. Culturally and practically, certain types of these waters can be people's exclusive or main source of water depending upon tradition, adaptation and economy, but most often there is a combination of these forms of water at a certain place. If there is only one life-artery in society, such as the Nile in Egypt, this water will attain a different meaning and role compared to places where there are multiple water-bodies which open up for flexibility in strategies and uses of water for different purposes and livelihoods. Thus, in order to understand the role of water in society or a particular region, case studies analysing the particular waterscapes and the combinations of different types of water are necessary. Not all types of water are seen as being equally important or relevant in society, and hence it is necessary to conceptualise which and why certain types of water are given importance in daily life but not others.

Moreover, even within these overall bodies of water, the water continuously changes character. The silent flow of the Nile is interrupted by the violent cataracts and rapids, but still it is the same water. The dew during chilled mornings is different from the water droplets after heavy rain. As waters from beneath rather than above, the water in oases and underground wells attains particular characteristics. The transformative capacities of water, which turns from a fluid substance into steam by cooking, a process parallel to the hydrological circle in nature, emphasise transgression and fluidity of borders and categories. These ever changing qualities, capacities and forms of water as well as the various types of water enable the substance to be a medium through which it is possible to express and negotiate social relations and problems, and people can communicate the world they live in to themselves and to the outer world. Hence, the role water plays in defining, maintaining and negotiating identities and cultural values works at many levels, which may either oppose and contradict each other or strengthen and highlight unity and solidarity within a community or between communities.

### *Water and religion*

Water has deep ontological values. Religions and divinities can both be understood through water symbolism, and the cosmological realms can

be expressed and defined by the gods, as perceived by humans, through water. In more than one way, water becomes holy as it represents the material element of the spiritual core of religion. In many religions in the Nile Basin, from the ancient Egyptians' pharaonic cosmology to Christianity's and Islam's rivers of Eden, cosmos is either made from primeval waters or else it links or unites the divine realms to this world. Thus, water or parts of the water in the hydrological circle belong to the divine realms; either linking gods to humans or being a medium through which humans can reach their gods. Humans' perceptions of water in religions influence how, why and which water can be used in what manner, and this impacts their actions and responses to changes in waterscapes. Moreover, water or certain types of bodies of water are often seen as a divine gift, and it is therefore important to understand and document which types of waters are seen as divine gifts and why these particular waters as opposed to other forms of water are attributed with divine or spiritual qualities. Consequently, the different bodies of holy water are used variously in religiously defined settings.

The reverence of different types of water as holy or the attribution of various degrees of sacredness to water has caused controversies between the religions. The change from traditional folklore or tribal religions to Christianity or Islam, or syncretistic variants of the religions as well as the replacement of Christianity by Islam or the mutual co-existence, interdependence and influence of different religions and traditions highlight the structuring role water has in societies as a deep and resilient element and fundament in humans' understanding of themselves and their place in the cosmos. Although this basis of social and religious core values has always been changing throughout history, the ontology of water has been and still is part of the fundament in society and religion. Importantly, water beliefs and rituals often overlap and transcend dogmatic beliefs and rites in "Great traditions" or world religions. Ancient practices or relics of traditional rituals and cosmologies have to a large extent been interwoven into Christianity and Islam by the believers. Thus, syncretic practices and beliefs are often anchored in perceptions of water, and "high religions" incorporate former water rituals and beliefs as part of the religion's central beliefs and core values. It is therefore crucial to see water not only as a physical substance, but as an actively incorporated agency in the dynamics of change in culture and religion in history, since it has had a fundamental role in people's beliefs, value systems and identities.

## *Water and identity*

Water constitutes identities and creates societies in many different ways, both as symbols but also as a primary agency in culture. Cultural variation is based upon similarities and differences at various levels, which may or may not coincide with ethnicity or political units such as states. From a water perspective, the various water-worlds and types of water may transcend or divide states, enabling other identities since political boundaries may not correspond to the cultural units. These identities have their point of departure in the very physicality of the different forms of water and the biological necessity of the daily water. Which types of water are present at a given time creates human practices, responses and solutions. The availability of water creates practices and organisations of collecting, distributing and sharing of water, particularly when there is scarcity of water. The importance of procuring the daily and life-giving water creates activities, and water is thus a structuring agency in society. By conducting the same practices on a daily, seasonal and annual basis, traditions are made and the collectiveness of practices creates values and norms at household, community and regional levels which may not represent a national identity. Nation-states aim to link the social organisation – the state – to a culture which corresponds to the territorial unit. However, today's states may consist of multiple water cultures or different layers of identities which may not relate to ethnicity, and these identities may transcend or divide the political and territorial units. These identities are based upon shared values and practices founded on daily activities, modes of livelihood and religious beliefs and rituals.

Traditionally, at a household level, collecting water has normally been the task of women, thus creating gender relations but also relations and divisions between different age groups of women. The seasonal agriculture cycle is dependent upon when the life-giving waters occur, structuring the whole community through collective practices including the sowing and harvesting of the crops as well as determining the type and amount of husbandry possible. In traditional societies it was often the leader's responsibility to ensure and provide sufficient waters for the welfare of the people, and the procurement of the life-giving waters included religious ceremonies, whether as rain-making or rituals securing the Nile's annual inundation. The chieftain or king was also most often responsible for the failure of the life-giving waters, with harvest failure or famines and possible deaths

of smaller or larger parts of the population being the consequence. The occurrence of the first waters was celebrated with religious and cultural festivals as well as other celebrations related to the agricultural cycle and syncretic water rituals as part of the world religions. All of these practices with implications for life and death created shared experiences, values and norms which constitute traditions and cultures to a greater or lesser extent. Shared social and religious experiences become core value systems when these experiences are structurally institutionalised into the body of collective knowledge through people's own identification of the importance of these practices and the values they attach to them. Consequently, in different water-worlds there are different traditions and cultural practices since they do not share the same experiences.

### *Power, tradition and cultural change*

The legitimisation of social structures and the change of traditions are inevitably connected to power. From the organisation of the women's queue at the water well early in the morning to the distribution of a certain quantity of water among households and clans which they may use for irrigation or husbandry, the scarcity of water is hierarchically structured where some receive more water than others. Wealth is thus intrinsically connected to power and hierarchies, which in the past culminated with the chieftain or king who, as responsible for procuring the life-giving waters, could be sacrificed for society's prosperity if he was unable to fulfil his water obligations towards his people.

From the highest level in a given society to internal gender relations within a household, water constitutes not only identities but also social organisations and hierarchies. Hence, there have always been struggles and contests regarding these structures at a given time within a specific social or political unity. By changing existing water structures in a society, this enables hierarchical mobility since legalised access to more water is converted into economic, social and political wealth. From taxation policies at a state level to redefinitions of rights at the local level to exploit more of a community's shared and limited water which enable certain persons more crops or husbandries, including internal hierarchies within such water units with regards to division and organisation of labour and/or exploitation, individuals aspiring for wealth and power may have particular interests in challenging existing water structures. Water is power

and consequently an agency in the constitution and continuity of societies, as well as a driving force for those who would like to change existing structures and traditions with subsequent implications for cultural change.

### *Water themes*

Through an interdisciplinary approach to identity, culture and religion with emphasis on archaeology, history, anthropology, folkloristic studies, science of religion and cultural sciences, it is possible to identify some overall time periods, societal complexity, and themes in a historic perspective in relation to the above mentioned main forms or bodies of water. Since water is interwoven in all kinds of social life and institutions, water as an approach opens up new insights into these themes:

- Economy, subsistence and livelihood, including prehistoric and historic aquatic adaptation, hunter-gatherers, nomads, pastoralists and agriculturalists, and how constellations of various livelihoods have influenced their perceptions of water and how water has been culturally institutionalised
- Identity and gender, with emphasis on how water defines identities and relations on an individual level, but also how water practices and beliefs structure families and households, including gender constructions and divisions of work between men and women and between different age and gender groups.
- Ideology and culture, including how water practices create common experiences from a household-, village- and clan-level to more supra-political units such as states, and how people's cultural understandings of themselves correspond, differ or transcend different types of social and political organisations.
- Religion and rites, including rainmaking rituals, prayers and hymns to rivers and other sources and types of water, and how water is used as a metaphor for understanding eschatological and cosmological principles of the world, divinities and the life and consequences hereafter.
- Transmission and transformation of tradition, with emphasis on how water through history has been a resilient bearer of tradition, but also how water has been actively used to transcend, bridge or challenge contradicting conceptions and values; i.e. how water has been a formative agency in the constitution of society and tradition by being used to (re)define core values and norms with which people identify themselves.

- Power and hierarchies, with emphasis on the formation and organisation of societies from household and village levels to tribes, chiefdoms and state levels, and how concepts of water as well as legal claims to water are used to legitimise, challenge and change hierarchies, social organisations and structures.

These overall types of societies and organisations, themes and different bodies of water enable comparative studies on how and why water has been a crucial and formative agency in history at personal, societal and religious levels in both the past and the present. By emphasising and comparing different people's understandings of themselves and their water-worlds in various and changing ecological settings through history, it is possible to identify and analyse in depth the role and meaning of water in the history of the Nile Basin region in contextual and comparative contexts. Water constitutes personal and collective identities at various levels. By analysing and comparing water in different sub-regions and ecological settings, one may identify cultural variables and identities which have transcended or divided political units and social organisations in the past and continue to do so in the present, with subsequent implications for the development of the Nile Basin region in the future.

## *Chapter 2*

# **Traditional Values and Uses of Water along the upper Congo River**

Raphael M. Tshimanga

### *Introduction*

In the beginning and late 20th century, the management and development of water resources were forged through maximum yield principle, in which hard core engineering was dominating. Building upon past experiences, a shift or recognition of the social, cultural, economic and political dimensions surrounding water has been found pivotal for the sustainable management of water resources. As a result, more importance has been given to communities and societies (Evans and Appleton 1993; Blagbrough 2003; Schouten and Moriarty 2003). Stakeholder participation in water resources management has become widely acknowledged as essential for sustainable development (Chambers 1983; Wilson 2006). Themes related to water and cultural diversity have been given much attention in international arenas (UNESCO 2006).<sup>1</sup> Local knowledge and traditional practices are seen as fundamental for water resources management.

However, it is still claimed by many that human factors such as behaviors, attitudes, practices and knowledge are not sufficiently included in water management and decision making (Barnes and Ashbolt 2006). While demonstration of links between water and culture, or artistic expressions inspired by water are common, UNESCO-IHP observes that systematic analyses of the relationships between cultural diversity and water and their implications for sustainable management of water resources are not. The lack of integration of cultural factors in water resource management and policies creates a large gap, which can be addressed by a comprehensive and systematic assessment of research and case studies on the topic of water and cultural diversity.

An ecological region of rich biodiversity, the upper Congo rainforest sustains millions of people who rely on the ecosystem resources for their

water supply, food security, shelter, livelihood and social welfare. Among the resources provided by this biotope, fresh water remains abundantly distributed. Studies conducted in the area have revealed a strong relationship between waters and settlements (Kuper and Leynseele 1978; Bailey et al. 1989; Vansina 1990; Vansina 2006). Subsistence strategies, seasonal activities of the populations, pattern of territorial organization and social relations within communities and between communities seem much grounded on water resources.

Although some pioneers have succeeded in establishing a humans-habitat-ecology relationship in the area (Turnbull 1976; Waehle 1986; Hart and Hart 1986; Bailey et al. 1989; Vansina 1990; Laden 1992), it is important to notice here that few have been depicted as far as the water resources management concept is concerned. The background of water uses and related local values are a forgotten part of the scientific studies. Water uses are mentioned, but not in a systematic explanatory way; local practices and technologies are usually perceived from an ethnological perspective which does not place emphasis on the level of their effectiveness and productivity.

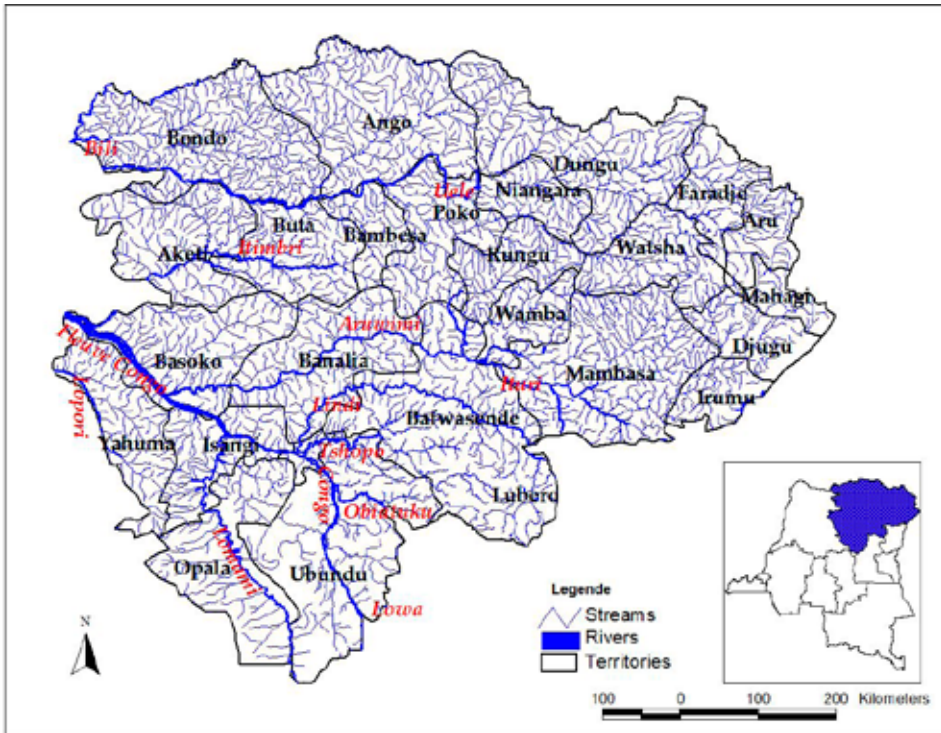
The main intent of this research remains that of exploring, identifying and documenting related local values and practices of water along the upper river Congo. Generally there is a relationship between the aquatic environment-settlements and subsistence, and social organization is a response to this relationship. In the following sections, the elements of social systems along the upper Congo aquatic environment will be indentified and analyzed. This may be necessary as it gives way to understanding some local practices of water resources protection and conservation.

### *Study area, waters and settlements*

Known as rainforest, the area along the upper Congo River offers a mosaic of ecological diversity composed of various eco-zones (fig. 1). In this eco-region, the Lualaba River drops 60 m over a distance of just 100 km and emerges from the rapids with a new name – the Congo River. North of here are the Lindi-Aruwimi-Bomokandi river systems, which take their rise from the foot of the eastern mountainous arc, and boost the flow of the great Congo River to 7000m<sup>3</sup>/s (Hughes and Hughes 1987).

The major part of the landscape in this system belongs to the Congo Basin and is covered with a dense network of permanent watercourses





**Fig. 1.** Map of the northeastern Congo showing territorial boundaries and hydrographic network.

which flow into the Ituri and its main tributaries: the Epulu, Nepoko, Nduye, Lenda, Ebiena and Ngayu rivers.

A small part of the landscape belongs to the Kibali-Bomokandi Basin, which constitutes the head of the Uélé-Oubangui system. The rivers of the region have moderate high waters with the maximum reached between September and November. After heavy rains, the small watercourses undergo brief high waters which disturb their beds and take away debris. Flood plains are rare in this landscape and are limited to the largest rivers in the west, especially the Ituri, the Lower Ngayu and the Lower Lenda. The heads of numerous streams have poorly drained areas that create dendriform networks of marshy environments.

The Uele River and its affluents, the Bili, Uere and Bomokandi rivers, drain woodland savannas in the north and east and mixed evergreen forests in the south and west. The Uele River begins from the Blue Mountains at an elevation of 1620 m, and then traverses the high plateau for 1170 km before joining the Ubangui River below 500 m in Yakoma.

Astride the equator, the area of the northeastern Congo lies between two extreme inter-tropical weather fronts. Most of the rains come from the Atlantic Ocean during the summer in the northern hemisphere and from the Indian Ocean during the summer in the southern hemisphere, although even then the coastal regions still derive their rains from the Atlantic. Most of the area receives between 1600 and 2000 mm of rain annually. October is the wettest month with rainfall of over 200 mm, while December, January and February are the driest months.

Although the difficulty of establishing firm evidence of the ancient inhabitants of the rainforests has been recognized, some archeological finds can be used to trace the early communities that would have occupied the rainforest several thousand years before our era. Vansina (1990) depicts the archeological sites, most of which emanate from rivers, of the most ancient Stone Age hunters and gatherers. For the northeastern part of the Congo, these rivers include the Bomokandi, Ituri, Lindi and Aruwimi rivers.

Keim and Schildkrout (1990) observe that the presence of early hunter-gatherer inhabitants in the rainforest is indicated by several finds of polished tools, especially sturdy axes made of hematite, a very fine grained iron ore. Similar tools have been found between the Mbomu and Uele rivers in the savannas, farther east to the rim of the mountains bordering the great lakes, and also south of the Uele and west of the Bomokandi valley in areas that were still heavily forested in 1880. The complex has been called the Uele Neolithic by archeologists.

The Glottochronological data used by Vansina (1990) to demonstrate the expansion of the Western Bantu, at least for the Northeastern Congo, result in the establishment of two main centers of dispersion, consisting of the Buan linguistic group in the valley of Bomokandi and the Soan linguistic group in the valley of Itimbiri.

Following this dispersion, the whole forest area of northern Congo was then settled by speakers of the northern Congo languages. Along the way, the rainforest eco-region continued to attract immigrants most likely coming to take advantage of the resources offered, namely animals, game, fish, water and agriculture productivity. This area of settlement was comprised of the deep forest of the Lindi River valley, east of the Nepoko River, southwest of the Bomokandi River, south of Itimbiri and the banks of the Aruwimi River. Therefore, the relationship between water and settlements is obvious.

### *Eco-concepts: Understanding the environment and its values*

Water represents a cross-cutting substance that sustains the performance of customary rituals in the Congo rainforest. This ranges from rituals of transition to life-stage, witchcraft, magic, neutralization of bad luck, healing and baptism, etc. This focal area will draw attention to a diverse range of practices rooted in customs, beliefs, knowledge and values of local people. In this section, the inherent value of water as it contributes to sustaining social and cultural activities of human life will be revealed. These are performance of customary rituals and recreation. The intention here is not to describe the rituals from an anthropological point of view, but to depict the intrinsic value and use, or otherwise the cultural significance of water in the traditional world of the Congo rainforest.

In the indigenous system of knowledge of the Northeastern Congo, people have conceptualized the world around them in terms they understand and which are distinctly separated into forest, land, bush and water as components of the ecosystem. Sometimes the distinction between bush and land is not overt, but the basis for this distinction would be linked to the products acquired for subsistence and thus, relies on a combination of aquatic products (fish), forest products (meat), bush products (cultivation) and land (village, cultivation).

The forest is like a father and mother for the forest people (Turnbull 1976). Like a father or mother, it gives them everything they need: food, clothing, shelter, warmth... and affection. Normally everything goes well, because the forest is good to its children. But when things go wrong there must be a reason. They believe in a benevolent deity or supernatural power which they identify with the forest. To this they owe as much respect, affection and consideration as they owe to their own parents, and from it they can expect the same in return.

This perception of the role of the natural environment, which is somewhat personified and deified, matches with that of the riverine people. The Lokele call the Congo River *bolanga*, meaning a cultivation field. As such, it sustains their needs of everyday life and requires their care in return. There is an obvious symbiosis maintained between human and river, which can explain their existential sharing. The river provides food and fish, is calm and does not chasten as it receives fellowship. When carrying out the project of water resources development such as the construction of

a bridge, barrage or water supply facilities, custom demands a subsequent offering of goods given to the river for acquiring success or sustainability for the project. Usually these offerings are in the form of salt, oil or soaps which the chief representative casts into the river.

In the Wagenia tribe there is a belief that fishing is the only subsistence activity which God provided for them.<sup>2</sup> During my survey in Kisangani, a Wagenia elder, Mr. Botowa, mentioned that "it is like a curse for us that we cannot grow crops; we are afraid of the forest as the forest people are afraid of the water."

In the Ngbandi oral traditions, the forest is a region of wild beasts.<sup>3</sup> Nobody walks in the forest all by himself because here lives Kaina - the god of the forest (Moen 2005).

Water is clearly distinguished as flowing water found in the rivers and streams, and stagnant water found in ponds and swamps. Swamps are well known for the category of special fish (anguilles) they contain.<sup>4</sup> As the legendary ancestors of the Ngbandi themselves, the water of the river which constantly flows comes from a high sky from where it falls. The concept of the river relies much on the functions that it performs. Molet (1971) reports that in the Ngbandi perception of the world there is a link between some substances and the ulterior world, such as the forest and the river. There is a corresponding relationship between substances or colors that transfers strength and energy. The power of the river, for instance, is the water itself and a substance of clay which is associated with the river. The colors correspond with the color they ascribe to different spirits of nature. Thus, white corresponds with water and river spirits, and red corresponds with the forest geniuses (Moen 2005).

This concept of color is also met in the Wagenia tradition, as it is related to Wagenia beliefs on the origin of their fisheries which would have been provided by their ancestors living underwater. One example of this is a white marginal figure that occurs in the myth about the Wagenia's departure from their former place of residence (Droogers 1980). The canoe they wanted to travel in was lying on the bottom of the river and was inhabited by the spirit of an ancestor. The man who eventually raised the canoe to the surface, Lesali, went to ask this ancestor spirit for help and according to the story, everything subsequently turned white from the water and he was promised assistance from the spirit. But before the procession, Lesali colored red both himself and the liana, with which he was going to pull the canoe out of the water. Upon departure, Lesali told those who re-

mained behind that if they saw the river turn red, this would be a sign that he had died. Traditionally, people used to be colored red at regattas, which is a type of boat race originally held on the occasion of the launching of a new canoe. Anyone catching a crocodile in former times would subsequently color his arms red, and when a snake was caught all the villagers used to color themselves red. White was hence the color of marginality or liminality, and red was more specifically that of the integration period or incorporation into the Wagenia culture (Droogers 1980).

Water is alive because of its very movement and is therefore a source of life. Thus it is related to woman, who is fertile and the bearer of life. Life is linked to water for people. Even in the bush, the Torondo are expected, despite their wanderings, to have their webbed feet and homestead near ponds or swamps (Molet 1971).<sup>5</sup> With its relative regularity, the annual rhythm of the river gives a sense of security enabling local knowledge that allows the people to take precautions. Unexpected or unusual phenomena such as flash floods, waves, change in the course, submerging islands, undermining banks, capsizing canoes, drowning, etc., are treated as mood swings and angry outbursts of the geniuses. Moreover, despite the immensity of its water table, the length of its course and the speed of its current, the river is more or less tamable and domesticable through the use of canoes and fishing; the advantages outweigh the disadvantages, benefits outweigh mischief, and confidence outweighs mistrust.

Without being truly personified, the river is represented by various aquatic geniuses (*ginaro*), some of which, like Mbomba and Kanda, are probably the very ancient ancestors.<sup>6</sup> They hold a special place in the belief system. They are given feelings and behaviors of humans and are attributed the anomalies or irregularities of the watercourse. The impressive geniuses of water subdue to the reverence and are considered to be beneficial. This brings out the general concept of *Mamy wata*, an aquatic genius known in many riverine communities along the upper Congo River and widely illustrated in paintings where she/it appears in a dimorphic form with its superior part of the body representing a woman and inferior part representing the tail of a fish. Langley (1979) observes that the genius is specifically known among the riverine people of Kisangani, such as the Lokele and the Turumbu. *Mamy wata* is reportedly known as a genius of wealth as it brings riches to the men who, in return, will stay faithful by preventing themselves from having intercourse with the earthly women. This justifies the Christian practices in the region, which consist of casting

the spirit of Mamy wata out of a new believer who has reportedly been in contact with this aquatic genius.

In the eyes of the Ngbandi, the spirits of water are guardians of water who ensure provision and security. The teeth of the crocodile are holy objects that represent the force of the river, as the ashes and the hide of the leopard, respectively, represent the earth and the secret of the rainforest. With regards to the Ngbandi's perceptions, these materials are links that put people in connection with the forces of nature (Moen 2005). Therefore, the tools used for e.g. fishing were to spend a night at the same place with the crocodile teeth (kaina, god of the river) for eventual success in catching fish.

The river morphology has a special meaning in the beliefs of people along the upper Congo River for the performance of some cultural endeavors. The upper reach of the river, which varies depending on the flow, is the visible level of water that varies in proportions fairly well known and which form an area known as "water edge". This fringe starts from the top of the abrupt slope of the river bank and ends at the submerged part where one can get off on foot or out of the back of a boat attached to a boom onshore. This border zone is an ambiguous area belonging both to the river and the village without a clear distinction. It is a mixed area where people throw garbage and detritus, and where people grow some crops such as cassava and sweet potatoes. This ambiguous zone is in contact with both worlds, the human world and the world of water, and this is where some meetings may occur with ginaro, who threatens passersby on the banks. It is used to cast the shells of oysters and thus, it is in this zone that offerings to aquatic geniuses and also initiation ceremonies are done. Similar to this zone are all areas on the watercourse where land appears and rocks, sandbanks, thresholds, rocky islets and islands emerge. These are areas of probable encounters between geniuses and people, and one must be prepared when frequenting these zones, ready to confront them or to flee. The men in their canoes and the women who dive to collect oysters or dig the seams of clay should be on good terms with ginaro, not only to placate them but also in order to attain a good token.

Ngbandi people have strong beliefs in related water intrinsic values, which incarnate the meaning of life in their day to day activities. They distinguish between the spirits of the stream, "Mbomba" or "Sangu", and the spirit of the waterfalls, "Bekpwa", who reveals himself from time to

time as a rainbow (Moen 2005). In the eyes of Ngbandi this rainbow is both a snake and a dragon. It was identical with the twin/snake children, and was looked upon as a kind of aquatic serpent with a red colored belly and a black colored back. Cited in Moen 2005, Leyder (1935) interprets this as mythology that has passed from generation to generation. In mentioning the rainbow, it is important to mention that in the rainforest eco-region, especially from the Bantu point of view, the rainbow (identified as a snake) appearing in the sky before or after a rainfall is seen as playing a prominent role to attenuate the effects of a heavy and destructive rainfall. This notion of the role of the rainbow is most likely drawn from biblical perception of the role of the rainbow after a deluge, which God gave to Noah as a sign of an established covenant providing security and protection against flooding (Genesis, 9: 8-17). The Ngbandi people call the real great spirit and lord over the rivers "Kilima", whose presence is believed to indicate that someone in the village has drowned in the river. Another malignant water spirit is "Banda", who can poison fish so it becomes inedible.

The indigenous system of knowledge in northeastern Congo is very limited with regards to groundwater resources. Springs, especially those flowing from a rocky mountain, are known for their good quality of drinking water. On the other hand, rainfall is a well known source of water and as such is very significant for food security in rain-fed agriculture, gathering, hunting and fishing. This will be highlighted in relation to rainwater and the production systems in the last section of this study. Hunters, gatherers and fishermen are not rain-water consumers, but their productivity is very much dependent on the rainfall patterns, which include dry and wet periods. The rain is known as *ngu ti Nzapa* (water of Nzapa), probably the name of a heavenly genius, who is believed to translate the words of God.

Rainfall is not always well perceived, as it spoils the pygmies' hunting and alters the Wagenia rituals of initiation. If the rain was threatening during the initiation ceremony, people would shout to the deity who produced rain. Droogers (1980) reports that during a heavy downpour, one woman walked in the rain alone while everyone else took shelter, shouting accusingly "who has brought down rain during our initiation?" A few songs were sung, preferably at the actual moment of farewell, when novices departed from the village for their rituals of Wagenia initiation: "The initiation has begun, Wagenia, go to the beach. Tshebeke is not afraid of the

rain, Tshebeke protects against the rain. The initiation is doing steps on the spot; go to the beach, Wagenia. Leave us, we are still drinking beer."<sup>7</sup> This illustrates an ideological level where water is intrinsic to the local practices and the symbolic opposition between rain and the Wagenia ritual.

This symbolic opposition is also expressed in the BaMbuti perceptions of the relation between fishing and hunting, or between land and water (Ichikawa 1987). Fishing is closely associated with water. Hence, rain spoils the hunting which is the men's principal activity. Only women and children can eat frogs, fresh water crabs and snails. When they eat these animals, however, these should not be cooked in the same marmite with that used for cooking meat. To do so would spoil the hunt. Putnam (1984) points out that these animals are associated with water, and therefore the rain which spoils hunting is an expression of the symbolic opposition between rain and hunting. This ideological level has shaped a range of BaMbuti perceptions. *Nba* in general is a term associated with behavioral prohibition towards hunting and it is said that apakumadura (the master of the forest) will get angry and make the forest cool and closed to the Mbuti if the prohibitions are violated. For instance, spilling cold water over the fire in the morning before going out hunting is perceived as an offence to apakumadura.

By emphasizing the ideological level of the rainfall concept, reference is made to Bailey et al. (1989) who report on the fearfulness of the Efe against rainstorms. Not only does rain lead to discomfort, but the high winds are potentially very dangerous, causing rotting vegetation to crash to the forest floor and large trees to be whipped about like wheat in an open field. Indeed, for the Efe, the greatest danger in the forest is not posed by snakes or animals, but by falling trees and branches (evil spirits) provoked by rainstorms.

Besides this symbolic opposition, rainfall is a source of water and thus a source of life. Water from rainfall is also used in healing rituals. This is the case of the *mayi ya liloko*, where water is collected in the forest from a receptacle of a tree, usually formed between the ramification of two vertical branches. It is reported in the Lokele tribe that this water is useful in treating diseases. According to perceptions of the Bantu, a population which constitutes a large majority of people living in the area, rainmakers are seen as sorcerers and their practices are believed to kill people.

Before I close this section on the intangible value of rainfall and the symbolic opposition that it reveals, I would like to stress the ideological



productivity of water. In July 1964, a rebellion began in the Eastern Congo with its bastion in Kisangani, ignited by the abuses of the newly established Congolese central government. The leaders of the rebel movement were leftist in ideology, but most of the rank and file was composed of spear-toting tribesmen from the Kivu and Orientale provinces. The rebel movement called Simba (meaning Lion) had great success at its inception, causing terror among the national troops that had been scared into head-long retreat by witch doctors together with only forty Simba fighters. They succeeded establishing their base in the major part of Kisangani (at that time named Stanleyville). They relied on the use of waved palm branches as part of their supernatural arsenal without any use of guns. However, the effectiveness of this witchcraft was hampered by a reluctance to fight during rainstorms. As we can see, a general belief is revealed here on the role of water against witchcraft. This role is imbued in local beliefs to the extent that water was being used to neutralize a presumptive action of evildoers. One could spread water wherever a place seemed to have been bewitched by sorcerers, meaning the water will neutralize the evil. Some families subject to evil attacks might set out a bucket or pot of water at their door entrance to prevent any evildoer (sorcerers) from coming to hunt them.

During the conflict that ravaged the eastern DRC from 1998 to 2003, another movement known as Mayi-Mayi (Water-Water) arose. The movement was based in the Kivu and Orientale provinces and had its strength in the use of water to carry out its victorious fighting. It is reported that they used to hold water in containers around their necks and sprinkle it everywhere and yell "Mayi, Mayi". In the Simba's case, if rain water was an hindrance to the success of the procession, here on the contrary there is a productive effect of water in war. This, however, puts emphasis on rainmakers, who are generally known in the Province Orientale for their practices of rain-making aimed at killing their enemies. It should also be emphasized that in these practices of war and rainmaking, rituals are performed which use water as the object of their performance.

The practices related to water resources in the northeastern Congo are based on the aforementioned beliefs and perceptions. A number of rituals and taboos are ipso facto observed. Someone crossing a river for the first time has to give an offering to the river as a sign of being blessed by the spirits. In the Wagenia culture, there was a rule that the relatives of a deceased person should bathe in the river after the funeral to get rid of the

odor of the deceased, just like the novices washing away the odor of camp after the Wagenia rituals of initiation (which will be elaborated later).

In funerals, the tool used for digging the grave is likewise washed in the river. In former times persons in mourning used to refrain from washing themselves for several months after the funeral. At the end of this period the widow or widower was washed in the river, dressed in new clothes and painted red. This was done by other widows or widowers, respectively. Another example is when the relatives of a deceased person were washed in the river and their heads shaved after the funeral. Likewise, the head of a deceased person was shaved when the body was washed. It was noteworthy that an important transition such as marriage was not accompanied with a river bath or shaving of the head.

Menstrual blood and blood after birth were disposed of in the river as well as the umbilical cord after it fell off (preventing the sorcerer's action), along with the peels of bananas eaten un-mashed by the mother during her lying-in. In the latter example, the desire for more births and good fish catches was expressed. Miscarried fetuses were likewise cast into the river. The issue of menstrual blood contrasts here with the pygmies' rules, whereby menstrual women are not allowed to bathe in the river or carry drinking water (Turnbull 1976).

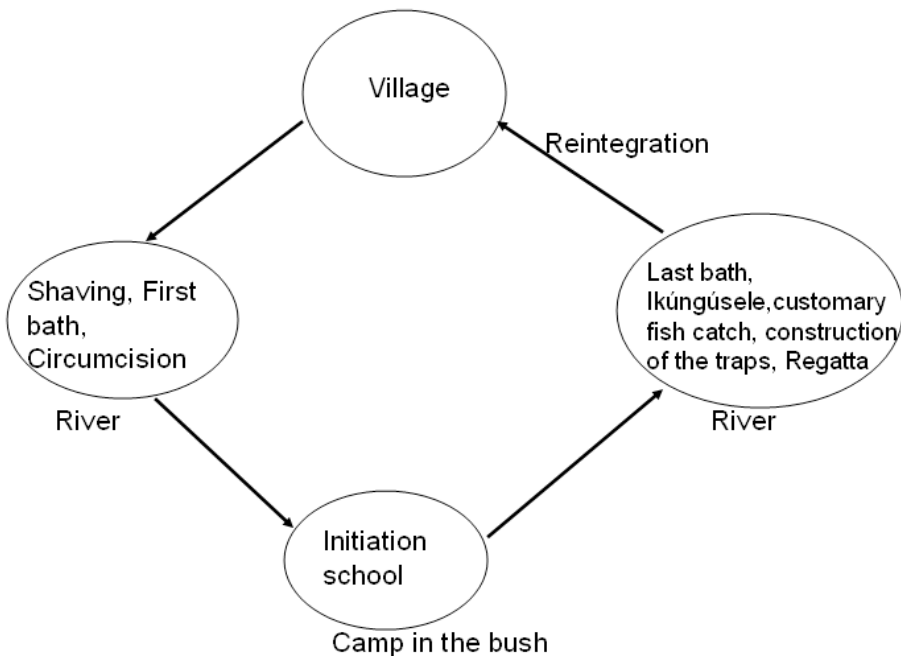
In Wagenia culture, the baby's first river bath half a year after its birth was a sign that the infant had survived the first months of its life and had not fallen victim to the high infant mortality. After this bath the child was allowed outdoors and outside the village. A child born after the premature death of one or more children of the same mother was placed in a canoe, which was allowed to float freely on the water without human intervention for a few moments the first day of the child's life. After its boat-ride through no-man's-land, it was pulled ashore again with the exclamation "we have found a baby". Such a child was named Bvoloiyaba, i.e. "dead fish (floating on the water) of the river". The exclamation was accompanied with the wish "catch us fish, Bvoloiyaba".

### *The Wagenia rituals of initiation*

Wagenia is a riverine tribe that has built its fame upon water. Their ability to manipulate the river flow in the cataracts, their fishing techniques in the waterfalls and their initiation practices have provided them a reputation for being the finest watermen of the river Congo (see Dedave 1957

for further references). The Wagenia way of life places emphasis on the individual and experiential component of knowledge that indicates a new direction that clearly brings out a differentiation in the role played by individuals in their society. This differentiation is determined by the initiation ceremonies, but may ideologically start from childhood. Thus, boys (men) differ from others in the category of the non-initiated, namely the women and girls.

Initiation thus plays a prominent role in emphasizing this societal differentiation. The initiation enables boys to assume their place in the respective areas of their social system. As the Wagenia are the “finest watermen” who build their lives from the resources provided by water, the initiation as a way of life is important in numerous spheres: Ensuring transition from childhood to manhood and integration into the Wagenia conceptual world; developing a physical stature for affording fishing enterprise in the cataracts; and it has a transmission function as cultural heritage, which is fishing. Droogers (1980) notes that circumcision was the final touch to this process, whereby the boy would become conscious of his sex role. The



**Fig. 2.** The Wagenia initiation of young boys and cultural use of water.

cycle of water use in the Wagenia initiation of young boys involves more or less the stages as summarized in figure 2.

In particular, the Wagenia perception of their living environment is the establishment of a tripartite world composed of river, bush and village. The ideological order of life in the village is ensured through transition from one social status to another. The bush is generally unknown to Wagenia fishermen, and is considered something dangerous which they left for the bush tribes to deal with as they like. For them it is neither a place of residence nor an area in which they may seek a livelihood. As far as they are concerned, the bush is uninhabited. The river constitutes a buffer between the village and the bush, a station between the inhabited and uninhabited worlds. The river is not a place of residence either, but is of extreme importance as a fishing-ground. Below the river, the spirits of the dead are believed to be living. The river is a convenient liminal symbol. In the initiation, the river has several functions; namely where the circumcision takes place, it is where the first bath is taken by the novices after their departure from camp, and it is also the location for the customary fishing.<sup>8</sup>

Once all the boys were picked up, the procession would go in the direction of the river beach to one of the permanent circumcision grounds. Here the circumcision takes place and only men are allowed to be present. During the circumcision, a symbolic position is to be observed. The circumciser and his assistants take up their position at the water edge, sometimes with their faces painted to indicate their role. The usual position for a novice during circumcision obliges him to stand with his back turned to the river bank, and consequently to the village, so his face points towards the water of the river. This makes it clear, as the circumcision is perceived as an act of sealing the farewell from the uninitiated remaining back in the village. During this process, the novice may be seated on the lap of his maternal relative. The foreskin removed from the penis is cast into the river. This is believed to produce great masses of little fishes (mokembe), allegedly because they feed on the prepuces. A successful ceremony is announced by men diving into the river and beating the water with their sticks. Droogers (1980:41) reports some songs which are sung during circumcisions:

“We are frog: The frog is dreaded, and no-one will venture out on the river in one. We are the punting-pole: By-name of Bina Mongula, whose men had to use punting-poles to reach the less accessible fish traps in the cataracts. We are small flies [i.e. the flies swarming in clouds above the water in the mornings]. We are ikau [i.e. a variation of liana used for the construction of fish traps, which coils itself around other plants and chokes them (*Ancistrophyllum secundiflorum*)]. We are the bank [i.e. we keep watch over the river so that no one is able to pass].”

However, some boys would have been circumcised long before coming to the circumcision ground. It is nevertheless significant that these boys do not go straight to the camp, but are taken there by way of the river, just like the boys who had not yet been circumcised. For both categories the insertion of an immediate term, “the river”, from the village to the bush has the intended effect of the transitional order.

When the circumcision is over, the procession is led in the direction of the camp in the bush. Here life is characterized by learning the conceptual Wagenia world. The novice has to understand the functioning of the world in which he lives and to apprehend his masculinity role. One of the objectives pursued in the camp is for the boy to attain a required physical stature enabling him to perform the men’s role. This objective is achieved through a special diet. According to this diet, the only meat the boys were allowed was elephant’s meat, and the only fish the small kalili’ and kalimba’ fish. The explanation for this prescription of elephant’s meat is obvious: the novice had to become or remain as big and strong as an elephant. The two species of fish are normally caught in the season in which initiation formerly used to end. If it happens that a boy dies in this period, his parent would eat no other fish than the varieties their son had been allowed to eat during the time prior to his death. An end would be put to this a month later by relatives giving the parents the tails of other fishes to eat. Droogers (1980:225) reports on the purpose of this diet:

‘The word iyamaka meant “to be big”, “to have grown”, “to be in good health”. A novice who had grown very fast was said to have received iyamaka. There was an extract of the iboaboa (*piper umbellatum*) which was either drunk or mixed into the lime with the aim of securing iyamaka...The word hu’u was an onomatopoeia for water rolling along, and

expressed the hope that the novices might grow as rapidly as the swelling waters of a flood. After all, they were supposed to be unrecognizable by their mothers upon leaving camp. The word *yakotíngátíngá* literally meant “leap-leap”, “hasty”, i.e., “not lazy”, “industrious”, or “to acquire all good things quickly”...The meaning of *kókókó* was to be strong, to be hardened, to be dry. In view of Wagenia’s physique and the stamina required for the specific type of fishing in which they engaged, the emphasis on physical strength is not surprising.’

At the end of this diet, subsequent to the return from the camp, liana bands are put on, two around each upper arm, around the muscles at the elbow and shoulder, one at each wrist, and one below the knee. The purpose of these bands which were worn from the end of the diet in camp was, as already mentioned above, to indicate the novices’ growth by their real or supposed degree of fitness. The boys normally keep these on until the father of the novice concerned has presented one or more fish, depending on the size of the novice, to the other men of the camp. This fish was also supposed to be prepared by the father and never by a woman. The fish head was reserved for the person who had put the raffia bands on the boy. Only specific species of fish were designated for this purpose and these were taboo for the novices. After receiving the fish, blessings were bestowed on the novices by the men of the camp by spitting on them.

Having gone through all these processes, the final link in the chain of customs was the reintegration of the boy into village society. This could be achieved through customary rules of fishing and also through *ikúngúsele*.<sup>9</sup> The boys fishing for the first time with *katilo* landing net were obliged to hand over the first three fish of a particular variety they caught to the men who had already caught the three fish of that same variety. The fish caught the first three days in a new trap were for the owner and the makers of the trap, and not for women and children. These fish were eaten unsalted. Catching a fish in the trap by its head was privileged. Those constructing the trap were forbidden to have sexual relations during the work, until three days after installation. Moreover, it was prohibited to catch frogs, crocodiles or electric eels which would cause the fish-trap installation to fall.

Droogers (1980) observes that in former times a boy was even supposed to have been prohibited from eating a particular species of fish until his father had caught a fish of that species and presented it to the men of

the village. This might last for a whole year, since all species of fish are seasonal. Throughout the lifetime of his father, and father's father or *samba*, a man was supposed to give them all the fish of three particular varieties which he caught. The practice of giving fish away was not uncommon among *Wagenia*, especially in former times. There was a similar rule in connection with fishing with *katilo* landing net, which was used as an underwater fishing technique. The first three fishes of a specific variety which a person caught this way were destined for those to whom these fishes were not taboo. That is, those who had already caught three fishes of that species themselves. In earlier days specific sorts of fishes were reserved to men within his own progeny, establishing a certain order according to whether these were the man's children, grandchildren or great-grandchildren. The more generations of offspring a man had, the more he profited by this rule, which did not apply to all kinds of fish but only to particular fairly rare species.

As for the *ikúngúsele*, the final link in the chain of customary reintegration of the novice into the village system, no fixed time was set and every boy was free to choose his own time. The strict sense of the word *ikúngúsele* referred to the novice's obligation to have intercourse once after his return with a girl or woman he would not marry. The increasing age differences between novices have stimulated the fulfillment of *ikungusele* in different ways. Young boys might acquit themselves of this task by simply touching a girl or even throwing a stone at her. Or they might go fishing and throw the first fish they catch back into the water. Whatever they did, the novices had to utter the word *ikúngúsele salo salo*, *salo* meaning luck or fortune.

In general, these rituals are performed under normal conditions of time and resources. However, some factors of temporary disturbances are reported to hinder the normal performance of the *Wagenia* rituals of initiation. These factors stem from disturbance in the water levels of the river, as the circumcision grounds and the camps may become submerged during the procession. Because of fish scarcity during the relatively high water level, it may additionally be impossible to meet the requirements of the expenses entailed by the ceremony. Another factor deals with a symbolic opposition between the rainfall and the initiation, already explained in the preceding section.

### *Molimo ritual*

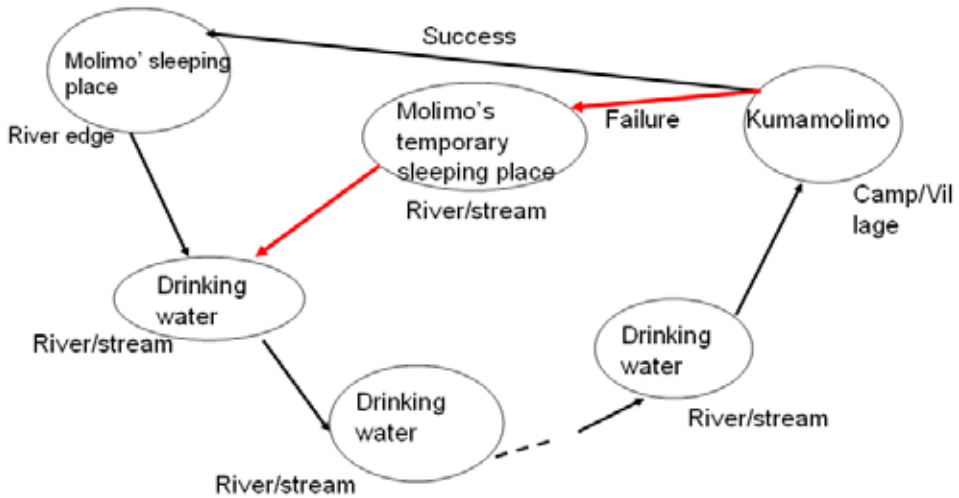
The forest is not always a warm and pleasant place. Life in the forest is characterized by abundance, plentitude and joy, but also by loss, scarcity and death. Both extremes are a way of life in the forest. But to ensure that all is well in the forest, a kind of fellowship is to be maintained between its residents which include the human and the forest spirits. This is usually performed through rituals. One of these rituals is called molimo, which is an expression of the BaMbuti conceptual world. The Molimo performance involves use of a trumpet, normally made of wood and kept hidden in a tree in the depth of the forest (Turnbull 1976).

The pygmies call out their molimo whenever things seem to be going wrong, e.g. the hunting is unsuccessful, someone is ill or someone has died. These are unpleasant occurrences, while the pygmies like when all is well. So they call out the molimo, which restores harmony. When something does go wrong, e.g. illness, hunting or death, it must be due to the forest sleeping and not looking after its children. "So what do we do? We wake it up by singing to it, and we do this because we want it to awaken happy. Then everything will be well and good again. And when our world is going well, then we also sing to the forest because we want it to share in our happiness (Turnbull 1976).

The Molimo is both material and immaterial in such that it uses a wooden trumpet (drainpipe) normally made from a young, straight molimo tree, a tree that has a soft center that can be bored out laboriously using different vines and woods as drills, twisting them between the palms of the hands. Neatly threaded at each end, though somewhat bent in the middle, it produces such a surprisingly rude sound when performed during the customary molimo ritual. This performance is achieved through use of natural substances, water and fire surrounded by songs and dances, as shown in figure 3. The starting point of the ritual is the sleeping place of the molimo trumpet. The "sleeping place" designated the location of the molimo trumpet emphasising the importance of the ceremony in the BaMbuti community. To describe the sleeping place, I would quote Turnbull (1976:90):

"He led me along an antelope trail, so low that I almost had to go on hands and knees, for it followed the banks of a stream and the mongongo river plants grew thickly. After a while the stream descended a slope





**Fig. 3.** Water and the Molimo ritual “The Molimo drinks water and eats fire”.

in small cascades, and the undergrowth cleared. We stood up and saw that water was all around us, rippling over rocks and joining together at the bottom in a sizeable pool. Maipe looked around, then walked surely into a patch of undergrowth and called me. I went after him and found him at the foot of a tall tree, the base of which was hidden by thick bush. But through the bush ran a vine, looped around the tree about three feet off the ground. Maipe said that any pygmy seeing that would know that it marked the sleeping place of a molimo trumpet and would keep away, for it did not concern him and the molimo should not be disturbed while sleeping. I asked where the trumpet was, and Maipe pointed up above his head. I could see nothing except the immense branches of the tree spreading out high above, more than a hundred feet up. That is where it sleeps, he said. It is safe there. It sleeps there until it is needed”.

From its sleeping place, the molimo is carried back to the camps through the forest, crossing the streams. When the procession reaches the first

stream it must cross, the trumpet is immersed in the water and then held up carefully so that the water runs from one end to the other. The trumpet “drinks” in this way at each stream it crosses. “The molimo likes to drink”. After that, people wash their feet and continue, and the ceremony is performed at every stream they come across, the trumpet being immersed and allowed to drink.

The drainpipes being lovingly washed and fed with water, it produces the sounds close to an elephant or a leopard. It fills the forest with strange sounds; the rumblings and growls of buffaloes and leopards, the mighty call of the elephant and the plaintive cooing of the dove. The sound is quite unlike other songs; softer, more distant and unapproachable. The singer sings into it or causes it to sound as either a leopard or an elephant, depending on the occasion being celebrated. The front end of the trumpet is waved around as the “forest animal” and while dancing, the procession is held in the direction of the camp where a kumamolimo (fire place) is hosted.

The molimo has now drunk water, it has partaken of the elements of the forest, namely air and earth, and only fire remained. Upon arrival at the camp, the ritual takes a very different form with all people gathered around the center of fire, the kumamolimo, breaking into song and dance as the singer echoes the sound, thus causing the molimo to respond. Sometimes that is all the youths will do, refusing to enter the camp at all. Those at the kumamolimo will then know that it is their fault that they have not sung or danced well enough, have not created enough ekimi to make the camp a fit place for the molimo. This is repeated night after night until the singing and dancing around the central fire are good enough to entice the greatest dancer and singer of all. Meanwhile, in the case of failure, the actual trumpet, instead of being returned to the tree each night, is kept submerged under the waters of a stream or river at a place known only to the youths who chose it. The trumpet is usually given fire to “eat” when it reaches the central fireplace.

### *Coping with rainfall in the rainforest: An analysis of production systems*

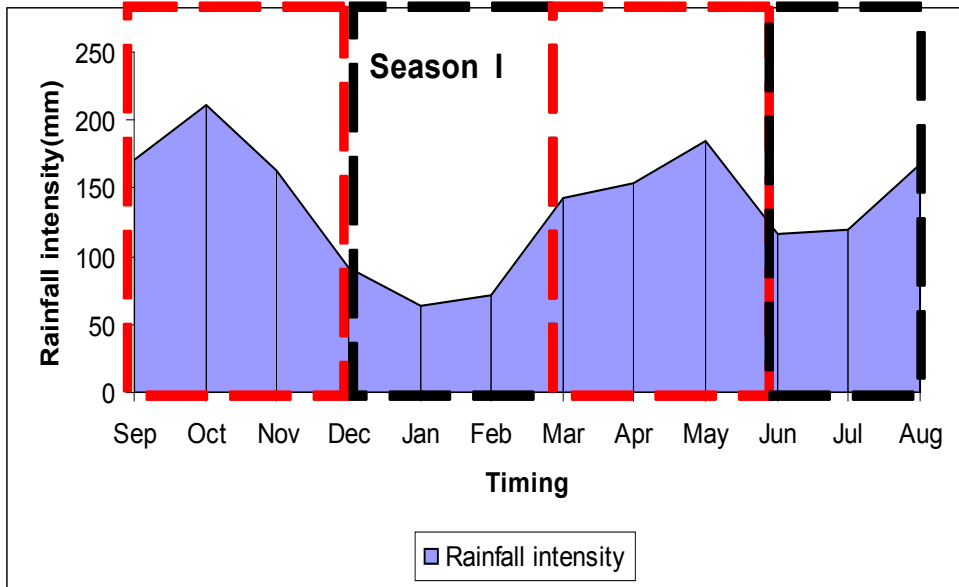
The history of the ethnic groups settled in the northeastern Congo reveals a mode of subsistence based on rain-fed agriculture, hunting, gathering and fishing. The relationship between these activities of human subsist-

ence and rainfall is our interest in this section. Not only does it provide knowledge of how to use the rainwater to sustain life requirements, but it also reveals an adequate know-how of how to cope with rainfall conditions in the rainforest, a heritage that has been transmitted from many generations.

Near the equator in general and in the rain-forests in particular, seasonality in rainfall is less than in other areas of the world (Ricklefs (1973) in Bailey et al. 1989). However, reports show that there are significant seasonal fluctuations in precipitation in rain forests which, contrary to what has often been written about tropical forests, contribute to mark seasonality in productivity at all tropic levels. This can be justified from the rainfall trend which shows variability in rainfall intensity of periods less than 100 mm per month. It is observed that most tropical rain forests have at least one period of the year when vegetable food resources suffer a decline. Variations in the onset and duration of the dry season can cause severe disruptions in the annual cycle of many biological systems, causing significant declines in food availability; faunal populations can fluctuate widely in response to unpredictable variation in food supply. Animals may migrate out of a stricken area. This variability of rainfall in the rainforests reduces their capacity to support hunting and gathering food for human foragers in tropical rain forests (Hart and Hart 1986; Bailey and Peacock 1988; Meggers 1973 in Bailey et al. 1989, Bailey 1991).

Although it cannot be claimed irrefutably that rainfall duration over the twelve months of the year in the northeastern Congo is favorable to the expansion of subsistence activities, much of the research has shown that the rainfall variability is a main factor that determines the seasonality, which in turn impacts the trend of food availability (Hart and Hart 1986; Waehle 1986; Bailey et al. 1989). Figure 4 shows the trend in the mean monthly rainfall over the study area. The analysis of the rainfall in the region reveals a period of monthly rainfall intensity less than 100 mm that lasts from mid-December to February. Ecologists refer to this period as the dry season (Hart and Hart 1986). The rest of the year presents irregularities in rainfall intensity which, however, does not fall under the ecological threshold of 100 mm. This is divided into early wet season (March to May), mid-wet season (June to mid-August) and late wet season (mid-August to mid-December).

Because of this variability, the major challenge for most food security systems is temporal matching of supply with demand. While supply and



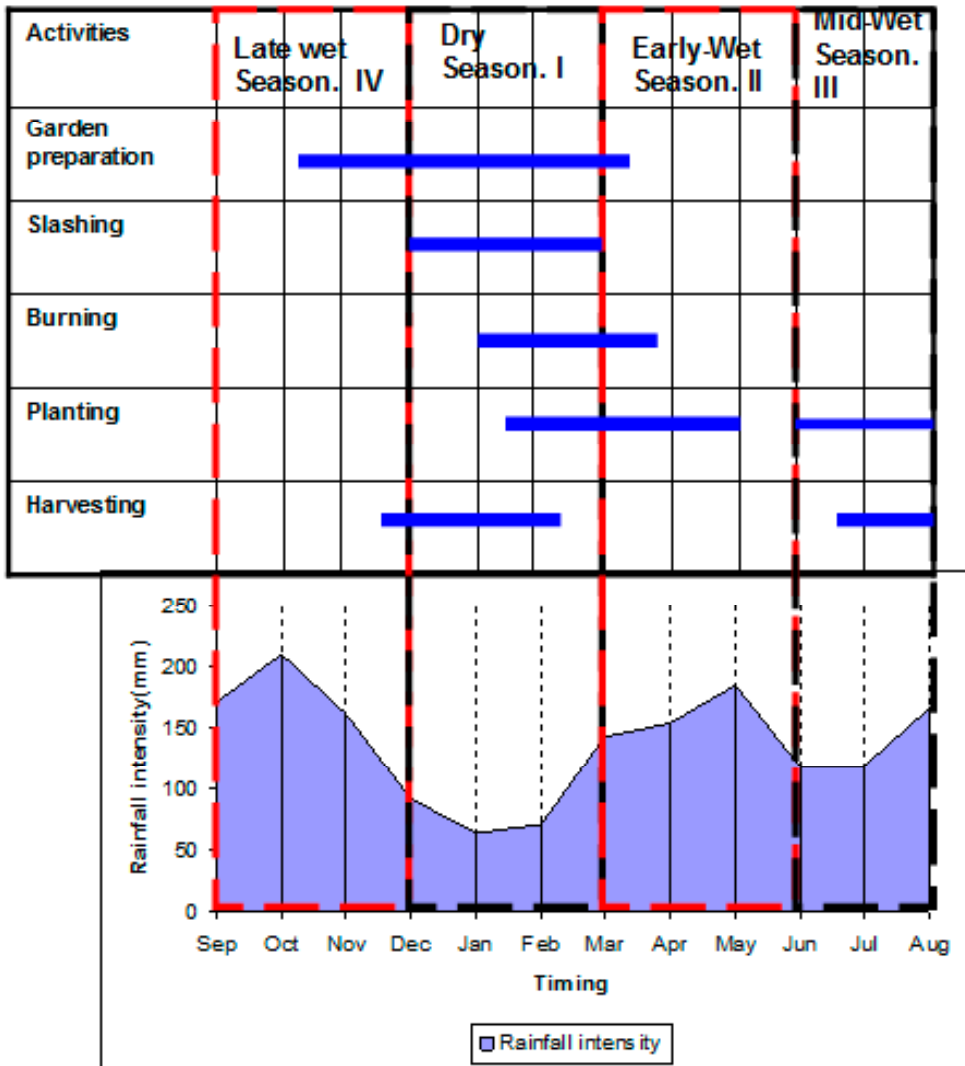
**Fig. 4.** Rainfall trend and seasonality.<sup>11</sup>

demand can be controlled in typical agriculture, in this traditional mode of subsistence (rain-fed agriculture, hunting and gathering) people will adapt strategies as part of environmental management.

### *Rain-fed agriculture*

The major invasion of the forest by farming societies provided for agricultural expansion. This began with early settlers who succeeded in adapting to the rainforest's eco-region merely with two main objectives for their food security: Yams and oil palms (Vansina 1990). The advent of the Iron Age brought about major changes in the farmers' practices, which could go beyond the mere spheres of food production. Clearing land, ringing trees, burning and poisoning arrowheads or spears were highly efficient techniques. Moreover, the advent of the banana in the area allowed farmers to colonize the entire habitat. Farmers could now settle everywhere and populations increased faster.

However, one challenge remained unchanged; namely, how an adequate food supply could be maintained throughout the year despite rainfall variability. Thus, local knowledge based on adaptive cultivation techniques was to be developed. Figure 5 illustrates the relationship be-



**Fig. 5.** Rainfall seasonality and agricultural management.

tween seasonal rainfall patterns and cultivation techniques as applied in the northeastern part of Congo.<sup>10</sup>

Each year during the heavy rains of October to December, all adult males would search within the dan’s usufruct for a new area to clear for cultivation. Fields were selected according to the absence of sand in the soil (high proportion of humus), the ease with which small saplings could be uprooted, and the presence of Sini (*Ataenidia conferta*) which is a Ma-

rantaceae herb. All of these criteria were reported to be characteristics of fertile areas. If several suitable areas were found, the Lese for example would pick those areas closest to the village or to the previous year's fields, thus minimizing travel distance and the need to clear new trails (Wilkie and Finn 1988).

Starting in November, the understory vegetation was cleared using small machetes and axes. Once understory saplings, small trees and herbaceous vegetation were cleared, work began on the large canopy trees. As work progressed on the largest trees, smaller ones in its fall zone were partially cut, with the hope that the weight of the large tree would topple the rest as it fell. Tree cutting is likely to continue through the month of December. This coincides with the beginning of the dry season, where rainfall diminishes or is absent from January to March (Bailey and Peacock 1988). Once the trees had been felled, major branches were pruned and banana suckers/sprouts planted among the debris. The cleared field continued to dry until just prior to the onset of the rains, at which time it was torched. Burning was seldom complete, and soil temperature never became very high, so the pre-planted bananas were scorched but not killed (Lacomblez 1918; Miracle 1967). At this stage further pruning and re-burning often occurred and planting continued. Bananas, several varieties of yams, colocasia, a climbing curcubita grown for its seeds and several varieties of cassava grown primarily for their edible leaves were intercropped (Lacomblez 1924). Sesame was often planted in pure stands beside other crops, or in cleared areas near the village. Most crops were harvested as they ripened over the 12-18 months subsequent to burning. With some minimal tending, bananas were expected to continue to clone and produce fruit for 3-5 years. As the fields gradually became less productive, they were tended less frequently and were re-colonized by a succession of herbs and shrubs. Stump re-sprouting often quickly reestablished the wood vegetation. Unlike traditional staples such as bananas and cassava, crops such as rice and peanuts require the storage of seeds for subsequent planting (Johnston 1958). Cultivation of these crops demands the construction of containers, and pest and rot-proof storage areas to preserve the seed. The lack of a traditional hedge on food scarcity produces a cycle of moderate crop failure, food shortage, consumption of stored seeds, subsequent reduction in field size and crop yield, which lead back to food scarcity (Miracle 1961; Ogbu 1973; Pagezy 1982; Waehle 1986; Martorell and Arroyave 1988; Jenike 1989).

### *Hunting, gathering and fishing*

Rather than cultivating particular rainforest crops, some indigenous peoples choose to collect their food from the existing surroundings. This process includes varied methods of hunting, fishing, and gathering. The essence of hunting and gathering economies is to exploit many resources lightly rather than to depend heavily on only a few (Waehle 1986). Small, mobile human populations subsist on whatever resources are available within their territory. They adapt to conditions as they find them, using what is already there. They hunt game, whatever kinds are available, adapting their lifestyle to the conditions they face. In tropical rainforests, hunter-gatherers exploit many different plant resources for food, fiber, medicine, soap substitutes, etc. Again, seasonal patterns of rainfall influence this mode of subsistence, as illustrated in figure 6.

The range of species is wide, and throughout the year there are peaks for activities related to seasonal variations in the forest. Different roots and tubers are valuable. Various types of yams are among the more important wild foods. Various nuts are cherished, but they are only a snack and complementary food source. Mushrooms are especially abundant during the mid and late wet seasons. There is a peak for wild food in the last months of the year, and little ripe forest food from February to May. In the early part of the year, only yams and palm nuts (fruits of oil palm) can be gathered from the forest. Waehle (1986) points out that when gathering, they (Bambutu) do not only go for wild plant resources but also eggs (from birds and tortoises), insects, mollusks, crabs and reptiles as well. Honey and termites are among the most prized of the forest resources. The availability of honey is extremely variable. Some honey is found in March/April, but the major season is in the second part of the year, after the blossoming of the trees *Cynometra alexandrii* in February and March, and *Brachystegia laurentii* (from which comes the highly prized, clear honey). Because there are more *Brachystegia* than *Cynometra* in the forest and perhaps because each *Brachystegia* tree has more flowers or contains more nectar, the period of greatest abundance of honey is between July and September. In good years the major season can last from July to October. This is considered the honey season. If it is a particularly good season, it may last into November. While honey extraction can be labor intensive, it seldom necessitates labor input from more than four men, and two men are usually quite sufficient. Yet the honey is customarily shared more or less equally by all men present

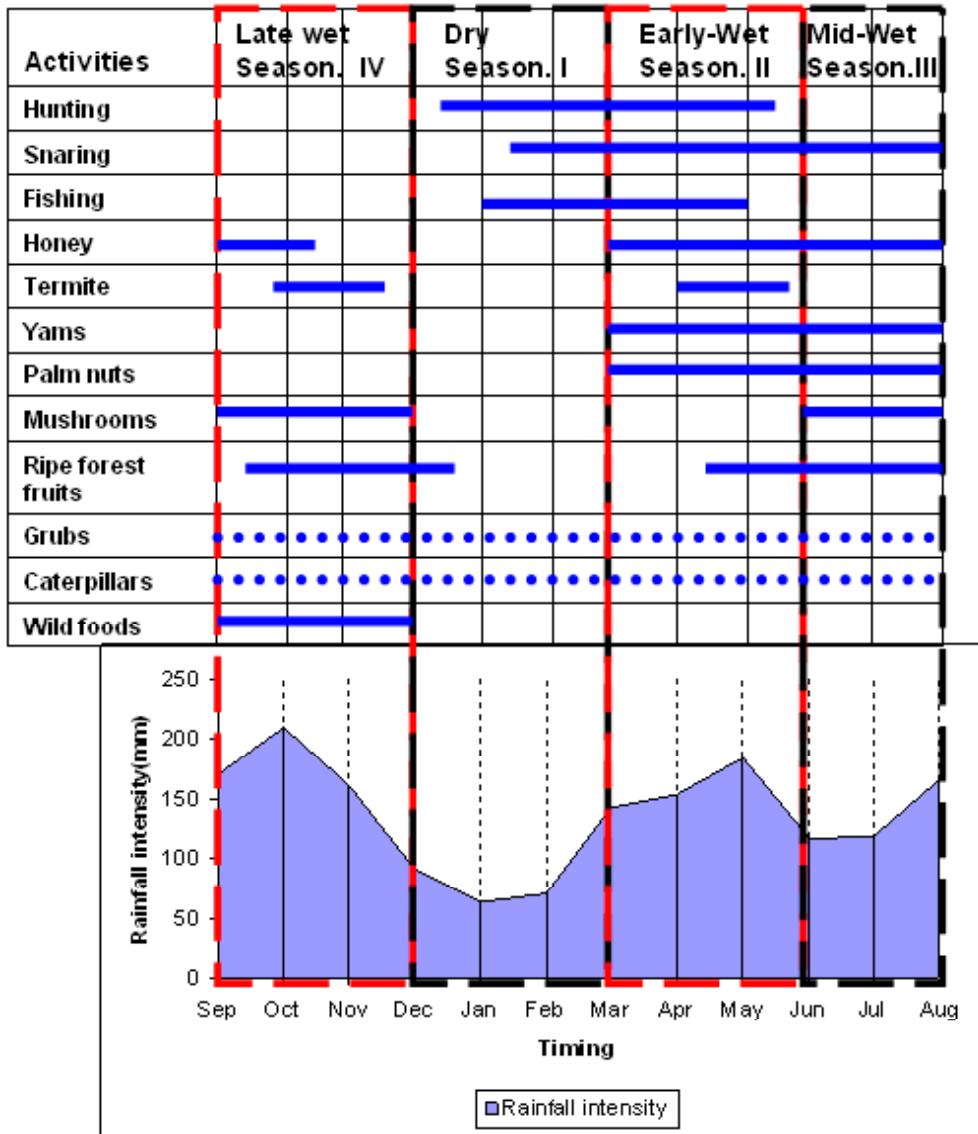


Fig. 6. Rainfall pattern and subsistence activities of hunting-gathering-fishing.

at the tree during the extraction, with only slightly more honey given to the man who originally sighted the hive (Bailey et al. 1989). During this season, there is a move of settlement to the honey camps in the forest. This is also a time when forest food like fruits and nuts are in plenty.



The honey season gradually blends into a period of termite gathering in October and November. Grubs and caterpillars are available from time to time. Wild plants are important as a daily supplement. Several wild plants are highly prized and eagerly sought after. Men, women and children gather edible forest resources. However, gathering is mainly the women's task (Waehle 1986).

Hunting is traditionally accomplished with arrows, darts or spears. These weapons are easily created from available plant resources and often dipped in poisons extracted from rainforest animals or plants. The addition of poisons assists the hunters by further disabling the animal targets, often by paralyzing the animals' muscles. However, after the honey season, rainfall makes hunting bad and the forest cold and wet to live in.

Fishing takes place using a variety of techniques, especially in the dry season and early wet season when the rivers are at their lowest. The techniques include hooks and line, small fish traps and large installations in the river. The latter will divert every large fish in the trap. Other techniques may include the use of darts, arrows or spears to catch individual fishes. Nets are sometimes used to catch more. Other times, special poisons are introduced into the waterways to stun or kill fish that can then be collected in larger quantities. Nothing but the fish appears to be affected. In this way, people roam around in the river catching unconscious fish by hand or with the help of a machete. Whenever large quantities of poison have been used, the river is more or less empty until the heavy rains arrive. It is possible to portion out poison in smaller quantities. In this way, fishing can take place several times along the same river.

Fishing is largely a collective endeavor including several households. Men manufacture simple fishing rods from saplings. They leave the camp in groups for a larger river nearby, but spread out along the bank and fish individually. Occasionally women and children will come along for these fishing trips. Some men borrow portable fish traps from other villagers. They catch fish in smaller rivers (not necessarily restricted to the dry season). They do this on a "share-cropper" basis. The owner of the trap has the right to a certain amount of the catch.

Women have a way of fishing called kusenga, where it is explicitly stated that men cannot participate. Kusenga is held when the water level in the river is very low, allowing women to stand in it and perform their catch. Waehle (1986) observes that when there is more water, they build two dams of soil, sand and branches. The distance between the dams var-

ies from 3 to 25 meters. Equipped with large mangongo leaves, they work hard and fast, throwing water out of the area between the dams. When all the flow has been poured out, the fish are caught by hand. The procedure is repeated several times during a single day. This very technique of fishing is called *Nzele nsi* in the Cuvette Centrale of the DRC.

## **Conclusion**

The study carried out on the traditional values and practices of water resources in the rainforest along the upper river Congo has revealed the relationship between humans and the environment. Water in all its forms, either flowing water from the rivers and streams or rainwater sometimes called *ngu ti Nzapa*, is a key environmental factor and pivotal in this relationship. Life is linked to water and this has provided for social organizations which set out rules, taboos and practices for the protection and use of these resources. To some extent, these rules and taboos are aimed at ensuring the principles of protection, conservation and equity. To this we may call upon the rule of access to resources (e.g. fishing ground) which is subject to family/clan appurtenance; the role of spirits/geniuses guardians which ensure protection of the resources (water bodies, forests); access to the headwaters which must be authorized upon offerings to the spirits; a taboo towards clearing the vegetation adjacent to rivers; and an observation of a non-fishing period. Generally, the practices are conceived to ensure resource uses and maintain fellowship and harmony with the natural environment. Here various ritual ceremonies and know-how practices of environmental management come into the picture. Here some practices related to offerings to riverine geniuses or use of sacred objects such as the teeth of the crocodile that represent the force of the river for possible success in catching fish are also revealed. However, some practices must be questioned since they raise concerns about environmental degradation and biodiversity depletion. This is the case with fish poisoning and *kusen-ga* techniques.

## **Footnotes**

- 1) In 2008 UNIFOB Global at the University of Bergen hosted a research team on Water, Culture and Identity.
- 2) The Wagenia tribe is a people who live in an almost unbroken chain of some kilometers along the banks of the river Congo on either side of the rapids in Tshopo, district of the Province Orientale. In a number of villages their houses are built along the streets parallel to the river banks.
- 3) The Ngbandi tribe is a people established both in the Equateur Province and in the Orientale Province. In the Orientale Province they are spread over the territories of Aketi and Bondo, district of Bas Uele, and share the area of Uele with the Azande. There is no doubt that there has been an intermingling through marriage, exchange of goods as well as other cultural activities between these two tribes.
- 4) Anguille is a French name for an elongated fish found mostly in stagnant water.
- 5) Torondo are the forest (bush) geniuses.
- 6) Ginaro, Kanda and Bomba are aquatic geniuses reported in the Ngbandi culture (Molet 1971).
- 7) Tshebeke is a bird with a circling flight.
- 8) Droogers (1980) mentions a begging tour where the river was also paid a visit.
- 9) ikúngúsele is a practice that allows the integration of a novice into the society by having intercourse with a woman or lady of the village. During ikúngúsele the bad odor and misery of camp were devolved upon the woman or girl, she would bear the consequences and e.g. never have children or lose them again soon after birth (an alternative to ikúngúsele was also met by throwing a fish from the first catch into the river). If ikúngúsele was omitted by a boy, he would have to put up with the consequences himself and remain weak, contrary to the objective of the initiation. The boys were not supposed to have intercourse with their own wives or girlfriends before ikúngúsele, in order to prevent the seed of camp from remaining within their union and causing misfortune here.
- 10) Data were deduced from Waehle (1986); Bailey et al. (1989); Wilkie and Curran (1993); Hart and Hart (1986); PNSAR (1998).
- 11) Data used were deduced from the monthly rainfall trend recorded at Beni station.

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## Chapter 3

# Manica Rock-Art in Contemporary Society

Tore Saetersdal

### *Studying rock-art in Manica province, Mozambique*

Through archaeological and ethnographic research in the mountainous Mozambican province of Manica, the use of rock shelters as special places through time has been made the focus of research. Many of these shelters are adorned with rock-art. Painted images occur on the walls of many shelters formed by the many granite boulders that are the characteristic of this rocky terrain (Duarte 1979:54, Duarte & Duarte 1988:75, Saetersdal 2004). Some of these places play an important role in present rituals and beliefs related to ancestor worship and rainmaking.

Central and southern Mozambique lacks any immediate ethnography of the San hunter-gatherers who executed the rock-art. However, in Manica there is a 500-year history and ethnography of Shona-speaking people, which also includes relations to some of the painted shelters. Current ethnographic studies are relevant to present-day studies of these people and the management of the cultural heritage there. Can it also shed some light on pre-historic activities in the Manica rock-shelters? To what degree can one turn to present Manica ethnography to learn about the origin of some rituals and beliefs? And can it tell us about the cultural interaction between the early Shona-speaking groups of the region and the hunter/gatherer population who already inhabited these lands when they arrived?

### *The geography of Manica*

The Manica Province stretches along the eastern Zimbabwe escarpment for about 800 km (fig.1). The border between Mozambique and Zimbabwe generally follows the mountain ranges, cutting through a mountainous and rocky terrain. These peaks may climb as high as 3000 metres above sea level, the Manica Valley is situated at 650 metres.



**Fig. 1.** Map of Mozambique. Research area in frame. Source: Department of Information, United Nations.

Along the eastern foothills of these larger mountains the land slopes steadily downwards towards the lowveld and finally, the eastern seaboard. The rocky landscape of this part of the Zimbabwe escarpment is strewn with granite whale-back hills and kopjes with broken, castle-like summits. Underneath the large granite boulders, natural caves and dry shelters are abundant.

Of two main research areas, one centres around the castle-kopje of Chinhamapere in the Manica valley. It is located just west of Manica town. Another area where intensive surveys have been carried out is around the village of Guidingue, south-east of Serra Vumba. Here the Serra Vumba foothills stretch southwards towards Rotanda and the Chimanimani range to the south. They rise some hundred metres from the plains, and form a natural border towards the west. The

mountains and hills are divided by several deep river valleys. The Mavita plains, with the present-day Chikamba Dam, stretch eastward towards the modern provincial capital of Chimoio. In ancient times these plains were traversed by four major rivers, creating an area with rich pastures where water rarely ran scarce.

### *The rock-art of Manica*

The first known report of southern African rock-art was in a Portuguese report from Mozambique to the Royal Academy of History in Lisbon in the 18th century (Willcox 1984:1). The actual site that this report referred





**Fig. 2.** Detail from the Chinhamapere 1 main panel. Photo: The author.

to is not known but it is the first report of the art in an area that would become known as the richest rock-art region of the world.

Apart from Chinhamapere (fig. 2) very few pre-historic sites at all, and rock-art sites in particular, were known from the Manica district and the Vumba area when fieldwork commenced in 1997. The site was first reported to colonial administrators in the 1930s as one of the first reported archaeological sites in Mozambique (Duarte 1979:54; Duarte & Duarte 1988:75; Felgueiras 1965:27; Oliveira 1962:1; 1971:4; Willcox 1984:145).

On the northern side of Mount Vumba, the rock-art of Manica valley consists of paintings only. During fieldwork several hitherto unrecorded rock-art sites were registered with the art of San hunter-gatherer and of later farmers art. Although reports exist of a few individual petroglyphs, none have been verified on the Mozambican side of the border. This is probably due to lack of research rather than a real absence. Just underneath the top of the Chinhamapere kopje is a shelter with numerous San paintings. The rock-art at the known panel is easily attributable to the clas-

sic San tradition. Apart from this the art of the region is poorly known and described. Through my survey three shelters with rock-art have been found on the kopje itself, and two other sites with extensive rock-art in the immediate vicinity.

In the vicinity of the village of Guidingue, alongside the river Zonue on the southern side of mount Vumba, the sites are situated in rock-shelters (save one, on the side of a large granite boulder). Of seven sites containing art, three have San paintings, although only one exclusively. The others contain white and red paintings of anthropomorphic and animals; a few geometric designs can also be found. These seem to a large degree to be finger-paintings. In southern Africa these are generally later than the San paintings, which often include fine detail and line-work. The numbers of individual images on each site range from one to more than one hundred.

Across the border in the Manyikaland province of Zimbabwe a few sites are known showing richness in rock-art varying from the Inyanga farm petroglyphs, resembling the map-like engravings of South Africa, to the wonderful painted panel at Diana's Vow near Rusape (Cooke 1979:115, Goodall et al. 1959:230, Maggs 1995:132).

### *Manica Valley*

In the Chinhamapere area, just outside Manica town, all the sites contain classical San art executed in monochrome red. At the Chinhamapere II site a white anthropomorphic figure is also present and a yellow therianthrope, a human upper body with long locust-like legs. In general the sites around Manica town do not contain any finger-paintings or paintings that may be attributed to other than San cultures. The San art here contains images well known to students of South African rock-art; humans and antelopes predominate. Although a large proportion of the depicted antelopes are indeterminate species some are easily recognized. The Giant Kudu is the prominent species, it is easily recognizable by its characteristic ears and hump. Few of the depicted animals have horns, this may mean that it is the female Kudu which has been painted, or very young males. Also depicted are smaller antelopes like the Thesbe and the small Duiker, a few reptiles and larger animals like the elephant and rhino. The animals are done in various styles which has been attributed to hunter-gatherer Khoi-San speaking groups across the region. At the Chinhamapere I site there



**Fig. 3.** Detail from main panel at Chinhamapere I. Fine-lined images of humans filing in procession around a bird-like creature. Colour: dark red. Photo: The author.

is great variation in shape, size and content, although all the images are recognizable as “San hunter/gatherer art”. Some animal figures are large with only a thick line outlining the shape as they are depicted seen from the side. Superimposed on these large depictions are figures of humans and animals which are smaller and filled-in, some of the smallest are only done in a very fine single-line technique.

Human images are in some cases of very stylised groups of humans either holding weapons such as bow and arrows or carrying quivers either in their hand or slung across their shoulder (fig. 2). These figures are either depicted in a line in side silhouette, as if moving to one side of the panel, or they are depicted frontally with their arms held out. In fig. 2 a group is shown with a possible hunting bag painted underneath them, the depiction is similar to bags painted in the Western Cape (Parkington et al. 1996:229). Gender is sometimes shown where a silhouetted penis

sheath is shown. Most images are not gender-specific and many carry no material culture. Fine-lined humans presented in what seem to be scenes are common to several sites in the Manica valley. These are often depicting long lines of humans in very dynamic postures, possibly representing some kind of dance. At Chinhamapere I such a line is encircling a bird-like figure. These human figures are normally only 4-5 cm. tall and are painted with only one thin line without items of material culture (fig. 3). Postures and "scenes" which in other parts of southern Africa have been interpreted as trance-related are also present in the Manica art.

The kneeling posture with arms raised behind the body, floating postures and dancing scenes are present at several of the sites in the classical San art. Superimposition is a common feature at the sites, save two with only a few images.

### *Guidingue*

Of the two research areas the art in the Guidingue area is more varied. At the Moucondihwa rock-shelter, classical San art exist side by side with white and red finger-paintings depicting mainly humans and animals. The art traditions differ greatly in style, colour and content. The San paintings are all to the right of this main panel. Situated underneath the roof of the shelter is a large number of faded finely-detailed San paintings all depicting scenes involving humans and indeterminable antelopes. The images are small, all executed in what today seem like monochrome red ocre although the majority are greatly faded. The humans are done in the thin-line style known from other sites in the area, where the human shape is depicted without material culture attached to it. The finger-painted images attributed to the agricultural societies are all situated at a different location within the shelter from the San art. Monochrome images done in various shades of white and bright red depicts some large animals, elephants and a possible buffalo (fig. 4), some schematic smaller animals, possibly lizards or scorpions and human figures. In several instances humans and animals are depicted together: a human figure and a possible giraffe; a human possibly riding a horse. Items that are attributable to agricultural or at least pastoral inventory are also depicted, like depictions of humped cattle and a person seemingly wearing a frock and a hat.

Although this do not determine anything as to the authorship of the paintings it is still interesting as it suggests an earliest possible date for



**Fig. 4.** Detail from the main panel at Moucondihwa rock-shelter. Naturalistic white paintings of large elephants superimposed on each other, and smaller finger-paintings in red and white, some in spread-eagled style. Another panel in the same shelter contains classical San images done exclusively in red. Photo: The author.

the painting around the first part of the first millenium AD. Three large elephants are superimposed on each other in the centre of the main panel; there is a lot of un-painted space surrounding them, so they could have been painted without superpositioning. It seem like the very act of superpositioning the elephant images one on top of the other was significant.

Other rock-art sites in the vicinity of this large shelter are less varied, the art consisting mostly of monochrome red finger-paintings. Again the predominant motifs are humans and animals as well as some geometric designs consisting of crosses and lines. The human figures here are schematic, elongated figures with long legs extending for up-to a metre in length without any material culture.

Although no mention is made in Portuguese records of Khoi-San-

speaking hunter/gatherer groups south of the Zambezi in Mozambique, the rich San ethnography from the southern African interior may be used as an analogy to explore the meaning of the images (Barnard 1992:91; Biesele 1993; Lewis-Williams 1981; 1992:56; 1986:93; 1987; Lewis-Williams & Dowson 1994; Marshall 1957:232; 1962:221; Vinnicombe 1976).

Ethnographic accounts of San groups in the vicinity of Mozambique are few and only Potgieters (1955) study of the sad state of the few remaining //Xegwi people from the Lake Chrissie area in Mpumalanga describes the possible descendants of groups that may have inhabited the Mozambican area (Barnard 1992:85; Potgieter 1955). North of the Zambezi the distinct rock-art attributed to the Kafula and BaTwa cultural complex may provide us with further analogy. The elusive so-called "Twa people" may have existed in the Malawi region until very recently. The very different Twa rock-art tradition lies as a massive barrier between the art of Tanzania and East Africa and the art south of the Zambezi which may seem to have more in common (Masao 1979; Leakey 1983; Schoffeleers 1992:25; Smith 1997:47).

Since aspects of southern African rock-art are normally linked to particular groups (hunter-gatherers, herders, farmers) one expects comparable links in the new study-area. Because these various groups often existed side by side over the last 1500 years, a secure chronology is a difficult area in southern African rock-art research. In some areas there seems little doubt that the San art is considerably older than Bantu, or farmer's, art (Garlake 1995:17, Walker 1987:137, 1996:11). In other cases this seems open to debate. However, it is reasonable to expect the local chronology and cultural affiliation in Manica broadly to parallel the better-known regional sequence. Looking south and west, the art of Manica strongly resembles the art of northern South Africa and Zimbabwe (Eastwood 1999:16; Eastwood & Cnoops 1999:107; Garlake 1987; 1995:11; 1997:33; Walker 1996:7) (See also Eastwood & Brundell this volume). The major difference between the Manica art and the Zimbabwe/Limpopo San paintings may be the predominance of monochrome images, although this may be a result of colours fading away. Form and content is very similar to the Zimbabwean art with a predominance of Kudu as the large antelope. In this way it matches the broad pattern, in which particular animal dominates in any one region, the Eland in the Drakensberg and the Kudu in this region. This may be related to a similar belief in *n!om* which is known from the

areas where Eland is the predominant animal in the art or it may have to do with the forces that affect the weather through the concept of n!ao. For the Limpopo Shashi Confluence area Eastwood & Cnoops (1999:107) have convincingly argued that the Kudu is connected to the San concept of n!ao, a notion connected to gender, meat animals and weather as well as to fertility (Barnard 1992:59; Biesele 1993:88; Marshall 1957:236). As the interaction of n!ao from people and hunted animals affects the weather, the concept is important in connection with weather changes, as from dry to wet seasons. Indeed the very notion of n!ao is divided into these two categories, wet and dry.

The San people are historically known as fierce medicine men and sorcerers. They were often employed in these roles by the surrounding non-San population. Controlling the forces of the land and the animals which are part of the land would be of immense importance to any immigrating population. The Shona-speaking societies, on the other hand, have a long tradition of including non-Shona speakers into their societies as subjects. The behaviour and rituals of "the other", in this case the hunter-gatherer population, offer a means to gain quick control of the ritual sites and to secure the willing co-operation of the spirits of the land. Dowson (1998:75) discusses the significance of mythical rain-creatures as part of the rain-making ceremonies. Serpents are believed to be part of San rain-making beliefs (Vinnicombe 1976:233). Large black serpents are said to guard the sites and large water serpents are said to dwell in the sacred pools which are often to be found on the mountain tops. People whom are suspected of killing and eating the meat of the Rock Python snake are viewed with fear and suspicion as well as some envy. Rumours will have it that these people also indulge in cannibalistic activities. The fat from a python is regarded as highly potent medicine to protect against witchcraft as well as presenting its owner with great power.

Among the Manica Shona-speakers the most potent animal is the scaly anteater, the pangolin, which the Chief may claim immediately if it is killed in his territory. It should be brought to his homestead without delay. The animal is believed to have great medicinal and magical potency. As it is usually encountered during the wet season it is affiliated with rain and is by some believed to be coming from the clouds together with the rain. Interestingly enough, this animal is not found represented in the rock-art.

## *Archaeological excavations*

Archaeology in the modern sense started late in Mozambique but has grown thanks to numerous projects supported through the Swedish SAREC programs. The war of liberation and the consequent civil war made fieldwork difficult and dangerous. In spite of this, work in the south, around the capital Maputo intensified. In the north, archaeological investigations were undertaken into the archaeology of the Swahili coast and the Nampula province in the northern interior while ground-breaking investigations were carried out at Chibuene (Adamowicz 1990:137; Cruz e Silva 1979; Duarte 1988:57, 1990; Morais 1984:113; 1988; Sinclair 1982:150; 1985a; 1985b; Sinclair et al. 1993:409).

Apart from the Zimbabwe stone monuments at Barue and Songo in the Tete province, the archaeology of this mountainous part of Mozambique is poorly known and understood (Macamo and Duarte 1995:561). Although the archaeology across the border in Zimbabwe is generally better known due to more research being done, only some studies have focused on the earlier pre-history of the Manyikaland province which borders Manica. The emphasis in later years has been on the terraced settlements of Inyanga and the more recent iron using societies rather than the earlier periods (Soper 1996:1).

Very few archaeological excavations have been carried out in central Mozambique, contrary to the substantial work being done in other parts of the country (Sinclair et al. 1993:410). The excavations at Chinhamapere are the first in Manica. In Zimbabwe a few comparable investigations have been done in the eastern highlands (Cooke 1978:1; 1979:115; Robinson 1958:270, Walker and Thorp 1997:9).

The archaeological material excavated at the Chinhamapere II site in Manica testifies to the extensive use of the painted shelter by Late Stone Age groups from at least 3000 years ago to the relatively recent past. Ochre in various shades of red is present throughout the layers of refuse; it may have been used as a rock-art paint ingredient as well as for other purposes, like body painting. There is no evidence for any long-term occupation of the shelter as household goods are absent from the recovered material. The small shelter seems to have been used for short periods by a limited number of people. The rock-art is by far the most striking part of the archaeological remains. The five panels are extensively decorated with classical San images. Almost no traces of iron-using societies



were retrieved from the site, save some recent potsherds in the top 10 cm spit. The small shelter Chinhamapere IV is situated just 50 metres directly below and in plain view from Chinhamapere II; that site yielded pottery of the Ziwa and Gokomere early iron-using traditions (Bernard 1961:84, Phillipson 1993:192). One very large vessel was retrieved, of a size which may suggest it had been used for beer-brewing. Although there are faint traces of paint at the rocks in the Chinhamapere IV shelter no Late Stone Age material was found save a few quartz scrapers not an exclusive stone age tool. From this shelter one may enter into a large cave with a low ceiling. Excavations in the cave provided proof of occasional use through the last 800 years. Again, no evidence was found for long-term occupation as only a few artefacts which may be characterized as household goods were found. Grinding stones were found and is expected to have been used to prepare medicines and paint for ritual use. For both shelters, it is possible to argue, ritual activities were the main activities taking place. At some point in time these activities included painting. It is too simple to expect the dwelling places to be in the same shelters as the rock-art. I expect that temporary dwelling places will be found some distance from the ritual site, possibly in another cave or shelter for the hunter-gatherer groups and probably open-air sites for the agriculturalists. During times of unrest, these places in the rocky provided the inhabitants of the Manica valley with refuge and safety, as during the Nguni sieges (Bhila 1982:169, Liesegang 1970:330; Rita-Ferreira 1982). The two sites may not have been used simultaneously; doubtless the later users would have been aware of the paintings left by their predecessors. An important, and overlooked, aspect to rock-art is that it endures on the walls of shelters (Chippindale, *in press*:273); people going into a shelter see in this way material traces of these predecessors, in a way they would not see the stone tools, potsherds and other debris which is buried within the sediments of the shelter. So rock-art has an unusual, and perhaps a special role when a population moves into an area previously occupied by others.

It is a matter of course that the material retrieved through excavation may not necessarily have been left there by the same people that painted. However, the activities that we find traces of through excavation may have taken place there because of the painted images that were already there.

### *Shona history and ethnohistory*

The traditional leadership consists of paramount chiefs and headmen whom rural people relate to just as much as they do to the political authorities. Among the Shona-speaking population of Manica, chiefs rule over areas according to tribal and chiefly descent; they allocate areas to local headmen who also rule by descent. In Manica, Chief Chirara is the last in a long line of rulers from the Chirara family. It is important for the political authorities to have a good co-operation with the chiefs; without that it would be difficult to involve people and muster their enthusiastic following when the need arises. There is no doubt that local people's relationship with the chiefs and their Sabuku, local headman, is just as strong as that with their political leadership. Traditionally, local villages and rain shrines have been the enduring social institutions. The larger-scale political leadership has often changed over the years. Access to the gold mines of Manica caused a fierce competition between the Mutapa state and the Portuguese from the 16th. century onwards and local villages often shifted their allegiance (Beach 1980:171, Newitt 1995:55). In general, the Portuguese often tried to install people they could control in the places of the traditional leaders thus trying to achieve a semblance of legitimacy (Bowen 2000:69). In Manica, however, the chiefly dynasties have survived to a great extent, although a close co-operation exists between the political and traditional leadership in present-day society. The chief still holds court and rules over subjects and property. He has the last word in disputes over land and animals, heritage or family feuds. When people relate to him, they also relate to a stable authority with many hundred years of history and tradition. Political systems and authorities in far-away Maputo may change, as they have done in the past, but a member of the local chiefly dynasty will rule over the Vumba as long as the Manica people exist.

The chiefs are in many ways dependent on a third authority, that of ancestor spirits, who provide the rulers of the present with authority and power. The spirits rule certain areas and sites; they are particularly potent in certain contexts. They may be malicious or benign, depending on our conduct as living people (Bourdillon 1976:227; Lan 1985:31). Chiefly territories and rule is traditionally connected to rain shrines and certain local ancestor spirits who will communicate through the local spirit medium.

The population history of Manica shows a tumultuous and dynamic picture with various groups migrating into, and passing through, what

today is an area dominated by Shona-speakers. The dialect of ChiMan-yika is spoken in the present-day Manyikaland of Zimbabwe as well as among the Shona-speaking groups in Manica district of Mozambique. It is the easternmost of the six major Shona dialects. To the south the N'Dau-speaking peoples occupy the vast areas of Chimanimani, to the north the BaTonga-speaking people still occupy the areas of their ancient Kingdom of Barue with the important rain shrine of Kaguru (Newitt 1995:32). The Shona invariably classify their neighbours as BaTonga; this means simply "chiefless people" and is used for neighbours from the Zambezi to the Delagoa Bay (Abraham 1959; Beach 1980:157). Some Shona dynasties used the word even to label their own subjects.

Archaeological sources indicate that the area was populated by hunter/gatherer groups prior to the arrival of Bantu-speaking groups. Although most researchers believe them to have taken a more westerly route, it is possible that some Khoi-speaking herder groups may have passed through or stayed on in the area, interacting with the existing hunter-gatherer population. It remains difficult to connect them with any specific traits in the rock-art.

Oral history of the Manica Shona describes how a party of hunters from Mbire, a mythical place, came into the valleys of Manica while out hunting. The location of the country Mbire is uncertain; it is placed alternatively in the north-west or in the north, some claim it was part of the Mutapa state and that the people who first entered the territory of Manica were an offshoot from the Mutapa state. Other traditional tales tell of an origin along Lake Tanganyika and point to a possible relationship with the Fipa along its eastern shore (Bhila 1982:10). Alpers (1968:8) suggests a steady stream of people trailing in from the north with a north-western origin, most probably from the Congo basin or areas north of the Lake Malawi. Bhila (1982:10), who also reports a north-western or north-eastern origin for the Manica peoples, goes on to say that the identity and pattern of Manica settlements are highly uncertain.

Beach (1980:167) suggests that the mythical place of Mbire is related to regions Mbire I or II in the Mutapa state. The first figure in Manica traditions who may be historically verified is the ruler Nyamubvambire, in some accounts the head of the hunting party mentioned above. He was of the Shumba (lion) totem and the Mutasa dynasty (also referred to as the Chikanga dynasty); this has ruled the Manica kingdom, of which Chirara is one of the paramount Chiefs, until the present.

According to oral tradition, the newly arrived Nyamubvambire possessed a superior knowledge of fire-making and the cooking of foods. The owners of the country, the Mponda and the Muchena clans, knew not of these things and ate their food raw. Nyamubvambire soon acquired the land by trickery and consolidated his land claims by matrimonial alliances with the two clans already present in Manica, the Mponda and Muchena clans. As an act of honour, the Mponda clan was charged with the priestly function of performing burial rituals in the new kingdom, something which this clan still holds as their responsibility in Manica (Bhila 1982:10).

The Chinhamapere hill is conceived of by many living Manica people as a place of "kings" or a place of the "spirits". Many stories are told of the large, black spirit snakes that hide among the large boulders and rocks around the top of the kopje. They will attack you if you have not made contact with the ancestors and been authorized by them to approach the place. Such may be obtained through a simple ceremony that can only be performed by people authorized by a spirit medium to do so. To venture forth without having communicated with the ancestors is foolhardy and invites disaster. As will be shown, such rites, or small ceremonies, are not only confined to entering Chinhamapere or sites which are recognized as "special" in any senses; they take place whenever a living person does anything that he feels the ancestors need to know about or whenever he does anything where protection might be needed. Venturing into unknown territories may be such a situation where it is prudent to call upon one's ancestors for protection and guidance. The present custodian of the site tells of the sites' importance in rain-making rituals of the past and how young girls used to dance at the Chinhamapere I site at night. These girls were all pre-menstrual and the custodian described it as part of their "growing-up" rites. This custom is similar to the one described by Ranger from Nswatugi cave and other places in the Matopo Hills. These caves are also richly adorned with rock-art (Ranger 1999:20).

The Manica ancestor spirits play an important role in social life, on all levels from the individual, through family and clan to the collective experience of life in a larger Shona-speaking society. It is the Manica belief that life is greatly enhanced by death, as in the spirit world one may better protect family and possessions. When a person dies, he or she becomes a Mudzumi (pl. Midzimu), an ancestor spirit. A whole life-time of accumulated knowledge and experience will be available to the living in a spirit

version that is a resource to be drawn upon and consulted when guidance, protection or divination is needed (Abraham 1966:28; Lan 1985:32). Worldly worries and problems no longer hinder the dead in devoting their whole attention to guide and protect their families at all times. They see into the future and may give advice on how to avoid impending dangers, they have curing power and may be called upon to cure illnesses. With no material form they are not bounded by time or dimensions and can be at all places at all times; the form they take is called *mweya*, breath or air. However, the spirits do have sensory experience, eyesight, hearing, emotions (Lan 1985:32). Spirits may go quiet and never be heard of again, as new spirits will take their place. The spirits exist in a world mirror-image to our own. Hence, they also age and fade away; new spirits are “born” when younger relations die and end their existence in this world. Ranking above the *Midzimu* in importance is the *Mhondoro*, usually the spirit of a dead chief related to a specific region, and the *Mwari*, the Shona high deity.

The physical land of Manica, save the high mountains, is very similar to the land of granite kopjes and whaleback hills so characteristic of much of the area inhabited by Shona-speakers. The Shona myth of “the creation of water” which stems from the Matopo hills in the south-west, the Shona Banyubi area, is consequently from an area of physical resemblance with the Vumba foothills. The water which brings life to the valleys comes from the hills and mountains where an abundance of small streams and pools empty themselves into the larger river systems in the valleys. Moreover, the rain that brings precipitation comes from the south and south-west in October/November. Viewed from below the Chinhamapere and the location where rain-making ceremonies are performed today, these clouds appear over the “shoulder” of the Serra Vumba and then above Chinhamapere. These clouds invariably are accompanied with thunder and lightning, a spectacular sight at Chinhamapere as the large boulders around the top of the kopje take their pounding from the lightning.

Some believe that there has been a continuity from hunter-gatherer rain-making rituals to the later rituals; some sites, like the Matopos, may have been used for such rites for thousands of years. Which probably means that agricultural peoples of the first iron-using communities to settle in the area may have danced and executed rain-making ceremonies in the painted caves of the Matopo hills long before the arrival of the Shona-speaking societies in the beginning of this millennium.

Oral tradition among the Shona Banyubi regards many of the hills in the Matopos as very important rain-dance hills. The following oral tradition is quoted from Tredgold (1956:85; in Ranger 1999:20), who collected it from "an old" informant in the early 1950s':

"The dancers were young girls about twelve years old who wore a small apron only when they danced; old women danced, too. They danced to the music of drums and woman clapped their hands, whistles were not allowed. All the men had to go away when the dance was on. As they danced they threw water up into the air."

Tredgold argues that this ceremony has roots far into the past; it is much older than the Mlimo (Mwari) cult in the area. Ranger (1999:20) relates the story of a guard at Nswatugi cave in the Matopos, one of the most famous rock-art sites in the area. The cave, adorned with San paintings, is a major tourist attraction of the Matopos. When Ranger visited the cave in 1985, he was told by the guard on duty that the place was used in the early 1960s' for rain dances, when the man was young. Because all the villages were removed in the early 1980s, the cave was no longer used for such ceremonies. However, he said, Silozwane cave in the same area was still used for female dancing ceremonies at that time; indeed, his own grandmother was the keeper of the Silozwane rain-making shrine. Ranger concludes that neither of these caves have ever been Mwari shrines. Hence, it seems such dances are not part of a Mwari ritual at the time of his visit, they may, consequently, be of greater antiquity than the cult. Both the caves mentioned are famous for the number of San paintings present in them

The link between fertility and rain-making is close, and in everyday language in Manica it is an obvious link. Megan Biesele (1993:114) shows how, among the Kalahari Ju/'hoan changes in weather is related to fertility. Related to this is also the potential danger of menstruation as demonstrated by the fact that only pre-puberty girls and women past menopause take part in the ceremony and dancing. This connecting element between acts of transformation and women is seen elsewhere in East African Bantu societies, in pottery-making and iron-making where a natural substance is transformed into cultural objects through the forces of fire. At initiation rites women past menopause play a very important part as guardians of the rite and fire, even in male rites. The rain-making ritual holds elements of the same transformative action as dry is transformed into wet

through a ceremony of dancing. No mention is made of fire in the above accounts; it is assumed that the fire plays an active part in the rite as well as it certainly does in present Manica rain rituals where the role of the oldest woman is closely related to lighting of the fire and brewing of beer. The heat is an important factor of any transformation and healing ritual (Collett 1993:499; Jakobson-Widding 1989:27, Saetersdal 1995; 1996a:755; 1996b:133; 1999:121). In a powerful metaphor the lightning from the sky is the fire that transforms the weather. Rain is accompanied by thunder and lightning which the Ju/'hoansi call "Gods fire" (Biesele 1993:115).

The Mwari oracular cult, active at the time of European arrival, is closely connected to the standing stones of the Matopos. The main shrine, the Njelele, is a column of standing rocks located in the southwestern part of the hills. The rocks of the Matopos have become a symbol of gods endurance. According to the Njelele followers, it "always has to be a stone. A stone can keep something better. A tree rots" (Ranger, 1999:21). A tree is always used in communication with a midzimu among the Manica and, indeed, generally throughout eastern and southern Africa. The fact that a stone is thought to "keep something better" is of significance and this may reflect the durability of the Mwari deity as opposed to the Midzimu, or even the Mhondoro, who are thought to fade away into silence as new ancestors gradually take over their places.

The Mwari cult was also present in the Mutapa dynasty, even further afield from Matopos than Manyika. In Ranger (1999:22) a mention is made of a cave at Nyachiranga where the voice of the Dzivaguru, the high god of eastern Zimbabwe, may be heard. The cave is seen as the nucleus of a living and active landscape. (Zvabva 1988; in Ranger 1999:22). As Zvabva refers to the cult as a "regional cult", I assume it is a Mhondoro regional ancestor cult. Certain rules of behaviour and ways of doing things within the shrine may also suggest a link backwards in time: people adapt to the cult sweep the floors of the caves and shrines with their bare hands and not with brooms, stone tools are used to cut the grass; no metal tools are allowed.

There is considerable ritual and religious similarities over parts of the region. The centrality of the rain-making cults and fertility cults may partly be explained with reference to the "ritual ownership of the land" where immigrating and conquering groups concentrated their political efforts against the local chieftainships and the rain cults, as was the case in Barue and QuiTeve, the kingdoms north-east and east of Manica. Here the villages headed by decent and rain cults were the enduring social institutions.

## *Discussion*

This paper has not been about the original meaning content in the rock-art of Manica as such. However, I am rather concerned with two aspects of the art: the possibility of saying something about pre-historic practices by looking at the present and historically known ethnography, and the associations that people make with the art and the landscape where the art is found. Although people do not distinguish between traditions in the art in academic terms based on style or chronology, they do clearly connect the art to the ancestors, which may also consist of the people that occupied the area before their own Shona-speaking ancestors arrived. The rock-art shelters are not the main ritual arenas for a rainmaking ritual but at certain stages in the proceedings the ritual leaders are sacrificing to the ancestors by placing pots of beer in front of the painted panel. The painted sites are referred to many times during the ritual as a meeting place between the spirits, because of the art, which is made visible to us as a sign from the spirits and us.

The sites represent a link backwards through time, even if the actual rock-art is not physically a part of current ritual activities. The link is the ritual ownership of the sites which has been handed over, or taken over, through generations of users. This re-use and the links between these phases of use and groups of people are presented to us through the archaeological material present at the sites:

- San paintings.
- San and Bantu tradition paintings.
- San paintings and EIA pottery
- San painting and Bantu burial.
- San and Bantu paintings and rain-making today.

The continuing use of the same sites and the obvious importance connected to some of the sites and painted panels may obscure real disjunctions in the ritual meaning and performance. For much of the information about Shona ritual activities we also have to look beyond the Manica core area. The various Shona-speaking groups have demonstrably similar cultural traits across space today. Although the Manica have no site that can match the importance of Njelele, the beliefs in ancestral spirits and the importance of the rain making ceremonies are very similar. Indeed. They are



also very similar to beliefs found among other Bantu-speaking groups of the region.

Has the differences and distance between people with different economic adaptation as well as between various groups of farmers really been so un-dynamic and rigid as it is often portrayed? It is reasonable to believe that the “otherness” found in other groups was attracting as well as frightening. When people venture into a new area there is not only a physical adjustment to a new geographic and ecological zone but also a social adjustment to the people already living in the land as well as the ritual adaptation to the land and its spirits. Spirits of the land may be represented through rock-art, or may be part of a landscape such as vegetation. It may be an inconspicuous part, like a tree or a hole in the ground. These spirits are as important as the people that already inhabit the land, and to appease them is of paramount importance. The spirits of the ancestors and the land are everywhere and are present at all times. In the homestead you know who they are as they are your own, in the open bush, your own must negotiate with the unknown spirits of the “others” for your safe passage. Also in the bush are these fixed points related to the ancestors and their spirits. Walking through the landscape of Manica people will know these fixed points between which we are navigating and relate to the meaning attributed to them in various ways, like going through certain ritualised behaviour.

It is not all rock-art sites that are of significance in the present, as no specific image seem to be of greater importance than others. Some sites may be totally un-known at present to be later re-discovered and for some reason become important in a new frame of ritual and religious activities or when ritual leaders change or certain traditions are re-born for some reason. Meanings attached to individual images are long since gone but the panels continue to play an ever-important part of present understanding of the cultural landscape. The rainmaking ceremonies of the present Manica people have many aspects, like blessing of people and animals, increased fertility and harvest. However all these aspects are tied to the all-important aspect of rain and water. Without food, health and fertility will suffer and diseases will increase.

Barnard sees the relationship between Khoe-speaking herders and non-Khoe-speaking San hunter-gatherer groups particularly dynamic. It seems that these groups could easily take up each other’s economic adaptation and “become” the other, if circumstances so demanded. The ex-

tensive borrowing from Khoe language found in present Nguni dialects bear witness to the degree of interaction between these groups (Barnard 1992:159; Newitt 1995:149).

Vinnicombe (1976:136) and others shows how close was the interaction between the San groups of the Natal Drakensberg and the surrounding Ngoni-speaking groups. The San, considered by the Ngoni as ritual experts, were employed as rainmakers. Such interaction has been shown from other parts of the region as well (Hall 1994:61; Jolly 1998:247).

When discussing cultural similarities over the vast area of southern Africa we are walking into contested territory. Lewis-Williams & Dowson (1994:207), discussing the validity of a concept such as "Pan San", decides against the use of this term as they had themselves employed it earlier (Lewis-Williams 1981:37; Lewis-Williams & Biesele 1978:117). Even though striking similarities do exist between present !Kung ethnography and what was recorded by Bleek and Lloyd a century earlier in Cape Town, temporal and cultural variation undoubtedly existed and exists through time and space. The image of the "Bushmen" or "San" as a coherent unit is a European or settler concept, while the San do not see themselves as members of an integrated unit but rather as !Kung/Ju-/wasi/San or any of the other Khoi-San speaking groups (Barnard 1992:152; Gordon & Sholto Douglas 2000:4)

There seem, however, to be some areas where a great deal of cultural similarity exists between various San groups. Lewis-Williams & Dowson identify concepts like *n/om*, *n/ow*, puberty rituals for either sexes, marriage and shamanistic performances where trance played a prominent role (Lewis-Williams & Dowson 1994:207). The existence of puberty or initiation rites among Shona-speaking peoples has been debated with regard to the interpretations of Great Zimbabwe (Beach 1998:47; Huffman 1996:200). Initiation rites in Africa seem to be expected always to follow the same three-stage pattern: a segregation phase and a rather long seclusion or liminal phase removed from society, followed by an introductory phase often coupled with a new identity as in the classical rite de passage where the emphasis is on the passage. However, the vast cultural variations in Africa mean great variation also in how initiation rites are defined and carried out. Initiation of some sort may be an element or part of a larger rite, such as a rainmaking ritual. The classical studies of ritual like Turner's (1967) studies of Ndembu initiation often portrays the societies as closed, small-scale with a shared cultural and symbolic code which takes sym-

bolic consensus for granted. We may have to look for a more dynamic and multi-cultural model of rituals, which may take into account the plurality of individual cultural and ethnic backgrounds present among the participants. We do easily realize that this is the case in present day Mozambique. It may, however, also have been the case in previous times where bearers of various social experiences seek to reform or re-invent their tradition on the basis of their background or individual understanding of the symbols presented in the ritual (Humphrey and Laidlaw 1994:80). The elders in Manica always emphasized "in October we do our rain-ritual, which is also for crops, animals, health and family". However, each time the procedures are discussed among the elders, which in recent times also involves political administrators.

J.M. Schoffeleers (1992:9) directs attention to the cultural dynamics between the Kafula (or BaTwa), the autochthons of Malawi, and immigrant Bantu-speakers in his discussion on the Mbona cult. The "ritual ownership" of the land is essential to the immigrating power. Through the autochthonous ancestral spirits, natural forces are controlled, in particular the rain. Schoffeleers does not make the full connection between the founding myth of the Mbona and a hunter/gatherer origin for the rain cult. However in his description of the oral tradition around the founding of the cult, Mbona is described as a person that lived in the Shire valley prior to chiefdoms and who were a great sorcerer. He left marks of his body, utensils and weapons on the rock faces and was finally killed by people using iron tools. His followers took his head and built a shrine to him (Schoffeleers 1992:142). It would seem that a connection to the original hunter/gatherer population and their fame as sorcerers might be made. The similarities between the rain cults of Malawi and the territorial cults of the Shona-speaking region south of Malawi such as Chaminuka, Karuva and Dzivaguru, show the regional cultural similarities between the rainmaking cults. Beach (1980:314) sees the spread and rising popularity of these cults in relation to the lack of central powers during the 19th century. He asks if Shona politics were taking new turns to adjust to a "frontier politics" in the absence of centralized powers such as Mutapa and Changamire

The ritual performers, the spirit mediums, were also connected to the local headmen, the sabukus and villages rather than the paramount chiefs and royal lineages. The enduring element of the social structure in historical Manica was the village and its headman, as it still is and as it has been in recent history. The Karanga states of Barue and Quiteve were established

as an over-rule grafted on these pre-existing social institutions. The Karanga rulers tried to build alliances to the rainmakers and the local villages in various ways (Newitt 1995:43). In times of strife and emergency the local headmen could easily turn their allegiance to other paramount chiefs or to the Portuguese. As discussed above, several authors doubt any great antiquity for the Mwali and other "cave cults" in the region. However, there is no doubt that caves and shelters have been used as ritual places from far earlier times. The archaeological material, such as the rock-art, tells us that much. Shifting politics and cultures have necessitated religious changes and adaptations in ritual and religious practices and beliefs, although the material context has been much the same over the years, as have aspects of the ritual as it is practically conducted, if not in its meaning.

A new religious order very often takes over the place of the previous religious order but also various ritual practices. This may particularly be so if religion is supplanted by a recently immigrated power. In order to accommodate and gain control of the "spirits of the land" the ritual experts of the original population will often be used and a large part of their ritual practices incorporated into the new religious order. The cultural interaction between the white and black population seem to have been greater in the Portuguese territories than in the other southern African colonies. Many of the white settlers that arrived in Mozambique came from the rural districts of Portugal. From their own country they would have been accustomed to many of the elements of religious practices and beliefs that they met among the indigenous population of Mozambique (Pina-Cabral 1986:174). In current Manica society the Christian sect of the Zion Apostles gathers to pray at places known to be important and sacred ancestral places, like the Chinhamapere and Monte Guidingue. They normally gather just above the painted shelter. The local spirit medium at Chinhamapere is also a Catholic and an eager churchgoer. It would be naive to believe that almost 500 years of exposure to the Catholic Church and Portuguese customs should have had no impact on local beliefs and local customs.

When the original painters ceased to use the sites is impossible to tell with any degree of accuracy. What is plausible is that some of the rituals that took place in these sites regarded control of the natural forces and water. The paintings would have been recognized as the makings of ancestors, as they are today, and the site would have provided the liminal space of ritual timelessness that is natural for this type of ritual contexts. The painted surface represents the past timeless realm of the ancestral powers and

the present outside the shelter represents the future. Through the elders the messages from the past is interpreted in the eyes of the present and passed on as guidance for times to come. The painted sites thus present a physical continuation and link to the past that is enduring beyond shifting cultural traditions into which it may be interpreted at any point in time.

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## *Chapter 4*

# **Water, Iron and Soil in a Matrix of Culture: Analysis of the Prosperity of Milansi and Karagwe Kingdoms, Tanzania**

Bertram B.B. Mapunda

### *Introduction*

The political system in Tanzania around the mid-nineteenth century, just before colonial invasion, shows three broad types of organizations: clan-based polities, chiefdoms and kingships. It should be noted that the three systems do not denote progressive stages towards political advancement, with the first being primitive and the last being an advanced stage as it was previously implied (Oliver and Mathew 1963). Instead, each political system should be understood as being mature and self-sustaining and adopted by any given society in response to given socioeconomic and cultural forces.

The clan-based political organization, for example, was dominant especially among hunter-gatherers such as the Hadzabe and Sandawe and pastoral communities such as the Maasai and Datoga. The main reason for this was the migratory pattern of life which in turn was dictated by their mode of subsistence. Hunting and gathering are sensitive to availability of natural resources, especially faunal, floral and water in any given micro-ecozone, and their quality and quantity determine the size of the community or band that exploits the given micro-ecozone. The distribution of the three resources in a combined form in any given environment tends to prefer small communities, and these would more often than not constitute ethnically related members, hence clan-based leadership. This system in turn helped control overgrazing for pastoral communities.

Apart from hunter-gatherers and pastoralists, who were mostly non-Bantu-speakers, there were also some Bantu-speaking people who organized themselves under the clan-based political system. These encompass those who occupied the vast region of south-eastern Tanzania, including

the extensive wilderness that later became designated the Selous Game Reserve; e.g. the Pangwa, Manda, Matengo, Ndendeule, Ngindo, Mwera, Matumbi, Vidunda, Rufiji, etc. Socio-economically, these adopted a mode of sustenance which can correctly be termed as “mixed-grill”, a mode that combined farming, herding, hunting/fishing and gathering in almost equal proportions. As such they led a semi-permanent mode of life often dictated by natural resources. But when a given cluster reached saturation, socio-cultural factors such as witchcraft allegations or epidemics caused the groups to split and/or migrate (Iliffe 1979). The vastness of wooded savannah with almost similar natural resources in the region in question made such migrations less risky and in most cases more rewarding, as they opened up virgin soils with natural fertility and new hunting/fishing grounds.

This mode of living which had been there since at least the reporting of Gaspar Bocarro in the early 17th century (Kimambo 1969) came to be disturbed by the Ngoni invasion in the mid-19th century. In fact, it was the disunity of the indigenous people here and their inexperience in war and military affairs which made the Ngoni from Zululand feel comfortable to call this place their new home after being in exodus for almost 20 years and trekking north more than 3,000 km. Although the invasion had a militarizing effect on the local people, it had no uniting impact as the politico-military domination of the Ngoni made all efforts to prevent that from happening. If they did anything along that line, it was to further disintegrate what they found to be relatively strong clan-based community. People were turned into refugees, living in uncertainty and fear in their own land through perpetual raids for livestock, women and slaves until the time of the Maji Maji War at the beginning of the 20th century (Mapunda 2004).

By the mid-19th century the vast majority of Tanzanian communities lived under chiefdom polities and their rulers or chiefs are popularly referred to as Watemi (sing. Mtemi), hence the name Ntemi chieftainship. Examples include Zinza, Ha, Nyamwezi, Chaga (of Marangu and of Kibosho), Shambaa, Zigua, Zaramo, Gogo, Hehe, Bena and Kimbu. Socially, a chiefdom was principally an amalgamation of several often ethnically related clans. In most cases clan cohesion of this manner was a recent phenomenon, formed not earlier than the late 18th century following the re-awakening of trade contacts between the coast and the interior.

Centred upon ivory and slaves, the coast-borne trade had both posi-

tive and negative socio-political impacts. Small, clan-based communities were forced to unite lest they risk being swept wholesale into slave trade or slavery by stronger chiefdoms or armed gangs of slave hunters and traders. In most cases the unity did not come voluntarily but by force. Often the process would be initiated by an envisioned clan leader who either for the need of his polity's defence or for mere gluttony of power would, through persuasion or force, amalgamate neighbouring clans into a polity that would be large both spatially and population-wise. Thus united, a polity was able to withstand invasions from other polities or raids from slave traders.

However, it is also worth noting that one of the key factors in both forcing-in neighbouring clans and protecting the amalgam against subsequent attacks was military superiority which was made possible through the size of the army, military skills of the commander-in-chief (usually the Mtemi himself) and his army and weaponry superiority. While the first two were locally available, the last was not. For almost two millennia, weaponry superiority in sub-Saharan Africa (and many other places for that matter) was determined by mastery in metallurgy, especially ironworking. Iron spears, arrows, swords and knives had been, up until the late 18th century, the most feared and deadliest weapons in the region; hence the adoration of ironworking. But, with the re-opening and intensification of overseas trade in the 18th and 19th centuries, muskets, rifles and guns took over the superiority of spears and arrows. Defensive and offensive powers of the different polities no longer depended on superiority in iron production, but instead on trading with coastal traders which guaranteed the acquisition of muskets and guns. It is no wonder that success stories of most chiefdoms in 19th century Tanganyika are centred on the involvement in Swahili trade, where the main import was ammunition.

In this endeavour, a few chiefdoms reached a comparatively complex stage spatially or administratively, or both. Examples include the Ngoni, Fipa and Nyambo. We make exception for the Hehe, Nyamwezi and a few others who also had acquired relatively large geographical areas for the simple reason that they reached that stage rather late, late in the century.

Of the three communities, the Ngoni case is both interesting and unique. They had managed to subdue a large area of southern Tanzania, spanning roughly between the Rufiji River to the north and the Ruvuma River to the south, the Indian Ocean to the east and Lake Nyasa to the west, incorporating about a dozen ethnic groups. One could be tempted to

call it an empire. However, the Ngoni had only managed to exercise their military mastery and control in this region; they were not interested in political or administrative powers. As stated earlier, they seemed to have preferred maintaining the status quo in order to allow them to raid for livestock and humans at will. Full political domination would have denied them the right to raid their subjects. Thus we cannot speak of a “Ngoni Empire”, despite the spatial vastness of the region of Ngoni’s military influence, because of its weak administrative structure.

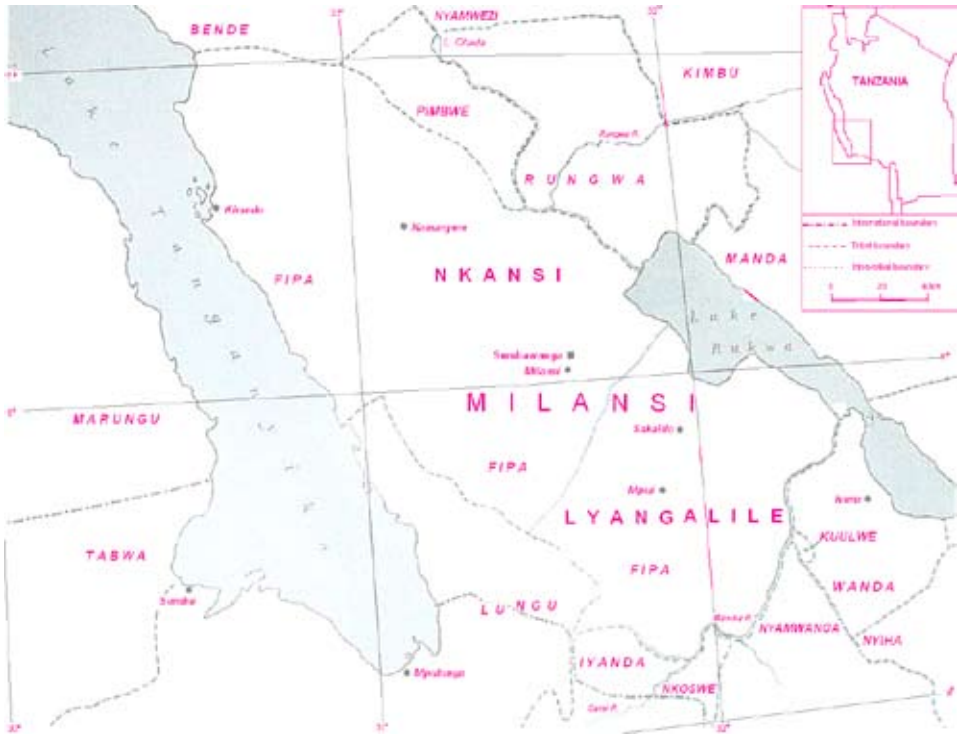
The Fipa and Nyambo (Milansi and Karagwe) are two polities with long history, expansive regions and elaborate administrative systems in the order we observe among several states in the Interlacustrine region, including Rwanda in what is today the Republic of Rwanda and Buganda, Bunyoro and Nkore in present day Uganda. One can already refer to these as kingdoms or empires by the mid-19th century. The following section provides an account of the two Tanzanian kingdoms, with emphasis on factors leading to their emergence and success.

### *Milansi Kingdom: a historical background*

Milansi Kingdom was located in present day Nkasi and Sumbawanga districts, Rukwa Region, south-western Tanzania (Map 1). At this time the chiefdom had extended from Lyamfipa escarpments and Lake Chada in the north, to the Saisi and Momba rivers to the south, and from Lake Rukwa to the east and Lake Tanganyika to the west (Map 1); roughly 25,000 km<sup>2</sup>.

The Fipa oral traditions place the origins of the political history of the Fipa at the coming of Ntatakwa, the founder of the Milansi chiefdom, matched in calendar time to around the late 17th century A.D. It is held that Ntatakwa sent out his five sons to found villages and govern other parts of the country. These sons then became minor chiefs who continued to regard the reigning chief of Milansi as their “father” (Willis 1968).

Around the middle of the 18th century during the reign of the third chief of Milansi (Ntseka), some female invaders came from the north and usurped the chiefdom of Fipa and introduced what is known as the Twa ruling dynasty which continued to rule Ufipa into the beginning of the 20th century (Popplewell 1937; Willis 1968; Wright 1982). The usurpers are believed to have brought with them a concept of political organization similar to that of the more northerly Bantu states of Karagwe, Buganda, Ankole, Bunyoro and Busoga (Willis 1968).



**Map 1.** Milansi Kingdom before 1900 (from Roy Willis 1968).

Willis believes that the usurpers were Tutsi people (Willis 1966, 1968, 1981). However, deeper scrutiny shows that the attribution of Fipa’s political dexterity to Tutsi borrows more from the famous Hamitic myth than from ethnographic truth. This is because there is no evidence of the presence of Tutsi in Ufipa, such as exists for e.g. the Arabs. Roy Willis, who states decisively in his later works that the immigrants were Tutsi, surprisingly shows us a completely different story in his earlier ethnographic reports. He clearly admits that his informants told him that the migrating women who varied in number from two to four came from Uha. His narrative is as follows:

“Two women who were sisters lived in the country of Uha. For a long time they dreamt of a country where there were no people and no chief.

Eventually they set out, looking for this country...When they reached Milanzi they saw a young man ... [who] took them to Wakumilansi's [chief's] house, where his wife said that her husband had gone out hunting.... The wife ... took out a stool for the elder sister. She refused to sit on it and also refused several others ...until at last the wife produced Wakumilansi's own stool. She then sat on this stool.... When Wakumilansi returned from hunting and saw the new-comers, with one woman sitting on his stool, he was very angry with his wife, and said, 'Now this country is no longer mine'" (Willis 1964:343).

Ironically, in his conclusion, Willis converts Waha into Tutsi, and gives no explanation except to claim that "as most Fipa [say]", but no Fipa is shown saying so in his report. And henceforth, the Tutsi rather than the Ha are said to be the usurpers of the Fipa Kingdom. Here is his version:

"My own guess (and it cannot be more than a guess) is that the story of Unda, Mwati, and Saa [the migrant women] is the myth-image of a real event which occurred between 100 and 200 years ago—the incursion into Ufipa of an alien people who may well have been Tutsi (as most Fipa, including the Twachi themselves, believe), and who gained power through a bent for political organization exceeding that of the indigenous people. The improbable women travelers I surmise to have been invented to serve the needs of the Fipa descent system, which traces clan affiliation to a female (the father's mother); hence the founder of a new and ruling clan must be a woman" (Willis 1964:350).

There is strong indication that Willis was influenced by Roland Oliver, one of the prominent East Africanist historians of the time, but a royal subscriber of the Hamitic myth. This is implied in Willis' own admission that the term Sudanic, which he uses to explain the Fipa political system, "is due to Oliver and Fage (1962)" (Willis 1964:340). Both Willis and Oliver and Fage were compelled to attribute the emergence of the Fipa political system to foreign influence following the sophistication of its administrative system, which for the reigning paradigm of the time could not be ascribed to Bantu invention since this was an inferior race, but rather to the superior race of the Hima (Tutsi). Confessing this, Willis writes:



“The indigenous state structure of Ufipa was of the type that has been qualified by Oliver and Fage as ‘Sudanic.’ That is to say, the political system consisted of a hereditary chief (Mweene) surrounded by a court of titled officials including a number of appointed functionaries charged with administering specific areas of the country on behalf of the chief. Also consistent with the ‘Sudanic’ model was the exalted status of the queen-mother... and a new year ceremony in which fire was kindled by the chief and carried to extinguished hearths all over the country” (Willis 1966:20).

The confusion of the origins and early history is bound to remain unresolved, since all the elders who had some ideas of that remote past are gone. Even only thirty years after Willis’ studies of the 1960s, the current author could not get hold of the elders Willis had interviewed. So as time passes, oral traditions become more and more incapable of solving this problem. The only hope now is archaeology. However, efforts by this author to excavate at the royal compound of Milansi in 1997 met with strong resistance from the traditional caretakers of the site, as they considered excavation a defilement of the site and disdain to their ancestors. Nonetheless, it is worth another attempt.

But debate aside, after invasion we are informed that the polity consolidated and gave rise to two equally strong chiefdoms, Nkansi in the north and Lyangalile in the south. The two states were in constant struggle throughout the late 18th century and much of the first half of the 19th century. The struggle and competition helped to strengthen them politically and economically as it stimulated them to consolidate their administrative structures and participation in long distance trade.

This state of affairs was interrupted by the appearance in Ufipa of the Ngoni, a warrior people from South Africa who rapidly overran the country. The Ngoni stayed in Ufipa for less than a decade, during which time the Twachi chiefs and their followers are said to have taken refuge in caves. After the death of their leader Zwangendaba, the Ngoni quarrelled and split up and the different bands left Ufipa in various directions (Willis 1968, 1981).

The Ngoni’s victory over the Fipa is attributed to their superior military techniques. Although the Ngoni occupation lasted less than a decade, it marked a definite divide in Fipa social and political history. The two chiefdoms began to concentrate on internal developments instead of

the military struggles of the pre-Ngoni period. The defeat by the Ngoni and by the Bungu from the northeast a few years later forced the Fipa to participate more actively in Swahili trade for the purpose of acquiring firearms. The Bungu allegedly defeated them because they had firearms (Willis 1976). Formerly, the Fipa had been relatively strong compared to their neighbors, thanks to their mastery in iron technology which supplied them with weaponry.

The Fipa's emphasis on trans-continental trade easily paid off well, thanks to their strategic geographical location between Unyamwezi to the north and Kazembe to the south, both important trans-continental trading centers as well as abundant sources of ivory. This in turn enabled them to acquire firearms, with which they conquered their neighbors and captured prisoners who were exchanged for more firearms and other manufactured goods (Iliffe 1979; Willis 1981; Wright 1982).

By the last quarter of the 19th century, Nkansi became the strongest chiefdom not only in Ufipa but all over southwestern Tanzania. Iliffe describes it as "one of the most elaborate chiefdoms", deserving to be called a state because it "was more stratified, had more precise borders and was governed in a more strictly administrative manner than the other polities of the plateau" (Iliffe 1979:24). Mwene (chief) Nandi Kapufi, who reigned Nkansi for about thirty years (ca. 1860-90), made alliances with coastal traders and is reported to have had an Arab "prime minister" in the 1880s (Iliffe 1979).

"Mwene", literally meaning "the one" or "the omnipotent", governed with the help of sub-chiefs known as "Walasi" (Mlasi, singular). The prosperity of this chiefdom remained uninterrupted until the Germans arrived at the end of the 19th century. Unlike many communities in Tanzania that had strongly resisted colonial intrusion in their territories, the Fipa seem to have received the newcomers with little resentment. One strong indicator is the way the Fipa readily accepted Christianity. Iliffe notes that "as his subjects rapidly became a Christian people, [chief] Kilatu of Ufipa put his regalia up for sale" (Iliffe 1979:232).

With the British policy of indirect rule, the chiefly titles continued up to 1962 when they were officially banned by the government, a year after Tanganyika became independent. The last formal Mwene was Joseph Kapufi, who was crowned in 1956.

### *Karagwe Kingdom: a historical background*

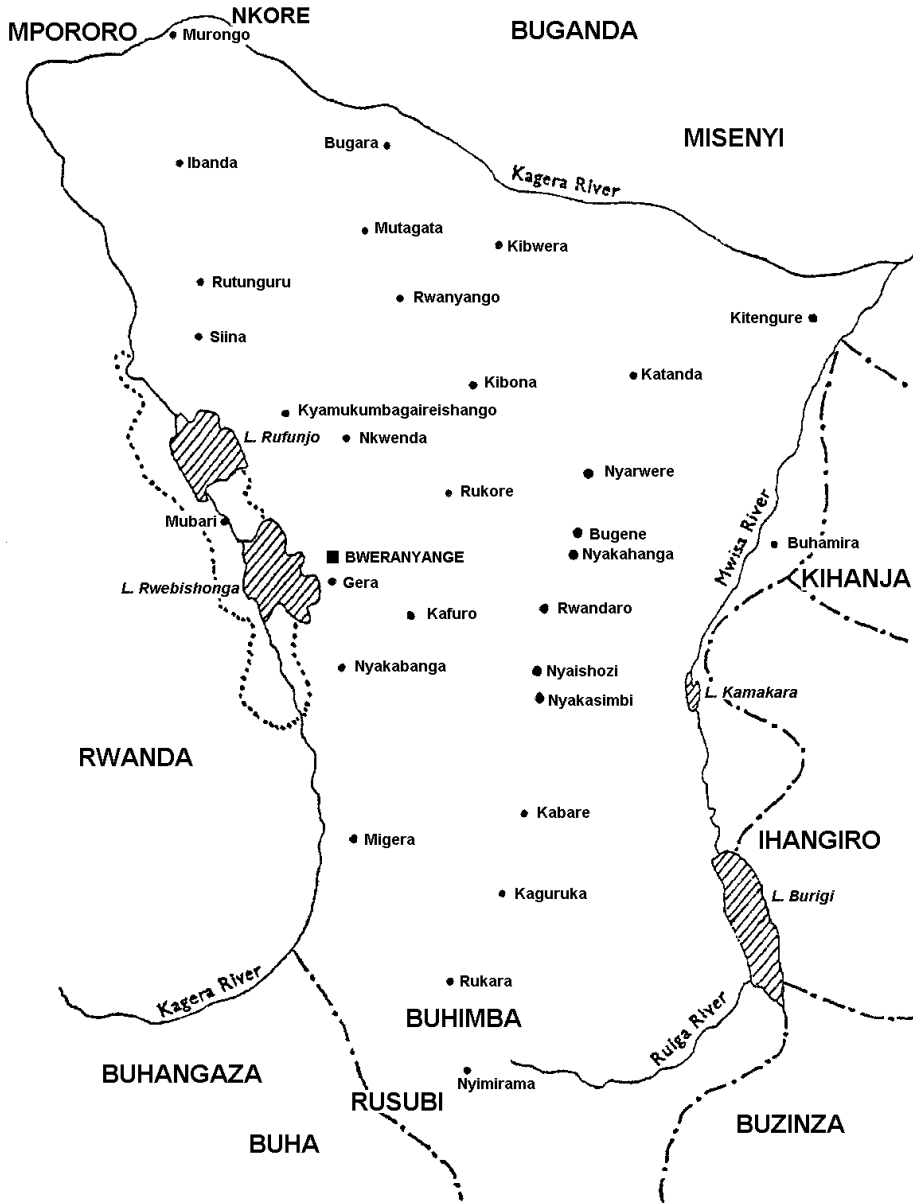
Today Karagwe is an administrative district of Kagera Region, northwestern Tanzania. Aerially, the district is much smaller than the Karagwe Kingdom discussed in this work. According to Israel Katoke, “some of its territory was given to Mukama (King) Kasusura of Rusubi and Kahigi of Kihanja as a reward by the German authorities during their administration of Tanzania, because these two rulers are said to have been obedient to and cooperative with the German authorities” (Katoke 1975:1).

Karagwe Kingdom was marked by the Kagera River in the west and north, sharing the border with Rwanda, and in the west while in the north it shared borders with the kingdoms of Mpororo and Nkore in what is today Uganda as well as Misenyi in Tanzania. Her neighbours to the east included the kingdoms of Kiziba, Kihanda and Ihangiro, while to the south the kingdoms of Rusubi, Buzinza and Kimwani (Map 2).

From the onset it should be stated that the ethnic history of the Nyambo, just like that of many other people in eastern Africa, is not clear and firm. This has been attributed to overdependence on oral accounts which are unfortunately time-affected; the longer the time the shakier the information (Vansina 1985). Sometimes local informants, especially those who are often consulted for historical information, recycle oral histories back into oral traditions to fill in the gaps, naturally with new omissions and offshoots. Encountering this in his study, Israel Katoke laments:

“...it became quite clear to me that even some of those informants who were recorded by their neighbours as the ‘authorities’ of Karagwe history had memorized the accounts written by Speke, Grant, Stanley and Ford and Hall. At times when I asked some of them to tell me from whom they had learned this information, they mentioned a ‘book’ or a ‘Mr. Speki’. Others brought the book itself or a copy of Tanganyika Notes and Records, no. 24, 1947, and turned to the article by Ford and Hall. To some individuals these works have become little bibles or standard texts books of Karagwe history” (Katoke 1975:xv).

Even so, historians working on the pre-colonial period in Africa have little choice but to grapple with these drawbacks. With caution one can always find informants with “original and authentic information based on what they had received from their ancestors or from their own personal experiences and family histories” (Katoke 1975:xv).



Map 2. Karagwe Kingdom before 1900 (after Katoke 1975).

While a number of historians (e.g. Ford and Hall 1947; Corry 1949) place the origin of the Karagwe Kingdom in the 16th century AD, a date that matches with the coming of Bahinda, the legendary founder of the kingdom, Katoke, probably correctly, pushes the date a century earlier (Katoke 1975). Basing this on oral accounts and astronomical evidence, he argues that Karagwe had started as a unitary state under a Bantu ruler long before the arrival and conquest of the Bahinda. According to Katoke, the Bahinda invasion took place some time before a series of eclipses of the moon which occurred between 1492 and 1520. The eclipse is reported in both Bunyoro and Nkore traditions in Uganda, the cradle of the Bahinda and where it is said to have taken place during the reign of Nyabugaro or Ntare I, ruler of Nkore. Nyabugaro is claimed to be one of the sons of Ruhinda Kizarabagabe, the founder of the Bahinda dynasty. "If this account is accepted, as it seems it ought to be," Katoke argues, "Ruhinda and his followers must have come [to Karagwe] much earlier than has hitherto been suggested" (Katoke 1975:xi).

It is generally accepted that the indigenous inhabitants of Karagwe are "Banyambo", a Bantu-speaking people who seem to have settled in the area during the second half of the first millennium AD. At least two genesis traditions exist among the Nyambo. One holds that their forbearers came from heaven, having been expelled by God because they defied him; whereas the other claims that the Nyambo have lived in Karagwe ever since the world was created by Ruhanga (creator God) (Katoke 1975).

For scientists, the second story seems comprehensible and explainable. Archaeological evidence shows that Karagwe was settled since the Middle Stone Age period, probably around 200,000 years ago (to a lay person this age is not far from "since the world was created"). Surface scatters of stone tools of the Sangoan type, generally classified as the early form of the Middle Stone Age, have been noted in different parts of Karagwe (Katoke 1975) and an archaeological excavation conducted by Merrick Posnansky in the 1960s at Nsongezi, just across the Kagera River in Uganda, has provided a primary context of those materials. Although the presence of Middle Stone Age artefacts in Karagwe does not necessarily tell us that the makers of those tools were the direct ancestors of the Nyambo who live there today, it allows for consideration of a longer ethnic history in the area than oral accounts tend to assume.

The people who can probably claim direct ancestry to the Nyambo are the iron-producing and farming communities evident in the Interlacustrine

region from around 500 BC. The shared opinion is that the makers were Bantu-speakers who seem to have migrated east into the region half a millennium or so before. Evidence for ironworking from Katuruka, West Lake Victoria (Schmidt 1997) and Kabacusi and Gasiza I in Rwanda (Van Grunderbeek, 1992), east and west of Karagwe, respectively, attest to this. Unfortunately, very little archaeology has been done in Karagwe and no date is available to help us pinpoint ironworking, let alone its makers and users in a chronological wall chart. In the 1960s John Sutton, then a lecturer with the University of Dar es Salaam, described surface collections of pottery collected by Katoke (a historian) at Lukajange as having downturned rims with roulette decorations. He tentatively dated them to “15th century or later” (Katoke 1975:15), a date that concurs with oral account origins of the Karagwe Kingdom.

In the 1970s Peter Schmidt conducted test excavations at Bweranyange, the capital of the Karagwe Kingdom (Schmidt 2006). Other than confirming the kingdom’s involvement in iron production, Schmidt’s work fell short of informing us of the history of the kingdom.

We are therefore left with no other alternative than oral tradition, which unfortunately fails to offer a clear picture of what happened in Karagwe during the first two millennia of ironworking (BC 500-AD1500). This weakness withstanding, we are informed that prior to the arrival of the Bahinda invaders from the north, the indigenous Nyambo, who subsisted principally on farming, had already amalgamated into a single polity. The initiative and process of cohesion is attributed to the Basita clan, though it is not clear whether the Basita achieved this through military or charismatic means (Katoke 1975). Oral traditions provide the names of three Basita rulers: Magunguru, Malija and Nono, who are interpreted as representing three generations.

It was during the reign of Nono that the hitherto Bantu-ruled Nyambo chiefdom was usurped by Nilotic Bahima. Specifically, Nono, whose capital was at Mugutu, near Rukole (northeast of Bweranyange), was ousted by Ruhinda, the son of Wamara and Njunaki—a slave girl. Ruhinda shifted the capital to Bweranyange. Wamara, the son of Ndahura, was the last Chwezi king of the Bunyoro-Kitara Kingdom who came to be ousted by the Babito twin brothers (Katoke 1975).

Ruhinda, who is also called Kizarabagabe, i.e. the father of rulers, is said to have extended his empire as far south as Buha and Kahama. But

when he died the satellite chiefdoms such as Buha, Buzinza and Ihangiro broke away, thus weakening the newly formed empire. Nevertheless it continued, albeit with lesser region than that of Ruhinda, up to the mid-20th century. The last ruler of the Karagwe Kingdom was Ruhinda VII, who was installed in 1939.

Like the Fipa Kingdom, Karagwe's success is not only confined to its spatial extension but also to the dexterity of its administrative machinery. The king ruled with the assistance of a firm system of subordinates, including a prime minister who took care of all administrative matters; a chief commander who was in charge of the army; a leading healer who took care of both the biological and magical health of the king and his subjects, and others.

The remaining part of the paper attempts to explain the secret behind the success of the two kingdoms.

### *Factors for the success of the two kingdoms*

The political achievements obtained by the two kingdoms did not come by accident, but emanated instead from various factors, most prominently iron technology, good soils, trade and water. These were nicely blended with culture that was conducive for development.

**Iron:** Oral traditions and archaeological evidence from both Ufipa and Karagwe show that the political history of the two kingdoms is closely connected with ironworking. While iron technology emerged in both places before centralized political organization, it is reported that the founding chiefs were iron workers. The oral accounts of the Fipa, for example, maintain that ironworking in that area was brought by the first immigrants (original Fipa) who came from the southwest led by "Ntatakwa", the founder of the Milansi Kingdom c. 1700 AD (Willis 1968; Mapunda 1995). These immigrants settled in village communities, produced their own agricultural implements, adzes and other tools for building, as well as weapons for war such as spears and arrows. Having conducted intensive ethnographic enquiries among the Fipa, Roy Willis argues that the fact that "the present chief of Milanzi is an iron smith (isilungu), a hereditary occupation, supports the theory that the founders of the Milansi chiefdom were themselves smiths" (Willis 1968:84). Archaeological work conducted in Ufipa shows that around the 16th century a new type of technology

emerged in the region, referred to as katukutu. This date closely matches with the timing reconstructed through oral accounts for the arrival of Nta-takwa.

Karagwe also demonstrates a very close tie between political power and ironworking. Having conducted test excavations at Bweranyange, Peter Schmidt believes that ironworking there was conducted at the centre of the royal compound (Schmidt 2006), which is a clear indication that the rulers had connections with iron. He elaborates upon this by stating:

“Much like the incorporation of a forge inside the king’s compound in Kaiija Kingdom in Buhaya as well as the ritual incorporation of the king into the iron forge during installation rites..., the Karagwe evidence suggests a parallel process: the smiths and smelters inside the royal compound were inside royal space in a relationship of intimate contiguity, a metonymic relationship that conferred to the king the attributes of the iron producers and publicly displayed his power over them” (Schmidt 2006:243).

When we talk about marriage between the royalists and ironworking in Karagwe, one irony is evident. We noted above that the kingdom was ruled by the Bahinda Dynasty, said to be of Nilotic origin, from the beginning of the late 15th or early 16th century. But we also know from anthropological and ethnographic studies that, unlike Bantu-speakers who adored and respected ironworking, Nilotic-speakers viewed ironworking with contempt (Larick 1986). How then can we explain the association of ironworking with political power in Karagwe Kingdom?

Schmidt has attempted an answer. He thinks that the Nilotic rulers did not find their involvement with ironworking defiling because their participation was highly ritualistic. He writes: “it is important to understand that it would be culturally impossible for the Hinda king to work iron, an activity that is taboo except in ritual settings” (Schmidt 2006:243). Although Reid and Maclean (1995) do not argue with Schmidt, they clearly note the high level of ritual performance in iron smelting in Karagwe, especially in the last two centuries.

However, we can also consider other hypotheses. First, the association had started during the pre-Bahinda period and became such a strong tie that when the Bahinda took over political power they could not ignore



or abolish it, but only adopt it. In other words, they opted to act against their norms for the sake of political stability and tranquillity. Second, the political power returned into the hands of Bantu rulers perhaps after the death of Ruhinda, who might have abolished the tradition. But after his death, which was followed by struggle for power, the Basita clan or other Bantu clans took power and brought back the practice. Although both hypotheses are not supported by the available oral traditions, they are worth testing.

What all this shows us is that there came a time when iron became so important in the respective societies that it was adopted by the rulers as a key to success, power, progress and victory, as it supplied farm implements, weapons, trade commodities and the like. For example, no community could be assured of its food supply if it did not have iron implements; no polity could be assured of success in offensive or defensive confrontation with its neighbour without iron weapons. This is clearly proven by King Ndagara I who reined from 1820-1855. His interest and insistence on ironworking enabled him to conquer his neighbours and expand his kingdom more than any other king after Rihinda I (Katoke 1975). Such roles as these for iron made political leaders form an actual or symbolic relationship with iron. Hence, the involvement of the two polities in iron production was a key factor to their success.

**Fertile land:** Soil fertility was another blessing the two kingdoms had. This is not to say that the Fipa and the Nyambo occupied the most fertile land in the whole of east Africa; but rather, coupled with other factors, the advantage of soil fertility the two places had accelerated their social and economic advancement. Located at the edge of the western branch of the East African Rift Valley, the two places have had the advantage of volcanic soil, which is generally fertile.

Consequently, even today Rukwa is one of the leading regions in production of excess food, especially maize, eleusine (finger) millet and beans in Tanzania. Other crops include sweet potatoes, cassava, sunflower, groundnuts, wheat, tobacco, coffee and sugarcane. Farming supports about 90% of the population ([www.rukwa.go.tz.agriculture.htm](http://www.rukwa.go.tz.agriculture.htm), June, 2008), thanks to good soils and favorable climate—moderate rainfall and temperature.

Evidently, farming has always been the prime occupation in Ufipa.

Some travelers who crossed Ufipa in the 19th century (Thomson 1881) expressed their admiration of the Fipa's farming skills and devotion to farming. While sailing south along Lake Tanganyika in 1878, Edward Hore noted "stores of corn and dried fish stacked upon rocky islets... mile after mile of scattered houses peeping out from amongst groves of bananas indicates peace and plenty, and wide-stretching fields of corn and cassava are spread over the country" (Hore 1889:586). Before the introduction of the current staple food crops, namely cassava and maize (from South America) and rice (from Asia) around the 18th century, the staple crop all over Ufipa was eleusine millet, one of the most nutritious crops, believed to have been cultivated in the "corridor" sub-region for two millennia (Ehret 2002).

Cattle herding is also an important economic and cultural activity in Ufipa. There are two kinds of zebu cattle (*Bos indicus*) found in Ufipa today: the short-horned and the long-horned, Ankole type. The former is predominant and its history seems to match with that of human settlement during the Iron Age. They have been noted in archaeological excavations at Kalambo (Clark 1974), Ivuna (Fagan and Yellen 1968) and Kirando (Mapunda 1995). The Ankole cattle are said to be a recent addition in the area, introduced into Ufipa from Uha around Kigoma by the German administrators in the 1890s (Willis 1966).

As in Ufipa, in Karagwe "the soil is good and prolific, ... suitable for growing almost any kind of crop" (Katoke 1975:3). Traditional food crops of the Nyambo included finger millet, sweet potatoes, peas, beans, yams, tobacco, coffee and groundnuts; bananas, plantains and maize which dominate today are late comers. Unlike Ufipa, which is largely flatland (especially the Lake Rukwa shores and the plateau), Karagwe's topography is uneven, with plateaus, marshy areas and undulating land with steep valleys. The latter has been most favoured for farming and settlement, as Katoke notes: "farms or ... villages are built on the gorge like valleys of the country which are watered by streams or a subterranean system which flows from high elevations" (Katoke 1975:3). Apparently the valleys are both fertile (due to accumulation of alluvial soils) and well watered, hence less affected by drought.

Cattle herding is also a traditional occupation in Karagwe. Oral accounts hold that the Ankole cattle type was brought by the Bahinda immigrants in the 15th /16th centuries AD. This date is probably too late, given that other places in the area have yielded archaeological and linguistic

evidence of over a millennium earlier (Sutton 1993; Schoenbrun 1993; Reid and Maclean 1995; Reid 1997). However, by attributing the introduction of cattle to the Bahinda, oral traditions may want to underscore the close association cattle had with the ruling class. Cattle were the property of the political elite, the Bahinda, not the commoners (Bairu), Nyambo.

All in all, the combination of nutritious food from eleusine millet and milk and meat from cattle, coupled with fish from the abundant lakes and rivers in the two areas must have positively impacted the health condition of the people in a conspicuous way, leading to population growth, prolonged life expectancy and increased bodily strength. This along with iron technology must have made the two kingdoms militarily strong and highly competitive both offensively and defensively.

*Trade:* By the 19th century, both Milansi and Karagwe kingdoms were major players in a lucrative trade that involved the coast and the interior. The two acted as gateways of trade for other strong polities of Kazembe in today's Zambia, for the Fipa and Buganda in today's Uganda and for Karagwe. Both lines were strongly controlled by the Nyamwezi.

Before we move along to specific cases, it is imperative to note that before these kingdoms got into long-distance trade they must have started with short-distance trade which often appears naturally as a result of unequal distribution of natural resources and specialization. For example, not everyone in the community kept cattle though it played a central role in dowry payment. Thus, a farmer would barter cereals for cattle when a need for the latter arose and vice versa.

Unfortunately, the information on short-distance trade in East Africa by and large remains hypothetical especially when dealing with distant times, beyond easy comprehension of oral traditions. This is because archaeology, which is expected to handle the deeper history beyond the reach of oral traditions, faces difficulties in identifying items of internal trade. However, it is easy to recognize long-distance trade because of the presence of exotic materials. No wonder more has been written about long-distance trade (e.g., Sutton 1973; Sheriff 1981) than short-distance. But logic renders it incomprehensible for a community to develop a lucrative long-distance trade without first or concurrently being involved in some forms of exchange at the local level.

Turning to Ufipa, we note that commercial and other forms of interaction between the Indian Ocean littoral and the region around Lake

Tanganyika seem to have existed as early as the first millennium A.D. Although there is little direct evidence of interaction between the coast and Ufipa during the next eight centuries except for a few Indian red glass beads excavated in graves at Ivuna (Fagan and Yellen 1968), there can be little doubt that the trade continued (Gray 1957). The discovery along the Lake Tanganyika shore of TIW (Triangular Incised Ware), a pottery type commonly found along the coast of east Africa during the period ranging from the 8th to 12th century AD, has also been interpreted as long-distance interaction (Mapunda 1995).

By the 19th century the Fipa were actively engaged in a long-distance trade network controlled by their Nyamwezi neighbors to the north (Iliffe 1979). Their central geographical position enabled them to co-ordinate trade between the Indian Ocean littoral, Atlantic Ocean littoral, and interior centres such as Kazembe and Katanga to the south and Unyamwezi to the north. The trade involved ivory, "oil of red color" (palm oil) and slaves bartered with fire arms, beads, blue cotton cloth and some broad cloth.

Salt and brine from the Lake Rukwa basin is another important natural resource in Ufipa that has been exported to the neighboring region for at least a millennium. Trade in salt went hand in hand with that in tilapia (*Oreochromis rukwaensis*) and catfish (*Clarias* sp.) (Fagan and Yellen 1968). While salt production stopped during the mid-20th century following availability of cheap salt from the Indian Ocean coast, the fish trade still continues.

By the mid-19th century most of the trade traffic involved boating along and across Lake Tanganyika to and from Marungu in eastern DRC as it was known then (Tambila 1981; Gray 1957). The Fipa and other people living on the eastern shore of the lake are said to have been less skilled in boating compared to their western counterparts, the Rundi and the Goma (Hore 1889). Unlike the Arabs who used sails, the Africans used dug-out canoes, with some measuring "six fathoms [10.8 m] long but with no sails" (Gray 1957:229). In 1878 Hore noted the following items of trade bartered along the shore: oil, mats, fish, salt, goats, honey and all sorts of wares (Hore 1989).

Kirando, and to a lesser extent Kisumbi to the south, were the most important trading ports on Lake Tanganyika in the Milansi Kingdom. Kirando's lure was not so much the harbor but its fertile hinterland and relatively large population, comprised of "up to twenty-five ethnic groups" (Tambila 1981:75). The islands off Kirando shore and the fact that the lake

is narrow both at Kirando and Kisumbi, thus demanding only a few hours of rowing across, placed the two ports in a better competitive position compared to other ports.

This trade has left permanent legacies which include not only the presence of “indigenous Arabs” (as they call themselves) at Kirando, but also people who continue to barter with their neighbors across the lake, especially Burundi, and to a certain degree Zambia and DRC. Exported goods include rice grown along the shore, beans from the plateau, honey from the neighboring wilderness, and dried fish, especially Daga. In exchange they import beer (Primus brand), construction materials such as portland cement and roofing metal sheets, printed cotton cloth (vitenge), sugar and electronics.

Like Milansi, Karagwe was strategically located between the areas of supply and demand - between the coast and Unyanyembe on the one hand, and the kingdoms of Bunyoro, Buganda, Nkore and Mpororo on the other. It is generally accepted that goods from the coast had reached the Kibuga (the capital) of the Kabaka (king) of Buganda by the latter part of the 18th century (Katoke 1975) or early 19th century (Gray 1957; Sheriff 1981) and that these goods passed through Karagwe. If this is true then Karagwe must have started interacting with the coast earlier than that. It is believed that the pioneer agents in this exchange business were the Nyamwezi, long before Arabs or Swahili traders (Walungwana) arrived. The earliest date we have for the arrival of Arabs in Karagwe is approx the late 1830s and early 1840s (Katoke 1975). Coastal traders established depots at Kafuro, Bwerenyange and Kitengure, from which small teams of traders were sent to neighboring kingdoms as a means of evading tariffs and bans for foreign traders.

While they were central to the southerly trade route through Ufipa to Kazembe Kingdom in Zambia, the Nyamwezi also mastered the northerly route through Karagwe. This was somewhat a blessing, as it enriched the commercial network in the two zones by increasing the spatial scope of the market of products in the whole region, from Zambia to Uganda. Katoke, for example, notes that besides bringing goods from the coast and those produced in the Unyanyembe/Usumbwa area, “these pioneers of the long-distance trade routes [i.e. Nyamwezi] seem to have brought [into Karagwe] copper, possibly from the Katanga/Zambia area, and salt, possibly from Buha (Uvinza) or Lake Eyasi” (Katoke 1975: 43), north-central Tanzania. Karagwe itself produced spears and other iron goods

as well as milk vessels. In addition to their local products, Karagwe also supplied imported goods as it had already become a commercial hub. We have already noted copper from Zambia, but there was also salt from Nkele and Uvinza, bark clothes from Buganda and Kiziba and slaves from Bunyoro. In this way, coastal traders were attracted to trade with Karagwe since items from different places were deposited there. As one of the leading trading centres in Karagwe, Kafuro reportedly grew into a large depot as important as Kazehe and Ujiji (Katoke 1975).

But there was more to the attraction. Most of the 19th century Mukamas waived the tariff for traders and official visitors. "Instead of demanding fees from them," Katoke notes, "these fortune seekers were awarded free food, livestock, slaves and many other valuable gifts by the Mukama in return for the small presents they had given him" (Katoke 1975:72). This implies that like Ufipa, Karagwe was a "land of plenty" that made traders prefer to visit where they would not starve.

As with Karando, Kafuro contains tangible evidence of the lucrative trans-regional trade. This includes the Swahili language and "resident" Arabs and mulattos.

**Water:** Water is relatively abundant in both kingdoms. Ufipa is bound by Lake Tanganyika in the west and Lake Rukwa in the east. The plateau bracketed by the two lakes also contains hundreds of troughs, most of which retain water throughout the year. Among these are sources of tributaries which merge along their way down to either of the lakes (Map 1). Karagwe is principally dominated by the River Kagera drainage system. The main Kagera River, together with its two beaded-up lakes Rwebishonga and Rufunjo, form the border of Karagwe with Rwanda in the west and with Uganda in the north. Meanwhile, the Ruiga River which drains into Lake Burigi forms the southern border of the main kingdom, and Lake Burigi along with Mwiswa River which drains into the Kagera River lies close to the eastern border of the kingdom. Much of the surrounding undulating land possesses streams which lead to any of the aforementioned major tributaries or lakes (Map 2).

With this hydrologic network, the influence of water in the development of the two polities cannot be overstated. The domestic uses are not of most concern here, but rather the economical and cultural benefits.

Fish supply is one of the most obvious benefits. Lake Rukwa is renowned for its supply of tilapia and catfish. The main catches in Lake

Tanganyika are *Stolothrissa tanganicae* (Dagaa) and *Laciolates stappersii* (Mikebuka), whereas in the Kagera drainage system of Karagwe the main catches are tilapia and catfish. While fish is the main source of protein for people in these places and leads to improved health and increased life expectancy, it is also the main source of income. Evidence from e.g. Lake Rukwa shows that until the 1960s dried fish from the lake was traded as far away as Mwanza town on Lake Victoria and the Copperbelt region in northern Zambia (Willis 1966; Fagan and Yellen 1968). Although it is unclear as to when this trade started, there is no reason to question the assumption that it formed part of the commercial network dominant in the two polities even prior to the 19th century.

The commercial advantage of these lakes and rivers does not end with their supply of fish, but also includes providing easy means of transport as Hore notes, "Lake Tanganyika, to the natives of those regions, is the great water and the source of many industries, both directly from what it produces, and indirectly through the facility for transport and communication it affords to the ten different tribes whose territories are fringed by its 1000 miles [1600km] of shore" (Hore 1889: 585). This has been clearly documented on Lake Tanganyika (Thomson 1881; Hore 1889; Gray 1957), where it is noted that sail boats had already been introduced on the lake by the late 19th century and were used by Swahili traders operating especially between Ujiji and other ports in what is today Burundi, Democratic Republic of Congo and Zambia. However, the most famous route was between Ujiji in the north and Mpulungu in the south, with ports of call in between, including Kirando, Wampembe and Kala in the Milansi Kingdom.

Needless to say, sail boats came after an unknown period of rowed dug-out canoes, the traditional water vessel in tropical Africa. These must have been central in ferrying people and goods within and across the borders of the two kingdoms.

Another major contribution of water was in ironworking. Given that the two polities were deeply involved in ironworking, water was imperative. I have presented at length elsewhere (Mapunda forthcoming) that water had a major influence on the selection of iron smelting sites. This is because it was needed for kneading clay for furnace construction. This was perhaps more important for the Fipa ironworkers who constructed large furnaces (3-4 m high and 1.5-2 m wide at the base) than for the Nyambo iron smelters whose furnaces were about three times smaller than those of Ufipa.

Water was also important in ore sourcing. It is known that hydrous ores such as limonite and goethite are formed in water-rich environments such as bogs and swamps. But even other none-hydrous ores are likely to be affected by water in one way or another. Magnetite-rich amphibolites, for example, are sometimes eroded by running water such as streams and rivers and are transported downstream. Some of this is deposited along the river banks or at the river mouths where they are easily collected by smelters (Mapunda forthcoming).

All these uses of water must have contributed variably to the emergence and subsequent developments of the two kingdoms.

**Culture:** This term is hereunder used in the simplest definition which refers to shared behaviour that any given society learns and transmits to its descendants through some process of enculturation (Kottak 2002). By this definition culture is extrasomatic; it exists independent of an individual's biological body. But once an individual becomes a member of a society, he or she is subjected to norms, regulations and patterns of behaviour established by that society for specific purposes. The norms, regulations and the like are highly influenced by the environment in which people live. Because environment varies so much, so does culture.

Although culture is not inborn but acquired, it is highly capable of influencing people's attitudes of mind and modifying their perspectives and worldviews. For instance, it is culture which has enabled the Maasai in eastern Africa to maintain their traditional pattern of dress despite colonial and neighbours' influence; and the Kung! Sans of south-western Africa to maintain their hunting and gathering mode of subsistence despite social, political and environmental pressures. Some anthropologists have tried to account for cultural retentions of this kind (Spear and Waller 1993; Wilmsen 1989), only to learn that matters are more complicated than often thought. This is because material and environmental explanations often incorporated in explaining such behaviours are not comprehensive enough. Attitude of mind must also to be taken into account.

It is this kind of cultural contribution to socioeconomic and political change which is here considered as an influence on the emergence and development of the Milansi and Karagwe kingdoms. This consideration is buttressed upon the assertion that the desire to change and methodology used are influenced more by culture than by environment. That is to say,



the material and environmental factors enumerated above such as iron, strategic locations, soil fertility and water are not enough in moulding developmental change without cultural contribution. In other words, one can argue that the various factors are by no means unique to the two places; many other areas are endowed with these resources. But why don't we see the same elsewhere?

We have, for example, noted that iron was a decisive factor for military superiority and agricultural and commercial achievements in pre-colonial African societies. But the level (intensity) of symbolic values tied to it and its incorporation into the political milieu varied from the one people to another and through time. By all measures the Fipa and Nyambo (and a few others in the Interlacustrine region in particular) inserted iron deeper into their culture than many other societies in eastern Africa, or as Andrew Reid explains, "knowledge of iron smelting [in Karagwe] was interwoven within the state" (Reid 1997:506). Although more societies took that line and portrayed complex symbolic expressions by the 19th century (e.g., Pangwa, see Barndon 2001), the Interlacustrine states and the Fipa had the advantage of longevity. By the late 19th century, iron technology had been incorporated into their political system for more than three centuries. Hence it was more deeply infused into the people's minds there than elsewhere.

The same can be said about farming. While conducting research e.g. on the slave trade along the coast of Tanzania, I have noted that people with a long history of settlement along the coast of Tanzania such as the Zaramo, Ndengereko and Rufiji tend to place less emphasis on farming, surprisingly their sole means of subsistence, than do their counterpart from the hinterland. When people from the interior such as the Luguru, Sukuma, and Gogo move to the coast and engage in agriculture, they tend to work harder and produce more from a given size of land than "indigenous" coastal dwellers. The explanation here is that the "indigenous" coastal dwellers have been influenced by Arab immigrants who have lived there for more than a millennium and who, until the beginning of the 20th century, used slave labour for farming. This has influenced people's minds so that they look upon farming with disgust, as a slave's duty or punishment (Mapunda 2006).

The last example above serves to demonstrate that the devotion to farming (and ironworking and trade for that matter) demonstrated by the Fipa and the Nyambo cannot be explained in terms of soil fertility and

good climate alone, but must also be explained in the context of culture (which moulds attitudes of mind). In other words, soil fertility became a stimulus for farming among the Fipa and Nyambo only after their culture accepted and characterised farming as a noble practice. From there it paid returns to the people through production of not only sufficient food for survival, but also surplus for gift giving and trade. In return, these benefits further strengthen farming.

All in all, culture is located at the centre of most organic developments and civilizations noted around the world.

### *Conclusion*

This paper has presented the historical development of the Milansi and Karagwe kingdoms located in south-western and north-western Tanzania, respectively. Emphasis has been placed on factors accounting for the emergence and subsequent development of the two kingdoms. It has been demonstrated that the two kingdoms are not only among few kingdoms in pre-colonial Tanzania that reached a high level of prosperity and political dexterity, but they also shared a number of properties such as long age, mastery in iron technology, zest in agriculture, complexity in political administration and insistence on trade. In examining the source of these characteristics, it has been found that the two kingdoms also shared a number of natural resources including iron ore, fertile soils, water and strategic geographical locations for trade. However, it has been demonstrated with concrete examples that environmental resources alone are unlikely to trigger and/or sustain the kind of developments such as those achieved by these two kingdoms, except when those factors are coupled with a cultural will or attitude of mind. This serves to reinforce that the interplay of environmental and cultural factors lit the candle of development upon the genesis of the Milansi and Karagwe kingdoms, a candle that did not become extinguished despite some downs in their histories, until 1962 when the independent government of Tanzania banned all traditional forms of leadership in the country.

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## Chapter 5

# **The Dialogue between the River Nile and its Hinterlands: Al Khandaq - A Desert Terminal and a River Port**

Intisar Soghayroun Elzein Soghayroun

### *Introduction*

This research aims to shed light on the importance of the wadis systems and their role in connecting the desert and the Nile. This linkage has created a sort of dialogue into which many actors were and continue to be active to varying degrees, affecting different levels in the dynamic system. The main actors include the Nile, its hinterlands (the desert and the wadis) and man, which are in turn our solid facts. The main outcome of this dialogue in this research is trade, which is not necessarily the only outcome. Trade itself has its socio-economic impact on people and buildings. One side of the multi-faceted dialogue is settlements, villages and towns with elaborate buildings such as al-Khandaq, once an important river port. Other aspects include the genetic effect of the Diaspora from the Nile to the west and vice-versa; as is the case here, the export of technology (shadouf and sagyia), the generation of new work opportunities for both nomads and settled villagers, and in the linguistic sphere the creation of new terms such as Jallaba and Khubara.

### *The characteristics and potentialities of the Middle Nile Valley*

Covering about one-tenth of the area of the continent, the Nile River basin provided the arena for the evolution and perishment of advanced civilizations in the ancient world. People who were among the first to cultivate and use the plow lived on the banks of the river. The Nile allows for cultivation and offers a waterway for transport where the cataracts permit. Most of the rivers and streams in the Sahara are seasonal or intermittent,

the chief exception being the Nile River, which crosses the desert in Sudan and Egypt. Underground aquifers sometimes reach the surface, forming an oases, such as Siwah in Egypt and al-Qa'ab in Sudan. The basin is bordered in the north by the Mediterranean; in the east by the Red Sea Hills and the Ethiopian Plateau; in the south by the less well defined watershed between the Nile, Chad and Congo basins, extending northwest to include the Marra Mountains of the Sudan and the Al Jilf al Kabir Plateau of Egypt and the Libyan Desert.

The Blue and White meet in Khartoum to form the River Nile, which flows northwards through Egypt to the Mediterranean Sea. The Blue Nile's course through Sudan is nearly 800 km long and is joined by the rivers Dinder and Rahad between Sennar and Khartoum and is the main source of Nile's water and fertile soil. The White Nile within Sudan is longer than the Blue Nile, but has no significant tributaries.

The middle Nile Valley is formed by three principal streams: the Blue Nile (Al Nil al Azraq) which meets the White Nile (Al Nil Al Abyad) in Khartoum, thus forming the Nile proper which then meets the Atbara River flowing from the highlands of Ethiopia. This part of the middle Nile is characterized by the presence of six main cataracts, the great bend, the islands and the large wadis (seasonal and /or dry watercourses) (see fig. 1).

**1. *The cataracts of the Nile*** are shallow stretches between Aswan and Khartoum where the water's surface is broken by numerous small boulders and stones lying in the riverbed. Measured upstream (from north to south), the First Cataract is near Aswan in modern Egypt and its length is approx 6.5 miles, while the rest are in Sudan:

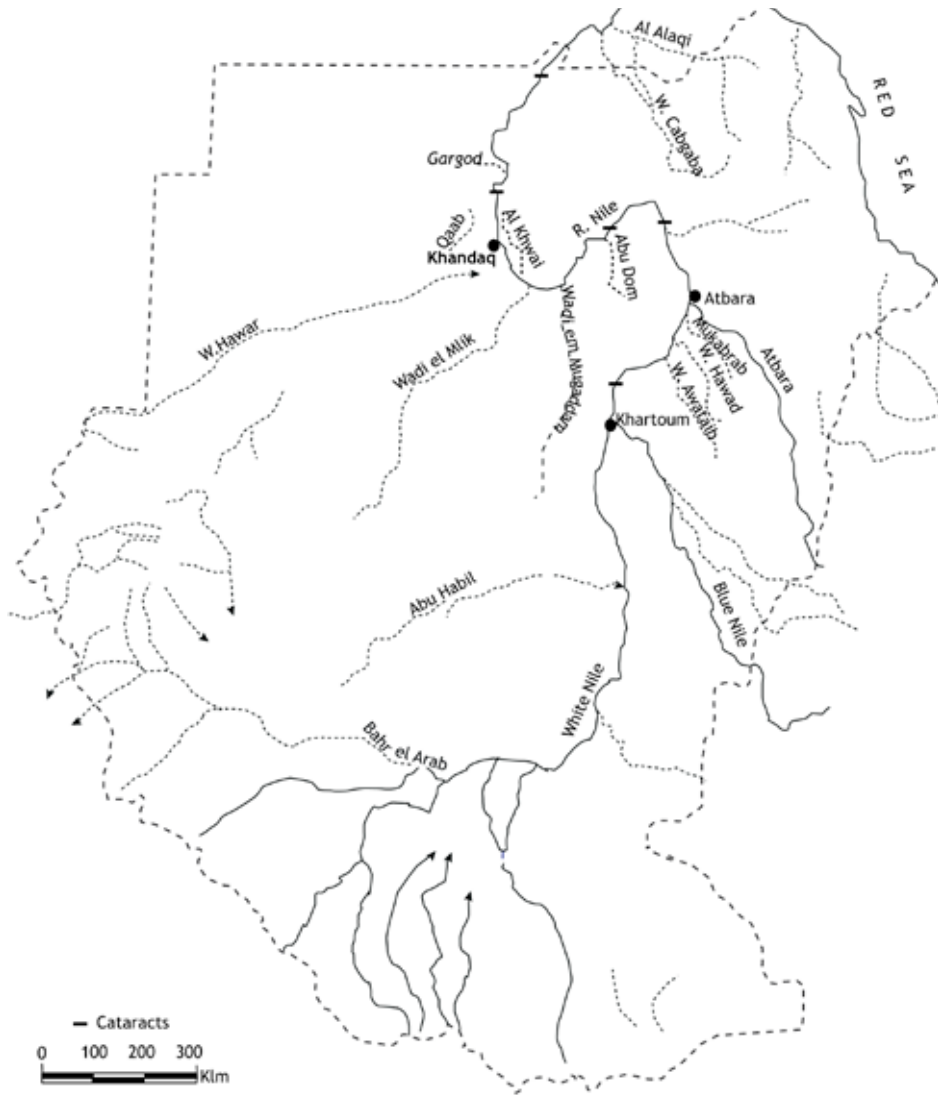
- The Second Cataract (or Great Cataract or Halfa Cataract) was in Nubia, approx 226 miles from the first cataract. Its length was 14 miles and it is now submerged in Lake Nasser)

- The Third Cataract is near Tombos / Hannek and its length is approx 3 miles. It is c. 40 miles north of Dongola, where it commences.

- The Fourth Cataract is in the Manasir Desert, approx 250 miles from the third, and has been flooded by the Merowe Dam since 2006.

- The Fifth Cataract is near the confluence with the Atbara River (known as the cataract of Wadi al Humar "Donkey"). It begins approx 30 miles below Berber and consists of three or four separate groups of rapids (Lyons 1908; 462).

- The Sixth Cataract is where the Nile cuts through the Sabaloga Gorge



**Fig. 1.** Nile, its tributaries and main Wadis.

50 miles north of Khartoum, approx 194 miles from the Fifth Cataract and its length is approx 8 to 10 miles.

These distinctive features of the river between Aswan and Khartoum have led to this stretch often being referred to as the Cataract Nile, while the downstream portion is occasionally referred to as the “Egyptian” Nile.

These cataracts were the main obstacles for boats sailing on the Nile in antiquity. Despite these characteristics, some of the cataracts which are normally impassable by boat become navigable during the flood season. Perhaps the first cataract acted at (A) group time as a deterrent to riverain trade, as it was towards the close of the Old Kingdom that the Pharaoh Mernere ordered a channel to be cleared through it.

The cataracts are described extensively by European colonials, notably Winston Churchill in *The River War* (1899). In her book *A Thousand Miles Up the Nile* (1892), Amelia Edwards describes the now submerged second cataract as being more than sixteen miles in length. In ancient times and up until recent history, the first cataract was the border between Egypt and Sudan.

**2. *The islands.*** One of the distinctive features of the Nile is the large number of islands in both rivers and the Nile proper. On the White Nile the largest is the famous Gazira Abba of the Mahdi (33x4 miles). On the Nile proper the largest is Mograt Island, which is approx 33x5 miles. It is surrounded on all sides by a great number of small islands, 32 altogether (Ahmed 1971: 1). The large islands are inhabited as well as some of the small ones. Some are used for cultivation, while others were used in antiquity for refuge during times of danger.

**3. *The great bend*** is where the Nile changes direction from south-north to east-west, and turns to flow westward for a good portion of its course before again returning to flow north to the sea. As this makes the journey longer, routes were opened across the desert, some following the dry wadis tracks.

**4. *The Sudd*** is a vast swamp formed by the White Nile. It is the world's largest swamp and provides a problematic expanse of lakes, lagoons and aquatic plants, the area of which exceeds 30,000 square kilometers in high flood waters. Sudd is an Arabic word which means barrier. The Sudd area is one of the largest wetland areas in the world and the largest freshwater wetland in the Nile Basin. It is so unmanageable and was such an obstacle to navigation that a passage was not discovered until the mid-19th century. Its expansion into large area makes its rate of evaporation very high, and the Sudd consumes more than half the water that comes from the White Nile.



**5. The Wadis.** Through its ancient history, the Nile received and still receives water from some of the once running watercourses or intermittent streams (wadis, widyan or khairan). Some of these are today dry, with only evidence of moistened ground such as Wadi Howar. Others still contribute water during rainy seasons, such as Wadi Muggadam. Yet others may add water during the heavy rain season, such as khor Abu Habil, which originates from the Nuba Mountains in western Sudan, joining the White Nile at Gazira Abba. In low rain season khor Abu Habil loses its water in sand dunes before reaching the Nile. In the north there are a few small watering holes such as Bir Natrun, where the water table reaches the surface to form wells that provide water for nomads, caravans and administrative patrols. Here are some of the wadis from the north:

- Wadi al Allagi: Desert watercourse which led to Nubia's richest goldfield. The most productive of Egyptian mines were those along this wadi and its tributaries between lower Nubia and the Red Sea.

- Wadi Gargood: One of the many wadis of the Mahas region, which prevail in most of the third cataract region. It originates in the northwest of the Gargood area and pours in the southeast direction into the Nile after traveling 18 km. It receives water from other sub-branches mainly from the north.

- Wadi Al-Qa'b: Sandy depression running through the channel of a broader rocky valley. It is approx 125 miles in length and averages 5 miles in breadth. It extends from Hannek to a point 25 miles due west of Dongola. Wells are numerous and many are lined and contain good water. In many places water is also found at a depth of 9 to 20 feet below the surface (Handbook of Anglo-Egyptian Sudan p.13-14). According to Ensore (1881:27), Wadi Al-Qa'b forms a large oasis with many wells and a place of congregation for many thousands in the dry season.

- Wadi al-Khowi: An ancient paleochannel of the Nile on the eastern border of the Seleim and Kerma basins (occupied during the Neolithic).

- Wadi Howar (Hawa): Located on the southern fringes of the Libyan Desert, Wadi Howar is the largest dry river system in the presently hyper-arid and uninhabitable eastern Sahara, stretching more than 1100 km from its source area in eastern Chad to the Nile. Geo-scientific investigations have shown that during the early Holocene, this Wadi was the Nile's largest and most important tributary from the Sahara. Holmes (1933:159) suggested that drainage from Lake Chad may have reached the Upper

Nile at Dongola via Wadi Howar. Later, it became a chain of freshwater lakes and marshes supported by local rainfall.

- Wadi al-Melik is the bed of an extinct river and now forms a shallow depression approx 10-30 m wide, stretching 350 miles from Debba in a southwest direction to Umm Badr in the northwest district of Kordofan. It holds water in pools for a short time after the rains and is generally moist enough to allow grazing. There is water at the wells of Mahtul and Soteir, 30 and 60 miles, respectively, from Debba.

- Wadi al Mogaddam extends from Korti and south to beyond Omdurman, a length of approx 200 miles. This now dry watercourse shows every indication of having formed the main branch of the Nile during a remote geological epoch. There are some good wells and cultivated lands at Gabra, 60 miles north of Omdurman.

- Wadi Abu Dom: This wadi is still active and brings huge amounts of water to the river Nile just a few kilometers before the Mogaddam Junction. It originates from the Bayuda Desert.

- Wadi al Hawad: A short distance south of the pyramids of Bejrawiya near Shendi is the broad dry bed of the Wadi al Hawad, an ephemeral stream which carries much of the seasonal runoff from the great Butana Steppe (Adams 1977:298).

There are many other wadis away from the Nile in Kordofan and Darfur, such as Magrur and Azum. The latter collects the drainage from the northwest side of the Meidob Hills and runs 60 miles in a northeast direction to finally end in the Baheir Tageru ("the little sea of Tageru"). The Wadi Magrur may be of some strategic importance, since the smoother going in its bed provides a sort of corridor from north to south, al Haraz and Az Zum.

Some of the wadis are man-made depressions intended to catch and hold runoff, such as Wadi es Sufra hafir al Kabir, which should catch and hold water from Wadi es Sufra in the Butana. A few wadyan descend from the Red Sea Hills, providing the only grasses found in the whole area. The wells (Abar, sing. Bir) are numerous and many of these are the result of wadyan; travelers can find water after digging two meters. The wells are a characteristic feature of most of the trade routes of the country. They are along main routes such as between Aswan and Berber, Abu Hamad and Korsko, Suakin and Berber, Korti and Metamma, Ambgoul and the Sixth Cataract, Debba and Omdurman, al-obayid and Debba, Al-Fashir and Dongola and Bir Natrun (Niter).

## *A short history of the Sudan*

The earliest evidence of human presence in the Sudan goes back 300,000 years, covering the Paleolithic and extending through the Mesolithic 8000 BC and the Neolithic 5000-3000 BC. Between 3700-3000 BC a development of a more complex society occurred, represented with the culture known as A-Group between the 1st and the 2nd cataracts. It is famous for its egg shell pottery. Approx 3000 BC, Egyptian attention was directed towards its southern borders in the search for raw materials and products of sub-Saharan Africa. This resulted in the establishment of settlements near Buhen (2nd cataract region), contemporary with the flourishing of the Kerma civilization in 2500-1500 BC around the 3rd cataract region. During the Egyptian Middle Kingdom, the territories were pushed further south of the 2nd cataract where a series of forts were established to control trade. During the New Kingdom, Egyptian presence extended far into the country and represented the first organized colonization (c. 1500-1100BC). By the 10th century BC a local family established itself around Jebel Barkal and Meroe. Around the 8th century they had the power to conquer Egypt and ruled up to the borders of Palestine, and were known as the 25th dynasty. The dynasty lost control of Egypt in less than 100 years but continued ruling as a power for another 1000 years, leaving remains that show different influences from Pharoanic Egypt, with also Persian, Hellenistic, Roman and indigenous local African traditions. By the 4th century AD the empire demised and disintegrated into three kingdoms which received the first Christian missionaries. The Christian kingdoms flourished for seven centuries and signs of deterioration started from the 12th century AD with the interference of Ayyubids and then Mamluks of Egypt, but they left elaborate wall paintings, unique in Sub-Saharan Africa, and churches. The final overthrow came with the rise of the Islamic Fung Kingdom of Sennar, which ruled most of the country up to the 3rd cataract region; the latter was under Ottoman power. Their main remains include domed tombs (qubbas), mosques and forts. The state was put to an end with the arrival of the armies of Mohammed Ali Pasha of Egypt, whose rule was in turn ended by the nationalist movement of Al-Mahdi who captured Khartoum in 1885. The latter action led to the interference of Egypt and England, who defeated the Mahdists in 1898 and established the condominium rule which ended with independence in 1956 (Welsby 2004:14-16).

### ***Trade commodities through history***

It is evident that the first products of the country to attract the attention of the outside world were animal products and precious and semiprecious stones. The Neolithic site of Kadruka in northern Sudan south of the 3rd cataract region presents evidence of local manufacture of ivory objects. A comb made from elephant tusk was found; yet that which is noteworthy is the presence of blocks of ivory fashioned from elephant tusks sometimes in the process of being carved (Reinold 2004:45-46). Beads are also common, made of stone such as sandstone, agate, amazonite, quartz and green stone, and ivory, bone and ostrich eggshell. This is in accordance with the first Old Kingdom records about the Sudan which started few centuries after that. Archaeological records of the earlier period (A) Group 3500-3000 BC, show the presence of beads of faience, shell and various kinds of stone pendants and amulets, in addition to ivory combs and bracelets, copper tools and wheel made pottery. The same commodities continued during the succeeding period of the (C) Group 2460-2200 BC, with the addition of objects of copper and alabaster. Animal and forest products seem to have acquired more importance than minerals since the A Group, as the gold of Wawat and Kush does not show evidence of having been extensively developed before the New Kingdom. Such products include ivory, ebony, incense, aromatic oil, leopard skins, and later ostrich eggs and feathers and hippo ivory (Adams 1977:144). In the 1930s, Bagnold (1933:114) reported of the 20th century ostrich eggs under one of the trees along Wadi Howar where they found a nest of ninety four ostrich eggs arranged in a circle approx 12 feet across and a central clutch of some twenty eggs upon which the bird was sitting.

From the Kerma site, raw material which shows local production of some objects was found, to include Keriak used for polishing pottery, lumps of resin, block of mica ornaments, rock crystal, carnelian pebbles and fragments of ostrich eggshell from which small disc beads were made. Round lathe-turned wooden boxes and kohl tubes (cylindrical containers) which were also decorated with ivory inlays came from Meroe. Again, the decoration suggests that these were sometimes clearly designed for Nubian markets and were perhaps locally made, although in some cases the wood was cedar from Lebanon. Other Meroe industries include pottery, weaving with evidence of indirect perforated mud loom weights, basket weaving throughout Nubian history and leather working (sandals), ob-

jects of bronze, glass faience, wood and ivory. Bronze was used for various kinds of ornaments and for small toilet objects: tweezers, scissors and kohl sticks, but above all for bowls and other vessels (the majority in Hellenistic and Roman forms), a few of which are similar in shape to Meroitic pottery vessels and even have similar decoration - although this is stamped rather than painted. Anklets, usually with chisel stamp decoration, are occasionally found in female burials - the majority of bronze and some of iron (Adams 1977:371-374). During the Ptolemy period, elephants and the desert gold mines may have been the principal motivation for expansion south. During the Christian period, items from Sudan included ivory, leopard skins, dates, ebony for furniture manufacture, spears, emery, alum, exotic live animal such as monkeys, lions, leopards, elephants and giraffes, cattle, camels and slaves. The local craft included the pottery industry, weaving, iron mongery and woven robes of wool; this is in addition to leather sandals and thongs, basketry and matting, wooden bowls and grinding apparatuses of stone.

From the Islamic kingdoms there were articles from Kordofan, Darfur and Sennar. These included gum, hides, senna leaves, ivory, rhino-horns, camels, cattle, tamarinds, ostrich eggs and ostrich feathers, gold in rings and in grains, water bags, salt, tobacco, natrun, (niter), whips, alum and slaves. Natrun has been traded since the Egyptian Old Kingdom and was used along with other material in mummification. According to a British report from 1907, the Kababish were affected by the closing of natrun fields for trading purposes due to the unsettled state. During the early 20th century, the natrun fields were considered to be part of Darfur and not Dongola (1907 Report:235).

Since the prehistoric and early historic periods, incoming trade items included mainly luxury objects such as alabaster vessels and ointment jars, ushabtis of clay, faience, toilet objects such as bronze mirrors, wooden combs, alabaster kohl pots and sticks. Weapons included bronze spearheads, arrowheads, axe heads and daggers. There were wheel-made vessels of Egyptian type during the Napatan period, and during the Meroitic period glass vessels, bottles and flasks. Wine had been produced in various parts of Egypt and was presumably traded from there into Nubia since the Old Kingdom. Cult of the grape, Bacchus rituals, vine wreath and Bacchic decorative motifs are found not only on imported pottery but also on native Meroitic pottery as well; Amphorae, pitchers and jugs such as vases in taverns in Seyala, beakers, cups, pitchers and oil lamps (Adams

1977:362-363). The Axumite had carried on silent trade with the Meroites, through which they obtained gold nuggets. Cosmos also mentioned that emeralds were obtained from the neighboring Blemmyes (present day Beja) and were traded to India at enormous profit (Adams 1977: 385-6). During the Christian period and according to the Baqt Treaty, items from Egypt included food (wheat, lentils, olive oil, exotic vegetables), vinegar and wine, while horses and textiles (special fabrics, luxury clothing and carpets) were also traded. The Fustat Islamic glazed ware and Islamic glassware (cosmetic flasks, tumblers, goblets, bottles with marvering techniques, painting and cut decoration) were among the items traded from Muslim Egypt, but these were only found in shards. Other imported items included Islamic bronze objects such as slender decorated rods, iron agriculture tools, knives and pectoral crosses.

Shendi and Berber provide good examples of traded items and commercial towns during the Islamic Kingdom of Sennar and the Sultanate of Darfur. Allan Moorehead reports Burckhardt's observations about Friday and Saturday; "a thousand miles from any part of the world that one could call civilized, you could buy such things as spices and sandalwood from India, antimony, medicines, German swords and razors, saddles and leather goods from Kordofan, writing paper and beads from Genoa and Venice, cloth, pottery and basket ware of every kind, soap from Egypt, cotton, salt and Ethiopian gold, monkeys to do tricks, Shendi wooden dishes, Dongola horses, camels and beasts to carry these goods across the desert". (in Moorehead 1961:157-60). Hoskins has noticed that merchants from Shendi and Sennar furnished Berber with soap, rice, mocha coffee, mirrors, glass beads, shell, cotton articles, tobacco pipes, crockery cooking dishes, etc. as they passed through on their way to and from Egypt. In addition came some grain, vegetables, salt, metals, silver dollars, scents, medical herbs and spices, beads, semiprecious materials, firearms and military supplies.

Means of transaction were either bartering or in kind. Barter was the system of transaction since the early periods of trade in Sudan, which encompassed slaves, cattle, iron and corn for import from the north (Arkell 1961:191). The abundance of glass beads in the Meroitic graves, where thousands and tens of thousands were found, led to the conclusion that beads were the media of exchange in the absence of coins. This bartering system continued for long periods, even with the existence of money such as the Spanish dollar during the 18th and 19th centuries. Other mediums

were Damur (cotton cloth locally weaved) and dhura (sorghum). Later in the mid-19th century some taxes revenues were taken in kind; Ahmed Pasha Widan (1838) had made the greater part of taxes in kind, such as indigo, hides, ivory, gum and slaves (Udal 1998:297). Transactions between nomads and peasants led to the development of local crafts such as basketry, pottery, ropes and cotton yarn.

### *The trade routes*

The quantity and variety of Egyptian goods in (A) group graves suggest that the Egyptian traders, boat captains or caravaners, must have been frequent visitors to Nubia over a long period of time, mostly itinerant as no evidence of royal interest exists during the earliest Egyptian dynasties (Adams 1977:136). It seems that such bulky trade must have flowed along the Nile and in donkey caravans. The Egyptians employed donkey caravans to transport goods from Nubia as far back as the Old Kingdom.

During the Kushite period of Napata-Meroe, the absence of important settlements between Kawa and Sanam indicates continued use of the Meheila Road (overland route from the Barkal across the desert to Kawa below Dongola) rather than the Nile as the principal route between the 3rd and 4th cataract. If towns at either end of the Meheila Road became the main urban centres of the Napatan period, and if no important settlements grew between them, it is a logical inference that trade along the overland route played an important part in their development, as the further extension of overland trade was an even more important factor in the development of Meroe and other cities in central Sudan (Adams 1977: 291). Evidence shows that Napata and Kawa have achieved some of their own prominence, which could be attributed to their location as the termini of the Meheila route which bypasses the upper Dongola reach and its adverse winds.

Meroe represents a further and much more significant extremity of this overland trade. The city lies at the upstream end of the great desert route which cuts across the Bayuda Steppe, bypassing both the 5th and 4th cataracts and the adverse winds of the Abu Hamad Reach. Meroe owed its existence first to the Bayuda Desert route, as it became the lifeline connecting the northern and southern districts of Kush. Napata and Meroe were the termini. Once established, Meroe also became the main staging point for overland trade not only with Napata but ultimately with Egypt as well.

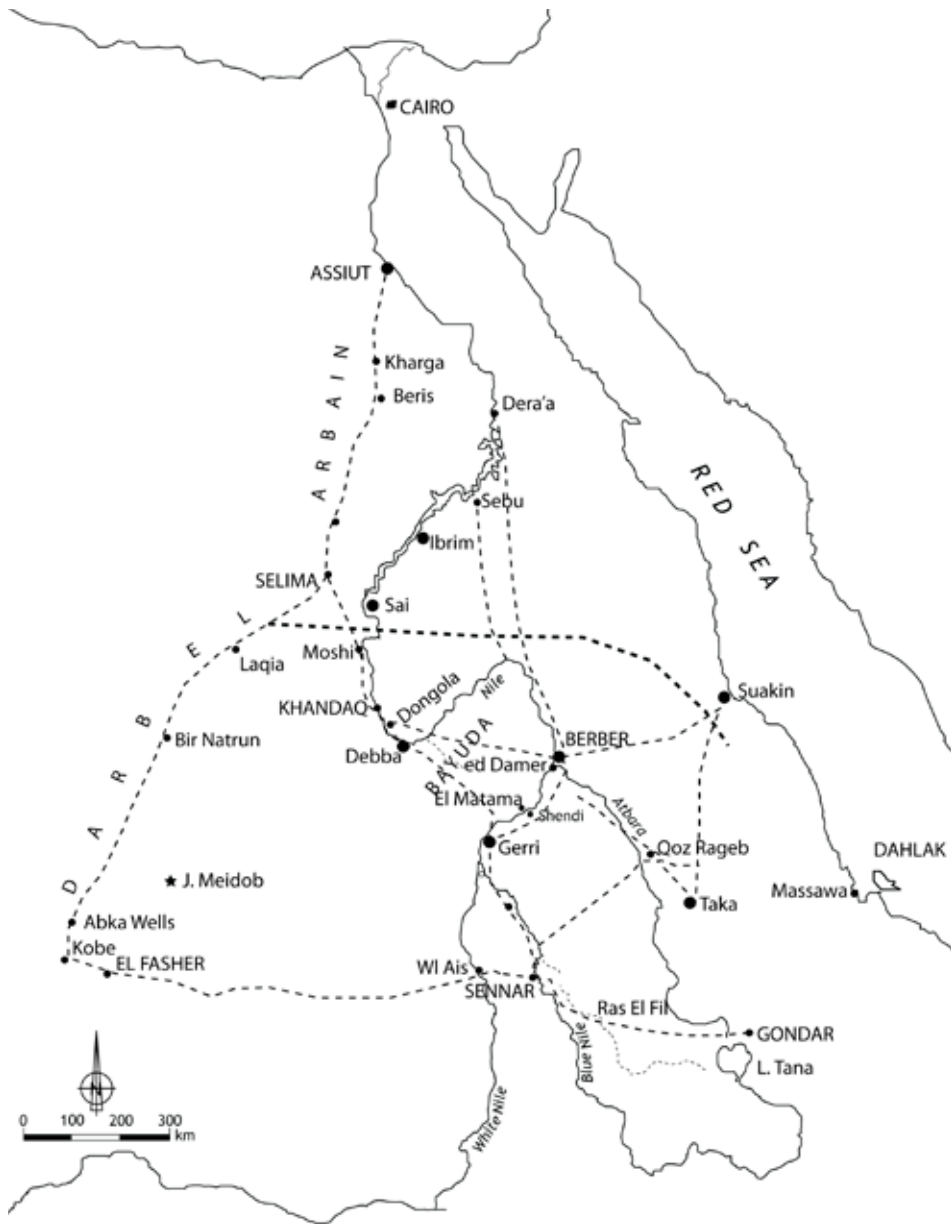
Having described his progress across the desert when he came from Meroe to Napata for his coronation, Nastasen Stela is another testament of the existence and use of this route. Along these routes, the ruins of a stone fort have been attributed to Meroitic period at the wells of Fura, halfway across the Bayuda Steppe (Adams 1977:303). Near Shendi the river made its closest approach to the southern end of the Red Sea, thus opening the way to Arabia, India and the Far East (ibid:590).

Even in the Butana Steppe the urban character of most of the known settlement makes it probable that these were supported by the development of agriculture in the nearby wadis rather than by animal husbandry in the surrounding grasslands. Beyond Meroe, a number of trade routes extended far into the interior of Africa. From this point southwards, the Nile was navigable without interruption. Eastwards from Meroe across the Butana Steppe, the historic trade route ran to the highlands of Abyssinia. Another route that travels east by way of Sinkat leads to the ancient port of Suakin.

The convergence of these trade routes led to Meroe's dominance in political and economic spheres. Trade items were found as far south as Senar and included bronze, glass and other luxury goods. In observing the position of Meroe near modern Shendi, it is logical to infer that the same routes led to its rise as a large commercial center for the caravan trade.

Another route that was important for the development of Meroe was the Korosko Road to Egypt. This road leaves the river at Abu Hamad and reencounters the Nile further down in lower Nubia, thus avoiding the great bend with its navigation hazards and length. While we know little about the first development of caravan trade along the Korosko Road, it had evidently become the main economic link between the Sudan and Egypt by the last century BC (Adams 1977:304). It might have been known in the New Kingdom, for it was in large part the same road which led to the Wadi Gabgaba gold fields. It was apparently not until Meroitic time, however, that the desert road became the main link between the central Sudan and the Mediterranean world. While supervising the digging of the well Jebel Um Madrum, Mr. Woodland reported in the British report of 1904 the discovery of an ancient road, which he thinks was of considerable importance between Khandaq and Barkal. Whether this ancient road is part of the Meheila Road or not requires further investigation.





**Fig. 2.** Trade routes and main towns 16th-20th centuries.

River trade is cheaper, but suitability for transport varies along its course; alternatives are by donkey and camel. Boats go as far as Hafir, while discharge and cargoes are carried overland to Wadi Halfa. A 1908 report showed that water traffic was made up of native sailing boats and that several new boats had been built during the past 12 months and added to the existing fleet. The majority of dates from the northern end are conveyed by native sailing boats to Semna during the Nile flood, and thence transported by canals to Halfa.

After passing the valley of Wahat (Oasis) to Selima in Egypt, the Darfur caravans turn southwest while Sennar caravans turn southeast to Mushu along the Nile by Khandaq, Debba or alternatively to Ambuqol or Korti, from there leaving the Nile and crossing the Bayuda Steppe to el Metamma.

Darfur had two main routes: direct to Egypt via Darb al Arba'in, or north-eastward to the Nile at Debba and Khandaq. In fact, the direct route of Kobbe was established and was much shorter than the route that went via Kordofan. In addition to its directness, the advantage of the desert road was being able to avoid adverse winds in the reverse bend of the Nile between Napata and Debba (fig. 2).

## *Data findings*

**1. Trade items.** In the Sudan before the Pharaonic state, trade was most likely developed by private entrepreneurs. Copper mining and diorite quarrying began as early as the Old Kingdom through direct Egyptian enterprise which seemed to be to the benefit of the pharaohs. Wild animals and forest products were obtained through open two-way trade which was advantageous. This continued during the medieval and post-medieval kingdoms; medieval writers' information reveals a marked change in the nature of the Baqt (the agreement signed between the Muslim rulers of Egypt and the medieval Christian rulers of the Sudan in 651 AD) with important implications, whereas the initial stipulated quota of the Nubians constituted slaves only, which was eventually reduced to a secondary position while a number of new items, chiefly animals, were introduced according to the 10th-11th century documents. Although the number of Nubians in the Fatimid Army was increasing, this was due to the slave trade and not the Baqt. At first animals were acquired for hunting as visible proof of power and uncommonness, for exhibit in ceremonial parades

and as gifts to foreign rulers. Later they were obtained for medical experiments and display in zoological gardens. Ibn Sulaym (in Mus'ad 1972:97-100) mentions that there was a considerable number of big game and he mentioned the area around the bend of the river south of Dongola, perhaps Debba at Wadi al Humar. But it was far more important that the King of Nubia had access to Darfur, the land from which pre-dynastic Egypt acquired its big game. Al-Tunisi mentioned big game hunting in Darfur by a professional body of hunters known locally as dramida (Al Tunisi 1965:288-295). The hunting ground of the Ptolemys was the Baraka and Gash stream districts in the Red Sea Hills, another reservoir of big game at that time. Medieval writers pointed out the wealth of big game in the area (Mas'udi part 1, 11, 4 Maqrizi 1, 195). In fact, by the late 19th century the reports of travelers attested to the richness of the area's wildlife (Beshir 1975:15-24). The Muslims originally intended to stabilize their borders with Nubia through the Baqt Treaty. Thus, and according to Spaulding (Spaulding 1995:585), the medieval Makurian Baqt was a typical expression of the system of diplomatic gift exchanges sponsored by northeast African kings. The same items continued during the Islamic kingdoms. According to Petherick (1869:304-305), caravans of hundreds of camels were laden with Arabic gum from Kordofan by way of Dongola to Egypt. Ivory and tamarinds imported from the Bagara and other tribes south of Kordofan are the next important native products. The ostrich feathers brought by the nomad Arabs of the north and western desert were also of considerable value. Slaves, ivory, ostrich feathers, tamarinds and niter came from Darfur to the Ubbayid market.

**2. Towns and/or forts.** Many towns and villages developed as a result of trade activities. Forts were erected or reused especially on the mouth and ends of wadis. Located on the right side of the Nile, Kuban is a fort situated at the mouth of Wadi Gabgaba. The fort was probably originally intended mostly as a supply and control point for traffic along the desert road which led to some of Egypt's richest mines and quarries, and may well have served as an administrative center. Numbering more than one hundred, these mines were scattered over the eastern dessert at distances of up to 150 miles from the banks of the Nile. In order to alleviate these conditions, Ramses had a well sunk in the Wadi Allagi (Adams 1977:187, 233, 304). The Gal'at (fortress) Abu Ahmed is a large massive stone-walled enclosure located approx 100 km to the west of the river Nile on the southern

bank of Wadi Howar channel. It has an irregular trapezoidal ground plan of 120x180 m, built of dry stone masonry (Jesse 2006:50). Situated on the left side of the Nile, Al Khandaq was previously an important junction for trade routes to Egypt. This is a large town with some solid houses built of mud brick and stone, some two storeys high. These are the homes of many wealthy merchants. Al Khandaq became the main port for Darfur and Kordofan caravans that chose the Nubian route to Egypt. Thus Khandaq became connected with regional and international trade work. In the 18th century Al Debba became a natural harbor along the Nile for caravans leaving and arriving from Kordofan along Wadi al Malik, while also Shendi and al Mettama. Shendi became one of the largest markets in the eastern Sudanic belt, decades before the Turkiyya (Bjorkelo 1984:81). It was the crossing point for caravans traveling north and south, east and west.

Slave trade, gum Arabic, gold and animal products were transacted first in urban markets of western Sudan such as al Ubbayid, Bara and al Rahad, which were all towns established by migrants from the Nile Valley. Kobbe was the main commercial center in Darfur where Egyptian commodities were sold and African commodities and slaves were acquired by caravans going north to Egypt via Darb Al Arba'in (the 40 day road).

**3. Trade as socio-economic agent.** Trade is not only the movement of goods and money, i.e. an economic activity; it also has its socio-economic and socio-cultural complexities (Manger 1984:2). The town of Al Khandaq provides a good example of how trade not only acted as a system of exchange, but also as an agency of change, contact and integration as mentioned by Manger. In this town the relationship between traders and local communities is well attested in documents that have been uncovered, along with their role in the commercialization of local economies. The socio-cultural effect is also attested through the lifestyle of traders which in turn influenced the life of the local people.

### *The Diaspora*

Most of the present day Sudanese settlements (villages or towns) were partially established by north/riverain Sudanese. Before the Turkiyya, the Danagla were among the most numerous and prosperous immigrants to Kordofan, closely followed by the Ja'aliyyin who outnumbered them in many areas during the Turkiyya. Wars, raids, famines (under the Fung,

Turkiyya and the Mahdists), land scarcity, the positive picture of life and opportunities in the Diaspora (especially in the trade sector) are the main reasons behind this movement. The diffusion of culture, language and religion of the immigrants into these regions is an inevitable outcome (Bjorkelo 1989:137). Manger (1984:12) referred to the development of trading Diasporas, in which the traders acted as agents of Islamization as well as commercialization. In the Sudan, the process of Islamization and Arabization is related to traders and their activities. This was in fact the case before the emergence of the Islamic Fung Kingdom of Sennar (c. 1504 AD), when a steady flow of 'Ulama (scholars) and Fugaha and/or Fugara (a Muslim religious teacher) ensued. According to Bjorkelo, success in the Diaspora was usually achieved in trade and to some degree in religious activities (Bjorkelo 1989:137-140). In fact, the Fugara as holy men are equally successful, as the sultans of the Fung and Fur depended on the sheikhs for the stability of their rule and usually offered land to the sheikhs. For security, some caravans prefer to take routes that pass by a sheikh's village or tombs. According to O'Fahey, the immigrants' commercial skills, experience of urban life and religious prestige led them to open trade and trade routes and to establish towns west of the Nile (O'Fahey 1974). A biography of Hamza Pasha Imam is an example of this movement. Hamza Imam el-Khabir was a merchant of Darfur. His ancestors were Danagla merchants who settled in Kobbe. He and his brother Muhamad Pasha were already substantial traders before the Egyptian invasion of Darfur in 1874, and dealt in commerce with Egypt by caravan along the 40 day road between Kobbe and Asyut. The Egyptian occupation of Darfur helped this trade, and they helped the Egyptians (Hill 1967:151). Another example is that of 'Abd al Mula from Khandaq, who established himself as Khabir in Kobbe in Darfur (Bjorkerlo 1989:124).

The migration of Riverain people and the Danagla in particular to major trading centers has been dated back to the late 17th century according to Cairo Mahkma (court) records, with the result that many Dongolese came to Egypt from Darfur during the 18th century and from Wadai in the 19th century. The Cairo Mahkma texts present us with the names of approx. 200 Gallaba who appeared in Cairo courts during the 18th century, or those who were connected in a legal or familial way with local merchants. The names of the merchants suggest origins in Mahas, Khandaq, Argo, Dalgo and Sennar (Walz 1978:72-74).

Kordofan's sand dunes with cultivation in between them in the small

basins of clay (Khairan pl., Khor sing.) are a vivid example of the movement of people and ideas. The economy became an agro-pastoral mixture with the advent of immigrants from the Nile Valley. According to Manger (1984) they were traders, mercenaries and a group of farmers. The farmers brought with them irrigation technology to be used in areas where water was close enough to the surface; mainly shadouf and saqya from the Dongola area. By the end of the 18th century Darfur caravans surpassed Senar's in size. This coincides with immigration of the Nile Valley traders, searching for opportunity to trade in Egypt along the 40 day route, which was the shortest desert route to Egypt but also the most dangerous. The alternative route was by way of al Khandaq, which was probably older. It had two courses: either through central Kordofan landing at al Dabba, or directly through Wadi Howar to Dongola landing at al Khandaq.

### *Manpower and services*

The Egyptian Old Kingdom officers Uni and Harkhouf carefully reported in their texts how they were obliged to secure the collaboration of local chiefs in their commercial enterprises and the scrupulous negotiation with them. It was during the same Dynasty IV that the governor of Aswan assumed the role of the keeper of the door to the south – further evidence of the growing prosperity and importance of the country (Adams 1977:144). The increase in desert vegetation made camel nomadism possible across a wide belt that included the Red Sea Hills, the Bayuda, northern Kordofan and Darfur (O'Fahey 1974:4). The sparse desert population provides services which include the camels and operating the carrying industry (Oliver 1977:232). Another relation is created in favorable circumstances when they exchange animals for vegetable foods with the sedentary neighbors, creating a symbiotic relationship. During the dry season they were pushed towards the Nile or to migrate to the south.

The 'Ababda worked as camel drivers and guides and for a long time controlled the route between Berber and Egypt. They extended their control further south during the Turkiyya and controlled the route between Omdurman and al-Ubayyid. Their work also included the postal service to Darfur and south to Fazugli. The Bishariyyin controlled the route from Berber to Suakin (Bjorkelo 1989:105).

In the western desert the Kababish controlled the Kordofan-Dongola route. For our case, the Kababish provide camels and manpower neces-



**Plate 1.** Means of carrying trade items through land routes.

sary to transport gum and leather to Khandaq. They acted in some cases as partners and traveling agents of big merchants; a good example is reported by Bjorkelo and Ali of the partnership between Hassan Hamza of al-Khandaq and the chief of the Kababish camel nomads al-Sayyid Fadl al Mula. Hassan had invested 48 Majidi Rayal for the partner to trade with (Bjorkelo & Ali 1990:36). Thus the role of the camel nomads was not confined to leading camel caravans or providing transport services (Plate 1). It is clear that merchants had financial partners in other regions and countries. Several small towns developed from villages to service stations where camels could rest, some commodities were exchanged, customs dues collected and caravan guides recruited. Agents were either natives of respective areas or partners from the trader's family or a relative. This led to the development of the jallaba system, a continuation of the mechanism of ancient Nubian trade. It also led to intermarriage of some Nubian traders with the people to the south, which in turn helped in securing faithful agents (Osman 1984:136).

The role of local communities must be taken into account as applies to caravans and boat harbors. Retail traders at these ports have their agents and partners who distribute the commodities to interior areas and to villages along the Nile where the boats have no stops. Local crafts such as palm branch baskets (for carrying dry bread and dried stripped meat), water skin bags necessary for the desert trip and mats were produced in these centers.

### *Terms & names*

There were new names and terms that emerged as brands or trade names, such as Jallaba and Khubara.

1. *Jallaba* (sing. Jallabi) is a term that stands for northern Sudanese traders and shop keepers operating outside their area of origin. It is a term used in western and southern Sudan to describe traders from the riverain tribes in the northern Sudan, mainly Danagla, Ja'aliyyin and Shaygiyya (Haaland 1984:274). As in most of 19th century travel literature, the term was long used to designate traveling merchants usually associated with the slave trade. According to Walz, this association should not be comprehensive, as the Jallaba have traded in various items and "should be seen as importers and exporters in the broadest sense" (Walz 1978:71). Cuny described them as merchants who transported goods between Egypt and the interior, either on their own account or on that of an associate (Cuny in Walz 1978:72). Approx 200 names of the Jallaba have been preserved in Cairo court texts (Mahkma) for those who appeared in Cairo during the 18th century. They contain place names or else tribal or racial names such as ad Dongolawi, alMahasi, al Khandaqawi.

2. *Khubara* (sing. Khabir): traders and camel drivers, some were wholesale traders who specialized in few commodities. Others were leaders of the royal caravans of the Sultans of Darfur. The name is now part of the famous family names of the al Khubara or al Khabir families, still retained in Khandaq.

### *Living proof: Al Khandaq*

A well known town and large village since the early 18th century, its name is on maps from 1725. Al Khandaq has been written in many ways: Handak, Khanduq, Hendek, Hhandac, Khandak or Hellet al Handak. Some referred



to its castle and saint tombs (Breuvery and Cadlvene 1836, Combes 1848, Ensor 1881). The inspector general of railway and telegraphs in the Sudan reported that al Handak is a large village after Dongola, immediately and after which follows Rumi. It has been described as one of the best built towns in Nubia (Gleichen 1888, Stacy 1884-5, 1959). It is one of four places of any note to be recorded viz North Dongola, Handak, old Dongola and Debba (1884 Report:134. 135), and was the residence of many rich merchants who built good houses (Hamilton 1935, Hill 1959). By the early 20th century, al Khandaq was already one of the six Mamaurias (districts) of Dongola Province: Dongola, Khandaq, Argo, Meroe, Korti, and Debba (1904 Report, Budge 1907). As told by Daud Kubara in 1911 (Mac Michael 1967), it was one of the ancient glories of Nubians along with Old Dongola Argo, Sai, Wadi Halfa, Faras and Ibrim.

Budge has taken Al Khandaq's history back to 1000 BC, when it was one of the New Kingdom settlements along with: Kalabsha, Delgo, Tumbos, Argo, Old Dongola, Meroe and Jebel al-Barkal. (The temple of Amenhotep at Khandaq, about 45 miles from Dongola al Urdi, is alleged to be in Khandaq and is now located under a mosque) (Budge 1907 vol.1:651). Crowfoot referred to a mosque which has been built on the ruins of a Christian church (the ruins of several churches existed a few years ago). Arkell dated the fortress to the Christian period 1250-1340 when Makurra was in the defensive (Arkell 1961: 196). From Abu Salih the Armenian Shinnie reported the existence of a monastery of St. George where the Nubian King Solomon was buried (Shinnie 1984:580).

*The town today.* The fort, or the "Qaila Qaila" as it is known locally (Plate 2), dominates the town; its southwest tower is visible from both north and south, whilst its western wall, with the remains of the southwestern and interval towers, dominates the area, looking from the west. Its remains are in desperate need of urgent support, especially the towers. The northern wall, which runs east-west, has largely disappeared and is cut by a track used by the town's people and their animals, at its eastern end. It seems that most of the stone has been reused to build the police station in the early 20th century and later some of the houses. Further adding to the destruction of the site is the presence of large quantities of animal dung inside the fort which the local people excavate to use as fertilizers.

The public buildings include the police station, which was established in 1902 and still survives. However, the post office and customs house no longer exist. The remains of the old butchery are still visible to the north



**Plate 2.** The town of al-Khandaq.

of the boys' elementary school. The indigo factory is represented by large granite stones and traces of the basins, but the main area has been used for cultivation. Established in 1905, the rest-house which overlooks the river from its high position is still standing but is in urgent need of restoration.

The surface pottery sherds date back to the Christian and Islamic periods. The town's houses with their size and quality confirm the distinction of the town as residence of wealthy merchants. It was once a thriving river port, with two storey houses of mud brick, many rooms, as well as one storey houses; these have been deserted since the early 1970s when trade declined and the merchants moved to Khartoum and Omdurman. There are two mosques in use: el-Hassanab and el-Khatibiya. The el-Hassanab's minaret is not included in the mosque structure, i.e. it is free-standing, whilst the other mosque's minaret is an integral part of the building. One of the observable features of the town is the presence of a lot of graves everywhere, inside inhabited houses, along the roads, beside the graveyards; this includes burials with vaulted roofs, group burials (Toskiya -

local term) and others tunneled into limestone hills (concealed graves). It seems that the town of el-Khandaq was built upon a large cemetery. There are two royal cemeteries and the main town cemetery is divided spatially among many factions of the town, i.e. Hassanab, Musiab, etc. and naturally by gullies. Grave superstructures vary. There are ordinary oval-shaped graves with two tombstones, inscribed and plain, with stone pebbles scattered on their surface; some have a sort of low mastaba of red brick, or mud brick, again with tombstones. Others are surrounded by a mud or mud-brick enclosure with a height ranging between 200-500 mm (Soghayroun 2008:74-76).

**Oral traditions.** The oral tradition furnishes us with solid information that supports written documents. Oral tradition can shed light on trade, the genealogy of the inhabitants and the subsistence economy of the town of al Khandaq during the late 19th and early 20th centuries. Mohammed Mohi ed-Din (94 years old) was the grandson of the famous el-Nour el-Khabir, the Sultan of Darfur's caravan leader and a notorious merchant who carried out trade between Egypt and the Sudan. He has an excellent memory of the first half of the 20th century and also of events mentioned to him by his father and grandfather concerning trade items, routes, boats, sailors and booze houses. A maternal relative of Ali Abd el-Latif (the hero of the 1924 revolution), Ahmed Hassan Khairi (75 years old) and some of the town residents still recall the house in which the Mahdi army leader Abd el-Rahman el-Nijoumi stayed and the story about his stay in el-Khandaq as told by Ali's father, Abd el-Latif, who arrived with el-Nijoumi's army. They showed us where Ali was born and told us the story of his father's marriage. Hanim Jar el-Nabi (75 years) has her own memories of the sailing canteens and their stop at el-Khandaq, of the shops that once lined the riverside road, of the traded items and the subsequent decline in trade. She told us about canteen boats from which they used to buy sugar, tea, sorghum (dhura) and coffee beans. Shops were aligned along the river bank. This river trade stopped 30-40 years ago, while they used to receive wooden logs, water jars and dried fish containers (maluha) up until ten years ago (Soghayroun 2008:77).

The women of el-Khandaq were famous for making objects out of palm leaves and wheat stalks. These objects ranged from the food covers "tabaq" to baskets used as food containers or for carrying food, roof hanging devices to keep food fresh, mats, etc. Women also prepared hearths or

stands out of lime mixed with animal dung. The extraction of lime to use for flooring and the making of hearths was once one of their jobs. An ethnographic observation of a female oven maker was carried out, as remains of ovens were observed in the deserted houses while some families still use ovens elsewhere in the town.

***The inhabitants.*** The people of al Khandaq affiliated themselves with the town (al Khanadqa pl., al Khandaqawi sing.), in contrast to the rest of the Sudan where people are linked to their tribes and are given the tribe's name. This shows the prestige al Khandaq has acquired to the extent that people treat themselves as one tribe of al Khanadqa or as residents of al Khandaq, despite the fact that they are a heterogeneous mixture from inside and outside Sudan as in the case of Suakin and all the port towns in general. They claim Bidairiyya, Abdallab, and Danagla origins. Others claim Egyptian origin and call themselves Al Hudur, i.e. from urban centers; they are certain Egyptians who came from Egypt before the Turkish invasion of the Sudan in 1821 and they live in Khandaq, Shendi, Mesal-lamiya and other places on the Nile and occupy themselves with trade (Budge 1907:439).

The present day populations are the descendants of famous traders between Egypt and Sudan. Although they live in the Dongolawi language region with a Mahas enclave to their south, they speak the Arabic language. They have been maintaining a different way of life (Omer 1985: 22). The Khanadqa traders are well known all over Sudan up to present time. Their economic prosperity from long trading experience furnishes them with the necessary wealth to educate their children, and according to documents uncovered at some of the deserted houses as well as information from local informants, most of the Khanadqa assume high positions in the government and the percentage of literacy is high. Documents uncovered show the type of books, magazines and journals they have been receiving during the early 20th century. During the Turkiyya and Anglo-Egyptian rule, al Khandaq has been one of the main districts of Dongola Province due to its urban setting (Budge 1907:407, 1904 Report). According to British reports, the town had schools with 50 students (Hill 1959:127), permanent buildings such as a police station, rest house and post and telegram office (1904 Report).

***Trade and traders of al Khandaq.*** Bergen's documents have shown that Abdella Bey Hamza traded in gum, feather, animals and grain. Gum and feathers were obtained from Kordofan and exported to Egypt via al

Khandaq. Many commercial documents, contracts, letters, promisory notes and receipts have been found which testify to the broad and far-reaching trade activities carried out by the Khanadqa. The importance of contract documents: commercial partnership was first introduced by the caravan traders (Jallaba) who traded between Egypt and Sudan (Bjorkelo & Ali 1990:36). It was an efficient way of financing and organizing long distance trade. Trade between Sennar, Darfur and Egypt has a long history. Generally the main export commodities of the Khanadqa were gum Arabic and ostrich feathers. Both originated in Kordofan and were then transported by camel to the Nile, so by boat either from Debba or Khandaq (through Wadi Howar), down the Nile to Hafir, and finally by camel to Halfa. Camel nomads were hired to transport commodities on land then by hired or private boats. We are still unsure whether al Khandaq witnessed the same representation as other towns, in which merchants from kings of Sennar, foreign merchants, brokers and hawkers, slave traders from Kordofan, craftsmen and artisans, peasants and nomads would meet.

## *Conclusions*

1. The Sudan belt that stretches south of the Sahara from east to west across Africa includes portions of several political units, principally the Sudan, Chad, Mali and Nigeria. These in turn include territories formerly occupied by famous African kingdoms such as the Fung, Darfur, Wadai, Kanem, Bornu, Sokoto, Timbuktu and Songhay. Despite these divisions and the rivalries, there seems to have been a long-lasting, remarkably free flow of men and ideas along the Sudan belt, and this flow continues today. The Sahel edge towns were harbors in the desert; the country changes from sand and scrub with wells and scattered oases in the north, to light grazing lands then cultivable lands with denser plant life gradually reducing stalk further south. Within the Sudanic belt there are few natural barriers to the mobility of men and ideas between east and west.

2. The western desert is less hostile to life, although it has most of the characteristics of the eastern desert. The nature of the sand allows for some rain water to penetrate, either from the scanty rains or from the widyan of north Kordofan. There are few Qu'ub (sing. Qa'ab, oasis) where sedentary life is present with the cultivation of sorghum, millet and some date trees (Omer 1985: 13).

3. In the present day Sudan there are several rivers; the Blue and White

Niles, the Atbara River and the Wadi Howar. In addition to Wadi al Melik, these supply water and food to travelers from or to Egypt from Ethiopia, Uganda and Darfur. Wadi Howar has been reported by Harding and King (1916:356) as being a place as deep and wide as the Nile.

4. River trade in the early 20th century has been well documented and helps in accounting for previous periods. This trade included both local and external trade (regional and international trade). The local trade based in Dongola organized into two groups; one controlled the river trade to the north up to Halfa, while the other group controlled river trade to the south. The movement was scheduled so that they would be able to meet and exchange goods in the Dongola region in summer, which is the time of date harvest and high floods in the cataracts (Osman 1984:134-135). When the Nile was high, boats could pass through the cataracts up to Egyptian borders and return before the recession of the Nile. Goods transported north include household pottery water jars, doukas (flat pottery dish for cooking local type of bread), food storage jars, dough containers and wood (either worked on bed saddle and ceremonial container, or un-worked blocks). Hangings of wool and palm branches, decorated gourds, salt niter and spices were among the traded items. Upon reaching Halfa, all the goods were sold and they then loaded up dates which they offloaded to traders who controlled trade between Halfa and Egypt. Dates are used for exchange, but wheat is rarely used. In Halfa exchange was by cash when they returned with manufactured goods: agricultural material, chinaware, ornamental goods, and luxuries such as tea, sugar, razors and towels. The return trip is quick, as these objects are needed south of Dongola. These are bartered with the households and traded for ceremonial objects produced in the south which would be obtained by the fleet travelling to the south. In many cases traders had agents in different places with whom they would leave some of their goods so that they could gather the necessary southern goods. According to Osman (*ibid*:137), three factors made the trade likely; ecological, technological and economic factors. The ecological factor is the Nile as the main constant element of trade with alternative roadways. The technological factor is represented by boats, canals and slipways. Nubian rock art depicts boats of all kinds and sizes that have been used. The economic factor refers to the variability of economic products and the other commercial needs of different parts of the Nile Valley considering the different climatic zones through which

the Nile and its tributaries run. These same factors are similarly present during the medieval period, so that one can suppose the prevailing of the same system with some modification.

5. Recent fieldwork has shown that even today in the Wadi Howar, water and pasture are seasonally available, while a well fortified site controlling access to the Nile suggests that this site was known and used during the Kushite Kingdom (Jesse 2006:50, 2008). According to Jesse, the fortress is connected with the role of the wadi as a thoroughfare. However, this is most likely just one function of the fortress. The presence of water and the control of it was certainly also of great importance. Military aspects can also not be excluded. Darfur can be approached either westward through the savanna, by Sahel from Alwa Christian Kingdom's domain or by the Wadi Howar from Mukurra. The hills and mountains of Darfur, which culminate with the 3088m high Jebel Marra, act as a watershed between the Nile and Chad basins. According to Maydon, Wadi Howar is a notable landmark and a natural boundary between what he termed ordinary Kordofan desert and the true desolate desert of Dongola (Maydon 1923:38). The course of this wadi is marked and visible by the line of trees growing in its bed from at least 10 miles away, and it passes south of Bir Natrun. According to Maydon, its bed was full of camel tracks coming and going, showing clear evidence of its continuous use for caravans from Darfur to Dongola or Bir Natrun as an alternative to the old Arba'in Road (Maydon 1923:39). Obviously, the area gradually became an area of passage. Stone settings of circular and rectangular shapes discovered in several places could be identified as watering troughs around wells and indicate that new forms of water management had become necessary. A radiocarbon date from a site at Abu Tabari where more than 25 watering troughs had been found indicates use in the 1st millennium BC (Jesse 2006: 49).

6. The craft industries provided the peasants with sagya pots (*gadás*), ropes, wheel implements, shoes, cotton, linen cloth and basketry. Beside the main exports of the country, the Wadis nomads bring with them medical herbs such as *senemaka* (*Senna Cassia*), *tomam* (*acutifolia delile*) and tar, which are used for human and animal medication, and niter salt from Wadi Natrun. The latter has been one of the main exports of the country since the Egyptian Old Kingdom, and was used for mummification. Al-Mattama relied mostly on its cotton cloth export. Palm leaf mats were exported as far as Egypt, while whips, ropes, saddles and leather bags were produced for the caravans as well as for local use.

### *The scenario of the dialogue*

- This dialogue has been made possible by the wadis, which created a network between the desert and the Nile. The wadis add more water to the Nile as they make their way to the river. In cases where they end before reaching the Nile, the wadis provide underground water in the shape of small depressions or wells. These in turn became ways for movement of people and ideas. These movements were caused by several factors, some coercive due to wars, political unrest, famines and lack of enough land for cultivation to support the increasing population, others voluntary such as trade or searching for a better standard of living. These wadis have offered safe and comfortable routes for trade caravans. Some wadis bore evidence of the existence of traded items such as ostrich for their feathers and eggs as in the case of Wadi Howar. Ostrich feathers were in turn mentioned in some documents as being traded through Khandaq. The desert provides camels for cargo transport and nomads who offer services either as caravan leaders or trade partners. As camels have been introduced rather late, one should probably mention the importance of donkeys for transport in older times. The Nile provides part of the cargo transport, water and food from towns and villages.

- The latticework is crowned with the establishment of towns, ports and fortresses either at the origin of wadis or at some points along the route or at discharge points, e.g. Zankor in Kordofan, at the origin of Wadi el Malik, where a medieval town with a fortress has been uncovered. The wadi discharges near Debba, which became the natural harbor for caravans traveling to and from Kordofan in the 18th to 19th centuries. The Wadi Abu Dom had a fortress in the Bayuda Desert and flows near Sanam and Abo Dom. Gala't (fortress) Abu Ahmed was uncovered towards the western end of the Wadi Howar and was used during Napatan times. The Wadi Howar pours into a wide area which extends from Old Dongola in the south to near Khandaq in the north. Towns were markets, places where caravans stopped to exchange commodities, food supplies and other desert road necessities.

- The women's participation in this trade is significant, as they prepare containers made out of palm branches and wheat stalks which are lightweight and allow for air to penetrate, keeping the food stuffs in good condition for the long journeys. They also prepare water skin bags and leather bags in addition to preparing the dried meat, spices and dried



bread (kisra, abraï). Ovens for making bread are a local industry, as is the case of al Khandaq where an ethnographical observation was made for the making of an oven in our 2007 season (Soghayroun 2008:77). They were and still are the main customers of nomads who bring the white lime from the wadis plateaus which they use for painting walls. The women of al Khandaq extract lime from within the town outcrops, but they use yellow lime for paving the floor and making fire stand "hearths".

- The multiplicity of ecological, cultural and historical variables which has been studied in this case study and the complementation of these variables has shown to what extent archaeological theories can be applied directly to cultural situations and how the result of such application modifies those theories to further our understanding of human past.

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## Chapter 6

# Christianity and Islam as Nile Religions in Egypt: Syncretism and Continuity

Terje Oestigaard

### *Introduction*

The Nile has had an important role in all religions, from the ancient Egyptians to modern Muslims in Egypt. All religions in the desert became influenced and incorporated life-giving water into the respective religions' bodies of myths and rituals because "in these deserts the river was life itself. Had it failed to flow, even for one season, then all Egypt perished" (Moorehead 1960:vii). Everyone living in Egypt has been dependent upon the Nile. The river has had a life-giving role in society and religion throughout history, and many of the beliefs in the various religious traditions share the same fundamental aspects, which enable an analysis of how the Nile's structural properties in particular and water in general shape religious beliefs (fig. 1).

A distinction is often made between the Great and Little Traditions, or High and Low Religions (Redfield 1956), and both Christianity and Islam are high religions or great traditions. Therefore, it is of interest to see how the river itself transcends the various religions and creates notions of syncretism and religious dualism and multiple co-existing traditions (Insoll 2004a). "Syncretism" is often perceived and condemned as implying "inauthenticity" or "contamination" of a "pure" religion. However, it is important to highlight that it is very useful for analysing religious change because it describes "the blending or fusing of different religious traditions or elements" (Insoll 2004b:98). Therefore, in order to understand religion, one must assess "the development of religious syncretism, co-existence, adaptation and the development of popular religious traditions" (Insoll 2001:19).



**Fig. 1.** The Nile today in Cairo. Photo: Terje Oestigaard.

Thus, the aim with this article is to analyse how and why the Nile shaped beliefs among the Christians and the Muslims, and how these traditions have a syncretic continuity with the ancient Egyptians through the Greeks and Romans.

### *The classical background*

Homer gave the Nile the name Aigyptos, thus equating the river with the country (Macfarquhar 1966:108). The name “Nile” seems to first appear in Hesoid, where the river is called Neilos. An interesting feature with this name is the numerical value of the Greek letters (50, 5, 10, 30, 70, 200), which together equal 365 or the total number of days in a year, thus indicating that the Nile was everything (Lindsay 1968:39). Thales is believed to have been taught by Egyptian priests (Kamil 2002:5). In Thales’ philosophy everything came from water, and water was the prime substance the world rested upon (Dicks 1959:296). The classical Greek and Roman au-

thors had enormous admiration and adoration for the Nile. Herodotus is attributed with the phrase "Egypt is the gift of the Nile", but it most likely stems from Hecataeus of Miletus who travelled in Egypt almost a century before Herodotus (Darby, Ghalioungui & Grivetti 1977:32). Originally, Hecataeus probably described only the Delta. Strabo used the phrase to refer to the whole of Egypt, whereas Herodotus as Hecataeus most likely referred only to the Delta. In Herodotus' point of view the Nile-created land extended for three days' journey upstream, and the expression may have been borrowed from the Egyptians themselves (Griffiths 1966:59). Although Herodotus adorned the mighty river, he has apparently omitted the most important stage in the process, the actual inundation, and refers to the river merely as "being full" (Quincey 1965:10).

The Syrian writer Heliodorus wrote that the Nile is called "Horus", "the giver of life", "the saviour of all Egypt, both Upper and Lower Egypt", "the father of Egypt", "the creator of Egypt" and "he who brings new mud each year". The latter aspect, with regards to the silt which the Nile annually deposits, is also stressed by Seneca: "...it renders a two-fold service to the fields...Egypt owes to the Nile not only the fertility of the land but the very land itself". According to Philostratus, the gymnosophists of Egypt recognised this dual nature because they rendered "cultic worship to the Nile in particular, for they consider this river to be both earth and water" (Wild 1981:94). The whole of Egypt was made of the Nile, the silt created the land and the water gave it life – both qualities and outcomes of the flood, which created an extremely fertile environment. Theocritus emphasised that "No land produces as much as Egypt when the Nile floods", and Themistius proclaimed that the Nile was "the father of crops" (Wild 1981:93). The Nile was the most spectacular river in the world, and according to Diodorus; "The Nile surpasses all the rivers of the inhabited world in the benefactions to humanity". Seneca claimed that all rivers were "vulgares aqua", but the Nile was the "most noble" of all watercourses. Arnobius proclaimed that the Nile was "the greatest of rivers" and according to Ammianus Marcellinus it was "a river which is kindly to all" (Wild 1981:88).

Apart from general descriptions of the great benefactions, the Nile also had other qualities. Plutarch mentions one interesting aspect, which the Coptic Christians later would develop in other ways, and that is that the Nile contained everything, including Logos: "In the Soul [of cosmos], then, Mind and reason (Logos), the guide and lord of all the best in it, is

Osiris; and so in earth and air and water and heaven and stars, that which is ordered and appointed and in health, is the efflux of Osiris, reflected in seasons and temperatures and periods” (Plutarch 49.3).

### *Coptic Christianity*

Upon the introduction of a new religion, the ancient Egyptian religion with regards to the Nile was Christianised at least on the surface. The Nile rose through the power of Christ or by the intercession of the Archangel Michael and the saints (Kakosy 1982:297). Coptic Christianity is truly syncretic, mingling remnants of Pharanic practices with elements of Hellenistic, Byzantine Egyptian and Arab civilisation as well as being one of the most ancient forms of Christianity (Cannuyer 2001:11). The word “Copt” is interpreted as an Egyptian Christian, although the word itself refers to all Egyptians, including both Christians and Muslims (Finneran 2002:62). The word itself comes from the ancient Hikaptah (“house of the ka or spirit of Ptah) (Kamil 2002:1). Today the government estimates that approx 6 percent of the population are Copts, or approx 3.5 million people. However, the church claims that the number is considerably higher, approx 10 million or more (Cannuyer 2001:110). According to Egyptian Christians, St. Mark who was Egyptian by birth was the first apostle of Egypt and arrived in Egypt in approx 60 AD. He became a martyr in 68 AD (Meindarus 2002:26-28).

A central core in Coptic Christianity is Jesus’ flight to Egypt. Jesus found refuge on the banks of the Nile with his family (fig. 2) who were fleeing persecution at the hands of Herod the Great, King of Judea, according Matthew (2:12-15): “And having been warned by God in a dream not to return to Herod, the magi left for their own country by another way. Now when they had gone, behold, an angel of the Lord appeared to Joseph in a dream and said, “Get up! Take the Child and His mother and flee to Egypt, and remain there until I tell you; for Herod is going to search for the Child to destroy Him.” So Joseph got up and took the Child and His mother while it was still night, and left for Egypt. He remained there until the death of Herod.” The Egyptian tradition makes a great deal of the holy family’s stay, and along the Nile there are many pilgrimage sites, including the Church of the Virgin at Daqadus, the church at Sakha, the crypt of Musturud, the balsam tree at Mataria known as the Tree of the Virgin, and the monasteries of Gebel el-Tair and Deir el-Muharraq (Cannuyer 2001:15).





**Fig. 2.** Way to the crypt of the Holy family under Saint Sergius Church where the family lived for some time during their stay in Egypt. Photo: Terje Oestigaard.

The Coptic era begins on 29 August 284 AD, which is the date the Roman emperor Diocletian came to reign. Diocletian published four edicts of persecution, which struck the eastern Christians hard. The church in Egypt was so devastated that it later started the time era – The Era of Martyrs – with the tyrant’s reign (Cannuyer 2001:26). A soldier in service of the Romans named Menas met his death and became a martyr in 296 AD. On 11 November he was apparently executed for his Christian faith. According to legend, his body was miraculously transferred from his deathbed to a spot approx 20 km south of Alexandria. It is believed that he said his body should be placed on a camel and sent out into the desert, and that he should be buried at the spot where the camel halted. His remains were interred, and soon afterwards Menas’ fame spread among the Christians in Egypt. Around 324 AD the Roman empress Helena (c. 248 – c. 328) erected a shrine at his grave after her daughter had been cured of elephantiasis by drinking from a nearby spring (Cannuyer 2001:26). The grave became

an important pilgrimage centre, on which a small limestone church was built during the fourth century. In the fifth century a large basilica was constructed, but this was destroyed in the seventh century. The fundamental religious commodity at Abu Menas was water. The pilgrimage place was like an Egyptian Lourdes, and the water was believed to have strong curative properties. Long after the cult of St. Menas' decline, a large 150m square pool was the foci for the cult in the town of Abu Menas. Before leaving the town, pilgrims filled vessels or ampullae with this water to take with them, and water and sanctity is a common pilgrimage motif (Finneran 2002:87-88).

Other Christian groups developed other approaches to religion in Egypt. The movement of the "Desert Fathers" initiated by St. Anthony (251-356) consisted of Christian hermits living in isolation and extreme poverty resisting temptation. St. Pachomius (286-346) developed communal monastic settlements, which became monasteries in every sense of the word (Finneran 2002:21). "The Copts believe that monks in the desert are superior to virtuous men in the world. Even the novice monk is believed to surpass the virtuous man in righteousness" (Gruber 2003:38). The hardship in the desert and rewards were explained in this way by Thomas Merton, who was a great monastic figure of the 20th century western Church:

"He [the monk] withdraws from [the world] in order to place himself more intensively at the divine source from which the forces that drive the world onwards originate, and to understand in this light the great designs of mankind. For it is in the desert that the soul most often receives its deepest inspirations. It was in the desert that God fashioned his people. It was to the desert he brought his people back after their sin...It was in the desert, too, that the Lord Jesus, after he had overcome the devil, displayed all his power and foreshadowed the victory of his Passover" (Merton 1977:175).

One of these desert monasteries was the White Monastery. Although situated in the desert, water and the Nile had a prominent role. Shenoute was a Coptic abbot at the White Monastery from the latter part of the fourth into the third quarter of the fifth century, but the writings which are preserved from Shenoute are fragmentary copies made long after he died (Young 1993:17). The White Monastery was located close to today's Sohag. Although the copies are difficult to date, it is generally believed that

the various parts were written between the eighth and eleventh centuries (Young 1993:19). In approx 385, the monk Shenoute who was then in his mid-thirties became the third head of the White Monastery. He had been living in the monastery since he was seven years old, and is believed to have died in 464 at the age of somewhere between 115 and 118 years old (Krawiec 2002:3). Shenoute practiced for more than eighty years, and it seems that at one point his disciples numbered as many as 2200 monks and 1800 nuns. Although he is labelled as authoritarian, harsh and violent, Shenoute plays a crucial role in the history of monasticism (Veilleux 1983:v). Shenoute's hatred of paganism and heresy in all its forms resulted in attacks on the local deities and he played a crucial role in erasing these former religious traditions as he envisaged and established Coptic Christianity in all areas and sectors of Upper Egypt (Bell 1983:18-19).

In *The Angel of the Waters* Shenoute wrote about the tense wait for the annual flooding of the Nile. Shenoute called the annual inundation of the Nile God's "yearly mercy" (Bell 1983:107). Besa, who was his disciple and successor at the White Monastery (Bell 1983:3), writes in his *The Life of Shenoute*: "It happened one year that [the Nile] did not flood, and our father apa Shenoute knew from God the hidden reason for it. He also revealed the matter to the brothers with tears flowing from his eyes, and said to us: "Pray to God. I, too, will go into the desert and spend this week praying to the Lord. See that no-one at all comes to me" (Besa 1983:72-73). Shenoute said to his disciples; "You know what I said to you, that God has commanded that there should be no flooding of the land this year. Behold, then, I prayed to him, and he, as the good and merciful God, promised me that this year again he would cause the waters to come and cover the face of the land" (Besa 1983:73). Thus, water had an important role in the religious life and "Shenoute's self-proclaimed relationship with God gave him knowledge of what God required for salvation" (Krawiec 2002:56), which in daily life was water.

The coming of the flood was an important Christian event. The Copts call the star Sirius the "flood-bringer" due to the proximity of its rising and the yearly rise of the Nile (Gruber 2003:178-179). "As it appears, the monks intone the owshia, the special liturgical prayer which distinguishes each of the three Coptic seasons. A new Coptic year has begun... Undoubtedly, some form of it antedates Christianity in Egypt when a pharaoh or his priest might have actually invoked the star and the subsequent flood" (Gruber 2003:179). 11 September is New Year's Day (Gruber 2003:180): "Near the

end of October, forty days after the New Year has begun, the flood waters ordinarily begin to subside. The prayers of the Church turn to concerns about vegetation. Likewise, from the third week in January to mid-June, alternative prayers are chanted for the coming of seasonable winds, not so strong as to damage crops, but constant enough to assist pollenization and fruitfulness" (Gruber 2003:180). Thus, the Copts continued the Pharaonic calendar with three seasons of four months; the season of the flood, the season of the cultivation and the season of the harvest (Kamil 2002:33).

The feast of the Epiphany or baptism of Jesus is celebrated on 19 January, which was previously a great celebration of the Nile. Before most festivals there is a period of fasting and abstinence. During fast, no food or drink is taken between sunrise and sunset (Cannuyer 2001:107). The Feast of the Cross "was a procession from the church that used to tour the village before ending at the Nile, or its nearest tributary, with the throwing of the cross into the river...there is little doubt that this festival was related to the Pharaonic feast of the Bride of the Nile" (Bishop Thomas 2004:985). Hence, it also seems reasonable to interpret the *galaktotrophousa* or nursing image as a historic trajectory of ancient Egyptian beliefs and in particular the nursing Isis. This goes back to the Pyramid Texts where the white Nile was also seen as Isis' nursing breast milk: "Raise yourself, O King! You have your water, you have your inundation, you have your milk which is from the breasts of Mother Isis" [Pyr. 734] (see Faulkner 1969). Moreover, when Theodosius outlawed paganism and the temples were closed in 379, the Egyptians continued to see their beloved Isis and her son Horus in the images of Mary and Jesus (Kamil 2002:18).

### *The miracles of Virgin Mary's breast milk*

Virgin Mary has a fundamental place in Coptic Christianity (figs. 3 & 4). "Mary's perpetual virginity is especially emphasized in all these feasts as a special means of her total dedication to God. She is thereby regarded as a favourite model of monastic holiness by the monks who celebrate her feasts" (Gruber 2003:182). The *galaktotrophousa* or nursing image has a crucial role in Coptic Christianity. *Galaktotrophousa* means "she who nourishes with milk" (Bolman 2004:1174). The nursing period in Late Antiquity and Early Byzantine Egypt lasted normally for two or three years, and most often it was not the child's mother who nursed the baby but a wet nurse. Hence, this image, which is depicted in Coptic iconography in



**Fig. 3.** Saint Virgin Mary's Coptic Church or the Hanging Church in Old Cairo built on top of the Water Gate of Roman Babylon. Photo: Terje Oestigaard.



**Fig. 4.** Inside the Hanging Church: Photo: Terje Oestigaard.

monasteries, does not represent a symbol of mother and child intimacy as such (Bolman 2004:1176). Clement of Alexandria described in the second century CE the milk in Virgin Mary's breast as having its origin from God, and more precisely logos, since it has the same composition as the flesh and blood of Christ. The milk does not originate from the Virgin's own body, because this blood is "liquid flesh". The milk is, according to Clement, "the drink of immortality" (Bolman 2004:1177). Following Clement,

"What a surprising mystery! There is a single Father in the universe, a single Logos in the universe, and also a single Holy Spirit, everywhere identical. There is also a single virgin become mother, and I like to call her the Church. This mother, alone, did not have milk because, alone, she did not become a woman; she is at the same time virgin and mother, intact as a virgin, full of love as a mother; she draws to her the little children and nurses them with sacred milk, the Logos of nursing" (op. cit. Bolman 2004:1179).

Early in the fifth century, Cyril, another Alexandrian, followed this line and argued that Mary deserved to have the flesh and blood of Christ placed in her mouth since this milk is given "in the heavens". Heaven contained rivers of milk and honey, and milk was given as a reward to Christian martyrs. In Egypt the newly baptised infants were given a special Eucharist consisting of milk mixed with honey. Following the "Canons of Hippolytus", the baptismal Eucharist should consist of milk and honey since it is the flesh of Christ which "dissolves the bitterness of the heart through the sweetness of the logos". This understanding of Virgin Mary's milk as the nectar of immortality also has a parallel in an Egyptian tale called the "History of Aur", where a family of wealthy magicians addresses and asks her: "deign to give us a little milk from thy breasts, so that we might drink it and never die" (Bolman 2004:1179-80).

These depictions of the nursing Virgin Mary in monasteries may have had a political function from the seventh century and onward. While the Muslims claimed that Christ was simply a human prophet and not the divine son of God, the iconographic message would have underlined the divine aspects (Bolman 2004:1181-82). Moreover, although this practice of using milk and honey in the baptismal Eucharist was never established in Syria and declined in Rome after the sixth century, it continued in Christian Egypt and Ethiopia in an unbroken tradition at least until the

nineteenth century, and most likely into the twentieth century as well (Bolman 2004:1179).

The most interesting aspect of galaktotrophousa in this discussion is the explicit reference to milk being the cosmic logos which incorporates everything. The close relation to Isis is intriguing, and in particular the contemporary interpretations by Christians that the breast milk – the ultimate life giving water – was logos. Returning to Plutarch again, these were exactly the divine qualities he described. “In the Soul [of cosmos], then, Mind and reason (Logos), the guide and lord of all the best in it, is Osiris; and so in earth and air and water and heaven and stars, that which is ordered and appointed and in health, is the efflux of Osiris, reflected in seasons and temperatures and periods” (Plutarch 49.3).

Altogether, the number of miracles grew with time to a total of 316 (Six 1999:55). Virgin Mary’s breast milk was not limited to nursing Jesus, but the holy substance could cure any disease; among other things it could heal the blind. John Bakansi was a priest in Cairo. He was more than one hundred years old and had become blind in both eyes. In the church there was a picture of the Virgin Mary, and in a dream he saw her coming out of the painting, “And she drew nigh unto him and took out her breasts from inside her apparel, and she pressed milk out from them upon his eyes”, and straightaway his eyes were opened (Budge 1933:47-48). In Upper Egypt, she cured a blind girl by sprinkling “upon her from her breasts some drops of milk of healing mercy; and straightway the eyes of the maiden were opened” (Budge 1933:54). Her milk also cured a monk who suffered from lip cancer (Budge 1933:55).

The beliefs in breast milk originate in the Nile, and Virgin Mary’s power was believed to control the very flow of the Nile as well. During a famine which lasted for nearly seven years (1066-72 AD), the Egyptian Khalif sent an embassy equipped with valuable gifts to the King of Ethiopia, who was believed to be withholding the water. The Ethiopians accepted the gifts, and in the years following received tribute for sending the Nile waters. For centuries the Christians had kept alive the idea that the coming of the Nile was one of the miracles of the Virgin Mary (Six 1999:53). During a war between Christians and Muslims, the Virgin appeared saying that God had given the Christian Emperor Dawit of Ethiopia (1380-1412) the wisdom to divert the Nile. With this power, the Muslims became scared since they could not harvest without the Nile waters, and they declared that they were



not enemies of the Christians. When Dawit heard this news, he praised the Virgin (Six 1999:57). "Since that time it was commonly accepted, not only by the Egyptians but also by European rulers, that the Ethiopians were the masters of the Nile" (Six 1999:58). Thus, it has generally been believed that the Ethiopians could control the Nile flow (e.g. Donzel 2000), and droughts occurred when God "restrained the heavens" so it "could not rain" (Pankhurst 2000:26).

In the 19th century the "idea of diverting the Nile" was again seen as a Miracle of the Virgin Mary, a theme which had been a challenging topic in the relationship between Egypt and Ethiopia since early times (Six 1999:68). The Miracle 268 of the corpus Tä'amrä Maryam [Miracles of Mary] concerns the Nile and Dawit, the King of Ethiopia:

"And on this day at Midnight Our Lady Mary, the holy twofold Virgin, bearer of God, appeared to the King of Ethiopia Dawit and she said to him: "O my beloved and beloved of my son Jesus Christ, and now I have asked my son on behalf of you that you will go and rescue my nation, the Christians, and thus He has granted and made even for you your way. Get up and go. And He will perform through your hand many miracles" ...And God gave him wisdom and he stopped the river [Nile], so it did not descend into the land of Egypt, because there are no rains in the land of the people of Egypt; unless the water of the [Nile], which flows from Ethiopia, reaches them, they do not plough, they do not sow seed and they do not get water at all...[King Dawit of Ethiopia said] Was it not said once: To restrain the water is like beginning a war, but the will of God, the Lord of the Christians, may come about" (Six 1999:66).

For the Muslims living along the Nile, it was intolerable that the Christians controlled the Nile and had the religious legitimacy of the precious life-giving water. Therefore, many of the controversies between the Christians and the Muslims were concerned with the Nile, both politically and religiously.

### *Nile Muslims*

The Islamic invasion of Egypt took place in 639 AD. Apart from the Nile, there was little continuity from ancient to Islamic Egypt due to a double cultural break; first with the victory of Christianity and then three centu-

ries later with Islam. Hence, in the Islamic area the knowledge of the pyramids, rituals and symbols, and indeed the whole civilisation was gone (Haarmann 1996:606). Still, the almighty Nile shaped the beliefs of Muslims in Egypt.

Ancient Egypt was seen as the embodiment of paganism, and the ninth century book-dealer and bibliographer Ibn al-Nadīm labelled ancient Egypt as the “Babel of sorcerers”. Nevertheless, there were scholars who aimed to integrate the pagan pre-history into the salvation patterns of Islam (Haarmann 1996:607). Moreover, the pyramids played a fundamental role in the Islamic eschatology. According to the Shi’i theologian Ibn Bābūyah (d. 991 AD), at the end of history the pyramids which had served as talismans against the inundations will be destroyed by the Twelfth Imam. In the Ottoman period, the cruel King Nebuchadnezzar, in the final days of the world, will use black powder to blow up the pyramids, ensuring that Egypt is open to the demise in the floods of the Nile (Haarmann 1996:608). The pyramids were also important in Islam with regards to another watershed in history: the Deluge which divided this period of paganism into two halves. Abū Ja’far al-Idrīsī of the thirteenth century worked on this treatise. He consulted twenty-two authorities on this question, of which eighteen favoured an antediluvian date, because as one of them said, “Otherwise their story would have been preserved”. Thus, the pyramids survived the flood, but not without damage, and the Deluge precipitated the Sphinx and broke it into pieces (Haarmann 1996:608-609).

Known in Arabic as the Ghitās, the most important Coptic Nile festival coincided with the rising of the waters, commemorating baptism and the unity with the Holy Spirit. The festival takes place shortly after the winter solstice when the Nile water is most pure. The most important ritual was submersion into the Nile, a rite of water purification. In 367 AH<sup>1</sup> the caliph al ‘Azīz prohibited the festival. Although he allowed the festival for a period of time, the Fatimid caliph al-Hākīm banned the collective ritual of submersion, and in 403-405 AH ordered a banishment of Copts and Jews to Byzantine territories. Fourteen years later, the festival flourished under the patronage of the caliph who used it to articulate Fatimide authority, a tradition which seems to have lasted until as late as 517 AH (Lutfi 1998:259-262).

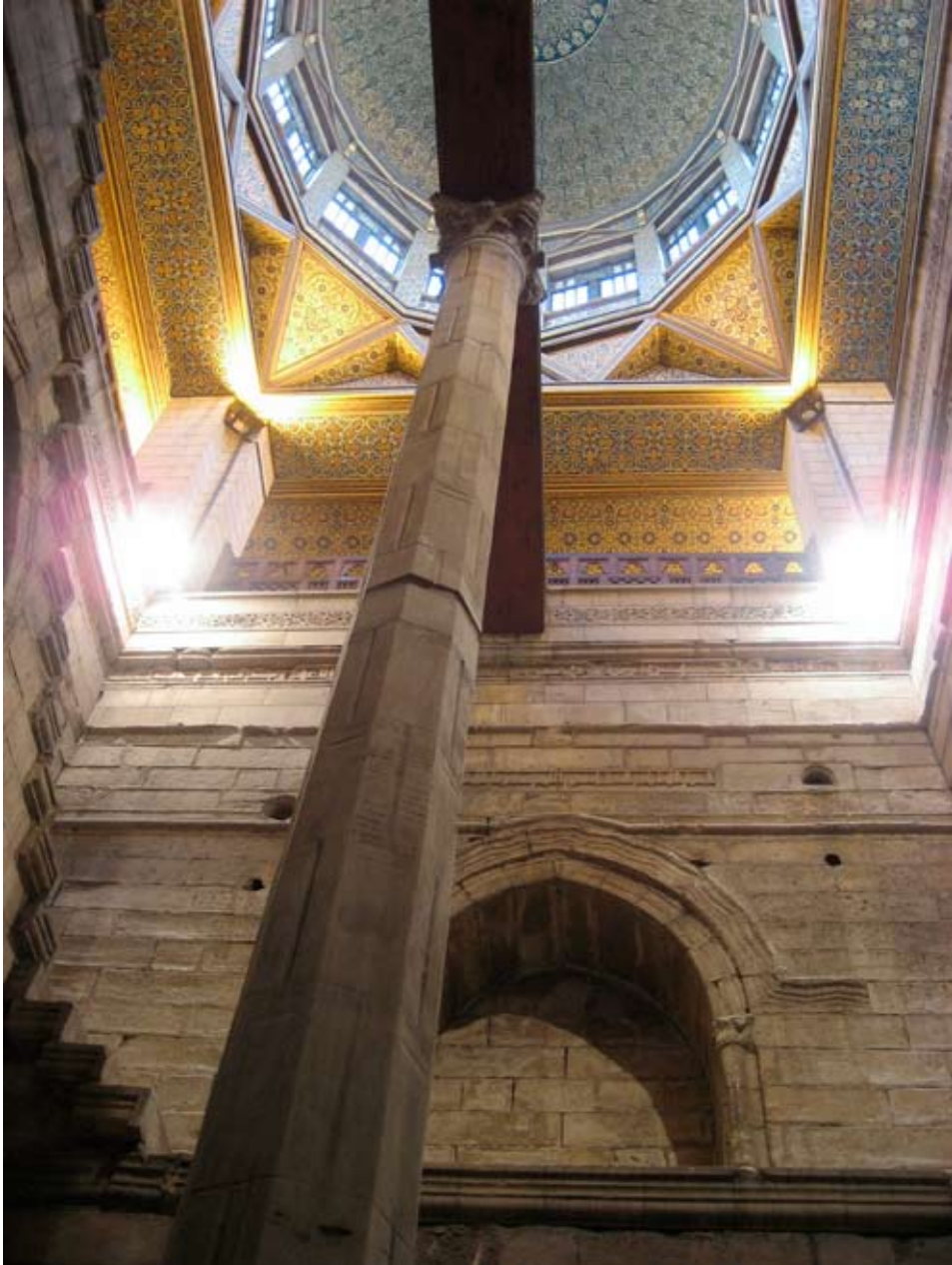
A very unusual event in the history of Islam is the participation of a Muslim governor in a Christian religious feast – the feast of baptism cel-

ibrated by the Copts every year on 19 January. al-Mas`ūdi described the event elaborately:

“I attended in the year 330 A.H. the feast of baptism in Cairo. During that time the governor of Egypt, al-Ikhshīd Muhammad ibn Turghj was in his palace, called al-Mukhtar, on al-Roda Island which is surrounded by the water of the Nile. He ordered that ten thousand torches be lightened on the island along the Nile shore of al-Fustāt. This was over and above the [number of] torches that the people had lightened in the city. Thousands of Muslims and Christians came to the Nile shore, others came in boats and others watched from their homes overlooking the river. Many on the shores of the Nile, who did not disapprove of eating and drinking in public, showed up in their gold and silver jewellery and played music to entertain themselves. During that evening the gates remained open and many people immersed themselves in the Nile claiming that it gave them protection from illness and prevented the spread of disease” (op. cit. Tagher 1998:91-92).

The rule of al-Hakim was harsh and cruel. In 400 AH Christian feasts were cancelled and celebration forbidden throughout the country. Three years later an order was issued to loot and destroy the remaining churches and monasteries in Egypt. Finally, al-Hakim came up with the last choice: death or conversion (Tagher 1998:103-104). However, the historian al-Antākī mentions that al-Hakim had attended the celebration several times in disguise (Tagher 1998:119), and “after dinner Christians and Muslims alike dipped into the water of the Nile. They claimed whoever dipped into the water that night would be safe from weakness of the body during that year” (Tagher 1998:120). When al-Zahir succeeded al-Hakim, he allowed the celebration of the feast in 405 AH. Maqrīzī writes:

“The emir al-Mu`aminīn [the Prince of the Faithful] al-Zahir li-`Izāz Dīn Allah, the son of al-Hakim, went to the palace of his grandfather al-`Azīz bi-Allah to look upon the al-Ghitās festival with his harem. It was announced that Muslims should not join the Christians when they dipped into the water of the river Nile on that night. [Even so,] the caliph ordered the torches to be lit at night, and there were a great many of them. The monks and priests carried crosses and candles, and prayed and sang hymns for a long time until they dipped into the Nile” (Tagher 1998:119).



**Fig. 5.** The Roda nilometer in Cairo with records from 641 to 1890 AD. Photo: Terje Oestigaard.

Muslims also worshipped the Nile and consequently two of the most controversial issues between the Christians and the Muslims were the Coptic festivals and who was in control of the Nilometer. As long as one follows the “true” religion, the land will prosper. The Copts were therefore deprived their privilege of announcing the rise of the Nile waters (fig. 5). “Measuring the Nile water became a tradition that was followed religiously by subsequent states, not the least of which was the Mamluk state” (Lutfi 1998:258). The Coptic Nile festivals in Egypt also mobilised collective social and religious reaction by the Muslims, and hence it was seen as a threat to the Mamluk leaders who had to recast it to accommodate dominant Muslim structures.

Based on Maqrīzī’s historical texts from fifteenth century Cairo, Huda Lufti has analysed how the Coptic festival as a social and cultural event and hence the Copts as an ethnic minority became marginalised in the official Mamluk narratives (Lutfi 1998). Rather than giving a full account of the Coptic Nile festival itself or analysing the suppressive means employed by the Mamluks, Lufti has emphasised how the Nile and the former rituals and perceptions even overpowered the Muslims. Maqrīzī constructs two cultures in tension; a hegemonic Arab-Muslim culture and a declining but nevertheless resilient Coptic culture. Maqrīzī starts his treaty of the Coptic Nile festivals with the famous story of the first Arab Muslim governor of Egypt who forbade the practice of sacrificing a female virgin to the Nile. However, due to this ritual sanction, the Nile did not rise for three month. The governor was in despair and wrote to the pious caliph ‘Umar I, asking him for advice. The caliph proclaimed that instead of virgins being sacrificed, the governor should throw a piece of paper into the Nile on which the caliph had inscribed (Lutfi 1998:256):

“Allah alone can cause the Nile water to flow. [The governor] threw the paper in the Nile, one day before the festival of al-Salīb, but in the meantime, the people of Egypt were preparing to depart, because their welfare rested only on the Nile. However, on the day of the Salīb festival, Allah, the Almighty, caused the Nile to flow, reaching 16 cubits in one night, thus preventing harm from happening to the people of Egypt”.

Later on the Copts used to throw a finger which belonged to a male Coptic martyr into the Nile. On this Maqrīzī comments: “The finger of the martyr

was taken in a box to al-Malik al-Sālih to be burnt in front of him in the maydān. He then ordered that its ashes be thrown in the Nile, so that the Copts would not be able to take it back. From that day on, 'Īd al-Shahīd was discontinued until this period. To Allah we owe gratitude and strength" (Lutfi 1998:268).

There are very few references to Mamluk state ceremonials of the Wafā festival. Wafā al-Nīl was the date when the Nile reached 16 cubits. Nevertheless, Maqrīzī gives an account of the state's celebration of such an event, constructing a glamorous picture of the Fatimids' celebrations: "Wafā al-Nīl was of great importance for them, and they celebrated it with excessive joy, for it was the cause of the land's prosperity and the creatures' harmony before Allah's grace. This explains why the caliph paid much greater attention to it than any of the other festivals" (Lutfi 1998:269). Koran reciters and the religious leaders of the most important mosques were ordered to spend the night in the Nilometer mosque, and when the Nile reached the 16 cubit mark, the ritual of anointing the Nilometer was performed, signifying a desire to bring life to the Nilometer, a ritual the caliph attended. In contrast to the Coptic festival of the Nile in the Mamluk period, the Wafā had undergone a fuller process of Islamisation (Lutfi 1998:270). "Thus Wafā al-Nīl seems to have been displaced as a Coptic festival, only to reappear as an official Muslim event. Notorious for their patronage of popular religious festivals, it is quite possible that it was the Fatimids who pushed for the Islamisation of the Wafā rituals" (Lutfi 1998:270). Rain prayers also took place, but only when the Nile failed and showed signs of drought.

"The communal performance of rain rituals may be said to express a collective desire to pass from a state of sin to a state of virtue in order to bring about forgiveness and mercy, thus effecting a reversal of the drought situation. Underlying the performance of these rituals is the common belief that natural catastrophes are caused by human transgressions of God's laws, which may be reversed only if people repent their sins" (Lutfi 1998:273).

Maqrīzī writes about a Nile decrease in 810 AH: "The Nile water stopped increasing for three days, beginning Thursday, and several amirs rode in order to attack the sites where people congregated for rejoicing. They were forbidden to commit abominations, so it started to increase on Sunday



**Fig. 6.** A Muslim collects water in a Cairo mosque. Photo: Terje Oestigaard.

and the increase continued" (Lutfi 1998:273). In 823 AH he reports of a drought:

"The Nile stopped increasing for several days. Grain prices rose and merchants stopped selling it. People's worry increased. They were called upon to stop committing what Allah forbade, and instead to commit themselves to virtue. They were asked to fast for three days and to go out to the desert. Many people fasted the next day, including the sultan. So it was announced that there was an increase of one digit" (Lutfi 1998:274).

The Muslim rulers had to control the Nile or, in other words, it should be in the hands of Allah and not the Christian God (fig. 6). Those who controlled the Nile controlled the people, and the story about King Dawit of Ethiopia stated clearly that Christian control was a threat to the Muslim people, their rulers and their God – Allah. Nevertheless, it was essentially the Christian rituals which became Islamised, and thus, Nile Islam was a syncretism of the previous religions and worship of the river, with roots going back to ancient Egypt.

### *The Almighty Nile*

The almighty river Nile has formed society and religions throughout history, and the changing religions along the Nile's shore in Egypt illuminate how transcendental religions incorporate the physical environment and the water world in a desert. In Egypt where all life came from the Nile, the river became identical with these divine gifts since life is the blessing of God. Everything good came from the god, and in a desert nothing was more precious than the life-giving waters. This also has a scriptural basis.

Water has a crucial and divine role in both Christianity and Islam (Oestigaard 2005, *in prep.*). In the Hebrew Bible there are more than 580 direct references to water and many more references to rivers, wells, dew and rain (Hillel 1994:26), "for he did good and gave you from heaven rains and fruitful seasons, satisfying your hearts with food and gladness" (Acts 14:17). The importance of water in Islam is summed up in the Qur'an in this way: "We made from water every living thing" (21:30). The word "water" occurs more than sixty times in the Qur'an, "rivers" more than fifty and "the sea" more than forty times, whereas "fountains", "springs", "rain", "hail", etc. occur less frequently (Haleem 1999:29). Moreover, water has



been seen as a gift from Allah: "Consider the water which you drink. Was it you that brought it down from the rain cloud or We? If We had pleased, We could make it bitter: why then do you not give thanks?" (56:68-70). Statements concerning water frequently begin with "It is God...It is He Who...", and hence, it reminds humans that the origin of fresh water is from God and not humans (Haleem 1999:30) and the benefits of this divine gift are also stressed; "We send down pure water from the sky, that We may thereby give life to a dead land and provide drink for what We have created – cattle and men in great numbers" (25:48-49).

In the absence of rain, the Nile was almighty or a symbol of the Almighty's power. Hence, it necessitated that both Christians and Muslims incorporated the river into their religious picture. For the dominant Muslim majority in particular, this utmost source of wealth, health and prosperity could not be ideologically and religiously controlled by Christians. Moreover, this also shows how a particular topography with a specific water-world is incorporated into an overall corpus of texts and rituals, giving the respective religions a local and distinct expression of the divine presence and its gifts. A mighty river like the Nile was almighty and created life and prosperity for humans and husbandry, while absence or failure were seen as a penalty by which God punished his children or his enemies (cf. Tvedt 1997, Tvedt & Oestigaard 2006, 2009).

## *Conclusion*

Even transcendental religions such as Christianity and Islam have not only been concerned with eschatology and soteriology, but have also incorporated the actual water-world into religious cosmology. The annual inundation and daily flow of the Nile have been the same parameters all inhabitants along the Nile have had to cope or struggle with, or praise and worship. Hence, this continuous flow of water has been the same source of religious elaboration, metaphors and rituals for the ancient Egyptians, the Greeks, the Romans, the Christians and the Muslims. As a result of the river's character, the different religions have shared many of the same basic structures and perceptions, and consequently there have been many syncretic beliefs and overlapping layers of meaning which combine rather than separate the respective religions. Nevertheless, because of the almighty character of the Nile upon which all life was dependent, it was of utmost importance for the respective religions and their state leaders to

claim authority over the Nile. Thus, the religious control and interpretation of the Nile was also a political one and a source of both theological and secular conflicts. Still, they all shared one thing: the continuity of the ever-flowing Nile, which has created religious syncretism.

## Footnote

- 1) Year 1 AH in the Islamic calendar starts 622 AD, but the Islamic year which follows the moon is shorter than the year used in the Gregorian calendar.

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## *Chapter 7*

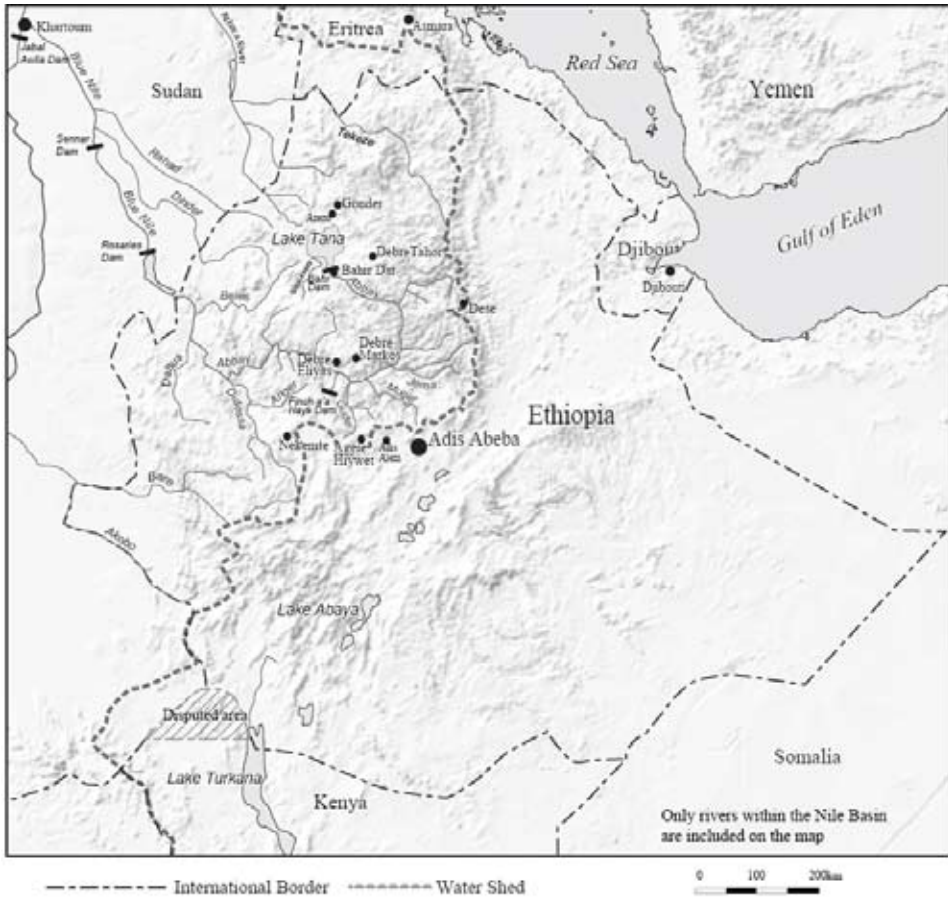
# **Holy Waters: Pre-Christian and Christian Water Association in Ethiopia**

Niall Finneran

### *Introduction*

This contribution considers the nature of the acculturation of “natural” space from the perspective of Christian belief, utilising examples from Ethiopian Orthodox Christianity, with special reference to its idiosyncratic syncretic amalgam of pre-Christian socio-ideological traits. We will frame these data against a picture of archaeological indicators from a wider perspective, focusing on the immediate regional Miaphysite/non-Chalcedonian Christian contexts of north-eastern Africa, and on continent-wide socio-cultural indicators of water beliefs and ideology, and attempt to build a biography of syncretism in place and space with special reference to water.

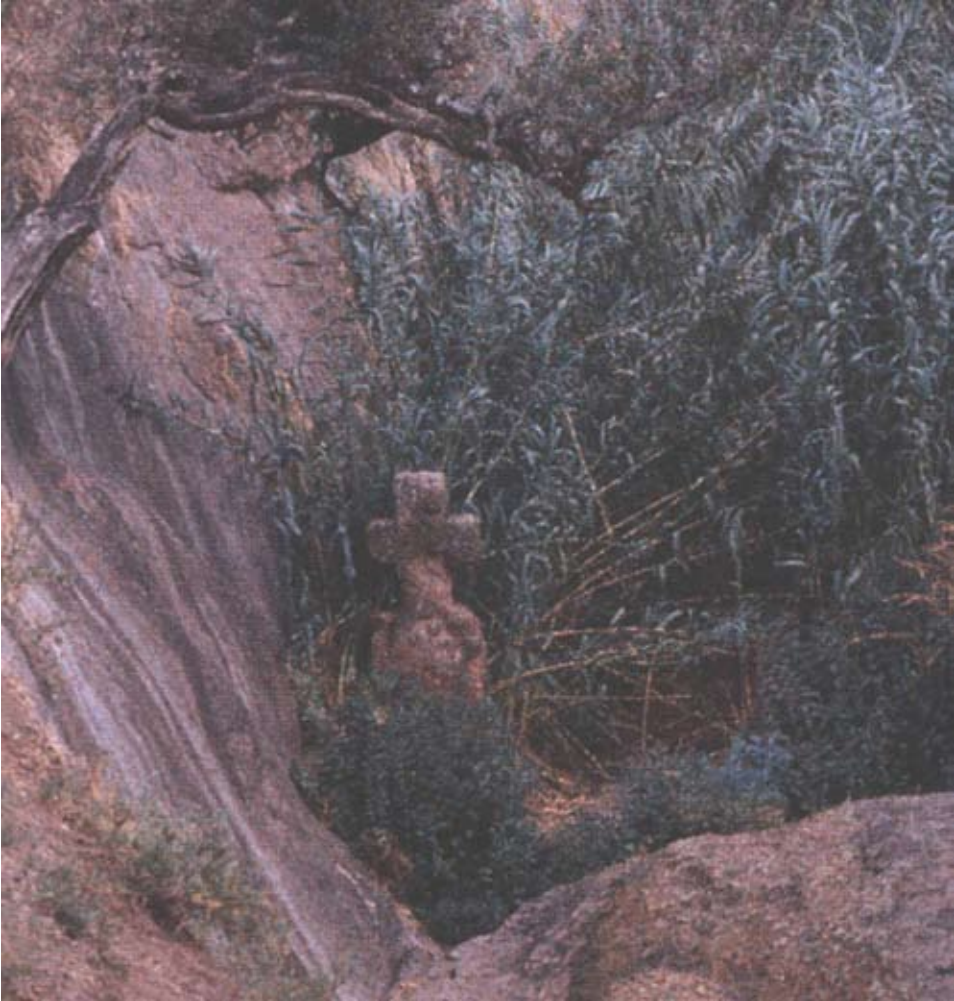
The idea of sacred places within the landscape is a common motif in many ideological systems the world over; the natural world is the stage upon which humanity works, and is not surprising that the environment should play a key role in shaping patterns of belief (e.g. Yi-Fu Tuan 1974: 23). Water is of obvious economic importance to humanity, and this is manifested in broader symbolic spheres. For the civilisations of Egypt and Mesopotamia, for instance, water availability was a matter of life and death, and as such rivers carried great symbolic and ideological overtones (Yi-Fu Tuan 1974: 85). Today, for Indian Hindus, the Ganges is not merely a life-giving force; it also embodies complex symbolic connotations. At first glance it appears that of the major world religions, Christianity has little room for such notions (Davies 1994). This is not entirely correct; the Bible, which draws upon a variety of socio-cultural sources, is especially rich in references to nature-based symbolism (Japhet 1998; Marcus 1994). Water, for instance (and in perhaps more of an Old Testament context) is used as a symbol of death and rebirth: the Flood story, for example. In the New



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Testament we have the connection between water and the rite of Baptism, also a notion of spiritual rebirth in the eyes of God (Eliade 1952:151-60).

Sources of sacred water (holy wells, for instance) are especially important in the Christian context. In many cases a sacred source of water (which may often have considerable pre-Christian ritual significance) becomes associated with a saint, or miracle worker. The waters often take on special powers, often connected with healing, and subsequently these loci become pilgrimage centres. These sacred places may be revealed to believers in two ways: in a hierophanic situation, there is a direct manifestation of the deity at the sacred place, conversely, in a theophanic situation; a message is received via an intermediary (Park 1994:245). The



**Fig. 1.** A holy land recreated: a rock-hewn cross marks the symbolic place of the baptism of Christ. Here the River Jordan (Yordanos) is a canalised section running through the Ethiopian town of Lalibela: an earthly Jerusalem in the Ethiopian highlands.

Marian apparitions at Lourdes, France, in the mid-19th century, are an example of a theophanic designation of a sacred space. The medium, Bernadette Soubirous, was “chosen” to communicate with the “deity” (using this word in the Roman Catholic theological context of Marian veneration). The waters of Lourdes have subsequently become a great pilgrimage centre for healing - and also, incidentally, a great economic boon for

what was a very poor town. Within the European Christian context, sacred places became centres for extensive pilgrimage networks, albeit with subtle regional differentiation; intriguingly, on the European Continent such shrines are mainly associated with plants and animals, whereas in Ireland the majority are connected in some way with water (Nolan 1986).

### *Water and world Christianity: Some archaeological themes*

Two obvious Christian water associations may be defined: 1) the rite of baptism and 2) the global prevalence of holy wells as centres of veneration and pilgrimage. The rite of baptism in the Christian context may link with pre-Christian notions of ritual cleansing, ablutions and concepts of purity, but in terms of the immediate roots of the Christian faith, there are no clear parallels to be found in Judaism (Lane 2001). In time, as baptism became an integral part of the liturgical structure, so specialist fonts and baptisteries were incorporated into church buildings. In a notional “check-list” approach to archaeological indicators of Christianity (unsatisfactory as that term may be, e.g. Lane 2001), the presence of a font and baptistery complex would be something of a key marker. Changes in baptismal practice, for example from complete immersion to simple affusion of water, may be indicated in shifts of the location of the specialist building in relation to the church building and in the size and decoration of font.

Baptism is one of the most important Christian rites, deriving directly from Jesus’ own immersion in the River Jordan, itself, at the simplest level, a rite that confers life membership of a religious group. The importance of this rite is indicated by the considerable efforts expended in later times on the construction and decoration of specialist baptisteries (the word itself comes from the Latin *baptisteria*, which was applied originally to Roman bath houses), and the fixing of the important Feast of the Epiphany (Greek for manifestation) that celebrates the baptism of Christ. The ideological importance of this ritual is clear in many early sources; from the New Testament (Acts 8:36) we come across the figure Candace “Queen of the Ethiopians” (actually Queen of the Nubians, in all probability) stating “behold, here is water, what doth hinder me to be baptised?”. Tertullian, writing from Carthage in the second century, states in a similar vein “it makes no difference at all whether a man is baptised in the sea or in a pool, in a river or in a spring, in a lake or in a tub” (Milburn 1988: 203-4). These two statements clearly suggest that in the formative years



of the Church (and against a background of continual persecution before the Edict of Milan in the fourth century) there was obviously no requirement for dedicated baptistery structures, at this time baptismal rites were very much associated with the “natural” place, places where one could play out the rite in a discrete manner without fear of persecution (fig.1).

The earliest archaeological evidence for the formalisation of the rite of baptism itself (in a sense the beginnings of the acculturation of natural waters) comes from fourth-century wall paintings in the Catacombs of Rome, and in the Levant, where a number of small baptisteries, with simple, cross-shaped tanks, have been found in association with small, mid-fourth century church buildings (Milburn 1988:205). The development of the baptistery in later Roman and Byzantine times need not concern us here, but it is sufficient to note that from the fifth century onwards, separate baptistery buildings and highly ornate fonts became important features in the sacred space of church buildings, including the Lateran Basilica in Rome, the Church of St Restituta in Naples, and even earlier (at around 350) at Poitiers, France, where the building itself is sited upon an old Roman bath house, an obvious example of cultural syncretism in a notional biography of a space (Milburn 1988:207-210). The Romano-British picture presents some additional and interesting bases for comparison.

In Britain, large, lead tanks - many inscribed with the Christian Chi-Ro monogram - have been found in fourth-century contexts from: Walesby, Lincs. (Thomas 1981:221), Icklingham, Suffolk, (Morris 1983:13) and from Ashton, Northants (Guy 1977); here the tank itself seems to have been intentionally damaged, and placed within a well, an example perhaps of returning an obvious Christian symbol (perhaps as an episode of desecration?) to the natural world. Examples of fixed, plaster-lined baptistery tanks (roughly contemporary with the lead tanks, which were probably used as portable baptisteries), have been found at Richborough, Kent (Morris 1983:13), and Witham, Essex, where a fourth-century octagonal tank and baptistery was uncovered within a Christian cemetery (Morris 1983:15). The symbolism of the shape of the tank (in common with examples from as far afield as Roman North Africa, Europe, and the Byzantine Empire) as well as its location, is exceptionally intriguing. The number of sides on the tank may correspond symbolically to days of the week; hexagonal types indicating Friday (the sixth day) when Christ was crucified. The octagon may link with Sunday, the day of resurrection, and for the early church fathers



**Fig. 2.** The Holy Well in a European context: St Winefride's Well, North Wales.

the "eighth day" of the week (Morris 1983:15). The placing of the baptistery installation in the graveyard would indicate a symbolic link with death; early baptismal ceremonies, according to one scholar, were "almost funereal" in tone (Milburn 1988:205), and when baptisteries were subsequently enclosed and their space formalised, the preferred archetype for the building was the funerary mausoleum. Turning to the Scriptures we may find a clue for the origin of this symbolism; a passage from a letter of St Paul to the Colossians (2.12) states that the convert would be ceremonially "buried with Christ in baptism". The linkage

between death and rebirth via the baptismal rite is richly symbolic.

The second component of water-based symbolism in the Christian Church refers back to the notion of sacred places in the landscape, specifically here holy wells. The attitude of the early church fathers to the appropriation of pagan sacred sites was diffident. Building churches within pagan temples was actively encouraged, both as a symbolic notion of appropriation of space, and as an economic and pragmatic necessity. According to Bede, Pope Gregory sent a letter to Mellitus (the second archbishop of Canterbury) stating 'if those temples are well built, it is necessary that they should be converted from the cult of demons to the service of the true God'. Although the long surviving practice of venerating stones and trees was banned by the Edict of Arles in 452 and the Council of Tours in 567, the veneration of springs continued, although the symbolism was now strictly framed in a Christian cultural context. In Britain, for instance, churches were often sited near to earlier sacred springs. Wells Cathedral is a case in point; the etymology is obvious, and here we find the Chapel of St Mary situated atop a mid-Saxon mortuary complex, a Roman mausoleum and

among a number of ritual wells of possible pre-Christian (Roman) ritual significance (Blair 1996), another example of syncretism of sacred space.

It is difficult, in the light of current archaeological research, to prove that the ideological importance of a well was maintained across the religious divide. St Winefride's Well, North Wales (fig. 2), is still an important holy well, famed for its healing powers. According to legend, the spring gushed forth when St Winefride's head was cut off and hit the earth on that spot. This legend may have some earlier pre-Christian significance, for an Iron Age stone head was found within a well at Llanallgo, not far away on Anglesey (Edwards 1996). This is one of the few examples where archaeology can prove this ideological continuum. Holy wells are especially prevalent in Cornwall and Wales, they are directly associated with a saint, and are regarded as producing waters possessing curative properties; these wells are often found in churchyards and frequently have a small complex of buildings associated with them. Offerings are still left at these wells; at St Boniface's Well, Munloch, in the Scottish Highlands, rags are left at the well, and every Easter in Derbyshire holy wells are "dressed" with garlands of flowers and petals (Bord and Bord 1985 *passim*). Having defined some key themes of water symbolism from the wider Christian context, let us now consider the Ethiopian evidence.

### *Water symbolism in the Ethiopian Orthodox Church:*

#### *Some socio-cultural and archaeological themes*

The Ethiopian Orthodox Church, along with the Egyptian Coptic Church, are the two surviving branches of the African Miaphysite church, the Miaphysite church of medieval Nubia having become extinct around the 10th century (Miaphysites rejected the rulings of the Council of Chalcedon in 451 on the natures of Christ). The Ethiopian Orthodox Church (EOC) - which originates from the conversion of the Aksumite Kingdom of King Ezana in the late third century - represents an intriguing amalgam of syncretic beliefs; unlike other Miaphysite/non-Chalcedonian churches, the Sabbath is on a Saturday, pork and shellfish are prohibited foods, circumcision is carried out, and equal precedence is given to the Old Testament in divine liturgy. These traits have led a number of scholars to posit that a large pre-Christian Judaic cultural element has survived (e.g. Pawlinkowski 1974), but equal weight should be given to the survival of pre-Christian, African/

Semitic-origin folk belief. Spirits and possession cults are still an important part of every Christian's life, and there are a number of traits that suggest that beneath the Christian veneer, traditional age-old symbolic constructs are never far away. It is such syncretism that makes a study of water-related symbolic constructs within the EOC an intriguing topic.

In a book published in 1974, the American anthropologist and historian Donald Levine sought to define a number of "pan-Ethiopian" socio-cultural traits. He developed the idea that most of the Ethiopian peoples, be they Christian, Muslim or traditional animist, possess very well defined relations with their natural environment. In terms of water symbolism, a number of interlinked and generalised traits are apparent; the Kefa (Omo) believe in water spirits called Eqqo, the Amhara version of the Rhine's Undine is the Agannint spirit of the Awash river (Levine 1974:48), and the so-called Hebraic pagan Qemant groups (now very rarely found) worship groves of trees and streams, these genius loci being known as Qole (Gamst 1969:30). A number of possible pre-Christian sacred springs feature significantly in the siting of the early churches of northern Ethiopia.

The probable sixth-century monastery of Debra Damo in Tigray is situated on top a flat hill or amba. Such locales were easy to defend, but also have other significance; Ethiopian monasteries are often situated upon high points because they are symbolically closer to God. At this very important monastic complex, we find a number of threads of water symbolism associated with pre-Christian belief; it is alleged that the cisterns in the complex (used today to provide water to the settlement) were at one time sites of pagan water veneration (Hein and Kleidt 1998: 95), although from my research, I have found no direct cultural link, and perhaps this notion owes more to oral history than archaeological fact. There is, however, another level of water symbolism present here; the cave in which the founder of the monastery disappeared drips with dew from the rock, and this water is held to have healing powers - a common theme in Ethiopia (Matthews and Mordini 1959). Other associations of churches with holy water springs may be found in Tigray at Maryam Hib'ito, Tembien (Buxton 1971), Debre Salem Atsbidera, where the water source has been dammed to form a rudimentary baptismal pool (Plant 1985:109-110), Mai Beles, Aksum (pers. obs.), and Maryam Aba'o, Dera (Plant 1985:193).

The siting of these early churches of Tigray, northern Ethiopia may give us a clue as to the symbolic meanings of water (fig. 3). As Buxton (1971) points out, the rock-hewn cave churches are sited within clefts, or



**Fig. 3.** The holy well in an Ethiopian context: the Tsebel (Inda Sellassie-Shire).

recesses of probable earlier ritual significance “especially when combined with springs”. In time these springs became attached to the name of the saint who founded the church - such sources of holy water are known as *tebels* - and the water obtained from these sources became regarded as possessing healing properties (Pankhurst 1990:201). It is difficult to prove the continuum of symbolic meaning between the pagan and Christian periods, although for one scholar, Ruth Plant, the matter seemed clear cut: “is it coincidental that water is found in a number of churches....has it some significance whether of pagan origin or for the Christian baptism?” (Plant 1985:26). While not denying that certain zones within the landscape - such as caves and ravines - may have had some mystical significance to animist and Christian peoples alike, they often fulfilled a practical role too. In the

16th century, for instance, Ethiopia was overrun by the Muslim warlord Gragn, and many churches were destroyed; priests used caves to hide themselves and their liturgical equipment, and it was only much later that these places of sanctuary became known as sacred places (Braukämper 1992).

We may also develop the theme of water-related pilgrimage in the EOC, and returning to the theme of religious syncretism, we find many layers of meaning are inherent in this act. Zequala, some 60 km to the south of Addis Ababa, is one of the best known pilgrimage sites in Ethiopia. The site consists of a volcanic crater lake, and is marked by a fifteenth-century church dedicated to the founding saint Abba Gebra Manfas Qedus. There are many levels of meaning to be found here; apart from the obvious Christian associations, the waters are known to adherents of Islam and of traditional animist religions as having powers to aid fertility (A. Pankhurst 1991). In the woods around the site are a number of sacred stones, where elemental spirits called *zar* are appeased, and tree spirits are placated with offerings (Meinardus 1964).

For the Muslims, Christians and animists alike this is a very special place. In terms of the physical notion of pilgrimage, the act is divided between the journey itself and the destination (Park 1994:260). The ascent of the mountain to the lake, often without shoes, is an act of penance - not far removed from the Croagh Patrick pilgrimage climbs in Mayo, Ireland. Apart from taking waters, venerating the saint and (even for some Christians) placating the *zar* elementals and tree spirits, there is also the important *fachasa* ritual, a fertility rite based on the gathering of the marsh grass *qetema*, washing it in the water of the lake, then brushing the foliage over women to aid conception (Sellassie 1991). The Christian authorities do not encourage this ritual, and the Muslims have banned it outright, but many peoples still come to the site to seek a blessing that may have pre-Christian undertones (Petros 1994).

There are a number of other important pilgrimage sites in Ethiopia centred around holy water veneration, although not exhibiting the same degree of symbolic syncretism as is seen at Zequala. The pilgrimage to Mucculla/Gambella was noted in the nineteenth century by the English traveller Nathaniel Pearce - the goal of this long-distance trek being a source of holy water (Pearce 1980:123). At Lake Hora, Farqassa, Islamic pilgrims gather at a spot where there are 8 holy springs, although 7 of them are actually dedicated to Christian saints (Pankhurst 1994a), and finally one of the most important pilgrimages in the EOC is that to the monastery of

Debra Libanos. Taking of the tebel waters here is very important for healing purposes, and in the cave of St Tekla Haymanot the water dripping from the roof is collected by pilgrims and used as a curative (Pankhurst 1994b).

As with any Christian community the rite of Baptism in the EOC is important. Excavated churches of the Aksumite era (sixth-seventh centuries) have yielded a number of small baptistery areas attached to the church, although in terms of scale and decoration all are very plain and simple - in the words of one scholar "sparsely appointed" (Kobishchanov 1979:239). Dedicated baptistery buildings and fonts have been excavated at Wuchate Golo (De Contenson 1961), Adulis (Paribeni 1907), in the church in the pre-Christian temple of Almaq at Yeha (Doresse 1957) and at Matara (Anfray 1974), where the waters are fed by a complex piping system fashioned from pots. In later churches, baptistery buildings do not feature highly, and often a small, simple tank suffices: at the rock-cut church at Guh, Tigray, the font is carved out of a large boulder nearby.

In Tigray a number of churches use old Aksumite stone basins as baptismal fonts and holy water containers. In Aksum itself, the churches of Abba Liqanos and Abba Pantaleon have Aksumite-period basins, although whether they are very old Christian features or reused pagan basins is hard to tell. The Deutsche Aksum Expedition to Aksum in 1906 uncovered an Aksumite basin at the church of Arbate Insessa; this was unequivocally a Christian work as it bore the legend "the King of Peace in Heaven and Earth", and it may represent one of the earliest extant baptismal fonts in Ethiopia. Similar basins have been noted by the writer at monasteries in Shire, western Tigray; recognisably Aksumite in character, these basins are still used for baptism and holding holy water. An interesting parallel to the use of Aksumite stone basins is found in medieval Ireland with the use of hollowed stones (bullau) (fig. 4), which are prehistoric in origin and are often used as containers for holy water (Ó Crónín 1995:31).

Arguably one of the most interesting elements of water symbolism in the EOC context is found in the celebration of Epiphany (January 6th). This ceremony, known as Timkat, has few parallels anywhere else in the Christian world; it entails bringing the sacred church tabot - a representation of the Ark of the Covenant - to a body of water where it remains overnight. The following morning the congregation receives a blessing and are doused with holy water - in some cases, if the water source is large enough, this signals a mass bathing session (Rey 1927:155; Walker 1933:82). Any area of water may be used, sometimes special tanks



**Fig. 4.** The Irish bullaun in an Ethiopian context: Enda Abuna Abay, Shire.

are constructed, but otherwise a river suffices; toponymically this use may be seen in the naming of a stream Mai Timkat or water of Timkat (Beckingham and Huntingford 1961: 344). The first foreigner to record this ritual was Abu Salih in the thirteenth century (Hable Sellassie 1972:271), although a fuller account is brought to us by the Portuguese friar Alvares in the sixteenth century. Describing what would seem to be a portable Epiphany or Timkat tank, Alvares was scandalised at what appeared to be promiscuous bathing (Hyatt 1928:169), and from a liturgical orientation, the Jesuits were scandalised by what they considered to be rebaptism, when the clear aim of the festival is to commemorate Christ's baptism (Beckingham and Huntingford 1961:345-6). Later travellers such as Bruce in the 18th century (Pankhurst 1990:96), and Harris (1844:200) in the 19th century report that rivers were dammed to provide the Timkat water, and specialist installations were not used, although this is not usually the case. In the middle ages imperial courts were peripatetic affairs, and the construction of dedicated Timkat tanks would not have been viable, but at some long-lived urban centres (usually ecclesiastical in nature rather than political) we do see specialist Timkat pools (fig. 5).



Aksum is the oldest continually inhabited urban centre in northern Ethiopia, and its role at the centre of the EOC qualifies it as possessing a status as a holy city akin to that of Rome or Canterbury. Notions of water symbolism are inextricably linked with Christianity here; legend has it that the cathedral church of Maryam Zion was founded upon an area - formerly a lake bed - that was miraculously drained by God in the era of Kings Abreha and Atsbeha (Munro-Hay



**Fig. 5.** Fasilidas' Bath, Gondar, a focal point of the town's Timkat celebration.

1991:209). There are at least 72 good quality springs of water in the area (a factor that may have contributed to the development of the town), and many of these are considered holy water sources, or *tebels*, with curative properties. At a small rock-shelter site some five kilometres to the northwest of Aksum (Baahti Nebait), two small fissures in the rock surface seep with water even in the dry season, and although this site has no special Christian, or *tebel* significance, folk belief holds that these waters have curative properties for eye infections. The two fissures do indeed look like eyes closely set, and the name Baahti Nebait may be translated from Tigrinya as "cave of the teardrops" (Finneran 2000).

Special attention focuses upon the large, man-made reservoir in the centre of the town known as Mai Shum - this may be translated as "chieftain's water". Popular belief ascribes the construction of this water source to the legendary Queen of Sheba, but its antiquity remains unproven; archaeological work in Aksum over the last hundred years has not touched upon this feature in any detail. The reservoir is not mentioned in the twelfth-century Book of Aksum - an odd omission, given the detailed topographic information in that work, and the eighteenth-century British traveller James Bruce claims to have heard that it only dated from the

fifteenth century. The reservoir itself has been constantly remodelled, and today is used for bathing, washing clothes and for the January Timkat festival. Water collects here from the bare hillsides of Mai Qoho above, and it is a very rare that the pool runs dry. In the nineteenth century there were strict penalties for bathing in the pool (Parkyns 1853:88), and it appears that access to the waters was strictly controlled. Mai Shum serves a dual role in the life of Aksum; it is of socio-economic importance, but also retains a strict ideological function. The debate over the dating of this feature cannot be resolved without detailed archaeological work, but if as oral history suggests it is a relatively recent construction, then it is possible that the roots of the Timkat ceremony as it is known today may not be found during Aksumite times, and may be an early medieval development.

This contention may be strengthened with a consideration of the town of Lalibela. During the twelfth century, according to indigenous tradition, long after the fall of Aksum, a new ecclesiastical centre was created in the central highlands of Lasta by the Agaw-speaking Zagwe dynasty under King Lalibela. His eponymous town was to be modelled on the sacred geography of Jerusalem, even down to a Golgotha and a River Jordan (Yordanos) (Heldman 1992). Few of the distinctive monolithic churches have dedicated baptistery buildings or fonts, but the Timkat rite is catered for in a small lake at the meeting of the biblical rivers called Yohannes Amba (translated as John the Baptist). A monolithic cross and pillar here - mirroring that on the real Jordan - mark where Jesus was baptised (fig. 1). If this is an original twelfth-century feature, it is possible that the modern roots of the Timkat celebrations may have originated here. Water symbolism in this region is also present in the form of a large number of tebels in the surrounding countryside; the outlying monastery of Yemrehane Christos is founded according to legend on top of a sacred pool, and fissures in the cave at the back of the monastic church of Na'akweto La'ab yield holy water which is collected in a simple pool. It is only during the seventeenth century, with the construction of the capital of Fasilidas at Gondar, that we see a Timkat pool given a degree of architectural importance; the 50 by 30 metre bathing pool of Fasilidas, complete with a pavilion, is still used today for Timkat festivities (fig. 5).

*Ethiopian Christian water symbolism in a wider African context, and in relation to the northeastern African Miaphysite church*

We may only make very tentative conclusions about the nature of water veneration in pre-Christian Ethiopia, but from records of oral history and contemporary ethnographic survey, we may be sure that a number of markedly similar traditions of animist naturalistic worship of *genii loci* were probably widespread. These concepts are widely mirrored elsewhere in Africa; in west Africa there is a major tradition of shrine worship, mainly of a hierophanic nature, where man may communicate directly with gods at a number of shrines within the landscape (e.g. Thornton 1999:244). Water deities and spirits are also widespread in Africa, their personalities are often linked with healing behaviour (Horton 1993:217); the Niger River, for instance, is identified by the Bambara peoples with the body of their deity Faro, and the waters - as well as having general healing powers - are specifically linked to conferring fertility. A similar trait may be noted amongst the Yoruba of Nigeria, where the deity Yemoja gave birth to all rivers and is explicitly associated with fertility. Sea waters, however, are seen as wild and inhuman and constrict powers of reproduction (Zahan 2000). In Nigerian Igbo cosmology, the water goddess Nne Mmiri fulfils a similar function (Jell-Bahlsen 2000), and this notion of circularity and rebirth may be linked to the generalised African cosmological outlook that emphasises a circular, cyclical flow of time rather than the western concept of linearity (Olupona 2000).

Syncretic ("pagan/Christian") concepts are noted widely in traditional African water veneration. The Mami Water festivals of western Africa embody a number of Christian and non-Christian, African and European concepts; Mami Water shrines confer fertility, and pictorially the Mami is represented as a western-type mermaid albeit with African dreadlocks (fig. 6). These ceremonies are generally accepted by the Christian Church, but these deities are regarded by Muslims as djinn, or evil spirits (O'Brien Wicker 2000). The concept of rainmaking also displays such traits. In the southern African Tswana kingdoms in the nineteenth century, missionaries competed with chiefs in claiming powers to control rain - a very important economic as well as ideological facet (Gulbrandson 1993) - and missionaries sought to adapt pre-existing folk belief to emphasise the fact



**Fig. 6.** Mami Water: a popular poster.

that Christianity could compete as a religion of nature (Chidester 1992:39-41) (see fig. 6).

A number of clear links in regard to water symbolism between the EOC and the Coptic church of Egypt are apparent. Firstly, the Coptic Church itself has absorbed a number of obvious cultural and ideological elements from its precursor religions, especially in terms of burial belief, symbols and iconography and appropriation of sacred space (Atiya 1968: 20-1, Wassef 1991). Baptisteries, as elements of sacred space within the church building, are more emphasised here than in the EOC. In the first few centuries, the spatial

configuration of baptisteries at churches and monastic churches shifted widely, but is now mainly standardised at the upper end of the northern aisle (Godlewski 1991). There is also a link here to the Timkat ceremony; Epiphany is an important time in the Coptic liturgical calendar, and the blessing of the waters to confer magical powers may have a deeper link to rituals of the Isis cult in ancient Egypt. It is notable that the Roman Catholic Church, uneasy with these pagan undertones of conferring magical status onto holy water, removed the Service of the Blessing of the Waters in 1890 (Leeder 1918:210), although it remains an important component of Coptic liturgy. Distinct Epiphany water tanks are found in many churches, especially in the medieval churches of Old Cairo. Generally measuring about 2 by 3 m, they are not designed to cope with a mass immersion of the congregation as is seen at Timkat, although historical records suggest that original Epiphany ceremonies actually took place in the Nile, and the

ceremony was only brought into churches in the 11th century (Grossman 1991). Another trait, not generally mirrored in the EOC, is the presence in Coptic churches of the laqqan, or mandantum (Maundy tank); generally smaller than the Epiphany tanks, these features are used for ritual ablutions and foot washing on the feast of St Peter and Paul.

In general, the Coptic Church does not place the same importance on holy water springs as the EOC. St Antony, the founder of Egyptian anchoritic monasticism, was associated with springs of holy water that

welled up whenever he stopped to pray (Leeder 1918:209), but only the spring at his monastery today is directly associated with healing powers (Meinardus 1962:10). Perhaps the most important evidence for pilgrimage-linked holy water veneration may be found at the ancient monastic site of Abu Menas, some 60 kilometres to the southwest of Alexandria. Founded to commemorate the Diocletian-era martyr St Menas, his tomb quickly became a centre for pilgrimage, and miracles were ascribed to the waters that came from the site. In the latter half of the first millennium AD, this site had become the Coptic equivalent of Lourdes, and as a pilgrimage centre was dealing with thousands of visitors a year; these pilgrims often collected the healing waters in special ceramic bottles, or ampullae, frequently bearing a portrait of St Menas. The discovery of these ampullae all over the Delta region and farther afield attests to the importance of Abu Menas (fig. 7) as a centre for holy water veneration and pilgrimage (Viaud 1991).

In comparison to the rich ethnographic, historical and archaeological data afforded by the Coptic church of Egypt, we know rather less about the nature of Nubian Christianity of the first millennium AD, although historical sources are explicit about the linkages between the EOC and the church of Nubia. Archaeological evidence from excavated churches points



**Fig. 7.** The tomb of St Menas paradoxically at risk from the rising waters of the site.

to a similar variety of baptismal - and occasionally Epiphany tanks as is noted in the Coptic church (Godlewski 1979 *passim*) - but Christianity died out here by the beginning of the second millennium AD, and evidence for water symbolism in the Nubian Church is limited. There are, however, some intriguing Christian survivals amongst modern Muslim peoples in the area; around Dongola, the Mariya ritual, enacted two-three days after the birth of an infant, carries strong overtones of the baptismal ceremony of the Christian Church, and this can only have come from the now defunct Nubian Church. The new born is placed into the waters of the Nile with the words "I plunge you with the baptism of Hanna" - Hanna being the local folk name for John the Baptist (Vantini 1981:209-210).

### *Conclusion*

The foregoing survey of the socio-cultural and ideological place of water in the EOC raises a number of intriguing theoretical issues. Making a rather universalist assumption, it is clear that these case studies show a broad similarity with associations of water symbolism in the wider Christian and non-Christian African world. In many cases, part of the process of "Christianisation" involves a re-modelling and re-conceptualisation of existing sacred spaces, be they natural places or man-made constructions. Water is of special interest; such sites were obviously of key spiritual significance in pre-Christian belief systems (as extensively witnessed by the contributions in this volume), and through the rite of baptism - a means of conferring membership in the Christian context - it was easier to incorporate such places into the wider spiritual "Christianised" landscape. The process of Christianisation removed the place of water from a naturalised "non-Christian" environment, and sought to acculturate; this was done through the construction of associated churches and baptismal installations, appropriation by an important and holy figure (i.e. a Saint), incorporation into Christianised ritual, time and rhythms (such as pilgrimage cycles and festivals) before ultimately bringing water physically into the building in the shape of a font or tank, but crucially non-Christian symbolic associations could not be wholly erased. This then is an idealised biography of a type of sacred space. We must strip away the layers of symbols and meanings that are part and parcel of a "syncretism of space", and so in the most obvious post-Structuralist sense (e.g. Hodder 1988; Thomas 1994) engage in a deconstruction of a "space as text". Of course there are then many ways in which that text may be written, for in our increas-

ingly homogenised “western” societies, organised Christian religion has tended to relegate the importance of the natural world. In the highlands of Ethiopia, however, such concepts remain vital, and it would therefore be a moot point as to whether our ethnocentric writings of Ethiopian space would be recognised as being valid constructs in a society so attuned to its natural landscape that the idea of “syncretism of space” is hardly unusual.

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## Chapter 8

# Water and the Construction of Social and Religious Identities in West Africa: *An Archaeological Perspective*

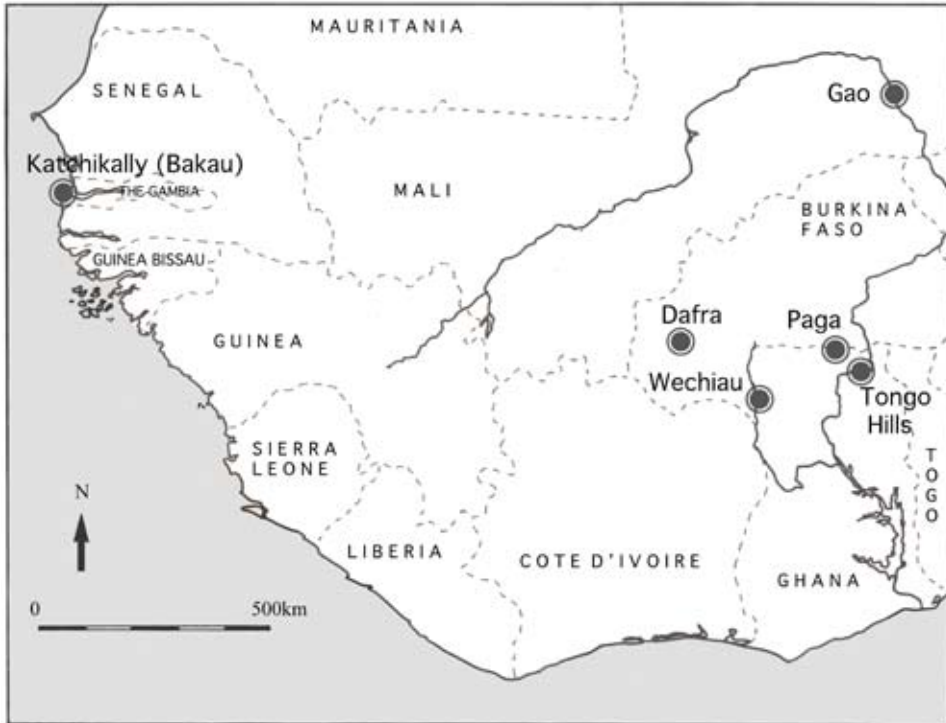
Timothy Insoll

### *Introduction*

The importance of water in West Africa beyond the recognition that it is of obvious significance in sustaining life would seem to have been largely ignored by archaeologists. Within relevant anthropology this would seem to be true to a lesser extent and instead the role of water in the construction of social and religious identities at least is acknowledged (e.g. Goody 1962:56-57, 1967:32; Griaule 1965:18-19, 138; Jacobson-Widding and van Beek 1990:21), if not necessarily fully explored. This paper will seek to consider a range of examples from West Africa which indicate how water can function in many different ways in the construction of social and religious identities and how, in part at least, this might begin to be approached by archaeologists or used, potentially, to inform their interpretations. The adoption of an archaeological “perspective” is deliberate, reflecting the author’s disciplinary competence and his epistemological background. Nonetheless, excursions will be made into related fields, anthropology, development studies, and history, hopefully without diluting this archaeological perspective unduly. It should also be noted that this contribution is the development of a conference paper delivered verbally, and as is perhaps somewhat characteristic of such products is best regarded as work in progress rather than fully formed.

### *The many roles of water among the Tallensi of Northern Ghana*

*i) Introduction to the Research.* Since 2004 a collaborative archaeological research project has been running in the Tongo Hills of the Upper East Re-



**Fig. 1.** The locations of the sites discussed.

gion of Northern Ghana (fig. 1). This project has two dominant aims, first, investigating the archaeological signatures and extant material culture associated with indigenous religions in the region, and second, establishing an occupation chronology for an area previously wholly ignored by archaeologists (Insoll, Kankpeyeng, and MacLean 2004, 2005, 2007, Insoll, MacLean, and Kankpeyeng in press). The Tongo Hills and its immediate surroundings are inhabited by the Tallensi ethno-linguistic group who are subsistence farmers speaking a Gur language of the Oti-Volta group (Naden 1988:12), formerly referred to as the Voltaic languages. They are divided into two main groups of clans, the Namoos and the Hill Talis, and the focus of the research described here has been upon the latter.

The Tallensi were made anthropologically “famous” by the work of the Cambridge anthropologist, Meyer Fortes (1945, 1949, 1987), who completed fieldwork amongst them in the 1930s. Fortes work is groundbreaking in many respects but can be criticised for being somewhat ahistorical (Allman and Parker 2005) and lacking in consideration of material culture,

at least in his published work (Insoll in preparation a). Both of these shortcomings, in what are otherwise exemplary studies of, for instance, kinship (Fortes 1949), the psychology of destiny (Fortes 1983), and religion and its inter-relation with clan structures (Fortes 1945), can perhaps be attributed to being a correlate of his structural functionalist approach (see Verdon 1984; Allman and Parker 2005). Hence the aims of the current research are also in part linked with addressing the absence of data on these facets of Tallensi existence and the pre and protohistory of the Tongo Hills. In so doing they build upon the detailed historical research of Allman and Parker (2005), completed primarily in relation to the limited historical sources available.

Hence the empirical focus of the research has been multi-dimensional in completing archaeological excavations and surveys (Insoll 2006, 2007a, 2007b), but also in recording extant material culture (Insoll in press), and traditional technologies such as weaving and blacksmithing (Eyifa 2007; Insoll in preparation b). Related to this, albeit to a lesser extent, has been the investigation of Tallensi interaction with materials, substances, and, indirectly, the elements. As, for instance, with fire which is manipulated through the controlled use of bush fires as a way of managing the environment and which is also associated with taboos that in turn have direct implications for material culture through the types of building materials used and hence architectural forms which can be adopted (Kankpeyeng 2005:17; Kankpeyeng, Insoll, and MacLean submitted). Water is also significant in various ways and this is what will be considered here prior to expanding the discussion away from Northern Ghana to include examples from elsewhere in West Africa to explore how water is variously utilised in the construction of social and religious identities.

*ii) Water Storage and Provision.* Water is of significance in Tallensi life at a variety of levels. First and foremost water is of primary importance in sustaining life. The Tongo Hills are in an area of tropical semi-arid climate and with what Gabilopoulos (1995:20-21) refers to as “a rainfall-deficient winter”, or dry season. Hence water shortage can be a reality when there can be too little in the dry season. Conversely, there can also be too much water as with the devastating floods that damaged property, livestock, and crops following the unusually heavy rains experienced in late August and early September 2007 (Web Reference 1). Considering such factors it could be assumed that practical measures for the provision, storage, and control of water would exist, certainly in the contemporary

physical environment, and perhaps in the archaeological record as well.

This is correct as regards the present environment with wells, agricultural terracing, a reservoir, and boreholes all found in the Tongo Hills. However, the historical picture of water storage and provision is far from clear. First, the wells can be considered. These are obviously linked with ensuring a reliable water supply, but quite how long they have existed is unclear, for they all seem to be comparatively recent. This point is made for Fortes and Fortes (1936:263) do not refer to wells at all, but to “water-holes” as sources of water during the dry season. Equally, that “water-hole” might be a misnomer for “well” has to be entertained but does not appear to be applicable, for the water-holes as described, appear to be just that, rather than specially dug, stone-lined wells as seen today. It is possible that the construction of the wells might be linked with the activities of the Canadian International Development Agency (CIDA) described by Gabrilopoulos (1995:37). No reference to well digging is made but he refers to their performing hydrological surveys and providing water pumps from the mid-1980s.

Secondly, the agricultural terracing. This seems to be linked with soil conservation rather than water control, though retaining the latter might be an associated factor as well. The soils of the Tongo Hills are generally poor, and formed from “highly weathered rocks, creating lithosols, or, more generally, latosols” (Gabrilopoulos 1995:22). Thirdly, the reservoir, or “dam” as it is marked on the Survey of Ghana Sheet 10001A3, does not appear to be of any considerable age. Today, drinking water is obtained from wells, as described, but also at the southern Tengzug end of the Hills, from boreholes dug in the last couple of decades, again as a result of international development initiatives such as those of CIDA. Hence, in summary, the archaeology of water provision is elusive.

Similarly, the remains of water storage facilities have not yet been found, though numerous pots have been recorded at various sites in the Tongo Hills. These include in partially complete forms, in-situ, in what has been interpreted as a kitchen area at the as yet undated Zandoya site near Yinduri at the base of the hills. However, rather than these pots having been used for storing water, one of the project’s Tallensi research assistants suggested that, based on the presence of collar necked jars, this was more likely to have been a kitchen area perhaps used for the storage of pito or millet beer (Kinsley Tendaan pers. comm. 30/3/08; fig. 2). Considerable quantities of seemingly deliberately broken and interred ce-





**Fig. 2.** Storage pots in kitchen area at Zandoya (photo. T. Insoll).



**Fig. 3.** Broken pot spread in the Nyoo shrine (photo. T. Insoll).

amics have also been recovered from the Nyoo Earth shrine in deposits dated to between AD 955-1155 (fig. 3). But again a link with water storage is unlikely and rather, the hypothesis has been advanced that this act of deposition was ritually linked with returning the pots to the medium from which their raw material came, i.e. the earth, and that this was of significance in the context of this Earth Shrine (Insoll in preparation b).

Hence none of this evidence is apparently linked with water, though Fortes and Fortes (1936:263) refer to water being kept in large earthenware pots in the kitchen in the 1930s, as it is in the present. Eyifa (2007:103) describes how these water storage pots are called dok, and that they have a wider mouth than the wuure pots used for carrying water. Today both water carrying and storage pots are likely to have been supplemented with plastic containers and enamelled basins. This raises the question of how were the physical needs for water met in the past if, overall, in the archaeological record evidence is lacking? The answer would seem to be waterholes, ponds, streams, pools, and possibly from the White Volta River itself. That the latter is some 4 km southeast from the Hills at the nearest point might not be a factor of particular consequence if other water sources are unavailable. Perhaps, as archaeological excavations and surveys continue, evidence for water storage and provision might be found in the Tongo Hills, but what is clear is that the importance of water among the Tallensi transcends a practical dimension.

*iii) Water, Ritual, and Religion.* The significance of water in relation to ritual and religion is potentially various but data on this is still being collected. This noted, water pools are of significance because they can connect, through the creatures they contain, with what is often referred to as "totemism". This is a much-misused term (Levi-Strauss 1962; Insoll 2004:140), but both its applicability and operational complexity within the Tallensi context have been eloquently explored by Fortes (1945, 1987). The function of Tallensi totemic avoidances has "a symbolic value in relation to their social organisation" (Fortes 1945:142), but equally, as Fortes (ibid) continues, they are not "explicable simply as a function of the social structure". Fortes' (1987:123) thinking on the role of Tallensi totemic institutions and observances was later clarified as their being "cultural devices" and more precisely defined as serving, "to focus the actors' recognition and conception of his identity as a person in a given status and to declare his identification of himself in relation to and by others" (ibid:124; and see Allman and Parker 2005:39). The complex role of Tallensi totemism

in the construction of personhood and social relations is thus indicated.

Tabooed species are various and can be terrestrial, arboreal or aquatic. The latter could include water tortoises, crocodiles, and water lizards, and the myths associated with the taboo often relate that these creatures assisted an ancestor in the distant past. A water tortoise helping an ancestor across an impassable river by showing him a ford, or a crocodile saving the life of an ancestor during a communal fishing expedition are both examples cited by Fortes (1945:129). That these totemic beliefs are seemingly more than inert mythologies is well indicated by Fortes (1987:249) recounting of Tallensi reaction to the killing of a crocodile at the sacred pool of the Zubiung clan as "murder of the most heinous kind" (*ibid.*). Whilst Gabrilopoulos (1995:26) takes a more pragmatic view in stating that "crocodiles are frequently killed by the Tallensi, and, as it is a totem animal, it is required that some form of ritual activity be performed". Looking beyond Tallensi territory, Cardinall (1920:36) describes various pools containing sacred crocodiles in an area roughly corresponding with the Upper East Region and makes the point that, "the cult of the crocodile is commonly met with throughout the Northern Territories".

Data on the meaning of water, if any, is not so readily available as it is still being collected (e.g. Eyifa 2007:130), but based upon analogy with neighbouring ethno-linguistic groups water can form an important element of medicine shrines. Mather (1999:110) describes how in Kusasi medicine shrines water is often mixed with plant parts in a pot to cure, for instance, leprosy or malaria, or as a "preventative against haunting" (*ibid.*:123). This prophylactic aspect is also noticeable in the yuya shrine for the bayaas or burial experts, and from which initiates drink water "as a means of building their personal resistance and power as they perform tasks that bring them into closer contact with corpses or human remains" (Mather 1999:124). Similar medicine shrines formed of a pot containing water and "herbs" are recorded by Apentiik (1997:242) for the Balsa.

As stated, such detailed information is currently unavailable for the Tallensi. Eyifa (2007:96-97) mentions that during a "Gurene" naming ceremony a tree root is placed in a ritual pot with water, and that some of the water from the pot is given to the child to drink. Whilst Fortes (1987:254) in referring to Tallensi concepts of life makes the point that rivers along with stone and clay are not classed as belonging to the "living part of the non-animate world" unlike trees and plants. Whilst in more general, and probably in far too simplistic terms, Cardinall (1920:34)

refers to the existence of “spirits of rivers and water-holes” that are “greatly respected”, but not to any belief in the power of water per se in Northern Ghana. Yet it would be too straightforward to write watery locations off as unimportant. They can form parts of Earth shrines and thus prohibitions can operate on what might be hunted therein (Fortes 1945:142). Whilst the ancestors that are considered as a living, mystical force (Fortes 1945, 1987:74-79), are sometimes symbolized by living creatures including aquatic ones for “animals are peculiarly apt symbols for the livingness – the immortality – of the ancestors” (Fortes 1945:145).

Thus complexity in both beliefs and definitions exists and certainly with regard to locations such as sacred pools the concept of “natural” as opposed to “cultural” can be questioned (Insoll 2007a). Water thus functions in connection with various components of indigenous religions; what have been variously termed “totemism”, “animism”, “ancestor cults”, and to which can also be added “earth cults” as well. All of these are difficult terms, obviously not of this author’s invention, and the applicability of which is questionable (see James 1999:xv). Not least for the role of elements such as water within religion and in ritual practices indicates the conceptual blurring which occurs between the different “components” that comprise religions and are the focus of ritual practice, the material correlates of which archaeologists seek to explore.

*iv) Water and Social Identity.* Yet it would be wrong to reduce Tallensi relationships with water down to a practical and/or religious role alone. Water is also implicitly linked with the construction and reinforcing of social relationships as is indicated by the ritual fishing undertaken at the Golib Biong or pond during the annual Golib Festival (fig. 4). The Golib is at the end of what Fortes (1987:98) describes as the “cycle of the great festivals” of the Tallensi, all of which are concerned with the “unpredictable potentialities of threat inherent in the climate and the environment” (ibid:43). It is a festival held by the Hill Talis prior to the sowing of the early millet and takes place at the end of the dry season and is composed of a variety of activities, including group dances at various locations, solemn rituals, and communal fishing. As Fortes (1937:133) notes, “the magical intention of Golib is to ensure the fertility of crops, women, and livestock, success in all food-getting enterprises, (and) security from danger, disease and death”.

Besides the ritual importance of the fishing in the Golib Biong its significance is two-fold. First, it is a group activity and reinforces community



**Fig. 4.** Communal fishing in the Golib Biong, March 2008 (photo. R. MacLean).



**Fig. 5.** Man with catfish caught in the Golib Biong, March 2008 (photo. R. MacLean).

identity. Second, it inaugurates the season of communal fishing in ponds formed in the bed of the dry season White Volta River. What the fishing does not do is provide a significant source of protein for fish is a luxury food, as Fortes (1937:132) records, which does not replace the staples, predominantly millet (Fortes and Fortes 1936:242). The species caught are various, mostly water tortoises and silurids or catfish (fig. 5). Fortes (1937:139) refers to young crocodiles sometimes being caught during dry season communal fishing expeditions to the ponds in the bed of the White Volta, but none were observed in the Golib Biong in

either March 2006 or March 2008, and it is possible that these, as with most large animals in this part of Northern Ghana, are now extinct. However, of interest is the catching of the silurids, as they are not apparently attached a symbolic importance. This stands in contrast to what is found both elsewhere in West Africa, and in other parts of sub-Saharan Africa.

### *Water and anomalous creatures. Sacred catfish and the shrine at Dafra, Burkina Faso*

In considering why a symbolic importance might be ascribed to catfish in parts of West Africa, systems of classification have to be considered. Linnaean and Darwinian classification might have “revolutionised” the natural sciences (Insoll 2007c:107) but what we need to focus upon are folk taxonomies (see Descola 1996). The criteria of belonging in a folk taxonomy, according to Clark (1988:18) is that, “things are almost perfect exemplars of their class”. The catfish does not do this, instead it defies and crosses categories and in so doing can assume the status of an anomalous creature in some, but obviously not all, folk taxonomies. In sub-Saharan African thought it is not unique in this respect (Roberts 1995), and could be joined, for instance, by the aardvark (Roberts 1995:81-83; De Maret 2005), or more famously by the pangolin (Douglas 1966; Roberts 1995:83-85). The potential anomalous status of the catfish could be due to various reasons constituted by its biological makeup. For example, they do not have scales, they are negatively buoyant, i.e. they sink to the depths, and some catfish can give electric shocks powerful enough to knock down or even kill humans (Roberts 1995:87; Bruton 1996:36-37).

Within the “Voltaic” sub-region of West Africa, catfish can also be attached with significant symbolic and ritual importance. A good example of this is provided by the Dafra shrine 8km southeast of Bobo Dioulasso, the second city of Burkina Faso (fig. 1). At Dafra sacred catfish form one of the important elements of the shrine, and “Dafra” as a name encompasses both the location and the catfish. Although a predominantly Muslim city, catfish are considered the protective spirits of Bobo-Dioulasso. Dafra is thought of as a powerful place visited by Muslims, Christians and followers of indigenous religions alike as it is believed to be helpful in curing illness and infertility, and in reversing business failures etc. (Werthmann in press: 9-10). The catfish live in pools that form the



**Fig. 6.** One of the sacred catfish at Dafra, January 2002 (photo. T. Insoll).

source of the River Houet, and feeding them parts of sacrifices completed at the shrine such as chicken entrails comprises part of the rituals completed at Dafra (Insoll 2004:xiii-xv). The shrine custodian (or client) calls the catfish with the call “Dafra, come and take!” (Werthmann in press:9), and the fish then take the offerings. These catfish can attain a large size, up to a metre in length (ibid), and a myth exists that they wear earrings or necklaces (Badoun 2006:217), though no sign of such ornaments were seen on a visit to Dafra in January 2002 (Insoll 2004:xiv, fig. 6).

The contrast in the sacred status of the catfish at Dafra with the situation amongst the Tallensi is of interest in indicating the significant variation found in a similar area, as Bobo-Dioulasso is only some 250km west of the Tongo Hills. It also, rightly, questions the types of approach that used to uniformly ascribe some form of common religious or folk philosophy to peoples in similar geographic zones or through their having common links via language families such as the former “Voltaic” languages in West Africa giving rise to the so-called “Voltaic peoples” (Murdock 1959:77).

### *Water, the Songhai, and the archaeology of the hippopotamus in Gao, Mali*

*i) Archaeology and Gao.* In the example just discussed a move away from archaeology was made but in many instances it would be impossible to reconstruct the levels of symbolic meanings and associations linked with water as a substance, watery locations, and the creatures they contain based upon archaeological evidence. However, this is not necessarily impossible where supporting data from oral history, mythology, and in rare instances written history might be available to inform archaeological interpretation. The next example to be considered illustrates this in returning to research completed by this author in the city of Gao, Mali.

Gao is located upon the Niger Bend in the east of the Republic of Mali (fig. 1). Historically, it was important as the capital of the last of the great West African “medieval” empires, Songhai, in the 15th through late 16th centuries AD (Hunwick 1985). Excavations were completed in Gao in 1993 and again in 1996 and the discussion here relates to a find made in the first season. The excavations were focussed in various areas of the city including the trade centre of Gao Ancien where a an aisle of what might have been a mosque, part of a palace or rich merchant’s house, and a section of a substantial stone wall and associated gatehouse enclosing this central “citadel” of Gao Ancien were uncovered, all dating from the twelfth-thirteenth centuries (Insoll 1996, 2000).

Underneath the fired-brick floor of the palace or house in Gao Ancien was found a cache of over fifty hippopotamus tusks (Insoll 1995). The tusks had been placed within a pit cut to a maximum depth of 160cm from the surface level. Two slivers of wood that survived underneath the tusks along with a dark brown organically rich linear deposit that was present





**Fig. 7.** The cache of hippopotamus tusks uncovered in Gao Ancien (photo. T. Insoll).

suggested that the tusks had been placed upon wooden beams within the pit (fig. 7). One of the slivers of wood provided a radiocarbon date of the mid-ninth century (Insoll 1996:41, 2003:241). The original interpretation suggested to account for the presence of this cache was that it represented a consignment of ivory awaiting shipment to the ivory workshops of North Africa but which was never sent, for reasons unknown (Insoll 1995).

This is a feasible interpretation based upon various factors such as the properties of hippopotamus ivory. The latter is a material that is whiter and denser than elephant ivory and well suited to small work such as the manufacture of inlays (Krzyszowska 1990). These are produced by using ivory cubes along with blocks of ebony and other woods to make, for instance, mosque furniture (Pinder-Wilson 1960). Moreover, although little mentioned in the Arabic historical sources, possibly because it was frowned upon by more orthodox Muslims as representing products coming from animals not ritually slaughtered (Levtzion and Hopkins 1981:55;

Insoll 1996:72), a substantial ivory trade existed between West and North Africa (Insoll 2003:241). Hence a convincing economic interpretation was developed to explain the presence of the hippopotamus tusks, and one that specifically discounted the possibility that the cache represented a “ritual deposit” (Insoll 1995:327). The latter interpretation was based upon the assertion that no ritual evidence was found, to quote, “no burial, no other indications of ritual, and, at present, there is neither archaeological nor historical evidence from this region to indicate that the burial of hippopotamus tusks formed part of a wider ritual system” (ibid).

*ii) An Economic Interpretation Revisited.* However it is possible to revisit the interpretation of the cache and instead of suggesting one framed so strictly in economic terms to propose an alternative water-related hypothesis that does in fact revolve around a “ritual” or symbolic dimension. The basis for developing this alternative interpretation is a point made by Jean Rouch (1997:132), the late anthropologist of the Songhai, that, “de toutes les préoccupations des Songhay, l’eau tient une place privilégiée, car elle est la base même de toute vie”. This can be approximately translated as “in all Songhai preoccupation, water has a privileged place, as the basis of all life”. Hence the key role of water in Songhai life is evident in this statement. This centrality of water is also manifest in mythology. The Sorkawa, for example, believe that there is a water spirit in the River Niger who commands the life of the River and all creatures within it including “les poissons, les crocodiles, (et) les hippopotames” (Rouch 1997:106).

The Sorkawa are a fishing caste derived from the Sorko subgroup of the Songhai but are differentiated by their degree of Islamisation (Rouch 1997:112). The Sorko are the Songhai harpoon hunters of the River Niger, and the hippopotamus was one of their major prey until their almost total extermination on the River Niger in recent times. Rouch (1954:21) goes so far as to make an explicit link between the location of Sorko settlements and herds of hippopotamus. The hippopotamus is also prominent in mythology, and according to Songhai myth (Rouch 1997:231, and see Rouch 1953, 1989) Gao was founded by Faran Maka Boté, the ancestor of the Sorko, after he fought with the Bella “qu’il chassa hors du fleuve où ils étaient des hippopotames”. This mythic transformation of the Bella into hippopotami is of interest but whether it is indicative of some form of original “alliance totémique”, as also suggested by Rouch (1997:231) is unknown, but it does suggest



**Fig. 8.** The Harpoon/spear blade found in association with the hippopotamus tusk cache (scale in mm; photo. T. Insoll).

that the hippopotamus ivory cache can be considered in a different way.

Specifically, that where the hippopotamus figures so prominently in the myths associated with the origins of the city and its original inhabitants, could it be that the tusks might represent a foundation deposit underlain by symbolic intent rather than a cache of trade materials? The burying of key elements, the tusks or teeth might suggest this. A further piece of evidence also supports this alternative interpretation, a serrated iron harpoon or spearhead which was found lying on top of the ivory cache (fig. 8). Its precise function is unclear for it differs from the harpoon head illustrated by Rouch (1997:67), but its use as a harpoon cannot be discounted, for in a detailed description of a hippopotamus hunt provided by the Spanish Arab historian Al-Bakri writing in the eleventh century, mention is made of short javelins that were thrown at the hippopotamus (Levtzion and Hopkins 1981:78, 456; Insoll 1995:330-331), which might be akin to the type of harpoon found in Gao.

As with the hippopotamus, the harpoon also appears in Songhai mythology. Rouch (1989:67) describes “le harpon primordial” that was owned

by Faran Maka Boté, Zogu Zirbin, a male harpoon that was later supplemented by a female harpoon, Zogu Babingay. Faran Maka used both these harpoons for hunting in the River Niger when he settled in Gao. In the original interpretation developed to explain the hippopotamus ivory cache at Gao (Insoll 1995), little attention was paid to this iron harpoon or spearhead. This could have been an error, for the link between the preferred hunting technology of the Sorko, the harpoon (Rouch 1954:22) and the cache might be key. And if considered in such a way, rather than the harpoon/spearhead being inconsequential it perhaps assumes the status of a “signifier”. In so doing a mythologically derived, symbolic interpretation, with an obvious water association becomes viable as an alternative to the economic hypothesis previously proposed to interpret the hippopotamus ivory hoard at Gao.

Thus although the cautionary point made at the start of this section about acknowledging the limits of archaeological data remains valid, equally, this example indicates that archaeological evidence can be approached from a water-related angle, illustrating that it might be possible to tease out such associations elsewhere in West Africa using archaeological evidence if considered in an inter or multi-disciplinary manner.

### *Development, conservation and water. Bakau, Gambia, and Paga and Wechiau, Ghana*

Unfortunately, what is also evident from the examples discussed thus far is that they have, other than in reference to the silurids, related to water creatures in the past tense. The water bodies might still be there, the River Niger or the Golib Biong, but now that we are firmly in the Anthropocene, little space is left for non-human species as is evident on a global scale. Similarly, in the nations of West Africa with their increasing populations, desertification, deforestation, and growing requirements for resources, foodstuffs, and water, the priority given to conservation and applied development projects has been variable (e.g. Croll and Parkin 1992; Drijver 1992).

*i) Development and Conservation in Bakau, Gambia.* Ceesay and Ceesay (2005) provide an example of an attempt to redress the unequal struggle between water consumption, development, and the place for water creatures and watery environments in the Gambia. The case study they focus upon is the Katchikally sacred crocodile pool in Bakau (fig. 1), one of three sacred crocodile pools in the Gambia. This pool, as with the example of Dafra already discussed, is believed to make barren women

fertile and generally, “can reverse all sorts of bad fortune” (Ceessay and Cessay 2005:49). Hence visits are made to the pool for ritual washing and there was strong community identification with the site as a sacred place.

Unfortunately, this has been weakened recently, as local demographics have changed with more outsiders coming in, over-population of crocodiles, lack of resources to feed them, pollution, and rapid urbanization meaning that the site is now “almost in the middle of the town” (ibid:51). The pool also used to be maintained by communal labour that was mobilised to re-excavate the pool when need be, but this has not been so forthcoming recently. Hence Ceessay and Ceessay (2005:51) report that instead bulldozers had to be provided by the National Council for Arts and Culture instead. These factors have meant that both the future and purpose of the Katchikally pool needed to be rethought. The results of this process are optimistic in realising that properly managed tourism, allied with the continued recognition that the site is a sacred place possibly offers hope for its survival, if realised under an “integrated conservation management approach” (ibid:53).

In this instance, the conservation and management frameworks are being put in place, but will fail without the input of the local community. This would appear key for watery environments and the species they contain might survive if local communities are seen to derive economic, as well as, where applicable, spiritual benefits from them.

*ii) “Water” Ecotourism Projects in Northern Ghana.* Ecotourism projects can be significant in fostering a sense of community identity and in promoting sustainable development and in generating income. They can combine a variety of functions of the type discussed by Drijver (1992:132), thus encompassing both “ethical values” and “sustainability of economic functions”. This is evident, to a certain extent, in the Gambian example and also in Northern Ghana where the United States Agency for International Development (USAID) has been funding various community based ecotourism projects (CBEP) developed by a variety of project partners (web reference 2; Anon 2005:55-59). Of these, the Paga Sacred Crocodile Pools on the Ghana-Burkina Faso border in the Upper East region (fig. 1), and the Wechiau Community Hippo Sanctuary on the Black Volta River boundary between Ghana and Burkina Faso in the Upper West Region (fig. 1) are of relevance here.

According to the leaflet written to promote Paga as “a haven for culture” (Anon, no date a), approximately 600 years ago a young man, Naveh, on a hunting trip became trapped in a deep aardvark hole. A crocodile



**Fig. 9.** Inter-acting with a crocodile at Paga, August 2004 (photo. R. MacLean).

crawled from a chamber near him and led him out of the hole to safety via a tunnel. Followed by the crocodile the young man sought and found an area for a new settlement, “Ayipagayo”, meaning “my eyes like here”, i.e. Paga. The credit for the success of this journey was given to the crocodile, and hence the young man “believed that his soul lay within it. The belief was also that Naveh’s children, and the children that followed, would also carry their souls in the crocodile and pronounce it sacred” (ibid). This tradition would seem to account for the preservation of the crocodiles in an area otherwise denuded of animals. Moreover, it contains many classic totemic “elements”, as already described, including the assistance rendered the ancestor by the totem, and the identification with the totem henceforward by parts of the Kasena ethno-linguistic group of the region.

The survival of the crocodiles and their ponds has led to their being embedded at the centre of a community ecotourism project started with the establishment of the Paga Ecotourism Committee in 1998 (Anon, no date a). Hence the Paga ponds can be visited and an offering of a live fowl made to the crocodiles by the visitor accompanied by a local guide. During the visit something about crocodile ecology is learned from the guide and photographs can be taken (fig. 9). The rationale be-

hind all these community based ecotourism projects would seem to be similar in, besides conserving and preserving natural and cultural resources and biodiversity, promoting the creation of wealth in local communities and reducing poverty (web reference 2; Anon, 2005:1, 56). These are highly commendable aims, but unfortunately, the Paga ecotourism project has seemingly deteriorated quite rapidly between August 2004 and March 2008 when two visits were made to Paga by this author.

The, albeit subjective, impressions gained were that on the first visit this was a well-run, and well-maintained project. The ponds were fenced and a guide met the visitor at the visitor's centre, the published entrance fees were paid, and a visit to the crocodiles, as described, was completed. In contrast on the second visit the fencing had largely disappeared, the official guides were no longer present, and the locals who did ultimately arrive seemed not to be trained project personnel and attempted to negotiate entrance fees. Otherwise the crocodiles could be visited as before. It would thus seem that this project is not as well managed as it once was. Why, is unclear, but local informants stated that this was due to conflicts in sections of the community over who controlled the project, the ponds, and thus its revenues. This would seem to mirror the CPEB problems identified by USAID itself, with perhaps pertinent to the Paga situation, "competing special interests vying for tourism projects" (Anon 2005:59). Hence the casualty here has been the project and the environment, i.e. the crocodile ponds, which left unfenced could soon be open to poaching in a region where bush meat is much sought after (see Gautier and Van Neer 2005). It would thus seem that there has been a failure in community identification with this project.

In contrast, other water associated community ecotourism projects in Northern Ghana seem to have been much more successful in developing links with their host communities. The Wechiau Community Hippo Sanctuary on the Black Volta River provides a good example of this. Here it is possible to see the remaining herds of hippopotami from a dug-out canoe and to stay in various bush camps. This project is run in an exemplary manner by a committee composed of different elements of the community including the paramount chief, divisional chiefs, headmen, and fishermen (Anon, no date b). This is significant for it seems that the hippopotamus is not ritually or mythologically significant for the Lobi, the dominant ethno-linguistic group in the Wechiau region, in contrast to the symbolic importance accorded the crocodile at Paga (Anon, no

date a), as described. Instead, no mention is made of such significance in the “Wechiau Hippo Sanctuary” leaflet (Anon, no date b), nor in relevant ethnographies (e.g. Goody 1967:75; 1972; Meyer 1981). Hence it would seem that the hippopotami are being protected as a resource, generating community income and providing employment opportunities.

In summary, these three brief examples indicate that, if properly managed, sustainable tourism initiatives potentially provide a means of preserving the fast disappearing natural and cultural water linked sites and environments of West Africa and their associated creatures. Furthermore, if such initiatives are not encouraged and do not succeed, realistically, it is likely that all large water mammals and reptiles will disappear from most of West Africa in the next couple of decades.

### *Conclusions*

This brief consideration of a few selected examples from West Africa indicates that besides water being vital to life it functions in the construction of social and religious identities in various ways. Moreover, it is also evident that this is an under-researched subject in West Africa at least from an archaeological perspective. Within archaeology in West Africa water is usually ignored or taken as a given when it should at least be recognised as both a substance and a subject of considerable importance. If it is considered as such and accorded its due importance it is obvious that, potentially, water is a subject that can permit the elucidation of a range of connections between different areas of life - ritual, religious, ontological, and economic. In so doing water can be seen to cross empirical and epistemological categories.

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## *Chapter 9*

# **Aquatic Resource Utilization and the Emergence of Pottery during the Late Palaeolithic and Mesolithic:** *A Global Perspective from the Nile to China*

Randi Haaland

### *Introduction*

In this paper I shall focus on the invention of pottery, and argue that it occurred in connection with exploitation of aquatic resources long before it became part of the integrated Neolithic syndrome. On the basis of ethnographic material and anthropological theories, I shall reflect on the potential of pottery making for metaphoric associations about basic human relations and its social consequences. The pot was an invention of cultural means that facilitated the transformation of raw food by boiling. Boiling is a cultural process in the sense that it requires a cultural artefact (the pot). These technical facts are “food for thought” about wider dimensions of human existence. The question is what thoughts are likely to be stimulated by the transformation of raw food facilitated by the invention of the pot. The evidence I shall present in this article indicates that the invention of pottery took place in a context of aquatic resource utilization, where boiling of fish was an alternative to the natural processes of drying and smoking as techniques for transforming raw fish into consumable items. Since early aquatic resource utilization seems to be generally associated with the consumption of wild grains, I would expect that boiling also included grains, as material from China and Africa indicates. Boiling is an activity that requires the coordination of a sequence of activities such as pottery making, firewood collection, provision of food to be boiled, firing, supervised boiling and consumption of boiled food. The sequence of activities may involve cooperation between several people as well as subjugation to constraints on the time intervals between, e.g. from the boiling of food

to its consumption. The pot is thus likely to favour development of a syndrome of productive and consumptive activities involving the formation of larger solidary units, e.g. based on relations of kinship or locality. In earlier publications I have discussed the central role of women in the emergence of cultivation, and its connection to hearth-based activities (Haaland 1987, 1995). Since women in ethnographic surveys dominate the collection of small aquatic resources, it is likely that their involvement in this activity may initially have played an even more important role in the invention of pottery than did their involvement in wild grain collection. For fishing by boat and deep-water fishing, however, ethnographic surveys indicate that men dominate. Provision of fish for boiling would thus imply increased complementarities between females and males around the hearth. On the symbolic side, this close organizational association between women and pots lends itself to a range of metaphoric associations.

### *The archaeological evidence of pottery in the Upper Paleolithic and Mesolithic period*

Material from different parts of the world indicates that pottery was invented apparently independently several thousand years before the adoption of agriculture. Early ceramics seem closely associated with the heavy reliance on aquatic resources and plants and for boiling of food. This is the case for North Africa, China, Japan, the Russian Far East and Amazonia (Roosevelt 1995, Haaland 1997, Keally et al. 2003, Pearson 2005, Jones 2007). Dates from China indicate that pottery might have been used as long as 20,000 years ago. In this paper I will discuss the social context of pottery making, its consequences, the adaptational advantages and symbolic uses of food and food related items such as pots. To a large extent I will base my discussion on archaeological material that I have excavated in Africa in the Nile Valley, but also on material from East Asia and Amazonia.

### *Aquatic context for the emergence of pottery*

Many years of archaeological fieldwork in Africa made me aware of the very early innovation of pottery that emerged in an aquatic food-gathering context, which preceded the use of pottery in the Near East by at least 2000 years. Comparative research from other parts of the world confirmed the importance of aquatic adaptation as opposed to agriculture in the innova-

tion of pottery. In the following I will make a brief survey of the emergence of pottery globally, after which I will discuss the African material in more detail.

Clay pots were being fashioned along the waterways and woodland edges of mainland China during the end of the Palaeolithic. Different dates are quoted in the discussion of early pottery in China and Japan. According to Keally et al. (2004), ceramics appear to have been invented in crude form about 15,000 years ago. However, several groups of sites in China and Japan show that pottery might be dated to as early as 15,000 to 20,000 BP-calibrated dates (Zhao & Wu 2000). In an article published in *Antiquity* 2005, Pearson (2005) makes a survey of early sites based on remains of pottery from China and Japan. One site from the Miaoyan, Guanxi Province in south China has yielded deposits dating from 20,000 to 12,000 BP. Potsherds of a similar type have been recovered from the Xianrendong site in Jiangxi Province and date from 18,000 to 19,000 BP. This pottery is thick, tempered with sand, undecorated and has been interpreted as being the remains of cooking vessels. Sites from Hunan Province have yielded remains of rice interpreted to have been in an early stage of domestication dating to 12-14,000 BP (Zhang & Yuan 1998). In general, the recovered pottery encompasses round bottom vessels probably used for cooking aquatic resources (fish, clam, snails), nuts and plants such as rice, which was to become the main cultivated crop in the region.

For Japan, Pearson (2005) refers to sites with several phases of occupation debris where the earliest phase has yielded dates to 13,500-12,700 BP. The number of sherds is few, but these increase over time and become abundant after 5000 years. The pottery has been interpreted as having been used for cooking and storing liquids or solids (Kelley et al. 2003). Comparable dates have been reported from Siberia (Kelley et al. 2003) and Vietnam (Obata 2003). Kuzmin and Keates have made a critical assessment of the context of the different C-14 dates from the Far East, and conclude that the dates which they consider to be certain are calibrated to c. 17,300 - 15,000 BP, while the uncalibrated dates from China range from 13,310 +/-270 to 13,680 +/-270. Most of the material used for datings is either charcoal or wood. Some of the dates based on freshwater mollusc are rejected (18,030 +/-300cal BP and 20,430 +/-450cal BP). They argue that the innovation seems to occur at approximately the same time for the three regions of China, far eastern Russia and Japan. They consider the pottery from these three regions of greater East Asia to be very different types, yet they do not take

a firm stand on whether these are three independent innovations or else have occurred in one place and spread to the other regions. However, they do say that there is little evidence of contact or exchange between these areas in the Late Glacial (Kuzmin and Keates 2005, Kuzmin 2006).

Bellwood (2005) also sees the importance of pottery used for cooking, but has pointed out that there seem to be two traditions. One early pottery assemblage appears to reflect the existence of a cuisine focused increasingly on the boiling of whole grains, millet and rice, initially wild and later domesticated during the warming postglacial conditions. The other partly contemporary tradition spanned from Late Palaeolithic to Early Neolithic, and was a flour-based cuisine judging by the large number of grinding stones recovered. Bellwood argues that the flour-based cuisine was similar to the Near Eastern cuisine. I will argue that the similarities were only in the use of ground flour, as the Chinese cuisine was based on boiling in the pot, while in Near Eastern cuisine flour was made into bread baked in the oven (Haaland 2007). From the earliest time of inception of pottery, Chinese cuisine was based on boiling in the pot. In addition to heavy emphasis on aquatic resources, food habits included the boiling of grain either used as flour or boiled as whole grain. Variation of this cooking pot theme has been maintained up to the present, with the main emphasis on the boiling of the whole grain - rice. Although rare, the practice of boiling whole grains such as millet sorghum is still practiced by the Burmese in central Burma (field notes December 2008). We are well acquainted with boiling whole rice, typical for the rice cuisine, but have very limited knowledge of boiling whole grains other than rice. We take it for granted that grains such as wheat and sorghum should be ground into flour before eaten. When identifying remains of cereals, in this case sorghum recovered on sites along the Nile Valley, Magid (1995) stated that we should expect to find grinding stones since grain cannot be eaten whole. The case of using whole grain for boiling food such as the ancient millet sorghum mentioned above and the present day use of whole sorghum grains might be particular to the Asian cuisine, which has a tradition deeply rooted in the technology of boiling rice.

From the New World, early dates of pottery in an aquatic pre-agricultural context have been recovered from the Brazilian Amazonia. Roosevelt (1995) reports that early pottery sites appear to be those of quite specialised river foragers. The pottery is sand or shell tempered, undecorated



and with bowl shapes. Dates range from mid-6th to mid-4th millennium (Roosevelt 1995). One site from the coastal lower Amazon area dates much earlier to c. 8000 BP (Roosevelt et al. 1991). Sherds are thick and sand tempered from simple, mostly undecorated bowls. Roosevelt suggests that these could have been used for fish stew, storage or social display.

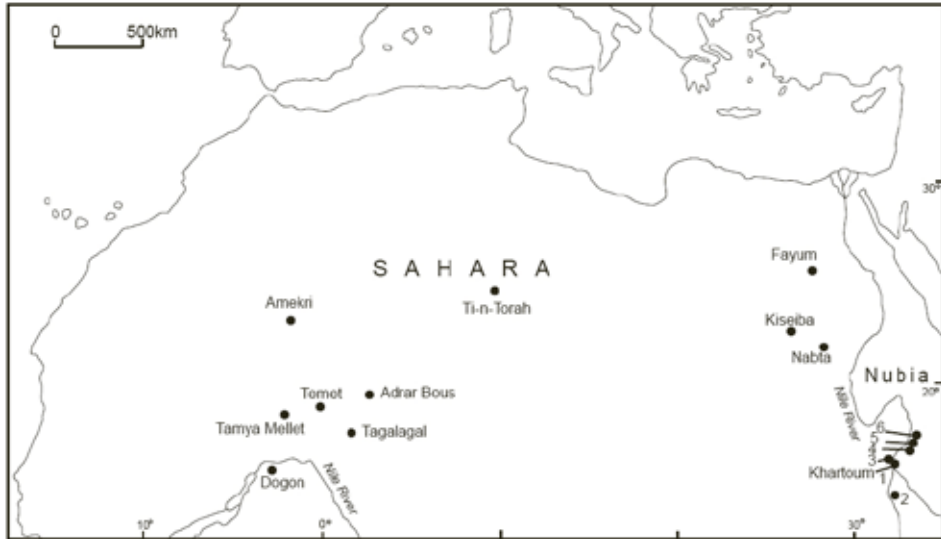
In Denmark, examples of pottery used in a pre-agricultural context dated to the 7th millennium BP come from sites with enormous shell middens. The name kitchen midden culture was assigned to these types of sites (Andersen & Johansen 1986). In this case ceramics were adapted from nearby farmers, while the others are examples of pottery invention that took place in a context of predominantly aquatic resource utilization supplemented with some exploitation of plants. A general development over time is an increased focus on plant exploitation with plant cultivation.

### *Consequences of pottery utilization*

The use of these pots allowed a novel range of culinary possibilities, extending the foodstuff from the solid to the liquid and semi-liquid, while also sweetening the food. In the preparation, the flavours of soups, stews, beverages and sauces could be mixed and cooked in quite different ways. The adaptive importance of pottery lies in its allowing for utilization of a wider range of food resources. Boiling or steaming food renders it more digestible and palatable, and pottery expands the range of potential food resources available in the same habitat (Arnold 1985: 125-136). Handwerker (1983: 19) has argued that pottery and the use of boiled food led to a change in the diet of infants, allowing early weaning which would influence and increase the fertility of women and affect the survival rate of infants, who are most vulnerable during the time after weaning. This general process had wider implications, primarily population growth, sedentism and population expansion.

### *Origin of pottery production in Africa*

To illustrate the emergence of pottery making and how the aquatic-porridge cuisine developed, I will first make a brief survey of North African sites and then draw on the material that our team excavated along the Nile in central Sudan. The earliest pottery on the African continent is recovered from sites located in the region of the Sahara and the Sahel. These



**Fig. 1.** Map of North Africa, sites with pottery dated to the 10th and 9th millennia BP.

sites tend to cluster in the southern part of the Sahara (Jesse 2003). Close (1995) has made a survey of early ceramic bearing sites from the Sahara, and emphasizes that early pottery always seems to occur in connection with grinders as well as in association with heavy emphasis on aquatic resources.

As suggested by Sutton more than 30 years ago (1974), resources were made into fish stew (fig. 1). According to Close, the distribution of the earliest ceramic-bearing sites in North Africa does not spread to the Mediterranean part of North Africa or east of the Egyptian river Nile (Close 1995). On these early sites the potsherds are few in number and they appear to belong to the same so-called Khartoum Mesolithic tradition characterised by dotted wavy-line decoration and open-mouthed globular shaped pots (fig. 2). Old dates are obtained from areas that are widely separated geographically, such as Ti-n-Torah in the Libyan part of the Sahara which dated to 9,300 BP (Barich 1987) and Talalegal in Niger which dated to 9,500 BP (Roset 1987).

Early dates from sites located along the southern fringes of the Sahara towards the Sahel zone now seem to indicate that pottery emerged along this zone. Excavations of sites on the Dogon Plateau in Mali have yielded pottery and grinders dated to the first half of the 10th millennium



**Fig. 2.** Typical dotted wavy line pottery (Photo: Anne-Marie Olsen).

BP (Huysecom et al. 2004) and there are indications of even earlier dates from sites in the area (Eric Huysecom, personal communication). The earliest dates of pottery in the Nile Valley come from the site of Sarurab in the Khartoum area, dated to 9,300 BP (Khabir 1987). The Nile Valley is an area where exploitation of rich aquatic resources goes back 25,000 to 40,000 years (Greenwood 1968; Stewart 1989). I have suggested earlier that innovation of pottery probably took place in the Nile Valley because of the very early importance of aquatic resources. With the early dates now appearing in the Dogon area in the Niger region, the likely area of innovation



**Fig. 3.** Boiling of aquatic resources along the Niger, Mali (Photo: Randi Haaland).

was probably in the Sahel zone between the Niger and the Nile (fig. 3). However, I would expect that the river areas along the Nile and Niger where people based their adaptation on a multitude of resources, most importantly the aquatic ones, are the most likely candidates of innovation with the occurrence of sedentary sites.

The 3000 km east-west distribution of early pots across the Sahara probably reflects both the fast spread of this new technology and the geographical expansion of people due to population growth, since pottery production and the use of boiled food served to increase fertility.

If the assumption is correct that the use of ceramics began in the 11th millennium, the Sahara which was then a desert would not have been ready for this type of multi-resource adaptation until the Early Holocene humid phase in the 10th millennium BP (Gasse

& Roberts 2005; Hassan 1986). During the humid phase the Sahara would have had vegetation consisting of mainly dry savannah similar to the vegetation zone, which at present is located 300 km further south. An indication of the type of plants growing is suggested by the plant remains recovered from Nabta Playa (site E-75-6) dated to the late 9th millennium. The plants consisted of sorghum and a broad spectrum of wild grasses, in all around 20,000 seeds. All of the plants were morphologically wild and today grow in the Sahelian zone with summer rain (Wasylikowa et al. 1997; Wendorf & Schild 1998; Wendorf & Schild 2002). The above survey of the resources during the 9th millennium BP can probably illustrate the plant

resources available in the Sahel zone before the Sahara opened up for this type of vegetation in approx 11,000 BP.

### *The archaeological sites along the rivers Nile and Atbara in central Sudan*

Here I will present the archaeological material that our team excavated in central Sudan (Haaland and Magid 1995). The three sites (Abu Darbein, El Damer and Aneibis) are located along the main Nile and Atbara rivers (fig. 4). The archaeological material from these sites is dated from the mid-9th to 8th millennium BP and is from a later phase in the use of ceramics, when pottery was becoming quite abundant. I believe it to be a positive illustration of the development of a multi-resource and aquatic adaptation, when the use of pottery became more diversified over time.

The three sites are located on old riverbanks and are large, ranging from 6000 to 10,000 square metres. The inhabitants of these sites exploited a broad spectrum of resources - hunting and gathering - but with heavy emphasis on aquatic resources. The osteological material shows that at least 30 different fish species were exploited, as well as large quantities of molluscs. These are abundant and reliable resources, or what Hayden refers to as «r-selected» species, with fast reproduction involving numerous offspring with short maturation time, thus yielding high rates of harvesting when exploited. These resources with high productivity and storability would have permitted a sedentary way of life (Hayden 1994). Having analyzed the faunal remains, Peters (1995) argues that the species-composition indicates the inhabitants were using nets and exploiting deep-water fish. They would thus have had boat technology; small disk-shaped pottery artefacts which could have been used as net sinkers have been recovered (fig. 5). The many harpoons found also attest to the importance of aquatic resources (fig. 6). Hunting activities are shown by the presence of both large and small mammals (large mammals such as giraffes, elephants and various types of small gazelles). Remains of cereals are recovered as imprints on pottery: *Sorghum verticilliflorum*, *Setaria* and *Panicum* (Magid 1995). These cereals are all from wild plants - there is no indication of any morphological changes pointing towards domestication. Presences of fragments of grinders were probably used for processing wild growing cereals. The grinders recovered are not numerous; material recovered from later sites shows an increase in number of grinders over time suggesting



**Fig. 4.** Abu Darbein, a Mesolithic site located along an old riverbank on the river Atbara (Photo: Randi Haaland).

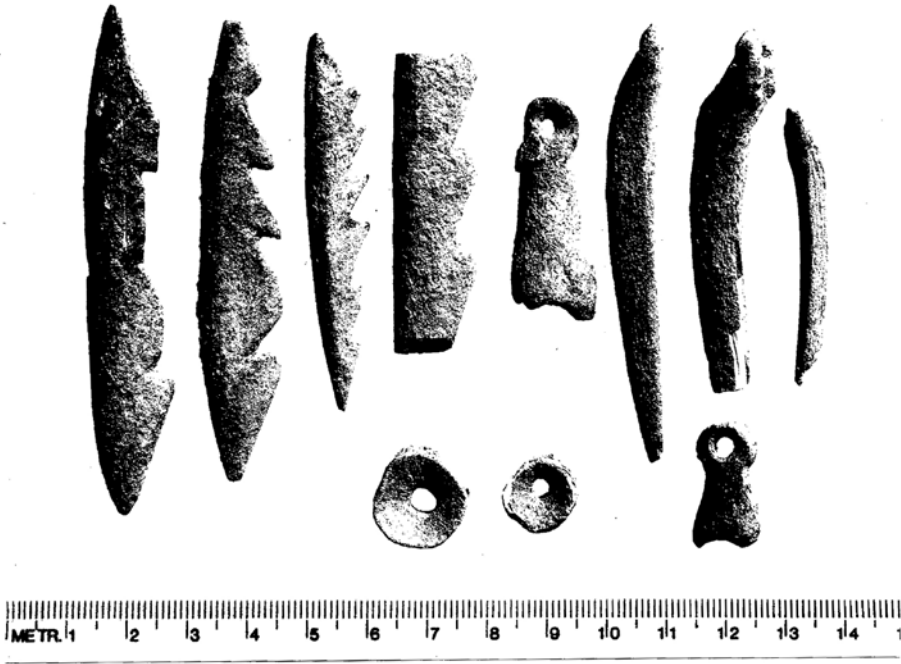


**Fig. 5.** Tools made of potsherds probably used as net sinkers for fishing.

increased use of cereal plants. The material thus indicates exploitation of plants, which were probably gathered and not cultivated. The very high artefact densities and thick cultural deposits suggest long-term permanent occupancy. Several pieces of wattle and daub which were found suggest the presence of more permanent hut constructions and a sedentary population. Another set of data which supports this interpretation is the presence of graves (seven graves were excavated at the site of El Damer).

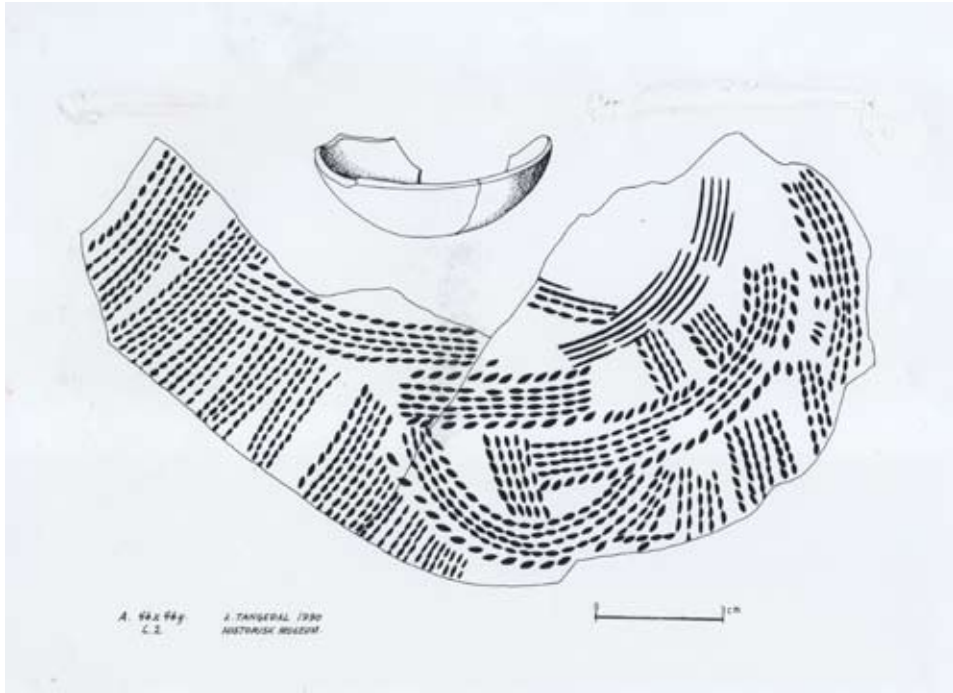
The most visible artefacts recovered on the sites were pottery, of which huge quan-

**Fig. 6.** Bone tool harpoons to the left (Photo Anne-Marie Olsen).



tities were found, with some excavated squares (one square meter) containing 3-4 kilograms of potsherds. Pottery was probably used both for cooking and storing. The large amount of pottery would have acted as a restraint on the mobility of the inhabitants, who became sedentary. The different types of pottery manufactured are shown (fig. 7). The pots seem to have been produced on the sites. The clay used has been identified as the same as the one found locally along the alluvial river bank. Numerous finds of mica used as temper and the tools used to decorate the pots (shells with serrated edges) are further indications of local production. The pots have rounded bottoms and a bowl shape. The coil technique was used for making the pots.

Graves are found within the settlement debris and pottery fragments are recovered with the burials. Since these are in the settlement area, it is difficult to judge if these were deposited as grave goods. However, comparative material of the same cultural tradition from sites along the Nile



**Fig. 7.** Pottery from Mesolithic sites located in the Atbara region, Sudan (Photo Anne-Marie Olsen).

further to the south in the Khartoum area shows that broken but quite complete pots were buried beneath the heads of skeletons. The excavator likened the pot to a pillow (Arkell 1949). The pot appears to have been deliberately broken, possibly as a way to symbolise the death of the person buried. The ceramics recovered in the graves are identical to the ones recovered in the settlement debris.

During the later phase of the Khartoum Neolithic period c. 6000 BP, the emergence of an increased diversity of pottery types over time can be observed. We see a variety of small vessels such as cups probably used to serve liquid foods and drink. This is probably also related to an increased social differentiation where drinking was part of social display (Krzyzaniak 2004). This is the beginning of the long history of the rich and diversified use of pottery in Africa. The pottery constitutes everyday social life and defines relations and events. Below I will explore how such symbolic uses of food and food-related technology such as pots are embedded in material forms.



### *The metaphoric potential of pottery*

Dating back 10,000 years in Africa and as far back as 15,000- 20,000 years in the Far East, the innovation of ceramics was fundamental for the development of cuisine based on boiling food in pots. There seems to be a global significance to Sutton's (1974) argument that the first ceramic vessels in Africa were part of a parcel of soup, porridge and fish stew revolution, where he hypothesised the relationship between aquatic resource utilisation and the invention of pottery technology.

The cross-cultural survey of material from sites with the oldest ceramics presented earlier demonstrates the importance of aquatic resources in this technological innovation. The change would have been crucial when people started to transform raw food into cooked food. There are elements of similarity in pottery production and cooking. The process of pottery production consists of clay mixed with water to be fashioned into the desired shape, and for food the process encompasses mixing different food elements with water to be boiled in pots. As the clay was transformed into ceramics via fire, the raw food was transformed via the same means into cooked food. Both fire and water were important elements in the production of food and pottery, and the technological development of food and pottery were closely interlinked. Below I will discuss the social context of the emergence of pottery.

### *Pottery innovation and hearth-centred female activities*

In earlier papers (Haaland 1987; 1995; 1997; 2007) I have discussed the importance of women in the innovation of pottery and the occurrence of this activity being related to cooking and hearth-centred activities. I will make a very brief summary of the arguments presented in earlier publications, and refer to these in my further discussion. The hearth-centred activities incorporated elements that were included in the cooking of food, such as water and firewood collection, pottery production, the making of grinding equipment and containers for storage and gathering of food.

My argument was based on comparative ethnographic material which shows a very close correlation between female identity and a syndrome of activities that includes childrearing, plant gathering and food preparation. I assumed that women played a major role in technological innovations within this activity system, e.g. with regard to techniques for food prepa-



**Fig. 8.** Fur woman preparing the clay for pot making by kneading the clay (Photo: Randi Haaland).

ration. It was within the female sector of activities that the important innovation of applying fire in order to transform clay to pots for cooking took place. This hypothesis has been forcefully argued by Wright (1991) who, on the basis of work done by Amiran (1965), pairs the making/cooking of bread/porridge with pottery production. Pottery making and food preparation by cooking involve activities which in many respects are similar: grinding, the use of water, kneading and firing (fig. 8). With these technological innovations it is also likely that the overall labour input became greater for women. Harris and Ross have argued that pottery production and the increased consumption of boiled food lead to increasing intensification of female labour in food procurement such as gathering and grinding of plant resources (1987).

In my discussion of the Mesolithic sites along the Nile, I focused to a large extent on plant resources. Remains of sorghum were recovered on these Mesolithic sites. This lies within the region where cultivation of this cereal took place. I concentrated on activities that could provide an understanding of the processes leading to agriculture. To a lesser degree I elaborated on activities related to the gathering of aquatic resources, such as examining ethnographic material to gain a comparative perspective on what the role of females was in collecting aquatic resources, including gathering resources such as different types of shells, molluscs and fish (not deep water fishing).

As my short global survey indicated in the beginning of this paper, early pottery coincides with the use of aquatic resources and to a lesser extent cereal resources. The importance of cereal-plant resources increased over time with the emergence of agriculture. A study of ethnographic material points to the significant role of women in plant gathering. Women also play an equally significant part in the gathering of aquatic resources (shell fish and aquatic resources close to land), such as among the Australia Aborigines and the Kwakiutl in Canada.

The change would have been vital when people started to transform raw food into boiled food. Water and fire were important elements in the production of both pottery and food. One finds that there were cultural regulations for the preparation of food; what type of utensils to use, where and by whom are important aspects in most societies. The use of the pot as a container for boiling would have been a different experience in the preparation of food as compared to the technique of roasting, a much earlier method for preparing food.



**Fig. 9.** Fur woman making pottery; note the grinder to her left used in preparing the clay and grinding cereal (Photo: Randi Haaland).

I will argue that pots were associated with women as producers and users of these objects (fig. 9), and a common human experience is the close identification of women with pots in a domain of profound meaning - nurturing. The metaphoric connection between female body and pots is not arbitrary but founded on true closeness.

### *Pots and bodily metaphors*

Eating food is clearly a bodily experience. However, if we look at the pot as a container we see that in most cultures the pot is not only viewed as a container but also as a symbol of the body. The metaphorical association of pots and bodies is apparent in the way we as archaeologists classify pots by using bodily traits as diagnostic - we use words from the human body: mouth, neck, shoulder and the body itself. Ethnographic studies of pottery-making show the same bodily terms used in the local vocabularies (David et al. 1988; Haaland 1997). My own ethnographic work from Fur in Sudan, Fipa in Tanzania, the Omotic people in Ethiopia and among

tribal people on the Deccan and in Burma shows the use of the same bodily terms. There is some variation in the terms used, thus the name for rim varies between lip and mouth, while in some cultures people will call the inside of the pot the stomach (Omotic). However, it is the metaphoric association between the human body and pots that comes across and appears to be a universal experience, suggesting a special relationship between pottery and human bodily experience.

Did the early emergence of pottery in a food gathering (predominantly aquatic) context shape prehistoric people's concepts of food and cuisine? Can we hypothesise that there existed a similar association between pots and the human body in societies where the invention of pottery took place, or that this important early experience which characterises these societies would set them apart from cultures which developed another type of cuisine based on food technology such as baking and the use of ovens? These are interesting questions to address. I will hypothesise that the innovation of pots made a fundamental difference in people's life experiences. The earliest bodily experience of a child in being breastfed would later have been extended to another experience when being fed boiled food from the pot.

The growing importance of activities centred around a more permanent hearth where women were the source of sustenance and provision had important consequences (Haaland & Haaland 1995). It is from the hearth that the inhabitants are fed and nurtured, and the shared consumption often provides the basic idea of cohabitation and kinship: "the hearth is both literally and figuratively the site where these transformations actually take place" (Carsten & Hugh-Jones 1995: 42-3). In a study of the Zafimaniry on Madagascar, Maurice Block finds women in this community to be associated with the hearth and the objects around the hearth, most importantly the cooking pot; these objects are used symbolically to signify marriage, which stands for human relationship (Block 1995).

When pottery making takes place in a female dominated hearth-centred domain, it has broad potential for symbolization of important events and relations in human life - a potential that is frequently realized in conceptualizations of pottery making as a transformation analogous to gestation. Thus, the metonymic association between the body of the woman and her nurturing roles such as breast-feeding and cooking is close at hand (Herbert 1993:213). Below I will further elaborate on pots and bodily metaphors.

In her excellent book titled *Food, the body and the self* (1996), Deborah Lupton argues that food itself is coded feminine. There is a strong association across cultures of women with food preparation, and women produce food with their own bodies during pregnancy and lactation. She sees a symbolic cohesion between women's bodies and food; it is the women who transform food from a natural to a cultural product, and the pot is crucial in this transformation. A fundamental aspect of being a woman is the role as nurturer. If one looks upon the body as a container and the pot as a container, a metaphoric association between female bodies and pots is close at hand. Herbert (1993: 211) has pointed out that pot decoration often uses scarifications and features which illustrate the social identity of the pot as if it were a person. For pottery, socially and culturally constructed markers may be just as important as anatomical ones (Herbert 1993: 213). The pot can have a gender and an "age" conveyed by its type and what it is used for. In cultures where human bodies are decorated and pots are seen as human bodies, one would not think of leaving pots unscarified any more than leaving the human body undecorated (Herbert 1993: 211), since the pot frequently accompanies a person from cradle to grave. Ethnographic material demonstrates the ritual breaking of pots in and on the grave, often used to symbolise death (Barley 1994: 108). In many societies pots are thus seen as symbolising people, and the human body is often used as a metaphor for the societal body (i.e. society) (David et al.1988).

There is no necessary relationship between pots and the female body; the relationship is imagined. As Barth (1993: 170) remarks, "Meaning is something conferred on an object or an event by a person, not something enshrined in that object or event - that is, it arises in the act of interpretation". Yet the meaning is "not merely a matter of arbitrary fanciful projection from anything to anything with no constraints". Concrete bodily experiences not only constrain the "input" to the metaphorical projection, but also the nature of the projections themselves or the kind of mappings that can occur across domains (Johnson 1987: XV). The metaphorical projections from female body to features of pot forms are grounded in experiential structures of meaning, where the role of women as the «nurturer» par excellence is pronounced and relations in the wider social world of sedentary society must have been experienced as more precarious (Haaland & Haaland 1995). This is the basis for metaphorical projections of other relations for qualities of "trust" and "solidarity" embedded in the mother-child relationship. An apt expression of that linkage is the cook-

ing pot. I see this metaphor and its material expression as emerging with sedentism and the development of pottery; the experiential structures it is grounded in are so fundamental to sedentary societies that even archaeologists have made the inference without thinking about the reason.

### *Conclusion*

Pottery, which constrains mobility, would have operated as a factor favouring sedentism as well as being promoted itself by sedentism. Ceramics are thus associated with activities which become important with the advent of sedentism and are associated with the emergence of female dominated hearth-centred activities. The consequence of this innovation and the process of sedentarization should be viewed as interconnected and resulting in a change both in social relationships of people within the household unit and in the relationship of people between these units. People now had to relate to each other within a permanent context where hearth-centred activities were not only centred around the fire but also around the pot. Innovation of pottery took place in a context of emerging sedentism largely made possible by the development of techniques for exploiting more stable resources - aquatic resources in combination with intensified grain-gathering. The use of pottery led to a set of interconnected activities - cooking, firewood collection, carrying of water, pottery-making, food consumption, child-rearing and habitation, all centred around the hearth in a new way of life more important for women and children than for men. The growth in importance of activities centred around a more permanent hearth where women were the source of sustenance and provision had important consequences for people's early life experiences (Haaland and Haaland 1995).

I have now presented some general perspectives on the context of the technological innovation of pottery, which I consider to be of global relevance. However, having worked in Africa most of my professional life, this has influenced my heavy emphasis on both archaeological and ethnographic material presented to illustrate the general perspectives.

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*Randi Haaland*

## Chapter 10

# Neolithic Adaptations and Subsistence Economy in the Middle Nile Region, Sudan

Azhari Mustafa Sadig

### *Introduction*

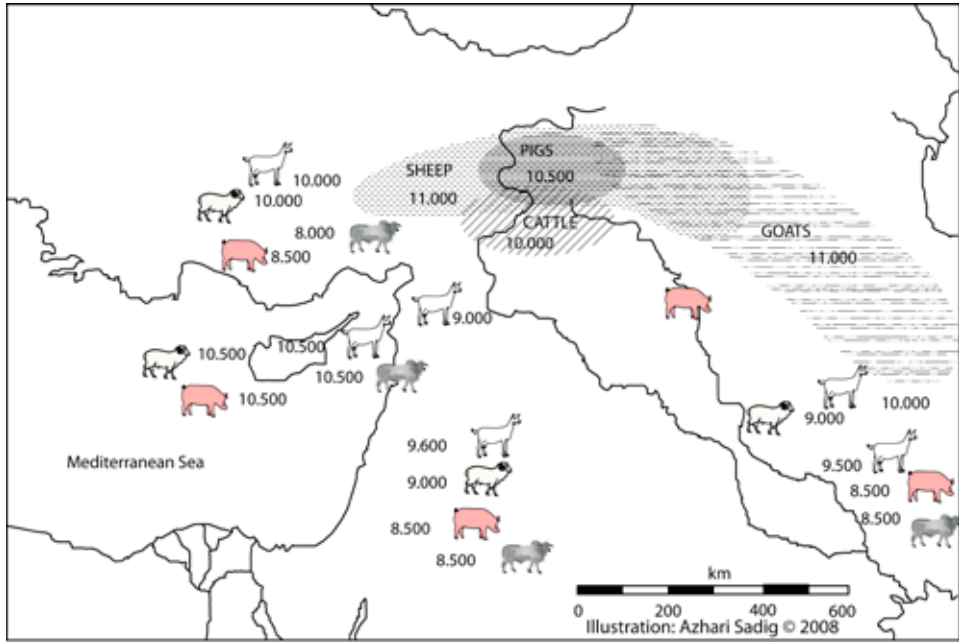
Many scholars have attributed animal domestication to humankind's ingenuity and assert that it occurred in a coordinated and premeditated fashion (Isaac 1962). Other researchers have argued that it was a natural consequence of the ecological and human demographic transitions which took place at the end of the last glaciation approximately 12,000 BP. These ideas include Childe's oasis or propinquity theory which contends that the encroaching desert in southwest Asia resulted in human and animal competing for water resources and that this ecological pressure fundamentally altered their interrelationship and eventually "led to animal domestication" (Childe 1952).

Binford (1972) took another approach to the origins of domestication and agriculture. His edge-zone hypothesis is based on culture as an adaptive device. He assumed that as human populations expanded in the Fertile Crescent, different groups impinged on each other, encouraging the development of new systems for more efficient resource-utilization, i.e. plant and animal domestication.

Although there is still no clear consensus concerning the precise changes in human behavior and ecology which gave rise to sedentary agriculture and animal husbandry, the evidence is overwhelming that the primary trigger was climatic. Recent evidence has confirmed that the 12 millennia since the end of the last glaciation have been the most stable.

### *Faunal remains and evidence of animal husbandry*

*First evidence:* The oldest evidence for animal domestication appears in archaeological sites of the Natufian period, a Mesolithic culture of the Le-



**Map 1.** Map of south-west Asia, showing the earliest dates of domestic animals.

vant (c. 12,000-10,000 BP) (Isaac 1962; Meadow 1989). During this period a symbiotic relationship between humans and the wolf (*Canis lupus*) developed which gave rise to the domesticated dog (*Canis familiaris*). The earliest site where skeletal material from domesticated dogs has been recovered is at the Upper Paleolithic cave of Palegawra in present-day Iraq which dates to approximately 12,000 BP (Whitehouse 1983).

The next stage in the Neolithic transition was a marked change in the dominant food source of certain ancient Middle Eastern Neolithic cultures from a reliance on gazelle and deer to ovicaprids (sheep and goats). This can be detected as faunal shifts which occurred in the Middle East between 10,000-8,000 BP (Davis 1982). After this period sheep and goat remains became the most common faunal remains at the majority of ancient human settlements in southwest Asia.

The last of the major domesticated species in southwest Asia were cattle and pigs. This seems to have taken place during the 9th millennium BP in a number of ancient human settlements scattered across the Middle East and the Levant (Davis 1982) (Map 1).

In Africa, The first authenticated domesticated cattle appeared in the early Neolithic settlements of the Nile Valley about 6,800 BP, e.g. Fayum

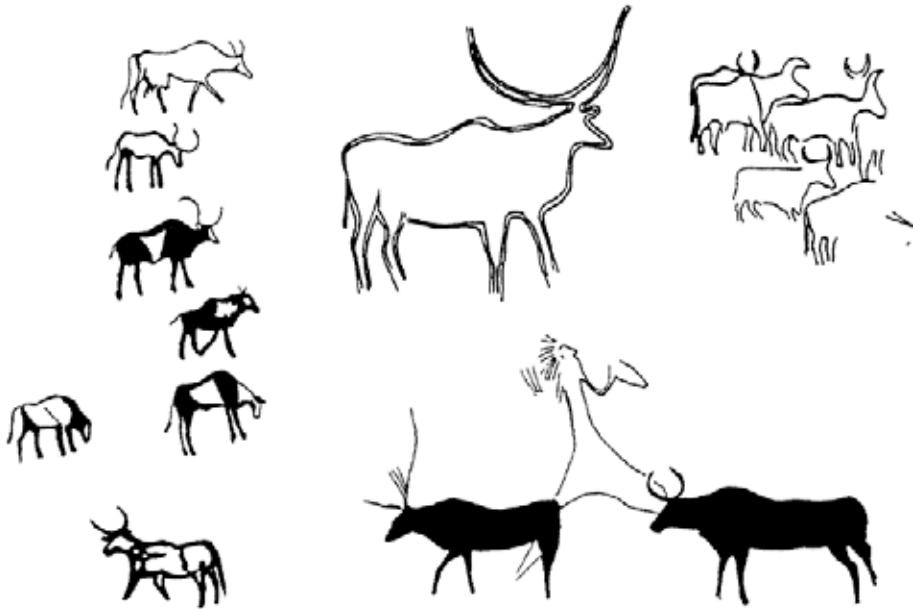


**Plate 1.** Rock painting of a pastoral scene, Tassili, southeast Algeria. Source: Phillipson 2005.

(Wendorf and Schild 1976). These longhorn cattle dispersed with Hamitic peoples; south through present-day Sudan, west along the northern coastal region, southwest into West Africa and also centrally through a much-reduced Saharan region. Cave art from the Tassili and Tibesti highlands indicate that at this time cattle were present in regions of the Sahara with practically no rainfall today (Plate 1).

Although there was an indigenous African aurochs, *Bos primigenius opisthonomus*, it is widely accepted that this subspecies was not domesticated independently (fig. 1) (Epstein 1971; Epstein and Mason 1984; Payne 1991).

There has been some speculation in the literature however, that this native African aurochs actually formed or contributed to the early domesticated populations on the continent (for reviews see Grigson 1991; Wendorf and Schild 1994).



**Fig. 1.** Rock paintings from Tassili n'Ajjer in southwest Algeria showing putative domesticated cattle and a human figure, possibly a herder (Reproduced from Grigson, 1991).

**African Evidence:** In Africa, the question of the food production is one of the most important problems facing the prehistoric archaeologists. This problem is generally concerning the origin of domestic species of plants and animals and the role played by the Africa late prehistoric populations in their domestication or introduction of them.

There are two schools of thought that applied their models in the study of early food production in Northeast Africa. The first believes that the area received knowledge of plant cultivation and animal husbandry from South-West Asia before they spread to the rest of the continent. The Nile Valley and, occasionally, the Horn and Ethiopia were suggested as possible routes for the diffusion of these ideas. Mohammed-Ali (1984: 65-66) summarized both opinions. For the former, the evidences are as follows:

a) The occurrence in South-West Asia of settlements with evidence of food production predating those from Africa.

b) The oldest domestic plants and animals (wheat, sheep and goat) recovered from Northeast African sites (Fayum, Merimde, Shaheinab etc.)



pointed to a South-West Asian origin, since no local wild ancestors of theirs had been identified.

c) Farming in temperate African zones was believed to predate that of tropical Africa.

d) Until recently no settlements with evidence of food production contemporary to, or earlier than, the earlier settlements of the Nile had been discovered in Africa.

The second school supported indigenous African domestication of sub-tropical plant and animals, independent of, and contemporary with, the South-West Asian complex. This was also due to a number of factors (Mohammed-Ali 1984: 65-66):

a) There was increasing evidence supported by radiocarbon dates that in Africa there was a stage of intensive plant exploitation (a necessary prerequisite, it was agreed, for food production) as early as, or even earlier than, equivalent intensive exploitation in South-West Asia.

b) Recent botanical work has confirmed that present-day African domesticated tropical cereals (Sorghum, Pennisetum, etc) were indigenous to Africa, and that their wild forms were unknown to South-West Asia.

c) There was sufficient evidence, supported by radiocarbon dates, that at least two of the so-called "Neolithic" innovations (pottery and ground stone tools) were known in the Sahara prior to their introduction into Northeast Africa.

d) Wild cattle (*Bos primigenius*) were found widespread in North Africa and the possibility of a local domestication could not, therefore, be ruled out.

Without detailed discussion of the evidence of these two schools, it is obvious that either domestic animals or plants were introduced to Sudan from outside or there was indigenous domestication in the Sudan.

In regard to the second argument, it has always been thought that the major domestic animals (i.e. sheep and goat) could not have been domesticated locally because no wild ancestors of these species are known to have existed in the area in pre-Neolithic times.

It is thought that these species were introduced to the Sudan from the north, namely from Egyptian Nile Valley and the Sahara, where they are known to have occurred at an earlier date than the Neolithic of the Sudan; then they are thought to have been only developed by the Sudanese food-gatherers (Krzyżaniak 1978: 169-170). This argument rejects part of

the evidence of the first school, which pointed out that in Africa no early settlements with evidence of food production have been discovered. The last argument could be modified by saying that if the domestic species were introduced from South-West Asia, they must occur firstly in the Nile before the rest of the continent.

### *Archaeological and botanical evidence*

Of the three major domesticated ruminant species in Africa, only cattle had a wild ancestor present on the continent during the period of time when domesticated livestock first appeared in the archaeological record (Epstein 1971). A number of scholars have presented archaeological evidence that cattle were domesticated independently in northern Africa (Carter and Clark 1976; Gautier 1984a; 1987a; 1987b; Grigson 1991; Wendorf and Schild 1994).

The oldest securely identified remains of domesticated cattle in Africa were discovered in North Africa in Capéletti in Algeria and these gave radiocarbon dates of  $6,530 \pm 250$  BP (Clutton-Brock 1989).

Another site, which revealed putative domesticates, was Adrar Bous in northern Niger and these remains were dated to  $5,760 \pm 500$  BP (Carter and Clark 1976). However, these later sites are within a timeframe which would allow them to be derived from domesticated stock originating in the Middle East (Map 2).

The northern region of Africa has undergone major climatic changes since the end of the Pleistocene epoch (Maley 1977; Street-Perrott and Perrott 1993). Three major wet phases have occurred in North African during the last 10,000 years, the first between 10,000 and 8,000 BP, the second during the period between 7,500 and 6,500 BP and the most recent between 6,000 and 5,500 BP.

The ecological conditions during these periods were very different from the arid environment present over most of northern Africa today. Lake Chad is the lone remnant of a series of permanent standing lakes which were scattered across the Sahara 9,000 years ago. Lake Chad was, at one time larger in area than the Caspian Sea and is referred to as MegaChad during the period 10,000-8,000 BP (Grove 1993).

The tsetse zone extended about 500 km further north than its present boundary, almost reaching the 18th parallel (Smith. 1992a). Most of the present-day desert was grassland and the mammalian fauna was similar



Adopted from Phillipson, 2005

**Map 2.** Location of principal sites with rock art and/or evidence for early cultivation or herding.

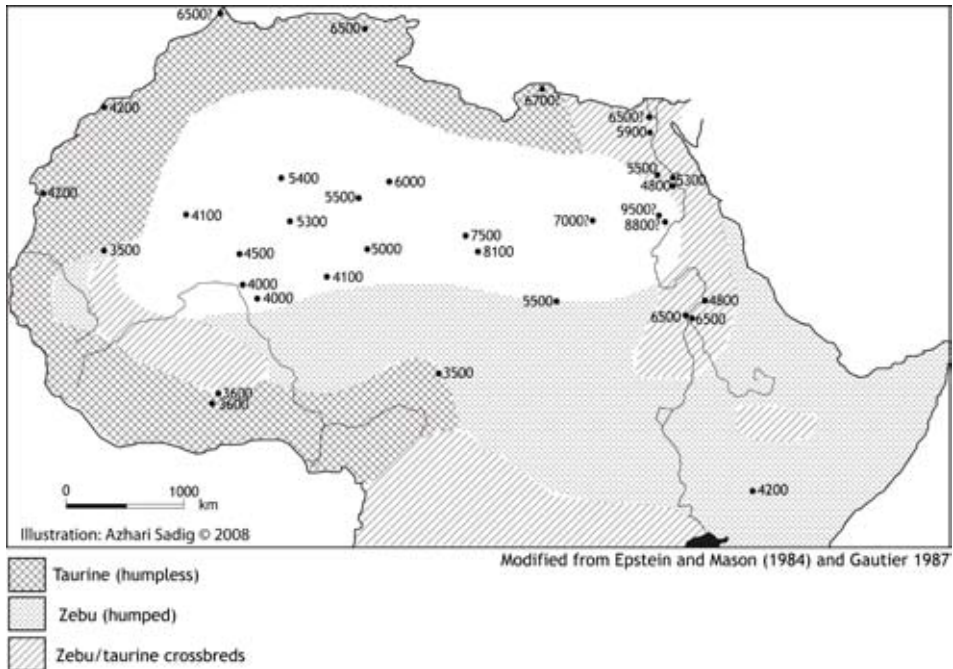
to the present fauna in East Africa. Elephants, giraffes, hippos, rhinoceros and wildebeest were only some of the large mammals which existed in the region at this time. Human populations were taking advantages of these resources and rock engravings, paintings and cultural debris are found in areas with less than 20 mm of rainfall today.

Smith (1992b) has argued that the ecological change between wet phases, particularly after the first Holocene wet phase may have been the environmental stress responsible for the domestication of cattle.

Human populations living in increasingly arid regions may have started to interact with cattle in such a way as to bring them partly under their control and this may have eventually led to full-scale domestication. A primary motive for such an event would have been to ensure the availability of adequate supplies of animal fat, a vital commodity for humans living in desert conditions, and cattle provide relatively large amounts of this substance (Speth and Speilmann 1983).

## *Cattle*

Cattle were the earliest domesticates in Africa (Map 3). Starting in the 1980s, Wendorf, Gautier, and their associates argued for the presence of



**Map 3.** Approximate distributions of the various types of domesticated cattle found in north of equator Africa and the earliest dated of their occurrence.

domestic cattle in the tenth millennium BP in sites from the Bir Kiseiba area of the Egyptian Western Desert (Close 1990; Gautier 1984b; Wendorf and Schild 1998; Wendorf et al. 1987). These dates would make African cattle domestication an independent and older event than in Southwest Asia. Gautier and van Neer (1982) further proposed that large bovid bone fragments from the Ti-n-Torha East Cave in Libya (8490–7920 BP) could also be of domestic cattle. Recent studies suggest that they were probably domesticated from North African populations of wild *Bos primigenius* by hunter-gatherers of the eastern Sahara 10,000–8000 BP. Their origins are still controversial, and the evidence is sparse and not highly diagnostic, but Gautier (1980; 1987a; 1987b; 2001) and Wendorf (Close and Wendorf 1992; Wendorf et al. 1984; 2001; Wendorf and Schild 1980) argue for domestic cattle in the eastern Sahara at Bir Kiseiba c. 9500 BP, and Nabta Playa c. 8840 BP. These dates would make African cattle domestication an independent and older event than in Southwest Asia. Cave paintings dating to 6,754 BP have been found at Tassili n’Ajjer in southwest Alge-

Site name	Country	<sup>14</sup> C yrs. BP	Dom. Cattle	Dome. Caprines	Sources
Merimda-Benisalama	Egypt	5830±60 5440±75	x	x	Driesch and Boessneck. 1985
Fayum A	Egypt	5860±115	x	x	Wendorf and Schild. 1976
Nabta E-75-8	Egypt	7120±150 6240±70	??	-	Wendorf and Schild. 1980
Kharga E-76-7, E-76-8	Egypt	7890±65 5450±80	??	-	Wendorf and Schild. 1980
Bir Kiseiba	Egypt	9000±100 8150±70 8740±95 8740±70	??	-	Close, ed. 1984
Gif el Kobir	Egypt	6980±80	x	-	Gautier. 1980
Shaqadud	Sudan	7500 3500	x	x	Peters. 1992
el Kadada	Sudan	4790±110 4630±80 4830±50 4730±80 4840±70 5170±110	x	x	Gautier. 1986
Es-Sour	Sudan	5296±48 5330±54 5180±48	x	x	Sadig 2008a, Sadig 2008b
Khashm el Girba	Sudan	5000 2000	x	x	Peters. 1992
Kadero I	Sudan	5630±70	x	x	Gautier. 1984a
El Zakiab	Sudan	5350±90 5660±80	x	x	Tigani el-Mahi. 1988
Um Direiwa	Sudan	4950±880 5600±110 6010±90	x	x	Tigani el-Mahi. 1988
El Nofalab	Sudan	5290±100 5520±130	x	x	Tigani el-Mahi. 1988
Laqiya	Sudan	3500 4000	x	x	Van Neer and Uerpmann. 1989
Wadi Howar	Sudan	5200 5000 3000	x	x	Van Neer and Uerpmann. 1989

**Table 1.** Dates for early cattle and caprines in the Nile Valley and adjacent areas.

Site	<i>Bos Primigenius f. taurus</i>	Source
Shaheinab	00%	Arkell. 1953
Zakiab	33.46% / 75.77% per class	Tigani el-Mahi. 1982
Umm Direiwa I	33.54% / 43.98% per class	Tigani el-Mahi. 1982
Shaheinab	6.96% / 50.00% per class	Tigani el-Mahi. 1982
Nofalab	11.43% / 33.33% per class	Tigani el-Mahi. 1982
Kadero I	74.45%	Krzyżaniak. 1978

(F: frequent=more than 100)

**Table 2.** Cattle percentages from Central Sudan sites.

ria which depicts pastoralists and herds of humpless cattle (Smith 1992b). Cattle are present to the west at Enneri Bardagu'e in the Tibesti by c. 7400 BP and in the Acacus by c. 7400–6700 BP (Garcea 1995; Gautier 1987a).

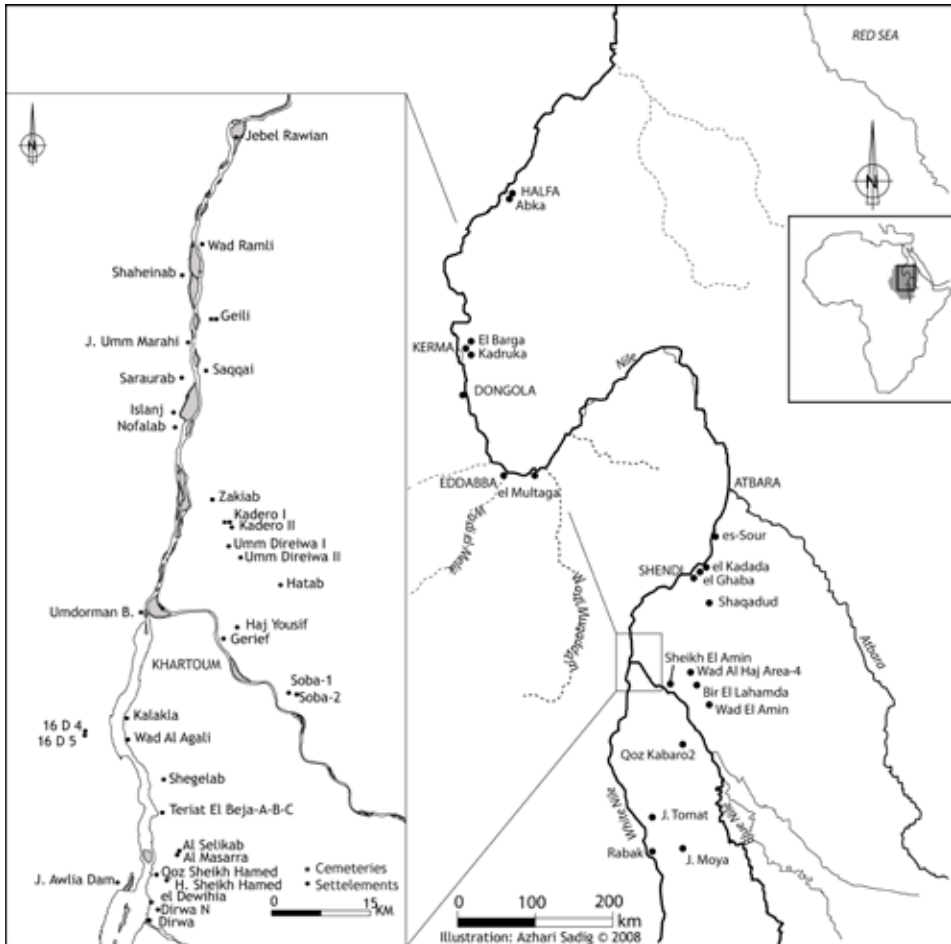
The wet climatic phase between 10,000 and 8,000 BP may have incorporated local cattle domestication and sites in Nabta Playa and Bir Kiseiba in the eastern Sahara have yielded putative *Bos* bones dated as far back as the 10th millennium BP (Gautier 1984a; 1987a, 1987b). Gautier

and his collaborators have argued that these cattle were domesticated because the ecology and climate of this area during this period would not have been capable of sustaining wild cattle populations. Evidence was also uncovered of shallow watering holes of about 1.7 meters in depth which could have been used to provide water for domestic stock (Wendorf and Schild 1994). A reinterpretation of the ecological and anthropological evidence led Smith (1992a) to argue against this interpretation and until more evidence is forthcoming from these sites, the question remains in the balance. Until unambiguous evidence of the domestication process such as faunal shifts or clear size diminution is discovered, it is unlikely that archaeology can resolve the issue whether cattle were domesticated independently in Africa.

Genetic analysis probably represents the most promising avenue of research to substantiate claims for an African domestication. These could be improved dramatically if breeds of cattle were examined from the areas known to have given rise to domesticated cattle in the Middle East. These populations could then be compared to both African and European.

New DNA evidence has shown that African cattle have been separate from those of Southwest Asia for at least 25,000 years. Scientists at the Africa-based International Livestock Research Institute, confirmed through DNA analyses that indigenous African cattle were domesticated from local strains of wild ox long before the introduction of cattle from Asia and the Near East (Hanotte 2002). Domestication, they believe, took place along the border area between modern-day Egypt and Sudan. The new research shows that cattle are an integral part of the African landscape, possessing longstanding adaptation to African savannas. Many wildlife conservationists believe that cattle are an alien species, but the new research provides evidence of their local origins. This strong evidence has confirmed that there was a separate center of cattle domestication in Africa.

The results presented in former pages indicate that the domesticated animals in Sudanese Neolithic sites (Map 4) were introduced from outside. There is no evidence, until now, which could support the process of a local domestication in the Sudan. Krzyżaniak summarized this by saying “we should, however, continue the research for such information, in particular for information concerning the domestication of the wild cattle (aurochs)” (Krzyżaniak 1992: 267-273). As regards the wild cattle, it is thought that this animal lived and was hunted on the middle Atbara River in the cool



**Map 4.** Neolithic sites in the Middle Nile Region.

and arid times of the Terminal Paleolithic, around  $10,230 \pm 270$  BP (Marks 1987:88). Wild cattle remains were also recovered from the lowest level of Site 440, a Middle Paleolithic settlement estimated to date c. 80,000 years old on geological grounds as described by Shiner (Shiner 1968; El Amin 1981). Also wild cattle were recovered from almost every site assigned to the Khormusan Industry, a late Middle Paleolithic complex dated at between 65,000 and 50,000 years old (Marks 1968). In spite of the importance of this evidence, the question is how to determine if the Sudanese hunter-gatherers tried to domesticate that animal.

### *Sheep and goat*

Unlike cattle, the wild ancestors of sheep and goats are believed to be indigenous to the mountains of South-West Asia. These undoubtedly were introduced to the Sudan from outside. The earliest evidence of domestic sheep and goat in Africa appears after 7700 BP (Map 5). Their bones have been found at the Haua Fteah in Cyrenaica c. 6800 BP and the Fayum c. 6400 BP. All this coincided with the opening up of a grassland niche in the Sahara which was increasingly occupied by pastoral people - e.g Tin-Torha (Libya) from 7400 and 5300 BP, Uan Muhuggiag (Acacus Mountains, Libya) c. 6000 BP, Adrar Bous (Ténéré Desert, Niger) c. 5800 BP, Meniet (Hoggar Mountains, Algeria) c. 5400 BP, Erg d'Admer (Algeria) c. 5400 BP, and Arlit (Niger) c. 5200 BP (Smith 1992a). They almost certainly come from western Asia (Gautier 1984a), because there are no wild ancestors for sheep and goat in Africa. Close (2002) argues that sheep and goat came to Africa via the southern Sinai before Near Eastern crop complex, which is thought (Wetterstrom 1993) to have entered the continent through the Nile Valley. These same animals, as well as cattle, are found in many Neolithic sites in Sudan with dates going back to about 6000 BP (Tigani el-Mahi 1982).



**Map 5.** Earliest dated occurrences of domestic sheep and goat in Africa north of equator.



Faunal percentages	<i>Ovis ammon f. aries</i> / <i>Capra</i> (sheep) / <i>Aegagrus f. hircus</i> (goat)	Source
Zakiab	2.90% / 16.30% per class	Tigani el-Mahi. 1982
Umm Direiwa I	7.28% / 9.54% per class	Tigani el-Mahi. 1982
Shaheinab	0.22% / 1.56% per class	Tigani el-Mahi. 1982
Nofalab	10.48 % / 30.56% per class	Tigani el-Mahi. 1982
Kadero I	22.10%	Krzyżaniak. 1978

(F: frequent=more than 100)

**Table 3.** Sheep and goat percentages from Central Sudan sites.

### *The beginning of pastoralism*

Pastoralism is a mode of subsistence consisting of the rearing of livestock (usually cattle, sheep or goats) and a process of constant movement between two or more different areas of pasture. In some cases, pastoralism is adopted as only one part of an agriculturally-based, semi-sedentary culture, while in other more extreme cases a wholly nomadic lifestyle is adopted (Shaw and Jameson 1999: 459). With the evidence available, it is most likely to say that the Neolithic people of Central Sudan were Pastoralists. Their subsistence consists mainly of herding cattle and there are many evidences that they move to different areas for pasture. However, this term is so confusing. This confusion may arise from imprecise application of the term “pastoralist” to any person or community possessing domestic animals, irrespective of the importance which these animals may have had in the overall life-style of the people concerned (Phillipson 2005). In his book (African Archaeology), Phillipson (2005) used the term “herder” to designate someone who owns or controls domestic livestock. However, the term pastoralism pertains more to the Neolithic herders of Central Sudan and Upper Nubia. It includes animal husbandry: the care, tending and use of animals such as goats, cattle, sheep, and so forth (see: Lees and Bates 1974). It may have a mobile aspect, moving the herds in search of fresh pasture and water. Social organization and all other aspects of pastoralism are evident in both areas.

One of the important problems concerning the domestication of animals is the kind of human action by which these domesticates were introduced to the Sudan Nile Valley. More traditionally oriented theories hold the opinion that the occurrence of the Neolithic domestic animals in the Sudan was the result of the influx of the pastoral populations from the Middle Holocene Sahara. These pastoralists are thought to have trekked

with their herds southwards, along the Nile, bringing with them the pastoral technology (Hassan 1986: 98-99, Clark 1980: 568; 577). Wendorf argued that the first domestication or human control of cattle occurred in the Nile Valley, possibly in the area between Tushka in Egypt and Dongola in Sudan, and between 12,000 and 10,000 radio carbon years ago (Wendorf Pers. Comm. 2003).

The only evidence to support this is at Tushka where they were using cattle skulls (wild) as head markers on burials, between 14,500 and 12,500 years ago. He further argued that from there the cattle herders moved into the desert when the summer rains intensified around 10,000 years ago, and they probably came because the wild grasses that grew after these rains were good for pasture.

The view that the fauna from the Neolithic site of Shaheinab near Khartoum (fifth to fourth millennium BC) had 98% wild animals (Bate 1953) has been challenged by Peters (1986) who has restudied the surviving material and concluded that the large bovids which comprise a large proportion of the assemblage were probably domestic cattle. A similar situation was found by Gautier (1984b) at Kadero I nearby, dated to about 4200 BC.

With reference to some evidences proving that the first domesticated animals appeared at the Sudanese section of the Nile River at c. 6000 BP (c. 4900 BC), Krzyżaniak suggested that it is difficult to connect this with the climatic deterioration in the Sahara, because there were other evidences indicating that the climatic deterioration was before 5750 BP (Krzyżaniak 1992: 267-273). As an alternative, he suggested "the acquisition of domestic animals by the Sudanese food-gatherers resulted from a functioning long-distance exchange network" (Krzyżaniak 1992: 269). Such networks, if there were any, could have existed in the Nile already before the Neolithic times. Caneva agreed with Krzyżaniak that there were earlier contacts between the Nile and the Sahara since the Mesolithic period which could have allowed the diffusion of domestic animals and the pastoral economy in the Sudanese regions (Caneva 1993: 89). Elsewhere, Caneva and Marks stressed on what they called "the Saharan cultural elements" which occurred outside the Nile in some sites like Shaqadud (Caneva and Marks 1992). Such elements include mainly some techniques of decoration at Shaqadud as well as some technological aspects, which did not occur in the Neolithic sites along the Nile Valley. This argument involved also that

common cultural features were shared by people inhabiting the regions between the Nile and the Ennedi/Tibesti mountains, as well as to the east of the Nile Valley, since the seventh millennium BC (Caneva and Marks 1992: 23-24). The problem is that these elements did not occur in the Neolithic sites along the Nile Valley before Shaqadud. In fact these contacts should have reached the Nile first before they reached Shaqadud, bearing in mind that Shaqadud's dates are not earlier than those of the Nile sites (Mohammed-Ali. Pers. Comm., see also El Amin and Khabir 1987).

It is obvious from the above hypotheses, which agreed that the livestock were introduced from outside, that there are two arguments concerning the origin of the domestic animals in the Sudan. The first suggests that the first domestic animals were introduced from the north, i.e. from Egypt, while the second suggests that earlier contacts preceding the Neolithic period between the Nile and the Sahara resulted in the expansion of the pastoral economy in the Nile.

Chronology and relations between Sudanese and Saharan areas (Paris 2000; Smith 1992a) suggest that domestic stock were introduced from the Sahara as it became drier (Haaland 1992; Hassan 1997). Cattle, sheep, and goats appear by the sixth millennium BP (Gautier 1984b; 1984c). Local assemblages of lithics and ceramics show continuity (Caneva 1987, 1988; Haaland 1995; Marks and Mohammed-Ali 1991), indicating that any movement of Saharans into the region was small-scale, and culture contact was more important than migration to socioeconomic change.

Entry of Saharans may have been eased by prior social links with the Sudan, indicated by trade and common ceramic styles. Compared to the original Saharan herding environments, the Sudanese Nile offered more dependable, productive resources. This area also posed no particular problems for cattle, as it lies within their wild range. Like earlier local hunter-gatherers, pastoralists used large, semi-permanent camps near the Nile, as at Shaheinab and Geili (Caneva 1988; Haaland 1995; Krzyżaniak 1991). Domestic animals are the dominant large mammals at many sites, such as Kadero I c. 5000–4000 BP, but were added to a wide range of wild animals used by earlier hunter-gatherers (Gautier 1984c; Haaland 1992). Unlike Saharan pastoralists, herders in this better-watered landscape are thought to have used plants more intensively than their hunter-gatherer predecessors.

Site structure and increased use of grindstones at Kadero 1, Um Di-

reiwa and Zakiab indicate to Haaland (1992) that, as early as 5000 BP, pastoral groups were cultivating sorghum that was morphologically wild (Stemler 1990).

Social differentiation appeared among Sudanese herders by the sixth millennium BP. Clusters of especially rich graves of men, women, and children at Kadero I argue for differences in wealth (Krzyżaniak 1991), but there is no evidence for social stratification. Pastoral intensification and a decrease in wild animal use are also evident at some sites in the Middle Nile after 5300 BP. Despite these developments, the spread of herding was patchy: at Shaqadud, east of the Nile, subsistence focused on wild resources as late as 4000 BP (Marks and Mohammed-Ali 1991; Peters 1991).

The evidences of animal husbandry in Nubia provide a rather varied picture. It is difficult to reconstruct the economic aspects of the Khartoum Variant groups, given the rarity of faunal remains. No animal domestication is evidenced, and the remains are primarily of fish and fresh-water mollusks, particularly *Aetheria elliptica*, indicating that these people were still very much directly dependent on riverine resources. The frequent occurrence of grinding stones and ostrich eggs at these sites serves to indicate both the exploitation of local wild plants and the hunting of the ostrich.

Evidence of hunting is very clear in the material of Abkan sites in Lower Nubia. Although the economic subsistence is not represented in the archaeological remains of Abkan sites, one of the largest and best known finds of Nubian prehistoric art was at Abka, closely associated with occupation remains at the Qadan and Abkan industries of the Final Stone Age and the Neolithic. Curiously, in view of the presumed subsistence activity of the people who lived at Abka, there are no representations of fish, although one semi-abstract design might be a fish trap (Myers 1958: Pl. xxxiv). Although Perkins (1965) considered that the fauna from the Abkan site ASG-G-25 at Wadi Halfa was wild, his "large bovids" may very well also have been domestic cattle (Grigson 1991: 133). The collection from this site contains catfish, Nile perch, ostrich eggshell, Egyptian goose (*Alopochen aegyptiacus*), hare, gazelle, large bovid and wild ass. Domestic goat (*Capra hircus*) seems to be represented by a single distal epiphysis found in the upper layer of the site and may be Terminal Abkan or intrusive (Grigson 1991: 222).

Another Abkan faunal assemblage was described briefly by Carlson (1966: 53-62) and includes fish, hare, gazelle and remains of a large bovid which could have been domestic cattle at least for part of them (fig. 2).



**Fig. 2.** Graffiti of domesticated cattle with male and female human figures from the Faras site in Sudan. These drawings were found on pottery dated to the 5th millennium BP (Reproduced from Grigson 1991).

Hence our scanty knowledge does not permit an unquestionable affirmation that the Abkans already were practicing animal husbandry though it seems that they may have combined gathering and hunting with pastoral activities.

The faunal remains recovered from the graves at site R12 near Kerma indicate that domestic livestock was most important, but collecting and hunting were not minor activities as shown by the large amount of hippopotamus teeth, gazelle bones and bivalves (Pöllath 2008: 77). The graves contained a wide variety of faunal remains including different animal products, eggshell, mollusk shells, bones and teeth, worked into ornaments, and other tools. Cattle were certainly most important as is demonstrated by the large amount of tools made from cattle bones and by the burcania that were a sign of wealth, power and influence. The lambs buried with the deceased indicate that sheep also played a vital role in burial customs.

### *Botanical remains and evidence of cultivation*

Before food production, Mesolithic people of Central Sudan made intensive use of wild plants. Early Khartoum people c. 9000-6000BP lived in large settlements, fished, hunted, and used *Celtis integrifolia*, *Echinocloa colona*, *Panicum tigidum*, *Salix sunbserrata*, *Setaria* sp., *Sorghum* sp., and *Ziziphus* sp. Plant impressions in pottery suggest that wild cereals were key dietary elements (Arkell 1949; Haaland 1987a). The exploitation of the domesticated plants during the subsequent Neolithic period remains hypothetical. Plant remains were limited to the imprints of grains found on potsherds excavated from several Neolithic sites along the Nile. Most of these imprints have been identified as wild sorghum (*Sorghum verticiliflo-*

rum), while very few as the wild ancestors of millet (*Pennisetum vidacum*) (Magid: 1989).

**Morphological data:** In Sudan the area between 15 and 20° North latitude roughly corresponds to Harlan's bicolor zone where the first domestication of sorghum is believed to have occurred (Harlan 1971: 128-135). This area included the Qoz of Kordofan, the area around Khartoum and Atbara. In addition, the Jebel Marra region in western Sudan is another likely area which may yield direct evidence of domestication of millet. The last point is based on the fact that this region is one of the most conspicuous areas of interaction among wild, weedy and cultivated races of pearl millet (Harlan 1971: 471). The origins of crop sorghums, in the form of the primitive race bicolor, have generally been assigned to the sub-Saharan thorn savanna belt, from Nigeria to the Sudan, from *arundinaceum* (Harlan 1971: 471), although an Ethiopian origin has also been suggested (Doggett and Prasada 1995: 173).

Macrobotanical remains and plant impressions in pottery suggest that Shaheinab people used *Acacia* sp., *Celtis integrifolia*, *Elaeis guineensis*, *Hyphenaena thebacia*, *Ziziphus* sp., possible wild or domestic *Citrullus* sp., other Cucurbitaceae, and *Nymphaea*; grasses include *panicoids*, *Setaria* sp., *Sorghum verticilliflorum*, and wild *S. bicolor* ssp. *arundinaceum*. Morphological data indicate that sorghum was wild (Arnell 1953, Haaland 1987a).

Another site providing evidence of domestic plants is the Shaqadud site. On the basis of the botanical evidence from Shaqadud Cave, it appears that two distinct but complementary strategies of plant exploitation were used (Magid 1991: 196). The evidence for fruits of *Zizyphus* (Nabag) and *Grewia* indicates seasonal collection of these wild plants. The second strategy is apparent in the presence of domestic *Pennisetum*. The proportionately small numbers of *Pennisetum* remains might indicate that it played a relatively small role in the overall diet (Magid 1991: 196).

Large quantities of carbonized *Sorghum bicolor* (L.) Moench grains, spikelets and inflorescence fragments sorted from about 2 foot<sup>3</sup> of charred material have been found in a storage pit at Jebel et Tomat (13° 36'N, 32° 34'E), and small amounts of carbonized sorghum found in eleven levels of the midden excavated there, suggest that sorghum was the staple grain of people who inhabited the site. The date of 245 ± 60 AD (UCLA 1874M) was obtained from a concentration of carbonized plant remains in the floor of the pit, which was dug into the dark clay loam on which the midden rests probably at about the same time as the accumulation of the middle

or beginning of the upper unit of the midden. The remains of wickerwork matting and many fragments of thick stalks of cereal grass suggest that the pit may have been a silo lined with stalks and mats (Clark and Stemler 1975: 588-91). If so, it is not dissimilar to the pits made today in the area for storing grain.

*Archaeological evidence:* Sorghum certainly has a history of early dates within Africa that have been discounted following more detailed examination. Cultivated sorghum presents one of the more perplexing problems in African agrarian history. It is found in archaeological sites in Korea and India millennia before confirmed archaeological finds in Africa (Blench 2003: 276). The evidence for the sorghum in Asian sites clearly has implications for the antiquity of its cultivation and domestication in Africa. Dorian Fuller's recent re-analysis of claims for domesticated cereals in India, confirmed the presence of pearly millet, sorghum and two legumes (cowpeas and hyacinth beans) by the mid-second millennium BC (Fuller 2006). Finger millet is present from around 1000 BC. This is one such case where focusing solely on morphological domestication is too limiting a strategy for understanding the origins of domesticated sorghum. It is now well established that sorghum at least will not undergo the morphological changes that identify it as domesticated if harvested by stripping the grain from the stalks or beating it into baskets. Sorghum impressions (all morphologically wild in status) are plentiful on early Holocene potsherds in Nubia; grindstones are numerous and settlements occur in alluvial settings with heavy clay soils, contexts well suited for growing sorghum, whether for food or beer. Wasylikowa and Dahlberg (1999: 11-32) show that the carbonized sorghum grains found at Nabta Playa in southern Egypt from c. 8000 BP are exclusively wild.

Material from Neolithic sites of Kadero I, Zakiab and Um Direiwa shows that the inhabitants were probably cultivating wild sorghum. The discoveries at these sites include several imprints of sorghum in potsherds and an extremely large number of grindstones (Haaland 1981a: 196-197). The dates obtained from the site of Zakiab range between  $5350 \pm 90$  BP to  $5660 \pm 80$  BP. Three radiocarbon dates were also obtained from the site of Kadero I; the oldest of these is  $5700 \pm 100$  BP and the youngest is  $5030 \pm 70$  BP, as well as four radiocarbon dates from the site of Um Direiwa I; the oldest of these is  $5600 \pm 110$  BP and the youngest is  $4950 \pm 80$  BP (Haaland 1981a: 55).



**Plate 2.** Fragments of some of the broken grinders recovered from the Um Direwa site during excavation. Source: Haaland 1995.

These dates provide the earliest evidence of exploited wild sorghum in Sudan. In addition to these, one impression of *sorghum verticilliflorum* on a potsherd was also recovered from the Neolithic site of Shaheinab (Magid 1982: 97-98). Several dates were obtained from this site (Arnell 1953, Haaland 1981a, 1981b, 1987a); all these are more or less contemporary to those obtained from the sites of Zakiab, Kadero I, and Um Direiwa I. Stemler (1990), who identified the plant remains from these sites, pointed out that the sorghum imprints are not morphologically different from those of wild grain, the only exception being one impression from Um Direiwa that bears some resemblance to domestic sorghum (Stemler 1990: 87-98). Stemler's main argument is that "the type of sorghum looks like wild sorghum", but "there is a possibility that it was a primitive domesticate very similar to the wild" (Stemler 1990: 96).

As regards to the other evidence of cultivation, the many numbers of grindstones on the Neolithic sites could not be used as a direct evidence of cultivation, although their frequency may point to a greater reliance



on plant food (Plate 2). On the other hand, there is a clear decrease of the other indirect evidence such as the tools that may have been used as sickles. The only tools that were discovered and that may have been used as sickles are lunates and backed tools (Wendorf 1968: 943).

In the case of the Neolithic sites in the environ of Khartoum, Haaland suggested that these microlithic tools were not used as sickles because of their very low frequency (Haaland 1987a: 76). In another place she used some evidences to argue that the early Neolithic populations have cultivated sorghum (Haaland 1981a: 213-215). This hypothesis is based on various arguments:

1. The large dimensions of the early Neolithic base settlements could have accommodated large populations,
2. High frequencies of grindstones used for the processing of grain occur in these settlements,
3. The use of lithic gouges which are thought to have been used as blades of hoes in tilling the soil.

She also used a botanical argument when she states that the simple sweeping off the ground of the grains of sorghum - cultivated or not - cannot lead to domestication unless a harvesting tool (knife, sickle) is used (Stemler 1980: 514-516, 521). In his discussion of this hypothesis, Krzyżaniak stated that: "It is however, difficult to accept this hypothesis on the basis of the archaeological ground mentioned above before testing its arguments. Firstly, we still know very little about the actual dimensions of the early Neolithic settlements at any one time when they were functioning. Second, observation made at Shaheinab and Kadero I point to a possibility that a considerable part - perhaps the majority - of grindstones found at the sites were used to perform some function other than crushing or milling grain. Thirdly, as regards the function of the gouges, their use can only be hoped to be determined by use-wear analysis; traditionally they are thought to have been used in wood-working" (Krzyżaniak 1992: 269-270). Unfortunately, our present understanding of the early development of seed-crop agriculture in the Sudan depends largely on such indirect evidence. The artifacts, which have been usually used for inferring early food production, are such items as grinding stones, sickles, pottery and ground stone axes (Frankenberger 1979:21). However, it is important to reiterate that a certain degree of caution should be exercised when such material is being considered as diagnostic signs of food production in the Sudanese Nile Valley. Such artifacts have been found in non-agricultural

contexts as well. Taking this into account, the finding of such pieces of evidence is of some value in filling many of the gaps left by exiguous records of direct evidence.

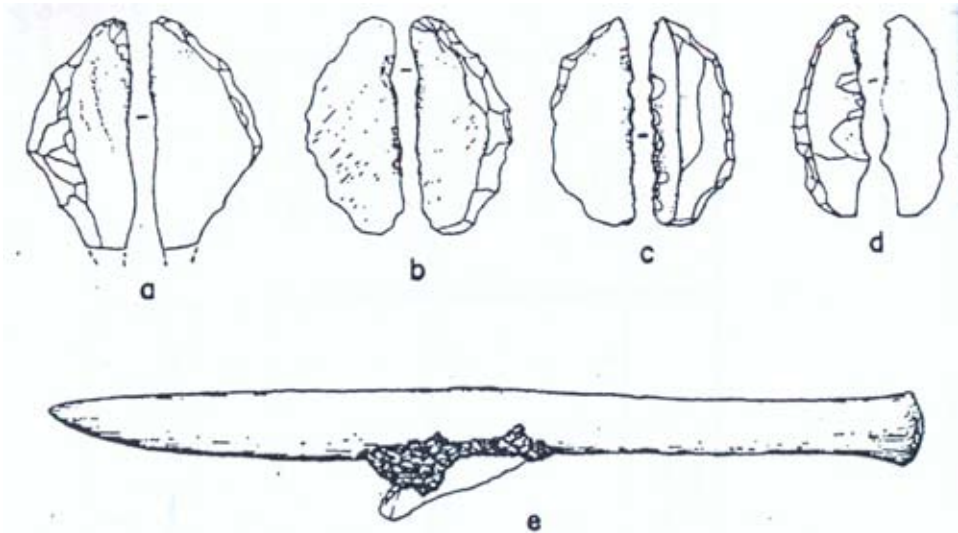
*Indirect evidence:* Some of the earliest finds of the indirect archaeological evidence for plant domestication in the Sudan has been found in the Early Khartoum sites. The radiocarbon dates for these sites demonstrate that pottery manufacture was much earlier in this region than in the Egyptian Nile Valley (Plate 3). The un-burnished wavy line decoration characteristic of the Early Khartoum sites has also been found in sites in Ennedi in Chad as well as at Amekni in the Hoggar region of Algeria (Arkell 1972: 222). These Sahara sites register dates between 5230 and 6100 BC (Arkell 1972: 222). Clark postulates that the wide distribution of this pottery gives a strong indication that an exchange of knowledge as well as trade goods was occurring all across North Africa, and that “a knowledge of plant cultivation as well as domestication of animals could equally have been diffused to the limits of the Savanna at this time” (Clark 1970: 201).

Magid (1989: 123-129), summarized the association of pottery with the exploitation of food-plants in the following points:

1. The introduction of pottery probably demarcated the beginning of a new adaptation in which already known, potential food-plants were now exploited, for instance the beginning of utilizing seeds and grains of cereals. Pottery might have provided the basic requirement for cooking these seeds and grains before serving them as food.

2. Pottery containers would also provide means of storage for the durable food-plants, e.g. seeds, berries, fruits and nuts to be used during periods of need or when they were not available in nature.

Another area of the Sudan, which provides indirect evidence of domestication of plants, comprises the Butana and the Atabai plains east of the Nile Valley in the Eastern Sudan (Mohammed-Ali 1985: 26). Neolithic sites have been located in this area as well as the latter, contemporary with the last half of what has been designated the Kassala phase, wherein occurred a group of over fifty sites termed “Jebel Mokram”. This phase has been generally dated to around 2nd millennium BC and is characterized by seasonal occupations of nomadic groups who moved into the Butana and the Atbai (Mohammed-Ali 1985: 26, Fattovich et al. 1984: 182). In addition to domestic cattle, some of the potsherds recovered from these sites contain amounts of macrobotanical materials. Some of these were identified as domestic sorghum (Fattovich et al. 1984: 182).



**Fig. 3.** Suggested method of hafting of lunate-sickle from Toshka (Source: Wendorf and Schild. 1976. 277).

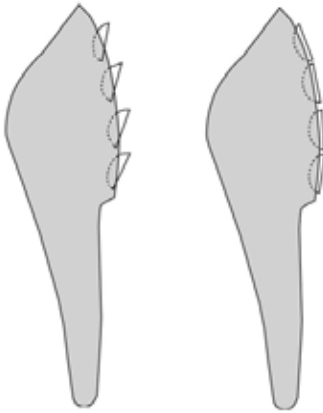
Another indirect evidence of food production is the use of lithic tools associated with plant activities. These contain lunates, sickle-blades, grinders, rubbers and stone. It has been suggested that hafted lunates dated to c. 12000 BP were used as sickles (Wendorf 1968: 943, Wendorf and Schild 1976: 276-277) (fig. 3), and according to Honegger (2008: 172) there are two main groups of lunates; the large lunates which “must have been sickle or plant knife elements” and “the smaller ones “which are identified as arrowheads” (figs. 4a and 4b).

According to Magid (1989: 135) the interpretation suggested by Wendorf as to how the lunates were hafted and what function they performed is not applicable in the case of the lunates which were recovered from Central Sudan for the following reasons:

1. Scientific examination of the lunates under microscope did not show any visible traces of sickle-gloss on them that would indicate that they were probably used as tools to cut food-plants.





2. The tools are too small to have been used as sickles if they had been hafted.

3. It is evident that there was a noticeable decrease both in the number and size of lunates from the period of Early Khartoum to those of the



**Fig. 4a (left).** Proposition of reconstitution of sickles with two different insertion methods for the microliths, in accordance with the observations made at Kadruka (Source: Reinold 1994) and at Kerma.

**Fig. 4b (below).** Outline representing lunates hafted as arrowheads or barbs, the way they were found at Naga Ed-Der, 2320-1760 BC (Source: Clark et al. 1974, fig. 9, p. 362).

A1	A2	A3	A4
 <p><b>Broad Lunate</b></p>	 <p><b>Narrow Lunate</b></p>	 <p><b>Narrow Lunate Barbed</b></p>	 <p><b>Broad Lunate Reversed Barbs</b></p>

Shaheinab. Thus if lunates were used for the exploitation of food-plants, they would have also increased in number over time.

Other artifacts played an important role in the food production process. For example, the extremely numerous grinders found in the Neolithic sites indicate an increased importance of vegetal foods such as sorghum and perhaps the beginning of their cultivation (Haaland 1981a: 215, Magid. 1989: 149). Evidence of grinders was recovered from late sites such as Jebel Tomat. The earliest evidence of domesticated cereals, namely *Sorghum bicolor* (L.) Moench from the Central Sudan, was found at this site. It is most likely that grinders were used during this late period more than at



**Plate 3.** Rimsherd from a large vessel, probably used for storage, from Aneibis, Atbara Region. Source: Haaland 1995.



**Plate 4.** Sandstone Rubbers from Shaheinab site (Source: Arkell 1953).

any time before for grinding food-plants (Magid 1989: 149).

According to Magid (1989: 177), the only tool which might be directly related to cultivation activities is the sandstone rubbers which are believed to have been used for shaping and polishing wooden and bone artifacts (Plate 4). As stated previously, at present there is to my knowledge no direct archaeological evidence for plant domestication in the Sudan during the Neolithic period. This seems quite strange considering the fact that this area was probably one of the places where the first attempts at domestication took place in Africa (Vavilov 1951, Harlan 1971).

### *Other subsistence economies*

The archaeological materials from the Neolithic sites in the Middle Nile show that fishing, shellfish collecting, hunting and plant gathering were important subsistence activities.

Fish remains represent a major aquatic resource exploited by the Neolithic people. Six Nile fish genera, all represented in today's Nile, were identified by Tigani el-Mahi at Zakiab, Um Dereiwa, Shaheinab and Nofalab (1982: 59-78). Among these six genera, four are presented at all the sites, namely *Tilapia*, *Lates*, *Synodontis* and *Clarias*.

The remains of bone harpoons, spears and fish hooks suggest one method by which fish were caught. Tigani el-Mahi (1982) has argued that other methods were used for fishing. These included traps, baskets and poison. Unfortunately, we do not find any direct evidence for the use of the last three methods. In his study of fish remains in Mesolithic sites in the Atbara region, Peters (1991) suggests that nets were used, although no remains of these have been found. Some disk-shaped pottery artifacts that are frequently recovered on all Mesolithic sites in that region might have been net sinkers (Haaland 1995: 159).

The importance of the aquatic resources was further indicated by the very numerous shell remains found. At Shaheinab fifteen species of shellfish were identified (Arkell 1953: 11). These include *Ampullaria wernei*, *Lanistes carinatus*, *Melanoides tuberculata*, *viviparus unicolor*, *Cleopatra bulimoides*, seven species of bivalves and three species of land-snails.

At Shaheinab, 32 mammalian species have been identified and of these, buffalo, giraffe and hippopotamus were the most plentifully represented among the wild animals (Bate 1953: 11). The swamp-loving animals (reed rat, water mongoose and Nile Lechwe) were absent. Antelope had noticeably decreased. Mammalian remains are also abundant on the other Neolithic sites in the Middle Nile and show that a wide range of animals was hunted. The hunting is also practiced in Butana sites. The faunal materials from Shaqadud certainly attest to hunting. Most of the animals hunted during the Neolithic were still being hunted, although the larger antelopes are not found and hare makes an appearance. Small antelopes were hunted, as were giraffes; a large part of one was found in the middle cave deposits (Marks et al. 1985: 275).

Macrobotanical remains suggest that the only remains found were seeds of hackberry tree (*Celtis integrifolia*). This type of seed was found

on many Neolithic sites in Central Sudan. The inner seeds were left, and probably the outer parts of the berries were eaten (Haaland 1987a: 181). Neolithic people also used *Acacia* sp., *Elaeis guineensis*, *Hyphenaena thebacia*, *Ziziphus* sp., possible wild or domestic *Citrullus* sp., other *Cucurbitaceae*, and *Nymphaea*; grasses include *panicoids*, *Setaria* sp., *Sorghum verticilliflorum*, and wild *S. bicolor* ssp. *arundinaceum*.

Faunal remains from the Neolithic sites in Lower Nubia include those of wild animals and fish. Although no direct evidence of food production has been obtained from the two cultures, the dominance of small sites in Khartoum Variant, both along the river and as far as at least 20 km west of the Nile, has been interpreted as evidence of a pastoral economy. Evidence of hunting is very clear in the material of Abkan and Khartoum Variant sites. Although the economic subsistence is not represented in the archaeological remains of Abkan sites, it seems that the Abkan people were essentially exploiting the river valley, judging from the remains of mollusks and fish (*lates niloticus*, *Clarias*). Land-based creatures, such as the gazelle, the ostrich and the goose (*Alopochen aegyptiacus*), are also represented among the faunal remains. Finally, the metatarsal bones of domestic goat may possibly be linked with the Abkan stratum at site AS-6-G-25, excavated by the Scandinavian Joint Expedition (Nordström 1972).

The Neolithic people of Upper Nubia had a mixed subsistence economy including animal husbandry, hunting and gathering. Major faunal resources for subsistence needs were probably available within the region. As discussed before, the R12 faunal assemblage reveals an increase in exploitation of domestic animals, especially cattle. The faunal profiles seem to suggest that hunting wild animals, including some very large game such as elephants, appears to have been a significant activity in the community, though, it is difficult to say whether elephants were present in the vicinity of R12 during the Neolithic. The finds from this cemetery are exclusively ivory objects and are not helpful in solving this question. The evidence of wild animals shows that the Nile Valley inhabitants exploited the aquatic resources and went on hunting trips, exploiting the River Nile itself as well as the riparian forest zone and the adjacent semi-desert (Pöhlath 2008: 73).

## ***Conclusion***

The Neolithic culture of the Middle Nile Basin was distributed through the Central and Northern regions in the fifth millennium BC. Several cultural traits mark the social and economical development in the Neolithic period. Burial practices indicate the presence of social hierarchies. Regional cultures became more extensively distributed, and finally, the Late Neolithic cultures of this region became increasingly complex, forming the foundation for the development of the Bronze Age societies (A-Group, C-Groups and Kerma civilization).

The wide excavations on the Neolithic sites have greatly increased our knowledge of the cultural development of the Neolithic period, together with the results of the previous work in Nubia and Central Sudan. However, many more questions concerning the Neolithic development remain unanswered. We know little about agricultural activities, land use, and community organization. We lack information on the origins of the Neolithic of Central Sudan. Caneva argued that “the chronological gap which seemed to separate the Khartoum Mesolithic from the Shaheinab Neolithic is now consistently filled by the dotted wavy line cultures” (1993: 89-90). Focusing the research on this problem ought to bring us closer to explaining to what degree the older, local cultural base contributed to the development of the Neolithic culture of Central Sudan and what the main factors were that contributed to the development of the Neolithic societies in this whole area.

Social differentiation appeared among Sudanese herders by the 6th millennium BP. Clusters of especially rich graves of men, women, and children at Kadero I argue for differences in wealth, but there is no evidence for social stratification. Pastoral intensification and a decrease in wild animal use are also evident at some sites in the Middle Nile after 5300 BP. Despite these developments, the spread of herding was patchy: at Shaqadud, east of the Nile, subsistence focused on wild resources as late as 4000 BP.

However, whatever this social organization might have been, it should have left some material manifestations of its structure. The increasing importance of domesticated animals, for example, would be associated with the emergence of more individualized rights and responsibilities in economic management and this would have led to increased differentiation within such communities.



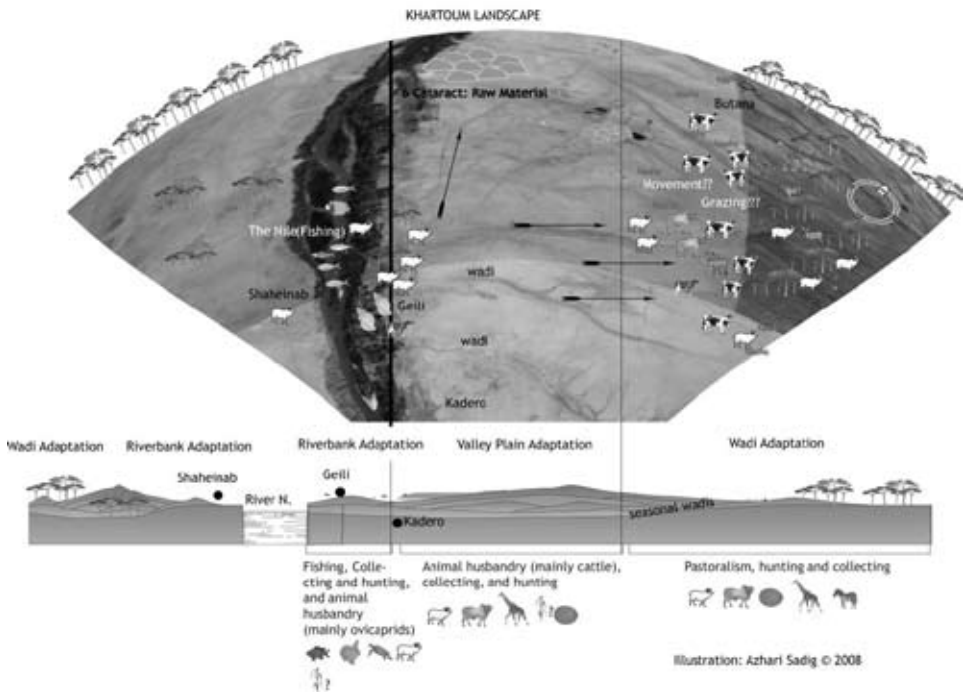
It seems that, in spite of many excavated sites, evidence for the social organization of the people of the Neolithic in Central Sudan will be limited to that derived from burial information. Although the hypothetical social classes reflected in the graves were not observed in the settlements, currently available evidence seems to indicate that the burial grounds at el Kadada and Kadero I clearly illustrate the process of increasing concentration of goods and power by a social “elite” toward the end of the Neolithic.

It is clear that the social structure in the Central Sudan during the Neolithic period exhibited more or less inseparable economic and settlement patterns which are in turn witness to developmental stages extending from the Early Neolithic to the complex picture of the Late Neolithic.

The archaeological and morphological evidences of Neolithic subsistence show that the people practiced multi-resources during that period. There is evidence for food production based on animal husbandry around 6000 BP. It seems that all riverine settlements of the Middle Nile region during the 6th and 5th millenniums BC were occupied by populations following basically similar mixed economy strategies (fig. 5), which consist of the following (based on Krzyżaniak 1984: 314):

**1. Riverbank Adaptation:** subsistence based on fishing, collecting and hunting, supplemented by small-scale animal husbandry (possibly only of the ovicaprids). The Khartoum Variant sites suggest fairly stable, long term occupation by a relatively sedentary population. Although only bones of fish and some mollusks have been found associated with the riverside sites, the presence of many formal tools in the lithic industry suggests a mixed economic adaptation, albeit perhaps one without any domesticated plants or animals. The Abkan can also be reasonably identified as a mixed economy population. The Abkan adaptation seems to have focused on fishing supplemented by hunting and gathering. Large numbers of fish remains are associated with Abkan sites. Also, a variety of hunted animals, including gazelle, large bovids and geese as well as grinding stones are found on most sites. As in the Khartoum Variant case, the Abkan mixed adaptation may not have included use of domesticated plants and animals.

**2. Valley Plain Adaptation:** subsistence based on large-scale animal husbandry (mainly cattle) of pastoral character combined with the intensive, and perhaps already with elements of specialization, collecting of seeds of wild tropical cereals, other grasses, tree fruits, mollusks and some hunting. The evidence from Kerma and Dongola areas allows iden-



**Fig. 5.** Hypothetical illustration of the economic strategies of the Neolithic communities in the Khartoum Nile environment.

tification of such adaptation. Faunal remains from Kadruka and Multaga sites represent a sedentary or semi-sedentary mixed economy population, similar to that of Central Sudan. The remains from the Neolithic sites in Central Sudan represent a sedentary or semi-sedentary mixed economy population, which in some cases included cultivation of domesticated? plants and herding of domesticated animals. Haaland has argued that the processes of cultivation started at an early date and constituted the selection pressures which finally led to the evolution of domesticated sorghum (Haaland 1987a). She also mentioned that the material from the Neolithic sites such as Kadero I, Um Direiwa and Zakiab shows that the inhabitants were probably cultivating wild sorghum (*S. verticilliflorum*) (Haaland 1992: 50). As far as archaeological and morphological evidence are concern, cultivation is much less certain, indicating human utilization of wild varieties of sorghum rather than clearly domesticated sorghum.

**3. Wadi Adaptation:** subsistence based probably on pastoralism, hunting and collecting. This feature could be observed in the sites of Shaqadud (50 km from the River Nile bank), Sheikh el Amin (18 km), Wad el Amin (25 km), Bir el Lahamda (40 km) and Wadi Rabob (58 km). According to their location with respect to the Nile, the settlements had a different socio-economic orientation: dry season camps in the alluvial plain or Butana plain, exploiting the aquatic resources (in the case of last four sites), base sites occupied all-year round in the alluvial plain or Butana and orientated to cultivation, and herding camps in the Butana savanna during the rainy season (Haaland 1987b: 216).

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