Death is another country

Mortuary rituals and identity in Fazzan, Libya

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Abstract

Death is universal and all societies have developed some kind of death ritual which serves as a formalisation of the death and an opportunity to mourn the dead. After the death of a person, there is the need to deal with both the emotional and physical aspects of death, including the disposal of the deceased. In modern times, death is removed from human experience. We are no longer constantly faced with death, and when we are it is presented in a sanitised form. The death of a family member, a friend, a neighbour, provides us with the experience of death and a reminder of our existence and certain extinction. Death rituals reaffirm the central beliefs within culture. They are drawn on previous practices and memories. Cemeteries and funerary monuments act as physical memories; they become the focus of rituals and tie them to the social memory.

The Garamantes flourished in the region of Fazzan in the period *c*.500 BC- c. AD 500. Classical sources provides a first contact with this civilisation, although as discussed in this thesis, archaeology is offering the opportunity to combine what Graeco-Roman writers understood the Garamantes to be and what they have left behind. My interest lays with their mortuary rituals, the Garamantian way of death and how, at the time of death, the Garamantes saw themselves as one culture, following a similar pattern of behaviour across time and space. The analysis of the cemeteries, place (structures) and burial rituals, the treatment of the deceased and the offerings linked with death provides information on the cultural identity of the Garamantes and their and social values, which have been transmitted through the funerary record.

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Contents

List of Figures

Page

List of Tables

Page

List of Graphs

Chapter 1. Death is another country

1.1. Introduction

1.1.1. General introduction to the research project and study zones

This research project examines the funerary behaviours in the region of Fazzan, in the Wadi al-Ajal in particular, in order to understand the mortuary practices of the Garamantian societies. The Wadi al-Ajal, area known as the 'heartland of the Garamantes', has been the focus of several British interdisciplinary projects since the 1960s, firstly with the work led by Charles Daniels (University of Newcastle) and followed by Professor David Mattingly (University of Leicester).

Specifically, my research seeks to explain the variability and diversity in the rituals related to death and burial and its relation to the creation of cultural identity and social memory. Daniels estimated there were over 120,000 visible tombs in the Wadi al-Ajal (Daniels 1989: 49). A significant proportion of these monuments relates to the Garamantian funerary landscape, comprising a variety of tomb morphological typologies ranging from simple cairns to mud-brick pyramid tombs. The Garamantes, a society that dwelt in the central Sahara, with its apogee from *c.*500 BC to *c.*AD 500, employed a wide variety of cemetery and monumental typologies, including tombs, stelae and offering tables, and distinct burial forms (Mattingly 2003: 187-213). The analysis of this significant and accessible dataset within a contemporary theoretical framework, based on recent ideas and developments in mortuary archaeology, will aid in gaining a deeper understanding of Garamantian society, its representations of social and cultural identity, and its belief systems.

The region of Fazzan is a large closed basin with an area of 450,000 km², located in south-western Libya. It is part of the Libyan Desert that extends from the Algerian border to western Egypt in the east and south to sub-Saharan Niger and from Chad and Algeria to the pre-desert areas and oases of Al-Jufra (Mattingly 2003: 1). The present-day climate is hyper-arid. Modern human occupation is restricted to oases, particularly at the foot of the Massak Sattafat, a Nubian Sandstone escarpment

which divides Fazzan into two sub-basins. However, widespread lithic scatters with varying inferred ages, and numerous Holocene hearth fields, indicate that Fazzan has a very long history of human occupation (Armitage *et al.* 2008).

Figure 1.1. Satellite images of Libya (top) showing the location of the Wadi al-Ajal (Source: Google Earth).

The particular area of study for my research comprises the Wadi al-Ajal (Figure 1.1), a long linear band of oases to the south west of Sabha (the modern capital of Fazzan). The Wadi al-Ajal lies between the sands of the Edeyen Ubari to the north and the sandstone plateau of Massak Sattafat to the south. The northern edge of the Massak Sattafat is a steep escarpment overlooking the Wadi al-Ajal which reaches heights of over 100m (White *et al.* 2006: 124). At the foot of this escarpment there is a high concentration of cairns and other Garamantian funerary monuments, making these escarpment cemeteries one of the most characteristic features of the Wadi. As a point of comparison within Fazzan, I have analysed tombs of Garamantian date in the Wadi Tanezzuft (see Appendix C). Most of the research in this area has been related to the prehistoric period. Garamantian cemeteries lack a systematic investigation, with Fewet being the only exception (publishing of the results are forthcoming and not available at the time of writing this thesis).

The Wadi al-Ajal has been the subject of intensive survey and systematic archaeological excavation. An outline of the results of the fieldwork is provided in Chapter 2.

The choice of Fazzan as a region of investigation, and the Wadi al-Ajal and Tanezzuft in particular, developed from the distinctive nature of the archaeological record of the area, and the significance of Fazzan as a zone of contact with both the Mediterranean north and sub-Saharan Africa, making it unique and eclectic in character. The preservation of the archaeological heritage in Fazzan is in many cases extraordinary, mainly due to its remoteness. Nevertheless, in recent years the developments of tourism, modern development (both housing and road systems), agricultural and oil exploitations have greatly endangered the cultural heritage of this area and has seen the destruction of recognised archaeological sites. The loss of the archaeological heritage in the Wadi al-Ajal in the past three decades has prompted the protection of specific areas by the Libyan Department of Antiquities. Nonetheless, this is proving difficult to monitor, particularly in distant areas where the local populations may not be aware of the cultural and historical significance of the surrounding landscape. This is partly due to the focus on the Islamic heritage in the education system and the lack of knowledge and/or understanding of the Garamantes, the ancestors of the region of Fazzan.

The oases of Fazzan are situated in one of the main cross-roads of the desert route ways. The assortment of imported goods found in Fazzan, such as pottery, glass, amphorae plus ebony, ivory, copper and cotton suggests contact with both the Mediterranean and Sub-Saharan regions (Mattingly 2003). This trade is particularly relevant not only in terms of the variety of material culture but also the movement of people, which suggests a cultural mix as well as a possible mix of ethnicities.

The ancient populations of the Wadi al-Ajal are reflected by the skeletal material recovered by the work of Pace *et al.*, Charles Daniels in the 1960s and 1970s on the Garamantes and in more recent years the Fazzan Project (FP) (1997-2001) and Desert Migrations Project (DMP) (2007-2011) directed by David Mattingly, the latter more directly related to the systematic excavation of funerary structures in various cemeteries in the oases and escarpments (see Chapter 2 for details). The excavations of di Lernia and Manzi in the 1980s and 1990s provided the first systematic collection of human remains and study of funerary practices in the Wadi Tanezzuft, *c.*400km southwest of Jarma (di Lernia and

Manzi 1992a, 1992b and 1998). Previously to these excavations, research on the cemetery of Cocaman near Ghat and al-Barkat, near the Garamantian site of Aghram Nadharif, was carried out and partially published by Leschi (1945) and Pace *et al.* (1951) (Cremaschi and di Lernia 2002: 7). In addition to these, the discovery of a mummified child in the Uan Muhuggiag in 1958 by Angelo Pasa and the poorly preserved human remains interred in an antenna tomb in the northern Acacus in the 1970s were the only published skeletal material of this area of Fazzan (di Lernia and Manzi 2002: 3). The methodical survey and excavations of funerary stone monuments in the Wadi Tanezzuft, directed by di Lernia and Manzi in the late 1990s, as will be seen, has provided good material for comparison with the remains from the Wadi al-Ajal.

The broad focus of my research is on the funerary and ritual aspects in relation to the ideas of the expressions of cultural identity/identities and social memory through the construction of mortuary landscapes within the Garamantian (1000 BC-700 AD) societies. My aim is to analyse variability in the mortuary data from the Wadi al-Ajal in order to establish whether this variability represents new forms of mortuary practice and ideologies developed by local communities or whether they represent an established practice introduced by different communities with a particular cultural identity. A key issue is whether variability in mortuary practice resulted as a development of the cultural and ritual programme of the Late Pastoral societies and Garamantian communities throughout time or whether it is related to new expressions of cultural and social identity of diverse communities.

Many of the funerary monuments in Fazzan are paralleled in other areas of the Sahara. This may be due to the limitations of the landscape and available materials, but ultimately communities were adapting to the environment and making choices on the specific locations and forms of funerary structures. Cairns or tumuli are one of the most widespread structures, although covering a wide range of features characterised by small mounds of stones (Mattingly 2007: 144). These stone structures occur in numerous regions in the Sahara, such as Western Sahara (Brooks 2009); Niger (Paris 1990), Algeria (di Lernia 2002) and Libya (di Lernia and Manzi 2002; Mattingly 2003), embracing a long time span. It is likely that this omnipresence is related to their structural simplicity but their cultural meaning has not yet been properly considered. These simple stone structures are related to diversity in mortuary practice and beliefs, therefore implying different cultural meanings. Di Lernia (2002) draws attention to the fact that nomadic people have constructed and maintained these stone structures as landmarks in a changing environment, not just as funerary monuments. Therefore, it can

be argued that contacts, movement and shifts in population in specific areas can be detected through the analysis of funerary structures and practices.

1.1.2. Research questions

- What range of mortuary and ritual practice can be observed within the Garamantian cemeteries over time?
- What was the specific treatment of the body? What variations related to age, sex and status emerge?
- How do variances in form, place, and content reflect on chronology, status, belief or tradition?
- To what extent can a shared set of mortuary practices be said to express a sense of shared identity in death?
- To what extent does the Garamantian way of death reflect a way of life, a shared identity among the living?
- Can the archaeology of death provide a window into understanding the social and belief structures of Garamantian culture?

1.2. Aims of the thesis

From these research questions, I identify a set of three specific interrelated aims as core to this research project with the linking ideas of funerary practice and cultural identity. By cultural identity I am referring to the combination of qualities and characteristics of human groups, particularly to its ideological and social structures, rather than to a perfectly defined ethno-cultural unit (for a discussion see Chapter 2). One way to approach the problem of assessing cultural differences between human populations is to consider identity, and specific groups' own definition of themselves. There is an obvious problem with this which is that, as Hodder (1978; 1979) suggests, group identity, as opposed to a supra-community (in this case the Garamantes), were not necessarily expressed or considered essential to communicate a specific cultural identity. I consider that investigating variability (both similarities and differences) in the funerary record, which results from the repetitive action of a social act, provides a likely way to aid in understanding variability between the human groups themselves.

The funerary landscape of the Wadi al-Ajal is already proving a clear potential for this type of analysis given significant quantity of funerary sites (in various levels of preservation) which suggest a continuation of community activities related to the creation and maintenance of cemetery areas and in the behaviour accompanying the disposal of the dead.

Aim 1: Mortuary landscape (cemeteries and tombs)

This aims to identify the space and place of the dead in Garamantian society. Where were the dead and the activities surrounding the dead located? What factors determine the location of cemeteries or monumental tombs? What accounts for the variation in timing and intensity of use of these cemeteries?

Mortuary data has provided a main focus for studying social differentiation, cultural complexity and cultural change, along with anthropological and demographical data (Brown 1971; Carr 1995; Chapman 2003; Chesson 2001). The study of mortuary data tends to be looked at from the perspective of mortuary patterns, classification of funerary structures and material culture, etc. It has been less common, until recent years, to include the spatiality of death and burial rituals in the

analysis. A territorial approach to the study of mortuary data would provide relevant information covering the whole cultural process of dealing with death. As Sullivan (1987: 112) notes 'each culture identifies several kinds of space (…) every form of existence takes place in a space appropriate to its nature'.

Recently, a more complex concept of landscape has been developed which recognises it as a cultural construction. Consequently, understanding landscape as a construction, there is a need to acknowledge the centrality of 'symbolic landscapes' which 'produce and sustain social meaning' (Cosgrove and Jackson 1987: 96). Landscape has been defined as purely conceptual with the communities given meaning. Therefore it can be said that if cultural identity influences what people do and how they do it, then the place where these actions happen is as relevant as any of the other variables. The mortuary landscape is shaped by human actions and perceptions, at the same time that it constrains and influences people's interaction with the surrounding environment. Seeing space as a social product and approaching it in terms of human experience, attachment and involvement, along with an understanding of the mortuary landscape as a socio-cultural and environmental process, constructed cognitively, symbolically and physically, would aid in the interpretation of these landscapes as physical memories which become the focus of rituals and ties them to the social memory and the process of reworking the past (Silvermann and Small 2002; Sahlqvist 2001).

The spatial aspect of my research is merely comparative between different cemeteries within the Wadi al-Ajal mortuary landscape. After completion of the analysis of the individual cemeteries a comparative analysis will be carried out in order to gain a better understanding of typological and chronological variability. It is, however, outside the remit of my research to look at every aspect of the mortuary landscapes. A full analysis of the landscape of Fazzan would require a different set of data, methods and theoretical approach (not to mention being beyond the time constraints of PhD research). Nevertheless, it is fundamental to connect the mortuary data recovered from the analysis of the cemeteries to the wider landscape given the cultural significance of the location of the places of the dead. Cemeteries, whether monumental or not, serve as spatial reference points related to the ancestors interred there.

Aim 2: Cultural meaning of the dead and mortuary ritual (grave assemblages, body treatment)

Death is universal and, despite how simple or complex the society, there is the necessity to deal with the emotional and physical aspects of death, including the disposal of the deceased. Are rituals the same for every individual or do they change according to gender, age, and status? Were some items reserved for specific groups or limited by availability? Does a specific mortuary form have the same significance through time and across space?

Human remains have a personal, cultural, symbolic, spiritual and/or religious significance to the individuals and the communities to which they are associated. In relation to the physical remains of the dead is the question of how different communities conceptualise the world and how these differences affect the significance of the dead body. Ideas about what the body is, what it means, its moral and symbolic value, and how the body is defined, signifies different and sometimes conflicting realities and perceptions of reality (Synnott 1993: 7). The cultural understanding of the body and personhood has an impact on funerary practices. Therefore through the analysis of mortuary rituals we can recognise different interpretations of the dead, and we can explain variability through ideas of personhood and identity. For instance, an adult and child could be receiving completely different treatments at death relating to the cultural, metaphysical, psychological and ethical connotations of what constitutes a person (Sison 1993).

This part of my research includes a morphological and typological analysis of the funerary structures, and associated furniture, along with the burial rituals (treatment of the body; preparation of disposal facility; material culture) in order to recognise variability and diversity of practice and material culture. I believe it is more relevant, given the fragmentary nature of the archaeological record in general, and in Fazzan in particular, along with the irregularities in methodology and availability of the material, to consider diversity of objects inside the tomb rather than quantity and quality. The investigation of variability (meaning both similarities and differences) in funerary assemblages has aided in establishing the extent of cultural diversity within the Garamantian civilization and to identify whether or not different ethnic and cultural groups co-existed. In order to do so, it is necessary to go beyond material stylistic traits and understand diversity of choice of the space and place of the dead, the treatment of the body, grave goods assortments, etc.

I was also seeking to understand the role of funerary assemblages in relation to memory and commemoration of the dead. It is possible the form of a vessel may have had less relevance than the actual act of including or excluding specific artefacts in the grave or in the funerary ritual. Diversity is less subjective than quality and less sensitive to distortion from incomplete datasets. The analysis of the material culture associated with the funerary structures was focused on the provenance of the artefacts, distinguishing between imported and local goods. I also attempted to determine whether any object was particularly chosen as grave goods and assess differences between individual sites. In addition to this a comparative analysis of this material has been done intra-site and between different locations and periods.

Aim 3: Cultural identity and social memory

Mortuary practices are drawn on previous practices and memories are enacted through similarities. Cemeteries and funerary monuments act as physical memories; they become the focus of rituals and tie them to the social memory. Can local patterns in the funerary record indicate the existence of social identities? How can we establish a more comprehensive understanding of the relationships between tomb groups and social groups among the living as an expression of social identities?

The final aim of the proposed research was to understand cultural dynamics in the Wadi al-Ajal in Garamantian times. Key concepts to relate to are cultural identity and the creation of group memory. In relation to this, it is important to consider, as Fleming (1972: 71) points out, that new and original types of ceremonial monuments could arise not just as a result of the diffusion of foreign models nor of local degeneration, but in response to local design requirements. In the Wadi al-Ajal there are clear changes in the funerary landscape during the Classical Garamantian period (*c.*500 BC - *c.*AD 500) particularly in relation to cemetery morphology and funerary structures and rituals. A careful analysis of the space (landscape and cemeteries), place (structures) and burial rituals linked with death should provide information on the cultural identity of contemporary communities during the Garamantian civilization and possible movement of people in the landscape with their own set of cultural and social values which may have been transmitted through the funerary record.

A further goal of my research was to establish a theoretical framework through which ritual practices of the Garamantian societies of Fazzan can be understood. Drawing from different contemporary

approaches in archaeology of death, memory and identity, my aim was to find an interpretation of mortuary practices and variability in the Wadi al-Ajal in relation to cultural identity and social memory. Ethnographic sources were consulted in order to document plausible and/or implausible explanations for burial practice. For instance, as Ucko (1969) points out, the recovery of grave goods outside the tomb does not necessary imply a belief that they may be needed by the deceased in an afterlife.

A crucial aspect of my research concerns the concept of identity, meaning the way people think about themselves and how they choose to represent themselves. As will be discussed below (Chapter 2) mortuary practices are representations of aspirations and claims on status rather than social status itself. It is intended to identify cultural identity through mortuary data rather than attempt to establish a possible social structure of the Garamantian society.

3. Description of the structure of the thesis

This thesis is organised in six chapters, principally reflecting an introduction to the existing state of academic research on the field of archaeology of death and the development of modern theories, alongside a presentation of my area of research and current status of the archaeological investigations in the region of Fazzan and the Garamantes, who populated this area from *c.*1000 BC- *c.*700 AD (Chapter 2); methodology and typologies (Chapter 3); my research on the burial practices from regional to tomb specific (Chapters 4, 5 and 6) and a conclusion of the entire work (Chapter 7).

Specifically, Chapter 1 is a brief assessment of the main research questions and aims of this thesis, starting with a short description of the region of Fazzan and the fundamental objectives set for this project. The three interrelated aims are introduced in conjunction with key conceptual aspects linked to each individual aim.

Chapter 2 presents a literature review introducing key aspects to the history and theories related to the study of burial and death. Here I also present the contemporary state of research, specially related to funerary studies, in Fazzan.

In the third chapter, the methodology and morphological typologies are introduced alongside the chronological framework utilised in this thesis. The methodological approach has been designed and developed with the sometimes limited and incomplete datasets available in mind. The typologies I have used in this thesis represent those utilised by the British-Libyco research teams in Fazzan. These typologies have been established for cemetery, tomb structures and funerary furniture based on morphological features.

Chapters 4 presents the funerary landscape of the Wadi al-Ajal, based on the survey records of Charles Daniels and the Fazzan Project. Chronological and typological maps are included. The evolution of the complexity of the landscape across the Garamantian period is also discussed.

Chapters 5 and 6 deal with specifically targeted cemeteries, principally based on the recent excavations of the Desert Migrations Project. In Chapter 5 the character of each individual cemetery is introduced along with details of the individual identity of the populations interred there. Chapter 6 deals with the grave assemblages and their spatial distribution within the tombs.

Conclusions on the funerary activities of the Garamantians with regards to cultural identity are discussed in Chapter 7 along with suggestions for further research.

Chapter 2. Research context: Archaeology of death, memory and cultural identity

The general objective of this thesis is to develop an understanding of the mortuary rituals, their development and changes in the Wadi al-Ajal of the area of Fazzan. This chapter begins with a literature review of the theoretical approaches to funerary data. I will be introducing key concepts and ideas, which have created the theoretical framework of my approach to analysing the mortuary landscape, structures and material assemblages within the tombs. Some of these concepts vary from purely theoretical abstract terms, such as memory, commemoration, ritual but also culture, civilisation, to pragmatical terminology such as variability, diversity, quality, etc. In this chapter, I present an overview of the Garamantes, the historical sources and archaeological evidence, which supports the definition of the Garamantes as a civilisation.

2.1. Literature review on the archaeology of death and burial.

2.1.1. Funerary Rituals, Memory and Commemoration

The archaeology of death and burial has been one of the main focuses of attention for archaeologists since the beginning of the discipline (i.e. Kroeber 1927, study in the Nazca Valley in south central Peru; Bendann 1930, an intensive investigation of the similarities and differences in funerary rituals of Melanesia, Australia, India and north-east Siberia; Gluckman 1937, a study of the mortuary customs among the south-eastern Bantu). This attraction is largely due to the fact that mortuary rites involve the human body, manipulations of material culture and social relations which offer a wide range of data for analysis from different areas of interest.

Modern approaches to mortuary behaviour appeared as a criticism of the cross-cultural study of funerary rituals (for instance Kroeber's work in South America and Africa corroborating his findings in native Californian communities). New Archaeologists of the 1960s and 1970s developed a new interest in mortuary rites with the inclusion of ethnographic research into their analysis. Examples of this include Forde's (1962) study of the Yako of eastern Nigeria religion and mortuary rituals;

Goody's (1962) comparative study of the LoWiili and LoDagaa of Ghana, Freedman's (1966) analysis of the Chinese ancestor cults; Bloch's (1971) in Madagascar on the Merina mortuary rituals and, arguably the most influential, Saxe's thesis in 1970.

Saxe's thesis (based on eight hypotheses) was an attempt to develop a cross-cultural model (Kapauku Papuans, Ashanti and Bontoc Igorot societies as case studies) of how mortuary practices are interrelated with socio-cultural systems. Saxe's hypothesis can be summarised in two groups; Group A (Hypotheses 1-4) is concerned with the way social personae are differentially represented within disposal domains, however, not all identities that an individual has can be expected to be represented in death. Saxe suggests that those components that are included in the funerary record represent identities of greater social significance that those excluded (Saxe 1970: 101). Group B (Hypothesis 5-8) is concerned with the way different social structures are differentially represented among different disposal domains (Saxe 1970: 65). Hypothesis 8 is arguably the most commented and reinterpreted. Hypothesis 8 reads: "To the degree that corporate group rights to use and or control crucial but restricted resources are attained and or legitimised by means of lineal descent from the dead, i.e. lineal ties to ancestors, such groups will maintain formal disposal areas for the exclusive disposal of their dead, and conversely" (1970: 119). Saxe's approach was taken up by the 'role theory' developed by Goodenough (1965), which proposes that the social persona of every individual is a composite of the various social identities assumed by the individual in society in his/her lifetime, and recognised as appropriate for consideration after death. Thus, such roles are represented in the funerary treatment. According to Saxe then, when decisions must be made by the living as to which of the deceased's identity relationships are to predominate in the disposal ritual, those which are structurally more significant should tend to take precedence over others (1970: 72).

Although highly criticised, Saxe's dissertation has had a deep effect in archaeological approaches to mortuary studies. Using ethnographic research, Binford (1971) noted that there was a direct relation between the social complexity of a community, based on subsistence strategies, and the elaboration of funerary monuments. Binford proposed that the social persona of the deceased reflected in the funerary ritual varies in relation to the position of the living person in the society. Brown (1971) achieved similar results observing that there is correspondence between the quality

and quantity of grave goods and social status of the deceased. Following their conclusions, it could be suggested that there is a correlation between the social status of the deceased and the 'energy' invested in the burial ritual. There is an emphasis on the relationship between burial practices and social organisation, social status, ideation, gender roles, etc. The general assumption is that the more complex the society is the more complex the burial programme.

The work of Goldstein (1980) on the Mississippian cemeteries from the Illinois River Valley focussed on the spatial dimension of mortuary practice. She concluded that “not all corporate groups will maintain exclusive disposal areas for their dead […] but if a formal area exists and if it is used exclusively for the dead, then the society is very likely to have corporate groups organised by lineal descent” (Goldstein 1980: 8). Goldstein's reinterpretation of Saxe's Hypothesis 8 has been extended by Charles and Buikstra (1983) and Morris (1991). Morris examines the hypothesis through a generalised ethnological model, specific ethnographic data from Taiwan and Kenya and a historical comparison of the Classical cultures, arriving at similar conclusions proposed by Hypothesis 8, but highlighting the fact that 'in any specific instance the cemetery/ property message may be subverted by other arguments which the buriers are making. Charles and Buikstra (1983) in their study of the Central Mississippi Drainage assumed that the occurrence of formal cemetery areas is directly related to corporate lineal inheritance of fundamental and limited resources. Adding to the work of Binford, they concluded that; firstly, the utilisation of formal cemetery areas would correlate with sedentary subsistence strategies employed by the groups using the cemetery and that the spatial structuring present in the mortuary domain correlates with the degree of competition among groups for resources (Charles and Buikstra 1983: 119). Chapman (1981) focusing on the Saxe-Binford approach, critically examined the ideas formulated and highlighted new approaches to the study of mortuary data. Following processual thought it is therefore assumed that there is a direct relationship between mortuary practices and social organisation, arguing that the behaviour towards the deceased at death represents his/her status in life. According to these, it is thought possible to determine social organisations of past cultures through the analysis of their mortuary remains. This processual perspective is still dominant in recent studies in (i.e. Beck 1995; Carr 1995; Kamp 1998; Mitchel and Brunson-Hadley 2001).

Criticism of the processualist method was developed mainly in Europe by structuralist and symbolic theories. This is largely due to the different institutional set ups of archaeology as a discipline in the United States and Europe. The anthropological emphasis of processual archaeology can be easily associated with American theoretical approaches where archaeology is institutionally linked to the discipline of anthropology. In Europe, however, when the departments of archaeology are not independent they are linked with historical studies. It is therefore not surprisingly that processualism had a larger impact in the United States and consequently the fiercer criticism can be more easily seen in Europe. This eclectic group (i.e. Hodder 1980, 1982, 1991; Miller and Tilley 1984; Parker Pearson 1982; Shanks and Tilley 1992 (1987); Tilley 1984) has come to be named post-processualist as a general term for a diversity of theoretical groups countering the assumptions made by processualists. Some of these assumptions are related to the processualist positivist view of science. Post-processualists reject science as a sole form of knowledge and argue that the meaning attributed to the tested results is nothing but our interpretation of such results and therefore we are projecting our own views in the minds of the people of the past.

Post-processualism is united on the basis of the idea that mortuary rituals are used by the living to negotiate, display or transform social relations and that cross-cultural generalisations are not appropriate for archaeological contexts (Parker Pearson 1982; Hodder 1984; McGuire 1992). Post-processualism notes that mortuary rituals serve as agents of cultural change. Cultures cannot be viewed only as adapting to the external environment, people’s thoughts, feelings and understanding of their world was important; for instance, the interpretation of the funerary space. Following the critiques formulated by post-processualism in the 1980s, Cannon (1989) argues that a society's mortuary programme is a cultural phenomenon which can be unrelated with social or economic organisation. For instance, he suggests that cycles of mortuary behaviour taken by the elite may be transferred to groups of lower status which may cause a change in elite burials to maintain the symbolic differentiation.

The post-processualist line of thought has also continued in recent years providing good case studies embracing the idea of the social aspect of death and the deceased as opportunities for manipulation of social structures (Cannon 1995; Hill 1998; Parker Pearson 1995; Chesson 2001; Silvermann and Small 2002). In addition to this, the development of landscape studies has led to an

emphasis on the analysis of sacred landscapes deepening the meaning of the ancestors. The role of ancestors in the lives of the living has been approached in recent years (Buikstra 1995; Hingley 1996; Parker Pearson 1999, 2002; Rakita 2001; Whitley 2002) drawing on the work of Goldstein (1980), Saxe (1970), Kroeber (1927), van Gennep (1960) and Hertz (1960). Whitley (2002) recalls the 'omnipresent ancestors' who, according to him, were to the 1990s what chiefdoms were to the 1970s. He argues, in relation to studies of Neolithic Britain, namely Parker Pearson and Ramilisonina on Stonehenge and the ancestors (1998), Tilley (1996), Edmonds (1999) *etc*., that "ancestors are everywhere and everything is ancestral" (2001: 119). The beginning of the millennium has nevertheless seen a continuation of the debate of ancestral and burial rituals (Hastori 2003; Kuijt 2008; Thomas 2001; Williams 2003, etc.). This debate has noted that ancestorhood is not conferred by death itself; rather ancestorhood is an achievement and status of the remembered dead linked to generations through descent. Another point highlighted is the differentiation between burial rituals and ancestor veneration rituals, which are not necessarily directly related.

The study of death through the analysis of the archaeological record provides us with the ultimate expressions of the people of the past, their perceptions and understanding of themselves, their society and their world. The archaeology of death, as I understand it, provides us with a window to the humanity of the people of the past, their beliefs and perceptions. The beliefs of what happens to the body after life may be the same for everybody within a particular culture. Dealing with the dead is more than a materiality related to the physical disposal of the deceased. Death involves the society's reaction to an act happening to an individual member of the community. As Parker Pearson states, death lies at the bottom of all facets of humanity, becoming a crucial factor in the development of societies (2001: 203). Still, the understanding and interpretation of death is expressed in a material form and it involves material elements. The way the disposal of the body is performed (burial, cremation, etc.), by whom, what the tomb represents, the interpretation of the material culture associated with the deceased are difficult and complex queries. As stated above, different theoretical approaches can be applied, but still there are no general rules that can be drawn on. The universal problem of death has an almost unlimited range of solutions (Fahlander and Oestigaard 2008: 3). The material aspect of death, away from the eschatological explanations, involves the places where these beliefs are acted out and where rituals are performed. It also involves things, artefacts, landscape, etc. This materiality of death may differ within the same

cultures. Therefore, what it is socially significant is something that must be considered on a case-to-case basis rather than generalised based on ethnographical similarities on social structures, for instance. Approaching the material aspects of death has to be an inclusive and incorporative approach aiming to address the totality and the complexity of the relations between the dead and the living (Fahlander and Oestigaard 2008: 4).

2.1.2. Cultural Identity and Social Memory

Throughout history and across cultures, death has held great fascination. The change of status between the living and the dead has had, and still does have, profound consequences with medical, sociological, moral and religious implications. Every culture has created a system of thought that includes the reality and certainty of death in a manner that preserves social cohesion. Early human societies developed religious systems that connected the living and the dead and portrayed death as a transition to another world, somehow still connected to the earthly one (Moore and Williamson 2003: 4).

In modern times, death is further removed from human experience. We are no longer so regularly faced with death, and, when we are, death is presented in a sanitised form. Nevertheless, the death of others provides us with the experience of death. It helps us comprehend the human condition and to be conscious of the meaning of life in the face of the certainty of our own extinction. And then, at the moment of our extinction, our death becomes an episode in the time of others (Parker Pearson 1999: 142). All societies have developed some kind of death ritual, which, even though they may vary in form, serve as a formalisation of the death, the disposal of the body and the opportunity to mourn the dead, to cope with grief. In doing so, human societies generated a ritual response with all the integrating effect of such an endeavour (Davies 2005: 90). In addition, depending on personal beliefs, the death ritual could act as a separation of the mind and the body, an opportunity to free the spirit (Fforde 2002: 2). Moreover, death rituals reaffirm the central beliefs within a culture (Hubert 2003). This need to mourn and dispose of the dead, with an appropriate set of rituals related to a system of beliefs specific to every culture, is significant, in as much, as the process of death without the funerary rituals could be considered incomplete.

Our understanding of the dead and our relationship with them is crucial in the formation of the historical consciousness of individuals and societies (Parker Pearson 1999: 145). In maintaining a relationship between the living and the dead, societies tend to apply one of two different socially and culturally constructed premises. They may consider the dead as separated from the living and keep the dead alive only in a symbolic fashion. On the other hand, they might consider the dead to be only substantially separated from the living communities, keeping them alive in an almost literal sense. For instance, and drawing from contemporary samples, in traditional Mexican culture death changes nothing, the dead are still literally part of the family and specific rituals after burial emphasize this connection. For that reason, the Day of the Dead serves as a rite of intensification, reuniting the dead and the living (Higgins 1999: 46). Conversely, the traditional festivals of the dead amongst the Laymi society in Bolivia mark the agricultural cycle and divide the year into two thus connecting the dead as a source of fertility (Parker Pearson 1999: 144).

Mortuary rituals may include various aspects related to different cultural representations and interpretations of death. They can involve the simple treatment of the body, both the preparation and disposal of the dead body. It can also engage the intervention of ancestors in the world of the living or else they draw on ideas of death, rebirth and afterlife (Bloch and Parry 1982).

Van Gennep (1960) makes a division in funerary rituals into rites of separation, rites of transition (rights of way) and rites of incorporation. The first and last rites are understood as moments of cultural stability separated by the liminal period. Barrett and Kinnes (1988: 32) argue that the entire sequence of the burial ritual cannot be observed through the analysis of the archaeological record. For instance, in the case of inhumation the rite may terminate with the placement of the deceased in the ground symbolising his or her incorporation to death and break with life and the living.

Memories appear enacted through the repetitive practices associated with burial rituals and remembrance is actualised through a mortuary practice which refers through similarity to a deep temporal tradition (Jones 2003: 83). Remembrance is stimulated through the senses and remembering the dead is a multisensory experience. They evoke ritual performances; they can create environments for the embodiment of memories, including distinct tastes (food offerings),

specific aromas (incense burners) and even textures, all of which can mediate commemoration in mortuary and ancestral rites. For instance, in Fazzan, large numbers of incense burners occur both inside and outside the tombs, along with offering tables, suggesting food offerings, and oil lamps have been recovered from a variety of cemeteries and tombs. The funerary structures associated with the tombs, stelae, offering tables and enclosures, must have played a significant role in Garamantian funerary rituals, suggesting a relationship between the living and the dead. For example, some Classical sources, such as Herodotus (IV.172), mention the Garamantian practice of sleeping by tombs relating to the divination of the future, with the practice of making offerings at tombs continuing until today (Mattingly 2003: 232).

Figure 2.1. Offerings being made in the vicinity of Jarma in the winter of 2010 (photographs by Author)

The analysis of the physical remains from mortuary rituals is amongst the most complicated of human behaviours for archaeological interpretation. These remains are neither tools, nor consequences of specific processes. They are the remnants of a culturally formalised, deliberate and planned process in specially chosen places with specific patterns and practices. Therefore, regarding burial ritual as a culturally conventionalised event, it can be argued that the archaeological interpretation of mortuary remains could provide valuable information both on the individual identity of the deceased and aspects of the community to which he/she belonged. The ritual interment of the dead is intrinsically related to how different cultures conceptualise the world and understand death. It is also linked to what constitutes a person, the importance of memory and the materiality of the body as a possible context for manipulating the personhood, the identity, of the deceased. In addition to these, the process of preparing and disposing of the

body is linked to what happens to the consciousness and the body after death. Furthermore, burial, influenced by cultural and social aspects, is also concerned with the continuing relationship between the living and the dead (Hutchinson and Aragon 2002).

The archaeological remains of mortuary rituals are incomplete sources of information, in as much as the archaeological record is what we can recover, which is a fraction of some of the physical aspects of the funerary process. It is impossible, from an archaeological perspective, to recover the physical remains of the entire multi-sensorial dimension of the mortuary ritual, which may include specific smells, sounds or tastes. It is therefore important to recognise the impossibility of archaeology to fully recognise and reconstruct the complete multistage burial program (Silvermann and Small 2002: 5). Consequently, the study of any particular burial and its place may just represent a temporary stage of the post-mortem arrangements. As such, the analysis of the Garamantian funerary processes is based on the physical materiality of the ritual practice through which I propose an ontological system of believes and ideas of remembrance and identity.

Despite the fact that we can only recover some of many possible stages of the burial ritual, there are, nonetheless, aspects of the burial process from which we can find information related to the multi-sensorial dimension of the funerary ceremony. For instance, incense burnings, food offerings – implied by the presence of ceramic artefacts and offering tables outside the tombs along with the archaeobotanical evidence recovered from the graves themselves- *etc*., can still give us an insight into different aspects of the ritual programme.

In relation to asserting individual, and group, cultural identities and social memory, the study of rituals and mortuary practices provide us with an extraordinary framework for analysis. My study of the Garamantian funerary rituals includes the treatment and adornment given to the dead body, the disposal facilities and material culture accompanying the deceased. The funerary monuments themselves can serve to create, promote and express the communal memories of the dead (Barrett 1993; Hope 2003), whether these were a reflection of the identity of the deceased as it was actually experienced in life or a promotion or negotiation of a particular identity for the individual in death. Funerary monuments can also take on different meanings and commemorative roles over time (Williams 2006: 146).

Funerary rituals, as well as other transitional rites, are drawn on previous experiences, practices and memories - for example on the treatment of the corpse and the arrangement of the artefacts both inside and outside the funerary monument. However, the dead do not bury themselves. Mortuary rituals are enacted by the living and it is more likely that the treatment of the deceased represents the aspirations of the bereaved, which may or may not coincide with the deceased person's status before death. The study of mortuary rituals thus may tell us more about social statements made about the dead rather than the social status of the deceased. It is therefore an inaccurate assumption to interpret funerary remains as symbolic indicators of the status and identity of the deceased directly linked with social structure. As Schiller suggested (1997, 2001) mortuary rituals, although they may vary according to the status of the deceased, are primarily investments toward enhanced social status for and/or claims of social identity among survivors. Nevertheless, Graham (2009: 54) highlights that it should not be thought that the living wield complete control over the ritual activities, since the dead are still capable of participating. Graham notes that this can be done through the cultural and (or) religious obligations placed upon the living to provide the dead with appropriate treatment, disposal and rites, and this to be involved in a relationship of dependence with them; through the agency and physicality of the corpse which presences the dead in the world of the living and makes it necessary for the living to interact with the dead during the process of disposal; and through the power of memory.

For these reasons, I reject the processual position that variability in the mortuary programme is directly related to the organisational principles of the social system itself. In accepting that it is not viable to assume that the whole social system is represented in funerary rituals, it can still be suggested that the dead are powerful symbols, and through these rituals, the living reconsider their own legitimate claims of social position and identity (Barrett 1988: 31). By choosing the specific place and time for interment, structure morphology and artefacts, the living community drawn by social memory establish their own cultural interpretations and identity. The organisation of cemeteries and funerary assemblages are therefore likely to be determined by particular cultural values in specific communities.

Cemeteries and funerary monuments are both the context and the consequence of funerary rites (Barrett 1990: 182) and are a significant aspect of communicating identities and the location of the dead by the living communities contributes to the construction and reconstruction of social and

cultural relations. Cemeteries are the arena, the place, for ritual or ceremonial activity as well as remembrance and commemoration (Bender 1993; Fleming 1999; Tilley 1994; Ucko and Layton 1999). The grave does not only form the receptacle for the disposal of the corpse but it becomes the focal point for the redefinition of identities and relations with the deceased and of the mourners with the living. Moreover, the dead are gradually transformed from individuals with their own specific personal identity to members of a more abstract and collective society, the ancestors (Keswani 2004: 51). Libyan Fazzan provides us with a vast diversity of cemetery and tomb morphology across the landscape. The records of the excavations at these cemeteries, mainly of a descriptive as opposed to analytical nature, offer a good dataset for a theoretical analysis of the materiality of death - meaning the body, rituals and material culture of the interment.

It has been suggested that demographic changes in Fazzan since 6000 BP have resulted from environmental desiccation (Brooks 2006). This demographic change has also been associated with the transition from animal to human burial along with the expected increase of social complexity and stratification. The spread of what di Lernia (2006) refers to as a 'cattle cult', meaning the burial of animals in stone structures, has been interpreted as a ritual emerging within the Saharan pastoral societies dealing with uncertain climate and environmental changes. Di Lernia argues that this ritual practice reveals a shared identity copying with specific events, such as drought and desertification of the Sahara from 6000 BP onwards. The wide dissemination of this ritual in the Sahara suggests the movement of pastoral populations searching for a more suitable and sustainable environment. Furthermore, the shift from animal to human burial can be seen as the result of a major socio-cultural shift when these monuments become for the disposal of humans, therefore moving towards a more individual identity instead of a socio-communal one. In the Wadi al-Ajal, there is evidence for the drying of springs and the disappearance of surface water in the third millennium BP, although as Drake *et al.* (2004) indicate, some surface water may have remained in the depressions occupied by the playas at the lowest points of the Wadi. The desiccation of the Wadi seems to have coincided with the emergence of the Garamantian civilisation, with Zinkekra (dated *c*.1000 BC) being identified as the earliest evidence of settlement site where the emergence of the Garamantian culture from the preceding Late Pastoral can be recognised in the area (Mattingly 2003).

When analysing the funerary rituals, several aspects have been taken into consideration. Firstly, the remains of an individual who is not a member of the social group- in the case of this thesis the Garamantes- may receive a different treatment to the rest of the community. Secondly, a catastrophic event such as epidemic diseases or abrupt climate changes, etc. may be reflected in the mortuary record through a temporary change in regular procedures. Finally, it should be noted that the mortuary record of a cemetery reflects the repetitive application of a specific cultural community performance of the rituals for the disposal of the dead. The grouping of the dead can therefore be understood as an expression of socio-cultural identities and interests. The creation and maintenance of formal cemeteries and funerary structures become important aspects of the strategy of communicating cultural identity.

2.2. Archaeology of Fazzan: the people and the landscape.

2.2.1. The place: Fazzan and the Wadi al-Ajal

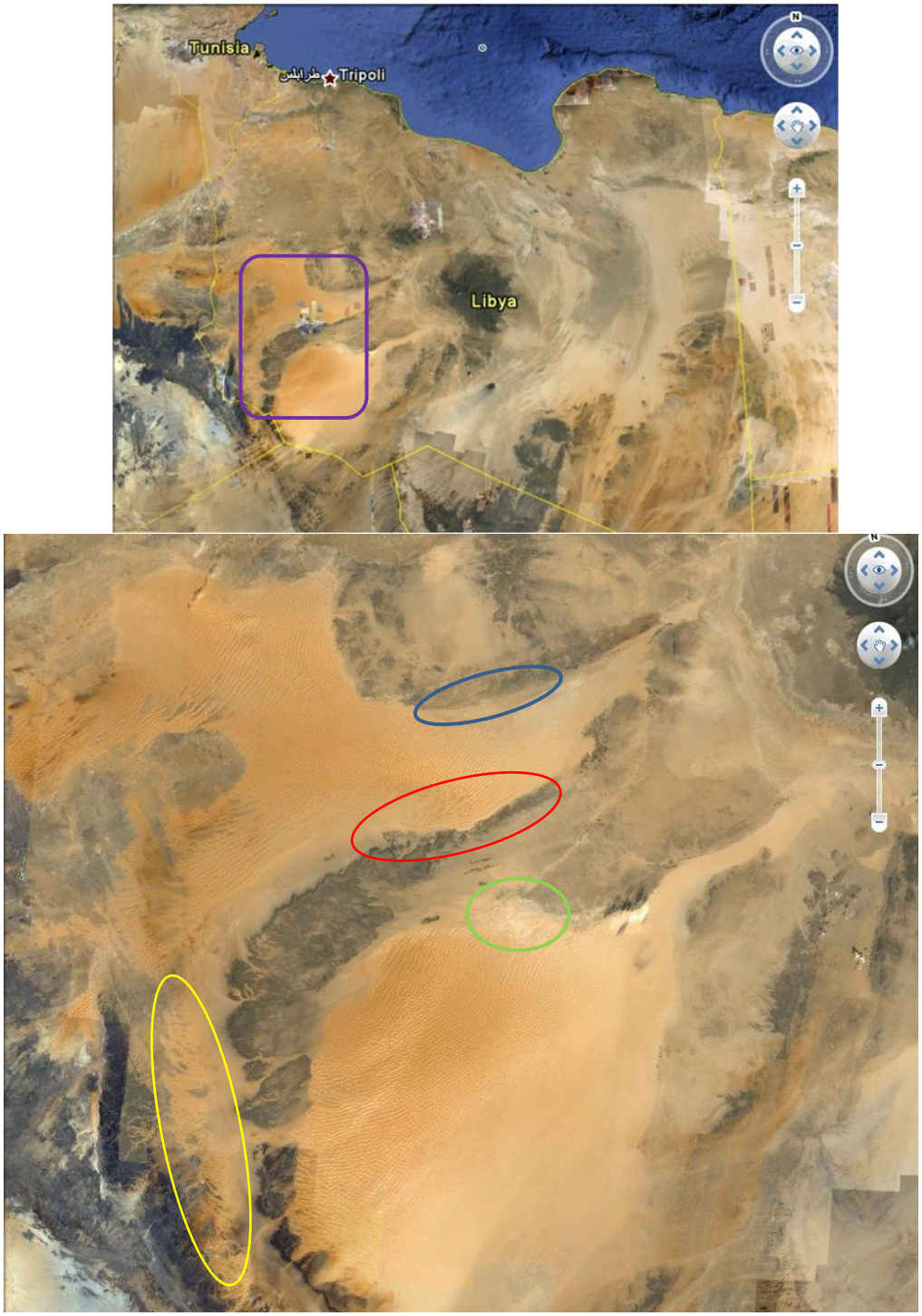


Figure 2.2. Map of Libya with location of study areas (purple) (above) and map of Fazzan showing the Wadi al-Ajal (red), Wadi Tanezzuft (yellow) and Wadi ash-Shati (blue), Murzuq basin (green) (Source: Google Earth).

The area of Fazzan is rich in monumental funerary areas dating from the latest millennia BC to modern times. The research undertaken during the past decades in the Libyan Fazzan has suggested trajectories of linked environmental and cultural change, which broadly reflect those of the Sahara as a whole (see Cremaschi and di Lernia 1998, 2002; di Lernia 1999; di Lernia and Manzi 2002a; Mattingly 2003, Mattingly *et al.* 2007a). Fazzan also provides a model of increasing social complexity, sedentism and urbanisation within a changing environment, in the form of the emergence of the Garamantian civilisation (Mattingly 2003 and Mattingly *et al*. 2007a).

The main area for my research was the Wadi al-Ajal ('the valley of death') in Fazzan, approximately 1000 km from the Libyan capital Tripoli. This distance would have been covered in the past in *c*.30 or 40 days through the desert's caravan routes (Mattingly 2003: 7). This Wadi is also known as the Wadi al-Hayat ('the valley of life') (for example, Belmonte *et al.* 2002); however, this thesis will be referring to Wadi al-Ajal in accordance with the publications in the English language. Wadi is the Arabic name to describe a shallow, usually sharply defined depression in a desert region, frequently comprising a bed or valley of a stream that is usually dry except during the rainy season. In spite of this, the Wadi al-Ajal is not a regular waterway; it is a large valley, a depression between two desert features, the Edeyen Ubari (sandsea) to the north and the plateau of rock desert of the Massak Sattafat to the south.

The Wadi ash-Shati, the Wadi Tanezzuft and the Murzuq basin provide material for comparison, despite the fact that less work focused on funerary aspects has been carried out. Recent research in the Wadi Tanezzuft, a fluvial valley west of the Acacus, south west of the Wadi al-Ajal, directed by di Lernia, has provided information on the funerary and ritual aspects of the Late pastoral communities and the Garamantes dwelling further from the capital, Garama (di Lernia and Manzi 2002a). Merlo's survey (2008 and 2013) was the first reconnaissance survey of the Wadi ash-Shati, north of the Wadi al-Ajal, which has located Garamantian sites, including cemeteries indicating the use of this landscape during the Garamantian period. The analysis of satellite images led to the fieldwork of the Murzuq basin (Sterry and Mattingly 2011) where a significant number of settlements, cemeteries and foggara have been recorded dating from the Garamantian period. This provides a southeastern input in the analysis of the Garamantes.

a. Wadi al-Ajal from Zinkekra

b. North view of the Wadi al-Ajal from Zinkekra

c. Modern saniat with irrigation

d. View of the Watwat embayment.

e. Taqallit embayment

f. Jarma escarpment

Figure 2.3. Contemporary views of the Wadi al-Ajal showing the diversity of the physical landscape (All photographs by Author).

2.2.2. The people of Fazzan.

The Garamantes is the name the Classical sources have given to the society that developed in Fazzan at a time when the desertification of the Sahara was analogous with the present levels. The period of the Garamantes, chronologically between *c.*1000 BC-*c.*AD 700, brought important developments to the central Sahara. The Garamantes went through a number of stages of increased social and cultural complexity. The Early Garamantian phase (EGAR), between c.1000 BC and 500 BC, is marked by the development of settlements situated in strategic and defensible locations. This early stage was sustained by an economy based on an irrigated cultivation system. During the Proto-Urban Garamantian phase (PUGAR), 500 BC-1 BC, what was to become the capital of the Garamantes, Garama, was established and there was an increase in the location of the settlements in the valleys. Garama developed into a city with public buildings and temples in the Classic Garamantian period (CGAR) (AD 1-400). There was an increase of the population evident from the general intensification of the number of villages, some of which are densely packed, in the proximity of the Garama, and the multiple cemeteries on the sides of the escarpments. The Late Garamantian period (LGAR) that followed was a time of relative decline, although we see a development of new settlements in, for instance, Murzuq (Sterry and Mattingly 2011). This later phase, until the 6th century AD, focused on defensive structures, agricultural activity was restricted to core areas of the oases likely due to increased difficulty of extracting water, and the quality and quantity of imported goods, that was so prominent during the Classical period, decays.

Phase	Abbreviation	Date BC/AD
Late Pastoral	LPAST	3000 BC – 1000 BC
Pastoral (undifferentiated)	PAST	5500 BC – 1000 BC
Early Garamantian	EGAR	1000 BC – 500 BC
Proto-Urban Garamantian	PUGAR	500 BC – 1 BC
Classic Garamantian	CGAR	AD 1 – AD 400
Late Garamantian	LGAR	AD 400 – AD 700
Garamantian (undifferentiated)	GAR	1000 BC – AD 700

Table 2.1. Garamantian chronological phasing with abbreviation used in the text.

2.2.3. The Garamantes in the Classical Graeco-Roman sources.

Classical and ancient sources, from Herodotus (5th century BC) to Isidore of Seville (7th century AD), refer to the Garamantes, providing the first written records of this civilisation. Some of these sources denote to the geographical location of the Garamantes, their contacts with other groups (i.e. Roman armies), aspects of their economy (agricultural practices, cattle, water management, etc.) and social structure (for instance various references to the king of the Garamantes by Pliny 8.142, Lucian *Dips.* 2. Ptolemy 1.8, Tacitus *Ann.* 4.23-26) as well as mentions on their physical characteristics.

There are various aspects to consider when reading the Graeco-Roman and ancient accounts of the Garamantes. Primarily, the sources available are mostly mere glimpses of the Garamantes in relation to the Classical Mediterranean world and the descriptions are likely stereotypes of what they understood the native populations of Sahara to be. In addition, it is necessary to note that some descriptions and accounts provided by later authors are purely repetition of previous accounts rather than new information.

There are various Classical sources that designate the geographical location of the Garamantes in the desert region south of Tripolitania; for instance, Livy (29.33), Mela (1.23), Pliny (5.26) (Appendix A Table A.1). Strabo offers an indication of the location and distances from the Garamantes to the oasis of Amon, whilst Ptolemy (1.10) recorded the distance of the journey between the Mediterranean coast and the heartlands of the Garamantes. In addition to these, the Tabula Peutingeriana also highlights the place of the Garamantes between the river Giris and a salt lake to the south east of Lepcis Magna. Evidence from classical sources suggests that the presence of Garamantian populations extended beyond the heartland of the Wadi al-Ajal situating them west towards Cidamus and south to the Acacus (see Appendix A Table A.1).

Furthermore, these sources assist in understanding the landscape in which the Garamantes inhabited. Although there is limited ethnohistorical information on the area, and what survives is in the form of descriptions by Herodotus, Strabo and Roman historians Pliny the Elder and Tacitus. Thanks to these ancient written accounts, we not only can place the Garamantes geographically

but also gain an insight into their neighbours and the physical landscape. Strabo in his *Geography* locates the Garamantes as neighbouring the Nasamones, Psylli and Gaetuli (north), the Marmarides to the east on the boundaries of Cyrenaica (*Geography* XVII: 23). The Garamantes were first mentioned by Herodotus in his *Histories*. His rather fantastic description mentions that '[the Garamantes] lived …in the land of wild beasts'. Moreover, he denotes that in the territory of the Garamantes 'a numerous tribe' was 'a salt-hill and spring … with date palms of the fruit-bearing kind, as in the other oases...'. Herodotus famously describes the backwards walking cattle as they grazed and the four-horse chariots with which the 'Garamantes hunt the Ethiopian cave dwellers'. Despite these semi-fabulous descriptions of the Garamantes, Herodotus' account was widely circulated in the Classical world. In the 1st century BC, Strabo not only alludes to the desert location of the Garamantes but he also refers to the physical aspect of the Garamantian territory mentioning that it was well supplied with water (*Geography* XVII: 23) whilst Pliny highlights the difficulties of crossing the desert to reach their heartlands (*Natural Histories* V: 35-38).

Ptolemy situated Garama 5083 stades (940km) south of Leptis Magna, against the assertions made by Flaccus and Maternus that Garama was 5,400 stades south. He wrote that the journey from Leptis to Garama took thirty days and the return journey twenty days, and that specific numbers of stades were reported for each days' progress from watering place to watering place in the desert route (Lennart and Jones 2000: 145).

Still, the Garamantians geographical location and socio-economic situation meant that they could uphold a privileged position whereby they could exploit their desert and sub-Saharan territories and the Mediterranean, successfully maintaining a trade system, which brought items such as olive oil, bronzes, glass, pottery, jewellery and other goods in exchange for slaves, salt and wild animals. The Garamantes have been recorded trading with the wider world. There is literary evidence of a caravan route stretching from the Nile towards the west and southwest on to the Niger. Herodotus (Hist. 4.185) mentions that '…there is a mine of salt on it every ten days' journey, and men live there […]. The salt there is both white and purple'. Classical sources comment on trading of 'Carthaginian' stones (red carnelian), cultivation of dates, horse breeding, ivory, ebony and, possibly, slavery referred to as 'hunting of Ethiopians' (Appendix A Table 3). It has also been suggested (for example, Desanges 1978) that the journey of Maternus to Agisymba was related to the procurement of rhinoceros and other wild animals for spectacles, very popular during the reign

of Domitian (Ptolemy 1.11). There are virtually no Classical records about the trade of slaves from the Garamantian territory to the Mediterranean world until the late 5th century AD. This is likely due to the fact that slavery was common in antiquity, thus bringing little attention to this aspect of the Garamantian trade. Despite the lack of earlier sources, it seems certain that the Garamantes were a slave-holding society. For instance, the Roman poets Florus and Luxorius make reference to the importation of Garamantian slaves and women into Roman Africa. There is also the Arab record in the Futuh Misr by Ibn 'Abd Al-Hakam where it is stated that Uqba ibn Nafi, in his third raid in Fazzan (the raid of Zuwila), demanded 300 slaves as a tribute (Willis 1985: 57).

The military and diplomatic contacts of the Garamantes with the Roman world have been recorded from the 1st century BC and 1st century AD when there were periods of intermittent conflict. The Romans knew of the Garamantes as a community dwelling on the peripheries of the distant south. Despite being defeated by Roman armies - notably Cornelius Balbus, proconsul of Africa (20 BC), as described by Pliny (*Natural History* V 35-37) and specially mentioned by Virgil (*Aeneid* VI 792-795)- the Garamantes were never annexed to the Roman Empire. In the early contacts, the Garamantes seem to have occasionally raided the Roman coastal settlements, and did not easily give in to the Romans. Further conflicts between the Romans and the Garamantes have been recorded in 15 BC, AD 22 and AD6 9. In *c.*15 BC, P. Sulpicius Quirinus campaigned against the Marmaridae and the Garamantes (see Appendix A Table 2) and in the first quarter of the 1st century AD, the Garamantes had an alliance with the Tacfarinas during his revolt against the Romans. Further, in the year AD 69, Garamantian troops raided Lepcis Magna. These conflicts suggest that despite the establishment of trade and commercial exploration between the empire and the Garamantes, they made a nuisance of themselves from time to time (Leadbetter 2011: 55). Ptolemy (1.8, 1.10 and 1.11) recorded in his *Geographia* the military expedition of Septimus Flaccus, who setting off from the Mediterranean coast, proceeded south for three months from the territory of the Garamantes until he reached Aethiopia. A second expedition in the late 1st century AD was that of Maternus, who accompanied the King of the Garamantes on a four-month journey and military campaign south of Garama to the country of Agisymba, which according to Ptolemy (1.11) was subject to the Garamantian Kingdom.

There is limited information recovered from ancient sources concerning social and cultural aspects of the Garamantes. As stated above, some of the descriptions of Garamantian society and ways of

life in the Classical period are a combination of preconceived ideas and stereotypes. Savage, fierce, indomitable, naked, miserable, promiscuous and lawless are some of the adjectives used to portray the Garamantes (Mattingly 2003: 86). Despite these, in various writings, spanning from the 1st century BC to the 6th century AD, we have access to different information that suggest a different view of the Garamantes. Latin texts refer to the Garamantian society as *gens* (tribe or peoples) and their capital Garama and other peripheral sites as *oppida (ibid.)*. The Garamantes have been described as an 'exceedingly great nation' (Herodotus *Hist.* 4.183.1), having a 'simple mode of life' (Strabo 17.3.19), 'tent-dwelling' (Lucan *Phar.* 4.679) - although Ptolemy in the 2nd century AD mentions the metropolis of Garama and Sabai (Ptolemy 4.6.12). Some social aspects of the Garamantes, as suggested in the Classical sources, are that the Garamantes did not practice marriage, and the women were held in common, with the children being adopted as their own by choice (Solinus 30; Mela 1.45; Strabo *Geographies* 17.3.19). Arnobius the Younger (5th century AD) commented that the indigenous North African Garamantes spoke Punic, contrasting with the barbaric languages of the interior (Com. Psal 104). With regards to the Garamantian agriculture and pastoral practices, there are ancient sources such as Herodotus (Hist. 4.183), Strabo (Geographia 17.3.11 and 17.3.19), and Pliny (Nat. Hist. 13.111) who have recorded aspects of their lifestyle. For instance, special mention is given to the cattle, the breeding of horses and the Garamantes ability in cavalry as well as the cultivation of palm dates.

The physical appearance of the Garamantes has been recorded in ancient sources. There seems to have been a mixture of Berber and negroid in antiquity as the descriptions often disagree or confuse Garamantes with Aethiopians (black-skinned). For instance, Ptolemy (1.9) implies the Garamantes were dark-skinned whilst Strabo (2.5.33) makes a difference between the Aethiopians and the Garamantes. There are also records of Garamantius used as a *cognomen*, maybe relating to slaves from Fazzan (Mattingly 2003: 89), which could have attributed to the confusion in the association of Garamantians as negroid. A 3rd century inscription from Hadrumetum reads: 'the scum *(faex)* of the Garamantes comes into our world, and the dark *(piceo)* slave is proud of his black body. If not for the human voice issuing from his lips, this demon with the awful face would horrify men' (*Anth. Lat.* 1.183). In addition to these, their representations in mosaics are not negroid but Berber. It can be suggested therefore, based on Classical sources, that Garamantian society was diverse.

Classical sources allude to the kingdom of the Garamantes both in poetic and military references. Silius Italicus in his epic poem Punica refers to the daughter of the Garamantian king Hiarbas whilst Pliny and Ptolemy highlight the campaign of Balbus and journeys of Maternus and Flaccus (Appendix A Table 3). In Section 2.2.5 of this chapter, I consider whether the Garamantes can be considered a state or a chiefdom drawing from the comparison of literary and archaeological evidence.

The evolution of the trans-Saharan trade routes placed the Garamantes in a unique position of contact between the sub-Sahara and Mediterranean cultures and the Nile to the east (Liverani 2000a: note 2). Nonetheless, as Edwards *et al.* (1999: 109) point out the story of the Garamantes is not only one of human adaptation in the face of increasing desertification, but also one of increasing social complexity and formative of a civilised society, understanding the term of civilisation as a way to describe a collective demonstrating a degree of organisation, co-operation and urbanism (Febvre 1973: 220).

2.2.4. Archaeological evidence of the Garamantes.

There has been a relatively late academic interest in the Garamantes despite them having been known to scholars through Classical literary sources. It has not been until the late 1990s, without taking into account the work of Pace and Caputo (1951) and the excavations of Ayoub and Daniels in the 1960s and 1970s (see section 2.3.1), that an academic interest in Fazzan and the Garamantes flourished. This led to a variety of archaeological projects, which has enlightened the current knowledge about the Garamantes, providing a source for comparison with the Classical sources.

Current archaeological research in Fazzan has highlighted aspects of the Garamantes that show a different picture far from the 'barbarian' nature attributed to them by Classical authors. Archaeological investigations in the area, involving the study of urbanism in settlement sites (Castelli *et al.* 2005; Liverani 2000a, 2003; Mattingly *et al.* 1997, 1998a, 1998b, 2003, 2006), pottery (Dore *et al.* 2007; Gatto 2010) – and small finds (Cole *et al.* 2010), osteoarchaeological analysis of human remains (Nikita 2008, Nikita and Lahr 2009, 2010, Nikita *et al.* 2010, 2011), analysis of the cemetery sites (Castelli *et al.* 2005; di Lernia *et al.* 2002; Faleschini 1997; Mattingly *et al.* 2007, 2008, 2009, 2010, 2011; Scarpa Falce *et al.* 2000), archaeobotanical and environmental

analysis (Pelling 2005, 2008; Radini 2010; Van der Deer 1992) and the study of the irrigation systems (Drake *et al.* 2008; Wilson 2009, 2010), are proving that this desert people were a collective, embracing their material culture and rituals, and demonstrating a degree of co-operation, urbanism and organisation.

The development of urbanism, with settlements concentrating in the oases, not only in the Wadi al-Ajal, where the 'capital' of the Garamantes, Garama (founded *c.*300 BC), was located, but also in the Wadis Tanezzuft and ash-Shati, as well as the Zuwila-Murzuq-Barjuj depression, is one of the aspects that characterised the increased complexity from the Late Pastoral societies of the 2nd millennium BC and the progress of the Garamantian culture (Mattingly and MacDonald 2013a: 72 and Mattingly and Sterry 2011). Archaeological research in Fazzan during the past few decades has provided evidence of different lifestyles from pastoral and sedentary sites, including some of the earliest evidence of urban settlements. Garamantian settlements were significantly different from those of earlier pastoral peoples.

There is a clear connection between the development of the Garamantian society and the development of urban centres. The earliest dated Garamantian settlements are hill forts located in areas with robust natural defences along the escarpment. These sites were further developed with the addition of fortifications, rampart walkways and gates. Zinkekra provides excellent archaeological evidence of this type of architecture (Daniels 1970; Mattingly *et al*. 2010a), with other, often intervisible, sites such as Tuwash (TWE021), al-Khara'iq (CHA003-007), Qraqra (GRA002) (Mattingly *et al.* 2007a: 139). These sites were occupied in the first millennium BC. The increasing complexity of the Garamantian society explains the development of settlements in the oases, which show a degree of morphological standardisation in the planning and layout. Excavations in Zinkekra, Garama, Saniat Jibril and Tinda (Daniels 1970, 1971; Mattingly 2003) and Aghram Nadharif (Liverani 2000 and 2005) provide good archaeological evidence of Garamantian architecture. The excavations at the Garamantian capital have recorded a good definition in the layout of the streets and alleys, stone foundations in public buildings, which suggest some type of monumental architecture, and a central *qsar* - a fortified building (Mattingly 2013). The building materials for these oases settlements were mainly mudbrick and palm (in addition to the stone foundation of public architecture). The excavations of the FP behind building GER1.3 have recovered building material of Roman influence such as painted wall plaster along with hypocaust

and flue tiles (Mattingly *et al.* 2007a: 165). The excavations of domestic buildings in the Garamantian sites of Aghram Nadharif, a fortified citadel in the periphery of the oasis of Barkat, and the village of Fewet, seem to resemble the domestic structures, materials and layout of those in the Wadi al-Ajal. The residential units comprised an inner and outer room and storage facilities for foods in the form of pits (Liverani 2005: 51-71, 121-33 and 167-84; Gatto 2005b: 73-120; Mori 2005a: 135-50 and 2005b: 151-66). In contrast with Garama, the excavations at the settlement site of Aghram Nadharif have recovered no evidence of public architecture.

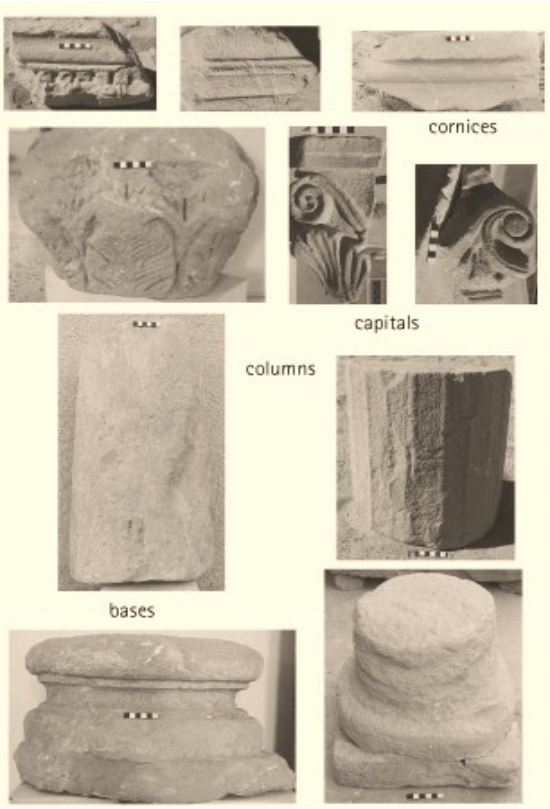


Figure 2.4. Architectural elements from Garama (Mattingly and Macdonald 2013: 73)

Despite the limited excavation of Garamantian settlement sites, note must be made of possible religious structures in addition to the urbanistic planning and domestic architecture. Two buildings in Garama have been suggested as possible temples (buildings GER1.1 and GER1.3[1]), not only for the morphological characteristics but the associated finds. The excavations at GER1.3 produced artefacts such as a decorated gold disc, the extremity of a bronze statue, a mask of Silenus and a small statue of Ammon, as well as various architectural fragments, including blocks pertaining to a frieze and parts of columns (see Mattingly 2003 for details). Despite the limited excavation, the use

[1] Nomenclature following Fazzan Project.

of satellite imaginery, and high-resolution pictures used by the oil industry in Fazzan, along with the aerial photographic record of the 1950s and 1960s, has helped to identify Garamantian walled towns, villages, and farms. Over one hundred villages and farms, and several towns, dating to the Classical Garamantian period, have been recorded in the past two years (Sterry and Mattingly 2011, 2013). The inter-visibility between settlement and funerary sites, as discussed in Chapter 6, has proven to be important. The best preserved Garamantian landscapes (i.e. Taqallit), which have not suffered the impact of contemporary towns and farms, provides a clear example where the relationship between cemetery, foggara and settlement can be observed.

Figure 2.5. Satellite image showing a fortified village (outlines) and associated oasis gardens (DMP).

Libyco-Berber inscriptions are widely spread across the Saharan desert. However, the chronology of these engravings in not uncomplicated. The fact that the written language used by the Tuareg is very similar in form to that of the ancient Libyan script makes the dating of the inscriptions problematic. Nonetheless, Garamantian inscriptions have been recorded in various locations across Fazzan, in different media, from carvings in rock wall to stele in funerary contexts. The systematic recording of these inscriptions have not yet been completed and therefore there is little information on the Garamantian component of the 'archive'. The inscriptions are based on a series of lines, symbols and dots in various combinations. The study of this written record would be of crucial importance in order to understand the individual and social memory of the Garamantian communities across Fazzan. The development of this writing system is likely to have been established for administration purposes and in relation to the wide trade. The fact that it is also encountered in funerary areas, suggest there must have been a wide use of writing. Unfortunately,

the high level of the water table in the oases settlements has meant the loss of possible documents on organic materials.

Figure 2.6. Foggara shafts in Taqallit (DMP2009)

Classical sources variously characterised the Garamantes as a nomadic or sedentary culture – some referring to their cattle and cultivation of dates, others assimilating them as nomads. Archaeological evidence attests that the Garamantes were a predominantly sedentary population, settled and exploiting the oasis and adapting to the desert landscape. The **foggara** irrigation system allowed agriculture to flourish. This model of irrigation is found across arid areas, from Morocco to Oman. Foggara is the name it receives in Syria, Palestine and some Northern African countries, including Libya. This system is also called qanāţ, Kariz, falaf, Khaţţāra in Iran, Oman and Morocco respectively (Wilson and Mattingly 2003: 235). A foggara is an underground channel that taps into groundwater and carries it to the surface (downhill) of cultivable land through an inclined tunnel. This channel connects with the ground surface through vertical shafts, dug at regular intervals. The foggaras are numerous in Fazzan and they are found throughout the Garamantian territory – Wilson (2012) suggests around 550 in the Wadi al-Ajal alone ranging from 100m up to 4.5km in length.

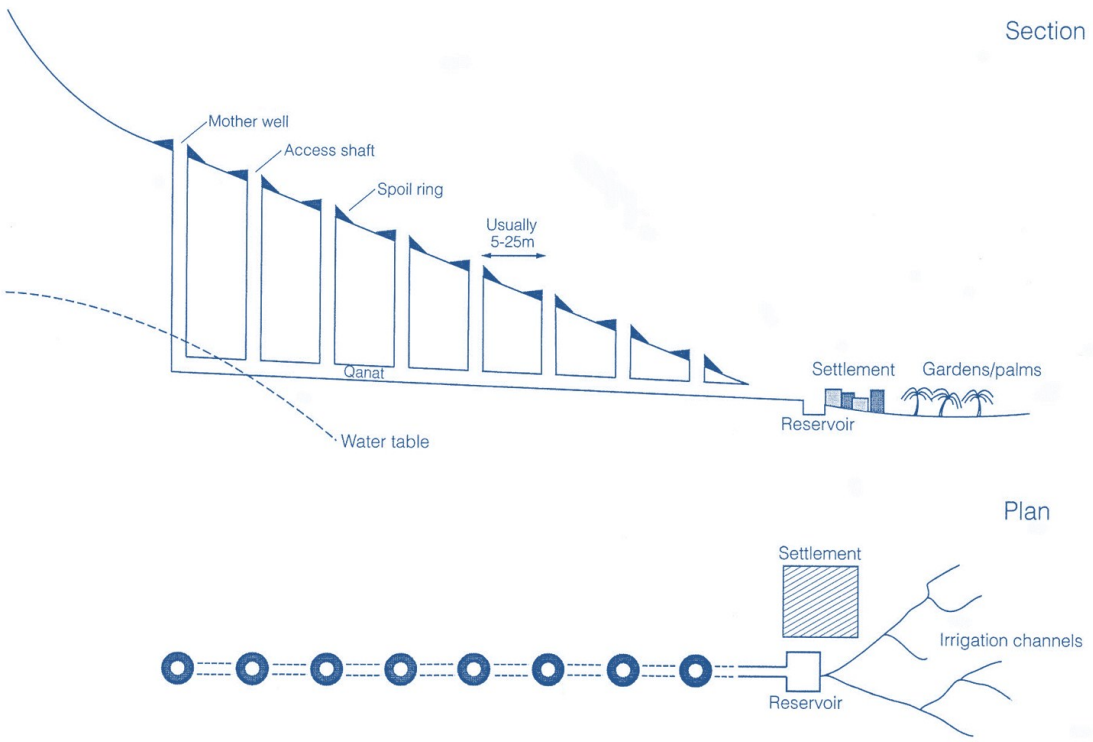


Figure 2.7. Diagram showing the structure of the foggara irrigation system
(Source: Watts- Plumpkin 2005)

Archaeobotanical analyses in various sites across Fazzan, including Zinkekra, Garama, Tinda and Aghram Nadharif, suggest that **agriculture** developed by the introduction of crops from elsewhere rather than expanding local resources (see Pelling 2005; Van der Veen 1992; Van der Veen and Westly 2010). Date palm and barley were the best-preserved plants in the archaeological record. In addition to these, wheat and other cereals are also frequent. The later phases of the Garamantian culture saw an increase in cereals and African crops, such as millet. Pelling (2005) and Sadori *et al.* (2010) suggest that this intensification on minor cereals where probably adopted because the soils would have begun to suffer the consequences of overexploitation as well as a decrease in water availability which in turn could represent a rise in human pressure in a drying environment.

The Garamantian phase of Saharan history not only saw the development of urbanism and irrigated agriculture but the introduction of the horse and the camel, which influenced the trans-Saharan **trade**. As Wilson (2012) suggests, in the first centuries AD a trans-Saharan trade developed, directly related to the importance and functioning of the Garamantian state, which may have been of more importance than previously considered. The adoption of the camel meant a

significant impact on trade for its physical characteristics: capacity to go without food or drink for several days, high tolerance of desert temperatures and the ability to carry heavy loads of up to 150 kg. (Mitchell 2005: 146). The exchange of material culture and knowledge would have also developed from their interaction with the Mediterranean. Liverani (2000) observes that Fazzan lies in the centre of a regional system with the Garamantes being in a key position of the interconnecting network linking Fazzan with Tripolitania, Cyrenaica, Egypt, Darfur, Tibesti, the Chad Basin and the Ahaggar (Mitchell 2005: 141). It has been suggested that the trading traffic from North Africa towards the Mediterranean and Rome was directed to the western coast of Libya and the southern tip of Tunisia. Places such as Sabratha, Oea (modern Tripoli) and Lepcis Magna along with the island of Djerba (still connected to the mainland in the first centuries AD) became important *terminus* for this long distance trade (Schörle 2012). Archaeological excavations in Fazzan confirm this after the recovery of North Africa amphorae in both settlement and cemetery sites. Moreover, it has been proposed that the Garamantes served as middle-men in the slave trade in the Trans-Saharan route and that the commerce of slaves between Fazzan and the Mediterranean world could potentially be seen as a candidate for the balance of the Roman commodities consumed by the Garamantes (Harper 2011: 87- 88). The excavations in settlement and funerary sites in the Wadi al-Ajal have produced Punic ceramics of the late centuries BC as well as a large number of Roman artefacts, which includes glassware, oil and wine amphorae, fine pottery, etc. in the Classical and Late Garamantian periods. Archaeological evidence of this exchange can be seen in ostraca recovered from the fort of Bu Njem (Marichal 1992), which shows the presence of Garamantian traders, and the inscription from Hadrumetum. The consequences of this connection between the Garamantes and the Roman world must have been noticeable in their lifestyle. The commerce would not only include material goods, i.e. pottery, glassware, but also new foods and tastes, which could have contributed to social differentiation through status display (Wilson 2012: 420; Mattingly 2013:173).

As stated in the previous section related to the records from ancient texts, the interaction between Fazzan and the Roman world was both commercial and military or diplomatic (see Daniels 1970; 1987). From Classical sources (see section 2.2.1), we can estimate a minimum of five Roman campaigns in Fazzan, those of Balbus, Quirinius, Septimus Flaccus, Julius Maternus and Festus (Appendix A Table A.3). The accounts provided by the Classical sources, suggest that the Garamantian resistance to Rome was due to their aversion for a civilising sedentary Roman culture portraying the Garamantes a stereotype of nomadic barbarians to likely fit their preconceptions on

desert dwellers. There is a lack of regard to the complexity of the Garamantian society. As Mattingly (2003: 86) points out "it is inconceivable over several centuries of diplomatic, military and trading contact, that the Roman Empire lacked a better understanding of the Garamantes".

With regards to beliefs, rituals and understanding, there is limited information of the religious and funerary aspects of the Garamantian civilisation. There are few excavations of Garamantian settlements, which could enhance the existing knowledge on religious practices and structures. Nonetheless, it can be suggested that along with trade and technology there are networks of culture and religion. For instance, the religious practice in Fazzan is highly likely to have been influenced by Egypt. Ammon, worshiped in Thebes (Egypt) had a famous shrine in the oasis of Siwa by the mid sixth century BC and in Awjila until the time of Justinian on the same oasis route (Quinn 2009: 268). In the first century BC and AD, ancient Roman sources associate Ammon with the Garamantes '… Him (king Iarbas) the god Ammon got by forced embrace upon a Libyan nymph; his kingdoms wide possessed a hundred ample shrines to Jove, (Virgil, *Aen*. 4.198-200). The religious architecture of the Garamantes (Old Jarma, Saniat Jibril) show an eclectic character influenced by the Hellenistic Mediterranean with its Ionic and Corinthian columns and the contemporary Carthage.

The cemeteries at the edge of the escarpment of the Wadi al-Ajal are one of the most characteristic features of this area, and the earlier work of Caputo, Ayoub and Charles Daniels concentrated on the funerary monuments of the Garamantes (Mattingly 2003). There are a few general characteristics about the funerary rite and architecture. Firstly, there is a diversity of morphological typologies and ritual features associated with them in the form of offering tables, stelae and enclosures (see section 4). Some of these characteristics are also encountered in other areas of the Saharan desert. The earliest human burials, during the Late Pastoral period varied from burials made in natural elements of the landscape, like rock crevices and caves, (Mattingly 2007: 140; di Lernia 2002) to cairns. It is not uncommon during this time to find multiple burials within the same graves. Early Garamantian burials show an increasing focus on individual interment though still clustered in the escarpment. The later centuries BC saw a development of clusters of burials and the introduction of offering vessels and tomb markers. Still, there was a general lack of grave goods. The expansion of the cemeteries in the first centuries AD highlights the

significant level of population and settlements in the Wadi al-Ajal. Along with this increase in the cemeteries, there were parallel typological complexities of both funerary monuments and furniture. The funerary assemblages inside the tombs show evidence of the Garamantian contact with the Mediterranean world.

In terms of the funerary ritual, there are just over 300 Garamantian tombs excavated in the Wadi al-Ajal and 30 Garamantian tombs in the Wadi Tanezzuft. Drawing from the descriptive accounts of these burials, we can say that the predominant form of burial in the Garamantian period was inhumation; there are limited examples of cremation (mentioned by Ayoub 1968 (Tomb A2.3); Caputo 1951: 268-70; el-Rashedy 1988:95). The body was normally placed in the grave in crouched position lying on its side. There seems to have been a preference towards the burial being orientated with the head to the east and the body facing south, however there were variations of this orientation and further analysis would enable us to draw hypotheses on the possible reasons for these variations across certain cemeteries. There is evidence of the bodies being wrapped in textile or leather shrouds and the insertions of matting lining the bottom of the tomb or surrounding the body (Caputo 1951; Mattingly *et a*l. 2007b; 2008; 2009; 2010b; 2011). There is no evidence of ritual mummification of the bodies as seen in other oasis near Egypt, for instance Siwa. In the Wadi al-Ajal, two mummified bodies have been recovered during the excavations in the Watwat embayment carried out by the DMP (González Rodríguez 2008b), along with the child found in Uan Muhuggiag by Mori (1951) and the recent ones in the Wadi Takarkori (di Lernia 2012). However, these are believed to be preserved due to natural causes, the fast desiccation of the body aided by the geology of the area, and not to a ritualisation of the preservation of the body that could be related to funerary aspects of neither the Late Pastoral nor Garamantian culture.

Within the tombs, there is a wide range of grave goods. Ochre has been recorded in various tombs (Caputo 1951; Bellair *et al.* 1953; Mattingly *et al.* 2007b; 2008; 2009; 2010b). Headrests have been recovered from burials at Zinkekra and Tajirhi (Daniels 1971; Mattingly *et al*. 2007b). A significant array of Roman pottery, oil lamps, amphorae, glass and faience has been discovered across the Wadi al-Ajal. Along with the Roman pottery, handmade Garamantian incense burners and painted pottery where included with the funerary assemblages as well as wooden bowls and baskets, gourd and items of personal adornment such as necklaces, rings, bracelets and embellished belts.

The ethnic character of the Garamantes was in all probability quite mixed, involving Berber and sub-Saharan African elements (Edwards *et al.* 1999: 110). Recent studies of the material excavated by the Desert Migrations Project and the analysis of the skeletal remains surviving from Daniels excavations, mainly from Saniat bin Huwaydi and Zinkekra, show that, morphologically, the Garamantes cluster closely to the Sub-Saharan Africans, to the Nubians from Soleb, and to the Roman Egyptians from Alexandria. The groups of Kerma and Jebey Moya in Sudan (in sub-Saharan Africa) and Gizeh are the most distant (Nikita 2010 *et al.*: 404). The analyses of the skeletal remains from Tanezzuft also show agreement with these deductions, a certain level of mixture and complexity of the genetic profile (Bruner, Ricci and Manzi 2002: 260). Not surprisingly, these conclusions reaffirm contact between the Garamantes and the Sub-Sarahan and Mediterranean regions. These conclusions also suggest continuity throughout time, as well as the continuation of these interactions.

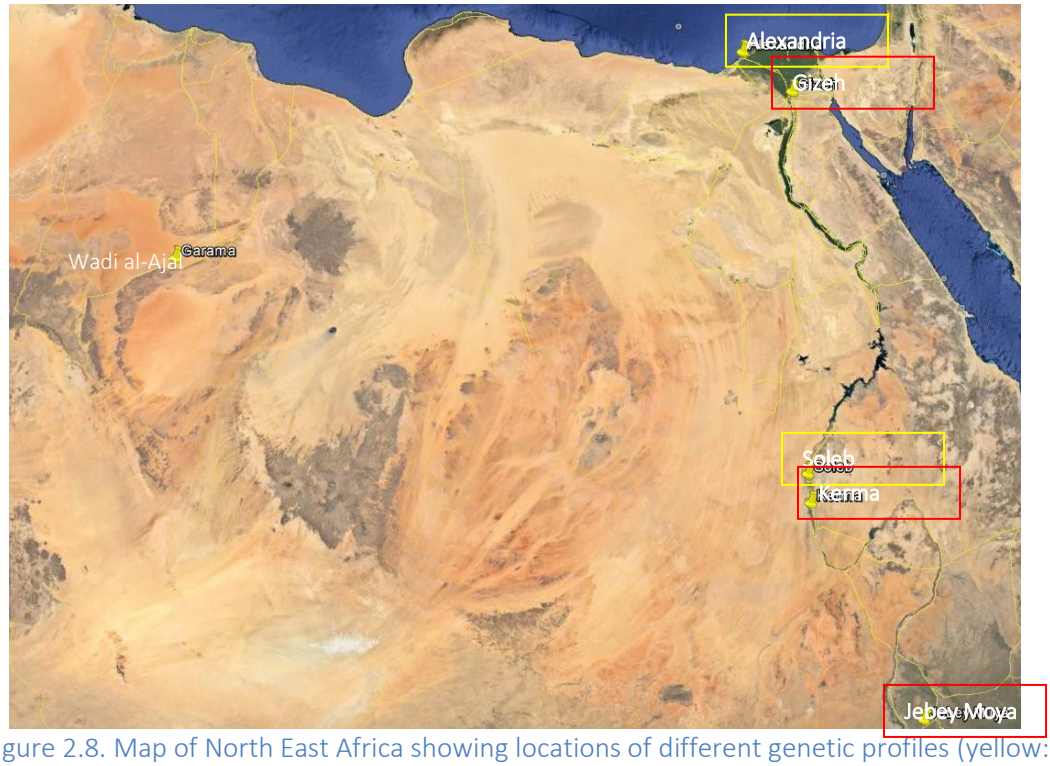


Figure 2.8. Map of North East Africa showing locations of different genetic profiles (yellow: morphologically closer; red: morphologically further)
(Source: Google Earth)

To summarise, the latest projects in Fazzan (Liverani, Fazzan Project, di Lernia and Manzi and DMP) have demonstrated that the majority of the population lived in nucleated settlements (towns or villages), some built in stone (Mattingly 2005: 393). Investigation of Garamantian farming systems has shown that they were intensively irrigating the lower part of the depression floor with sophisticated underground water channels called foggaras, similar to the Persian *qanat* systems (*ibid*). And there is evidence of the long-term long-distance trade between the Mediterranean, the Sahel belt and the Nile, for instance crops such as wheat and barley introduced from the Nile Valley or Western Desert (Pelling 2005: 401). As Liverani (2000) suggests, it seems that the change in lifestyle, the move to urbanism, agriculture in Fazzan, was a response to the final desertification of the region.

2.2.5. The people of Fazzan: a Garamantian Civilisation?

Overall, some of the innovations developed during the Garamantian period could unquestionably support the definition of the Garamantes as a civilisation. These innovations, some of which are supported by archaeological data, include the development of urbanism, irrigated agriculture and trans-Saharan trade. The development of agriculture during Garamantian period was due to the use of a system of underground wells and channels known as foggaras (Section 2.2.2). This section briefly introduces the terms that have been used in the classification of Garamantian society, in order to discuss whether the contemporary evidence on the Garamantes may support the definition as a desert civilisation, a term that has been used by researchers in various humanities disciplines, including archaeology, anthropology and sociology, in recent years, not without criticism (Magnavita 2011: 373-4). This criticism of the term *civilisation* is partly due to the ambiguity of the concept itself, which is very vague and diversely understood, and the relatively limited archaeological knowledge of the area. Nonetheless, it is intended in this section of thesis, to define the terms of *civilisation, society* and *culture*, all three used in the academic literature to describe the Garamantes, in order for me to establish whether the Garamantes can be defined as a civilisation, culture or society.

The term *civilisation* is sometimes used as synonymous with *culture*, or even as a society as a whole (Snyder 1999; McGaunhey 2000; Bosworth 2003). There are five ready variables in order to assess the place of the Garamantes within their contemporary societies in the Central Sahara: a. Technology; b. Demography; c. Social and political organisation; d. Socialisation practices and cultural dynamics; e. Ideology. Within the context of technology, I included the evidence of animal husbandry, horticultural and agrarian technology, pyrotechnia, metallurgy, etc. Demography refers to human density, the size of settlements as well as the mobility. Organisation from a socio-political perspective refers to the relationship between individuals (i.e. kinship), the stratification of the society (i.e. gender division of work), the occupational specialisation (i.e. herders, artisans, food processors, traders, etc). Cultural dynamics and ideology are linked to symbolism, belief systems, art and public rituals, the transference of cultural knowledge and identity. The Garamantian society showed a development and increased complexity in a technological level, with sophisticated irrigated agriculture, which allowed a growth in the population, and as the society became larger, it favoured the movement of people and goods.

Blaha (2002: 14) defines a *society* as a large group of individuals who have a set of shared beliefs (or culture) and who participate in a social organisation with common standards of social conduct. A *society* can be defined as a group of people who directly or indirectly interact with each other and whose members perceive that their society is distinct from other societies in terms of shared traditions and expectations.

Attributes of Society
Society is a **territorially bounded** population, with specific pattern of relationships among these people.
Society is **autonomous** and **interdependent** through social interaction
Society is a group of **interrelated individuals** with a network of interpersonal relations
Society is a population **distinguished** from those around it by common **language** and **costumes**

Table 2.2. Summary of attributes of society

On the other hand, a culture is a complex, largely interconnected whole that consists of the knowledge, belief, art, law, morals, customs, skills, and habits learned from parents and others in a society. A more developed definition of culture can be as the learned (as opposed to biologically inherited) abstract ideas, symbolisms, values and perceptions of the world, along with the ever-changing patterns of behaviour and meaning, shared by members of a society.

Attributes of Culture
Culture is made up of **learned behaviour**, with this learning being continuous (knowledge, beliefs, arts, morals, law, *etc.*)
Culture involves **symbols** created, manipulated and changed by people
Culture is **patterned and integrated,** the elements of a particular culture stand in logical relation
Culture is **shared** by members of a group
Culture is **adaptive**, as it contains information about how to relate to the world
Culture is subject to **change**, no culture remains static

Table 2.3. Summary of attributes of culture

There is no widely accepted standard definition of *civilisation*. Sometimes, the terms *civilisation* and *culture* are used as synonyms. Classical definitions of the term describe *civilisations* as anthropologically complex entities (Kroeber 1944), a method of organising life for the collective

with the same causes and purposes (Koneczny 1962), with a cyclical pattern of growth, maturity and decay (Toynbee 1987), being independent from external influences (Spengler 1922).

Contemporary discussions on what constitutes a 'civilisation' as opposed to 'culture' or 'society' follows on the work by Toynbee and his comparative study of twenty six societies, twenty one of which he considers civilisations (Toynbee 1934). Civilisation has been used in reference to the features than can be observed in the collective life of one human group, comprising their material, intellectual, moral and political life and their social life (Febvre 1973: 220). However, as Bowden (2004: 31) highlights, the term civilisation is not usually used to describe the collective life of just any group, as the term culture sometimes is, rather it is reserved for collectives that demonstrate a degree of co-operation, urbanisation and organisation. Blaha (2002) and Huntington (1993:24-25) use the term civilisation to describe a group of at least several thousand people with a common culture, usually a common language, usually a geographic locale, some significant (usually monumental) buildings and architecture, and a political structure that is not necessarily unified.

Attributes of Civilisation
Civilisation is defined by **objective cultural elements** such as language, history, religion and customs
Civilisation is defined by the subjective **self-identification of people**
Civilisation relates to ongoing **historical processes**
Civilisation identifies quantifiable **values** held in common by a distinct group of peoples
Civilisation refers to all the **features** that can be observed in the **collective life** of one human group
Civilisation is a **collective** with a degree of **co-operation, urbanisation** and **organisation**

Table 2.4. Summary of attributes of civilisation.

Thus, a composite definition considering the traditional and contemporary definitions of civilisation would be that a civilisation is a large society (both in population and in geographical terms) that has an all-encompassing culture that is extensive and persistent, a group that is autonomous, with specialised labour and shared knowledge. 'Culture' and 'infrastructure' would be related to the shared system of communications (including writing), religion and rituals and the ecological and technological innovations related to the development of agriculture as well as urbanism.

The key aspect that differentiates societies from civilisations, in relation to the entity, culture and infrastructure elements, is the potential of growth. This growth is expressed in the development of ideas, mechanisms or social institutions. A *civilisation*, therefore, is a continuation of patterns with its specifics modifications of materials and ideas. The change from farming to agriculture – which includes the growth, adaptation and development of new infrastructures – and the growth of agriculture, would create a surplus, which creates a challenge in terms of the distribution of resources, storage of food (and its accumulation).

Once accepted the idea that there is no one definition of civilisation in mind, neither in sociological, anthropological nor archaeological terms; and, furthermore, agreeing that there are, arguably, as many definitions of civilisation as there are researchers, a series of 'requirements' for considering a particular culture a civilisation are presented. The aim is to establish whether the Garamantian society, based on the research available to date, can be considered a 'civilisation'.

The table below provides a summary of the criteria established for the definition of a civilisation. Early civilisations are the simplest forms of class-based society, with a powerful class that has the control of agricultural surplus and the organisation and management of human labour (Trigger 2007: 46). Trigger's comparative analysis of seven early civilisations, as functioning systems, provides a comprehensive set of material to relate the Garamantes with other early civilisations, aside from the Classical Graeco-Roman Mediterranean ones, in order to establish, based on the available archaeological and Classical literary documentation, whether or not the Garamantian Kingdom fulfils the socio-political, economical and philosophical aspects associated and corresponding with those ancient civilisations.

Classification of Early Civilisations
Urbanism – all early civilisations have urban sites, although the nature of the cities varies considerably.
Hierarchical society – social groupings aware of each other, albeit there is different criteria and clarity in the perceptions of class.
Food production – agriculture supplemented with the use of domestic animals.
Socio-political organisation – for societies to grow more complex they may have to evolve specific forms of organisations.

Table 2.5. Summary of attributes of an early civilisation (after Trigger 2007).

In order to discuss whether the Garamantes could be considered a civilisation it is needed to contemplate the limitations of the data sources: the archaeological evidence, which provides limited and incomplete information on different aspects of their culture; and the written sources, meaning the works of Greek and Roman authors, as there is very limited records of Garamantian inscriptions and those recorded have not as yet been deciphered.

Figure 2.9. Possible Garamantian inscriptions at Taqallit (DMP2009).

The archaeological evidence of Fazzan presents information about technological innovations, subsistence, movement of goods, settlement patterns, etc. It is nevertheless difficult to establish, from the archaeological data alone, this society's political structure or social organisation. References in the Classical sources to the Garamantian kingdom provides us with a starting point to define the political structure of the Garamantes. However, there is not, as of yet, sufficient archaeological evidence, neither in the form of inscriptions, nor specific material culture to confirm the existence of a kingship rule. Moreover, we do not know how the Garamantes called themselves. Again, the written information originates from the perspective of the Classical Mediterranean cultures and what these cultures understood as a king or a kingdom. Therefore the Garamantes may have had different connotations or meaning to their political organisation. Still, from the Classical sources (see section 2.2.2), we know that the Garamantes were moving slaves from sub-Saharan areas to the Mediterranean world. It is also suggested that the Garamantes would have been a hierarchical society using slaves. The monumentality of some of the funerary structures in relation to other tombs, for instance the 'Royal Cemetery' GSC030 and the tombs in Watwat (for example, UAT050), can be seen as prove of different groups within the same

populations. The social organisation of the Garamantes is hinted in the written sources where they are said to be promiscuous and having more than one wife (Mela 1.45).

The development of agriculture and the sustainability of the production of food would have led to the need to storage and administer surpluses and distribution of the resources. The Garamantes supplemented their agriculture with the use of domesticated animals. A skilled group would be needed in order to train the animals and manufacture and maintain ploughs and other agricultural utensils. This is evident not only in the written Roman or in Greek records, but widely depicted in rock art.

The archaeological evidence also suggests the importance of trade in Garamantian society, which demonstrate an interconnected network with both sub-Saharan Africa and the Mediterranean. The presence, in both settlement and cemetery sites in Fazzan, of imported Roman and Punic products, and conversely Fazzani products in the North indicates a regular and successful trading relation with their neighbours. As established above, the Garamantes not only had an economical relationship but diplomatic and military contact. Although we do not know anything about the organisation of the Garamantes with regards to military campaigns, aside from what is mentioned in the Classical sources, we do know, from depictions in rock art and descriptions in Roman military accounts that they made use of the horse and wheeled transport.

In demographic terms, the density and distribution of the settlement and cemetery sites provide us a point of reference to the spread and numbers of the populations. Urban sites in Fazzan would have been the centre for specialised groups (i.e. craft productions, administrative and political) not involved in food preparation, concentrated in the farms. These urban sites have shown evidence of the development of art and public architecture. We have evidence of the Garamantian encounters with the Roman army and it is probably a good assumption that the Garamantes would have fought over water rights, fertile agricultural land and trade routes. There is no substantial archaeological data to relate to the military organisation of the Garamantes and we can only refer to their description in the Classical sources (see above) and few artefactual evidence in the form of knifes and blades. We do know the Garamantes were working metal (copper alloy and iron at least – probably silver and gold).

Figure 2.10. Garamantian anthropomorphic art: rock relief in Zinkekra (left) and clay figurine from Garama (right).

There is a lack of written documentation with information on the Garamantian religious beliefs and spiritual values; the knowledge gained from the excavation of their tombs only give us a small aspect of a particular set of rituals in direct relation to the disposal of the dead body. The development of a separate space for the dead and the living represents a major change in the funerary traditions of the region, and consequently these places become embedded in the memory of the communities for generations. This increase in the complexity of the Garamantian landscape is likely to mirror a level of complexity within the society itself.

Based on the above discussion and the archaeological evidence recovered from the relatively limited research carried out in the region of Fazzan with regards to the Garamantes do support the idea for them to be more than a society. The fact that this desert society shows evidence of complexity (as shown in Table 2.6) in all aspects highlight in a multi-disciplinary definition of civilisation, demonstrates that the Garamantes can be seen as an early desert state that has been able to develop their own culture and ideas. The Garamantian civilisation, from the earliest phase, between 1000-500 BC, and the 5th-6th centuries AD, has seen the development of agriculture and urbanism together with the rise of a hierarchical society that created economic and political relationships with its neighbours.

Attributes of Society	Attributes of Civilisation	Archaeological evidence in Fazzan
Group of interacting organisms	Continuation of behaviour patterns. Sometimes used as synonymous of culture (Kroeber 1957)	Material culture recovered across the Fazzan region shows homogeneity in behaviour patterns, in domestic and ritual sites.
Large group of individuals	Large population – long term human societies, development of urbanism	The number of Garamantian settlement and cemeteries sites in Fazzan provides evidence for the numerous population.
	Development of institutions (political, religious) to satisfy human needs (Quigley 1979).	Monumental architecture in the Garamantian capital along with the variability of mortuary monuments and ritual encountered. Administration of agricultural surplus.
	Ecological changes - agriculture (intensification of resources)	Archaeobotanical evidence of intensification of agricultural resources. In addition, we find the hearths associated with the refining of salt.
Direct or indirect interaction with each other.	Trade networks (distribution, mobility) – interconnections within themselves (Blaha 2002).	Numerous evidence of Saharan trade using camel and horse transport, with the Garamantes playing a central role.
Common culture - perception of themselves as distinct from others (traditions, expectations)	Cultural system, values and symbols (communication, knowledge) – self-differentiation.	Inscriptions recorded from Fazzan shows an interest in recording and communication. Similarity in burial rituals and material culture.
Shared beliefs	Religion (knowledge of self and nature, rituals)	Similarities of the Garamantian burial rituals across Fazzan, temple in Garama
Agriculture	Infrastructures (i.e. urban infrastructure, agricultural, industrial, etc.)	Foggaras used for irrigation, tapping the water table and providing the oasis with water.
Maybe growing or static (Blaha 2002: 14)	Potential for growth (ideas, mechanisms or social institutions)	There is a development in the complexity of the Garamantian society. Trading and use of slaves suggests a hierarchical structure with a potential for growth.

Table 2.6. Summary of society and civilisation attributes with relation to archaeological data.

2.3. Archaeology of death in Fazzan: Previous research in the Wadi al-Ajal.

Archaeological investigations in Fazzan can be divided into two separate phases. The period between the 1930s and 1970s, was initially influence by colonial ideals of Italian investigators, who began scientific analysis of the southern region of Libya and, subsequently the campaigns of Ayoub and Charles Daniels in the 1960s. The second phase began in the late 1990s after a hiatus of *c.*20 years. Excavations in Garama and a survey of the Wadi al-Ajal were carried out by the British-Libyan Mission directed by David Mattingly from 1997. In the same year, Mario Liverani, Mauro Chremaschi and Savino di Lernia led the Italian-Libyan Mission in the Acacus and Massak to investigate sites of Garamantian date.

Jarma was unknown except to the locals until the early nineteenth century when the Scottish explorers Dr Walter Oudney and Hugh Clapperton visited the Watwat mausoleum in 1822 (Daniels 1989: 45; Mattingly 2003). Modern research and excavations in the area did not begin until the Italian mission led by Pace and supported by Sergi and Caputo in the 1930s. During these campaigns, organised by the 'Reale Societa Geografica' and influenced by colonial interests, ten different areas of the Wadi al-Ajal, including the foggaras, Jarma, the mausoleum in Watwat and the settlement of Zinkekra, were studied and extensive excavations were carried out in various cemeteries. The Italians identified *c.*60,000tombs and it is estimated that over 100 tombs were excavated in the proximity of Jarma. The cemeteries targeted by the Italian mission were around the Watwat mausoleum and along the escarpment and in the monumental cemeteries to the south and east of Jarma. The main aims of this expedition were to establish a chronology for the tombs and determine the significance and relevance of the Garamantian capital, Garama, in relation to Fazzan's ancient history (Sivilli 2002). The first skeletal analysis was provided by Sergi (1951) whose main concern was with determining the racial origins of the Garamantes. These campaigns represent one of the first systematic excavations in the Sahara (Sivilli 2002) and the results included the first typological series of funerary structures in Fazzan (see Caputo 1937, 1949, 1951; Pace 1935, 1937, 1951; Sergi 1951 – referenced in Mattingly 2003).

Archaeological fieldwork was undertaken after the Second World War, when Fazzan was under French rule, including a mission led by Bellair (1953), during which a few burials were excavated in

four different cemeteries. Pauphillet also excavated a number of tombs in the Wadi al-Ajal (Bellair *et al.* 1953; Bellair and Pauphillet 1959 – referenced in Mattingly. 2003).

Cemetery	Tombs excavated	Inhumations	Cremations
UAT001	1	0	0
UAT002	14	12	2
UAT003	1	1	
UAT008	52	52	
GSC001-008	5	5	
GSC030	3	3	
GSC031	2	2	
FUG001	1	1	
Tuwiwa	2	2	
CHA001	9	9	
Takarkiba	3	3	
Al-Qraya	2	2	
Al-Abyad	3	3	
TAG001	3	3	
Ad-Disa	2	2	
			Total= 103

Table 2.7. Summary of Caputo's excavations in cemeteries in the Wadi al-Ajal (UAT= Watwat; GSC= Jarma Escarpment; FUG= al-Fugar; TAG= Taqallit).

The 1950s saw a turn to a more systematic research in Fazzan with the increasing interests in the existence of a Garamantian Tran-Saharan routes and the identification of the cultural groups and places mentioned in Classical sources with regards to Balbus' triumph (Daniels 1989: 47). More systematic archaeological investigations were developed and a detailed description of excavated material and processing of structural typologies are often found. Nonetheless, as Sivilli (2002: 18) points out, the archaeology of death in Fazzan, and northern Africa in general, during the 1950s, was highly influenced by diffusionist theories and chronological methods used to explain megalithism in Europe.

The independence of Libya in 1951 was marked by the formation of Fazzan's Antiquities Service in 1960, under the direction of Sudanese Mohammed Ayoub, which resulted in a more formal and intensive archaeological investigation in the Wadi al-Ajal. Ayoub was responsible for the consolidation and conservation of the Watwat mausoleum and he directed the excavations of

various sites including some of the settlements identified by Caputo on the southern side of Zinkekra. In addition to this, Ayoub initiated excavations in the capital of the Garamantes, Garama, old Jarma, and the oasis cemetery of Saniat bin Huwaydi (GER011), where he excavated an uncertain number of burials in addition to the fourteen that he provides a partial record, and of which six were especially rich. He also directed the excavations of what he named the 'Royal Cemetery' (GSC030 - Kings'; GSC 031- Queens') where eight monumental tombs were excavated between 1961 and 1963. Unfortunately, Ayoub's excavations were never fully published (for summaries of Ayoub's work see Daniels 1989: 47; Mattingly *et al.* 2010a). Nevertheless, his work added considerable information to the Italian work and brought up the significance and extraordinary quality of the archaeological heritage in the area.

Cemetery	Tombs excavated	Inhumations	Cremations
GER011	14	14	1[2]
GSC030	4	4	
GSC031	4		
			Total= 22

Table 2.8. Summary of Ayoub's excavations in cemeteries in the Wadi al-Ajal (GER= Jarma; GSC= Jarma Escarpment).

A group of 'French doctors' (unidentified and unknown dates of campaigns) followed up the work of Ayoub on the east side of the cemetery of Saniat bin Huwaydi. The only records we have of this excavation are scarce site notes and comments, still, it is uncertain neither how many nor which tombs were excavated by Ayoub or the 'doctors' in this area. The rough map in the excavation report in Jarma Museum has allowed the position of the trench to be identified within the area later excavated by Charles Daniels (Mattingly *et al.* 2010: 215). In addition to this, the German archaeologist Ziegert excavated at Saniat bin Huwaydi and near Budrinna (*ibid.*). The trench in Saniat bin Huwaydi uncovered at least two intact tombs of Garamantian origin of considerable significance judging by the photographic records and artefacts in the Museum of Jarma. However, most of his work remains unpublished and the location of his trench at Saniat bin Huwaydi is unknown (summarised in Daniels 1989: 48).

Charles Daniels' work on the Garamantes started in 1958 when he made his first trip to Fazzan and continued for 20 years in ten different campaigns. His excavations in the fortified settlement of

[2] Although I have included the cremation in Table 2.11, it is very doubtful.

Zinkekra were carried out in 1965-1968 and the results from the excavation were subsequently published (1968, 1970; Mattingly *et al.* 2010a).

His work at Taqallit, where a few tombs were excavated, produced a plan of the stepped tomb site and a record of Garamantian mortuary furniture, namely stelae and offering tables. The pyramid cemeteries in the vicinity of Al-Hatiya were discovered in the early 1960s. These cemeteries were surveyed but not excavated (though see Mattingly *et al.* 2010a: 352). Daniels was also involved in the excavation of the Royal Cemetery, where Ayoub had already started. His surveys of the dense escarpment cemeteries in the areas of Zinkekra and Watwat and excavations at Saniat bin Huwaydi (amongst others) provided a set of pottery for comparison with the settlement sites and added further knowledge to the Garamantian burial custom already suggested by the work of Ayoub. Along with his fieldwork in Fazzan, Daniels' aimed to establish a typological series of Garamantian pottery with the objective of dating Garamantian settlement and funerary sites. His work in the Garamantian capital, Garama, and the pottery typological series were continued by the Fazzan Project (see below). Daniels' archive has been studied in recent years and published in the Archaeology of Fazzan series (see Mattingly 2003; Mattingly *et al.* 2007a; 2010a; 2013).

Cemetery	Tombs excavated	Inhumations	Cremations
GSC030	1	1	
ELH001	1	1	
ELH002	2?	1	
ZIN013	9	9	
ZIN109	1	1	
GER011	43	43	
FUG001	1	0	
TWE001	1	0	
TAG001	3	3	
CHA (al-Khara'Iq)	2	2	
CLF010 (Ikhlif)	1	1	
			Total = 65

Table 2.9. Summary of Daniels' excavations in cemeteries in the Wadi al-Ajal. (GSC= Jarma Escarpment; ELH= al-Hatiya; ZIN= Zinkekra; GER= Jarma; FUG= al-Fugar; TWE= Tuwash; TAG= Taqallit; CHA= al-Khara'Iq; CLF= Ikhlif)(After Mattingly *et al*. 2010b: 213- 408).

The Fazzan Project (1997-2002) was a collaborative project between the Department of Antiquities and the Society for Libyan Studies directed by David Mattingly and Mohammed Al-Mashai. The multidisciplinary work carried on by the Fazzan Project comprised archaeological excavations at Old

Jarma, reconnaissance surveys and geomorphological and geographic studies. The aims were to complement Daniels' and previous work in the area and collect information on cultural and environmental variables to 'reflect the archaeological sequence, pre- and proto-historical subsistence and settlement patterns and changing social systems of the Jarma region' (Mattingly *et al*. 2003). The archaeological survey of the escarpment highlighted the density of the cemeteries and funerary structures noted by Charles Daniels. The surface collections during the survey derived in the pottery type series (from Late Pastoral to Medieval periods, with a significant attention to the Garamantian phases – 900 BC to AD 500) The results of the Fazzan Project have been substantially published (Mattingly 2003 and Mattingly *et al.* 2007a, 2010a and 2013) and led on to the Desert Migrations Project.

Cemetery	Tombs excavated
ZIN218	1
ZIN220	8
ZIN350	3
ZIN700	2
UAT004	1
UAT008	27
UAT009	2
UAT010	7
UAT050	5
UAT051	3
UAT052	5
UAT055	1
UAT056	2
GSC042	1
GSC048	3
GSC030	1
GSC031	3
TAG001	18
TAG006	2
TAG012	9
TAG021	1
TAG050	1
TAG063	3
EDS012	2
	Total= 111

Table 2.10. Summary of Desert Migrations Project excavations in cemeteries in the Wadi al-Ajal. (ZIN= Zinkekra; UAT= Watwat; GSC= Jarma Escarpment; TAG= Taqallit; EDS=Ad- Disa).

The Desert Migrations Project (2007-2011) was a multidisciplinary and multidimensional research project with the Department of Antiquities and Society for Libyan Studies as collaborative bodies. The project was again under the overall direction of David Mattingly and I was director of excavations. The main aim of the project was 'to address the theme of migration in its broadest sense, encompassing the movement of people, ideas, knowledge and material culture into and out of Fazzan' (Mattingly *et al.* 2007b). A team of specialists in different disciplines is investigating long-term climatic and environmental change, the prehistoric activity and mobility patterns in the areas surrounding a series of palaeolakes and the excavation of sample burials, believed to be of different chronologies and social hierarchies, for full osteological analysis and study of material culture and its relation to ethnic identity across time (see Mattingly *et al.* 2007; 2008; 2009 and 2010b). The Desert Migrations Project concluded its fieldwork campaign in January 2011. Excavations were carried out in Zinkekra, Watwat, Taqallit and the so-called Royal Cemetery in the Jarma Escarpment. In addition to the excavations, a survey of the western Wadi al-Ajal was carried out in Taqallit and the area closest to Garama. The results from these surveys, building on the work of the Fazzan Project, provide an improved plan of the escarpment cemeteries from Jarma to Zinkekra and enhanced level information about the cemeteries in the Taqallit area.

In this thesis I have used available data from both published and unpublished sources. Having been part of the team of the Desert Migrations Project in the capacity of director of excavations, I am drawing conclusions based on my own experience and interpretation.

2.4. Summary of Chapter 2.

This chapter has presented the theoretical aspects of my research. Firstly, I presented the literature review related to the archaeology of death and burial by referring to key studies and debates developing over the past few decades. As it has been discussed, funerary rituals are drawn from previous practices and memories and enacted by the living. Consequently, it is more probable that the treatment of the deceased represents the hopes of the bereaved emphasising social statements made about the dead rather than the social status of the deceased. It is therefore an inaccurate assumption to understand funerary remains as symbolic indicators of the deceased status and identity directly linked with social structure. The dead are present in the world of the living through the agency and physicality of the corpse making indispensable for the living to interact with the dead during the process of disposal and through the power of memory. Cemeteries and funerary monuments are both the context and consequence of funerary rituals which the living community drawn by social memory establish their own cultural interpretations and identity. Libyan Fazzan provides us with a vast diversity of cemetery and tomb morphology across the landscape. The records of the excavations at these cemeteries, mainly of a descriptive as opposed to analytical nature, offer a good dataset for a theoretical analysis of the materiality of death - meaning the body, rituals and material culture of the interment.

A synopsis of the research undertaken during the past decades in the Libyan Fazzan has been presented. Fazzan provides a model of increasing social complexity, sedentism and urbanisation within a changing environment, in the form of the emergence of the Garamantian civilisation. Following the descriptions in the Classical sources and the referring in academic literature on social complexity, this chapter provided a discussion on what constitutes a society and a civilisation. A comparison of the written sources and the archaeological data with contemporary ideas of what constitutes a civilisation has shown that the Garamantes fulfil the criteria to be considered an early civilisation. A summary of previous research carried out in Fazzan has been included in this chapter along with the morphological typologies that will be mentioned in this thesis.

Chapter 3. Methodology and Typologies

This chapter presents the methodology used to analyse the funerary data from Fazzan. As stated in Chapter 1, the aims of my research were to identify the place and space of the dead and to recognise patterns in the funerary ritual, including choice of tomb, preparation of the body and grave assemblages, that can be associated with individual and group identity The final part of this chapter relates to the typological nomenclature used in this thesis.

3.1. Methodology for the analysis of funerary remains in Fazzan

3.1.1. Cemeteries and funerary structures

The establishment of the physical character of each cemetery and comparison of contemporary sites and cemeteries of the same morphological type has been a key aspect of my research in order to contextualise the space and place where the funerary rituals were performed. The construction of specific types of funerary monuments, even in cases where these may have been influenced by the topographical setting, already has a cultural meaning and significance. In order to be able to interpret the funerary practices it was necessary to identify and describe the diverse typologies recorded in the Wadi al-Ajal. Along with the typological analysis of the tombs, the funerary furniture was also considered, including the orientation and location of the funerary structures within the cemetery and the living community.

The analysis of the individual cemeteries and funerary monuments was carried out as follows:

- Firstly, a descriptive and typological analysis of the main architectural features, including a study of the phasing and evolution of the different cemeteries; and
- Secondly, patterns within the cemeteries were sought through univariate statistical analysis concerning issues of diversity and density.

Methods:

- Geographical Information Systems: There is an already existing GIS as part of the dataset of the Desert Migrations Project 2007-2011 and the succeeding Trans-Saharan Project. Drawing

from the work carried out by the DMP (Mattingly et al. 2009; 2010c; 2011), I analysed the survey data available at this time in order to identify and classify cemetery sites with the same morphological characteristics and chronology.

- The creation of a descriptive database of each individual cemetery was necessary, linked with the two dimensional position of each grave. This was the collaborative aspect of my research with the DMP. Nevertheless, I had certainly needed to access these data, manipulate them, and analyse them in order to gain the information I required to carry on my research. A table containing analytical descriptions of burials has been linked in the course of subsequent analysis. The database has four tables (see Table 3.2): one for tomb variables, one for funerary furniture, one for the human remains and the fourth one for the associated artefacts. The database was able to provide a summary of these tables organised by funerary structure.

A diachronic analysis of the cemeteries has been undertaken through the examination of the mortuary data. The variables for this analysis (see Table 3.1) have provided an overview of the changes of mortuary practices across time. Through the diachronic analysis of the cemeteries, it was intended to provide a narrative and description of the funerary rituals along through the identification of similarities and/or changes in the funerary treatment. This has also provided us with information relating to changing frequencies, which may relate to more general changes in society.

Variables for diachronic analysis
Burial structure
Offering table
Stelae
Age
Sex
Corpse facing
Corpse orientation
Corpse position
Grave goods count
Grave goods diversity

Table 3.1. Variables for diachronic analysis of the funerary programmes in Fazzan.

Table	Variable	Description
Burial Feature	Burial Number	Burial identification code: cemetery code + Tnumber.
	Site	Name of the site from where the burial was recovered
	Period	Chronological period
	Phase	Chronological phase (if applicable)
	Area	Area within which the burial was located
	Type	Morphological typology (superstructure)
	Facility	Morphological typology (burial chamber)
	Length	Length in metres of the burial feature
	Width	Width in metres of the burial feature
	Depth	Depth in metres of the burial feature
	Chamber Area	Chamber surface (in m²) calculated from length/width
	Chamber Volume	Chamber volume in m³ calculated from length/width/depth
	MNI	Minimum number of individuals within feature
	Individual Number	Indicates of the feature is a 'single' or 'multiple' burial
	Diversity	Number of different artefact types found in the burial
	Artefact Count	Total number of artefacts in the burial
	Notes	General notes on the burial feature
Burial Assemblages	Burial Number	Burial identification code: cemetery code + Tnumber
	Skeleton Number	Individual with which the artefact was associated
	Artefact ID	Artefact catalogue number
	Description	General artefact type (i.e. ceramic)
	Artefact Type	Classification by type (i.e. amphorae)
	General Type	Artefact category (i.e. Tripolitanian II)
	Count	Number of this type of artefact encountered in the burial
	Notes	General notes on the artefact
	Location	Location of the artefact within the tomb
	Relation	Location of the artefact in relation to the human remains
Funerary furniture (outside of the chamber)	Burial Number	Burial identification code: cemetery code + Tnumber
	Skeleton Number	Individual with which the artefact was associated
	Offering table	Positive if present
	Offering Table Type	General morphological typology of the offering table
	Location	Location of the offering table in relation to the burial structure
	OT_Notes	General notes on the offering table
	Stelae	Positive if present
	Stelae Type	General morphological typology of the stelae

Table	Variable	Description
Funerary furniture	Location	Location of the stelae in relation to the burial structure
	S_Notes	General notes on the stelae
	Enclosure	Positive if present
	Enclosure Type	General morphological typology of the enclosure
	Location	Location of the enclosure in relation to the burial structure
	E_Notes	General notes on the funerary enclosure
	Artefact	Positive if present
	Artefact ID	Artefact catalogue number
	Description	General artefact type (i.e. ceramic)
	Artefact Type	Classification by type (i.e. amphorae)
	Location	Location of the artefact in relation to the tomb
	General Type	Artefact category (i.e. Tripolitanian II)
	A_Notes	General notes on the artefact
Human Remains	Burial Number	Burial identification code: cemetery code + Tnumber
	Skeleton Number	Individual with which the artefact was associated
	Sex	Sex of the individual
	Age	General age category of the individual
	Orientation	Direction of the head-pelvis axis
	Position	General position of the corpse
	Facing	Direction the corpse was facing
	Arm position	Position of the arms relative to the rest of the body
	Undisturbed	Positive if burial was not disturbed
	Disturbed	Positive if burial was disturbed
	Disintegrated	Positive if preservation of the bones is poor
	Fragmented	Positive if the bones were fragmentary
	Notes	General notes on the human remains

Table 3.2. Summary of variables entered in the database.

3.1.2. Analysing the individual burials

The main aim of my research was to identify changes and development of burial practices. It was therefore necessary to establish whether or not there was a relation between variables such as tomb locations, tomb construction and richness or diversity of the grave goods, and how identity was represented within the archaeological record (i.e. sex, age). In order to reach valid conclusions there were three areas that needed to be analysed: firstly, the individual treatment of the body, the preparations for the disposal and finally the material culture related to individual burials.

a. Treatment of the body

Related to the treatment of the body various aspects have been taken into consideration:

- the degree of articulation or disarticulation; disposition of the burial;
- number of individuals per burial;
- anatomical modifications.
- position and orientation of the body (possible relationship to sex)
- analysis of age and sex has also been noted in order to establish possible variations in treatment or even location of the burial structure.

b. Preparations for disposal

The preparation for disposal refers to the place of interment. In relation to the grave and funerary structures, the following have been analysed:

- the morphological typology of each individual tomb
- location of the individual tombs within the cemetery.
- analysis of the associated structures (location and orientation) (if applicable)
- stylistic typology of stelae; their location and orientation.
- stylistic typology of offering tables or offering bowls outside the burial chamber (location and orientation).

c. Material culture

Relating to the material culture, aspects to be considered were:

- material worn, used and carried by the living and the dead during the funerary rituals;
- material for the grave (including vessels, textiles, ornaments, food, etc.) (possible relation to sex and age);
- spatial organisation of grave goods.
- diversity of goods, which have been investigated including:
  a. considerations of the number of categories present,
  b. extent to which these categories are represented by similar number of objects and
  c. The variation between these categories.

Grave goods were analysed in terms of presence/absence. Diversity is less biased than a quality analysis of assemblages. Quantity, however, had also to be considered. An analysis of the grave goods has provided information on the individual's (or group's) access to specific goods (i.e. imported Roman artefacts).

In addition, relating to identity, the study of the grave assemblages in tombs where skeletal data was available has been contrasted with age and sex of the deceased in order to establish connections between specific artefacts and individual identity. With the intention of analysing diversity in grave assemblages, the artefacts have been distributed into typological series. Following the idea that the type of artefact rather than the amounts of artefacts may have more symbolic significance, it has been necessary to establish which artefacts were more indicative of special status than others. The analysis of the material culture in relation with funerary structures and cemeteries has also sought to establish to what extent there is a relation between variables such as tomb location, tomb construction and richness of the goods.

The mortuary variation analysis element of my research has concentrated on changing patterns of mortuary expenditure (relative elaboration and cost) and material symbolism. It has included location and spatial associations, burial ritual, material goods, etc. Differentiation has been important to be able to distinguish variability relating to different phases of the mortuary ritual from mortuary variability relating to differences in cultural or ethnic connection or social status.

Mortuary variation could be related to ideological or social changes. For instance, the development of agriculture and a more sedentary lifestyle may have led to the establishment of organised burial grounds for the disposal of the dead, therefore connecting the ancestors with the land and the communal identity. In the Wadi al-Ajal, we see an increase in nucleation in the cemeteries as opposed to broad funerary zones.

Variability (range, quality and quantity) of the material culture in the ritual performance is significant in association to the construction, perception and interaction with the ancestor. In the Wadi al-Ajal, there is a wide range of ritual features (offering tables, stelae, enclosures, etc). The variability analysis has highlighted the significance of specific cultural artefacts and the ways in which the dead have been remembered and/or forgotten.

Methods:

- Variables included in the database are the total number of burials for each individual site, recorded by age and sex; burial type; burial date; type of find; quantity; material; colour (of artefact); position and orientation of the human remains in burial; state of preservation.

- Each individual cemetery site has been assessed by tomb typology; chronology; presence/absence of offering table and stelae; orientation of the tomb (when possible); location of funerary furniture; range of artefacts; percentage of burials containing such items; the age and sex of the burials with which the artefacts occur. These variables have been organised in key diagrams. Key diagrams to study variability in the mortuary domain have been used since the 1970s (i.e. Saxe (1970); Brown (1971)). This technique, also known as formal analysis, is useful as an analytical tool because of the organisational aspect of it, setting of variables, which in the case of this research, includes the treatment of the body, the preparations for disposal and material culture. These established variables have been mutually exclusive in which only one choice out of multiple will be assigned to each tomb. The results of the key diagram have allowed the identification of funerary treatment and the possible variations related to age or sex, for example (see Chapter 5).

- The range of artefacts and the relative proportion to one another has also been determined in order to establish a profile of the individual cemeteries. In order to be able to summarize

quantitatively the artefacts associated with the funerary monuments, it was needed to add two variables: the artefact count and diversity of artefacts. Firstly, the artefact count, which is simply a count of the number of individual artefacts recovered from a burial. The second variable to take into consideration was the relative richness of the grave goods, which involved the calculation of different types of artefacts within the funerary assemblages. Taking into consideration the diversity of the objects inside the tomb rather than the quality is less subjective and less sensitive to distortion from incomplete databases (i.e. loss of information due to the robbing or during excavation, analysis and reporting of data). The available data for this research has allowed me to compare grave assemblages from different cemetery sites and different periods and phases based on these two variables (count/richness). The obvious downfall when trying to measure statistically diversity, variation or evenness, is that the calculations are affected by the sample size.

- Distribution maps of the different artefact categories have been created and charts used to illustrate the density and proportion of individual artefacts. In relation to this aspect of the research, I considered it necessary to take into account the multiple count artefacts, which often represent parts or portions of a composite artefact. Perhaps, the most obvious are the necklaces and other personal adornments, composed of ostrich eggshell, stone and glass beads. Other items that are often found in multiples include pigments (ochre), organic remains (both food remains and basketry), fibres, etc. To include individual records of each individual component of these artefacts (for example the count of ostrich eggshell beads) would artificially inflate the number of culturally and ritually meaningful objects placed in the funerary feature.

- Analysis of the spatial distribution of grave goods in relation to the body has also been undertaken. It was required to plot the position of artefacts as points on a general scheme of the burial chamber at its bottom level. Due to the variability in the levels of preservation of the human remains, two different types of division of the grave pit have been undertaken in order to examine the relevant data. The bottom of the grave has been divided into spatial sectors. Therefore two different sorts of spatial analysis were undertaken to examine the relevant spatial data.

The first analysis has been a uniform division of the grave pit into sixteen equal sectors (Figures 3.1 and 3.2) ordered following the compass north. In the case of circular chambers, the sectors of the periphery (sectors 1, 4, 13 and 16 in particular) are slightly diminished in size (see Figure 3.2). However, the differences in size are not such that would change the spatial analysis. Firstly, as the results show (see Chapter 4), the funerary assemblages in circular chambers are more likely to be found closer to the body than the walls of the tomb. When this is not the case, the artefacts are still countable related to the bottom of the vessel and the sector where the majority of the artefact is found.

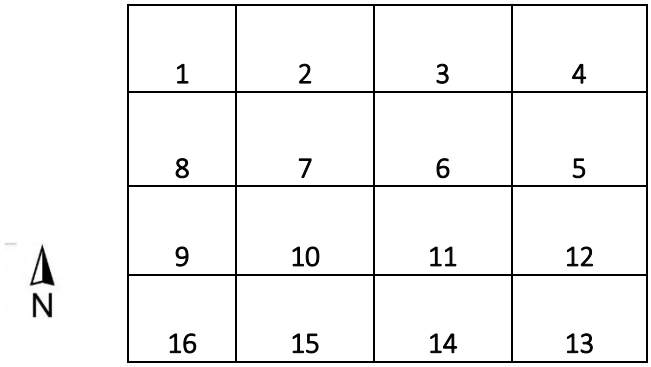


Figure 3.1. Spatial analysis of grave goods in 16 sectors (rectangular chamber).

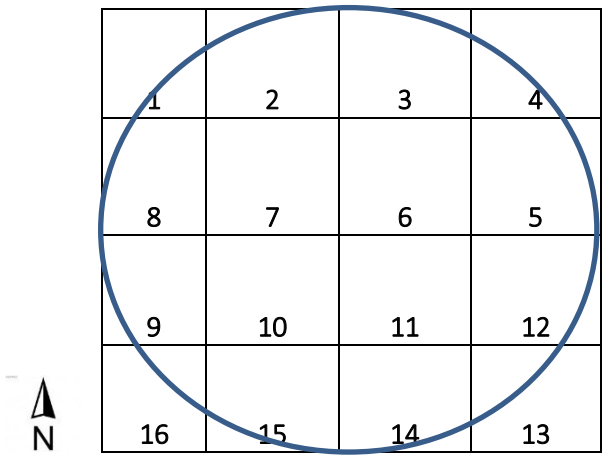


Figure 3.2. Spatial analysis of grave goods in 16 sectors (circular chamber).

The second type of division was in relation to the position of the body and its individual parts (see Figures 3.3 and 3.4). This second analysis therefore varied depending on the position and orientation of the body. By carrying out these two sets of analysis, it was intended to be able to interconnect and compare the spatial data. These analyses were done separately for every tomb. The spatial analysis was only done on a two dimensional level (horizontal) as there was a clear difficulty in gaining the third dimension data (the relative height above the bottom of the grave) for most of the burials. These difficulties were due to the lack of homogeneity of the written archive during the recording process of the excavations.

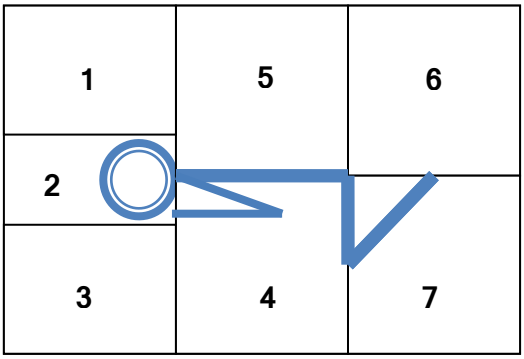


Figure 3.3. Spatial analysis of grave goods in sectors depending on the position of the body (body in crouched position laying on its right side with the head to the west).

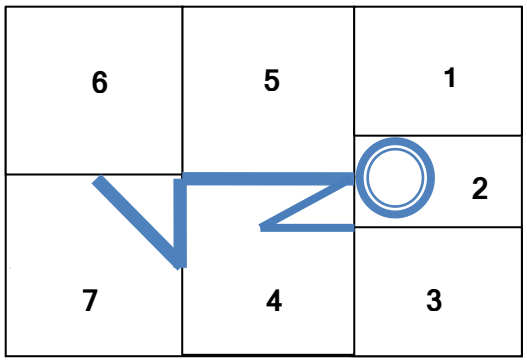


Figure 3.4. Spatial analysis of grave goods in sectors depending on the position of the body (body in crouched position laying on its left side with the head to the east).

- Following the individual inter-cemetery analysis, a comparative analysis of the variables across the cemetery sites in the Wadi al-Ajal (from Saniat bin Huwaydi to the Taqallit promontory) has been carried out. The statistical analysis was aimed to find out actual occurrences of particular aspects of the funerary ritual, in order to recognize the availability of specific choices, as well as opportunities and options, of the living to bury their dead.

In relation to the spatial analysis of the artefact and to be able to summarize quantitatively the artefacts associated with the funerary monuments, I have added two variables: the artefact count and diversity of artefacts. On the one hand, the artefact count is solely a sum of the number of individual artefacts recovered from a burial. Conversely, the relative richness of the artefacts has been taken into consideration. In order to do so, I have calculated the number of different types of artefacts within the funerary assemblages. By considering the diversity of the objects rather than the quality, the interpretation is less subjective and less sensitive to distortion from the incompleteness of databases (i.e. loss of information during excavation, analysis and reporting of data).

Still, these variables are also biased by the fact that some types of artefacts survive less well than others, namely the artefacts made of organic materials including items of clothing, food offerings, etc. In addition to this, the divisions of the ceramic assemblages included in the richness of the burial also affect the results. For example, an imported bowl and a local handmade bowl have been considered as two types of artefact despite the fact that both of them are bowls. The size of the artefact has also not be taken into consideration, thus an amphora will be considered one sort of artefact despite the variation in sizes across the site.

3.2. Data sets and accessibility

Although the investigation of cemeteries and tombs in Fazzan over the past decades has provided a dataset for analysis, the mortuary samples available for the different cemeteries, areas and time periods vary considerably both in size and detail of reporting. The intensity of fieldwork carried out in the Wadi al-Ajal is considerable more than in other areas of Fazzan. Nonetheless, smaller samples of mortuary data recovered from other areas have been useful as comparative material and have allowed to developing at least some preliminary conclusions about regional continuation and variability in funerary practices in the area of Fazzan.

The excavated mortuary data available from the Wadi al-Ajal has been summarised in the tables below.

Project	Cemetery	Tombs excavated
Caputo	Ad-Disa	2
Caputo	Al-Abyad	3
Caputo	Al-Qraya	2
Daniels, Caputo	CHA (Al-Khara'Iq)	11
Daniels	CLF10 (Ikhlif)	1
Desert Migrations	Ad-Disa EDS012	2
Daniels	Al-Hatiya ELH001, ELH002	3?
Caputo, Daniels	Al-Fugar FUG001	2
Ayoub, Daniels	Jarma GER011	67
Caputo, Ayoub, Daniels, DMP	Jarma Escarpment GSC030	9
Caputo, Ayoub, DMP	Jarma Escarpment GSC031	9
Desert Migrations	Jarma Escarpment GSC042	1
Desert Migrations	Jarma Escarpment GSC048	3
Caputo	Jarma Escarpment GSC1-9	5
Caputo, Daniels, Desert Migrations	Taqallit TAG001	24
Desert Migrations	Taqallit TAG006	2
Desert Migrations	Taqallit TAG012	9
Desert Migrations	Taqallit TAG021	1
Desert Migrations	Taqallit TAG050	1
Desert Migrations	Taqallit TAG063	3
Caputo	Takarkiba	3
Caputo	Tin Abunda	3
Caputo	Tuwiwa	2
Daniels	Tuwash TWE 001	1
Caputo	Watwat UAT 001	1
Caputo	Watwat UAT 002	14
Caputo	Watwat UAT 003	1
Desert Migrations	Watwat UAT 004	1
Caputo, Desert Migrations	Watwat UAT 008	79
Desert Migrations	Watwat UAT 009	2
Desert Migrations	Watwat UAT 010	7
Desert Migrations	Watwat UAT 050	5
Desert Migrations	Watwat UAT 051	3
Desert Migrations	Watwat UAT 052	5
Desert Migrations	Watwat UAT 055	1
Desert Migrations	Watwat UAT 056	2
Daniels	Zinkekra ZIN 013	9
Daniels	Zinkekra ZIN 109	1
Desert Migrations	Zinkekra ZIN 218	1
Desert Migrations	Zinkekra ZIN 220	8
Desert Migrations	Zinkekra ZIN 350	3
Desert Migrations	Zinkekra ZIN 700	2
		Total excavated tombs = 314

Table 3.3. Summary of excavated cemeteries in the Fazzan.

3.3. Typologies of funerary structures and cemeteries in Fazzan.

The morphological typologies described in this section correspond to the cemeteries in the Wadi al-Ajal, most of which are located in the escarpment. However, it must be noted that the studies of cemeteries of Garamantian age carried out in the Wadi Tanezzuft (di Lernia 2002) and the surveys of the Wadi ash-Shati, corroborate the typological descriptions below. Again, I will be referring to the terminology used in English literature rather than the terms referred to by the Italo-Libyan missions. Still, where they differ I have noted the alternative nomenclature.

Italo-Libyan nomenclature	British-Libyan nomenclature
Tumulus	Simple cairn
Simple cup	Mound cairn
Platform with two arms	Antenna tomb
Keyhole monuments	-
Bazinas	Stepped circular tomb

Table 3.4. Correlation of morphological typology terminology.

One of the aims of this thesis (see Chapter 1) was to examine the physical character of the Garamantian cemeteries, both in the oases and the escarpment and to establish a comparison of contemporary cemetery sites. Consequently, a diachronic analysis of the same morphological types has been carried out in Chapter 4 as well as a study of the variety of funerary structures recurring in the specific cemeteries. When thinking of morphological characterisation of mortuary areas, it had to be considered what constitutes a funerary site: when a group of cairns becomes a cemetery or the cultural significance of the creation and maintenance of a particular mortuary site. This typological characterisation of cemeteries and funerary monuments was needed in order to contextualise the space and place where the funerary rituals were performed. The construction of specific types of funerary monuments, even in cases where these may have been influenced by the topographical setting, already has a cultural meaning and significance. In order to fully understand, and to be able to interpret, the funerary practices, it is necessary to identify and describe the diverse typologies in the region of Fazzan. Along with the typological analysis of the cemeteries and tombs, the funerary furniture has been discussed in the sections below.

3.3.1 Tomb typology

Many of the funerary monuments encountered during the Garamantian civilisation are paralleled in other areas of the Sahara. For instance, the antenna tombs, also known as V-burials, which consist of a central cairn with two 'antennae' demarcated by lines of stones, with a variable size and usually a southeast and northeast alignment. These monuments have been recorded in the Western Sahara region, in the area of Bir Lahmar (Brooks *et al.* 2003: 17) and south Libya. The typologies described below correspond to the Late Pastoral and Garamantian monuments encountered in Fazzan. Further monuments recorded in the Sahara are the numerous Islamic tombs, on a north-south alignment.

Tomb structure	Typology	Sub-typologies	Chronology
	Mausoleum		Garamantian
	Pyramid Tomb		Garamantian
Rock-cut tombs +Subterranean Chamber			
	Type 1 - Simple cairn	Type 1a - Mound cairn	Pastoral/ Garamantian
		Type 1b - Corbelled cairn	Garamantian
		Type 1c - Kerbed cairn	Garamantian
		Type 1d - Crater cairn	Uncertain
		Type 1e - Crevice cairn	Pastoral/ Garamantian
	Type 2 - Shaft burials	Type 2a - Circular or oval	Garamantian
		Type 2b - Stone ring	Garamantian
		Type 2c - Capped shaft	Garamantian
	Type 3 - Drum	Type 3a - Drum cairn	Garamantian
		Type 3b - Drum tomb	Garamantian
		Type 3c - Corbelled drum	Garamantian
	Type 4 - Square	Type 4a - Quadrangular cairns	Garamantian
		Type 4b - Quadrangular tomb	Garamantian
	Type 5 – Stepped	Type 5a - circular tomb	Garamantian
		Type 5b - Quadrangular	Garamantian
		Type 5c - Multi-angular	Garamantian
		Type 5d - Oval	Garamantian
		Type 5e - Conical	Garamantian
		Type 5f - Square	Garamantian
	Keyhole	Cairn surrounded by concentrical rings	Pastoral
	Antenna tombs	Central cairn with two lines of stones	Pastoral

Table 3.5. Summary of typologies of funerary monuments encountered in Fazzan.

Type 1. One of the most encountered types of tomb in the Garamantian funerary landscape in Fazzan is the cairn, also known as tumulus, which is a circular heap of piled stones, morphologically conical and of various dimensions. There are significant subvariants of this type, ranging from low pile of stones to using natural crevices covered with stone (see Table 3.5).

Figure 3.5. Cairn in UAT009 (Photograph by Author).

Type 2. This type of funerary structure is very common in nucleated cemeteries. The most characteristic feature of these monuments is the shaft, which can be found lined with vertical slabs or unlined. On the surface Type 2 tombs can be either a stone ring or caped by stones.

Figure 3.6. Type 2 shaft tomb in Zinkekra (left) and Type 3 drum at Taqallit (right) (Photographs by Author).

Type 3. Morphologically, this is a roughly circular structure with a built vertical outer wall of small slabs filled with smaller irregular stones and chippings with a flat top. The quality of the drum tombs is based on the regularity of the coursing. The internal sub-structure is found both stone-lined and unlined. Drum tombs are one of the most common funerary monuments of the Garamantian period even though there are clear variations in shape and size (Table 3.5).

Type 4. This type is morphologically similar to the drum tombs with the exception that it has a square or sub-rectangular plan as oppose to a circular one. The burial structure tends to be a shaft. These tombs, as the drum tombs, have various dimensions.

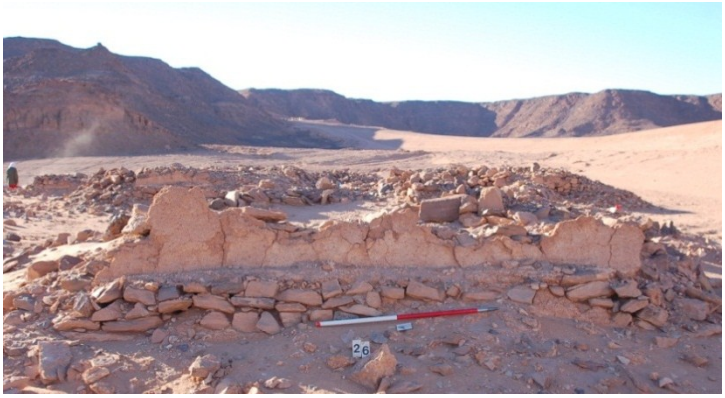


Figure 3.7. Stepped tomb (type 5) in Taqallit (left) and mud-plaster remains in the Royal Cemetery GSC031 (Photographs by Author).

Type 5. The stepped tombs, also known as *bazinas,* are superimposed circular, sub-rectangular or multi-angular structures. These monuments have been recorded in both mud-brick and stone. The outer walls of the stepped tombs were frequently treated with mud-plaster, which survives both in mudbrick and in stone monuments. There is also evidence of red colouring in the walls.

The typologies described above relate to the Garamantian phase of the funerary landscape of the Wadi al-Ajal. It must be noted that there are two prominent Late Pastoral types found in Fazzan, the antenna tombs and keyhole monuments, the former, a cairn with two rectilinear ‘arms, is present in the Wadi al-Ajal (Figure 3.8).

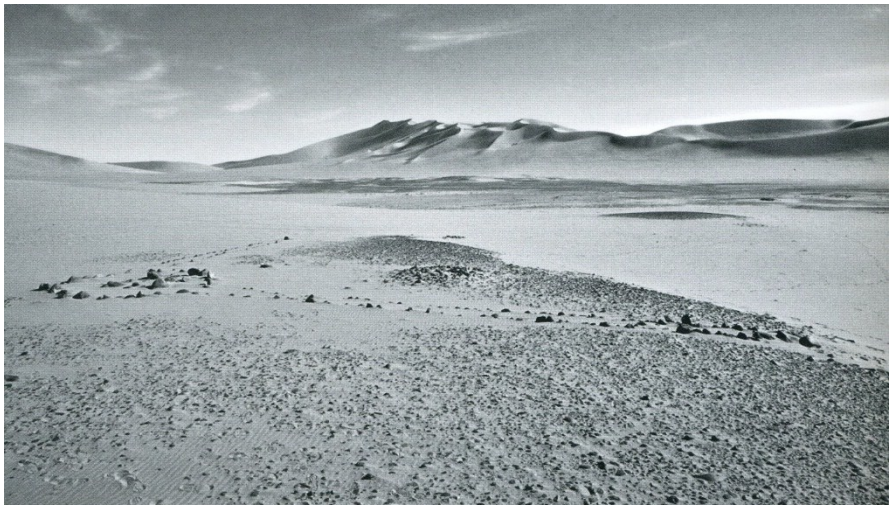


Figure 3.8. Antenna tomb in the Wadi Tanezzuft (di Lernia *et al*. 2002: 46).

In conjunction with the funerary monuments mentioned above, other structures can be found in combination with the different typologies. The table below summarises these structures.

External structures		
	Type 1. Annex	Created by a pair of parallel walls
	Type 2. Niches	Located in the side of the tomb
	Type 3. Portico	Flat slabs horizontally placed over 3 vertical slabs, portico-like feature
	Type 4. Altars	Small 'altars' or compartments (di Lernia refers to these features as 'fireplace').
	Type 5. Enclosure	Square or rectangular annex surrounding the stele and offering table

Table 3.6. External structures associated with funerary monuments (after Mattingly 2003).

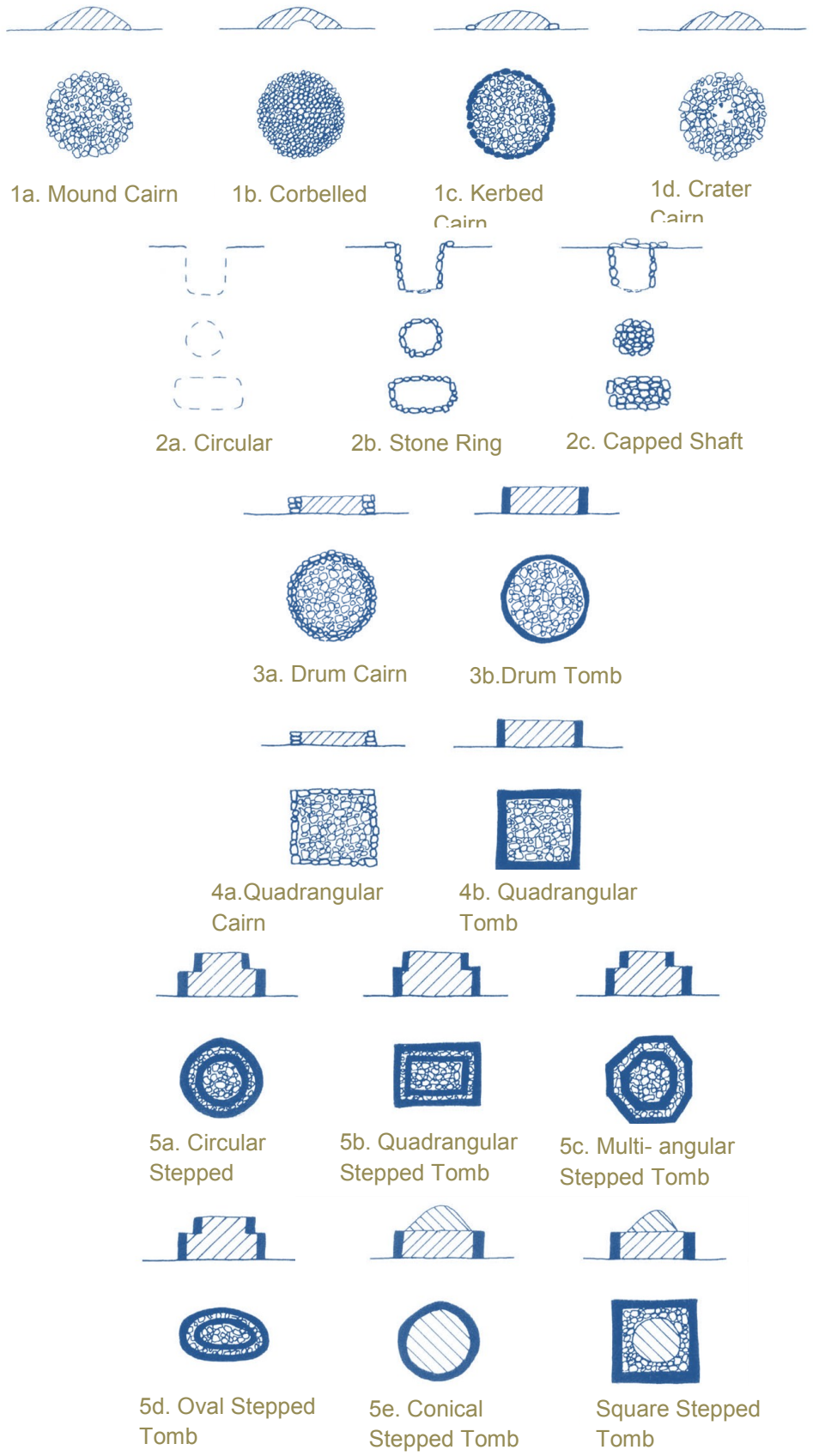


Figure 3.9. Tomb morphological typology (adapted from Mattingly *et al.* 2003: 197).

3.3.2. Cemetery typologies

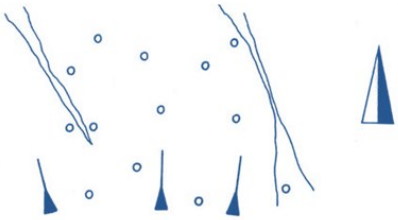
The Garamantian cemeteries of the escarpment of the Wadi al-Ajal are one of the most characteristic features of the area. These cemeteries have a wide morphological variety ranging from scattered funerary monuments within a specific area to densely nucleated monumental cemeteries. This variety is significant as it implies not only the possibility of a diachronic change but also distinction in the use of materials and techniques of construction of the funerary monuments along with a differentiation perhaps associated with identity or social status.

Whilst most of the funerary monuments in Fazzan are made of stone, the cemeteries located in the wadi-centres are built of mudbrick bonded with mud mortar. The use of this material instead of stone has allowed the development of larger structures than those found in the escarpment cemeteries (although with various exceptions as discussed in Chapter 4).

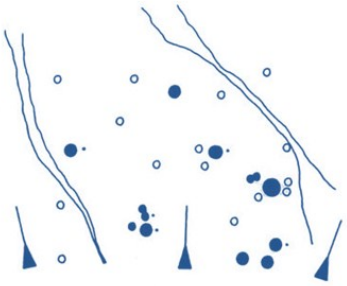
Following the Typology Series devised by the Fazzan Project (Mattingly 2003: 213-17), there are eight morphological typologies that relate to the cemeteries of Fazzan (see Table 3.7 and Figure 3.10.):

Cemetery typology	
	Type 1- Dispersed escarpment cairns (Tomb Type 1).
	Type 2- Dispersed escarpment cemetery (Tomb Type 1 and 3, S+OT)
	Type 3- Nucleated escarpment cemetery (Tomb Types 2, 3 4 and 5, S+OT).
	Type 4- Nucleated (non-monumental) cemetery (Tomb Types 1 and 2)
	Type 5- Nucleated (low density) cemetery (Tomb Types 1 and 3)
	Type 6- Linear cemetery
	Type 7 - Nucleated Wadi -centre cemetery (linear alignment)
	Type 8- Nucleated Wadi-centre (superimposition)

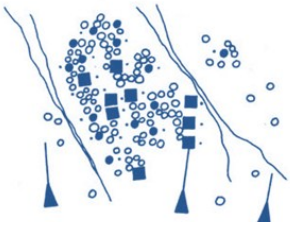
Table 3.7. Summary of cemetery morphological typologies in Fazzan (after Mattingly *et al*. 2007a).



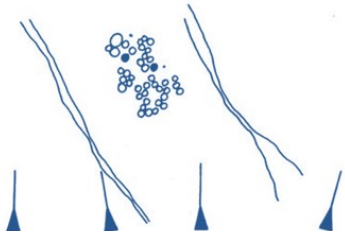
Type 1. Dispersed escarpment cairns



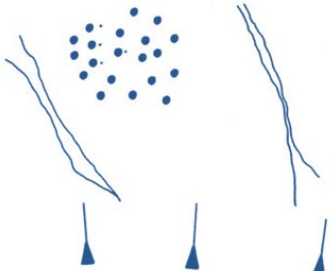
Type 2. Dispersed escarpment cemetery



Type 3. Nucleated escarpment cemetery with monumental funerary structures

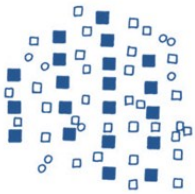


Type 4. Nucleated escarpment cemetery

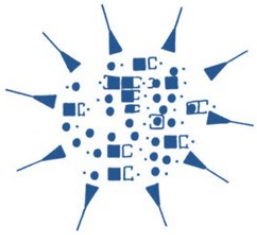


Type 5. Nucleated cemetery with drum tombs

Type 6. Linear cemetery



Type 7. Nucleated wadi-centre cemetery



Type 8. Nucleated wadi-centre cemetery with superimposition

Figure 3.10. Cemetery morphological typologies (adapted from Mattingly *et al.* 2003: 216).

Type 1. These low density cemeteries are located in the lower slopes and terraces of the escarpment progressively extending towards the higher steeper areas. The type of funerary monument encountered in Type 1 cemeteries are cairns, rings of stones (see section 3.3.1). No funerary furniture has been recorded in this type of cemetery.

Figure 3.11. Dispersed cairns in Taqallit (Photograph by DMP 2009).

Type 2. These cemeteries are also found in the slopes of the escarpments showing some indication of clustering around the larger tombs. Cairns are recorded in conjunction with drum tombs. In these cemeteries show the introduction of funerary furniture such as proto-stelae and offering tables (see section 3.3.3.), along with bowls located outside the tombs.

Figure 3.12. Dispersed escarpment cemetery in Taqallit (Photograph by DMP 2009).

Figure 3.13. Aerial photograph of TAG001, a nucleated cemetery of Type 3 – with monumental tombs (Photograph by DMP 2009).

Type 3. There is a variety of tomb types recorded within the nucleated cemeteries found in the Wadi al-Ajal. The key characteristic of these cemeteries is the compaction of the funerary monuments, whether simple cairns, drum tombs, or stepped tombs, which has been described as a 'honeycomb-like pattern' (Mattingly *et al.* 2007a: 215). In addition to a variety of monument types, funerary furniture in the form of stelae and offering tables are often encountered in nucleated cemeteries of type 3 (for example TAG001- Figure 3.13).

Figure 3.14. Type 4 nucleated cemetery in Watwat (Photograph by Toby Savage).

Type 4. Type 4 cemeteries are nucleated by comprising of simpler funerary monuments, cairns and shafts. The lack of monumental types also relates to the lesser encounter of stelae and offering tables. This type of densely populated cemeteries is largely recorded in the Wadi al-Ajal.

Type 5. Nucleated cemeteries of Type 5 are mostly found outside the Wadi al-Ajal, with large number of drum tombs and cairns but with a lower density in relation to Types 3 and 4.

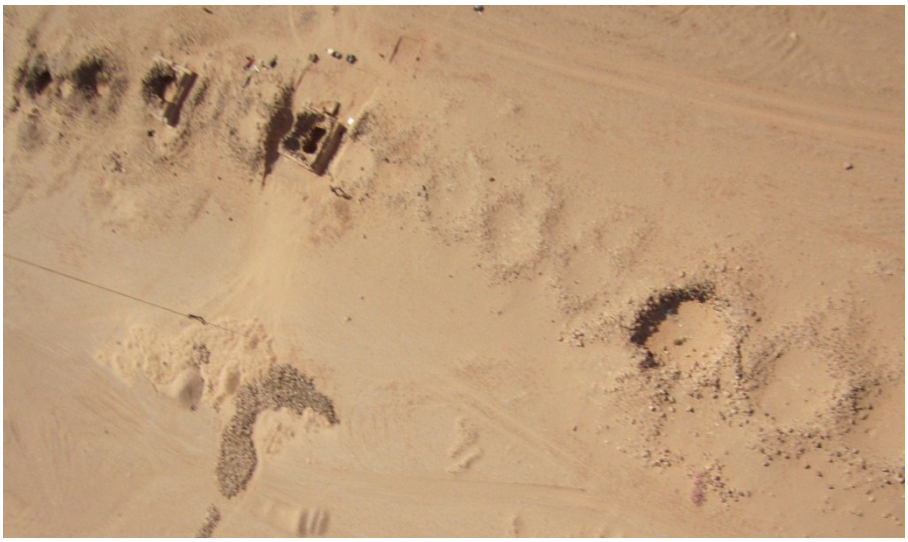


Figure 3.15. Aerial photograph of the so-called Royal Cemetery GSC030, morphologically a Type 6 (Photograph by Toby Savage).

Type 6. Linear cemeteries which have been recorded in various areas of the Wadi al-Ajal with the Royal Cemetery (GSC030) being a good example (Figure 3.15). In these cemeteries, the tombs are arranged in a linear manner towards the centre of the wadi.

Type 7. These are nucleated cemeteries located in the wadi centre with linear alignments. The pyramid cemetery of Al-Hatiya and the 'Queens' side of the Royal Cemetery (GSC031), for instance, show clear elements of linear planning within areas of higher density (Figure 3.16).

Figure 3.16. Type 7 cemetery GSC031 (Photograph by Toby Savage).

Type 8. These cemeteries are located in the wadi centre, are densely populated, and consist of various levels of superposition. The funerary monuments in the wadi centre cemeteries are built with mudbrick rather than stone. The cemeteries of Saniat bin-Huwaydi and TAG012 are excellent examples. There are similarities with the escarpment cemeteries of Type 3, with monumental funerary structures, in as much as the visual effect of the final structures, despite them being mudbrick or stone would look very much alike.

Figure 3.17. Mudbrick cemetery TAG012 in Taqallit (type 8) (Photograph by Toby Savage).

3.3.3. Funerary furniture and its typologies

Many of the cemeteries across Fazzan have offering tables and stelae as part of the funerary furniture, although not often found *in situ*. The level of detail and sophistication in the manufacturing of these features changes over time alongside the development of a more complex funerary ritual, particularly prevalent in the Classic Garamantian period. Below are brief descriptions of the typologies referred to in this thesis.

Figure 3.18. Offering table and stelae in Taqallit (TAG001.T92) *in situ* (Photograph by Author).

A. Offering tables

Offering tables are blocks of stone, mostly sandstone, which have been carved and placed in front of the tombs in order. The tradition of placing a recipient for food can be traced back to the Early Garamantian period when ceramic bowls have been recorded in front of the tombs and continues until the Late Garamantian period. The number of offering tables, sometimes placed on a platform, varies from cemetery to cemetery and across time. There is also variation with regards to the size of these features ranging from 0.5m to 1.6m horizontally- the largest offering tables have been recovered from the Royal Cemetery (GSC030). It can be suggested that the significant number of surface pottery sherds sherds encountered in the dispersed cemeteries is related to the placement of these offering bowls, which would have not survived undamaged. Ceramic vessels have also been recorded alongside offering tables (for example GER001.T17; GSC031.T40). The development of the stone cut offering tables can be seen from the stone with a small indentation in the centre, to the more geometrically carved depression of Type 4 and its variations. The table below

summarises the types recorded in the Wadi al-Ajal and follows the morphological types of the Fazzan Project (Mattingly *et al*. 2003: 210-12).

Offering Table Typology		
	Type 1	Ceramic vessel placed in from of a tomb
	Type 2	2a. Rough 'stone bowls', slab with shallow depression 2b. Unmodified rock used as offering platform
	Type 3	3a. Large slab with cut depressions 3b. Simple stone trough without the small compartments 3c. Two depressions cut into the stone
	Type 4	4a. Sandstone, elongated block with small compartments on the top. 4b. Sandstone, elongated block with small compartments on three sides 4c. Sandstone, elongated block with small asymmetrical compartments 4d. Similar to 4a and 4b but the shape of the compartments varies 4e. Similar to 4a and 4b with part of the surface decorated 4f. Sandstone, irregular shaped block. 4g. Small compartments found into one or both sides of the offering table

Table 3.8. Summary of morphological typologies of offering tables in Fazzan (After Mattingly *et al*. 2003: 210-12).

Figure 3.19. Example of rough type 3 offering table recorded between cemeteries UAT050 and UAT051 (Photograph by DMP2008)

Figure 3.20. Drawings of offering tables morphological typologies (after Mattingly *et al.* 2003: 210-12).

B. Stelae

Similarly to the offering tables, most of the stelae recorded from the Wadi al-Ajal have been found displaced, and sometimes broken, from the tomb originally associated with it. These types of feature are widely recorded across the Sahara desert (Festuccia and Mori 2013) and it has been simplified as horns or hands, depending on the visual effect of the stelae. Horns refer to two stones placed together, or one stone carved with two digits, whilst the hands are a four digit stelae, made of either one stone or three placed together. Stele and offering tables are more commonly found in the east side of the funerary monument, although it is not rare to find them placed on a different side (see Chapter 4).

Some of the stele recorded in the Wadi al-Ajal have traces of red ochre, which suggests that they would have been originally painted in red, albeit now weathered. It is not infrequent to find stele

with Libyan inscriptions, presumably ancient (although more epigraphic analysis needs to be made in order to further our understanding of their presence in funerary context and draw conclusions).

The earliest stelae recorded in Fazzan are roughly shaped stone or completely unworked. This type of stelae are found in association with stone bowls and they can be found as a single stone or in pairs placed vertically in front of the funerary monument, usually on the east side. The evolution of this type followed with worked stone with carved 'digits', either four or two, the two central ones being generally larger than the outer ones. The dimensions of the stele show great variation from c.30cm in length up to c.150cm (GSC030.T8).The finishing varies from pointed tops or flat square-cut, with incised decoration on the top of the digits (see Table 3.9 for details or refer to Mattingly *et al.* 2003: 209). The majority of the stele probably were originally decorated with red ochre or pigment, and occasionally with layers of daub or plaster (González Rodríguez 2011). It can be suggested that the maintenance of the funerary furniture, with the recoating of the outer face of the stele, indicates the continuation of funerary rituals outside the tomb for a longer period of time than the burial ceremony itself.

Stelae Typology	
Type 1	1a. Pair of pointed stones (unworked)
Type 2	2a. Four digits demarcated by grooves 2b. 2b. As 2a, exhibiting painted dots in rows 2c. As 2a, rounded tops. 2d. As 2a more splayed appearance
Type 3	Cut from a single stone, deeper grooves than type 2.
Type 4	Single block, hand with 4 digits cut right through the stone
Type 5	5a. 4 digit hand, 3 pieces, central pincer-like piece 5b. 4 digit hand, 3 pieces, central square 5c. 4 digit hand, 3, pieces, horn type central
Type 6	6a. pincer-like horn 6b. pair of elongated points 6c. pair of vertically aligned points
Type 7	Needle-like worked stone
Type 8	Four digit of broad width, thin and triangular shape
Type 9	Four digits, 2 central ones are larger and taller.

Table 3.9. Summary of stele morphological typologies (after Mattingly 2013: 206-9).

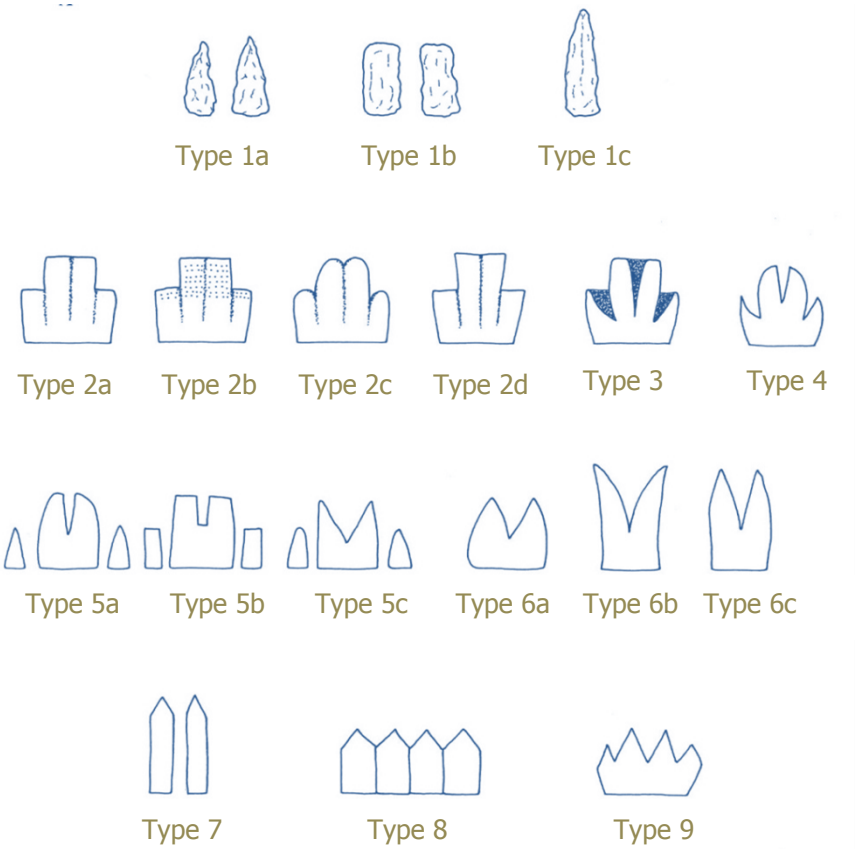


Figure 3.21. Drawings showing the stele morphological typologies summarised in Table 3.9. (After Mattingly *et al.* 2007: 206-9)

3.4. Summary of Chapter 3

My methodology has been introduced in this chapter along with a first presentation of the data to be examined. The analysis that follows involves a diachronic and morphological study of the funerary areas within the Garamantian landscape, presented in Chapter 4. Chapter 5 provides the results of the analysis of targeted cemeteries based on the available data in order to carry out a deeper study of the individual characteristics of each funerary area through the examination of morphological typologies, human remains and material culture. Chapter 6 follows on the findings from Chapter 5 and provides the results of the analysis of the spatial position of the funerary assemblages within the tomb and the relationship between these assemblages and various variables, including the position of the body and the funerary structures.

The morphological typologies, established by the Fazzan Project, of cemetery sites, funerary monuments and mortuary furniture referred to in this thesis have been described and illustrated.

Chapter 4. The place of the dead

This chapter deals with mortuary landscapes and is divided into four parts. The first one is an introduction to the spatial dimensions of mortuary practice. In the second part, I provide a short discussion on the conceptualisation used in this thesis of space and place, as more than a physical platform but a central part of social practices associated with identity and memory. These two concepts have also been defined before considering the relationship between place and identity and memory. The third part relates specifically to the Garamantian landscape and particular areas in the Wadi al-Ajal to highlight key aspects relating to the formation of the funerary landscape and its development over time. The results of more detailed intra-site analysis are presented in order to gain a better understanding of the characteristics of specific cemeteries, including morphology of funerary monument and the treatment of the dead, which will be further considered in Chapter 5. Finally, there are some concluding remarks.

4.1. Introduction. The spatial dimensions of mortuary practice

This chapter aims to identify the space and place of the dead in Garamantian society. Key questions are:

- Where were the dead and the activities surrounding the dead located?
- What factors determined the location of cemeteries or monumental tombs?
- What accounts for the variation in timing and intensity of use of these cemeteries?

The analysis of cemeteries and funerary places is valuable for understanding social differentiation and cultural change. Funerary landscapes are more than the remnants of mortuary rituals of the past, the remains of the monuments constructed for the deposition of the deceased; these landscapes have been reinterpreted, but are inherently performative: they are continuously reworked, revamped, rebuilt, remembered, or turned to ruins, obliterated, abandoned, and forgotten.

Mortuary data has provided a main focus for studying social differentiation, cultural complexity and cultural change, along with anthropological and demographical data (Brown 1971; Carr 1995;

Chapman 2003; Chesson 2001). The study of mortuary data tends to be looked at from the perspective of mortuary patterns, classification of funerary structures and material culture, etc. It has been less common, until recent years, to include the spatiality of death and burial rituals in the analysis. A territorial approach to the study of mortuary data would provide relevant information covering the whole cultural process of dealing with death. As Sullivan (1987: 112) notes 'each culture identifies several kinds of space (…) every form of existence takes place in a space appropriate to its nature'.

Recently there has been a re-definition for a more complex concept of landscape which recognises it as a cultural construction. Consequently, in order to understand landscape as a construction there is a need to acknowledge the centrality of 'symbolic landscapes' which 'produce and sustain social meaning' (Cosgrove and Jackson 1987: 96). Landscape has been defined as purely conceptual with the communities given meaning (Ashmore and Knapp 1999). Therefore it can be said that if cultural identity influences what people do and how they do it, then the place where these actions happen is as relevant as any of the other variables. The mortuary landscape is shaped by human actions and perceptions, at the same time that it constrains and influences people's interaction with the surrounding environment. Seeing space as a social product and approaching it in terms of human experience, attachment and involvement, along with an understanding of the mortuary landscape as a socio-cultural and environmental process, constructed cognitively, symbolically and physically, would aid in the interpretation of these landscapes as physical memories which become the focus of rituals and ties them to the social memory and the process of reworking the past (Silvermann 2002; Sahlqvist 2001).

The spatial aspect of my research has been based on comparative elements between different cemeteries within the Wadi al-Ajal mortuary landscapes – or tombscapes. After presenting the individual cemeteries, a comparative study follows which has provided information in order to gain a better understanding of typological and chronological variability. It must be noted that it is outside the remit of my research to provide a detailed study of various aspects of the mortuary landscapes. For instance, an interesting aspect to consider in future research would be the idea of movement in this landscape, and within the cemeteries; a phenomenological approach would have also allowed a more dynamic understanding of the funerary landscape. In order to carry out further analysis, a different set of data would have been necessary, which is not available. Nevertheless, I believe it is fundamental to connect the mortuary data recovered from the analysis of the

individual cemetery sites to the wider landscape across time. This is due to the cultural significance of the location of the places of the dead. Cemeteries and tombscapes, whether monumental or not, serve as spatial reference points related to the members of Garamantian society and individual communities particularly interred there.

4.2. Conceptualising place, memory and identity

In attempting to understand burial practices, it is fundamental to consider various aspects that relate to identity and memory of the deceased along with the living, as members of a social group. The dead person is central to this understanding as he/she provides agency to affect the experience and actions of mourners and evoke memories of the past (Williams 2003: 265).

4.2.1. Space and Place

The physical context where the burial of the dead person takes place, and funerary rituals associated to this, is a conscious choice of a space. This choice is determined by motives which are not only based on the physical characteristics of the landscape but on ideological reasons. The conscious choice of a location makes the space, the abstract spatial extension, into a place with personal and collective significance, meaning and values (Harvey 1989). Even the creation of a space for the disposal of the body, the grave itself, can be understood as the creation of a new space which is linked to an specific area, sometimes marked (either by a stele or a superstructure) hence perpetuating the memory of the dead among the living. Places are interpreted, narrated, perceived, felt, understood and imagined (Gieryn 2000: 464; Lewicka 2008). The meaning or value of the same place is changeable and flexible in the hands of different people or cultures, malleable over time. The meanings that individuals, and groups, assigned to places are more or less embedded and influenced by a shared cultural understanding of the landscape (Gieryn 2000: 473).

The development of emotional and sentimental connections amid people and place is the consequence of accumulated experiences. It can be argued that place attachments may ease a sense of security and comfort within the community and at the same time stabilises memory (Halbwachs 1992 [1941]). Hence, the meaning making process for the place of the dead correspond with areas of personal bereavement for the living.

4.2.2. Emotion, memory and commemoration

The study of funerary rituals is somewhat related to the study of human emotions, the feelings associated with the experience of death. Cultural responses to death, feelings of loss and grief, may differ depending on age, gender, and other characteristics of individual and group identity. Still, the most basic emotions - anger, contempt, disgust, fear, happiness, sadness and surprise – appear in most cultures albeit in different forms of expression (Plutchik 1991). Despite the fact that emotional responses are culturally formed and therefore not universal, the ways in which these are communicated, partially through meaningful material culture, can be approached and interpreted through archaeology (Tarlow 1997: 107-8; Hodder 1986). Still, access to emotions from material remains alone is extremely difficult, and even more so when relating to illiterate cultures (González Ruibal 2012: 147). Nonetheless, we can access past emotions through the material contexts which are created. The landscape interacts with physical human bodies in specific ways, irrespective of culture at the same time as the human bodies interact with the material world. Places related to collective identity, life, death and liminal states are emotionally charged. Therefore, understanding emotion in context could aid in understanding culture.

The relation between material culture and meaning is a product of social convention and understanding. However, in order to be an effective medium for communicating meaning, ideas and emotions, this materiality would work through the evocation of a particular set of cultural practices, linked to ideas of social memories (González Ruibal 2012). Human memories are ultimately social memories. What we remember is less a product of direct personal experiences and more of our embedding in social structures (Lewicka 2008: 212).

4.2.3. Considering identity

Identity, how we see ourselves and others, how others perceive us, is intimately interconnected to a sense of belonging, this being a family, community or society. As it relates to ideas linked to awareness and understanding, identity is an organic fluid concept which is ever changing and adapting. Identities are created through interaction with those around us (Diaz Andreu and Lucy 2005:1). Belonging is a basic human need; it is the perception of differences between 'us' and 'them'. This awareness is central to the ways in which people express their attachment to a locality.

With respect to the 'ideal' identity, it may be that some idea of negotiation is appropriate to a specific situation. Such an idea engages the identity of the living, who will have been actors in the funeral ceremonies and whose roles may have been redefined by the death of one member of their community. The status and role of the dead may have been transferred or have become available at the time of burial and the subsequent changes may have involved the redefinition of the roles of the living as well as the dead. The treatment of the deceased expresses ideas of self and community, with community values being reinforced between different members through the repetition of established processes.

Material culture is intrinsically related to establishing the identity of self. Lucy (2005: 101) notes how communal identities are constructed through social interactions and maintained through a shared ways of doing things. Thus, material culture has a communicative role, as it is directly involved in social practice. Through the study of social interactions, such as funerary rituals, where material culture is actively engaged, we can aim to define the identities represented in these social interactions. This however must be done though the analysis of the context where these materials have been used.

4.2.4. The place of the dead

The study of the space and place of death, alongside the analysis of the formal characteristics of the funerary monuments, provides a starting point in order to understand the areas that the people of the past considered meaningful. This can be interpreted through archaeology, moving away from the analysis based on grave features, which can obscure the role of the performance and the landscape, where the funeral takes place, in the creation of memories (Cannon 2002: 192). Cemeteries arouse memories, generate collective identities and represent histories. The meaning of the burial place does not remain static and its significance is not uniform (Rugg 2000: 259).

Cemeteries are also important places in terms of expressing social changes (Wingren 2013: 151) as symbols of memory and expressions of identity (both individual and communal). 'The cemetery is a place that mirrors society, where inherited and deep-rooted cultural differences become visible' (Wingren 2013: 170). Tarlow's article on 19th century garden cemeteries emphasises the necessity to understand emotion, and the society's belief and attitudes to death (2000a).

The choice of a place for the dead is linked to these ideas. The Garamantian funerary landscape shows an interest in the maintenance of the dead as visible members of society. The cemetery sites are located in relative close proximity to settlement sites (for instance Aghram Nadharif in the Barkat Oasis or Saniat bin Huwaydi proximity to Saniat Jibril, among others), suggesting a continuing relationship between the living and the dead. The Garamantes seem to have sited their place for the dead, when possible, close to routes of communication. This, alongside the visual impact of the funerary monuments, may indicate an interest, from the community and for the community, in displaying, showing their dead to other communities creating a sense of communal identity.

Still, the traces of the burial process and funerary rituals of the Garamantes uncovered from the archaeological record does form only a small part of an extensive and multisensory event. Consequently, this fragmentary and reduced material record will pose significant limitations to what we can understand from the archaeological evidence. Nonetheless, the study of the physicality of the place along with the funerary rituals accompanying the disposal of the deceased do in turn represent the continuation of the presence of the individual, even if this is in the memories of the living, aided by the creation and maintenance of a specific place for the dead.

4.3. The funerary landscapes of the Wadi al-Ajal

The aim of this section of Chapter 4 is to identify common denominators of the cemeteries recorded in Fazzan, with particular interest in the Wadi al-Ajal, in order to establish a framework for interpretation of mortuary variability with regards to the treatment of the individuals in relation to the cemeteries, their chronological and locational factors. The first part is based on the published material of the surveys carried out in the Wadi al-Ajal (Mattingly *et al.* 2007a). Figure 4.2 shows the location of the main archaeological areas of the Wadi al-Ajal mentioned in this section.

The publication of the surveys carried out by the Fazzan Project (1997-2002), has provided the base maps for this study (Mattingly *et al*. 2007a). These maps have not been geo-referenced and therefore it has not been possible to use GIS to analyse the data. To counteract this, I developed a different method to illustrated and analyse the data. I have created and manipulated a composite of geographical maps in order to present the chronological use of the landscape and the diversity of cemetery typologies across the landscape at the Wadi al-Ajal, which will be described from west to east. The numbers in the maps represent the site numbers that added to the three letter area code generate the cemetery names. For instance, the map below represents the area of Ad-Tamalalat, between In Tafarat (ITF) and Tinda (TIN). The settlement sites are marked by a dot (i.e. 6); the numbers among the foggaras are their individual identification number. The cemetery areas are marked by an irregular shape indicating the size and location within the landscape.

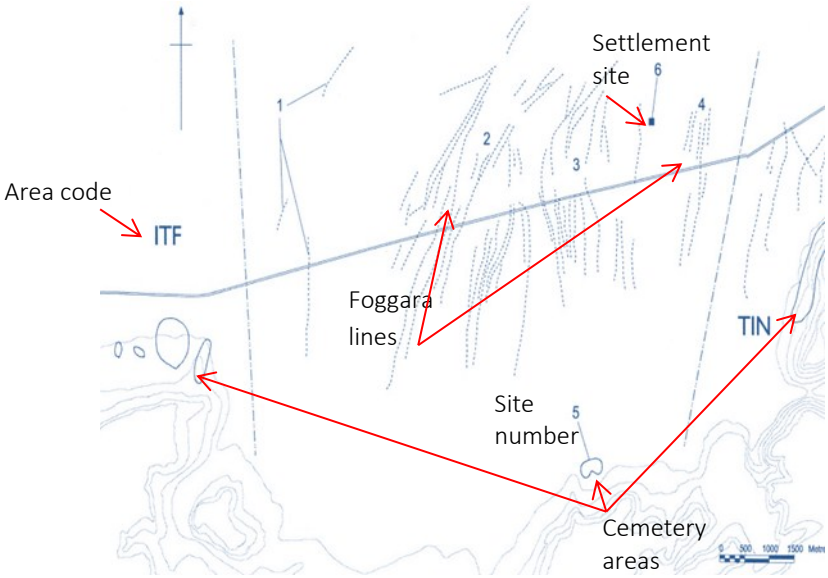


Figure 4.1. Example of annotations in this chapter

Abbreviation	Phase	Date BC/AD
LPAST	Late Pastoral	3000BC- 1000BC
EGAR	Early Garamantian	1000BC-500BC
PUGAR	Proto-Urban Garamantian	500BC-1BC
GAR	Garamantian (undifferentiated)	1000BC-AD700
CGAR	Classic Garamantian	AD1-AD400
LGAR	Late Garamantian	AD400-AD700

Table 4.1. Chronological phases used in this chapter.

It must be noted that the chronology presented in this section is tentative, based on survey collections of surface pottery, comparison and analogies of dated sites, morphologies and tomb typologies, presence/absence of funerary furniture, etc. In addition to this, surface collections have been made at many cemeteries and some cemeteries have been recorded only from aerial photography and have not been visited. Another aspect of the chronological framework that must be highlighted is what is labelled as GAR is referring to an undifferentiated period of the Garamantian civilisation.

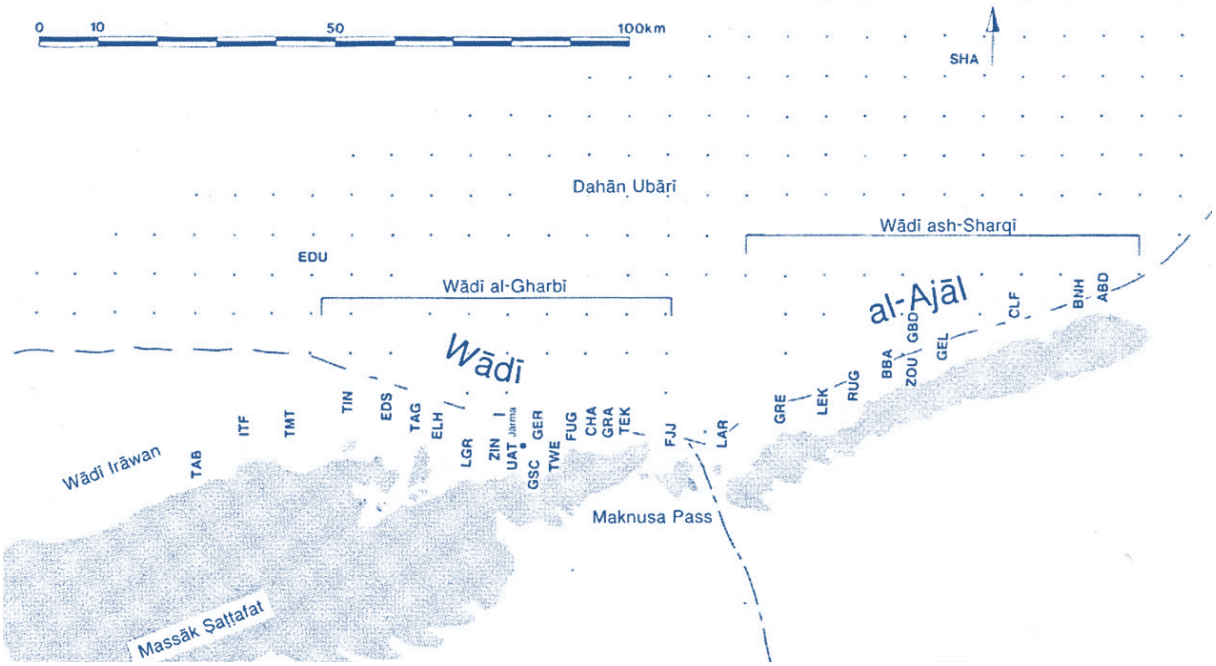
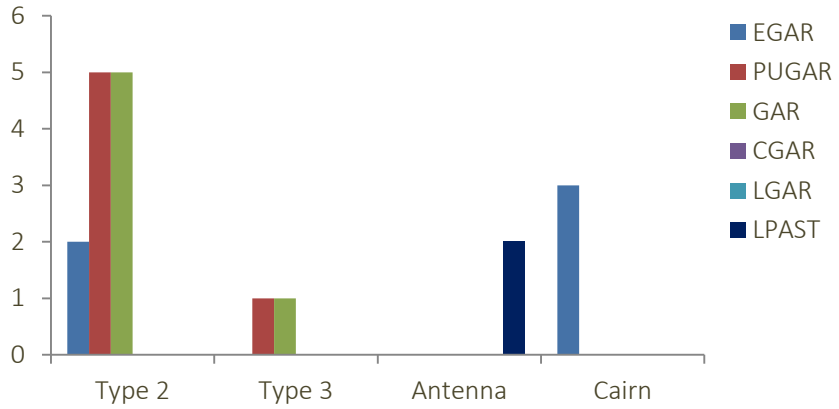


Figure 4.2. 1. Tin Abunda (TAB); 2.In Tafarat (ITF); 3. Ad Tamalalat (TMT); 4. Tinda (TIN); 5. Ad Disa (EDS); 6. Taqallit (TAG); 7. Al-Hatiya (ELH); 8. Al-Ghrayf (LGR); 9. Zinkekra (ZIN); 10. Watwat (UAT); 11. Jarma (GER); 12.Jarma Escarpment (GSC); 13. Tuwash (TWE); 14. Al-Fugar (FUG); 15. Al-Khara'iq (CHA); 16. Qaraqra (GRA); 17. Takarkiba (TEK); 18. Al-Fjayj (FJJ); 19. Larku (LAR); 20. Al-Qraya (GRE); 21. Al-Qsir (LEK); 22. Ar-Raqayba (RUG); 23. Bintbaya (BBA); 24. Al-Zuwiya (ZOU); 25. Qasr bin Dughba (GBD); 26. Al-Qal'at (GEL); 27. Ikhlif (CLF); 28. Bin Harith (BNH); 29. Al-Abyad (ABD) (Mattingly *et al.* 2007a: 4).

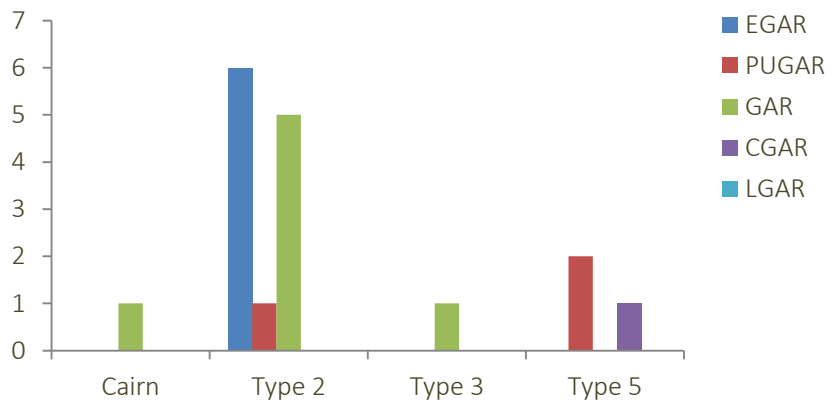
1. **Tin-Abunda (TAB).** The Italian mission in Fazzan in the 1930s provides the first records of the presence of Garamantian burials in Tin Abunda. Caputo excavated three tombs, a Late Pastoral antenna tomb and two cairns, one of which contained two iron 'daggers' (Pace *et al.* 1951: 385). Fourteen cemetery sites have been recorded in this westernmost area of the Wadi al-Ajal/Irawan (Mattingly *et al.* 2007a: 41). Out of these cemetery sites, two are antenna tombs and four are large cairns which may also date back to the Late Pastoral period. There are four Type 2 cemeteries which can tentatively belong to the Late Pastoral time but continued to be in used in Garamantian times. Alongside these latter ones, there are four Type 3 nucleated cemeteries, with funerary monuments being mainly cairns (Type 1b) but also drum tombs (Type 3a), for example in TAB020 and TAB023 (on the eastern side of the area of Tin Abunda). These cemeteries also have proto-stele. Therefore, it can be proposed that at least 57% of the cemeteries in Tin Abunda are of Garamantian age, given the tomb typology and the presence of stelae. The lack of surface pottery proves similar to PUGAR cemeteries in other areas of the Wadi al-Ajal, where limited amounts of pottery were placed within the tombs.



Graph 4.1. Chronological use of the escarpment sector of Tin Abunda with cemetery typologies.

2. **In Tafarat (ITF).** The records of the Italian mission in this area show a large number of tombs which they thought were from the Pastoral/Late Pastoral period (Pace, Sergi and Caputo 1951). However, in 2000, further survey research carried out by the Fazzan Project documented the presence of foggaras associated with settlements and cemeteries, indicating that at least some of the cemeteries are of Garamantian age. Eighteen burial areas have been noted in the area of the escarpment at In Tafarat. There are six dispersed cemeteries (Type 2) with cairns probably dating back to the Late Pastoral period. These are located in the central area of the foot of the

escarpment. 50% of the cemeteries in this area belong to the Proto-Urban Garamantian period, associated with the Early Garamantian/Proto Urban escarpment settlement sites. The western side of this sector of the escarpment has a concentration of small cemeteries (Types 2 and 3) with 50-100 tombs, mainly cairns and drums, related with a series of foggara systems. Figure 4.2 shows the distribution of the cemeteries in this area by chronology.

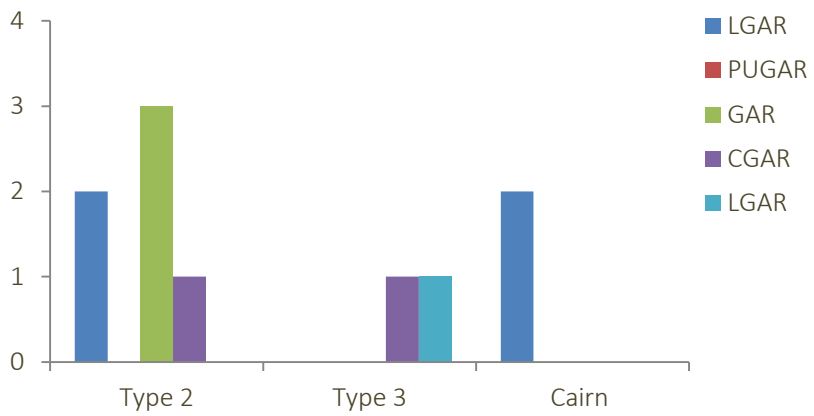


Graph 4.2. Chronological use of the cemeteries at In Tafarat with cemetery typology.

3. Ad Tamalalat (TMT). This ten kilometres stretch of the escarpment is of significance for the foggara system (over 30), indicating the presence of Garamantian settlement sites, for instance the qasr TMT006. The analysis of satellite imaginary currently being carried out by the Trans-Saharan Project is producing new data relating to the location of settlements buried under the sand. However, the results from the satellite images have not allowed me to deduce further information regarding the mortuary landscape. Only one Type 2 cemetery with *c*.100 cairns has been recorded on the north and east side of a small mound on the eastern side of the plain.

4. Tinda (TIN). This is the area south of modern Ubari, recorded by the Italian mission in the 1930s and Daniels in the 1960s. This section of the escarpment (Figures 4.2 and 4.3) had seen little urbanistic and agricultural development until the 1980s-90s, when new settlements, rubbish dumps and quarries have become a danger to the archaeological heritage (Mattingly *et al.* 2007a: 55). Ten cemeteries have been recorded in this area, showing a continuous use of this landscape for the disposal of the dead. Most of these are Type 2, with groups of dispersed cairns. TIN010 and TIN014 are two particularly extensive and dense cemeteries, with an estimated *c*.500 cairns and *c*.300 respectively (likely to be considerably more due to the lack of

survey on the ground[1]). TIN014 is a general number referring to a cairn field and at least two nucleated graves of the Classic Garamantian period. Interestingly, as with the cemeteries at the In Tafarat sector, there is a clear association between the cemeteries of Garamantian age and the irrigation systems based on foggaras (indicated on Figures 4.2 and 4.3 with dotted lines). The upper part of the escarpment and the western slopes of the escarpment show the location of Late Pastoral burial areas, including three large cairns (TIN023 and TIN024) and the large Type 1 cemetery TIN015 with an estimate of over 100 tombs. Out of the ten cemetery sites recorded in Tinda, three are Garamantian dispersed cemeteries with a density varying from c.50 cairns (TIN003) up to *c.*500 (TIN010). TIN008, a nucleated Type 3, is the only cemetery with diagnostic surface pottery indicating use as late as the 5th century AD (LGAR).



Graph 4.3. Chronological use of the cemeteries at Tinda with cemetery typology.

[1] Surveys carried out by the Desert Migrations Project have demonstrated that the densities of the cemeteries near Jarma as calculated by Daniels in the proximity of Garama are approximately one third of the real number (Mattingly *et al*. 2008; 2009; 2010c and 2011).

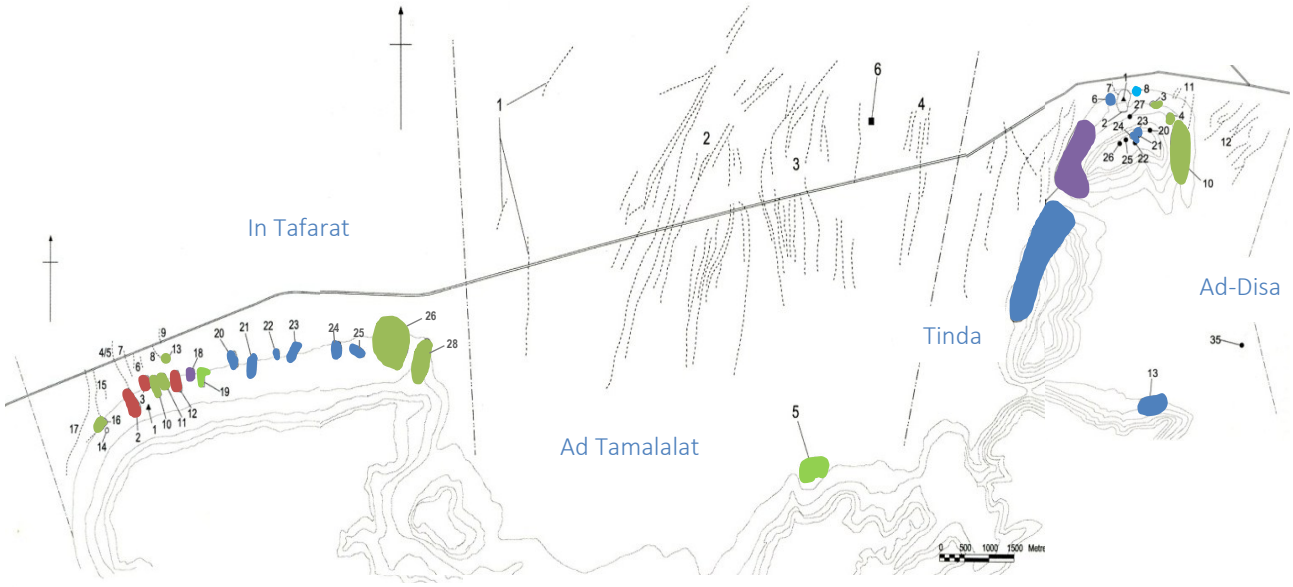


Figure 4.3. Map of the cemetery sites in the In Tafarat, Ad Tamalalat and Tinda sectors of the escarpment indicating the chronological use: LPAST= dark blue; PUGAR= red; GAR= green; CGAR=purple; LGAR= Light blue. (Adapted from Mattingly *et al.* 2007a: 46, 52, 54).

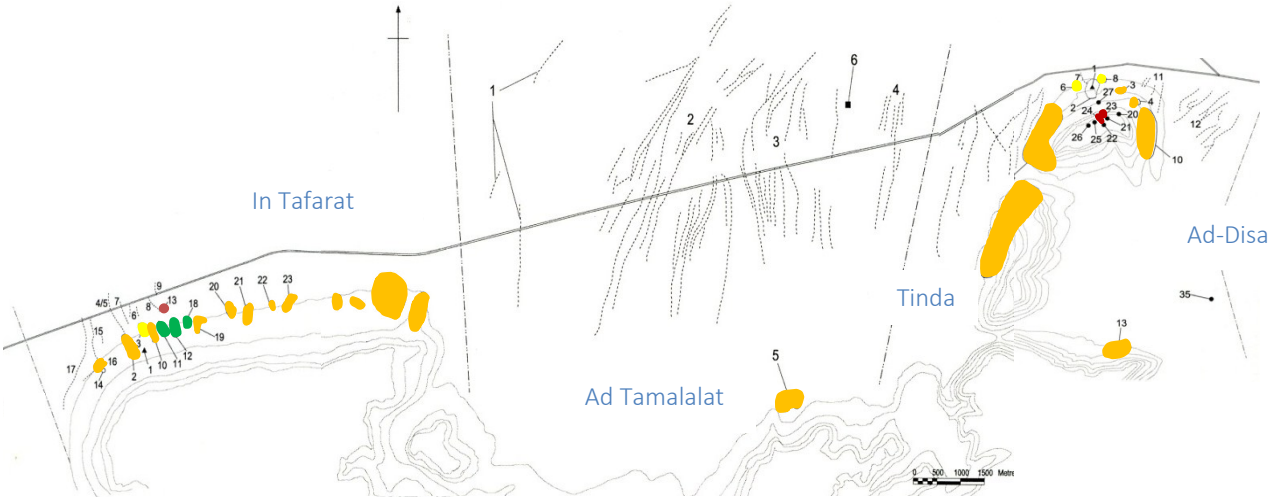
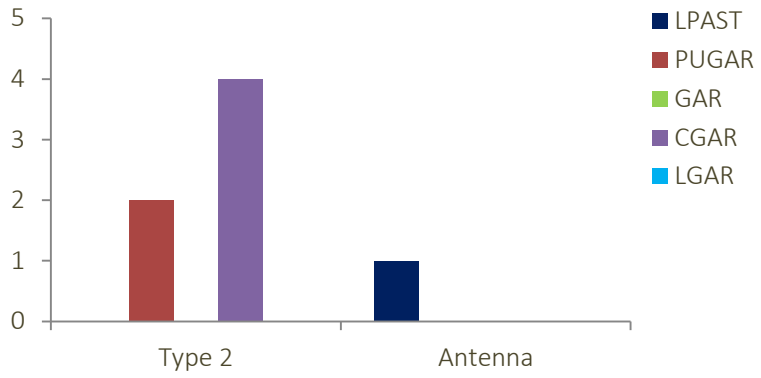


Figure 4.4. Map of the cemetery typologies in the In Tafarat, ad Tamalalat and Tinda sectors of the escarpment: Cairn= maroon; Type 2= orange; Type 3= yellow; Type 5= dark green. (Adapted from Mattingly 2007a: 46, 52, 54).

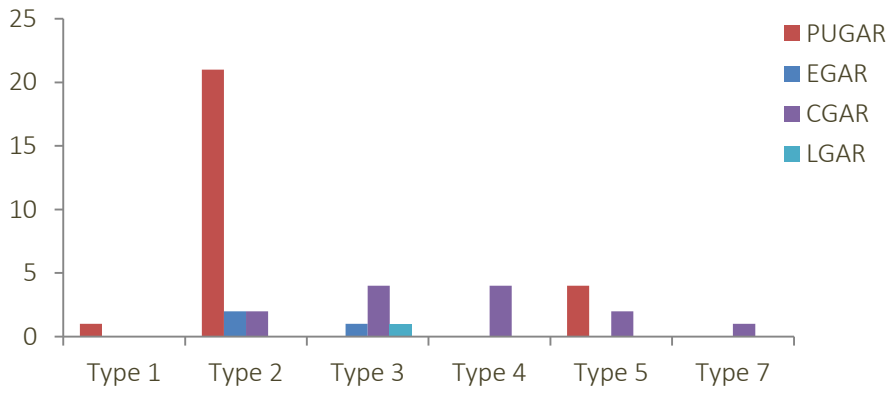
5. Ad-Disa (EDS). This area has had little ground surface survey, although the Desert Migrations Project has recently carried out a survey and investigation of the foggaras and associated settlement sites in the area of ad-Disa, indicating a high level of occupation (Mattingly *et al.* 2010c: 115, 221-25). The chronology of the settlements, based on surface pottery collections, ranges from the Proto-Urban to the Late Garamantian. Still, the chronology attached to the cemeteries in this area, which have been mainly identified on aerial photography, is provisional.

Notwithstanding, it can be suggested that most of the cemeteries are of Garamantian age, PUGAR and CGAR, aside from the antenna and cairn EDS012 which are from the Late Pastoral period. All the burial areas in the Ad-Disa escarpment are dispersed cairn cemeteries, varying from 20 cairns up to 200, including drum cairns (Type 3).



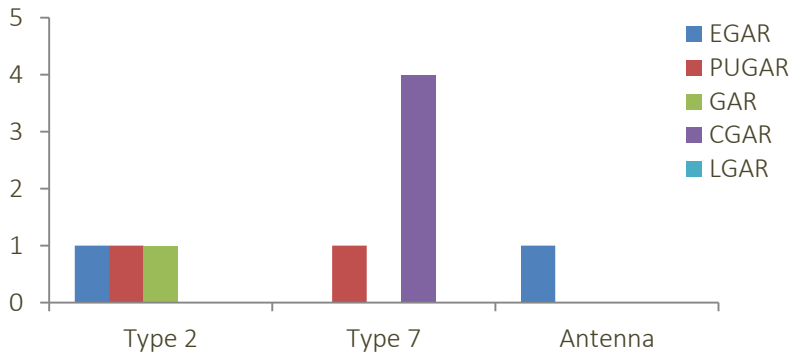
Graph 4.4. Chronological use of the cemeteries at Ad-Disa with cemetery typology.

6. Taqallit (TAG). This area is analysed in detail in Chapters 5 and 6. An extensive survey has been carried out by the Desert Migrations Project (Mattingly *et al.* 2009: 97-107 and 2010c: 107-113). Thirty eight different cemeteries have been recorded, dating from the Late Pastoral to the Late Garamantian periods, showing a continuous use of the mortuary landscape. 64% of the cemeteries of this area belong to the morphological Type 2, though showing great variation in the types of funerary monuments, from cairns to stepped tombs. All Type 2 cemeteries show a combination of various tomb typologies. The density of these cemeteries show great variability, particularly the dispersed and nucleated escarpment cemeteries (Type 2 and 3 respectively), which have the widest range of number of tombs per cemetery. The settlements in Taqallit are concentrated on the west and north-west of the promontory, providing a large density of population which corresponds with the prolific number of cemeteries in this landscape. The surveys have increased the number of known Garamantian sites, almost 40 settlements, and shown contemporaneity with the foggara lines (Mattingly *et al*. 2010c: 117-125). The analysis of this landscape indicates the strong relation between the traditional caravan route, settlements, foggara lines and cemeteries (Mattingly *et al.* 2010c: 118).



Graph 4.5. Chronological use of the cemeteries at Taqallit with cemetery typology.

7. al-Hatiya (ELH). This wadi centre area has seven settlement sites of the Garamantian period recorded by the Fazzan Project in 2000, including the substantial qasr and related structures ELH003 and ELH006 and its associated settlement complex ELH005 (Mattingly *et al.* 2007: 76-87). Despite the relatively small number of recorded sites in this area, these are some of the best preserved examples of Garamantian habitation given the low density of contemporary populations. The proliferation of foggara channels indicates the presence of further settlements likely buried under the desert sand in this particularly deep embayment of the escarpment east of Taqallit, which acts as a wind tunnel covering this area with sand. Daniels recorded the pyramid cemeteries ELH001-002, which were further surveyed by the Fazzan Project (Mattingly *et al.* 2007a: 77-83). Within the wadi centre, four Classic Garamantian nucleated cemeteries with linear alignments (Type 7) have been recorded with mudbrick funerary structures, as generally seen on the oasis cemeteries. ELH001, a Type 7 pyramid cemetery, is associated with settlements ELH005 and ELH006, with at least 38 funerary structures highly eroded by the wind, which makes it difficult to establish the full morphological range present. A full survey of ELH002, south of ELH008, was carried out by the Fazzan Project in 1998 recording at least 151 monuments, including numerous pyramids, with further burials almost certainly in the south-west area of the cemetery. Fragments of stele have been recorded on the surface of the cemetery, but there is no evidence of offering tables. Surface collections of pottery place this cemetery in the Classic Garamantian period. Another small cemetery of mudbrick tombs has been located to the southeast of the Garamantian qasr and settlement EHL003. Despite the limited archaeological sites in this area, a further two Type 2 cemeteries, with approximately c.100 cairns, have been recorded on the easternmost area of the Taqallit escarpment.



Graph 4.6. Relation of chronological use and cemetery typology in al-Hatiya.

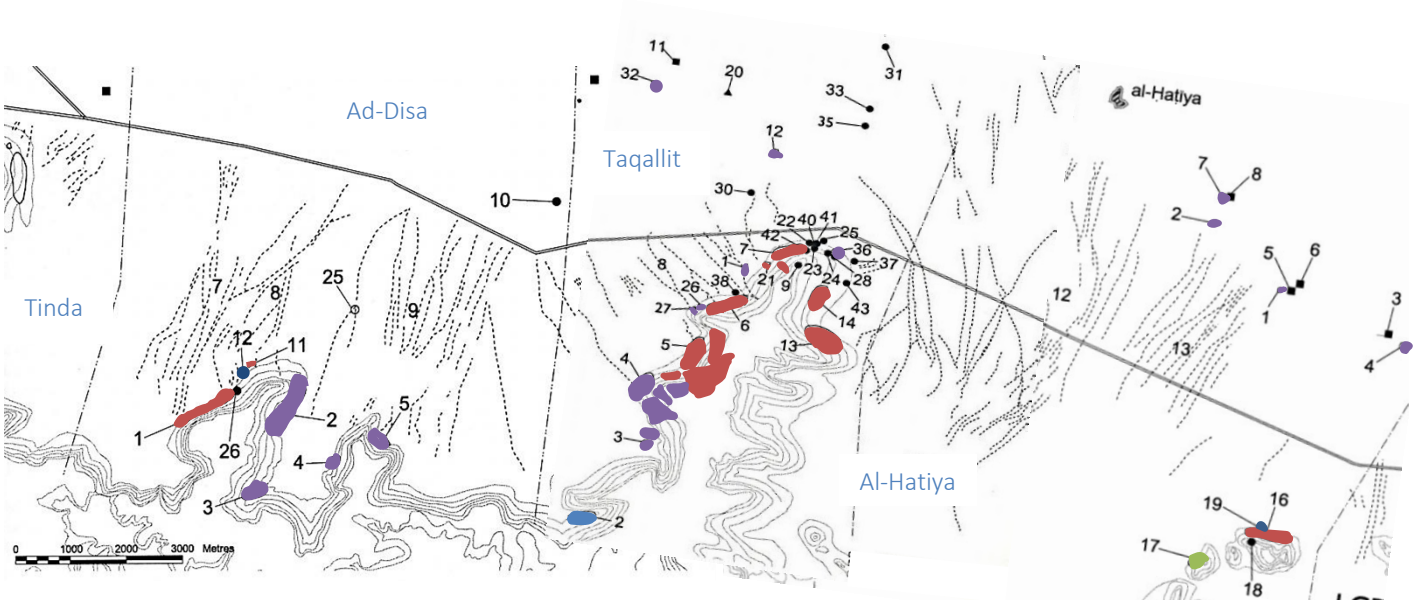


Figure 4.5. Cemetery sites in sectors Ad-Disa, Taqallit and al-Hayita indicating the chronological use: EGAR= dark blue; PUGAR= red; GAR= green; CGAR=purple. (Adapted from Mattingly 2007a: 61, 64, 75).

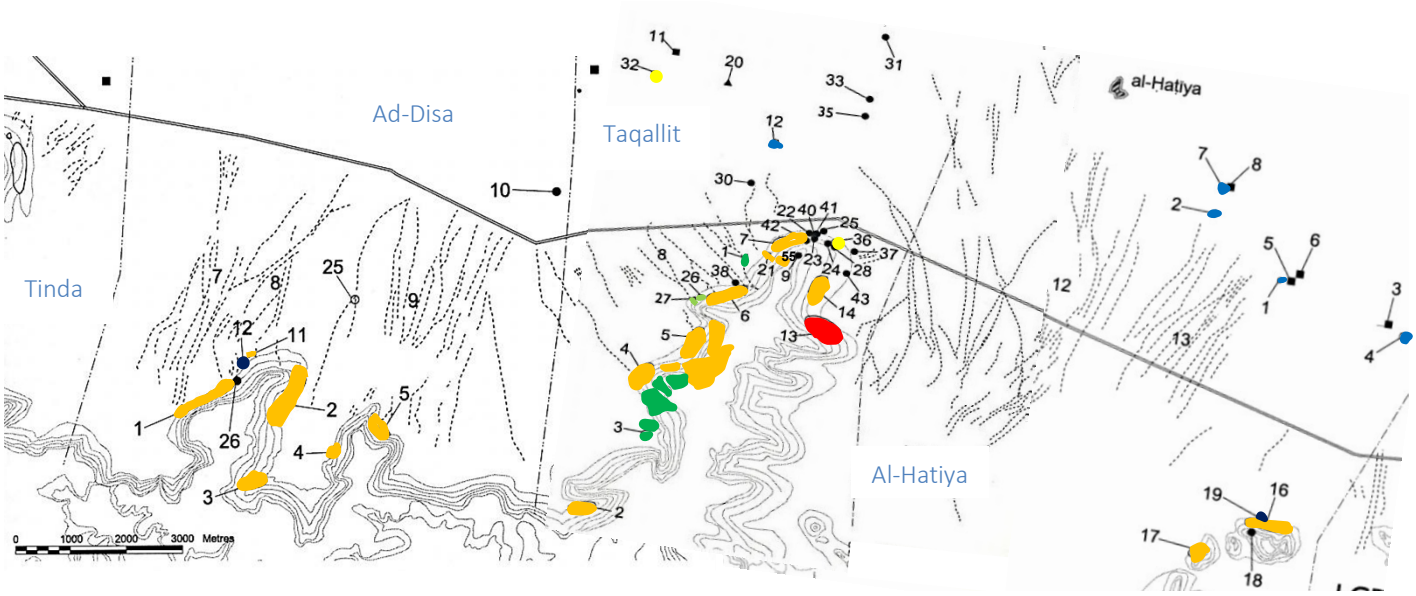
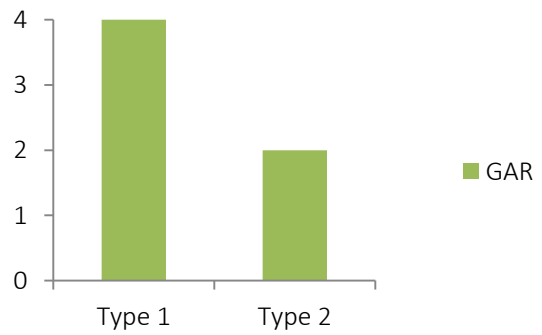


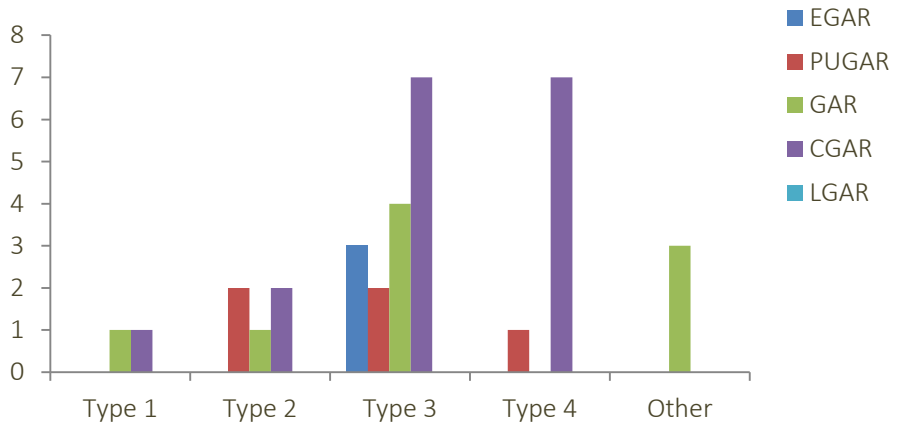
Figure 4.6. Cemetery sites in sectors Ad-Disa, Taqallit and al-Hayita by typology: Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green; Type 5= dark green; Type 7= Dark blue; Antenna= Navy blue (Adapted from *Mattingly et al.* 2007a: 61, 64, 75).

8. al-Ghrayf (LGR). Limited research had been carried out in this area of the wadi centre until the Fazzan Project survey in 2000. There are six Garamantian cemetery sites on the edge of the escarpment; a more specific chronology is not possible due to the lack of surface pottery. Nonetheless, based on excavated cemeteries in the Wadi al-Ajal, the absence of surface pottery in the cemeteries seems indicative of the Proto-Urban period. Some of the tombs in LGR027 are overlying foggara spoil heaps, which have been dated as Garamantian and are likely connected to the Classic Garamantian site LGR001. Morphologically, four are dispersed cairn cemeteries, with a varying density between 20 to 200 tombs. Two Type 2 cemeteries with a mixture of cairns and drums have been recorded on the western side of the Al-Ghrayf escarpment. Some remains of plaster on the drums may indicate these were in fact stepped tombs, as those seen in Taqallit.



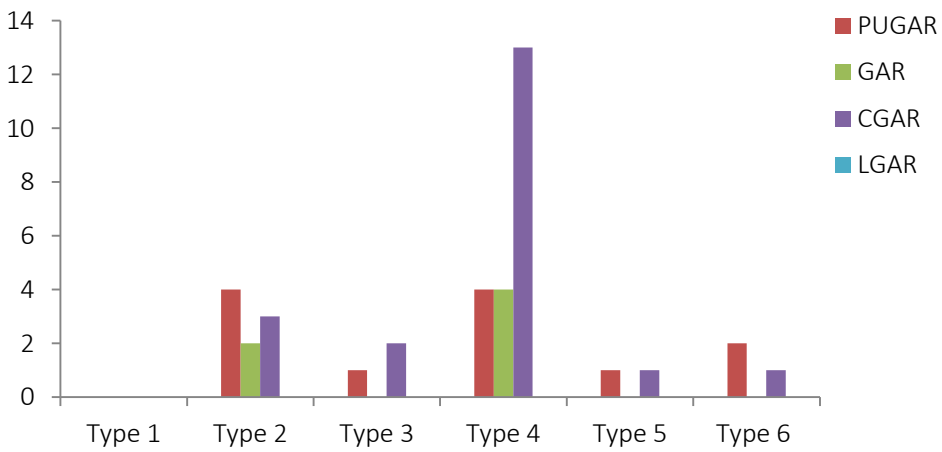
Graph 4.7. Typologies of cemeteries in al-Ghrayf

9. Zinkekra (ZIN). The promontory of Zinkekra has been subject to archaeological research since the 1930s and a more detailed study is presented in Chapter 5. There are a significant number of cemeteries in the areas surrounding the Garamantian settlement on the northern side of the promontory. The most recent surveys of Zinkekra, carried out by the Desert Migrations Project in 2007, have recorded thirty three different cemeteries at Zinkekra, dating from the Proto-Urban to the Classic Garamantian periods, indicating an uninterrupted use of this funerary area (Mattingly *et al.* 2007b). 69% of the cemeteries at Zinkekra are nucleated, 36% being non-monumental cemeteries. Regardless of its chronological period and morphological typology, all cemeteries in the promontory of Zinkekra show a diversity of funerary structures as well as density, ranging from 15 up to 250 tombs.



Graph 4.8. Chronological use and typologies of the cemeteries at Zinkekra.

10. Watwat (UAT). As with Zinkekra and Taqallit, Watwat has been targeted for archaeological studies in various campaigns, most recently the Desert Migrations Project in 2008. A summary of this data is presented below, but I have carried out further analysis (see Chapters 5 and 6). Twenty seven cemeteries have been recorded in this embayment, along with the mausoleum and funerary structures (UAT001 and UAT003 respectively). 55% of the cemeteries in Watwat are of Type 4 with cairns and shaft tombs. The density of this type of cemetery varies from 20 up to c.300 tombs. The next most common type of cemetery in Watwat with 26 % of them being dispersed cemeteries with cairns (Types 1 and 3a). As with Zinkekra, this area of the escarpment has been in used since the PUGAR period until the Classic Garamantian.



Graph 4.9. Chronological use and typologies of the cemeteries at Watwat.

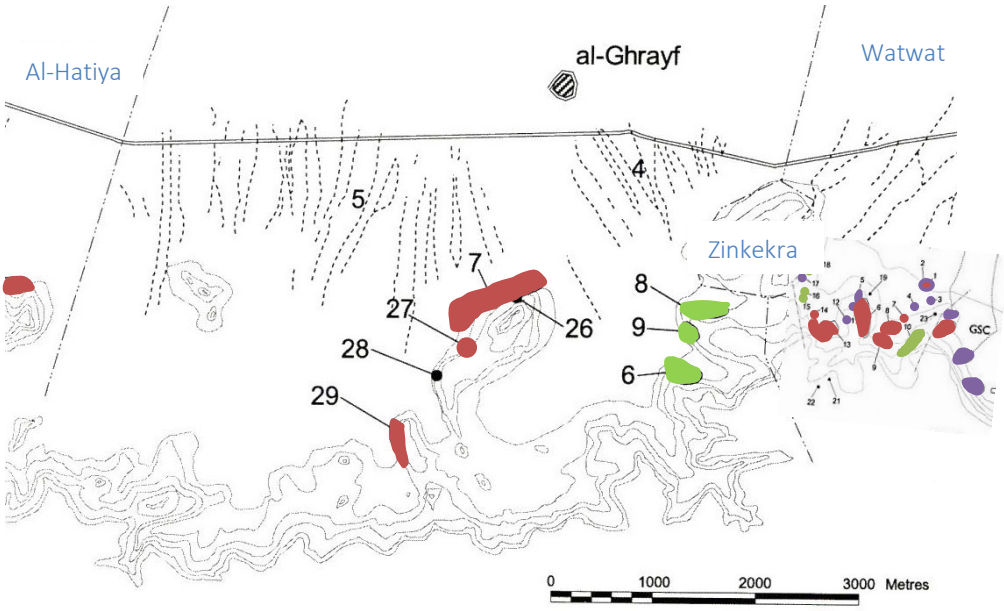


Figure 4.7. Cemetery sites in sectors Al-Ghrayf and Watwat (showing the position of Zinkekra), indicating the chronological use: PUGAR= red; GAR= green; CGAR=purple. (Adapted from Mattingly 2007: 88, 105).

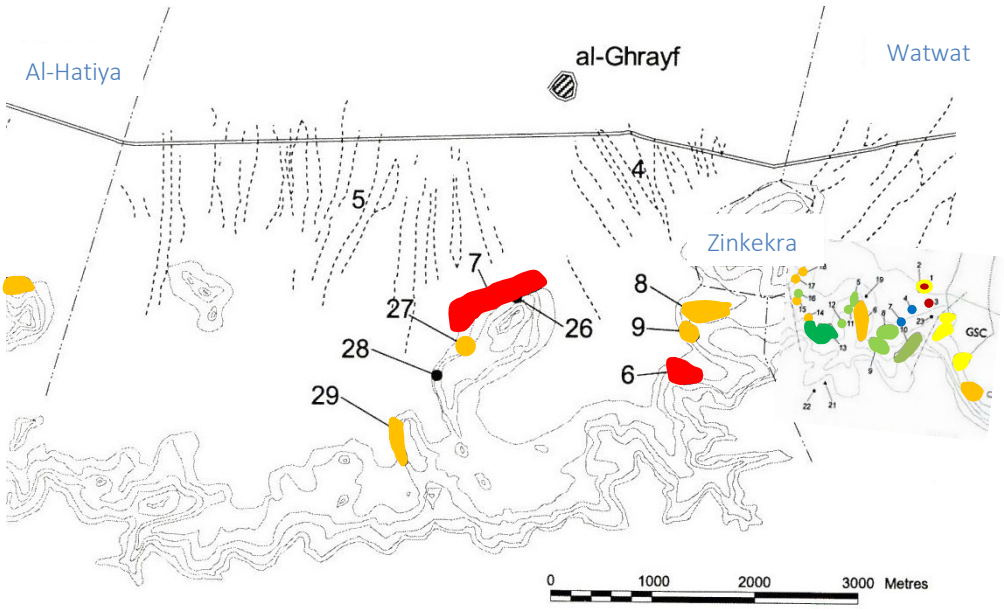
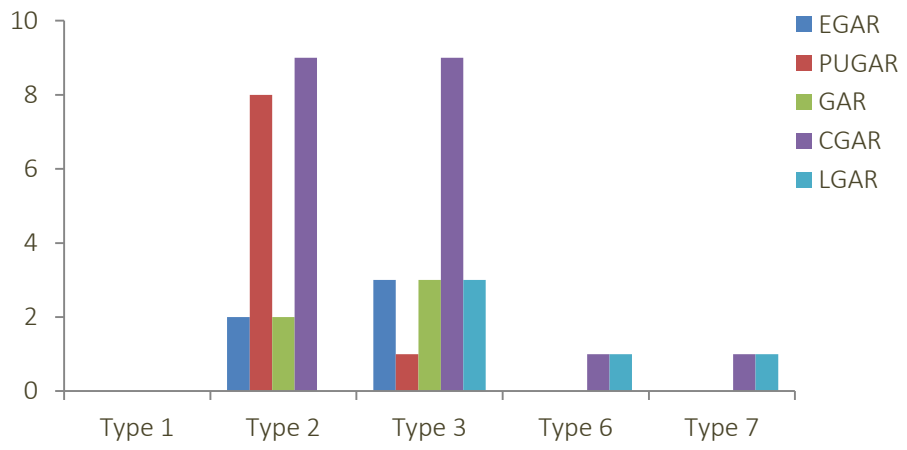


Figure 4.8. Typologies of the cemetery sites in sectors Al-Ghrayf and Watwat (with location of Zinkekra): Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green; Type 5= dark green. (Adapted from Mattingly 2007: 88, 105).

11. Jarma (GER). The area surrounding the capital of the Garamantes has been surveyed and excavated by Daniels, Ayoub and Fazzan Project (Mattingly *et al*. 2010a). Settlements sites from the Garamantian period are numerous, but cemetery sites are mainly based on the slopes of the escarpment south of Garama, Watwat (UAT) and Jarma Escarpment (GSC). Only one cemetery of Garamantian age, belonging to the Classical Garamantian period, has been studied, GER011 (Type 8), which is analysed in Chapter 5. Along with this, the remains of a possible mudbrick pyramid tomb (GER013) have been recorded north of GER011, which could be part of another oasis centre cemetery. The number of settlement sites of the Garamantian period in this area (illustrated in Figure 4.9) suggests that this may be the case.

12. Jarma Escarpment (GSC). This are is further developed in the next section of this chapter. The Jarma Escarpment refers to the section of the escarpment directly south from Garama. Out of the thirty five cemeteries recorded in the area of the Jarma escarpment (GSC), 33% are from the Classic Garamantian period (1-400AD); 15% from the Proto-Urban Garamantian period (500BC-1BC). The linear cemeteries (Type 6 and 7) referred to the so-called Royal Cemeteries, which were in use in the Classic and Late Garamantian periods. Apart from these, there are only three cemeteries (GSC012, GSC015 and GSC021) from this sector of the escarpment which show no variability in the morphology of the funerary monuments. Therefore, 85% of the cemeteries in the Jarma Escarpment show at least two different categories of tomb type, mostly cairns and drums.



Graph 4.10. Chronological use and typologies of the cemeteries in the Jarma Escarpment.

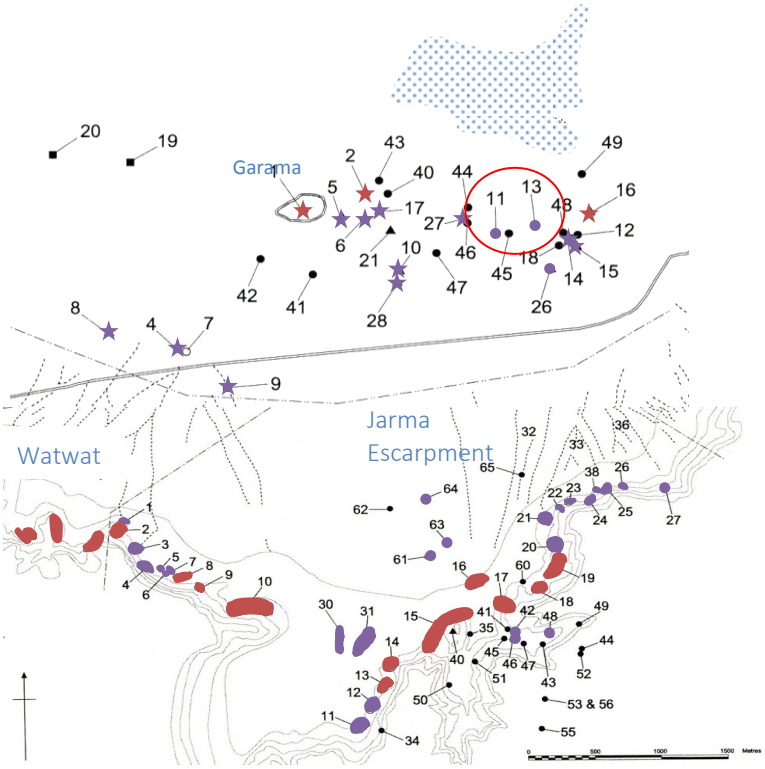


Figure 4.9. Jarma area indicating the chronology of settlement sites (stars) and cemeteries; PUGAR= red; CGAR= purple. (Adapted from Mattingly 2007: 115 and 132).

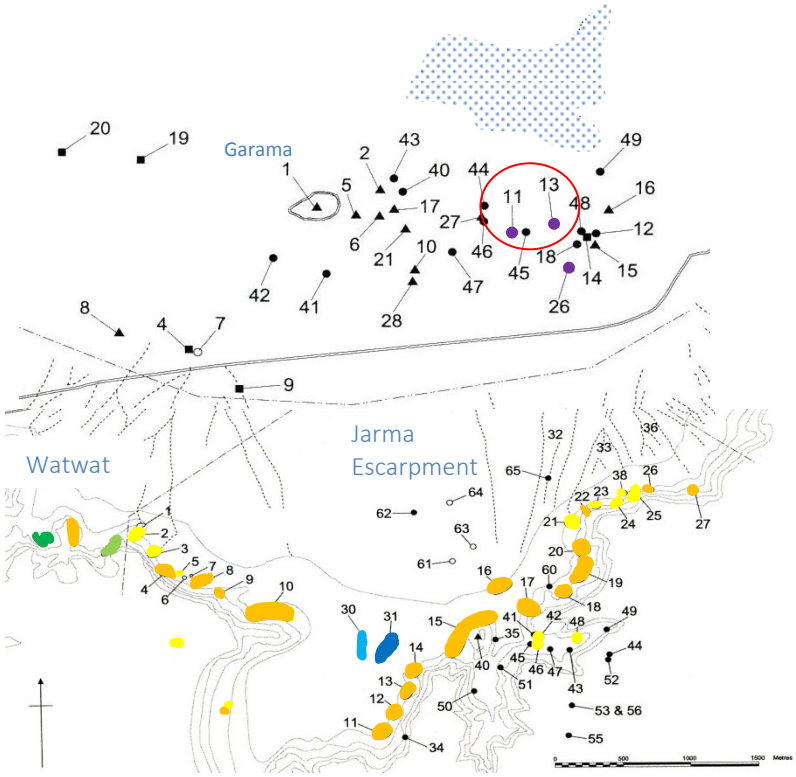
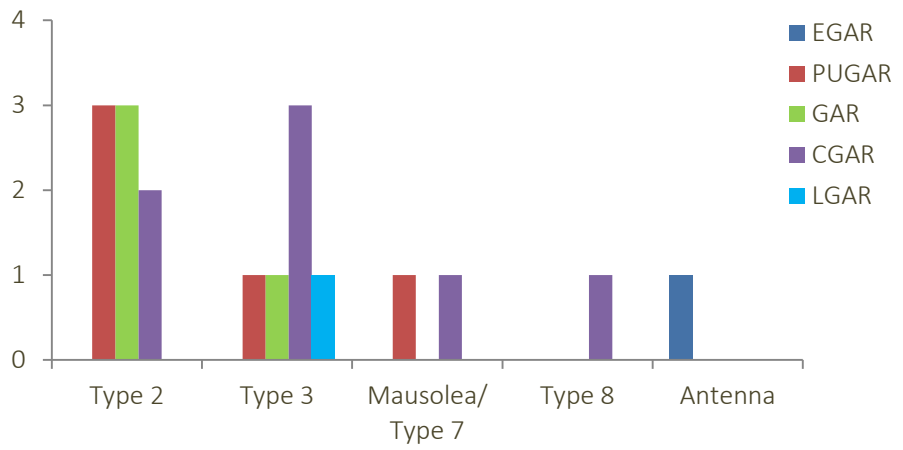


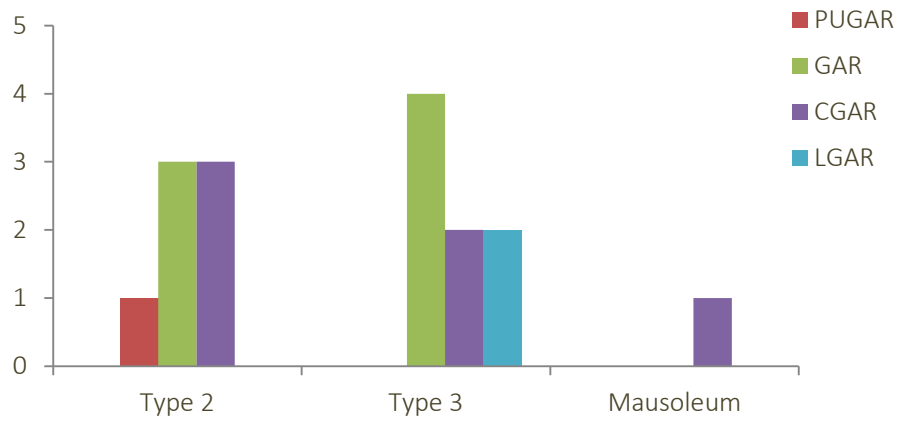
Figure 4.10. Cemeteries in the sector of Jarma by typology: Type 2= orange; Type 3= yellow; Type 6= light blue; Type 7= dark blue; Type 8= purple. (Adapted from Mattingly *et al.* 2007a: 115 and 132).

13. Tuwash (TWE). Only extensive surveys have been carried out in this area, with Daniels and the Fazzan Project recording individual sites. This section of the Wadi al-Ajal offers chronological continuity with cemeteries dating back to the Late Pastoral and Proto-Urban periods and continuing onto the Late Garamantian and Islamic. It also offers examples of funerary furniture, stelae and offering tables, indicating a wide use of these items in the cemeteries of the Classic Garamantian period. There are fifteen cemeteries in this sector of the escarpment, with particularly interest in TWE001 with three Mausolea type monuments. TWE001 was subject of trial trenching by Daniels and the pottery recovered from this suggests a Garamantian age. However, due to the erosion of the site and the distances separating the four individual burials, it is difficult to establish whether they are part of a single larger cemetery or of several isolated funerary areas (Mattingly *et al.* 2007a: 150-51). Along with these sites, 47% of the cemeteries in this sector are dispersed (Type 2). There is no diversity in the type of funerary monuments, only cairns have been recorded, with the only exception of TWE012, where there are records of drum cairns.



Graph 4.11. Chronological use and typologies of the cemeteries in Tuwash.

14. al-Fugar (FUG). The slopes of the escarpment at al-Fugar headland are rich in cemetery sites from the Garamantian period. Thirteen cemeteries of typologies 2 and 3 have been recorded. 46% of the cemeteries in this area are of Type 2 with no diversity on the type of funerary monument (aside from FUG002 – which has both cairns and drums). The cemeteries of Type 3 show a mixture of tomb typologies, including drum and square tombs. Along with these cemeteries the presence of two mausolea from the Garamantian period has been noted. These were identified by Caputo (Pace, Sergi and Caputo 1951) and are now among an Islamic cemetery, which has caused the loss of earlier burials (Mattingly *et al*. 2007a: 164).



Graph 4.12. Chronological use and typologies of the cemeteries in al-Fugar.

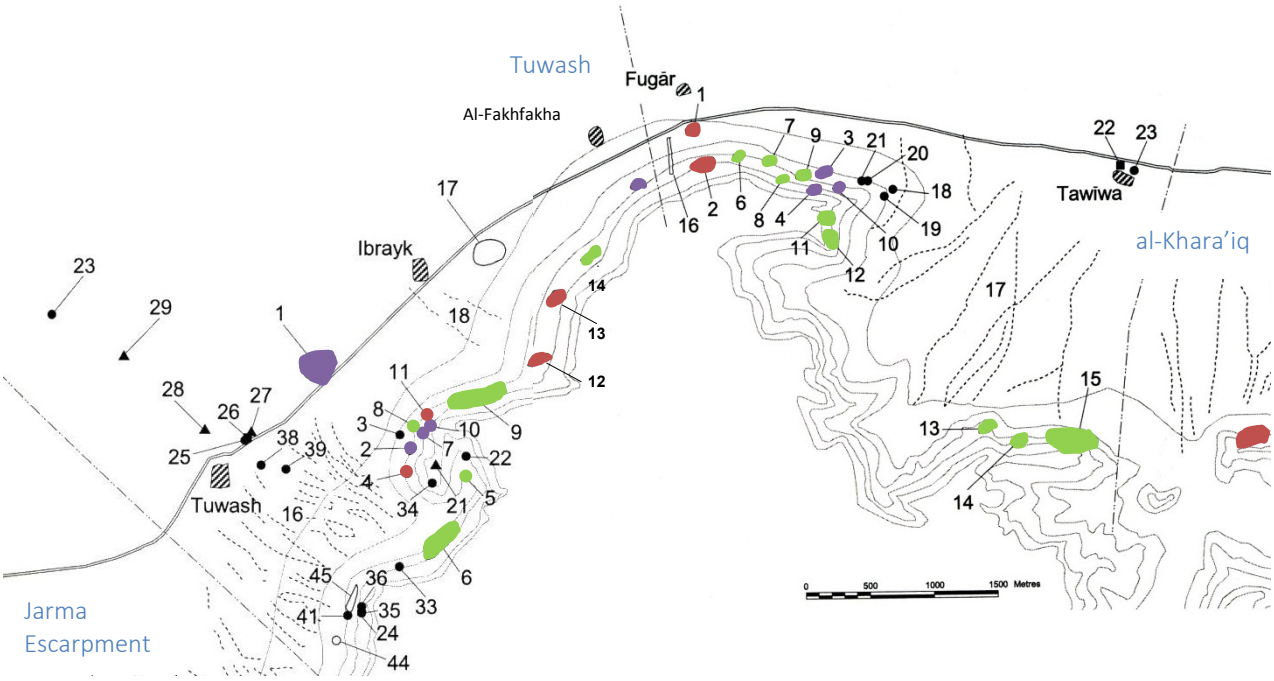


Figure 4.11. Cemetery sites in sectors of Tuwash and Al-Fugar indicating the chronological use: PUGAR= red; GAR= green; CGAR=purple. (Adapted from Mattingly *et al.* 2007a: 149 and 162).

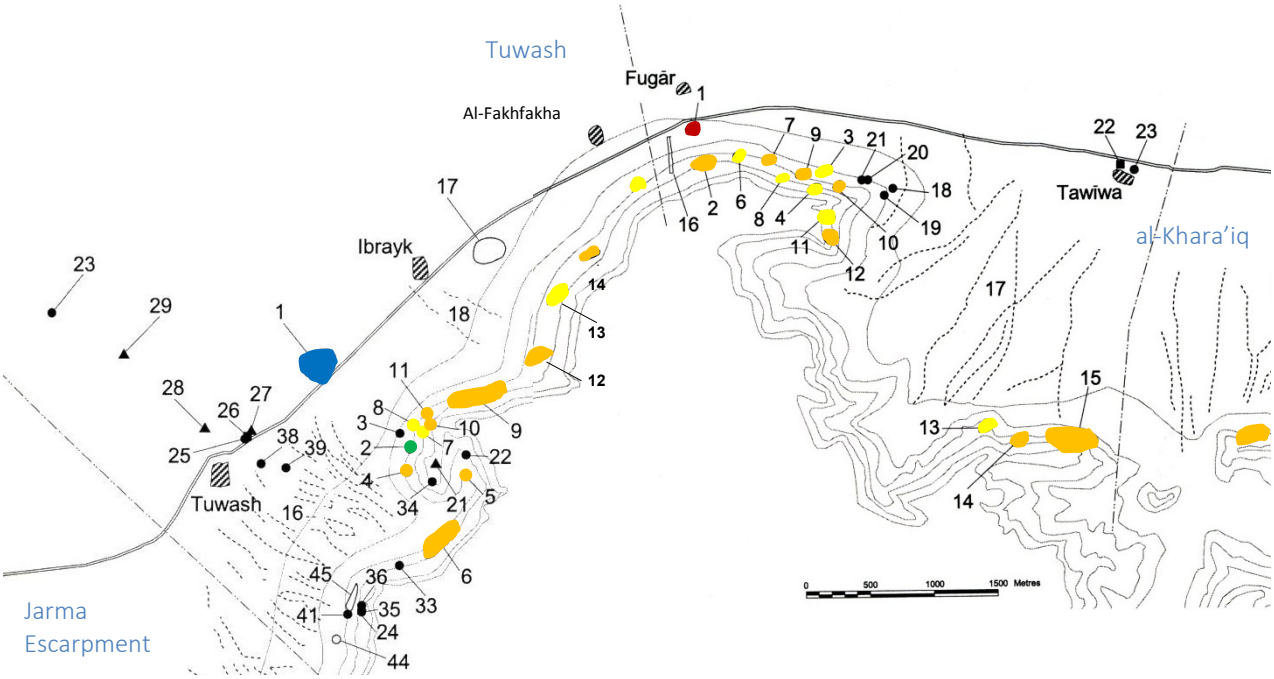
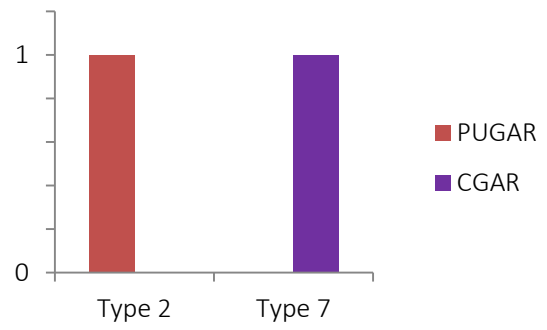


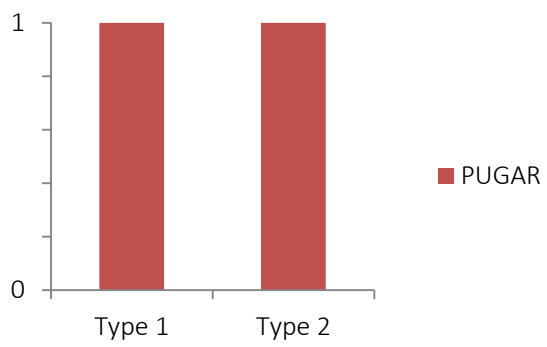
Figure 4.12. Typologies of the cemetery sites in the Tuwash and Al-Fugar sectors of the escarpment: Mausoleum= dark red; Type 2= orange; Type 3= yellow; Type 5= dark green; Type 7= dark blue. (Adapted from Mattingly *et al.* 2007a: 149 and 162).

15. al-Khara'iq (CHA). This area's highlight is a large complex pyramid cemetery (CHA001) on the foot of the escarpment, first explored by Caputo in the 1930s and later on by Daniels and the Fazzan Project (Mattingly *et al.* 2007a: 168-173). 285 funerary structures, 155 of them being pyramids, have been recorded making it the largest cemetery of this type in the Wadi al-Ajal. Alongside this cemetery, CHA012, a cairn cemetery (Type 2), is located on the western side of this sector of the escarpment, immediately south from a group of *c.*15 foggaras. The settlements on the top of this hilltop have been dated back from the Early Garamantian up to the Classic Garamantian periods (and post-Garamantian). It therefore suggested that the escarpment cemetery CHA012, associated with the foggara system is likely to belong to the Proto-Urban period, as some of the cairns are over the spoil heaps of the foggaras. The pyramid cemetery is likely related to the oasis settlement sites north of the cemetery (where pottery of the 1st- 5th centuries AD has been recorded) and therefore of the Classic Garamantian period. Two burials have been recorded in Al-Khara'iq when Daniels excavated the settlement site CHA005, albeit the lack of detail in the written record. These burials are Early Garamantian or Proto-Urban in date, as they predate the Garamantian settlement features (Mattingly *et al.* 2010a: 372).



Graph 4.13. Number of cemeteries and typologies at al-Khara'iq.

16. Qaraqra (GRA). Qaraqra is notable for the infrequency of cemeteries sites. The escarpment has been surveyed by Charles Daniels, who noticed the scarcity of cairns in this area. No survey has been done of the oases north of the escarpment. Two small cemeteries of dispersed cairns have been recorded, GRA001 (Type 1) with *c.*50 cairns along the edge of the escarpment and GRA004, a thin scatter on the foot of the escarpment. GRA001 is located west of a group of foggaras and is possibly associated with the escarpment site, morphologically similar to Zinkekra, where there are also a number of cairns, likely of the Proto Urban period. This settlement site dates back to the Early Garamantian/Proto-Urban, suggesting a similar chronology for the cemetery GRA001. On the other hand, the cemetery GR004, possible associated with the foggara group running into the oasis, has been recorded with possible clustering of cairns on the eastern side, which would suggest it was in use during the Proto Urban or Classic periods.



Graph 4.14. Number of cemeteries and typologies at Qaraqra

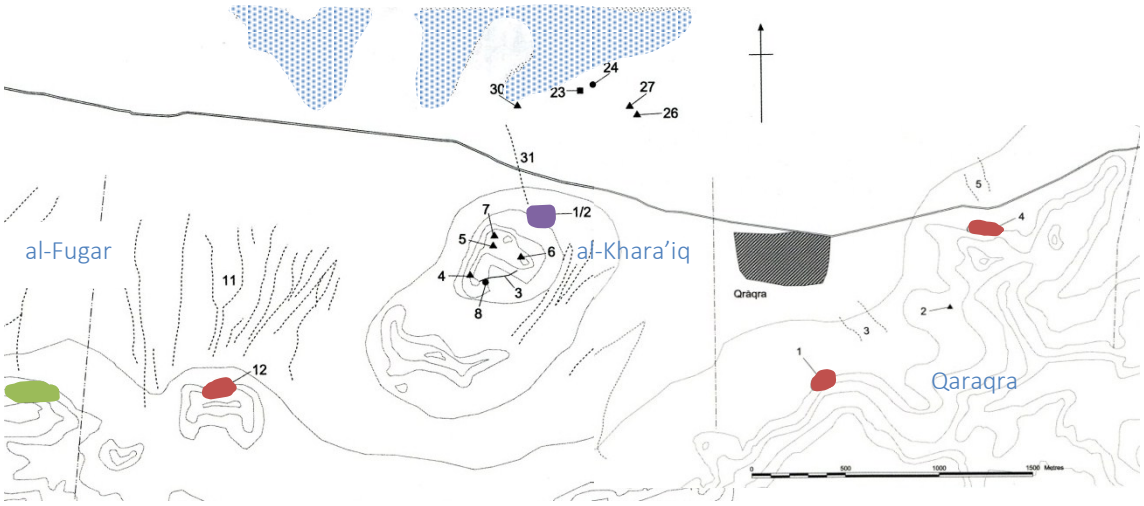


Figure 4.13. Cemetery sites in the area of al-Khara'iq and Qaraqra showing the chronological use of the landscape: PUGAR= red; GAR= green; CGAR= purple. (Adapted from Mattingly *et al.* 2007a: 168 and 177).

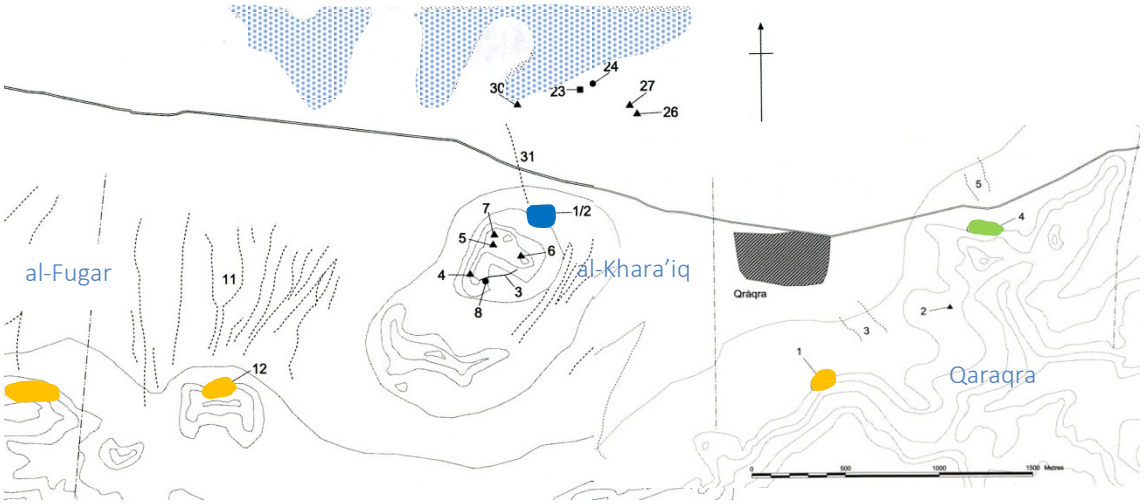
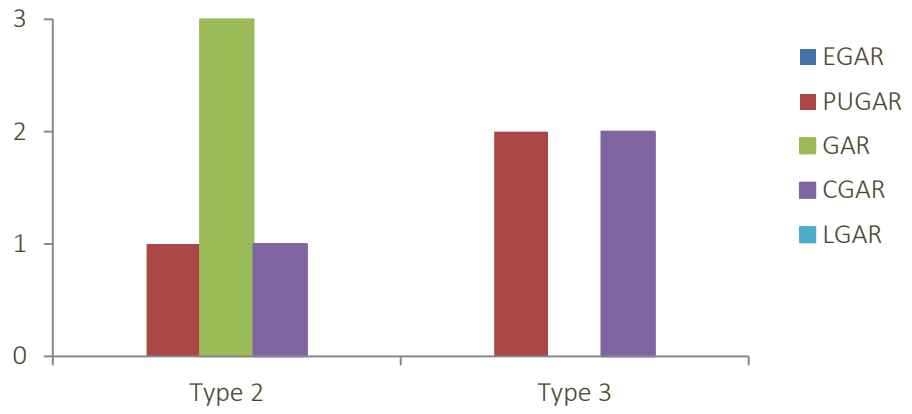


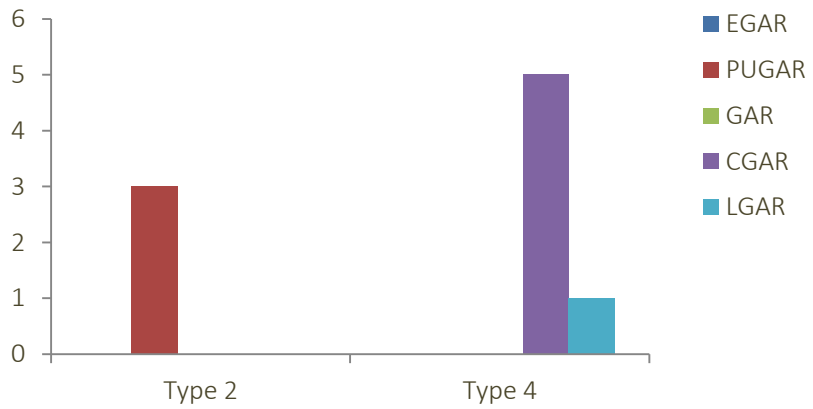
Figure 4.14. Cemetery typologies in the escarpment area of al-Khara'iq and Qaraqra: Type 2= orange; Type 4= light green; Type 7= dark blue. (Adapted from Mattingly *et al.* 2007a: 168 and 177).

17. Takarkiba (TEK). The central sector of the Wadi al-Ajal brings the escarpment close to the edge of the sandsea. Caputo (Pace, Sergi and Caputo 1951) excavated here, possibly in the eastern side of this sector. Daniels and the Fazzan Project surveyed the area, which resulted in the recording of eight Garamantian burial areas, spread across the slopes of the escarpment. The largest of the cemeteries, TEK001, a Type 3 cemetery with shaft graves and stepped tombs (suggested by the presence of mortar remains on the superstructures of the monuments) on the lower part of the escarpment, has stelae marking the east side of the tombs. There are no records of offering tables encountered alongside the stelae. A series of smaller Type 2 cemeteries, roughly dating from the Garamantian period, are situated along the escarpment.



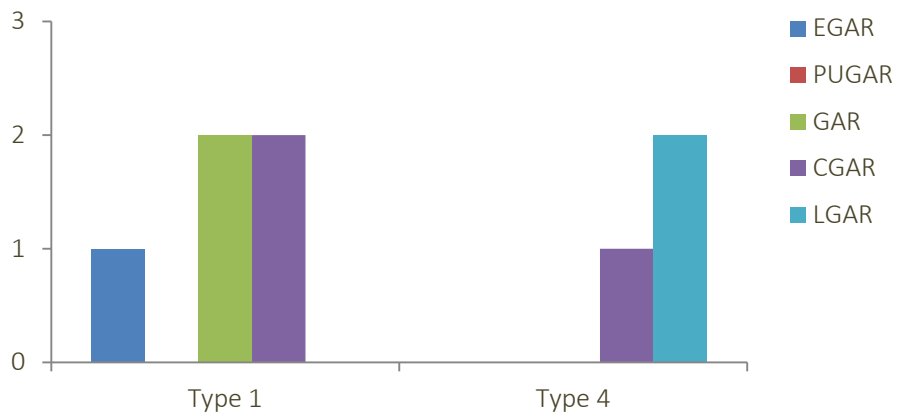
Graph 4.15. Correspondence of typology and chronological use in the Takarkiba sector.

18. al-Fjayj (FJJ). Immediately east of Takarkiba is al-Fjayj, first recorded by Daniels in 1959 and surveyed in 1965 (Mattingly *et al.* 2007a: 184). This area has a dense zone of dispersed Type 2 cemeteries (37.5%) and nucleated cemeteries Type 4 (62.5%) of the Classic Garamantian period. These cemeteries are concentrated on the west-facing side of the escarpment and directly related to foggara systems and settlement sites in this sector. The Type 2 cemeteries date back to the Proto-Urban phase and remained in use during the Classic Garamantian period. They all have records of late Punic pottery as well as rough stele and stone bowls or offering vessels on the eastern side of the cairns. The Type 4 cemeteries have a mixture of cairns and shaft burials with an average density of *c.*70 burials per cemetery. Interestingly there is an abundance of surface pottery which allows the dating of the cemetery sites to the Classic Period. The pottery encountered ranges from Late Punic fabrics to Roman imports, including flagons and amphorae. The Proto Urban FJJ002 and FJJ004 provide some examples of unworked proto-stele (with either one or two slabs) and offering bowls and proto-tables, predominantly positioned on the east side of the cairns.



Graph 4.16. Number of cemeteries and periods in al-Fjayj.

19. Larku (LAR). This area of the escarpment has not been systematically surveyed. Most of the work has been focused on the Garamantian Qasr Larku. Nonetheless, aerial photography has allowed the location of various cemeteries on the slopes of the escarpment. The Fazzan Project carried out visits to some of these cemeteries in 2000 (Mattingly et al 2007a). The records of the burial sites nearest to the Qasr (LAR003 and LAR010) indicate these are nucleated cemeteries (Type 4) of shaft burials (Type 2b). The presence of stele and various offering tables and bowls on the east side of the graves correspond to the burial programmes of the first centuries AD. Surface finds, including ARS and TRS, amphora and Garamantian handmade wares, refine the dating of these cemeteries to the Classic and Late Garamantian periods. The other cemeteries in this part of the escarpment are low density dispersed cairn cemeteries roughly dated to the Garamantian period.



Graph 4.17. Chronological use of the area of Larku and cemetery typologies.

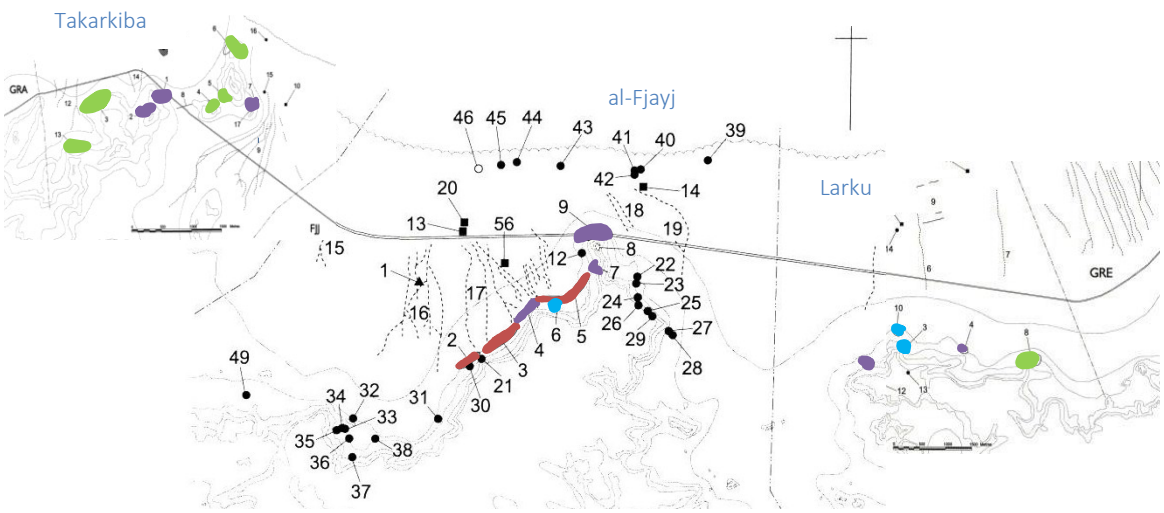


Figure 4.15. Cemetery sites in Takarkiba, al-Fjayj and Larku indicating the chronological use: GAR= green; CGAR=purple, LGAR= light blue. (Adapted from Mattingly *et al.* 2007a: 179, 183, and 196).

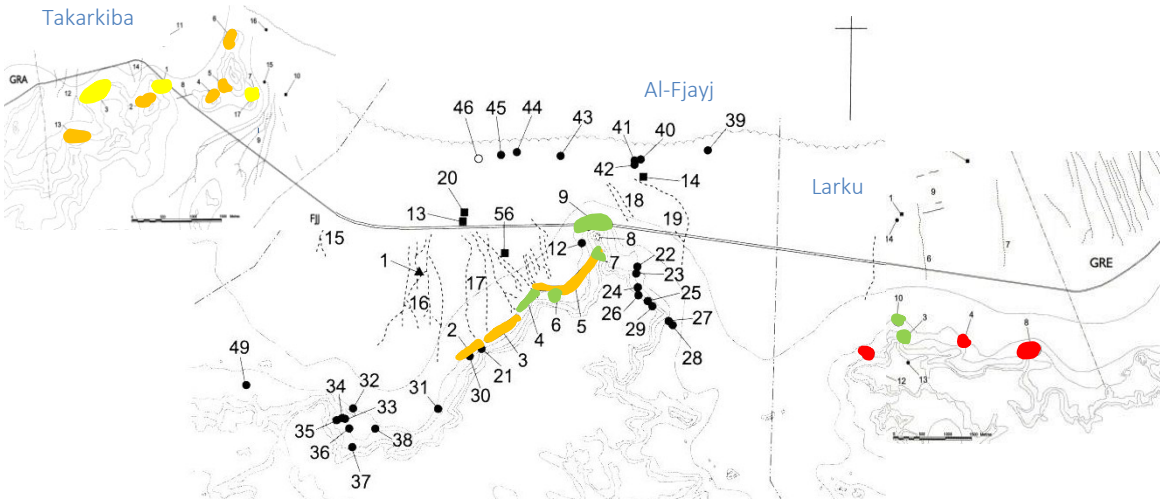
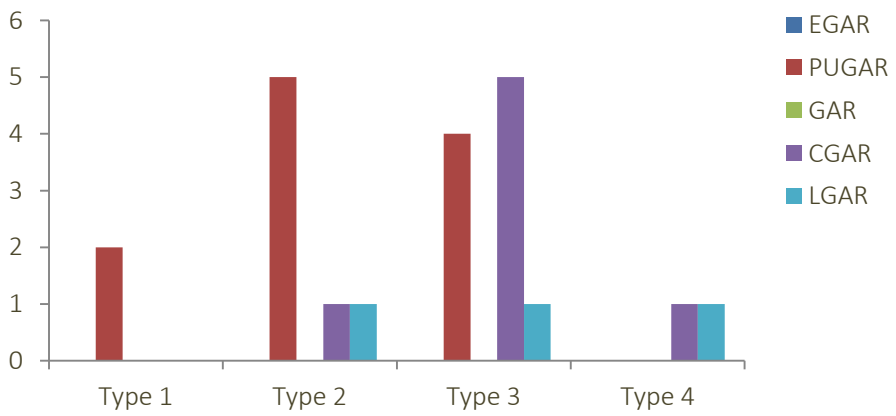


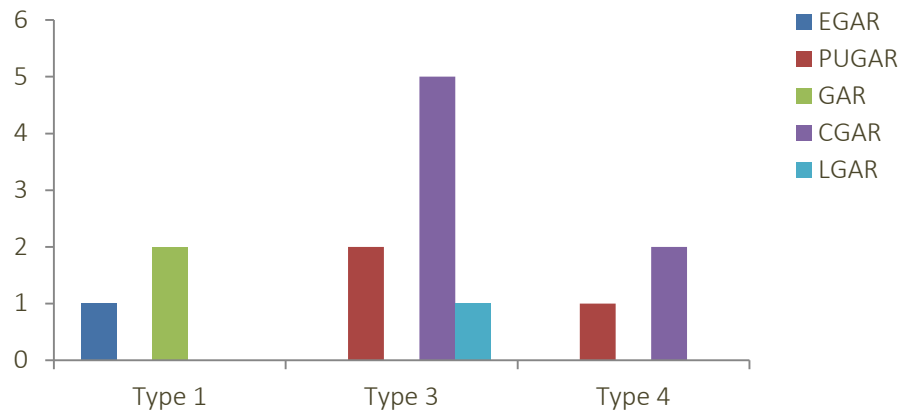
Figure 4.16. Typologies of the cemetery sites in Takarkiba, al-Fjayj and Larku: Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green. (Adapted from Mattingly *et al.* 2007a: 179, 183, and 196).

20. al-Qraya (GRE). One of the main features of the Garamantian landscape of this sector is the high density of foggaras, which indicates a significant population must have been concentrated in this area, albeit there are little settlement remains likely due to the intensity of the modern agriculture. Still, there is a prolific number of Garamantian cemeteries located in the foot and slopes of the escarpment. Unfortunately, most of these burial areas have not been surveyed and have been recorded through aerial photography. The distinctiveness of the burial monuments provides an indication of the morphological typologies of funerary monuments and cemeteries. The vast majority (60%) are dispersed cairns sometimes in more dense groupings (Type 1 and Type 2). These cemeteries vary in density, ranging from *c.*50 up to *c.*100 cairns. The lack of ground records for these cemeteries make the dating rather intuitive, but it can be suggested they belonged to the Proto-Urban period, based on morphological analogies.



Graph 4.18. Chronological use of the escarpment sector of al-Qraya with cemetery typologies.

21. al-Qsir (LEK). The escarpment here reaches the edge of the sandsea and there is a Garamantian at its top settlement associated with the cemeteries scattered on the slopes. Surface collections in this area by the Fazzan Project (Mattingly *et al*. 2007a) have provided material similar to that in Zinkekra. The cemetery sites in this sector of the escarpment demonstrate a continuation of the use of the landscape from the Proto-Urban period up to the Late Garamantian. 59% of the cemeteries in this area were in use during the Classic Garamantian period. These are nucleated cemeteries (Types 3 and 4) with a mixture of grave typologies, including stepped tombs. Surface pottery, stele and offering tables have been recorded in these cemeteries. A generic Garamantian date can be given to the dispersed cairn cemeteries in this area, as the lack of surface pottery and excavations does not allow a more specific chronology.



Graph 4.19. Chronological use of the al-Qsir sector of the escarpment with cemetery typologies.

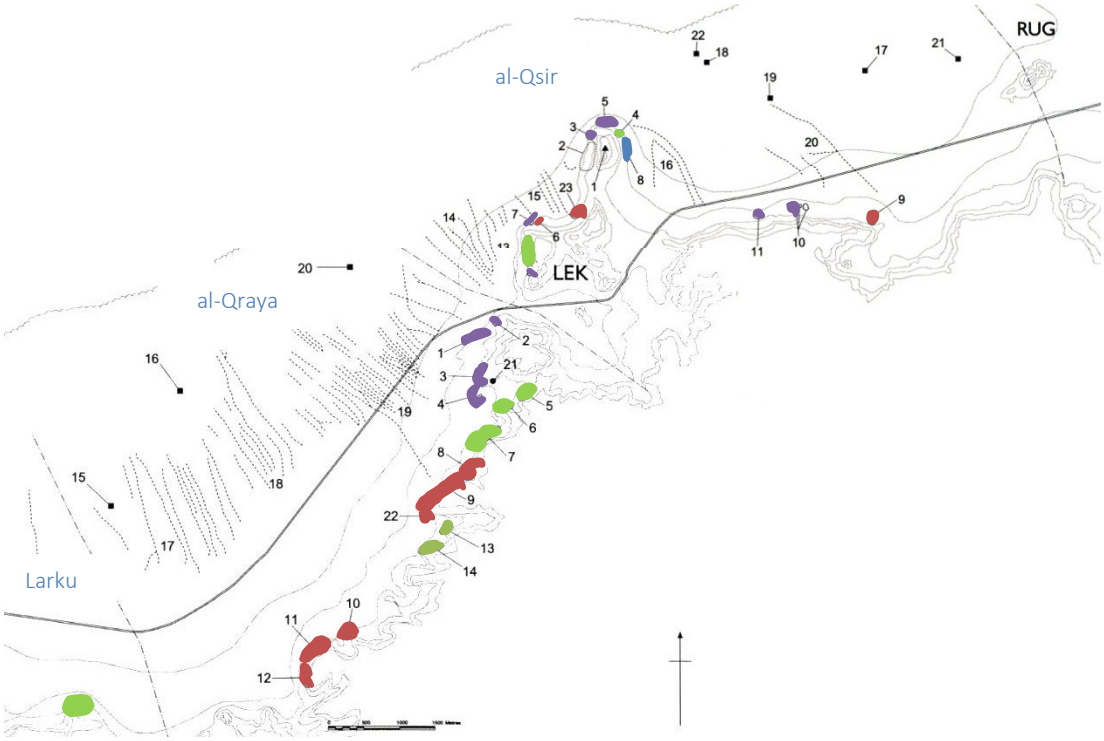


Figure 4.17. Cemetery sites in sectors of al-Qraya and al-Qsir, indicating the chronological use: EGAR= dark blue; PUGAR= red; GAR= green; CGAR=purple. (Adapted from Mattingly *et al.* 2007a: 200, 204).

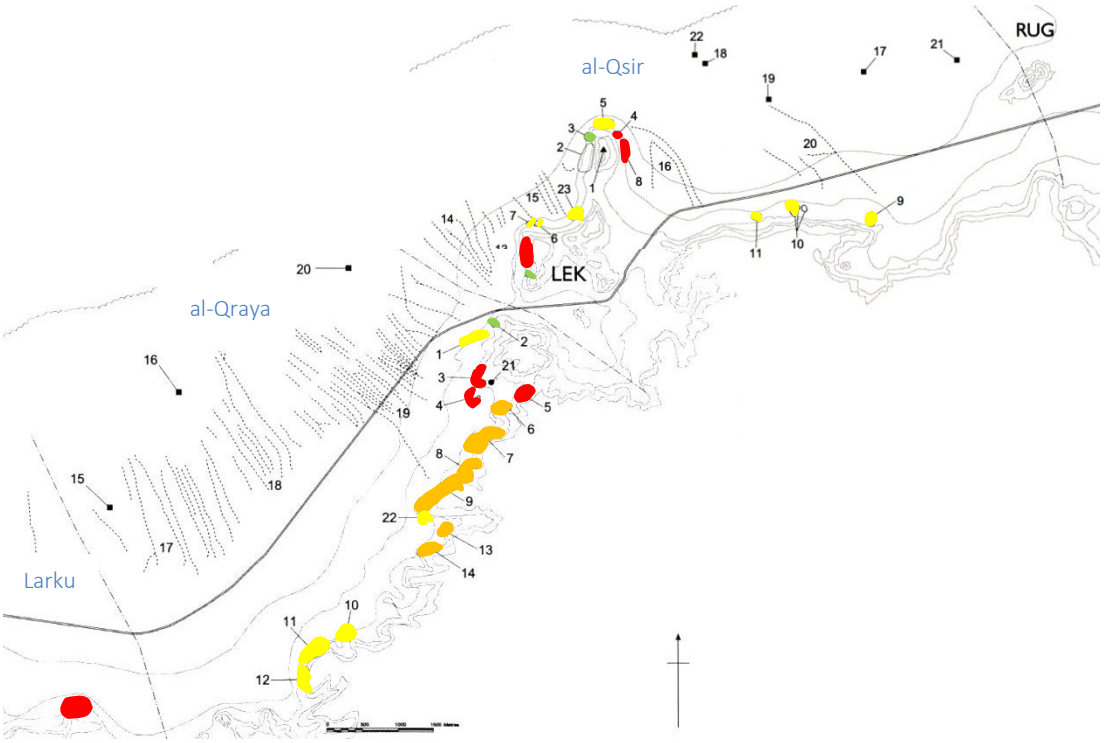
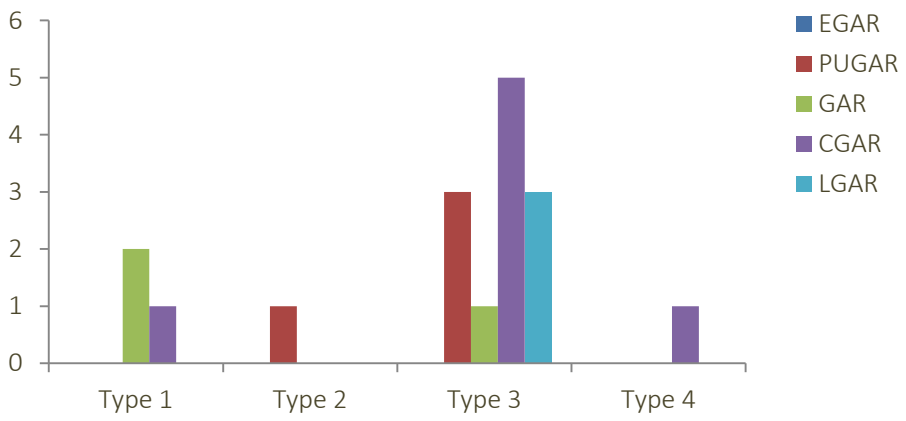


Figure 4.18. Typologies of the cemetery sites in al-Qraya and al-Qsir: Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green. (Adapted from Mattingly *et al*. 2007a: 200, 204).

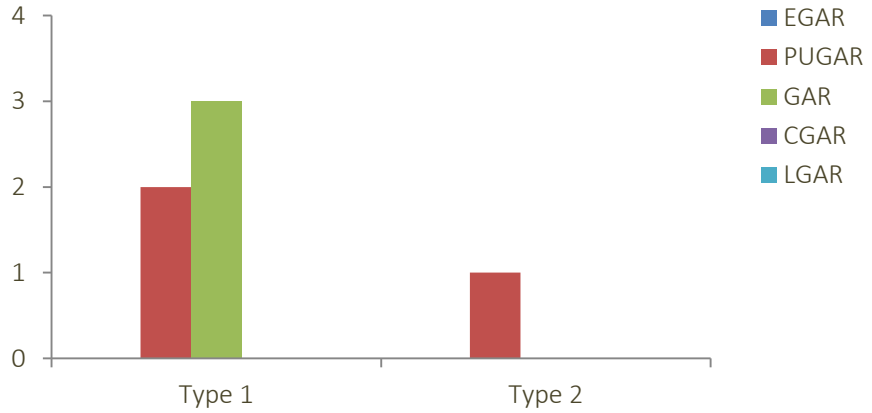
22. Ar-Raqayba (RUG). There is a concentration of cemeteries on the eastern side of the escarpment in the area near Ar-Raqayba, creating the largest distance in the wadi without escarpment cemeteries. Three qsur of the Classic or Late Garamantian periods have been recorded (RUG016, RUG023 and RUG024) in the centre of the oasis in the proximity to the proliferation of cemetery sites. Twelve cemeteries have been recorded in this area thanks to Daniels' surveys but they have not been systematically surveyed (Mattingly *et al.* 2010a). 58% of the cemeteries in this sector are nucleated cemeteries (Type 3) with cairns, shaft and stepped tombs. The use of the cemeteries in this area has been continuous throughout the Garamantian period (Graph 4.18), and some of these cemeteries indicate the development of a more complex funerary programme. For example, RUG001, a Type 3 cemetery and one of the largest in the Wadi al-Ajal, has a mixture of dispersed cairns, probably dating to the Proto Urban period, and stepped tombs accompanied by offering tables and stele. Type 1 cemeteries have been dated as a general Garamantian period. RUG006, a Proto-Urban cemetery, is located on the western side of the Ar-Raqayba sector, on a mound in the wadi centre. There is no indication of Garamantian settlements in this area. Nonetheless it must be noted that the relative close proximity of modern habitation and cultivation in this area has caused damage to the archaeological record through quarrying and bulldozing.



Graph 4.20. Chronological use of the escarpment sector of Ar-Raqayba with cemetery typologies.

23. Bintbaya (BBA). The survey of this area was carried out by Charles Daniels in 1973, at the same time that the modern town of Bintbaya was being constructed. This development resulted in the damage of the archaeological record in the escarpment and the level of examination that could be done in this area. Six cemeteries have been recorded on the slopes of the escarpment. The morphology of the majority of these cemeteries is small groups of dispersed cairns which have

been chronologically set as general Garamantian. BBA003, located immediately north of a possible Classic Garamantian qasr (BBA013), is situated in a mound in the centre of the oasis, likely related to the qasr. Surface collections in the two cemeteries BBA001 and BBA002 suggest they belong to the Proto Urban period. In fact, it can be suggested that all the cemeteries in this sector of the escarpment are from the Proto Urban period, given the presence and distribution of the foggara and settlement sites in relation to the cemeteries.



Graph 4.21. Chronological use of the escarpment at Bintbaya with cemetery typologies.

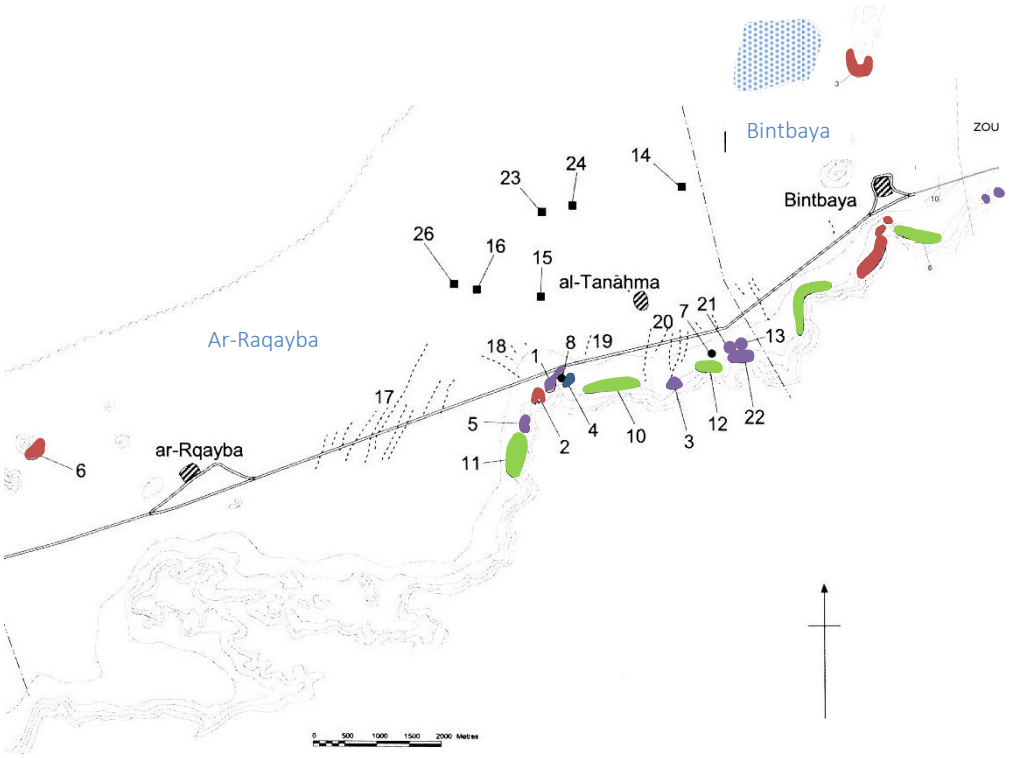


Figure 4.19. Cemetery sites in sectors of Ar-Raqayba and Bintbaya indicating the chronological use: EGAR= dark blue; PUGAR= red; GAR= green; CGAR=purple. (Adapted from Mattingly *et al.* 2007a: 213, 219).

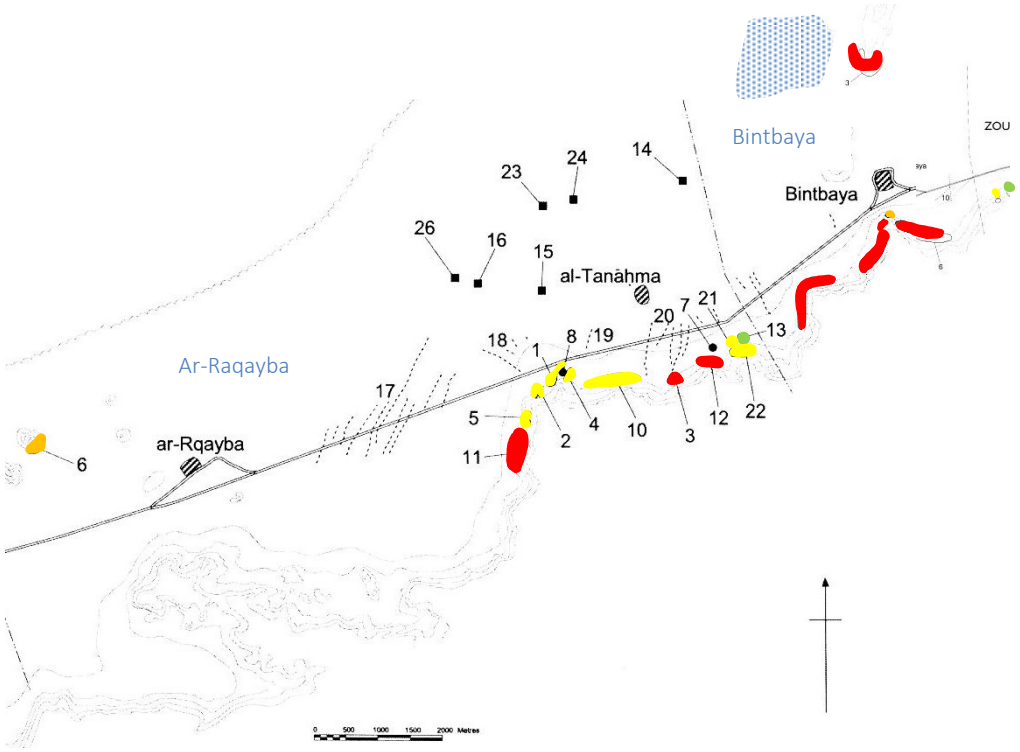
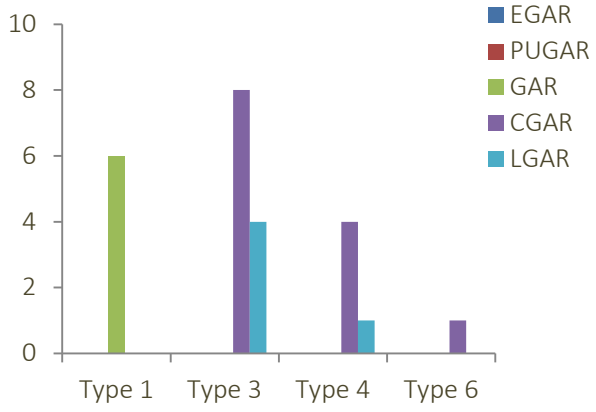


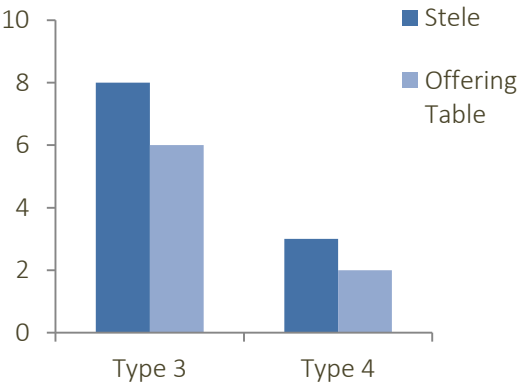
Figure 4.20. Typologies of the cemetery sites in sectors of Ar-Raqayba and Bintbaya: Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green. (Adapted from Mattingly *et al*. 2007a: 213, 219).

24. al-Zuwiya (ZOU). This area has a high concentration of nucleated cemeteries, including one of the largest cemeteries in the Wadi al-Ajal, ZOU001, with an estimated 1000 tombs. The data available indicates that 63% of the cemeteries in the sector of al-Zuwiya are nucleated cemeteries; 42% are Type 3/5, with monumental types. Stele, of various morphological typologies, have been recorded in all Type 3 cemeteries across this sector and 75% of these have offering tables. Offering tables and stele have been documented on both the eastern and western side of the tombs. Nonetheless, there is a clear predilection for the funerary furniture to be situated on the eastern side of the tomb, as these are only found on the west when there is no physical space between the structures. This pattern of the location of the funerary furniture can be seen across the Wadi al-Ajal. The other 21% of the nucleated cemeteries are Type 4, with shaft graves (Type 2b) and no upstanding superstructures. There are no records of the presence of offering tables or stele in these Type 4 cemeteries, with the exception of ZOU004. Alongside these nucleated cemeteries there are groups of dispersed cairns (cemetery Type 1) which has been given a generic Garamantian date given the limited surface pottery. Still, these could fit with the pattern of Proto Urban cemeteries where the lack of pottery among the assemblages has been recognised. Nonetheless, some of the Type 1

cemeteries have been described as having 'early cairns', probably referring to mound cairn, where a heap of stones mark the tomb, which may indicate a Late Pastoral/Early Garamantian period.



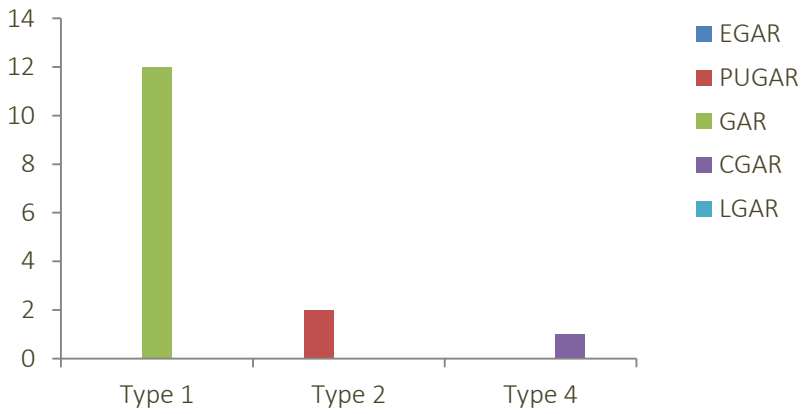
Graph 4.22. Cemetery types and chronologies.



Graph 4.23. Presence of stele and offering tables in Al-Zuwiya by cemetery type.

25. Qasr bin Dughba (GBD). Immediately north of al-Zuwiya's escarpment is the oasis area recorded as Qasr bin Bughba, where Daniels identified some settlements on aerial photography and the Fazzan Project located them on the ground in 1999 and 2000. The only cemetery in the oasis is GBD004, to the west of the Qasr and enclosed settlement GDB001. This settlement site shows elements of internal planning and Roman imports have been identified, including amphorae, jugs and flagons (Mattingly *et al*. 2007a: 229). The Classic Garamantian cemetery site GBD004 has not been formally investigated, however, the records indicate rectangular 'patches' were identified on the surface, indicating the presence of mudbrick structures of Type 4 (quadrangular tomb) or 5 (stepped tomb). Amphora and handmade localwares have been recorded on the surface.

26. Qal'at (GEL). The limited investigation of this area was undertaken by Daniels in 1965 and again in 1973, starting a photographic record and collection of surface finds. The occupation of this area is centred around mounds in the oasis. A chronology for the cemeteries in this area cannot be established without further research; therefore a generic Garamantian period has been noted for the vast majority of the burial sites. 80% of the cemeteries identified on aerial photography are Type 1 cemeteries, groups of cairns located on the slopes of the escarpment and mounds. Alongside these, there are two Type 2 cemeteries with cairns and drum cairns.



Graph 4.24. Cemetery typologies and chronological use in al-Qal'at.

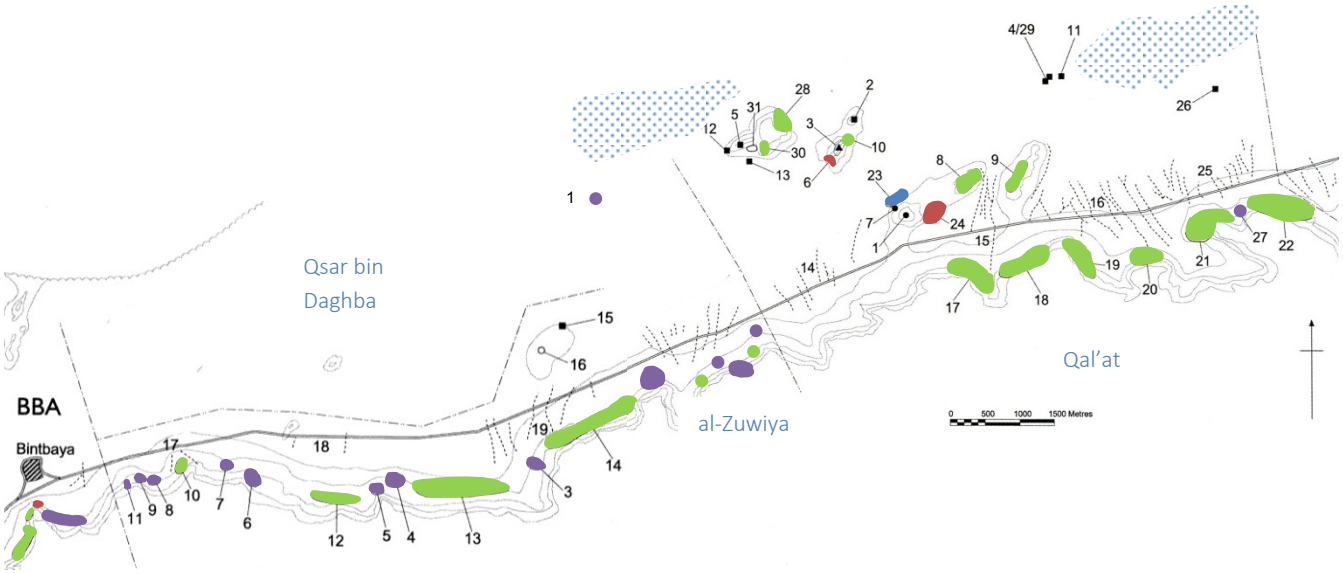


Figure 4.21. Cemetery sites in the escarpment sectors of al-Zuwiya and Qal'at and oasis near Qasr Bin Dughba, indicating the chronological use: EGAR= dark blue; PUGAR= red; GAR= green; CGAR=purple.

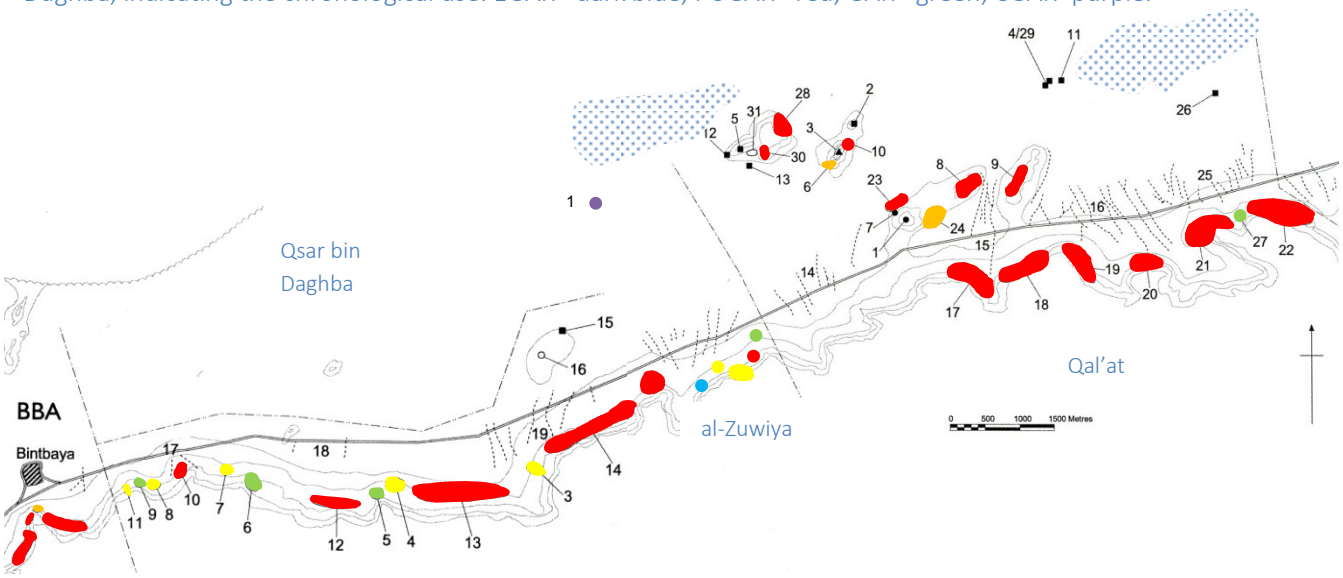
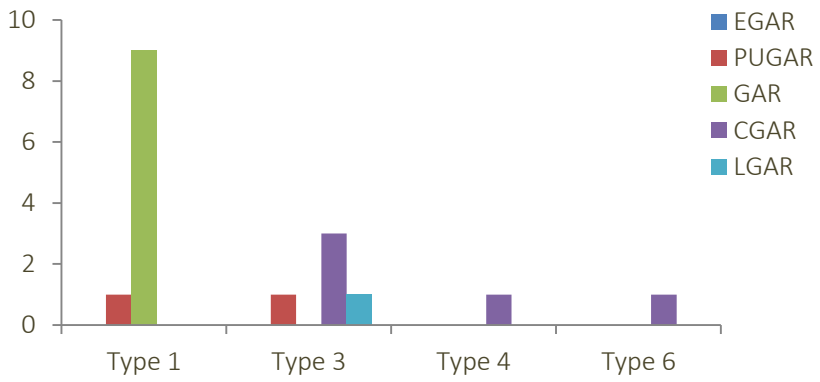


Figure 4.22.. Typologies of the cemetery sites at al-Zuwiya and Qal'at and oasis near Qasr Bin Dughba: Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green; Type 6= light blue.

27. Ikhlif (CLF). The archaeological sites in this area have suffered from modern damage during the construction of the new road. The surveys and consequent test excavations carried out by Charles Daniels in the early 1970s are the main source of information of this area of the escarpment. Two main enclosed settlements on the hilltops of the escarpment, CLF001-002 and CLF008-010, belonging to the Early Garamantian period and with some later occupation, are the centre of the development of a series of escarpment cemeteries. Most of these cemeteries have been recorded from aerial photographs; hence the recorded density is most certainly not a true indication of the use of the burial areas and the dating is based on the morphology of the cemeteries and funerary monuments and analogies with similar cemeteries where we have a date. 80% of the cemeteries in this area are dispersed cairn cemeteries, with an average of c.100 tombs. The densest are located on the northern side of the escarpment. Two groups of foggaras on the eastern side of this sector run towards the north and northeast from the group of cemeteries on the easternmost promontory, where there seems to be a lack of settlement sites. The records from this area indicate the presence of stelae, some of them *in situ*, in all the nucleated cemeteries (Type 3: CLF003, CLF012, CLF025 and Type 4, CLF028), dating to the Classic Garamantian period. Offering tables have also been recorded in the Type 3 cemeteries along with surface pottery including handmade jars and shallow bowls. Daniels excavated a single burial located under a simple mound cairn (Type 1a) in the Proto Urban CLF010. This burial is analysed in Chapter 5.



Graph 4.25. Chronological use of cemetery typologies in the area of Ikhlif.

28. Bin Harith (BNH). The records of the Italian surveyors in the 1930s make reference to very little permanent settlements in this area. Like in Ikhlif, modern construction and agricultural development has concealed some of the archaeology recorded in the 1960s by Daniels. Nonetheless, aerial photography has facilitated the location of cemetery sites though the level of recording is very limited. All the cemeteries in this area are groups of dispersed cairns mainly

situated on the northern slopes of the escarpment. Alongside these, two antenna tombs have been recorded; BNH011, in the proximity of the cemetery site BNH0011, on the western side of this sector and BNH014, south of the Type 1 cemetery BNH013, on the east (Mattingly 2007a).

29. al-Abyad (ABD). This area of the Wadi al-Ajal is the easternmost sector considered as it forms the limit of the Wadi ash-Sharqi. No systematic recording of this area has been undertaken on the ground and only a few cemeteries have been located on the slopes of the escarpment. The lack of on the ground survey makes systematic analysis difficult. Nonetheless, four Type 1 cemeteries have been recorded with an estimated average of *c.*30 cairns, only identified on aerial photography.

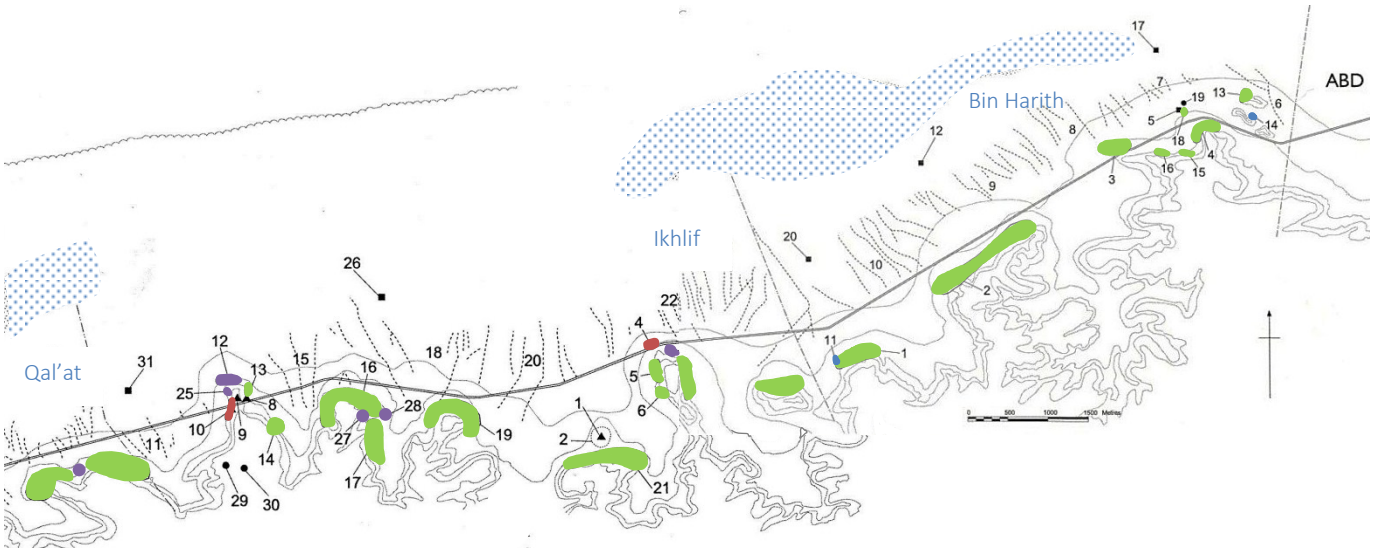


Figure 4.23. Cemetery sites in sectors of Ikhlif and Bin Harith, indicating the chronological use of the landscape: EGAR= dark blue; PUGAR= red; GAR= green; CGAR=purple.

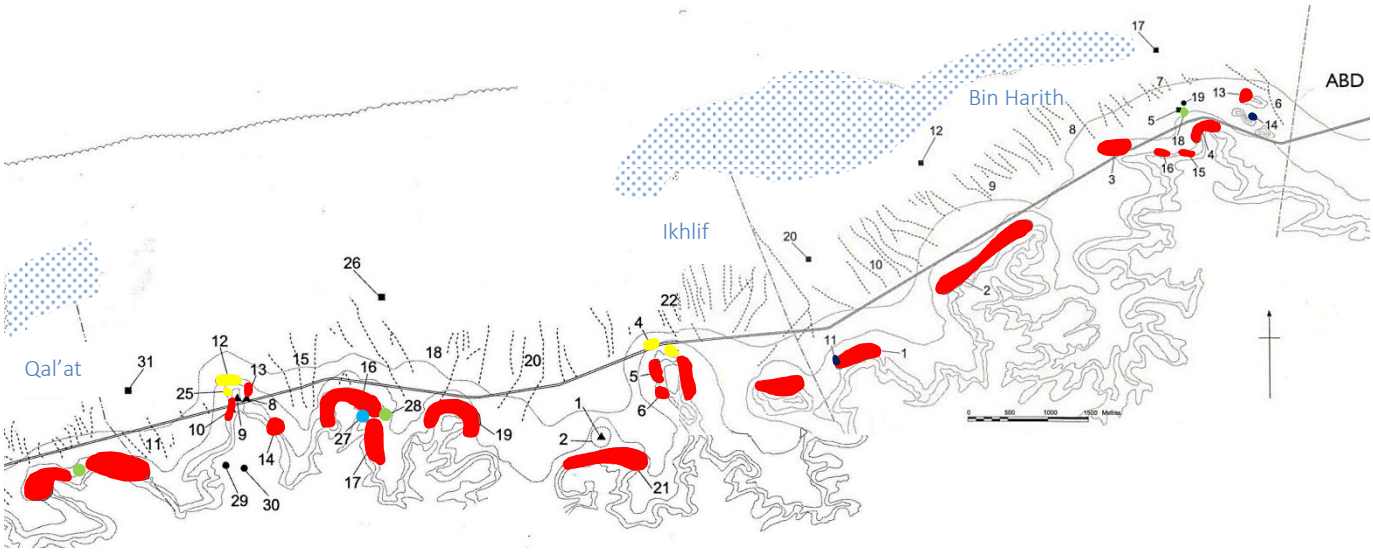


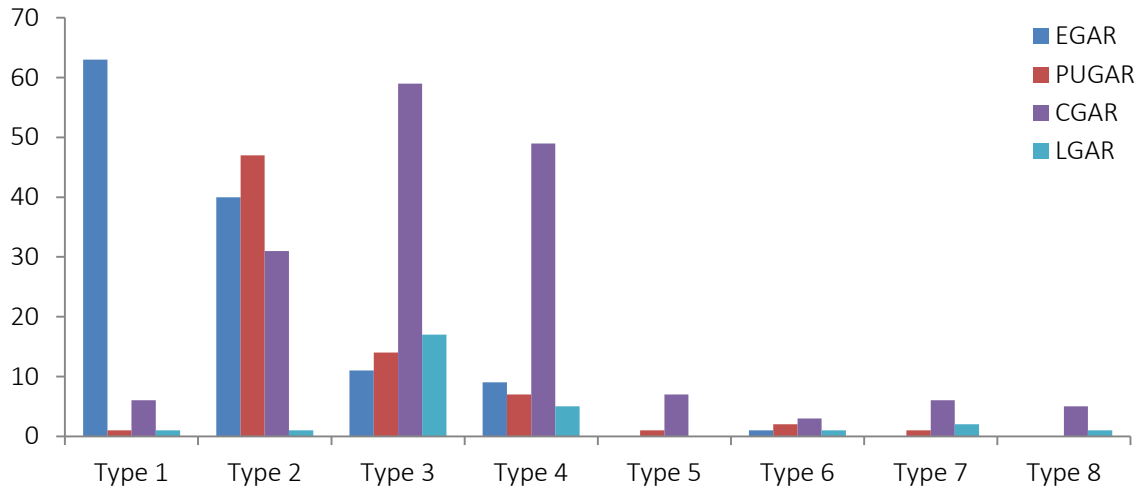
Figure 4.24. Typologies of the cemetery sites in sectors of Ikhlif and Bin Harith: Type 1= red; Type 2= orange; Type 3= yellow; Type 4= light green; Type 6= light blue; Antenna= navy blue.

4.4. The development of funerary areas in Fazzan

The aim of this chapter was to identify the space and place of the dead in Garamantian society. This was in turn related to the idea that landscape exists only as a meaningful construct though human activity. Therefore, understanding the landscape where the activities surrounding the dead were performed, it would provide a wider perspective in our understanding of the funerary activities themselves. Most of the data presented here reflects the reconnaissance surveys of the wadi, which provides fragmentary picture. As the more recent surveys of the Desert Migrations Project have demonstrated, further research in this area would aid to further the already established complexity of the Garamantian funerary landscape in the Wadi al-Ajal. The Desert Migrations Project surveys have been carried out in specifically targeted areas in the vicinity of Garama. It must be noted that this landscape has been subject to destruction. This section presents a first attempt to map and understand the typological and chronological use of the context of death, mourning and remembering in the Wadi al-Ajal.

As mentioned in Chapter 2, the process of desertification in Fazzan led to a more sedentary lifestyle and the development of agriculture and settlements. Consequently, it can be seen an increase of the concentration of funerary monuments in specifically chosen places in the escarpment for ceremonies and rituals surrounding death. This can be understood as part of process of construction of individual and community identities which evolved from the communal cairns of the Pastoral societies to the individual burials in the transition period and the Early Garamantian phase. The emergence of places through the repeated gathering of funerary activities can be seen in the more established spaces for the dead in the PUGAR phase.

The variation in the scale and size of the funerary areas and monuments can relate to the identity and social differentiation represented in the utilisation of the landscape alongside the variation and wealth of the material culture found in the burials.



Graph 4.26. Relation of morphological typologies and chronology across the Wadi al-Ajal.

Proto-Urban Garamantian (500 BC- 1 BC)

The further development of irrigation technology and urbanism created a new organisation of the landscape with a clear link between the settlements in the oasis, the foggara wells and the cemeteries at the foot of the escarpments. This can be seen as the beginning of a process of self-identification of local communities, and their claim to the resources (particularly water) by placing the cemeteries at the end of foggara lines. The choice of the location is significant and can be linked to the creation of a distinctive relationship between the living and the dead, providing a right to the land and its resources and a place where social memories could emerge. The cemeteries during the Proto Urban phase are located in visible areas of the landscape, namely, the escarpment.

The location of the burials in a prominent place in the landscape can be seen as a tool for the creation of a powerful association between the identity of the living communities and their relation between the past and the present, creating a sense of belonging. The cemeteries during the PUGAR period were placed in specific locations with the intention of being visible from the valley, therefore creating a direct visual link with the dead. This relation between the place of the cemeteries with a distinctive topographical feature, the escarpment, may have encouraged and enhanced the role of the cemeteries as places where communal memories and identities were produced and realised.

The pattern of placing the place of the dead in direct relation with foggara lines is seen across the Wadi al-Ajal with the exception of three areas: Ad Tamalalat (TMT), and the western sides of Al-Hatiya (ELH) and Al-Ghrayf (LGR) (Figure 4.25). Interestingly, these are also the only areas in the wadi Al-Ajal where the foggara lines do not reach the escarpment. It is likely that the water table was higher in these particular areas and there was no need to reach any further to have access to water. This, which explains the lack of foggara lines at the foot of the escarpment, does not readily explain the absence of cemeteries in these areas of the escarpment. It can be suggested, that the relative abundance of water may not have made necessary the sole location of the cemeteries in the escarpment and there is a possibility that there may be PUGAR cemeteries within the oases still buried under the sand, which are still unknown to us.

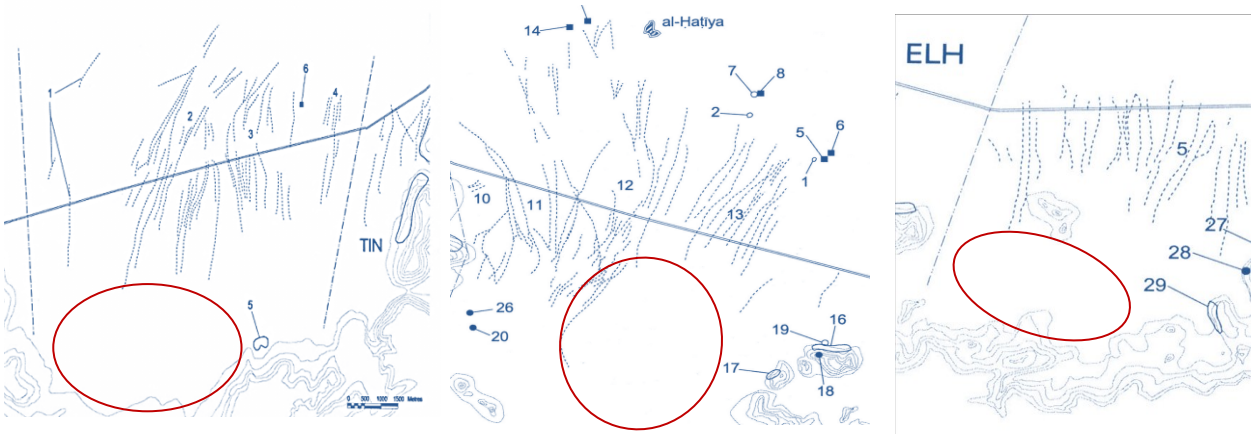
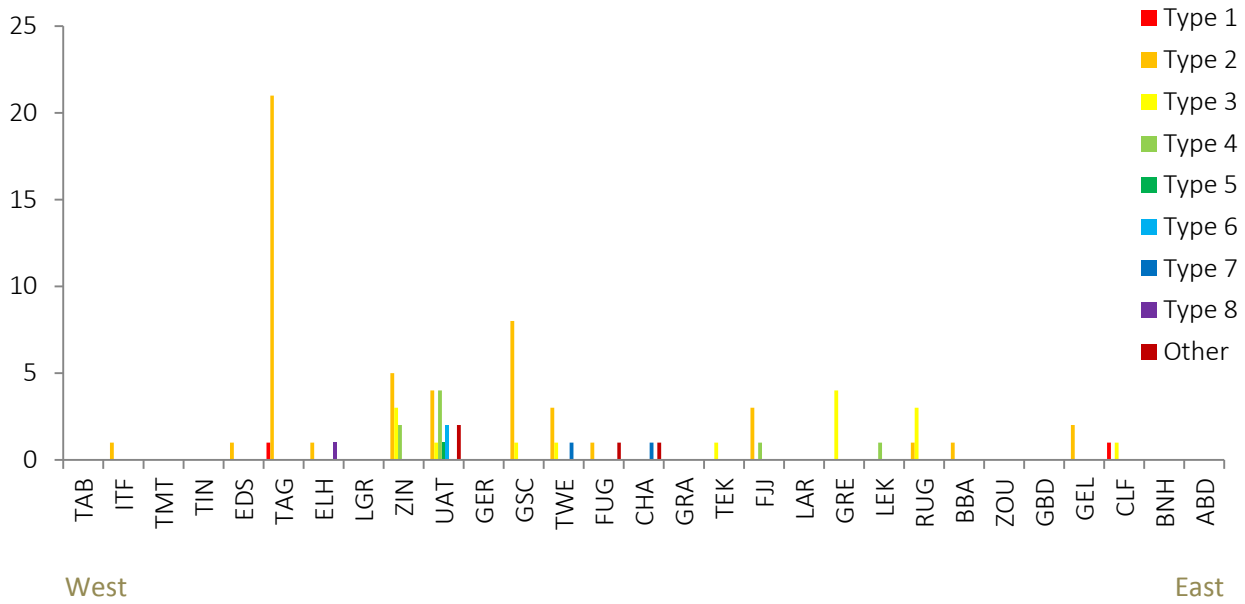


Figure 4.25. Relation of foggara lines and absence of cemeteries in the escarpment.

The ideas of community, identity and memory can also be suggested by the type of cemeteries encountered during this period, with the development of nucleated cemeteries, Types 3 and 4 particularly, and a more deliberate grouping of funerary monuments, as can be seen by the proliferation of Type 2 cemeteries (Graph 4.24). As I have discussed in Chapter 5, the Proto-Urban cemeteries show the use of offering vessels in relation to funerary monuments, and the beginning of the development of funerary furniture, linked to post-burial ritual and tomb markers.



Graph 4.27. Funerary landscape of the Wadi al-Ajal during the PUGAR period (by typology).

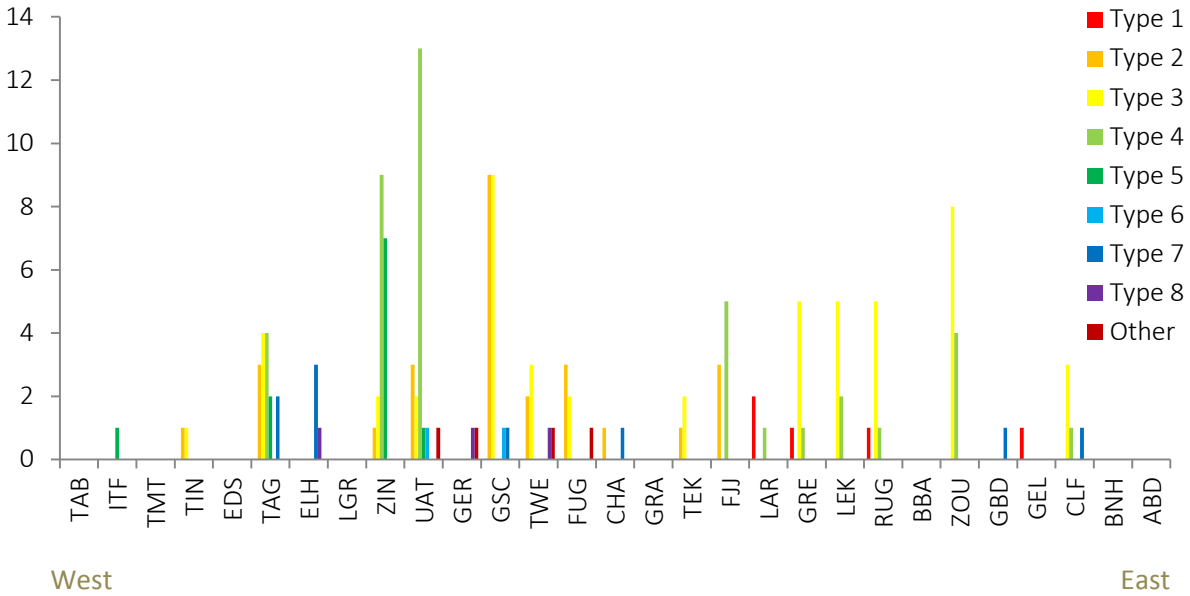
Classic Garamantian (AD 1- AD 500)

The funerary landscape of the Wadi al-Ajal during the Classic Garamantian phase provides an indication of movement of population towards the central sectors of the Wadi al-Ajal, closer to the Garamantian capital[2] (Graph 4.25). The Classic phase of the Garamantian civilization sees the centralisation of the state, around the capital Garama, and the increased connections with the Mediterranean. The movement of people and the growth of settlements in the centre of the Wadi al-Ajal activities can be suggested by the complexity of the funerary landscape (and the large number of individual burials), which included a wide diversity of cemetery types and funerary monuments and fully developed furniture accompanying them. Offering tables and stele of different morphological typologies were regularly encountered in the cemeteries of the Classic period; along with a variety of vessels introduced inside the tombs (see Chapters 5 and 6).

The Classic Garamantian landscape showed a clear grouping of monuments evidently linked to specific communities living in the oases settlements. It has already been highlighted the significance of the placement of the cemeteries in highly visible places is an indication of the sense

[2] Note must be made, when looking at Graph 4.24 that the area of Taqallit has been subject to intensive survey by the Desert Migrations Project in 2009 and 2010 and therefore the peak of Type 2 cemeteries is the consequence of this detailed survey in contrast to the more regular view of the rest of the Wadi.

of communal identity through the commemoration and remembrance of the ancestors. During the CGAR phase this is taken to another level through the monumentalisation of funerary structures, for example the appearance of stepped tombs. The visual impact of these cemeteries, with monuments sometimes covered in plaster and painted in white and red (placed against the black stone of the escarpment), would have aided to create and maintain a sense of community and past. This can also be interpreted as a claim to the water resources in particular areas the communities' rights to farming and settling.



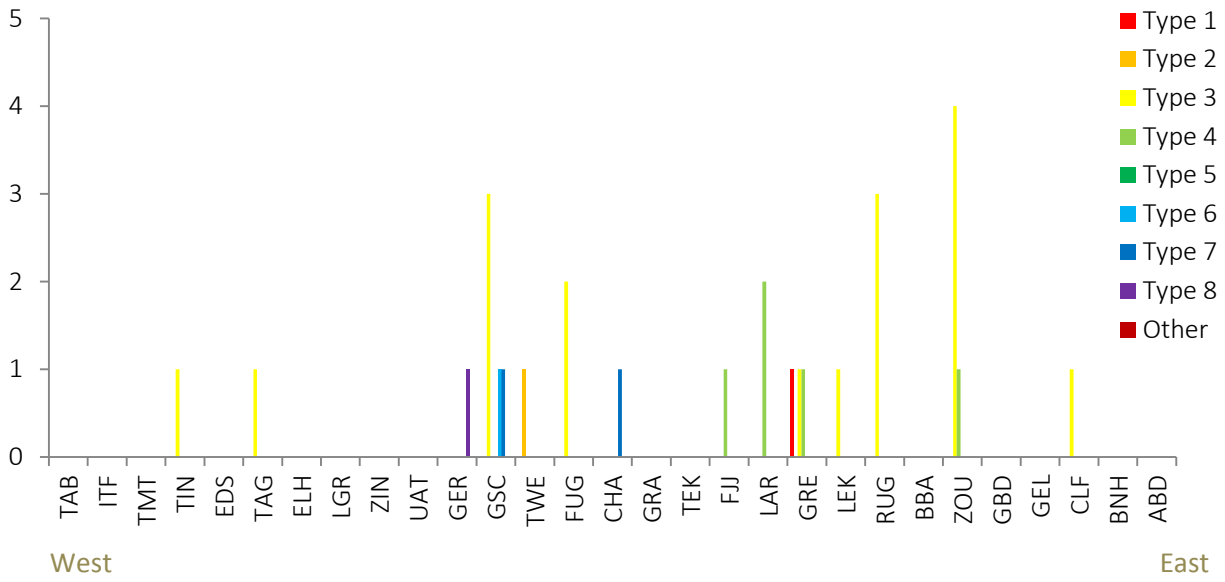
Graph 4.28. Summary of Classic Garamantian funerary landscape in the Wadi al-Ajal.

An interesting aspect that can be seen from this period is that cemeteries are found both in the escarpment and the oases. One possible explanation for the placement of cemeteries on agricultural land is that the irrigation systems and farming during this particular period are flourishing and the need for claiming resources would not be essential. Furthermore, the sense of identity and the meaning of particular areas of the landscape had been formalised during the PUGAR period with a more developed idea of a common identity with specific already established reference points in the landscape during the Classic Garamantian phase. The wadi-centre cemeteries (Types 7 and 8) are composed of pyramid and stepped tomb. The monumentality of these structures would have become a new feature within the landscape. Further analysis of these cemeteries along with their associated settlements would indicate if these were used for a specific group of people. The tombs excavated, as I will discuss in the next chapters, do not provide clear evidence regarding the significance of wadi centre cemeteries as a symbol of social status, at least

not during the whole life of the cemetery. This said, some of the richest (in terms of variability, quantity and quality of the assemblages) burials encountered in the Wadi al-Ajal come from the stepped tombs dating to the first phase of Saniat bin Huwaydi (1st -2nd centuries AD), richness which does not continue during the later phases of the cemetery.

Late Garamantian (AD 400 – AD 700)

The Late Garamantian period is one of relative decline, at least in the Wadi al-Ajal. The funerary landscape suggests this was a phase of abandonment of settlements as there are areas, particularly on the western side of the wadi, where there are no records of cemeteries from this period[3]. This can be possibly due to the collapse of the foggara systems, which would had obviously had a great impact on the agriculture and sustenance of the populations, and consequently we see an overall lower number of cemeteries. The more prolific areas with regards to the number of cemeteries is, similarly to what has been noted in the Early Garamantian period, towards the east of the Wadi al-Ajal and the area of Murzuq, that flourished in this period. It seems clear that the nucleated escarpment cemeteries are the one with the longest and widest used in the Wadi al-Ajal and likely to have continued in use until the introduction of Islam.



Graph 4.29. Summary of Late Garamantian funerary landscape in the Wadi al-Ajal.

[3] It must be highlighted that the lack of records of Late Garamantian cemeteries in the western side of the Wadi may be a consequence of the fewer number of imported artefacts which would make the dating of these cemeteries harder.

Chapter 5. Cemeteries of the Wadi al-Ajal

As seen above, the funerary landscape of the Garamantian civilisation presents a wide range of cemetery morphology and a continuous development across different phases. This chapter relates to Aim 2 established in the Introduction and involves the analysis of individual areas and specific cemeteries. The cemetery sites selected for analysis in this section are those where the excavated data allows a deeper analysis of the grave assemblages and body treatment and consequently the similarities and variability in funerary rituals throughout time and space in the Wadi al-Ajal. Key aspects dealt with in this chapter are the rituals related to the disposal of the deceased and the possible changes seen according to sex, age and status. Funerary assemblages have been presented and studied in order to discuss where specific mortuary forms have the same significance across time and space.

5.1. Case Studies in the Wadi Al-Ajal

The analysis of funerary archaeological data highlights various elements of the processes of treatment of the body of the deceased for his/her disposal and an insight into the some characteristics of the burial ritual. The internal study of individual cemeteries and the comparison with data provided by similar cemeteries could allow possible interpretation of their meaning. As pointed out in Chapter 2, funerary processes cannot be totally reconstructed purely based on archaeological data. However, basic elements can be isolated and a set of basic elements of the Garamantian funerary ritual established.

Age groups	Ages
Infant	0-2 years old
Young child	2-6 years old
Mature child	6-12 years old
Adolescent	12-18 years old
Young adult	18-35 years old
Mid adult	35-50 years old
Old adult	Over 50 years old

Table 5.1. Age references used in this chapter.

This chapter relates to the individual interment of the deceased members of the communities. Full information on age and sex of each individual person is provided in Appendix B. Table 5.1.summarises the age groups established by Nikita (2010), which have been used in this thesis. With regards to sex I have chosen this biological term, to avoid that of gender, which is socially and culturally constructed. I make use of male and female biologically determined sex rather than gender, linked to self-identification and identification by others (Diaz Andreu and Lucy 2005).

5.1.1. The area in the vicinity of Jarma: the cemetery site of Saniat Bin Huwaydi

This section relates to the cemeteries in the area directly south and east of the Garamantian capital, Garama, where Garamantian settlement sites have been recorded (Figure 5.1).

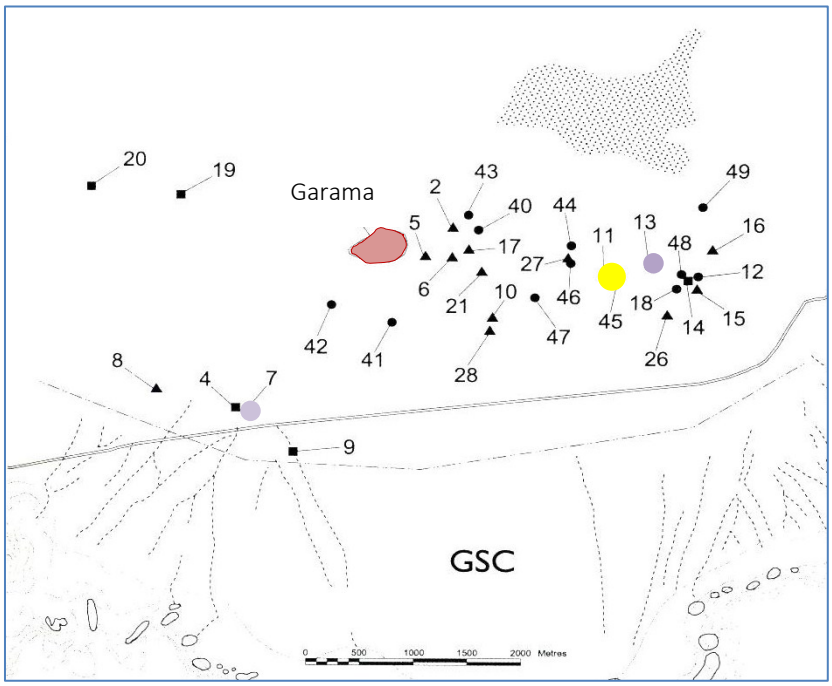


Figure 5.1. Sites in the vicinity of Jarma and location of the CGAR cemetery Saniat bin Huwaydi (yellow) (after Mattingly *et al.* 2007a).

Site Code	Chronological period	Excavated burials	Survey
GER011	PUGAR, CGAR, LGAR, [EMOD]	Ayoub, CMD	CMD, FP
GER013	CGAR		FP
GER026?	CGAR, PAST		FP

Table 5.2. Summary of surveyed and excavated cemetery sites in Jarma, including Saniat bin Huwaydi (GER011).

The data utilised in this study has been drawn from the published results of the excavations of Mohammed Ayoub and Daniels in the oasis-centre cemetery site of Saniat bin Huwaydi (GER011) in the 1960s-1970s. Of particular importance was the description of individual burials provided in Archaeology of Fazzan Volume 3 (Mattingly *et al.* 2010a: 213- 342). However, some minor amendments have been made during the tabulation of the data to include information provided in the descriptions that had been omitted in the plans. Some variation in the interpretation of the archaeological remains was also recorded.

There are some discrepancies on the material from Ayoub's excavations and caution has already been noted by Mattingly *et al.* (2010a: 221-243). The material from these excavations was catalogued in the 1960s by John Hayes and Daniels who corrected some of the evident inconsistencies in the written record. For example, Ayoub's record sometimes contradicts itself, as it is the case of GER011.TA2.3 where the published and unpublished record differ on the recovery of human remains, or in tomb GER011.TA1.2 where Ayoub makes reference to two different vessels from different tombs but gives them the same catalogue number. However, the provenance of some material is still uncertain. Along with Ayoub's material the work carried out by the 'French Doctors' has left a scarce record and little detail on the funerary material recovered from the tombs, apart from the 'many and very beautiful' comment (Mattingly *et al.* 2010a: 215). Chapter 6 below presents the imported assemblages of Roman pottery and glass at Saniat bin Huwaydi.

❖ Description of the site and dataset in Saniat bin Huwaydi GER011.

Saniat bin Huwaydi is a Garamantian oasis-centre cemetery of morphological Type 8. The cemetery is approximately 3 km east of Old Jarma and *c.*300m away from the Garamantian settlement site of Saniat Sulayman Krayda (GER027), along with others nearby. Chronologically (dated from assemblage analysis, mainly lamps, African Red Slip ware and Tripolitanian Red Slip) the cemetery had a long life, dating from the 1st century AD to late 4th, early 5th centuries AD.

Figure 5.2. Different phases of Saniat bin Huwaydi and mortuary furniture (Photographs by Author).

The physical appearance of Saniat bin Huwaydi is of a low mound of decayed mud brick rising above the level of the gardens. The tombs morphological typologies include Type 3b (circular), Type 4b and 5b (rectangular and square) mud brick superstructures, some of which include forecourts (Figure 5.2). Daniels recorded that the forecourts, offering tables and stelae have been placed mostly to the east. A significant amount of offering tables and Type 5 stelae were painted in red (this is still visible in some examples *in situ,* see Figure 5.3).

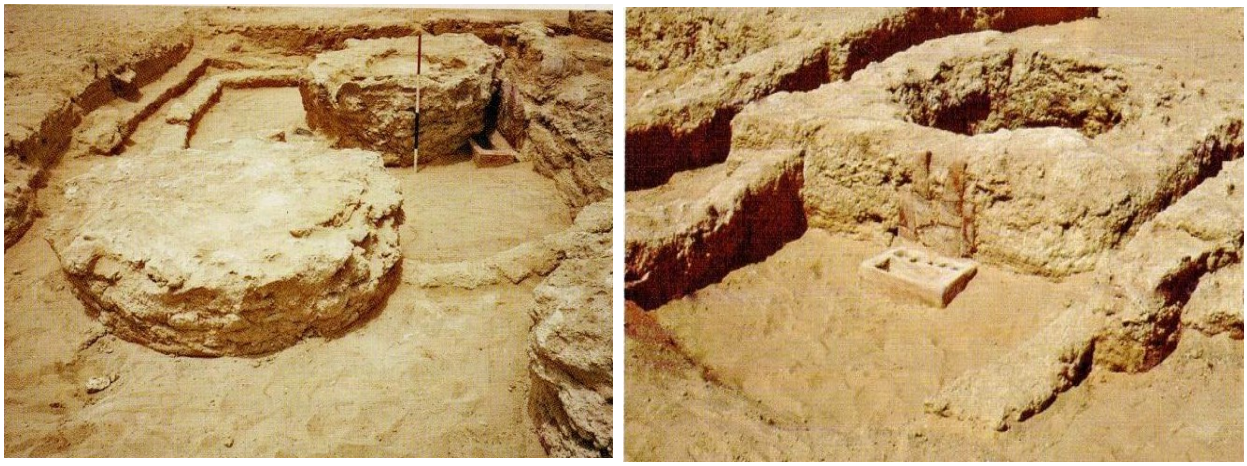


Figure 5.3. Examples of Type 3 (left) and Type 4 (right) tombs encountered in Saniat bin Huwaydi (Source: Mattingly *et al.* 2010a:253 (left) and Mattingly *et al.* 2010a: 274 (right))

In all, 64 burials were excavated at Saniat bin Huwaydi, most of which included human remains in various stages of preservation and disarticulation. Out of these recorded burials, there are 42 articulated human remains, some of which are in double inhumations. I have taken into consideration as articulated skeletal remains those with enough articulation to be able to distinguish the position and orientation of the body.

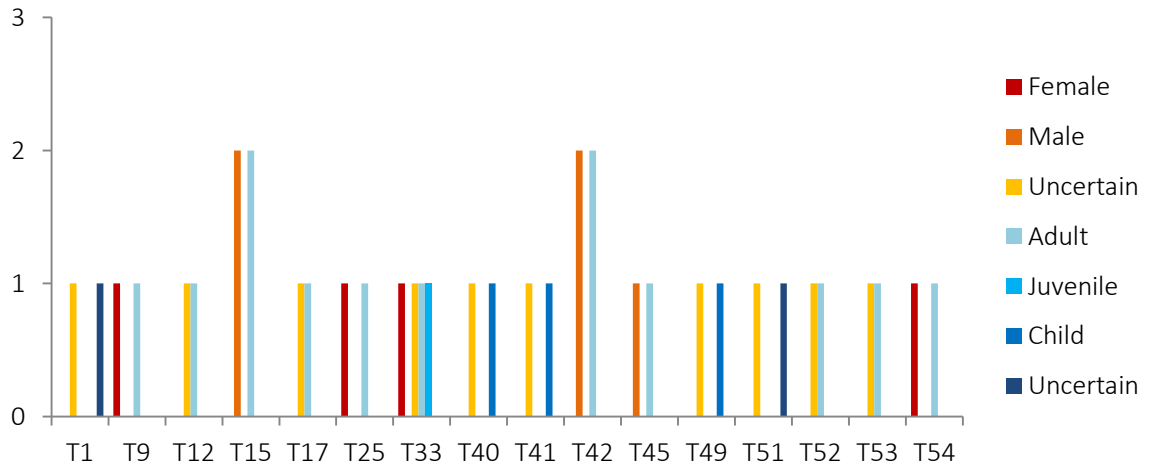
The first phase of the cemetery shows a vast variety of imported wares (pottery, glass and faience). Several tombs have stelae and offering tables, mainly located on the east side of the tombs (although there are some examples in crowded areas where they have been placed on the west side). Various tombs also had vessels placed outside the tomb structure. There is uniformity in the choice of stelae style with a preference towards the 'picket fence' Type 8. The same uniformity is seen in the offering tables, which are large and with complex carved compartments. Nonetheless, within this uniformity in stylistic typologies, there is great variation in specific details such as the disposition and shape of the offering compartments within the offering tables or the finishing of the stelae.

The second phase of the cemetery shows an increase in the use of circular shafts below squared structures. Some of these tombs were marked by stelae and had offering tables. There are also examples of funerary enclosures. However, the stelae style had changed to a smaller four point stelae either carved into one single stone or made up of two elements placed together (Types 6 and 8). These styles of stelae have been widely recorded in the Wadi al-Ajal. The later burials contained less grave goods and less variety in comparison to the Phase I. Daniels suggested the continuity of this cemetery until the 5th century. Given the level of destruction of the latter features and structures, due to looting, it is hard to be able to find substantial evidence for the dating of the latest phase of the site. Nonetheless, tombs GER011.T28 and GER011.T43, excavated by Daniels, provide us with secure contexts for dating the last phase of the cemetery. The sherds of Tripolitanian Red Slip (Hayes form 2) dating from the late 3rd - 4th century AD recovered from GER011.T43 and the Tunisian African Red Slip dish from GER011.T28 is datable to mid-4th -mid 5th centuries AD.

Regarding the grave goods recovered from the excavations carried out by Ayoub and Daniels there is a great variety of material culture, from imported Roman vessels to local handmade wares, glasswares and organic goods. Most of the vessels have been chipped in what seems a conscious and deliberate action. Ceramic vessels present this chipping on the rims. The same treatment is given to lamps and glass vessels.

The treatment of the bodies in Saniat bin Huwaydi follows the same characteristics as the ones in Zinkekra and Watwat. The form of burial was inhumation, despite Ayoub's claim to have recovered a cremation in GER011.TA2.3 (Mattingly *et al.* 2010a: 230). The human remains were in crouched position and wrapped in matting or leather. There are records of textile and red colouring (probably ochre) inside the tombs. The disturbance by robbing of the cemetery does not provide a full record in relation to the position and orientation of the bodies within the graves. Also, the level of the water table in the lower levels of the cemeteries has influenced the poor preservation of the human remains and the associated organic material. Despite these factors, it can be suggested that most of the burials were on an east-west alignment.

The burials are in various degrees of preservation and articulation. For detailed information of the skeletal analysis refer to Nikita *et al.* (2010). A summary of the sex and age of the individual burials used in this analysis and notes on the preservation and alignment is presented in Appendix B. The graph below is a summary of this information. The skeletal data is relatively limited in most of the tombs. Ayoub recorded the presence of a skeleton but does not provide further information. The poor preservation of the bones had made impossible the osteological analysis, which has been exacerbated by the lengthy storage.



Graph 5.1. Summary of information of the individuals per tomb.

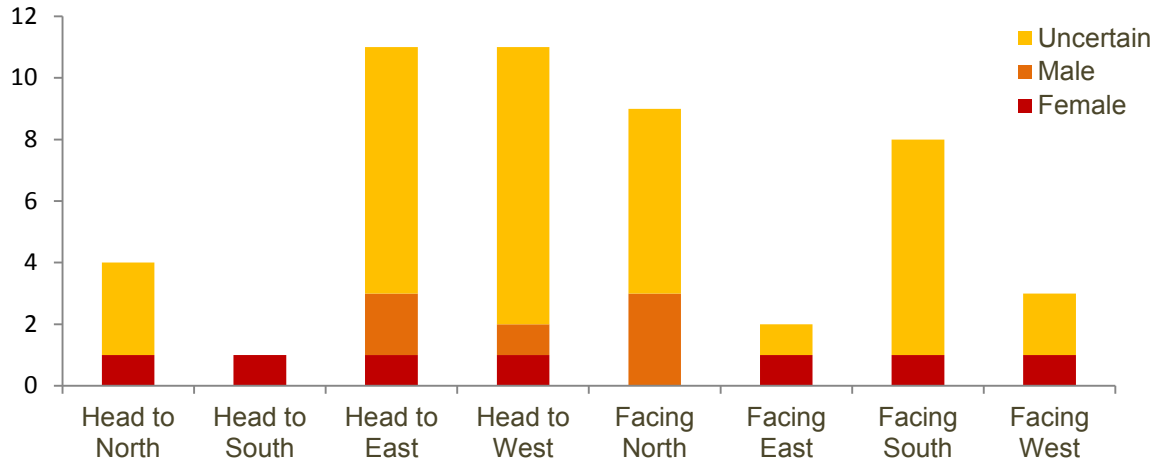
	Young Child (2-6).	Mature Child (6-12)	Adolescent (12-18)	Adult (18<)	Male	Female	Uncertain
GER011	1	2	1	11	6	3	7

Table 5.3. Summary of sex and age of individuals in Saniat bin Huwaydi used for analysis.

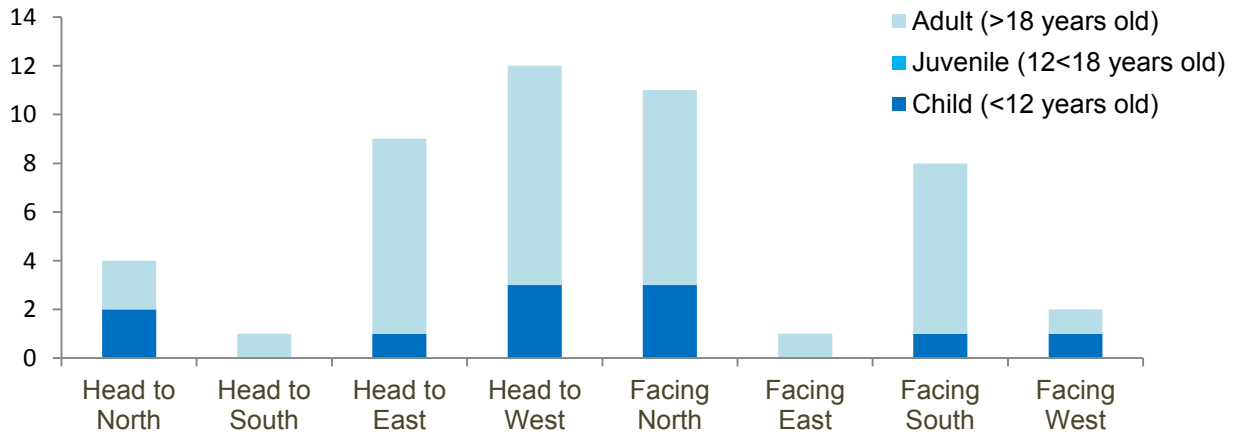
As indicated above, and despite the wealth of material finds within some of the funerary structures of Saniat bin Huwaydi, the human remains data available for analysis is comparatively restricted. In spite of the extremely limited information on female burials (only one) and therefore the impossibility of any suggestion or interpretation regarding the choice of alignment and position based in sex, there is a clear predilection for the body to be laid on an east-west alignment, indistinctively with the head to the west or the east, facing north or south. The position of the bodies in the tomb chamber reflects the location of the offering table and stelae whereby the head is mostly placed on the same orientation as the funerary furniture. In relation to the age of the deceased, the data regarding adults is more prolific than those of infants or adolescents. Still, the

information available suggests there is an inclination towards the west-east alignment with the head facing towards the north.

Before depositing the deceased in the grave, the body would have been previously wrapped in textile or leather and/or matting. The high water table of the cemetery site GER011 has not allowed for the adequate preservation of organic materials, but the written record does mention the presence of textile, leather and matting fragments.



Graph 5.2. Summary of alignment and position of the bodies from Saniat bin Huwaydi by sex.



Graph 5.3. Summary of alignment and position of the bodies in Saniat bin Huwaydi by age.

Below, information on the tomb typologies and grave goods included with the female and male deceased respectively is provided. As seen above, there is a significant limitation of this data. Also, the only tombs where we know the sex of the deceased are from Phase I or II. The choice of the funerary structure is directly related to the phasing, with the quadrangular and stepped tombs (Types 4b and 5b) pertaining to Phase I and Types 2a and 3b of Phase II at Saniat bin Huwaydi, rather than the sex of the deceased. The variability in funerary assemblages and tomb typology relates to the different phases of the cemetery. It must be stressed again that the funerary monuments from the later phases of GER011 have been subject of looting in antiquity and therefore the archaeological record for these tombs is largely fragmented. The seemingly diminished number of ceramic artefacts in the Phase II and Phase III is likely a consequence of this robbing, along with the smaller dimensions of the grave pit. Hence it is, with caution, suggested that a change in funerary style did not take place during the late Classic Garamantian and Late Garamantian periods in Saniat bin Huwaydi, and the reduction in artefacts, as presented in the archaeological record, is the combination of pillaging and reduced space.

FEMALES	TOMB TYPE	GRAVE GOODS
GER011.TA1.1	3b	Amphorae, flagon, handmade pottery, lamp
GER011.TA1.2	3b	Amphorae, incense burner, flagon, lamp, necklace
GER011.T9	4b	Amphorae, ARS jug, incense burner, lamp, glass beaker, faience dish, ring, beads, pumice
GER011.T25	5c	ARS bowl, necklace, incense burner, localware jug
GER011.T54	2a	Amphora, Italian Sigillata, Berber Red Ware, glass beaker, belt, earrings

MALES	TOMB TYPE	GRAVE GOODS
GER011.T15	5b	Amphorae, Italian Sigillata, ARS jug, incense burner, flagon, lamp, ochre, beads, rubber, Berber Red Ware
GER011.T33	3b	Amphora, Italian Sigillata, glass, beads, copper ring
GER011.T42	5b	Amphorae, Italian Sigillata, lamp, glass, faience bowls, saddle quern, chalk rubber
GER011.T45	3b	Berber Red Ware bowl

5.1.2. The cemeteries in the Jarma Escarpment

❖ General description of the cemetery sites

The Jarma escarpment includes the southern edge of Jarma, where there is a series of nucleated cemeteries pertaining to the Proto-Urban (500-1 BC) and Classic Garamantian period (chronologically 1st-4th centuries AD), and the area of the so-called Royal Cemeteries, GSC030, known as the King's Cemetery and GSC031, the Queen's Cemetery, dating back to the 4th-5th centuries AD.

Most of the cemeteries in the Jarma escarpment of the Proto-Urban period fit into the Type 2 and Type 3 morphological typologies described in Chapter 3. The vast majority of the cairns encountered in these cemeteries are corbelled cairns, a circular heap of piled stones with overlapping layers (Type 1b) with a few cases of drum cairns, with near vertical shape. The survey data has not provided an estimation of the number of tombs in these cemeteries. Therefore the density of these burial areas can only be attested through satellite imaginery. In two of these cemeteries (GSC010 and GSC014) there are survey records of the presence of Type 1 stele, a pair of pointed natural unworked stone. The Desert Migrations Project's survey of this section of the escarpment recorded the individual number of stele and their location. The Proto-urban cemeteries in the Jarma escarpment show either no ceramic materials or very little.

The Classic Garamantian cemeteries show a variety of morphological typologies with the most prominent one being the nucleated cemetery (55%) with a diversity of tombs ranging from shaft tombs (Type 2), drum cairns and tombs (Types 3a and 3b respectively) and circular stepped tombs (Type 5a). Dispersed cemeteries have also been recorded with corbelled cairns.

The cemeteries dated from the Classic to the Late Garamantian period, aside from the Royal Cemeteries (Type 6 and 7), are Type 4, nucleated with corbelled cairns. The King's Cemetery (GSC030) is a Type 6 linear cemetery with 25 stepped tombs.

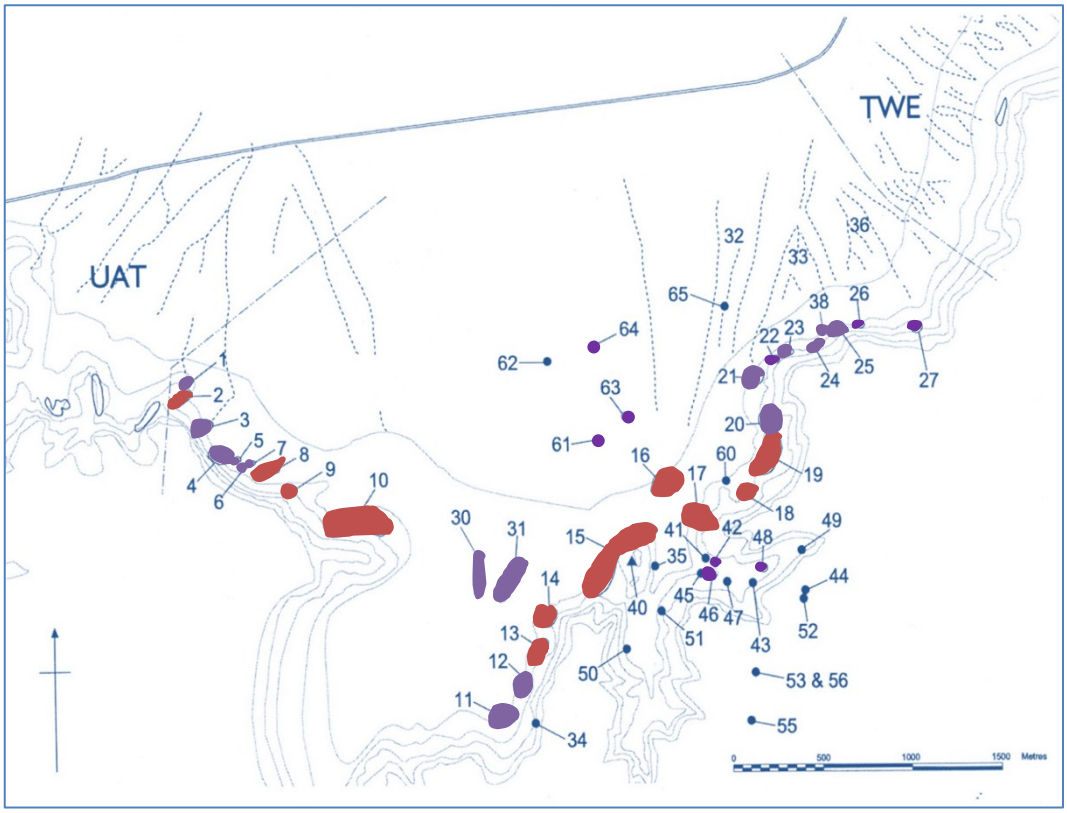
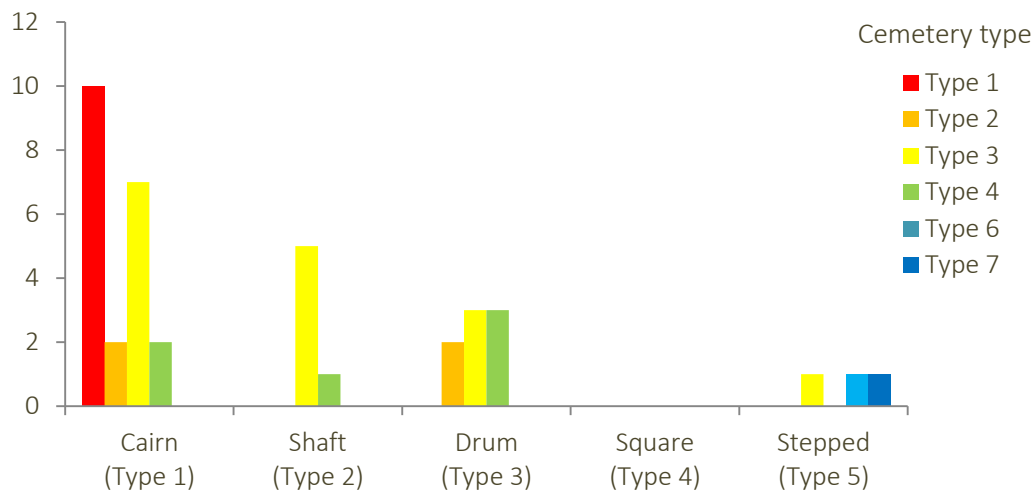


Figure 5.4. Cemetery sites in the area of the Jarma escarpment: Red =PUGAR, Purple= CGAR; (after Mattingly *et al*. 2007a: 132).



Graph 5.4. Relation of cemetery and tomb morphological typology

The Italian campaign in 1934 excavated some burials in the area of GSC001-008 as well as several tombs in GSC030 and GSC031 (see Table 5.4 below). Ayoub excavated in the area between 1962 and 1966. Daniels carried out a ground survey along the escarpment. The material recovered from the excavations by Caputo, Ayoub and Daniels (Ayoub 1967; 16-21; 1967b; Daniels 1971; Pace *et al.* 1951, 292-320; Mattingly *et al.* 2007a: 140-44; 2010a, 359-69) have shown that the tombs date to the Late Garamantian phase (4th to 6th centuries AD).

In 2000 the Fazzan Project surveyed the area and reported that several sites had been seriously damaged after the construction of a new road over the Hamada. Most of the cemeteries in the escarpment are small dispersed burial areas of Type 2 or nucleated of Type 3, both with shaft and drum tombs (Types 2 and 3). Proto-stele and offering tables have been recovered during the surveys along with surface pottery including some late Punic and Roman imports.

Cemetery code. Tomb Number	Excavated burials
GSC030.T1	Caputo (Pace 1951)
GSC030.T2	Caputo (Pace 1951)
GSC030.T3	Caputo (Pace 1951)
GSC030.T4	Ayoub 1961
GSC030.T5	CMD 1962
GSC030.T7	Ayoub 1961
GSC030.T8	Ayoub 1961; DMP2011
GSC030.T14	Ayoub 1961
GSC030.T22	Ayoub (1963), CMD 1977
GSC030.T25	Ayoub (1967), CMD 1977
GSC031.T1	Caputo (Pace 1951)
GSC031.T2	Caputo (Pace 1951)
GSC031.T3	Ayoub 1962
GSC031.T7	DMP2011
GSC031.T30/32	Ayoub 1967
GSC031.T40	DMP2011
GSC031.T62	DMP2011
GSC031.T71	DMP2011
GSC042.T1	DMP2007
GSC048.T1	DMP2008
GSC048.T2	DMP2008

Table 5.4. Excavated tombs in the Jarma Escarpment.

The Royal Cemetery GSC030, a Type 6 linear cemetery running south-north, c consists of Type 5b rectangular or square stepped tomb superstructures sealing chambers with corbelled roofs (Mattingly *et al.* 2007a: 140). The dimensions of these tombs ranged from 2.6x2.6m to7.3x7.3m. Some damage has been caused by bulldozing, especially at the northern end, flattening some of the stepped tombs. 'The Queen's Cemetery' GSC031 is a dense Type 7 cemetery of Type 5b stepped tombs. It shows some linear north-south alignments, mainly in the area closer to GSC030. The modern road, mentioned above, cuts the 'Royal Cemetery' and quarrying in the proximity of GSC031 has caused considerable damage. However, the 1958 aerial photograph of the area suggests that there were no funerary monuments between GSC030 and GSC031. The name of the cemetery does not necessarily indicate an association with Garamantian royalty, despite Ayoub's interpretation. Nonetheless, the monumental tombs of these cemeteries are the largest yet recorded in Fazzan (Mattingly *et al.* 2010a: 360). Moreover, the proximity to the Garamantian capital may indicate that this cemetery could have been connected to the highest classes of the community. The Royal Cemetery has provided the largest examples of offering tables and stelae, some which still remain in situ, mainly situated on the east side of the tombs. However, many of the stelae and offering tables catalogued by Daniels from these cemeteries are now in the museum at Jarma.

Caputo (Pace *et al.* 1951: 357-60) and Ayoub (1967a: 18-21) investigated the Royal Cemetery. Caputo's excavation at GSC030 (the Necropoli Monumentale) targeted three stepped tombs on the southern side of the cemetery. All of these tombs had stelae with red dye on them on the east side of the tomb and only one tomb had an offering table. The human remains recovered from these graves were highly fragmented and had been disturbed by robbing. Among the finds noted by Caputo are both local and imported wares, including sherds of amphorae, flagons and lamps. There was a significant amount of glass vessels and remains of organic materials (basketry and textiles).

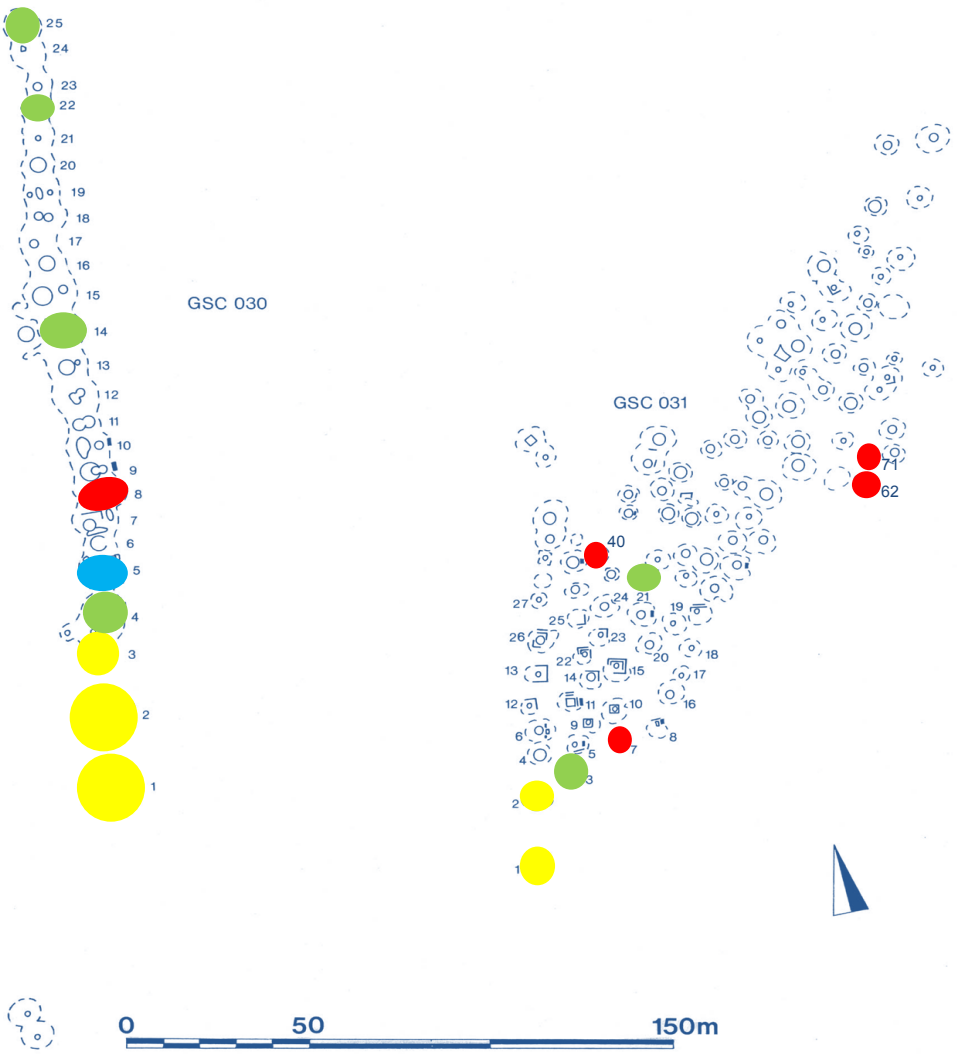


Figure 5.5. Plan of the Royal Cemetery indicating excavated tombs (yellow= Caputo; green= Ayoub; blue= Daniels; red=Desert Migrations Project) (after Mattingly *et al.* 2007a: 141)

Figure 5.6. Offering table and stelae from the 'Royal Cemetery'. The stelae still preserves some of the ochre on its surface.

Ayoub excavated in the Royal Cemetery in the early 1960s (Mattingly *et al.* 2010a: 213). His records follow the same patterns as Caputo's in relation to the morphological aspects of the tombs and the stelae. These tombs were heavily disturbed by looting in antiquity. Disturbed disarticulated human remains were recorded but no information can be gathered regarding the position and orientation of the bodies. The grave assemblages in Ayoub's tombs follow the same pattern as those of Caputo. A mixture of local and imported wares, glass and some personal items such as ivory combs, beads and bracelets were recorded (Mattingly *et al.* 2010a: 362-68).

Daniels followed on the work of Ayoub excavating one tomb in GSC030 and surveying both GSC030 and GSC031, many of which were disturbed by robbing in antiquity. Daniels noted in 1977 that most of the robbing pits are found on the east side of the tombs, a practice also observed in Taqallit (TAG001). The lack of a plan of the area from the excavations of Caputo and Ayoub does not allow the identification of the tombs in GSC031. Daniels work in the Royal Cemetery included a survey of both GSC030 and GSC031, but this survey was never finished and the previous report by Ayoub cited an inconsistent number of tombs in GSC031 (somewhere between 94 and 134). The Desert Migrations Project completed the survey in 2011 which counted 106 monumental tombs in GSC031 (Mattingly *et al*. 2011: 92). It has been noted that the preservation was best on the south and south-west side of the cemetery, with better survival of the stepped superstructure of tombs, in many cases with traces of the external plaster coating surviving (similar to the stone structures in Taqallit). A factor that has affected the preservation of this cemetery is the notable damage caused by bulldozing. Still, the degree of disturbance across the cemetery on the west and south sides of the funerary structures may indicate a pattern related to the ancient looting of the graves further highlighted by the proportion of surface finds encountered on the south and western sides, which included fragments of human bones and shreds of glass and ceramic artefacts.

The 2011 excavations in the Royal Cemetery have provided additional information on the structure and funerary furniture and grave goods of these cemeteries (Mattingly *et al.* 2011). The majority of the stelae recorded *in situ* were decorated with red ochre or pigment, and in some cases also with subsequent and repeated layers of daub or plaster. It appears that there was a regular renewal of the coating of the visible face of the stelae. Along with the offering tables and stelae large handmade pots have been recorded on the east side of several tombs (the best example being GSC031.T40). Although the tombs in the 'Royal Cemetery' have been badly

disturbed through the robbing activities in antiquity, and no artefacts have been recovered *in situ* (apart from the jar outside GSC031.T40), they have provided valuable evidence on the internal structure of these monumental tombs as well as an insight into the funerary assemblages, including wooden artefacts, whose survival rate is low. The grave goods included in these tombs were consistent with the ones previously recorded by Caputo, Ayoub and Daniels. Thus, a significant amount of glass, African Red Slip Ware, incense burners and beads were recorded. The recovery of carved wood furniture within the chamber, large carnelian beads and metal (silver rings, copper studs) were new elements added to the existing catalogue of grave finds in the Wadi Al-Ajal.

Figure 5.7. Plan and section of excavated stepped tomb GSC031.T7 (Photographs by Author).

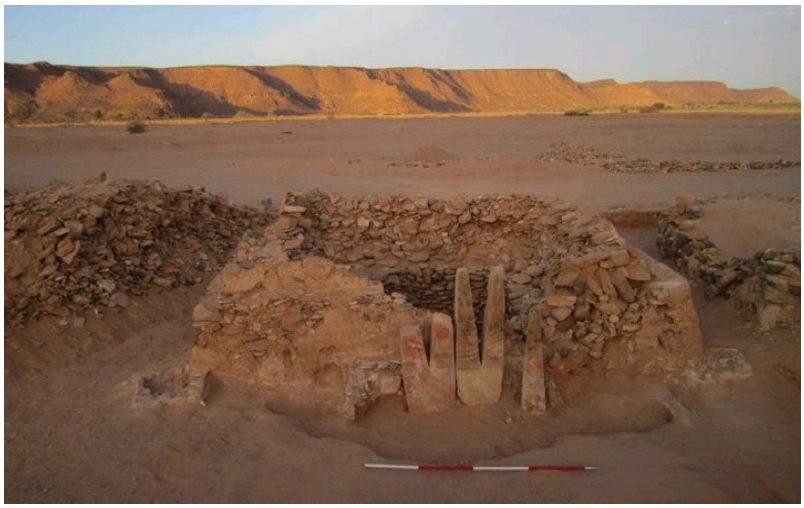
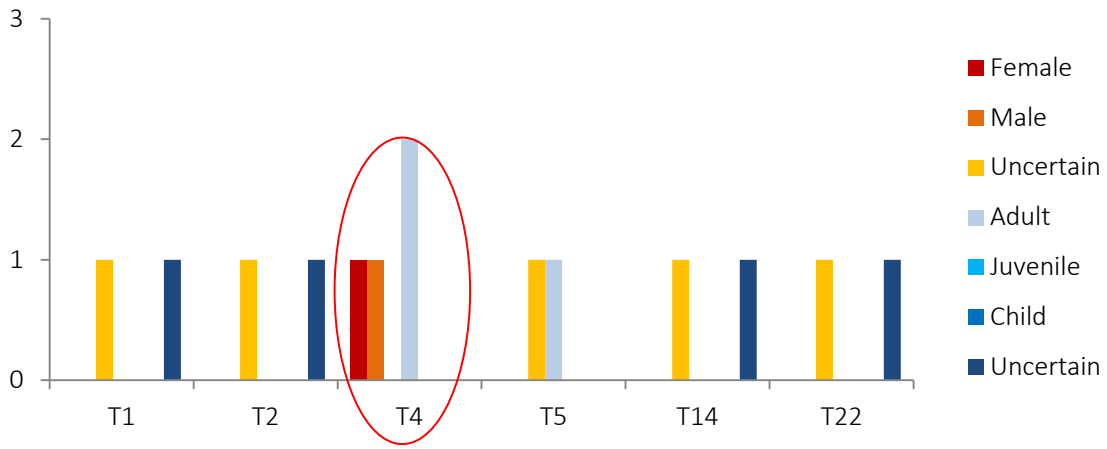


Figure 5.8. Stepped tomb in the 'Royal Cemetery' GSC030.T8 with stelae (Photograph by Author).

Site Code	Chronological period	Excavated burials	Survey
GSC001	CGAR, LGAR		CMD, FP
GSC002	PUGAR, CGAR		CMD, FP
GSC003	CGAR, LGAR		CMD, FP
GSC004	CGAR		CMD, FP
GSC005	CGAR, LGAR		CMD, FP
GSC006	CGAR		CMD, FP
GSC007	CGAR		CMD, FP
GSC008	PUGAR, CGAR		CMD, FP
GSC009	PUGAR? CGAR?		CMD, FP
GSC010	PUGAR/ [EMOD]		CMD, FP
GSC011	CGAR		CMD
GSC012	CGAR		CMD, FP
GSC013	PUGAR, CGAR		CMD, FP
GSC014	PUGAR?		CMD, FP
GSC015	PUGAR, CGAR		CMD, FP
GSC016	PUGAR?		CMD, FP
GSC017	PUGAR		CMD
GSC018	?		CMD, FP
GSC019	PUGAR?		CMD, FP
GSC020	CGAR		CMD, FP
GSC021	CGAR?		CMD, FP
GSC022	EGAR? GAR?		CMD, FP
GSC023	CGAR, GAR-EMOD		CMD, FP
GSC024	CGAR? EMOD?		CMD, FP
GSC025	CGAR		CMD, FP
GSC026	EGAR? GAR?		CMD, FP
GSC027	EGAR? GAR?		CMD, FP (AP)
GSC030	CGAR, LGAR	Caputo, Ayoub, CMD, DMP2011	Ziegert, CMD, FP
GSC031	CGAR, LGAR	Caputo, Ayoub, CMD, DMP2011	CMD, FP, DMP2011
GSC038	?		FP
GSC042	EGAR? GAR?	DMP2007	FP
GSC048	LPAST? GAR?	DMP2008	FP

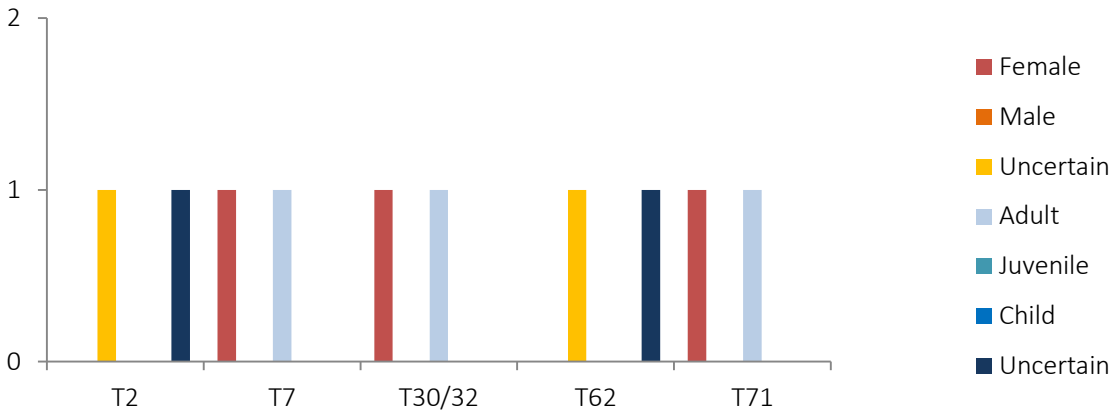
Table 5.5. Summary of surveyed and excavated cemetery sites in Jarma escarpment including the 'Royal Cemetery'.

Out of the ten burials excavated in the 'King's cemetery' GSC030, 6 contained human remains albeit in very poor fragmented and disturbed state of preservation, due to the plundering in antiquity. The excavations of the spoil heaps next to the robbed tombs in 2011 have added fragmentary information on the skeletal remains from these tombs, although this must be taken conservatively. For instance, the remains of the individual associated with GSC030.T4 have been identified as that of an adult male. Yet, the analysis of the remains recovered from the spoil from previous excavation highlighted the presence of a male, and one possible female and/or adolescent. Therefore it could be suggested that a possible female or adolescent individual was also interred in this monumental structure.



Graph 5.5. Summary of information of human remains per tomb in GSC030, the 'Kings' Cemetery'

The excavations in the 'Queen's cemetery' GSC031, have recovered the remains of 5 individuals, again in a poor state of preservation and fragmentation. Out of the tombs excavated in GSC031, three have been identified as adult females. Although the nomenclature of the cemeteries referring to differentiation of the sexes has not been proven, still the skeletal remains encountered does not add further information with regards to the deliberate separation of males and females. Yet, the presence of the possible female in GSC030.T4 can at least provide a clue into the intermixing of the sexes.



Graph 5.6. Summary of information of human remains per tomb in GSC031, the 'Queens' Cemetery'

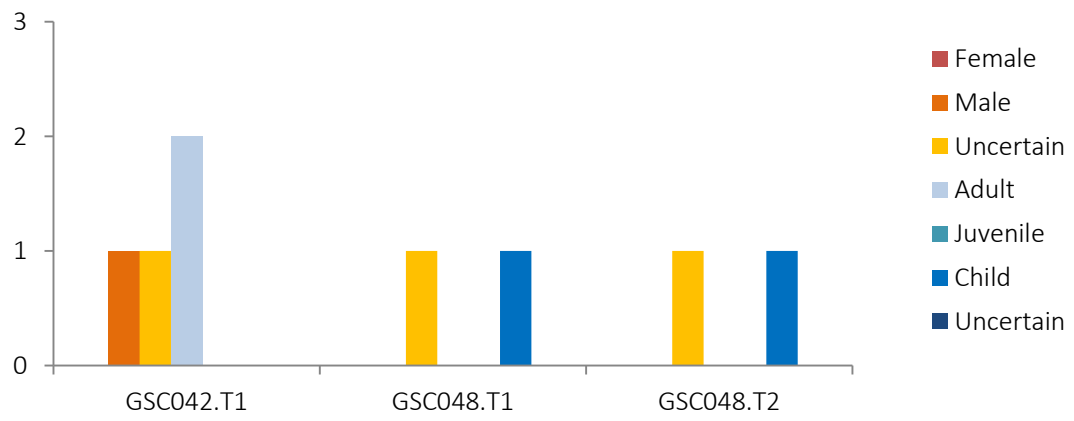
Unfortunately, the damage caused by the robbing in antiquity, especially on the human remains, does not allow a study of the positioning and orientation of the deceased within the burial chamber. By analogy, it can be expected that they would have been buried in crouched position.

The structural remains of the funerary monuments, and in the case of the Royal Cemeteries particularly given the extraordinary size of tombs, provide an indication of a *modus operandi* of both the individuals disposing of the body and the looters. It is suggested that the deceased was introduced into the burial chamber through the east side of the tomb, where the funerary furniture (stelae and offering table) were placed. The plan of Saniat bin Huwaydi and the positioning of the funerary structures do also suggest this would have been the case. On the other hand, the robbing of the structures tends to be from the northwest side of the tomb, where one find the most damage to the standing tombs.

FEMALES	TOMB TYPE	GRAVE GOODS
GSC031.T7	5b	Lamp, glass, silver ring, jewellery, beads
GSC031.T30	5b	Incense burner, glass, beads
GSC031.T71	5b	Handmade jug, glass, beads and wood (artefact?)

MALES	TOMB TYPE	GRAVE GOODS
GSC030.T4	5b	Amphorae, finewares, glass, textile and beads.

In addition to the excavations in the Royal Cemetery, other cemeteries have been targeted for investigation in this area. GSC042, a group of Type 1 and Type 3 cairns, GSC046, small group of Type 1 cairns and GSC048, large cairns, have suffered considerable damage due to the contemporary quarrying in the vicinity of modern Jarma. One tomb has been excavated in GSC042, and ten burials were identified in GSC048. Out of these ten burials only two (GSC048.T1 and GSC048.T2) have provided sufficient skeletal and artefactual data for analysis.



Graph 5.7. Summary of information of human remains per tomb in GSC042 and GSC048

Figure 5.9. Type 3 cairn GSC042.T1 with quarrying destruction in the background (DMP 2008).

Cemetery	Child (<12)	Adolescent (12-18)	Adult (18<)	Male	Female	Uncertain
GSC030			3	1	1	1
GSC031			3		3	
GSC042			2	1		1
GSC048	2					2
TOTAL	2		8	2	4	4

Table 5.6. Summary of age and sex of the individuals recorded in the cemeteries at the Jarma Escarpment.

The cemeteries excavated in the Jarma Escarpment do no provide sufficient data to analyse, nor even to suggest, any possible pattern in either the choice of funerary assemblages or the position of the dead body within the tomb. The adult burials of the Royal Cemeteries have not left human remains in a state of preservation and disturbance suitable for any other analysis than osteological (Nikita 2010a: 394, 396-399; and discussion 400-408). The two infants in GSC048 have equally been in crouched position, placed on their right side, with different alignments.

Children	TOMB TYPE	GRAVE GOODS
GSC048.T1	1	Coarseware bowl, ostrich eggshell beads and amulet
GSC048.T2	1	Carnelian bead, faience amulet

5.1.3. The cemeteries at Watwat

The Watwat embayment is an indentation in the front of the Massak escarpment southwest of Jarma. The Watwat Mausoleum is in this embayment (UAT001) at the centre of cemetery UAT002. The high density of tombs and different typologies in these cemeteries makes Watwat remarkable; there are *c.*2500 burial monuments recorded (Mattingly *et al.*2008). In 2008, following some of the work carried out by Daniels and the Fazzan Project, a full survey of the funerary landscape was undertaken by the Desert Migrations Project and cemetery typologies were established along with detailed mapping of the various cemeteries. As Mattingly *et al.* (2008) argue, despite the fact that Daniels had already identified several large cemetery areas on the Watwat embayment, he failed to recognise that these escarpment cemeteries can be separated into many different burial areas.

Site Code	Chronological period	Excavated burials	Survey
UAT001	PUGAR, CGAR	Caputo	Caputo; Ayoub; CMD; DMP
UAT002	CGAR, LGAR	Caputo; Ayoub	Caputo; Ayoub; DMP
UAT003	PUGAR, CGAR	Caputo	CMD; FP; DMP
UAT004	PUGAR, CGAR	Caputo; DMP 2007	CMD; FP; DMP
UAT005	CGAR		CMD; FP; DMP
UAT006	PUGAR, CGAR		CMD; FP; DMP
UAT007	PUGAR?		CMD; FP; DMP
UAT008	CGAR	Caputo; DMP 2007, 2008	Caputo; FP; DMP
UAT009	CGAR	Caputo; DMP 2008	CMD; FP; DMP
UAT010	PUGAR, CGAR	DMP 2008	CMD; FP; DMP
UAT011	CGAR		CMD; FP
UAT012	PUGAR. CGAR		CMD; FP
UAT013	PUGAR, CGAR	CMD	CMD; FP
UAT014	PUGAR		CMD; FP
UAT015	EGAR? GAR?		CMD; FP
UAT016	GAR		CMD; FP
UAT017	CGAR		CMD
UAT023	CGAR		DMP
UAT050	PUGAR?, CGAR	DMP	DMP
UAT051	EGAR, CGAR	DMP	DMP
UAT052	PUGAR	DMP	DMP
UAT055	CGAR	Caputo; DMP	DMP
UAT056	PUGAR?, CGAR	DMP	DMP
UAT058	PUGAR?, CGAR		DMP
UAT059	CGAR		DMP
UAT060	PUGAR?, CGAR		DMP
UAT061	CGAR		DMP
UAT062	CGAR		DMP
		Total DMP = 40	Total (surveyed) = 2,480

Table 5.7. Summary of cemeteries surveyed and excavated in Watwat.

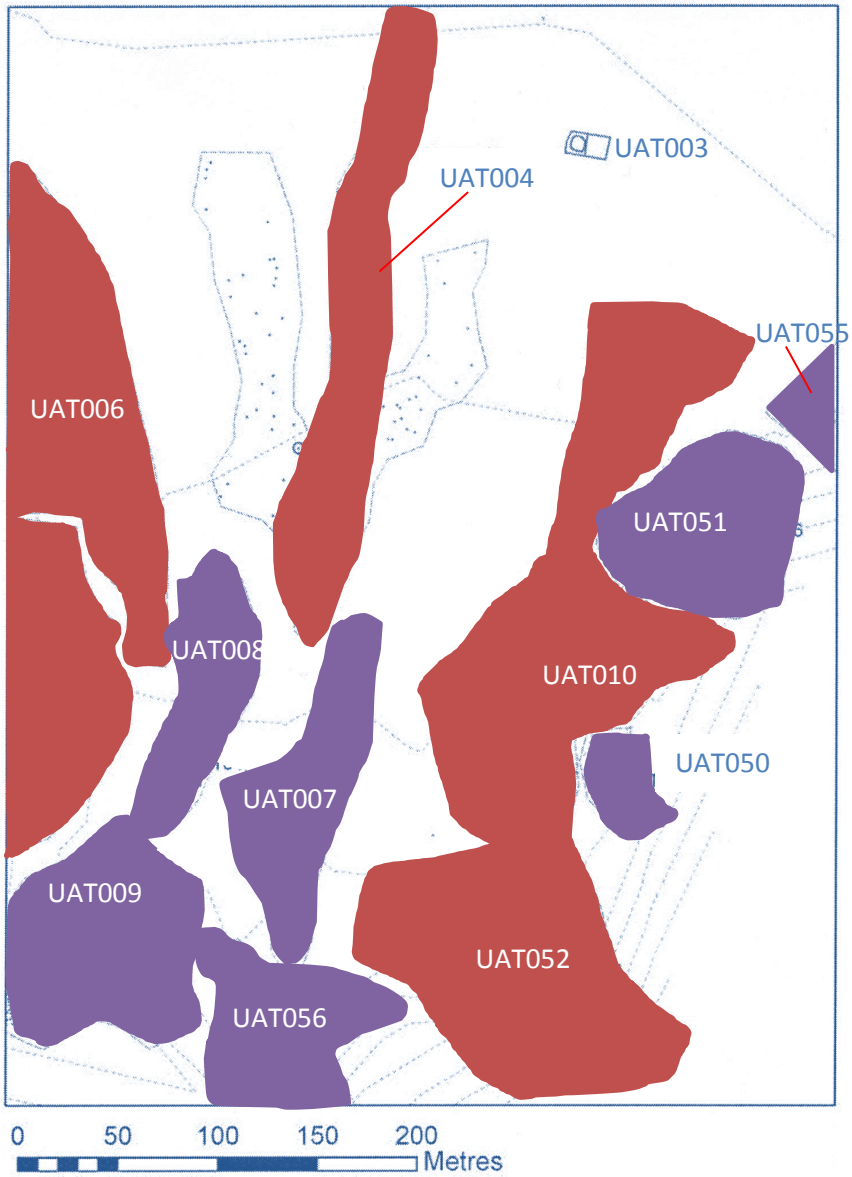


Figure 5.10. Map of excavated sites in Watwat (red=PUGAR; purple =CGAR)
(After Mattingly *et al*. 2008: 229)

❖ Description of the sites and dataset of Watwat.

In this shallow embayment we can observe a diversity of topographical settings for different cemeteries, with separate cemetery areas in the valley centre and along the slopes of the escarpment. Typologically[1], there are several examples of nucleated cemeteries of Type 4, varying in density, for instance, UAT008 and UAT051. Some samples of Type 2 (dispersed escarpment

[1] For typologies refer to Chapter 3

cemetery), nucleated escarpment with a variety of tomb styles (Type 3), Type 5, cemetery with mainly drum tombs and cairns, and Type 6, linear cemeteries, can be found in Watwat; for instance, UAT006, UAT002, UAT013 and UAT004 respectively. One aspect that needs to be highlighted about Watwat is the diversity in morphological types in both cemeteries and tombs. From a chronological perspective, there is continuity in the use of this space for funerary purposes from the Early Garamantian period with its apogee in the Classic Garamantian phase.

The archaeological work in Watwat can be traced to Caputo's mission in the 1930s. Caputo's team investigated over 100 tombs (Pace *et al.* 1951) including the mausoleum and two cremations. Their work concentrated in UAT008, where 52 burials were excavated and recorded. Caputo's records note the construction of some burials with stone lined shafts. Similar evidence to Caputo's, in terms of the structures and funerary assemblages and treatment of the body, have been published by the Desert Migrations Project (Mattingly *et al*. 2007b: 2008). Many of the tombs in Watwat have been robbed in the past, explaining the destruction of the tomb structures and the shaft lining.

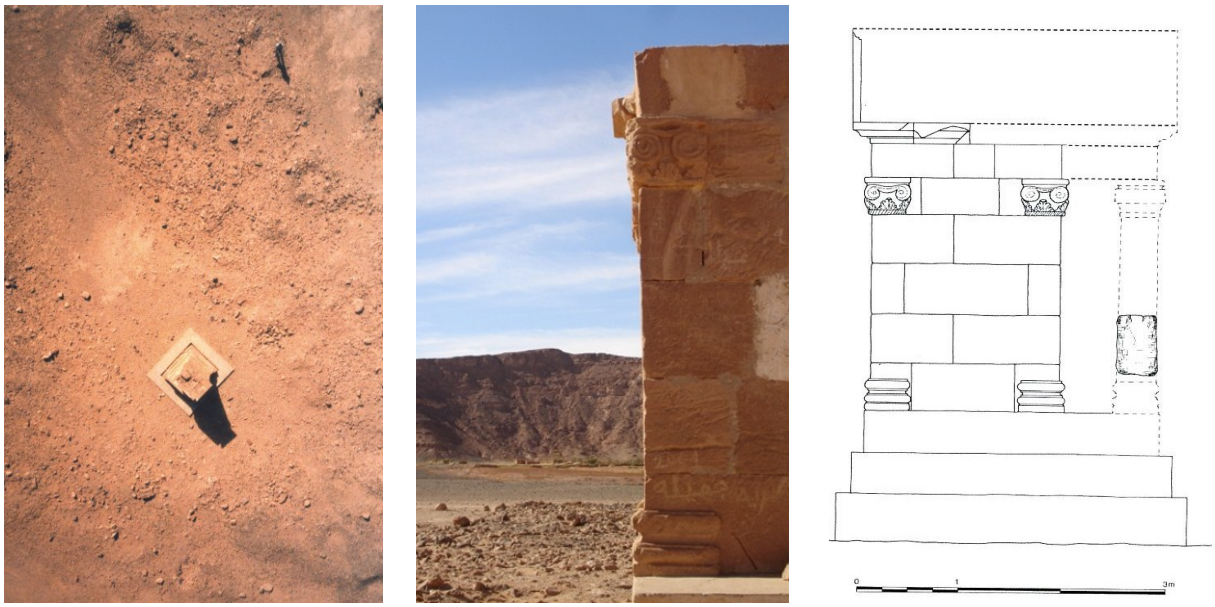


Figure 5.11. Mausoleum at Watwat and reconstruction of the portico (Photographs in Mattingly *et al.* 2007: 106 and Author (centre).

The Watwat mausoleum (UAT001) (Figure 5.4), a three stepped podium with a *cella*, was excavated by Caputo in the 1930s and Ayoub in the early 1960s. Daniels carried out further work in 1965 suggesting a new reconstruction fitting the architectural fragments recovered by Caputo

and Ayoub. This reconstruction suggests the inclusion of a pediment (only three fragments of which survive). All the works on the mausoleum have failed to locate a burial within or below the structure which indicates the mausoleum was a commemorative monument rather than a funerary structure. UAT001 is surrounded by a tightly nucleated cemetery UAT002, where Caputo reported to have discovered two cinerary amphorae in stone-lined cists (Pace *et al.* 1951: 207). Italian Sigillata and African Red Slip ware dating from the 2nd-3rd century AD and decorated glass were found during the excavations.

Caputo's expedition also excavated the isolated funerary monument UAT003 (Figure 5.12.) described as a square mud and stone structure with a square central inside. Caputo recorded six stelae on the east side with an offering table. UAT003 is thought to represent a prestigious burial with an enclosure for ritual practice (Mattingly *et al.* 2007a: 109).

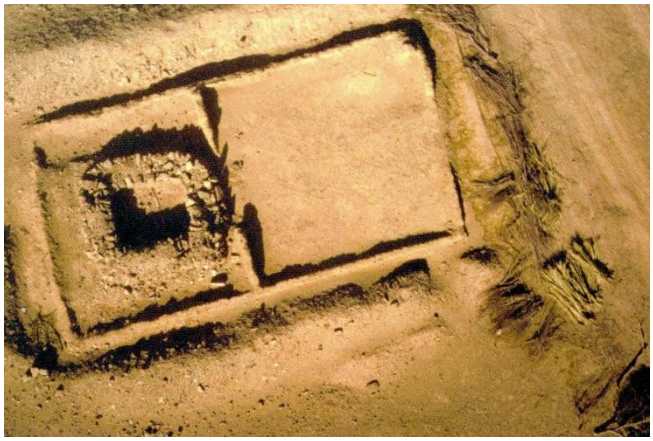


Figure 5.12. Aerial photograph of UAT003 (Mattingly *et al.* 2007: 179).

The funerary structures within the cemeteries excavated by Caputo, UAT002 and UAT008, are mainly cairns, Type 2b and 2c shafts, and Type 3a and 3b drums. There is little evidence of differentiation in terms of size of the structure. Various samples of offering tables and stelae have also been recorded.

Cemetery	Chronology	Cemetery Typology	Tomb Typologies
UAT001	PUGAR, CGAR	Mausoleum	
UAT002	CGAR	Type 3	Type 1 and 2b/c
UAT003	PUGAR, CGAR	Monument	Type 3
UAT004	PUGAR, CGAR	Type 6	Type 1a/b
UAT008	CGAR	Type 4	Type 2b/c
UAT009	CGAR	Type 4	Type 2 and 4a
UAT055	CGAR	Type 4	Types 1, 2b/c and 5a

Table 5.8. Morphological typologies of tombs and cemeteries excavated by Caputo.

Forty tombs have been excavated in Watwat by the Desert Migrations Project and *c.*2,500 have been surveyed in a series of different cemeteries. These tombs provide an insight into the nature of different types of interment in the area of Watwat and allow us to form an idea of the original burials in those tombs with only fragmented records. Note must be made that most of the burials in this area have been robbed in antiquity and consequently changing the physical aspect of this landscape. The surveys of the Desert Migrations Project led to the creation of a new morphological sub-category, Type 1e, to identify the 'crevice burial', for example UAT010.T4. This cairn uses natural boulders as part of the structure; the body of the deceased would be laid in a shallow scoop in the centre and covered by small stones (Mattingly *et al.* 2008: 232).

UAT004, leading south from UAT002, relates to a line of 24 cairns which display symptoms of robbing in antiquity, i.e. fragmentary evidence of human remains as well as the displacement of original grave goods. Desert Migrations Project excavated a large cairn in this cemetery which was originally thought to be for multiple burials. Despite it being robbed in antiquity, imported amphora sherds, as well as Garamantian pottery fragments, indicate it having being used into the Classic Garamantian period.

Further into the embayment, UAT008 is the largest of the shaft burial cemeteries. Mattingly offers a survey count of over 500 tombs (Mattingly *et al.* 2007: 141). This cemetery is set in a narrow stretch between two parallel gullies and it comprises a dense group of shaft burials of which 22 were excavated in 2007 and a further 3 in 2008. Despite the disturbance caused in the robbing activities in antiquity, most of the burials contained significant remains of organic material and some pottery. Two naturally mummified bodies were recovered from this cemetery in 2008 (Figure 5.13).

The Desert Migrations Projects focused its research on the south and east sides of the embayment, including UAT009, a small cemetery south of UAT008 containing *c.*280 shaft burials and Type 1b cairns; UAT010 with *c.*125 cairns.

The level of preservation of the human remains varies very much depending on the degree of destruction during the looting. There is, however, enough evidence to be able to establish the

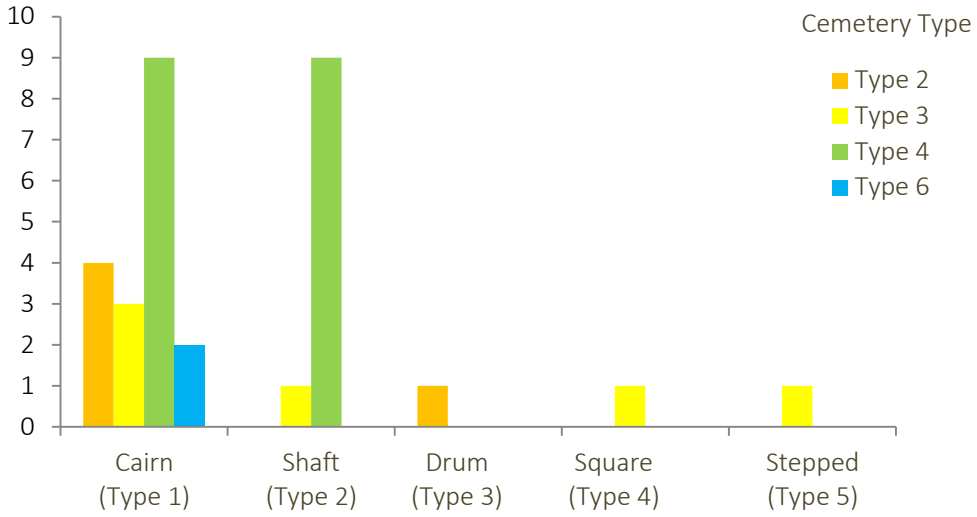
orientation and position of the body within the burial chambers and analysis of this will provide information on the possibility of ritualistic practice on deposition of the body. The bodies are lying in to crouched position with the arms flexed towards the face. Of the excavated burials in Watwat, individual graves predominate. However, infants have been found in double inhumations with adults; older sub-adults received individual burials.

There is evidence of leather and textile shrouds, some of which have beaded decoration and had been coloured. An excellent example of leather shroud was recorded in UAT008.T32. The two mummified bodies in tombs UAT008.T84 and T008.T87 provide us with exceptionally preserved textile shrouds. Traces of ochre have been noted inside the tombs, sometimes dyeing the stone lining of the chamber or surrounding the body (for example, UAT008.T16). In relation to personal items, ostrich eggshell and other beads were recorded from most tombs. Other materials found include ceramic vessels, glass and faience.

Many of the tombs in Watwat have grave goods accompanying the body and funerary furniture outside the tombs (for example, UAT050.T7). The density and range of surface finds varies between different cemeteries. There is a large proportion of imported Roman wares, including coarse and fine wares. The excavation of the tombs in Watwat has aided in establishing a correspondence between the surface finds and what was included in the graves. Roman pottery recovered from Watwat includes ARS dishes, amphorae, lamps and handmade bowls and jugs.

Cemetery	Chronology	Cemetery Typology	Tomb Typologies
UAT004	PUGAR	Type 6	Type 1a/b
UAT008	CGAR	Type 4	Types 1b and 2a/b/c
UAT009	CGAR	Type 4	Types1b, 2a/b/c and 4b
UAT010	PUGAR	Type 4	Types 1a/b/e
UAT050	CGAR	Type 3	Types 1b/e, 2a/b/c and 5a
UAT051	CGAR	Type 4	Types 1b, 2a/b/c
UAT052	PUGAR	Type 4	Types 1b/e and 3a
UAT055	CGAR	Type 4	Types 1b and 2a/b/c

Table 5.9. Relation of typology of tombs and cemeteries excavated by the Desert Migrations Project in Watwat.



Graph 5.8. Relation of cemetery and tomb typologies encountered in Watwat

Figure 5.13. Detail of mummified remains in UAT008.T84 (top left); grave good assemblage in UAT050.T5 (top right); intact crouch burial in UAT008.T32 with coloured textile and leather (bottom left); mummified body in UAT008.T87 (bottom right) (All photographs by Author).

With regards to the available information for the individuals interred in Watwat a few comments can be made (Nikita 2011). As mentioned above, the cemeteries of Watwat have been subjected to systematic robbing activities in antiquity. This has had a tremendous impact on the preservation of the burials and the level of disturbance within the graves. Therefore, it is not uncommon to find the remains of more than one individual in one tomb. For example, the disarticulated remains of various individuals were excavated in tomb UAT008.T23. These include a young adult, old child, a female young adult and a male young adult. All of these individuals are incomplete and therefore it is not possible to establish the primary burial. This is not due to multiple burials in a single structure but the backfilling of tombs by robbers with the spoils of different graves. Another problem when analysing these robbed tombs is that unless there is a repetition of a particular bone, it is not possible to discern if we are talking of the same individual or not. The fact that skeletal remains have been recovered from various fills of the tomb does not necessarily imply there are more than one person. For instance, UAT008. T74 has been recorded as having the remains of two female adults. Still, it is important to recognise these people as members of the community buried here and they have been regarded in relation to the number of persons, age and sex. For further analysis only the undisturbed, remains have been considered.

The skeletal data has been summarised in Appendix B by cemetery. What follows is a discussion on the individuals interred in the embayment of Watwat.

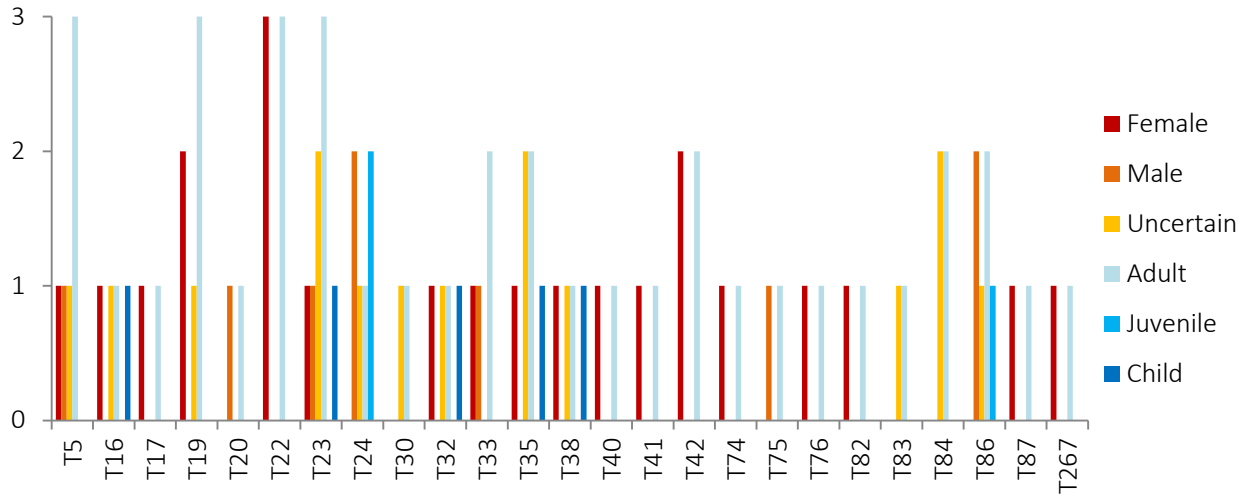
a. Tombs in UAT008. Twenty five tombs have been excavated in UAT008 from which 52 individuals have been recovered. Graph 5.9 (below) demonstrates the multiple numbers of individuals encountered per tomb, most of them disturbed and disarticulated, indicating the level of robbing in this area of the cemetery. It must be noted that In UAT008 it has also been seen the reusing of shafts, for example tombs UAT008.T84 or UAT008.T35.

Female	Male	Unknown
21	9	22

Table 5.10. Number of individuals in UAT008 by sex

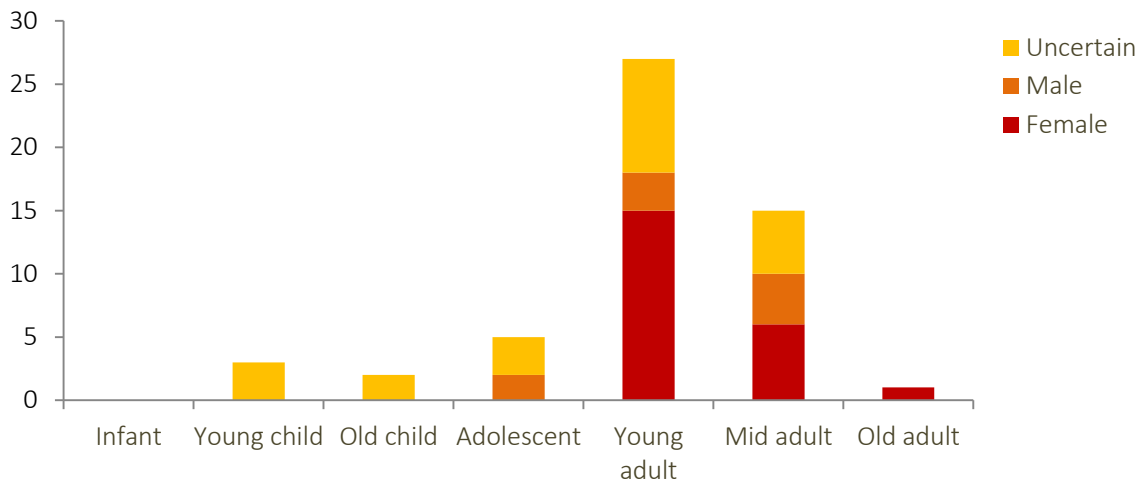
Infant	Young child	Mature child	Adolescent	Young adult	Mid adult	Old adult
0	3	2	5	27	15	0

Table 5.11. Number of individuals in UAT008 by age



Graph 5.9. Summary of human remains encountered in UAT008 per tomb.

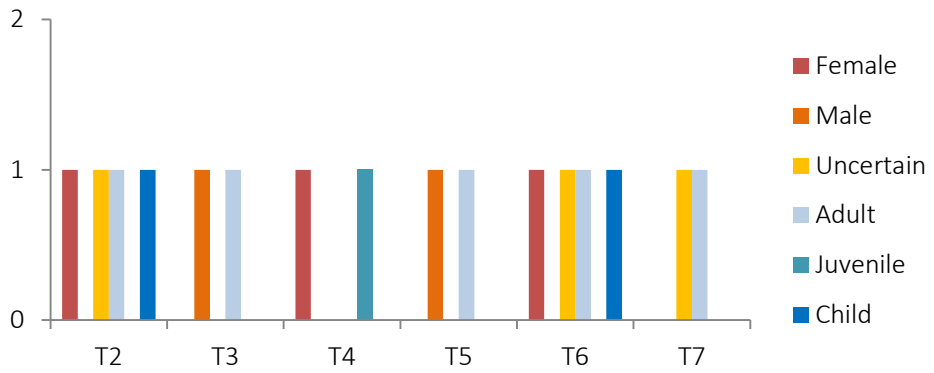
The remains of twenty people have been preserved in a condition whereby sexing was possible. 65% of these sexed individuals are females, 67% of them between the ages of 18 and 35. This significant number of young women dying could be related to maternal mortality, women dying from pregnancy or child-birth complications. All three children recovered from UAT008 have been buried with young women. The age of the children is variable, and none of them are babies. In UAT008.T35 the body of a young adult woman was recovered with a child aged between 8 and 14 years old. The double inhumation in UAT008.T38 may be two separate interments within the same tomb. It is suggested that the woman was the primary burial in this tomb and the child, between the age of 2 and 4 years old, was buried afterwards, hence reusing the same shaft.



Graph 5.10. Summary of population recovered in UAT008

b. Tombs in UAT009. Two tombs have been excavated by the Desert Migrations Project in 2008; one disturbed tomb belonged to a young adult male, still with some level of articulation (UAT009.T1). The remains of a disturbed female burial were recorded in UAt009.T2.

c. Tombs in UAT010. Six tombs have been excavated in UAT010, from which eight individuals were recovered. The ratio male/female does not indicate an imbalance. Two double burials (UAT010.T2 and UAT010.T6) were recovered belonging to female adults accompanied by children. This cemetery has not seen the same level of disturbance observed in UAT008.



Graph 5.11. Summary of individuals encountered in UAT010 by tomb

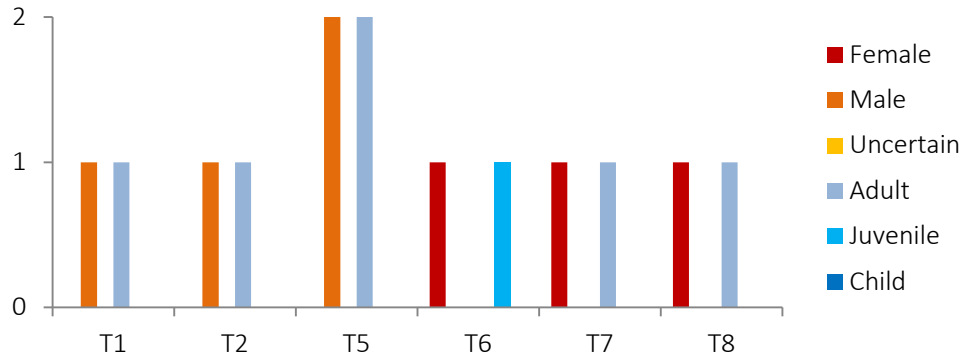
Female	Male	Unknown
3	2	3

Table 5.12. Number of individuals in UAT010 by sex

Infant	Young child	Mature child	Adolescent	Young adult	Mid adult	Old adult
0	1	1	1	2	2	1

Table 5.13. Number of individuals in UAT010 by age

d. Tombs in UAT050. Six tombs were excavated and record containing the human remains of seven individuals. This cemetery has seen a considerable level of disturbance due to robbing activity and out of the sampled tombs; only two were preserved well enough to be able to establish the position of the bodies. Of particular significance in this area is UAT050.T5, not only because of the richness of the grave goods (see below) but because it the only case where two male adults have been placed in the same grave contemporaneously.



Graph 5.12. Summary per tomb of individuals in UAT050

Female	Male	Unknown
3	4	0

Table 5.14. Number of individuals in UAT050 by sex

Infant	Young child	Mature child	Adolescent	Young adult	Mid adult	Old adult
0	0	0	1	4	2	0

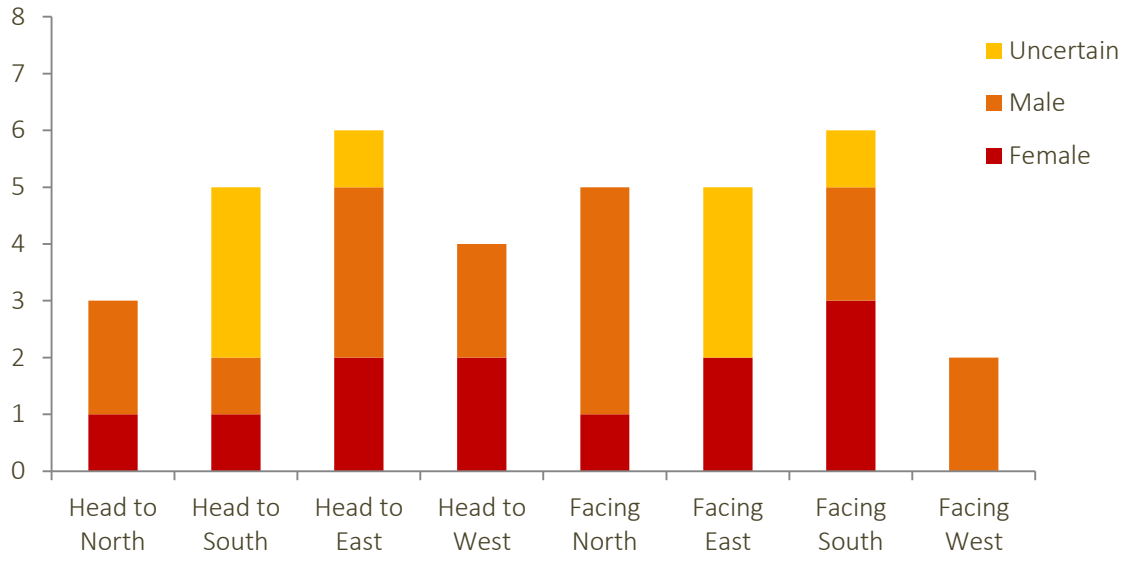
Table 5.15. Number of individuals in UAT050 by age

e. Other Tombs: UAT051, UAT052, UAT055 and UAT056. The three tombs excavated in UAT051 contained disturbed and disarticulated remains of three adult individuals, two females and a male. Four tombs were excavated in UAT052 with different levels of preservation and disturbance. The individuals in two tombs, UAT052.T3 and UAT052.T4, were disturbed but with sufficient anatomical articulation that allowed me to discern the position and orientation of the bodies. One sample was excavated from both UAT055 and UAT056. These tombs had been disturbed in antiquity and belonged to adult males.

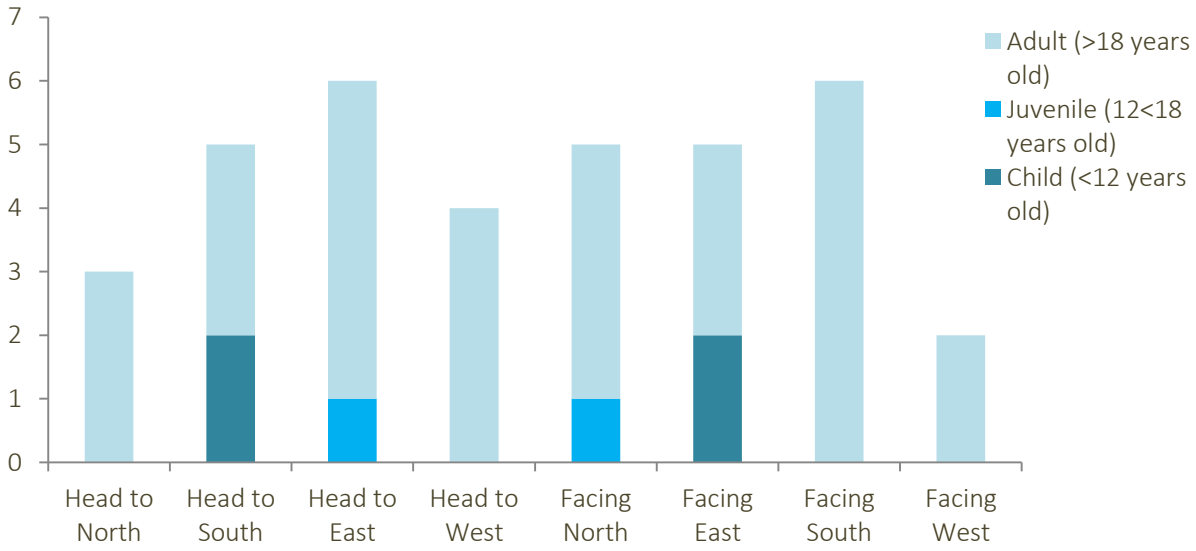
Cemetery	Child (<12)	Adolescent (12-18)	Adult (18<)	Male	Female	Uncertain
UAT004			1		1	
UAT008	5	5	38	9	21	22
UAT009			2	1	1	
UAT010	2	1	5	2	3	3
UAT050		1	6	4	3	
UAT051			3	1	2	
UAT052	2	1	3	2	2	2
UAT055			1	1		
UAT056			1	1		
Total	9	8	60	21	33	27

Table 5.16. Summary of age and sex of the human remains recorded in the cemeteries at Watwat.

As mentioned above, there are 77 bodies recorded in the cemeteries at Watwat. Out this only 20 have been sufficiently preserved to establish the alignment of the deceased at the time of burial. These are the burials of 9 male individuals, 7 female and 4 unsexed. The tables below summarize the information related to the alignment of the bodies both in relation to the sex and age of the individuals.



Graph 5.13. Summary of alignment and position of the bodies from Watwat by sex



Graph 5.14. Summary of alignment and position of the bodies from Watwat by age.

The bodies recovered in the excavations at Watwat date from the Proto-Urban to the Classic Garamantian period. Despite the length of the time span of these cemeteries, there is no variability with regards to the position of the body of the deceased. With reference to the alignment of the body within the grave, the burials of Watwat do not suggest a preference in terms of the position or the orientation of the body, which is equally balanced across sex and age.

Figure 5.14. Mummified remains in UAT008.T84 showing the presence of matting over the body (Photograph by Author)

Irrespective of the phase, cemetery, sex or age, the dead were placed inside the tomb laid in a crouched position with the arms flexed towards the face. With regards to the preparation of the body, the burials in Watwat parallel the rituals observed across the Wadi al-Ajal. The bodies were wrapped in textile or leather shrouds. The preservation of the mummified bodies provides a strong indication that the body was wrapped or covered by matting (Figure 5.14).

The tables below provide information of the grave goods associated with the individual burials organised by sex. As it has been noted, the cemeteries at Watwat have been subject of systematic robbing in antiquity, which has invalidated most of the funerary structures for more detailed analysis (Chapter 6). For this reason, and as explained in the methodology, this chapter deals with the presence/absence of artefact types within the tombs. Despite the deliberate looting of these cemeteries, there is enough evidence to establish an association between individual burials and assemblages. Five burials of women did not have any material culture connected with them; this is 20% of the female burials excavated across the cemeteries in Watwat. With regards to the tombs associated with male individuals, 4 tombs (28%) did not contain remnants of material culture.

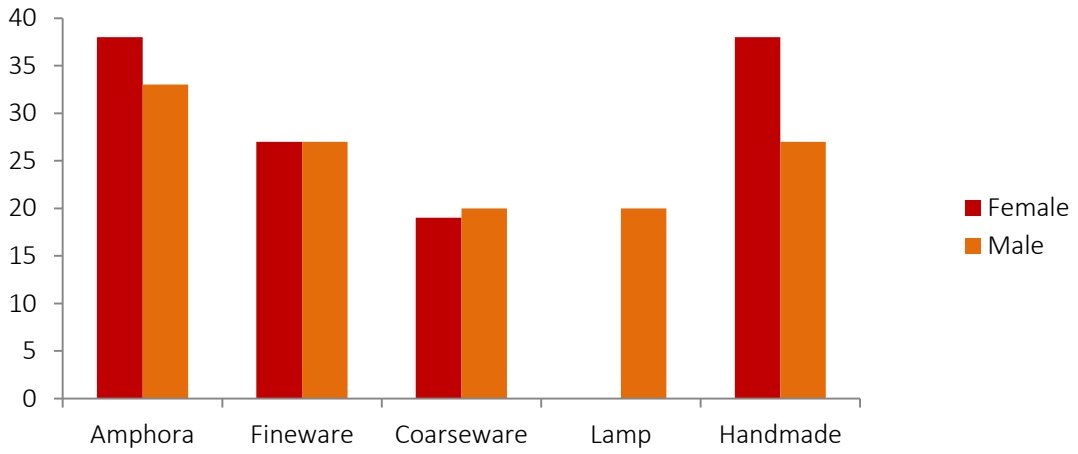
The analysis of the data recovered from Watwat shows the difference in assemblages and tomb choice. The Proto-Urban cemeteries UAT004, UAT010 and UAT052, do resemble the assemblages encountered at Zinkekra, very limited assemblages with handmade pottery and beads and very rarely the inclusion of imported wares. In contraposition to this, the cemeteries of the Classic Garamantian phase provide a wide range of imported materials as well as handmade wares.

FEMALES	TOMB TYPE	GRAVE GOODS
UAT004.T1	1b	Amphora, handmade pottery, OES beads, rotary quern stone, botanical remains
UAT008.T16	2c	Amphora, coarseware pottery, textile, leather and ochre
UAT008.T17	2c	Amphora, textile and matting
UAT008.T19	2c	Amphora, fineware and handmade pottery, matting
UAT008.T22	2c	Amphora, fineware, coarseware and handmade pottery, iron tweezers, leather bag, beads (carnelian, OES, glass), textile
UAT008.T32	2c	Fineware and handmade pottery, unguentarium, textile, leather, matting, beads (including OES, wood and glass)
UAT008.T38	2c	Amphora, fineware, coarseware, OES beads and leather (shroud?)
UAT008.T40	2c	Textile, matting, leather and possibly a wooden artefact.
UAT008.T41	2c	Amphora, fineware, coarseware, textile, leather shroud and matting
UAT008.T42	2c	Amphora, handmade ware, matting, ochre
UAT008.T74	2c	Fineware and handmade pottery
UAT008.T76	2c	No finds associated with this burial
UAT008.T82	2c	Amphora, coarseware and handmade pottery, textile, leather shroud and matting
UAT008.T87	2c	Fineware
UAT009.T2	2c	Amphora
UAT010.T2	2c	No finds associated with this burial
UAT010.T4	2c	Fineware and coarseware pottery and carnelian beads
UAT010.T6	2c	Handmade pottery and OES beads
UAT050.T6	1e	OES beads
UAT050.T7	2c	Amphora and handmade pottery
UAT050.T8	2c	Handmade pottery
UAT051.T4	1b	No finds associated with this burial
UAT051.T5	2c	No finds associated with this burial
UAT052.T1	1b	No finds associated with this burial
UAT052.T3	1e	Stone and glass beads

Almost 40% of the female tombs and 35% of the male contained amphorae. Finewares (bowls and dishes) are evenly distributed among male and female burials whilst there is a prevalent presence of handmade wares in the female tomb, 40%, as opposed to the 28% from the male. It must be noted that all the lamps recovered from Watwat have been related to a male burial. The analysis

related to age has not proven statistically viable given the disparity of the adult to child ratio and the few samples of adolescent and child burials. Only 5 tombs are associated with adolescents and four children were connected with an adult and no specific items can be undoubtedly with the child.

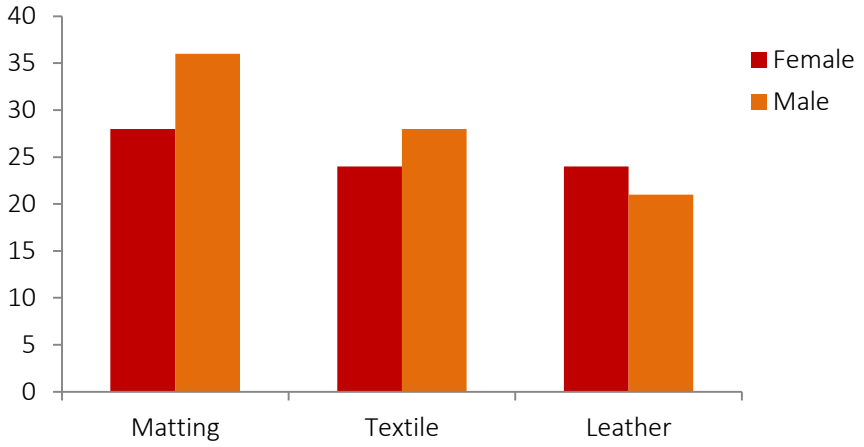
MALES	TOMB TYPE	GRAVE GOODS
UAT008.T20	2c	Amphora, coarseware pottery and leather shroud
UAT008.T24	2c	Amphora, fineware, lamp, textile and matting
UAT008.T75	2c	Amphora, textile and matting
UAT008.T86	2c	Amphora, fineware, coarseware, lamp, handmade pottery, wooden beads, textile and matting
UAT009.T1	2c	Fineware, coarseware, lamp and handmade pottery
UAT010.T3	2c	No finds associated with this burial
UAT010.T5	2c	OES beads, textile and leather shroud
UAT050.T1	2c	Amphora, fineware, handmade pottery, matting and wood
UAT050.T2	2c	Handmade pottery
UAT050.T5[2]	2c	Amphora, fineware, coarseware, lamp and handmade pottery, glass vessel, textile, matting, leather shroud and basketry
UAT051.T3	1b	No finds associated with this burial
UAT052.T2	1b	OES and carnelian beads
UAT052.T4	1b	No finds associated with this burial
UAT055.T1	2c	Textile, metal
UAT056.T1	2c	No finds associated with this burial



Graph 5.15. Percentages of pottery recovered from tombs in Watwat according to sex

[2] Note: this tomb is a double inhumation of two male individuals.

With regards to personal items and adornment, 27% of the female tombs had beads, some of which were sewn into the leather of shrouds. Also, UAT008.T32 had an unguentarium (see Chapter 6). 20% of the male tombs had beads. A difference observed is there is more variability in the beads associated with women, including ostrich eggshell (OES), carnelian, wood, glass, as opposed to the OES related to men, with the exception of the amulet made of glass in UAT052.T4., There are a significant proportion of burials with organic remains, in the form of matting, leather and textile shrouds. Graph 5.16 presents a comparison of the percentages of female and male tombs with organic remains. It is clear that consideration must be given to not only the disturbance of the tombs which would have caused extensive damage to the preservation of organics, but the conditions of the soil would have had an impact on the conservation. Still, and despite both the robbing and the geological condition, it is significant that between *c.*25% of females to *c.*35% of male tombs had recognisable traces of matting.



Graph 5.16. Percentages of organic remains recovered in Watwat according to sex

5.1.4. The cemeteries at Zinkekra

The Zinkekra headland is an outlier of the Massak escarpment, c. 4km west of the modern town of Jarma. There are numerous burial sites on the hill of Zinkekra and its surroundings, with a good proportion of cemeteries being of Classic Garamantian date. Archaeological work on the promontory of Zinkekra started in the early 1930s with the work of Caputo (Pace *et al.* 1951: 220-24; 229-233), followed by Ayoub (1962) and, finally, Daniels (1968; 1970). Various cemeteries (Table 5.2) have been investigated by the DMP in 2007 (Mattingly *et al.* 2007b). The data included in this part of my research encompasses the published material from the excavations of Daniels and the Desert Migrations Project.

- General description of Zinkekra's cemeteries.

The surveys carried out by Daniels in the 1960s have provided information on the morphological aspects of both cemeteries and tombs at Zinkekra; for instance, the sites ZIN020, ZIN022-026 are large cemeteries of Types 3 and 4, located on the south side of the promontory. Drum tombs of Types 3b and built tombs of Types 4b/5b have been recorded along with clusters of shaft burials (Type 2a/2b) in a honeycomb pattern (Mattingly *et al.* 2007a: 95). ZIN109, also on the south side of Zinkekra, is a large escarpment nucleated cemetery (Type 3) with most graves belonging to the shaft tomb Type 2b series. A few examples of considerably damaged stepped tombs (Type 5b) have also been recorded. In this cemetery various types of mortuary furniture have been noted. ZIN116, ZIN117, ZIN173 all are nucleated cemeteries with non-monumental tombs (Type 4) with Type 2b shaft burials.

ZIN280 is located on the southwest slopes of Zinkekra and has been surveyed and a few tombs were excavated by Daniels. The cemetery is a nucleated escarpment Type 3 with Type 1 cairns and a few samples of Type 3a drum cairns. This cemetery also provided samples of offering tables and stelae (Mattingly *et al.* 2007b: 96). A series of smaller cemeteries with dispersed cairns on the slopes of the escarpment were also recorded (ZIN281-288). ZIN290 and ZIN292 are another Type 4 nucleated cemeteries, which provided samples of Berber Red fabric vessels along with amphorae and flagons. On the west side of Zinkekra there are some small dispersed cemeteries of scattered cairns.

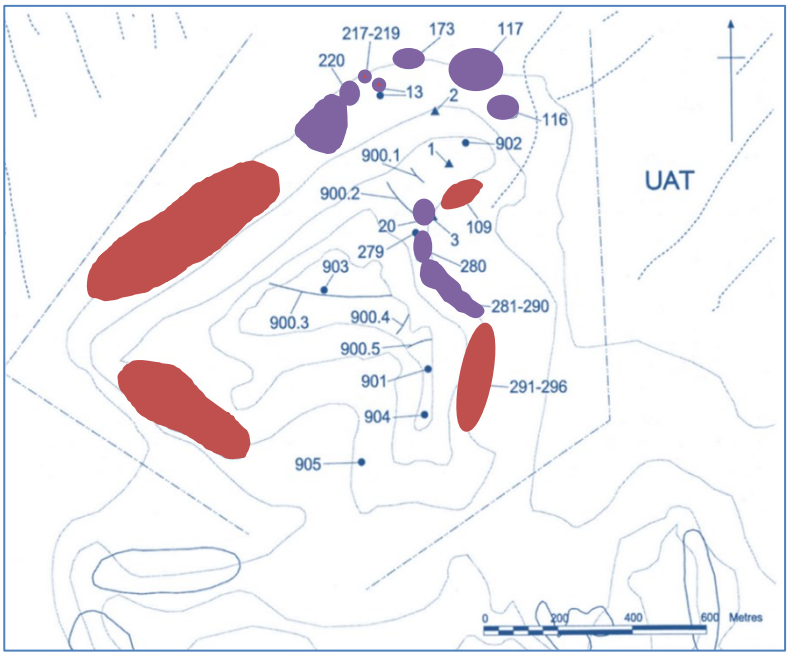


Figure 5.15. Zinkekra cemetery areas: Red=PUGAR; purple=CGAR (after Mattingly *et al.* 2007b: 93)

Site Code	Chronological period	Excavated burials	Survey
ZIN013	EGAR, PUGAR, CGAR	CMD	
ZIN020, 022, 026	CGAR		CMD1965
ZIN109	PUGAR, CGAR	CMD	
ZIN116	CGAR	CMD	
ZIN117	CGAR	CMD	
ZIN173	CGAR	CMD	
ZIN217-219	GAR	CMD, DMP2007	DMP2007
ZIN220	PUGAR, CGAR	CMD, DMP2007	
ZIN280	CGAR	CMD	FP2001; DMP2007
ZIN281	GAR		CMD1965; DMP2007
ZIN282	GAR		CMD1965; DM P2007
ZIN283	GAR		FP2001; DMP2007
ZIN284	CGAR		CMD1965; DMP2007
ZIN285	GAR		CMD1965; DMP2007
ZIN286	CGAR		CMD1965; DMP2007
ZIN287	CGAR		CMD1965; DMP2007
ZIN292	CGAR		CMD1965; DMP2007
ZIN293	PUGAR		CMD1965; DMP2007
ZIN294	PUGAR		CMD1965; DMP2007
ZIN295	PUGAR?, CGAR		CMD1965; DMP2007
ZIN296	PUGAR		CMD1965
ZIN330	CGAR		CMD1965
ZIN350	CGAR?	DMP2007	FP1997; DMP2007
ZIN351	PUGAR?		FP
ZIN352	PUGAR?		FP
ZIN700	PUGAR?	DMP 2007	DMP 2007

Table 5.17. Summary of the cemeteries investigated in Zinkekra (CMD= Charles Daniels; FP= Fazzan Project; DMP= Desert Migrations Project).

Daniels' expedition in 1967, which focused on the settlement structures on the north escarpment of Zinkekra, recovered three crouched burials in lined shafts (Type 2b) (ZIN013: T44, T45 and T54) on what is known as the 'East Trench'. Two wooden headrests were recovered from tombs T45 and T54 along with traces of other organic materials, namely straw and leather. In 1973 Daniels continued his excavations in this area discovering a further four shaft burials of the same typology. In terms of chronology, there are no conclusive dates, apart from the stratigraphical sequences, which suggest the 2nd to 1st centuries BC (Mattingly *et al.* 2010b: 353). Daniels' excavations in ZIN013, overlying some of the occupation layers on the north escarpment of Zinkekra, showed that most of the burials were in shafts (both with and without stone lining) and that all of the burials excavated seem to be contemporary. The records from these excavations illustrate that in this cemetery there was no consistency, at this point, on the orientation or position of the bodies within the grave. Also that, despite the presence of wooden vessels and headrests, there is an overall absence of pottery in the cemetery suggesting that the use of pottery in graves was rare or not existent at this date. No offering tables and stelae were recorded from the tombs from ZIN013.

The surveys of the Fazzan Project in 2001 and the Desert Migrations Project in 2011 provide information about surface pottery and density of cemeteries. Various cemeteries of Garamantian age show relatively little or no pottery, on the surface (i.e. ZIN281, ZIN285 and ZIN290). Fragments of amphora, flagons and Berber Red fabric vessels have been recovered from the surface of ZIN173, ZIN220, ZIN280, ZIN282, and ZIN284. There is also evidence of offering tables and stelae, for instance ZIN286, a nucleated cemetery (Type 3) of approximately 100 burials where both stelae and offering tables have been recorded.

Cemetery	Chronology	Cemetery Typology	Tomb Typologies
ZIN013	PUGAR/CGAR	Type 3	Type 2b
ZIN020	CGAR	Type 3	Type 3b,
ZIN022-026	CGAR	Type 4	Types 4b/5b
ZIN109	PUGAR/CGAR	Type 3	Type 2b
ZIN116	CGAR	Type 4	Type 2b
ZIN117	CGAR	Type 4	Type 2b
ZIN173	CGAR	Type 4	Type 2b
ZIN280	CGAR	Type 3	Type 1/3a
ZIN290	CGAR	Type 4	Type 2b
ZIN292	CGAR	Type 4	Type 2b

Table 5.18. Summary of Daniels' surveyed cemeteries with tomb typologies in Zinkekra

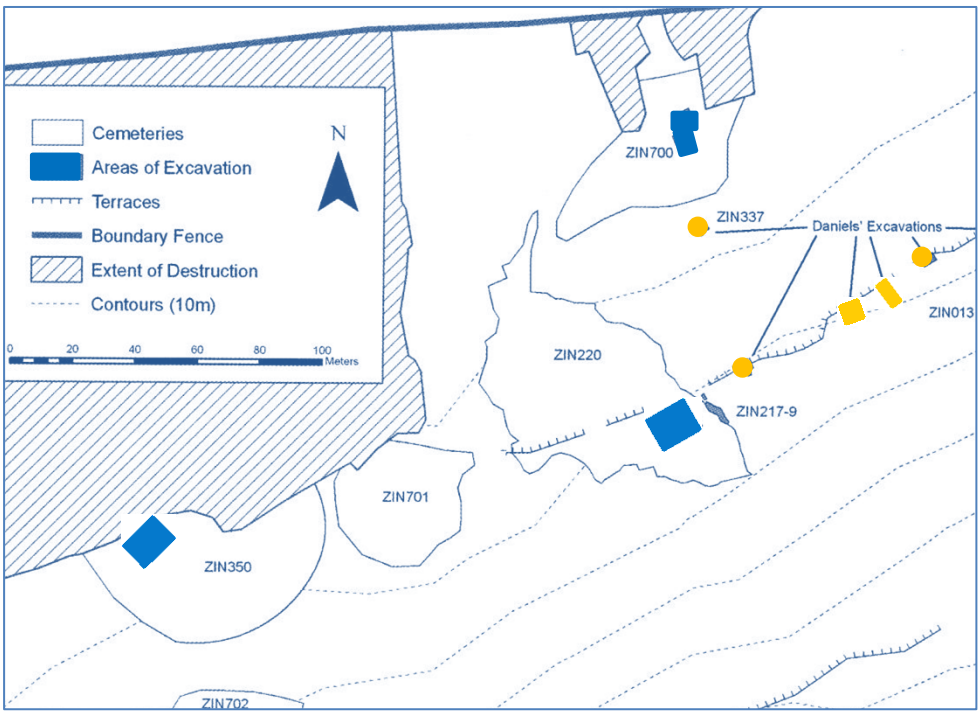
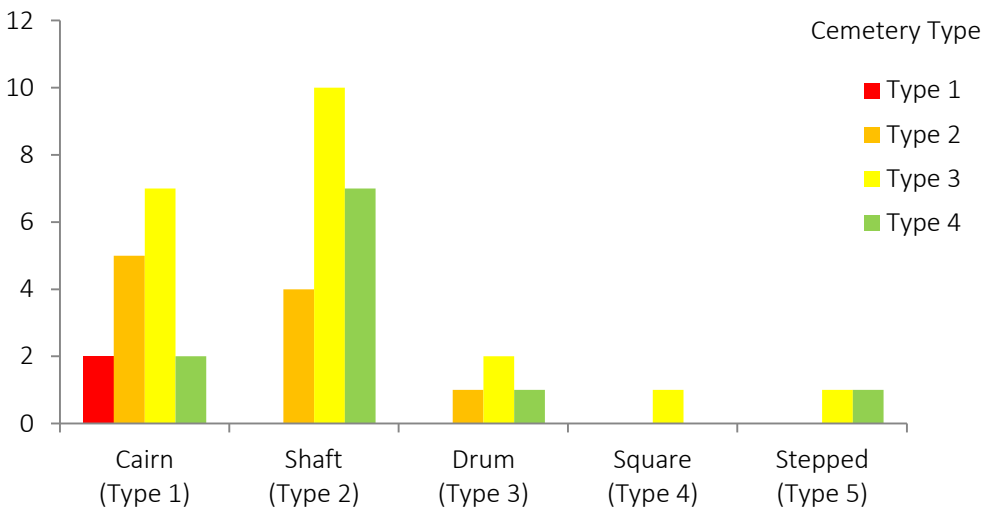


Figure 5.16. Location of cemeteries around Zinkekra, yellow= Daniel's excavations, blue= DMP excavations.

Cemetery	Chronology	Cemetery Typology	Tomb Typologies
ZIN217-219	PUGAR	Type 4	Type 2b
ZIN220	PUGAR, CGAR	Type 4	Type 2b
ZIN350	CGAR	Type 3	Types 1/2b
ZIN 700	CGAR	Type 2	Type 2b

Table 5.19. DMP excavated cemeteries and tomb typologies.



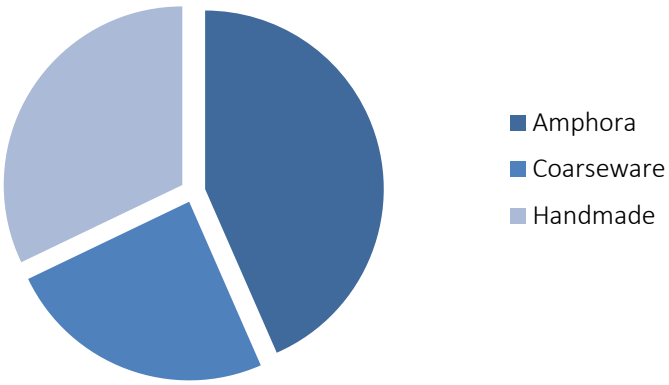
Graph 5.17. Relation of morphological typology of tombs and cemetery in Zinkekra.

Figure 5.17. Lined shaft ZIN220.T6 (left) and irregular shaft ZIN220.T8 (right).

In 2007, the Desert Migrations Project targeted several sites on the north side of Zinkekra, where recent damage to the archaeological heritage had occurred due to the expansion of farms. The excavations in ZIN220, a nucleated cemetery of the Classic Garamantian period, located between two gullies and overlying previous occupation layers, bounded to the north by the break in slope of the major terrace wall ZIN900.6. There are approximately 180 tombs; a sample box was excavated recovering eight shaft burials (Types 2a and 2b). The detail of the construction varies from tomb to tomb from lined shafts to mere scoops, showing also an overlapping of structures (Figure 5.17). Although some of the burials had been robbed in antiquity, both disarticulated human remains and grave goods were recovered with good preservation of textiles and other organic materials (i.e. leather, matting, dates, wood).

The 2007 excavations in Zinkekra recovered a significant number of pottery fragments (831) (Mattingly *et al.* 2007b: 33). The most prolific pottery type recorded (42% of the fragments) was amphorae. The sherds recorded in ZIN220 fit within the Fazzan Project Type 5, Late Punic amphorae dating to the 3rd -1st centuries BC (Dore *et al*. 2007: 336), and possibly a Greco-Italic Fazzan Project Type 10 produced during the 3rd and 2nd centuries BC (Dore *et al.* 2007: 341). The handmade fragments recorded in the Garamantian cemeteries at Zinkekra have a wide chronological range, dating from the 1st millennium BC to the 4th century AD. The morphological typologies encountered in the excavated cemeteries, which correspond with those recorded in the settlement sites of Zinkekra and Saniat Jibril, types include jars, bowls and jugs. Coarsewares are represented by fragments falling into the typological series of the Fazzan Project. These include bowls, casserole dishes, pedestal vases, mugs and flagons (Mattingly *et al.* 2007a: 33) dating from the Proto-Urban and, mainly, from the Classic Garamantian period.

Figure 5.18. ZIN218.T1, lined shaft with adolescent and grave goods (Photographs by Author



Graph 5.18. Relation of pottery types recorded at Zinkekra

Excavation of an adjacent section (ZIN218) revealed the intact tomb of a young adult (though no skull was recovered). The body was covered in straw matting, which was preserved (Figure 5.18). A wooden head-rest similar to the ones recovered by Daniels was also found along with a small bag-shaped jug, Fazzan Project Type 204, (Dore *et al.* 2007: 386) wrapped in textile.

ZIN350 is a large nucleated cemetery of the Garamantian period. In recent years it has been severely damaged by the expansion of modern farms. In 2007 a sample plan of the cemetery was drawn and tombs were excavated. Despite the heavy robbing and disturbance of these graves, information was gathered on the structure of the funerary structures.

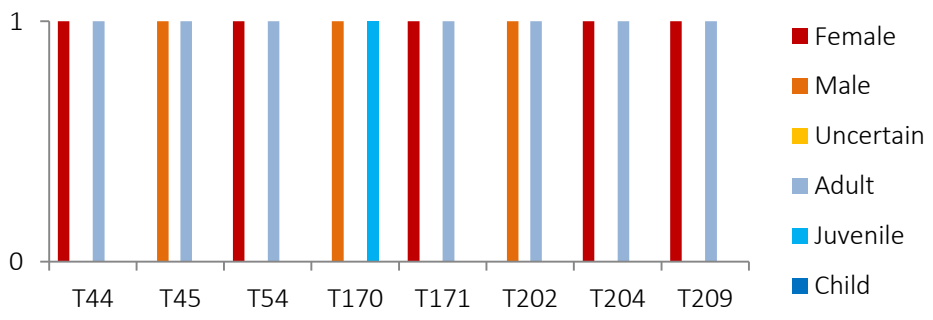
In all, there are 23 excavated burials from various cemeteries located on the promontory of Zinkekra, and most of these tombs had human remains. Out of the burials where skeletal data was recorded, there are 13 articulated human remains, two of which were double inhumation, one of

a female adult and an infant (ZIN220.T19) and two adult burials in ZIN013.202 and 209. I have taken into consideration as articulated skeletal remains those with enough articulation to be able to distinguish the position and orientation of the body within the tomb.

The burials at Zinkekra are in various degrees of preservation and articulation. For detailed information of the skeletal analysis refer to Nikita (2011). A summary of the sex and age of the individual burials used in analysis in this thesis and relevant notes on the preservation and alignment of the skeletal remains at the time of excavation are presented in Appendix B.

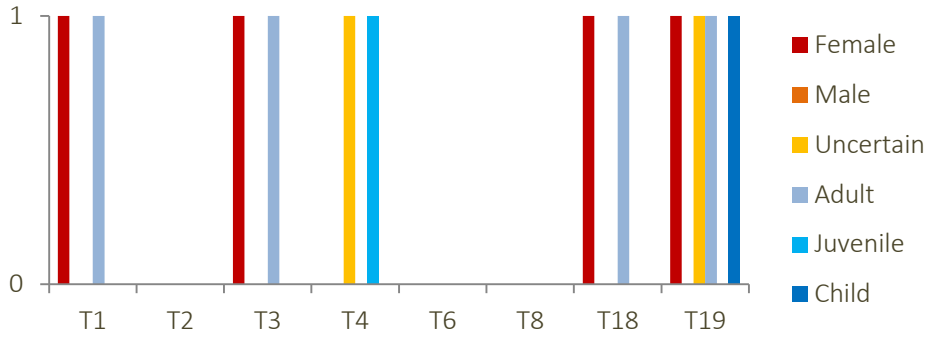
Figure 5.19. Burial ZIN220.T18: remains of an adult female in crouched position and her position within the grave (right). (Photographs by Author)

a. Tombs in ZIN002.013. This area of Zinkekra has the best preserved tombs. None of the excavated tombs had suffered from robbing in antiquity and therefore the human remains are in very good state of preservation and articulation. The eight tombs excavated were individual burials.



Graph 5.19. Summary of human remains by individual tomb in ZIN002.013.

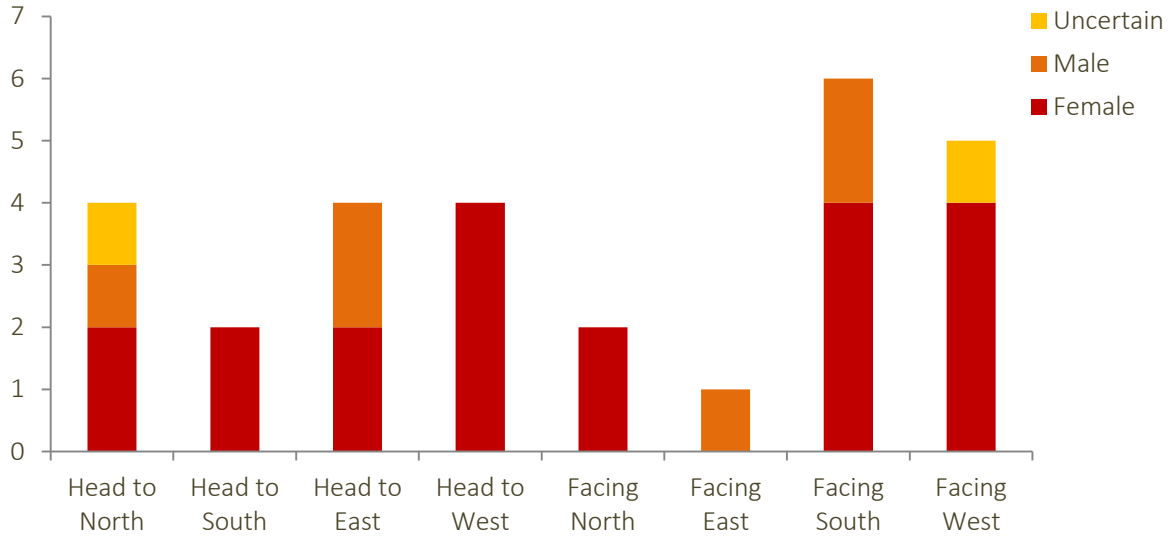
b. Tombs in ZIN220. This cemetery has been subject to looting in antiquity and therefore there have been different levels of disturbance across this area. Eight tombs have been excavated but only five contained human remains, which were in good state of preservation and with good anatomical order and therefore I was able to analyse both the position and alignment of the bodies. In this cemetery there is only one double inhumation, ZIN220.T19, a female adult with a child younger than two years old.



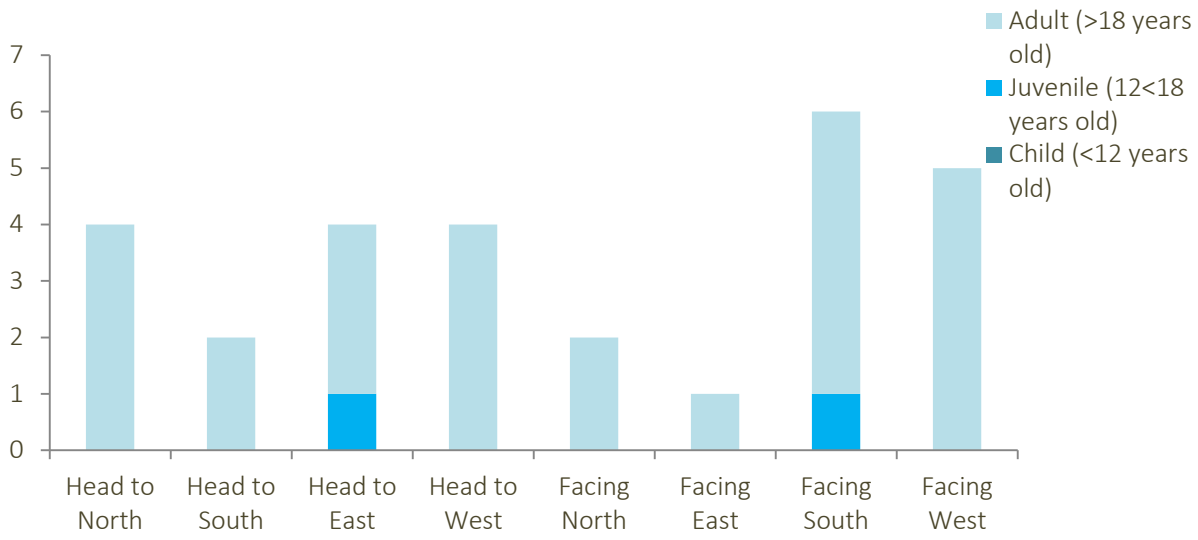
Graph 5.20. Summary of human remains per tomb in ZIN220

Cemetery	Child (<12)	Adolescent (12-18)	Adult (18<)	Male	Female	Uncertain
ZIN003.013		1	6	3	5	
ZIN218			1		1	
ZIN220	1	1	4		4	1
Total	1	2	11	3	10	1

Table 5.20. Summary of age and sex of the human remains recorded in the cemeteries at Zinkekra.



Graph 5.21. Summary of alignment and position of the bodies from Zinkekra by sex



Graph 5.22. Summary of alignment and position of the bodies from Zinkekra by age.

The bodies recorded in Zinkekra, regardless of sex or age, were placed inside the tomb laid in a crouched position with the arms flexed towards the face. The limited excavated data does not provide sufficient information to form statistically valid interpretation of a pattern of behaviour with regards to the orientation of the body. I cannot draw any definite conclusion with the available material; however, there does not appear to have been a clear preference towards orientation or position of the body, although there seems to be a predilection towards the east-west axis with 57% of the excavated burials being in this alignment. Still, it must be noted that no male burials were placed with the head on the west side of the tomb, whilst female individuals have been positioned with the head to either the west or east. Most of the deceased were facing towards the south (42% in total and 40% of all female burials).

Preservation conditions at Zinkekra provide an insight regarding the treatment the dead body received before burial. The bodies are wrapped in a textile or leather shroud. The tightness of the body indicates that the deceased was wrapped already in a crouched position. This would also facilitate the movement of the body from the place of preparation to the place of burial. The topographical setting of Zinkekra would have made this an arduous procession involving at least two adults carrying the deceased. The tombs have been lined with a funerary mat made of vegetable fibres, with the body being positioned immediately above it. It can be suggested that the matting would have then been placed both under and over the body. Headrests are one of the features encountered inside the graves that have only been recovered from the excavated tombs in Zinkekra.

Accompanying the dead body, there seems to have been an element of food offering, indicated by the botanical remains. The tables below provide information of the grave goods associated with the individual burials organised by sex, which have been analysed and presented in Chapter 6.

FEMALES	TOMB TYPE	GRAVE GOODS
ZIN002.013 T44	2b	Headrest; beads, leather; matting; date stone
ZIN002.013.T54	2b	Headrest; textile; matting
ZIN002.013.T171	2a	Leather; bead
ZIN002.013.T204	2b	Matting
ZIN002.013.T209	2b	Headrest; textile; matting; bead; wooden bowl
ZIN218.T1	2b	Headrest; textile; matting; pottery
ZIN220.T3	2b	No grave goods
ZIN220.T18	2b	No grave goods
ZIN220.T19	2b	Textile

MALES	TOMB TYPE	GRAVE GOODS
ZIN002.013.T45	2b	Headrest; leather; matting
ZIN002.013.T170	2b	Headrest; textile; matting; bead
ZIN002.013.T202	2b	Textile; dates

The analysis of the 33 cemeteries surveyed around the Zinkekra promontory does provide some information on the similarities of cemetery/tomb in relation to identity based on sex and age despite the small sample of excavated burials. The limited data does imply the preparation of the bodies prior to burial was not different for female and male individuals. Organic materials are attested in all excavated burials in Zinkekra, even though in some cases the preservation is rather fragmentary.

Nevertheless, the correlation of the different aspects of the mortuary behaviour, for instance, the choosing of the tomb and grave goods, along with the identity of the individual interred has helped to create a 'cemetery profile' for comparison with contemporaneous sites in the Wadi al-Ajal. This will be discussed in section 5.2.

5.1.5. The cemeteries at Taqallit

❖ General description

Taqallit is a prominent headland and the adjacent area of the Wadi. This area of the Wadi al-Ajal provides us with one of the best examples of the Garamantian landscape, where the archaeological preservation of settlement sites, irrigation areas and cemeteries have not suffered the same devastations as other areas in the valley (Mattingly *et al.* 2010c). Medieval and modern settlements do not overlie the earlier Garamantian ones and the modern agricultural fields are closer to the modern road north of the Garamantian settlement.

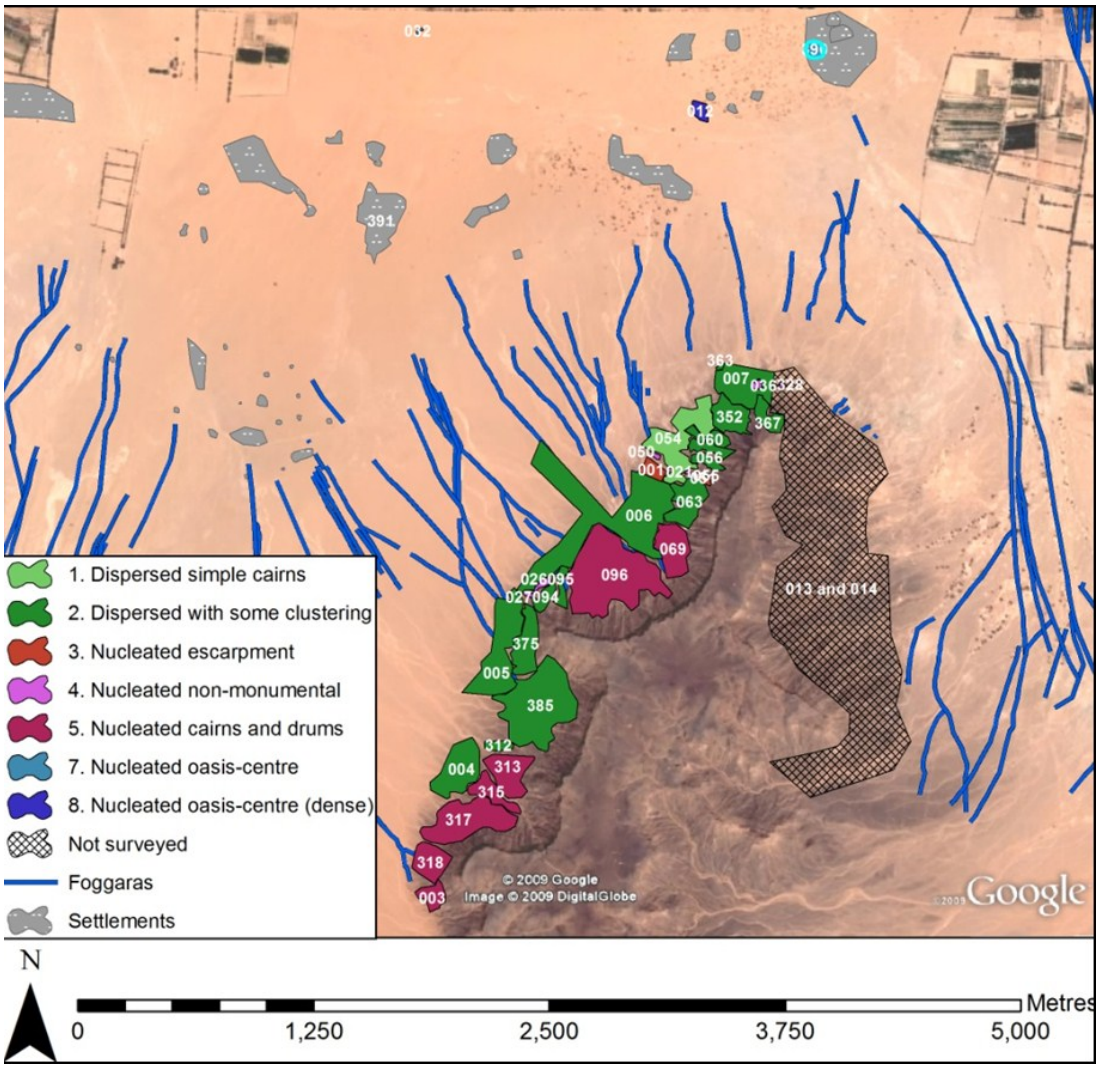


Figure 5.20. Cemetery sites in the Taqallit headland (Mattingly *et al*. 2010: 109).

TAG001 is one of the largest of the monumental cemeteries on the escarpment west of Zinkekra (Mattingly *et al.* 2010a: 344), with over half the cemetery area comprising 150 monumental tombs with stepped superstructures (mainly Type 5b) over a square or rectangular plan. These funerary structures were built in stone and evidently originally covered in mud-plaster. The physical appearance of these stepped monuments would thus not have differed from some of those in the oasis cemeteries, built in mudbrick. The periphery of the cemetery is formed by groups of over 200 shaft graves (Type 2a and 2b). The area was visited by Daniels in 1958 following on the work of Caputo on the stepped tomb cemetery (TAG001).

Caputo's excavations of the east side of the cemetery recovered Roman pottery (Pace *et al.* 1951: 381-84). Three shaft tombs were excavated in 1959 by Daniels. These tombs were highly disturbed by looting and only the disarticulated remains of one individual, with beads, were recorded from T3 (Mattingly *et al.* 2010a: 351). No stratified ceramic finds were recovered by Daniels. However, the surface collection of the area by Caputo and Daniels provides examples from the 1st to the 6th centuries AD (Mattingly *et al.* 2010a: 351). Most of the stone-built monumental tombs were two or three storey stepped tombs, mainly sub-rectangular or square in plan. A substantial number of offering table (43 complete ones) and stelae fragments (30 clearly restorable) were recorded by Daniels. Most of the offering tables were rectangular Type 4 examples whilst the stelae follow what Caputo (Pace *et al.* 1951: 408-412) had referred to as quadridigitata (Type 2/4, hands) and bicorne (horns, Type 5/6) .

During the survey carried out by the Fazzan Project it was reported that considerable damage had been caused by modern bulldozing and that most of the funerary furniture recorded by Daniels and Caputo had been removed. In 2009, the Desert Migrations Project targeted specific areas for detailed examination in different parts of the TAG001 cemetery where bulldozing had cleared the superstructures of the many examples of stepped tombs for building stone.

The Desert Migrations Project completed the survey of the west side of Taqallit promontory, limiting the survey to the broad embayment contained between the northern tip of the Taqallit promontory and its main western salient (see Figure 5.20). The morphological variety in the area is evident in both cemeteries and tombs. The cemeteries recorded by the Desert Migrations Project fit into the Types 1, 2, 3, 4, 5 and 7 (Table 5.8 and Figure 5.20) and most funerary structures can be assigned to Types 1, 2, 3, 4 and 5. Although, a proportion of tombs in different

cemeteries had been so badly damaged by robbing that the original appearance and tomb type cannot be certain, in comparison with neighbouring tomb structures and the amount of rubble present enabled the surveyors to make confident assumptions on typologies. In comparison with the surveys carried out in Watwat by the Desert Migrations Project there was a scarcity of surface pottery (with the exception of a small number of Classic Garamantian cemeteries TAG001, TAG012, TAG021, TAG026, etc. (Table 5.16).

In 2009 and 2010 excavations were carried out in TAG001, TAG006, TAG012, TAG050, TAG054 and TAG063. TAG001 and TAG012 are two monumental Classic Garamantian cemeteries *c.*2 km apart, one on the escarpment, one in the wadi centre. Cemeteries of Proto-Urban Garamantian date in Taqallit, like in the rest of the Wadi Al-Ajal, are characterised by the scarcity of pottery within the tombs. The ceramic material recovered has been recorded outside the tombs as possible offering vessels. The finds most associated with these Proto-Urban cemeteries are beads and organics, such as matting, textile and leather shrouds or bags.

Excavations in TAG001 were carried out in five different areas of the headland. As recorded by the Fazzan Project, TAG001 has suffered significant damage in the area where Daniels had recorded monumental funerary structures. Despite the fact that superstructures of these stepped tombs have been completely removed, the stone-lined burial chambers have survived the demolition. The records of the recent excavations in TAG001 note a preference for the alignment of the bodies with the head to the east. The human remains have been disturbed by systematic looting (mostly noted from the east side of the tomb) and only a few complete examples have been recorded. Nevertheless, these remains are in crouched position and evidence of matting and textiles have been recovered suggesting that they had been buried in textile shrouds. The surface collection of the area recovered a wide range of pottery in both chronology and style. Flagons and amphorae date to the 4th to 5th century AD. Along with these, examples of local wares are found; incense burners and handmade vessels. Items of personal adornment and organic materials (basketry, gourd and date stones) were also recorded in various tombs. Necklaces (made of carnelian, amazonite, ostrich eggshell and glass), belts and rings and a large quantity of loose beads have been recovered from TAG001.

TAG006 is located to the south of TAG001 on the lower slopes of the escarpment and comprises a series of dispersed tombs, mainly of Type 3a. The burials excavated show similarities with other

burials in the area. The bodies had been wrapped in leather and buried in the crouched position. In TAG006 a single date stone had been placed within the burial chambers. In terms of the funerary assemblages the first burial presented no artefacts other than the leather wrapping and fragments of vegetable fibres. The second burial, that of a female, had a necklace, a leather shroud with bead decoration sewn onto it and a lip plug. There is an absence of pottery inside the tombs which suggests a Proto-Urban date.

TAG012, a Type 8 oasis centre cemetery, presents similar features to Saniat bin Huwaydi. This cemetery contains square, rectangular and circular mud-brick tombs. The tombs are oriented on an east-west alignment. These tombs were often accompanied by stelae and offering tables, although only a few samples survive intact. Nonetheless, when found these were located on the east side of the structure. This cemetery has been systematically robbed. Due to the robbing and the level of the water table the preservation of the human remains is very poor and only disarticulated fragments were recovered. Part of the funerary assemblages consisted of metal artefacts (iron, copper alloy and gold), beads (glass, carnelian, and ostrich eggshell), glass and pottery (both imported and local wares). The imported pottery recovered (amphorae and flagons similar to the ones recorded at Saniat bin Huwaydi) suggests a Classic to Late Garamantian date, for the latest phase of the cemetery.

TAG021 and TAG050 are small Classic Garamantian nucleated cemeteries. The funerary structures in TAG021 are corbelled cairns and TAG050 has shaft burials. Higher up in the escarpment a series of drum tombs form TAG063 which is thought to belong to the Proto-Urban Garamantian period (5th -1st centuries BC). The findings in TAG006 and TAG063, and other Proto-Urban cemeteries show that ceramic grave goods were very rare in this phase, although a few rare vessels, both local handmade ware and imported wares, were used outside the tombs instead of offering tables. These finds are almost invariably on the east or west side of the tomb and often associated with proto stelae or stone bowls. The pottery from the surface collection in the cemeteries in the Taqallit promontory ranges from local handmade wares, with the typical basket-weave impressed flat tops of the Proto-Urban and Classic Garamantian period to Roman imports of African and Tripolitanian fabrics.

Site Code	Typology	Chronological period	Excavated burials	Survey
TAG001	3(7)	PUGAR, CGAR, LGAR	Caputo, CMD, DMP	CMD, FP, DMP
TAG002	2	EGAR? GAR?		FP, DMP
TAG003	5	EGAR? GAR?		FP (AP), DMP
TAG004	2	EGAR? GAR?		FP (AP), DMP
TAG005	1(2)	EGAR? GAR?		FP (AP), DMP
TAG006	1 and 2(5)	PUGAR, CGAR	DMP2009	FP, DMP
TAG007	2	PUGAR		FP, DMP
TAG012	8	CGAR	DMP2008; 2009; 2010	CMD, FP, DMP
TAG013	1	PUGAR		FP (AP), DMP
TAG014	2	PUGAR, LGAR		FP, DMP
TAG021	3	PUGAR	DMP2009	FP, DMP
TAG026	3	CGAR		FP, DMP
TAG027	3	CGAR		FP, DMP
TAG032		CGAR		FP, DMP
TAG036	3	CGAR		FP, DMP
TAG050	4	CGAR	DMP2010	DMP
TAG051	3	CGAR		DMP
TAG054	1 and 2	PUGAR? CGAR	DMP2010	DMP
TAG055	2	PUGAR		DMP
TAG056	2	PUGAR		DMP
TAG060	2	PUGAR		DMP
TAG063	2(5?)	PUGAR	DMP2010	DMP
TAG069	2(5?)	PUGAR		DMP
TAG094	2	CGAR		DMP
TAG095	2(3?)	CGAR		DMP
TAG096	2(5?)	PUGAR		DMP
TAG312	2(5)	PUGAR		DMP
TAG313	2(5)	PUGAR		DMP
TAG315	5	PUGAR		DMP
TAG317	2(5)	CGAR		DMP
TAG318	5	PUGAR		DMP
TAG328	4	CGAR		DMP
TAG352	2	PUGAR		DMP
TAG367	2	PUGAR		DMP
TAG375	2	PUGAR		DMP
TAG385	2	PUGAR		DMP
			Total (excavated) = 41	Total (surveyed) = 4008

Table 5.21. Summary of surveyed and excavated cemetery sites in Taqallit (After Mattingly *et al.* 2009:102 and 2010c: 110).

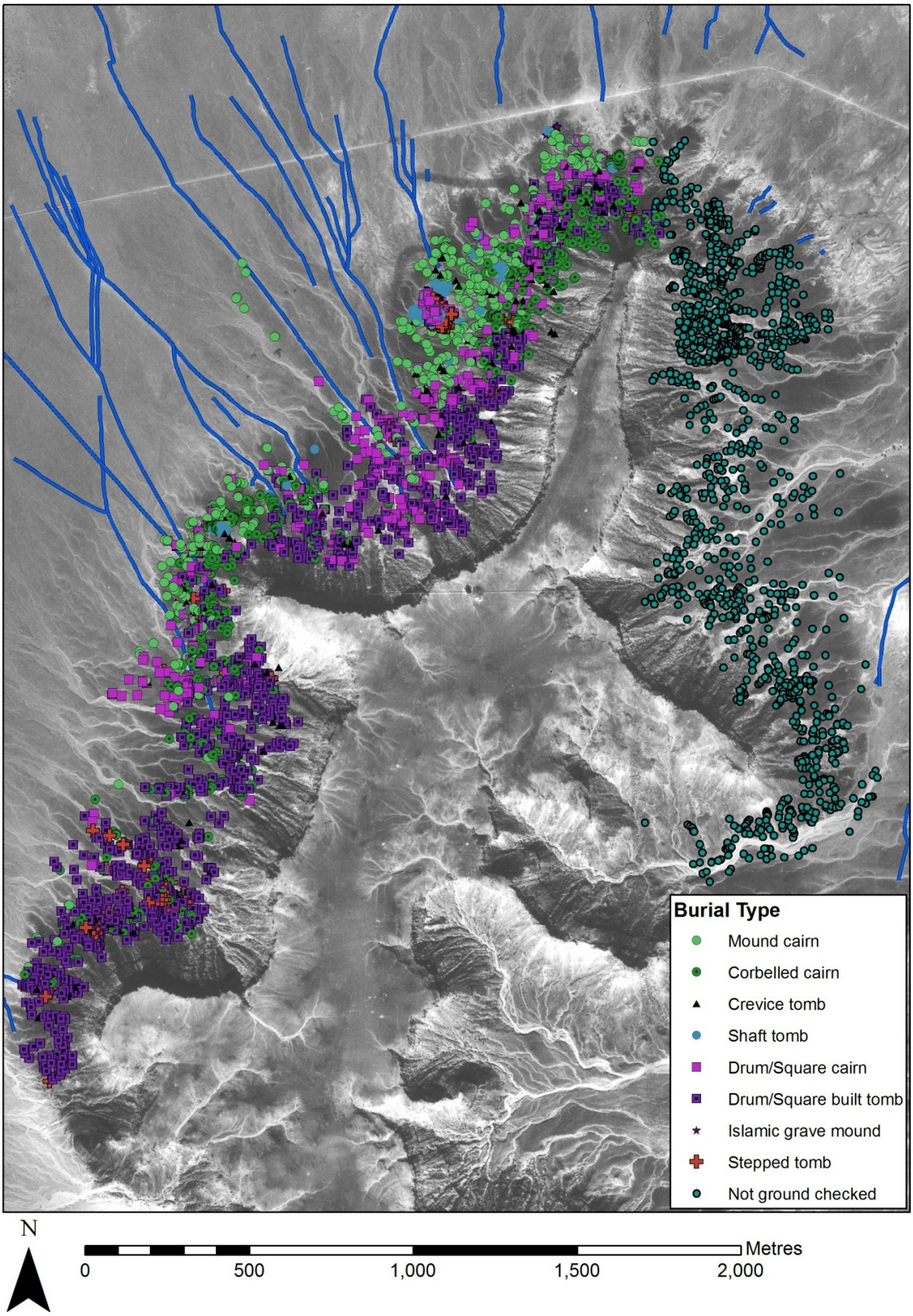
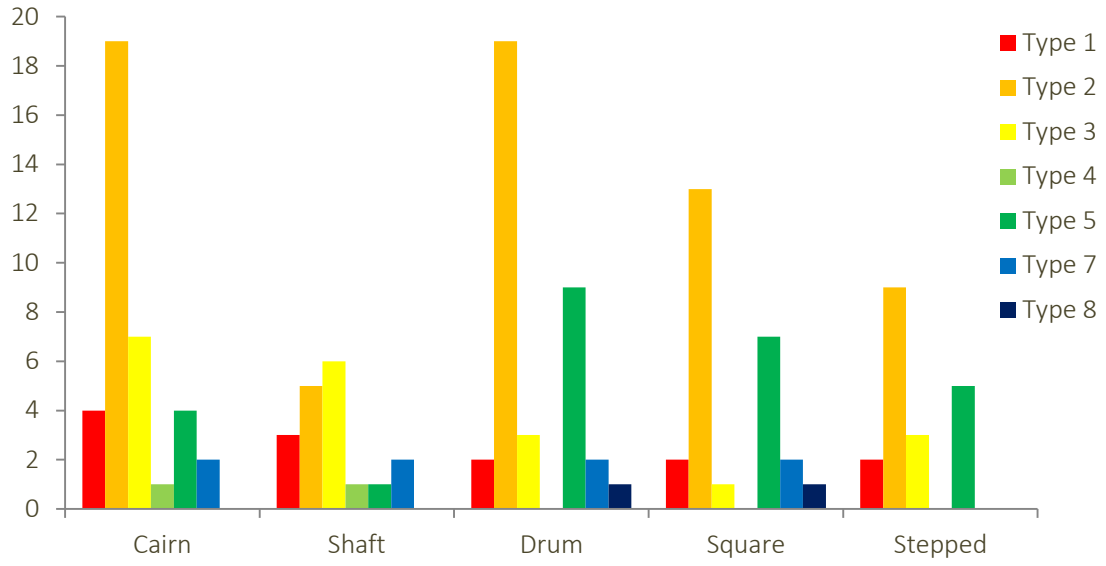


Figure 5.21. Taqallit embayment showing burial typologies (DMP 2010).

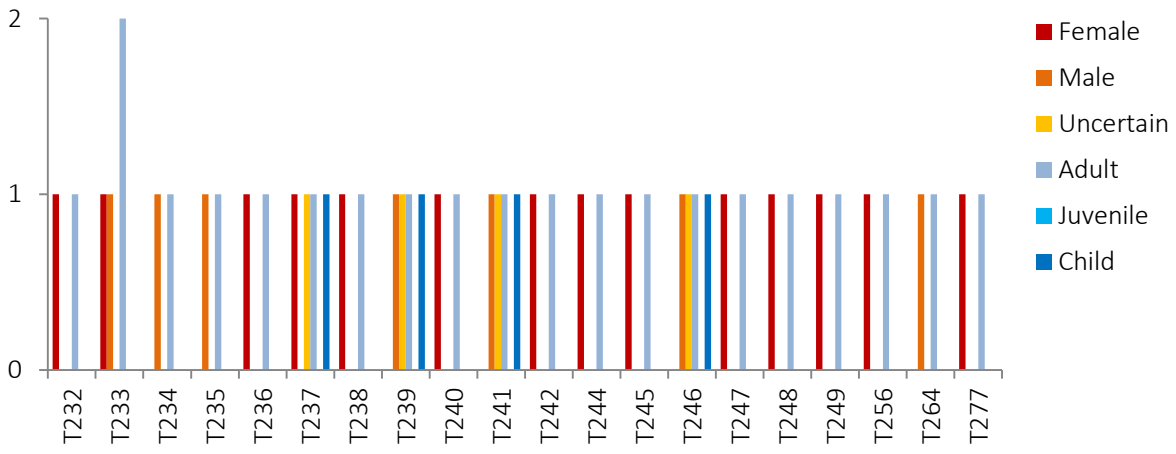


Graph 5.23. Relation of cemetery typologies and tombs in Taqallit

Figure 5.22. Damage in the monumental cemetery TAG001 (top left); TAG063.T8 with ochre in the hand (top right); stepped tomb in TAG001 (bottom left) and crouched burial in TAG001 with Garamantian vessels (bottom right). (Photographs by Author)

The burials in Taqallit are in various degrees of preservation and articulation. For detailed information of the skeletal analysis refer to Nikita (2009, 2010 and 2011). A summary of the sex and age of the individual burials used in this analysis and notes on the preservation and alignment is available in Appendix B.

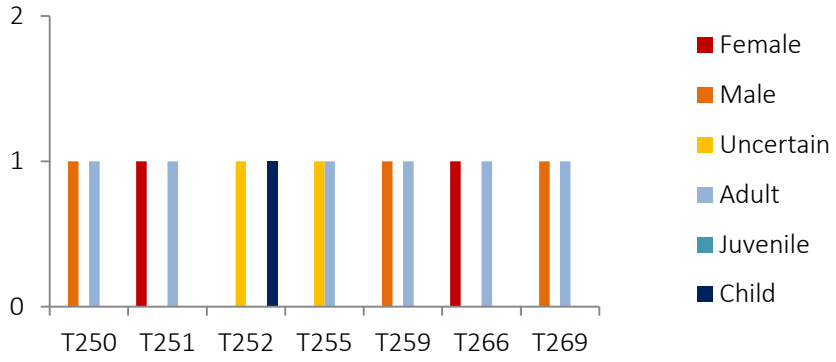
a. Tombs in TAG001. The excavations at Taqallit by the Desert Migrations Project defined six areas of excavations. These areas were targeted due to the damaged caused my modern bulldozing. Area 1 was located in the north east side of the site. Three tombs were excavated and the remains of four adult individuals were recorded. From the two tombs were excavated in Area 2, situated south of Area 1, only fragmentary evidence of human remains were encountered and it has not been possible to determine neither the age nor the sex of the individual. Twenty tombs have been excavated in Area 3. The graph below summarises the human remains per tomb. It must be noted that there is a significant number of young females buried in this area of Taqallit. However, it is not possible to confirm whether this is a deliberate use of the cemetery or chance. In this area we also see the reuse of the tombs and at least one double inhumation of a young adult female and a baby in TAG001.T237. The tombs that have been reused belong to adult males. Again the significance of this can only be speculative given the small number of tombs excavated in this cemetery.



Graph 5.24. Summary of human remains in Area 3 per tomb.

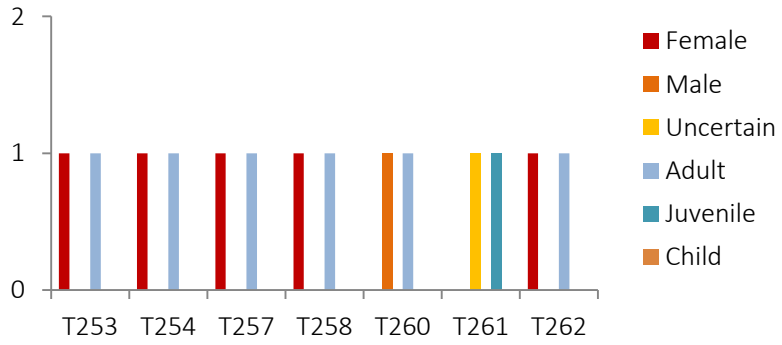
Seven individuals, all adults except one child (TAG001.T252), were recorded in the tombs excavated in Area4 with an even distribution of male and females. The tombs targeted in Areas 5 and 6 belonged mainly to women. Out of the four tombs excavated in Area 6, two

contained the remains of female adults and the other two those of children, younger than 12 years old. Despite the young age of these children they had an individual burial in the same style as those of the adults buried nearby.



Graph 5.25. Summary of human remains in Area 4 per tomb.

Area 5 was thought to consist of tombs of an earlier date from those in Areas 3 and 4. As oppose to those, this area has not suffered disturbance by modern machining. Five out of the seven tombs excavated in Area 5 were female adults, younger than 35 years old. One adult male and one child were also buried in this area, west of Area 3.



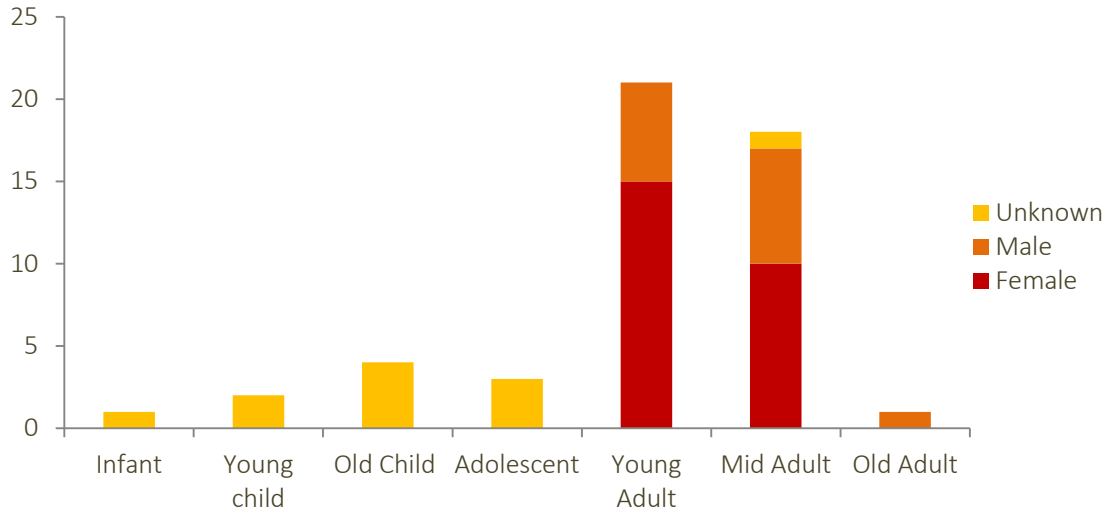
Graph 5.26. Summary of human remains in Area 5 per tomb.

Female	Male	Unknown
25	14	11

Table 5.22. Number of individuals in TAG001 by sex

Infant	Young child	Mature child	Adolescent	Young adult	Mid adult	Old adult
1	2	4	3	21	18	1

Table 5.23. Number of individuals in TAG001 by age



Graph 5.27. Summary of individuals recovered from TAG001

b. Tombs in TAG006. The remains of two young adults, a man and a woman, have been recovered from the excavation of two tombs in TAG006. The partial remains of a further two individuals, a young child and an adolescent, were recovered from the surface of two individual tombs in TAG006, T8 and T9 respectively.

c. Tombs at TAG012. The oasis cemetery of TAG012, as mentioned above, has been systematically robbed and the human remains badly damaged, and therefore only two individuals were in fair preservation to be able to carry out the sexing and aging. They are two adults, one female and one male.

d. Tombs in TAG021. A male and female adult have been recorded from this cemetery. Both of them were in good state of preservation and articulation.

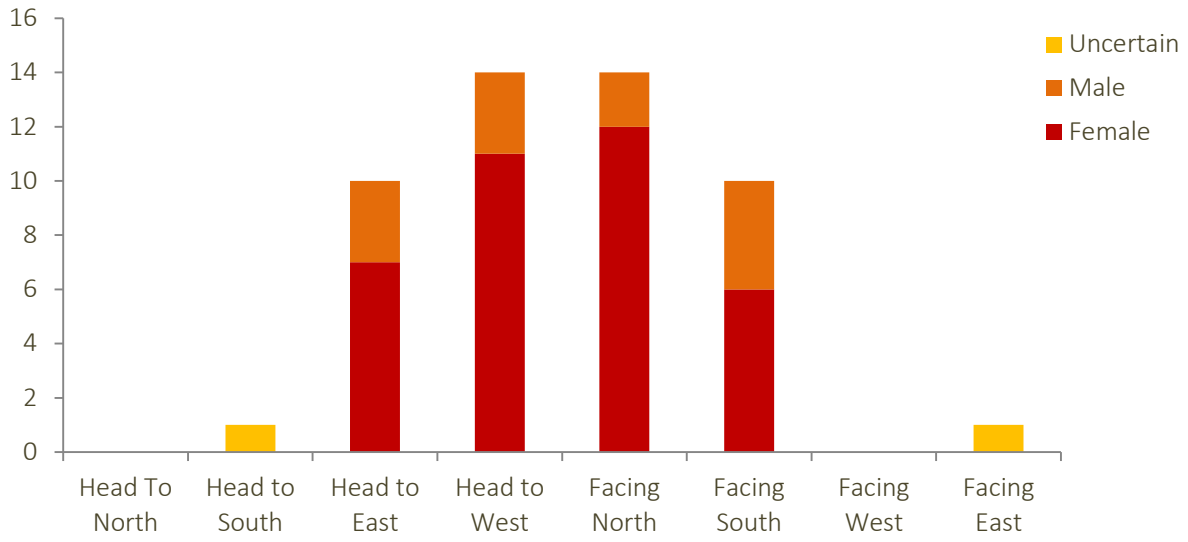
e. Tombs in TAG063. Two female young adults and a male have been recovered in good state of preservation from undisturbed primary burials in this cemetery. Along with these, the disarticulated remains of two children were also recovered for the backfills of TAG063.T10 and TAG063.T20. However, nothing can be said about the provenance of the children and no further information could be retrieved.

Most of the burials recorded in the cemeteries of the area of Taqallit belong to adults. As indicated, most of the excavated tombs (70%) are in TAG001, therefore providing the largest amount of human remains, although this cemetery has suffered looting in antiquity and more recently bulldozing. Having said so, out of the 71 individuals buried in Taqallit, 25 have been recovered with a level of articulation that has allowed me to record the position and alignment of the bodies. All of them have been placed in crouched position with the arms flexed towards the face and legs also flexed towards the thorax. Despite the volume of the chamber, some bodies have been wrapped extremely tight, perhaps indicating the hazardous process of moving the deceased from the settlements in the oasis to the steep areas of the escarpment.

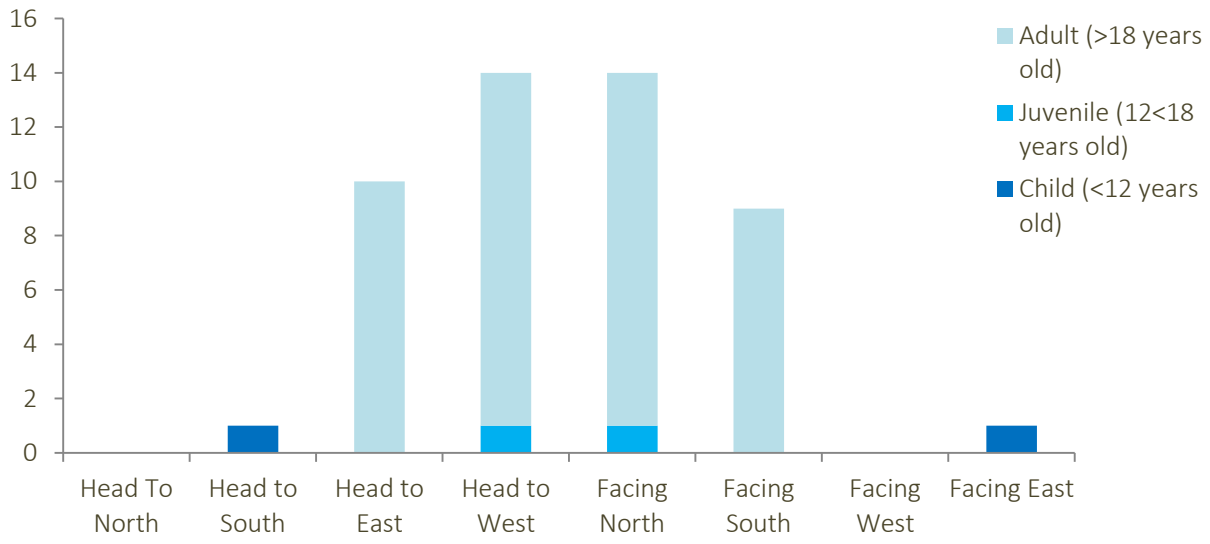
Cemetery	Child (<12)	Adolescent (12-18)	Adult (18<)	Male	Female	Uncertain	Total
TAG001	7	3	40	14	25	11	50
TAG006	1	2	1	1	1?	2	4
TAG012			3?	1	1	1	3
TAG021			2	1	1		2
TAG054			2		2		2
TAG063	2		8	3	4	3	10
TOTAL	10	5	54	22	34	17	71

Table 5.24. Summary of age and sex of the human remains recorded in the cemeteries at Taqallit.

Despite the relative limited data with regards to a possible pattern of the orientation of the body, it can be suggested that the east-west alignment (with the head either to the west or to the east) is the preferred choice for the female individuals, with the head facing towards the north. The male interments show more variability in the position of the body within the tomb, with the head placed on the north or west sides, and facing either south or west. Concerning the age of the individuals, although it must be noted that 86% of these are adults, there is a preference to the east-west alignment with the head facing north, here possibly reflecting the larger number of females (36%) compared to males (22%).



Graph 5.28. Summary of alignment and position of the bodies from Taqallit by sex



Graph 5.29. Summary of alignment and position of the bodies from Taqallit by age

The relatively good preservation of the grave goods in Taqallit offers a valuable idea of the treatment received by the dead body before the burial. Similarly to other cemeteries in the Wadi al-Ajal, the deceased body was wrapped in a textile or leather shroud. As I have pointed out before, the close position of the body, despite the size of the burial chamber, can be seen as an indication that the dead body was wrapped in a crouched position, rather than placing them as such once in the place of burial. The tombs in Taqallit show evidence that the inner chambers have been lined with a funerary mat made of vegetable fibres, with the body being positioned immediately above it, and then the mat could also be placed over the body. Textile shrouds are more predominant

than leather ones. The excavation of T259 in TAG001 (Figure 5.8) provided the negative impression in the base of the tomb chamber of parallel wooden lining, similar to the wooden furniture recovered in GSC030 (see above). This may indicate the transportation of the bodies and how they were placed inside the tomb.

The table below provides information of the grave goods associated with the individual burials organised by sex. The vast majority of the tombs excavated in the area of Taqallit are in TAG001. This cemetery has been methodically raided in antiquity. There is a strong suggestion, derived from the assemblages recovered, that these tombs were extensively furnished. Similarly to Watwat, the robbing limits further analysis, and therefore a presence/absence analysis of artefactual typologies has been carried out related to sex. No less than 21 of 25 of the burials with assemblages at were females (84%), of which only 3 did not contain remnants of material culture.

FEMALES	TOMB TYPE	GRAVE GOODS
TAG001.T231	5b	No finds recovered in this tomb
TAG001.T232	5b	Incense burner
TAG001.T236	5b	Ring (copper alloy)
TAG001.T237	5b	Incense burner, beads, textile, matting, gourd
TAG001.T240	5b	Flagon, amphora, handmade ware, beads,
TAG001.T242	5b	Beads
TAG001.T244	5b	Flagon; beads
TAG001.T249	5b	No finds recovered in this tomb
TAG001.T253	2b	Incense burner; matting
TAG001.T254	2b	Shroud[3]
TAG001.T257	2b	Incense burner, matting, wooden container, basketry and gourd
TAG001.T258	2b	Botanical remains, shroud (see footnote 3)
TAG001.T262	2b	Handmade ware
TAG001.T264	2b	Flagon
TAG001.T270	2b	Textile, leather and wooden container
TAG001.T277	2b	No finds recovered in this tomb
TAG006.T2	1b	Beads, leather shroud and botanical remains
TAG063.T8	3b	Carnelian bead; Textile, matting, cord; ochre
TAG063.T20	3b	Carnelian bead; ochre (possibly in container); textile, matting

[3] The extremely tight position of the body suggests this body was wrapped in a shroud, despite not having any physical evidence for it.

MALES	TOMB TYPE	GRAVE GOODS
TAG001.T234	5b	Fineware; coarseware; incense burner
TAG001.T250	5b	No finds recovered in this tomb
TAG006.T1	1b	Matting, leather shroud, botanical remains
TAG021.T1	1b	Wooden bowl; 'organic' container; textile
TAG063.T21	3b	shroud

The data recovered from Taqallit highlights the difference in assemblages and tomb choice in relation to the chronological period. TAG006, TAG021 and TAG063 are Proto-Urban cemeteries with assemblages composed of handmade pottery and beads and organic containers. In contraposition to this, TAG001 of the Classic and Late Garamantian phase provides more diversity in the range of materials and mixed assemblages of imported coarsewares and Garamantian handmade wares. 34% of these tombs have evidence of Garamantian pottery, including incense burners, with incised and painted decoration and small pots (i.e. TAG001.T262).

The treatment of the bodies in Taqallit parallels what has been described for other areas. Bodies were buried in crouched position wrapped either in a textile or leather shroud and laid on a mat made of vegetable fibre, which also covered the body. The evidence of the matting recovered from TAG063 and TAG001 indicate that two types of mats were used (Mattingly *et al*. 2010b: 102). Textile has been poorly preserved but traces have been recorded and are similar to the textile recovered from other cemeteries in the Wadi al-Ajal. The excavations of TAG001 by the Desert Migrations Project have also provided significant information on the presence of organic containers, baskets and wooden bowls. The baskets, seen as a negative impression on the dried sand, were flat woven containers.

The bodies in Taqallit, especially in TAG001, were decorated with necklaces, bracelets and belts made of beads of various materials, predominately carnelian and amazonite stone, glass and ostrich egg-shell. A haematite labret was recovered in TAG006 and copper alloy rings were found in TAG001.T236. All of the personal adornment has been found in female burials. The richness of these, which have survived the robbing, can be seen as an indication of other materials, now lost, that would have been included in these tombs and focused of the robbers.

The records of Daniels and the Desert Migrations Project surveys have located funerary furniture across the Taqallit cemeteries. It must be noted that the monumental cemetery TAG001 had numerous stele and offering tables, mostly positioned at the east side of the tomb. The count of

stelae and offering tables shows a considerable lower number of offering tables. Rather than an indication of a choice to have a stellae and not an offering table, I believe this is related to the difference in the level of the ground nowadays. It is possible that further excavations of these cemeteries would yield a similar number of stelae and offering tables.

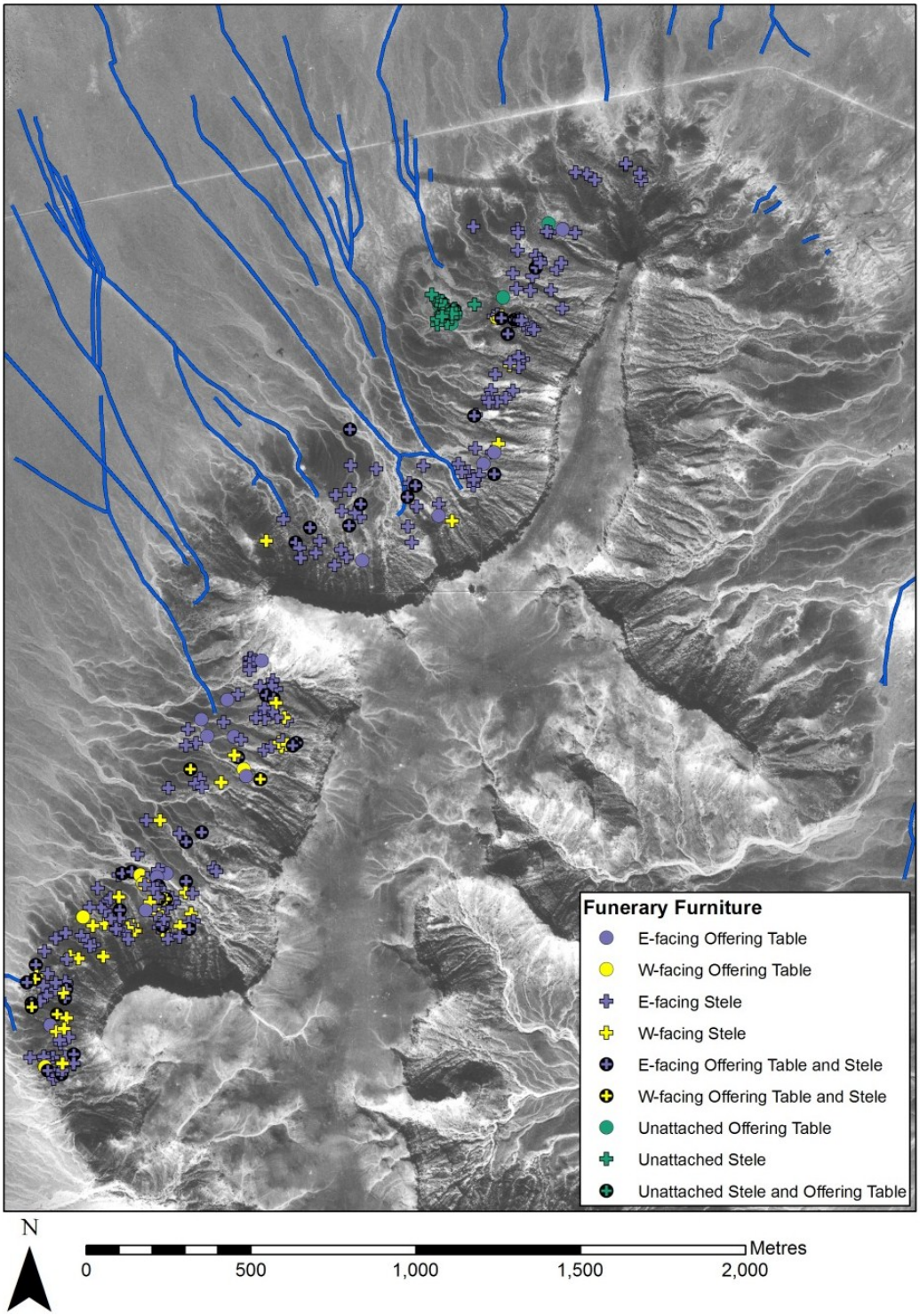


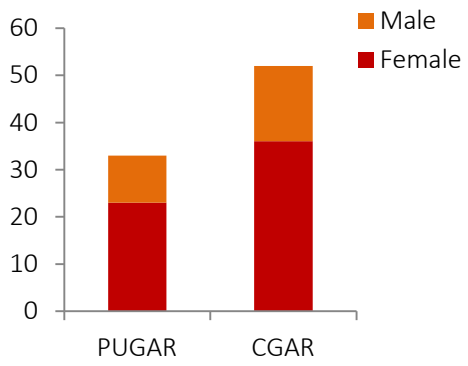
Figure 5.23. Distribution of funerary furniture at Taqallit (DMP2010)

5.2. Patterns in burial group composition

Death is universal and, despite how simple or complex the society, there is the necessity to deal with the emotional and physical aspects of death, including the disposal of the deceased. This chapter has presented the materiality of death, which I understand as a way of expressing the emotional aspects of death through materiality, under the premise that death highlights cultural values and articulates both individual and social identities. Having presented the individual character of specific cemeteries in the Wadi al-Ajal, this section aims to resolve some of the key questions set up in the aims of this thesis (see p. 8):

- *Are rituals the same for every individual or do they change according to sex, age, and status?*
- *Does a specific mortuary form have the same significance through time and across space?*
- *Were some items reserved for specific groups or limited by availability?*

My interest rests with issues of individual identity, meaning sex and age, and therefore I have only taken into consideration the tombs where the identity of the individual is known and where the chronological phase can also be established. Consequently, 87 tombs have been analysed, 40% of which belong to the Proto-Urban period and 60% to the Classic Garamantian and out of these, 68% are female burials and 30% male.

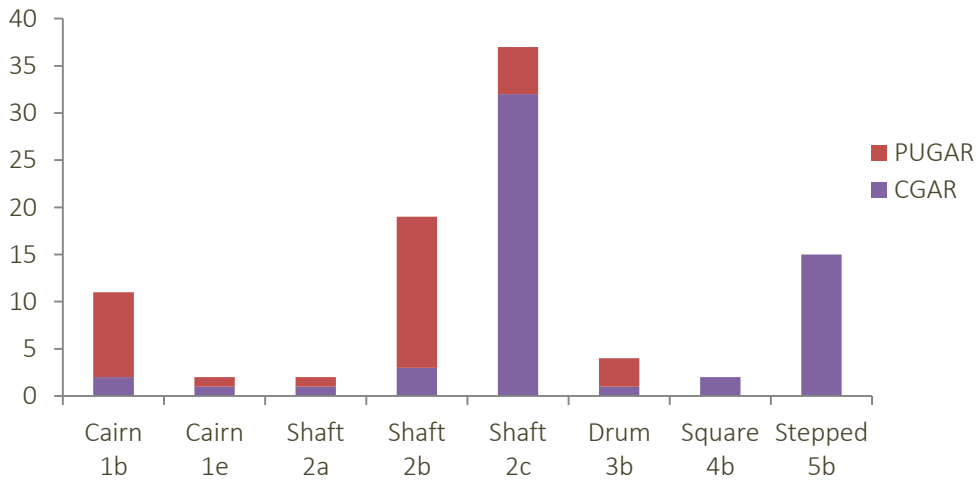


Graph 5.30. Summary of tombs by phase and sex

In order to assess the specific mortuary behaviour of the Garamantes across time, I am considering the choice of funerary structure, the treatment of the dead body and the grave assemblages. One must take into consideration the significant difference in numbers of female and male individuals as well as the burials of adults and children.

❖ Tomb type

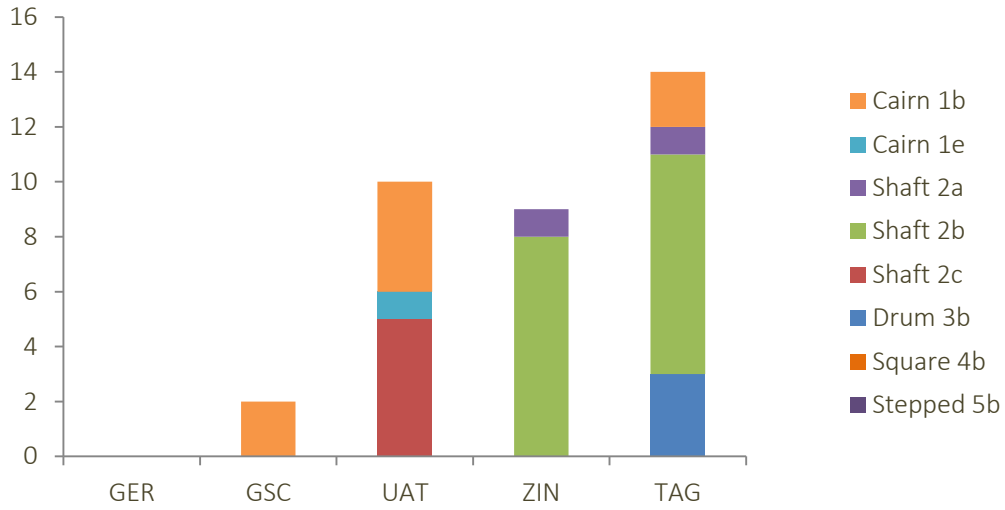
The burials have been divided chronologically into two phases, Proto-Urban (500 BC- 1 BC) and Classic Garamantian (AD 1- AD 400). Graves whose dating does not fall in one of these two categories have not been used, given the difficulties in dating Early Garamantian tombs. Despite the general diversity of funerary monuments in the Wadi al-Ajal during the Garamantian period, there is a clear popularity of the shaft burial, with 67% of the tombs falling into this category, from which 63% are capped shaft tombs and 32.7% stone rings. When considering the period, there is a clear preference for Type 2b during the Proto-Urban phase and Type 2c in the CGAR period. Whilst there is a continuity of the shaft tomb into the Classic Garamantian period, the introduction of more monumental types, i.e. Type 4 and Type 5, is perhaps of greater significance with regards to the interest of the individual communities to emphasise the space of their dead at the same time as maintaining the morphological types established in the PUGAR period.



Graph 5.31. Choice of tomb typology by phase

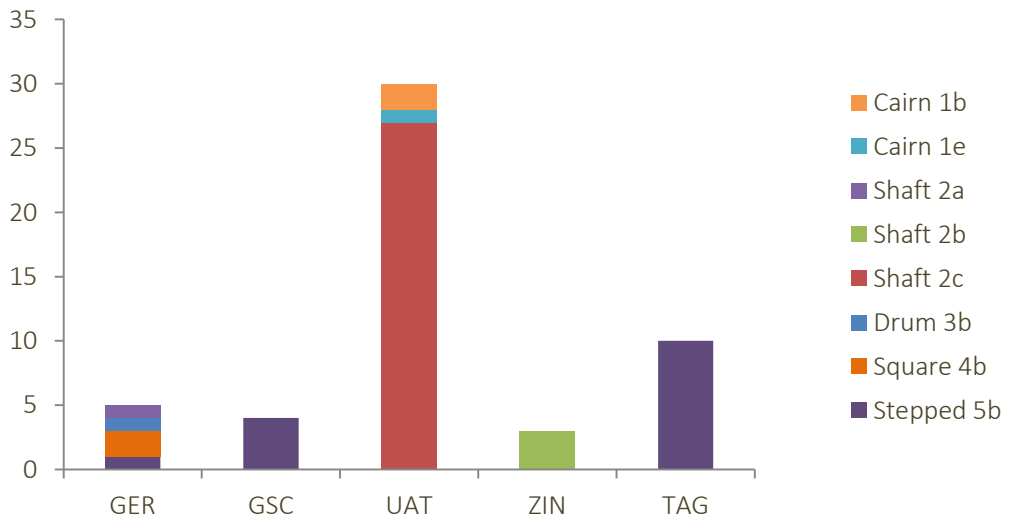
The variability and diversity of choice of funerary monuments fluctuates across the landscape and time. Graph 5.20 indicates the number different morphological types in the study areas during the PUGAR period. There is a clear preference for the shaft burial, with almost 70% of the tombs falling into this category, and 48% of these of Type 2b (marked with stone rings). An innovation of the Classic Garamantian period is the introduction of the stepped tomb, a more monumental and visually imposing structure. This type of tomb is seen both in the oases and the escarpment cemeteries. Despite the different building material, mudbrick in the oases and stone in the

escarpment cemeteries, the final result would have been almost identical, as the stone was covered in plaster resembling those tombs made of mudbrick.



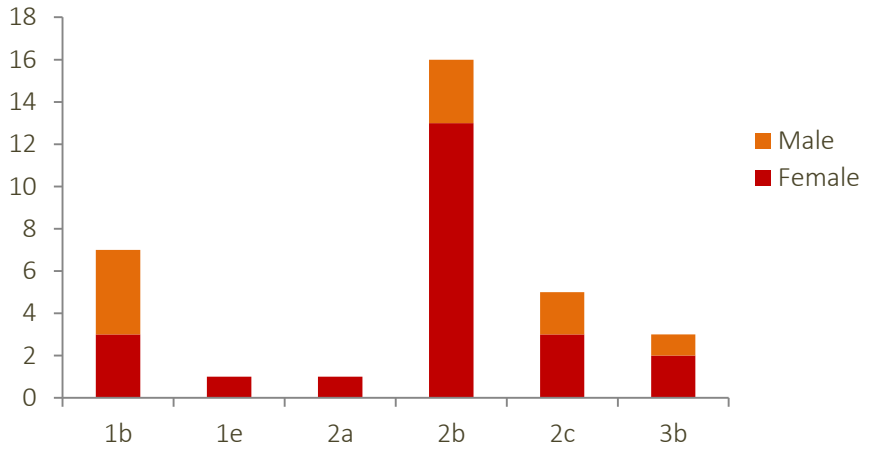
Graph 5.32. Choice of tomb typology by area during the PUGAR phase

The overall pattern seems to reflect an idea of emphasising the space and place of the dead within the landscape (see Chapter 4). Not only were the cemeteries becoming more nucleated during the Classic Garamantian period, but the individual burials are also turning into marked *loci* in the landscape. It is during this period when we see the establishment of funerary furniture, and the further development of the proto-stelae and proto-tables seeing in earlier cemeteries into morphologically diverse stele and offering tables marking the tombs, particularly associated with Type 4 and Type 5 structures.



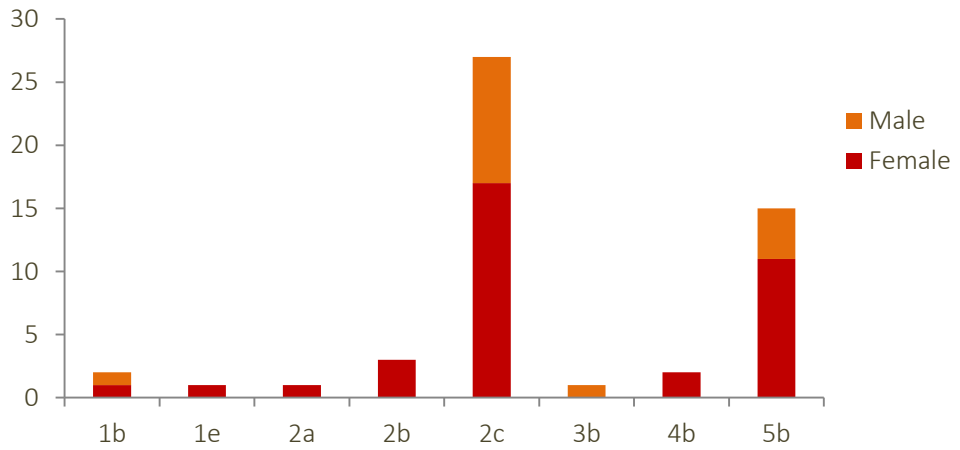
Graph 5.33. Choice of tomb typology by area during the CGAR phase

As stated above, I have only taken into consideration the funerary monuments where the identity of the individual is known, 87 tombs, which include the two Type 1b tombs in GSC048, which belong to children. With regards to the choice of tomb in relation to the sex of the individual, the data available does not indicate a preference towards a specific type neither in the PUGAR period nor the CGAR phase. The higher percentage of female burial excavated across the Wadi al-Ajal must be again highlighted and therefore some of the peaks noted in the graphs below are only indicative of this disparity of numbers.



Graph 5.34. Relation of type of funerary structure and sex during the PUGAR phase

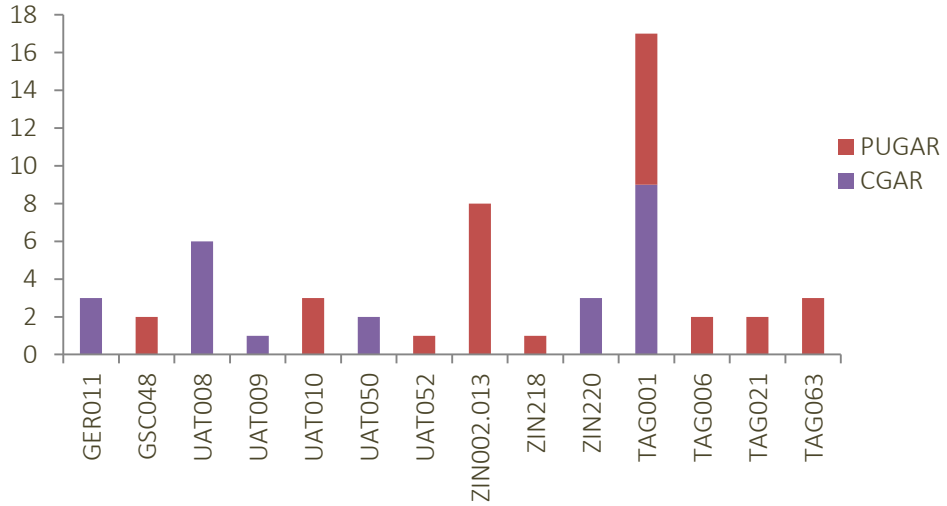
Still, the similarities of the treatment of the female and male members of society with regards to the funerary monument may be significant regarding the Garamantian perception of sex. The lack of differentiation of the female and male individuals suggests that, at least at the time of death, males and females are treated equally.



Graph 5.35. Relation of type of funerary monument and sex during the CGAR phase

❖ Treatment of the body

The individual analyses of the cemeteries provides information of the treatment of the dead body, which is central in the mortuary rituals, and can offer us an insight into the Garamantian attitudes towards the body and death. The treatment of the corpse contributes towards the redefinition of the person in his/her change of status from the community of the living to the community of the dead. This can also be seen as a means to maintain and reproduce a sense of a shared identity and community. Therefore, the study of the handling of the dead, the similarities and differences perceptible over time and space can provide an insight into changing or enhancing identity processes. The analysis presented here is limited to 54 tombs in 14 different cemeteries across the central area of the Wadi al-Ajal and belonging to both the PUGAR (55.5% of the tombs) and CGAR periods.

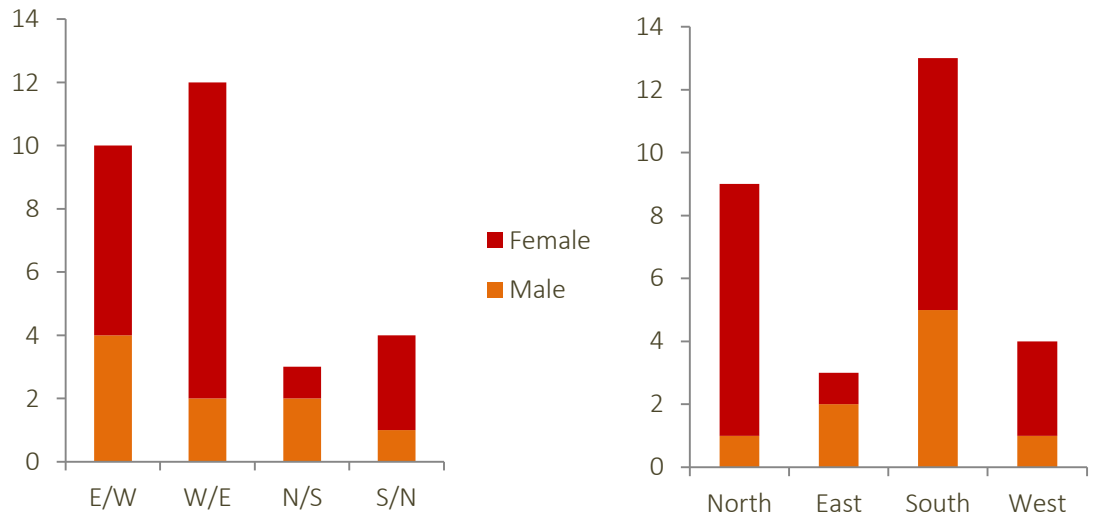


Graph 5.36. Number of tombs per cemetery analysed in this section

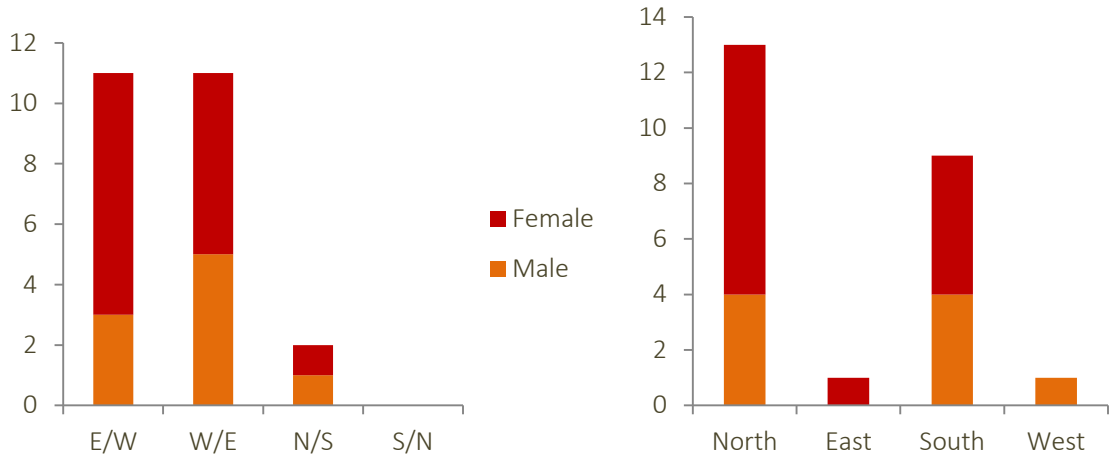
The *rigor mortis* usually appears between 2 and 4 hours after death and fully develops in 6-12 hours (DiMaio and DiMaio 2000:26). Therefore the preparation of the body would have started within two hours after death. This care may have included the washing of the body, but also the dressing of the person. The bodies were also adorned before interment, as it is evident from the multiple beads encountered associated with the dead in the burials. As I suggested above, the bodies were likely wrapped in textile at this stage, before being placed in the grave. In the case of the Garamantian mortuary practices, this treatment is identical for male and females both in the PUGAR and CGAR periods. 48% of the tombs analysed in this section had remains of textile, of

which 62% are female, and 31.5% had evidence of possible leather shrouds with similar proportions, 64% being female. Some of the bodies seen in the Wadi al-Ajal provide evidence that the dead person was also wrapped on a mat. However, this is not clear for the vast majority given the poor preservation of matting. What is more commonly seen is the placement of the body on matting which is usually covering the base of the grave and sometimes a portion of the sides.

With regards to the position and alignment of the body inside the tombs, it can be suggested that during the PUGAR period, although there is some variability of the alignment of the body, there is a clear preference for the east-west axis equally for both sexes, with 45% of them facing towards the south. This alignment seems to have been more formalised in the Classic Garamantian period where with the exception of two burials (one of each sex) all the bodies were placed on the east-west axis with 54% facing towards the north. The significance of this alignment is speculative but it can be suggested that the bodies were orientated within the range of sunrise or sunset, which may relate to the worship of the sun-god, the ram-headed Ammon mentioned by Herodotus (Mattingly 1994: 167-68). A possible astronomical motivation for the orientation of the dead can be supported by further solstitial markers reported in Fazzan (Belmonte 2002) which indicate the influence of astral elements in the Garamantian funerary and religious beliefs.



Graph 5.37. Alignment of the bodies (by sex) (left) and position (facing) (right) during the PUGAR phase



Graph 5.38. Alignment of the bodies (by sex) (left) and position (facing) (right) during the CGAR period

❖ Grave assemblages.

The final section of this chapter deals with the presence and absence of material goods and the similarities and differences noticeable across time and space with regards to the identity. The tombs provide a good insight of the materiality of the tombs and the Garamantian burial customs. As seen above, most of the tombs in the Wadi al-Ajal contained some sort of grave good. This section is divided in two parts, the first one dealing with the PUGAR phase and the second the CGAR period. In both sections the presence/absence of specific grave goods is presented in correlation with the funerary type, in order to establish whether or not a particular type of tomb implied a consequent set of rituals, and with the sex of the individual. Taking into consideration the fact that the treatment of the dead person was identical, regardless of the sex, the next thing to consider is the relation between the materiality of female and male burials.

PUGAR

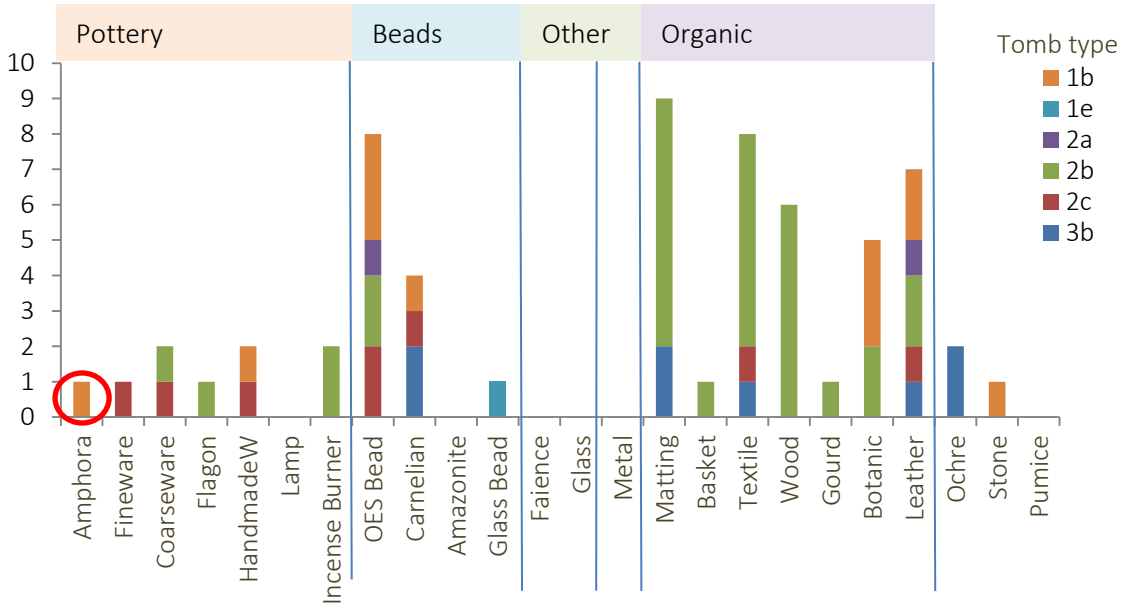
The Proto-Urban phase, as argued above, saw the development of more complex funerary structures and landscape. The tomb structures featured in PUGAR cemeteries have already been discussed (pp. 207-9). Taking into consideration the different types of artefacts, there is a wide distribution across the different tomb types. With the data available, it cannot be suggested that a particular type of tomb implied the presence of specific goods, moreover, there seems to be an equal distribution regardless of the morphological type. Only 5 tombs, 15% of those studied from the PUGAR period, have no evidence of goods associated with the burial, in equal proportion to males and females. These tombs fall into different morphological typologies, 1b, 2b and 2c.

The most common grave goods were artefacts made of organic materials and items of personal adornment. In the PUGAR period, the following categories of grave goods were identified:

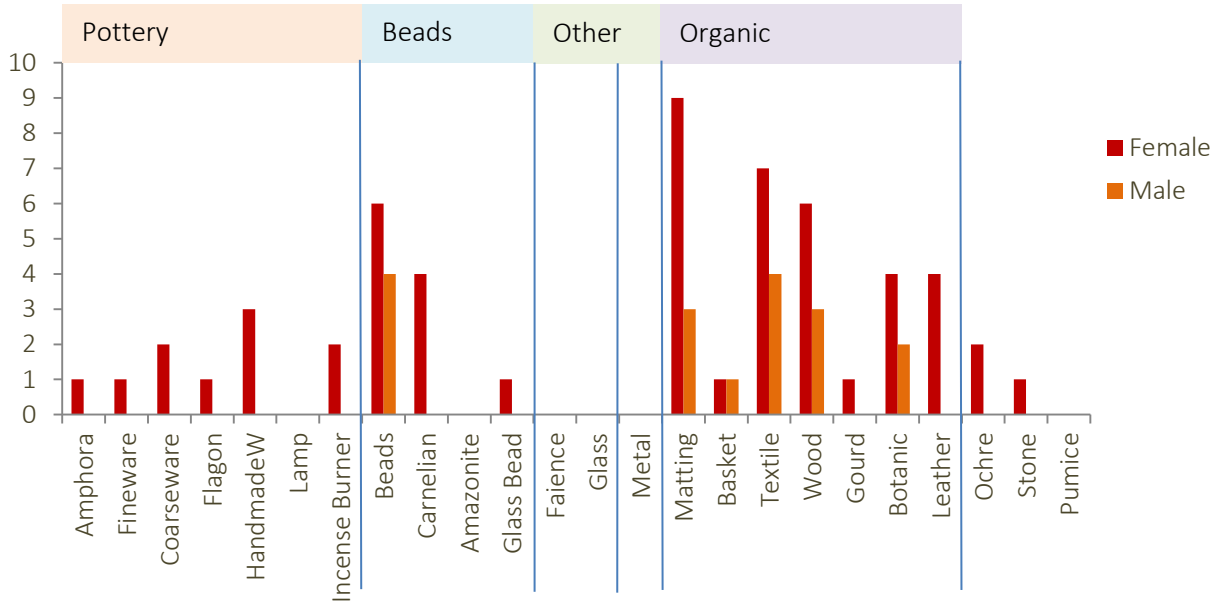
- Pottery, which included handmade wares, incense burners and jars, coarseware and fineware.
- Personal adornment: there are abundant beads, specially OES, carnelian and glass.
- Organic materials: matting, textile and leather are the most prolific. Wood, gourd and botanic offerings also been recorded.
- Colorants: small pieces of pigment composed of red ochre.

The presence of one single amphora sherd recorded in the fill of cairn UAT004.T1, circled in Graph 5.27, is probably not *in situ*. 22.2% of the tombs analysed had pottery within the assemblages

alongside organic materials. All of these burials with ceramic assemblages belonged to female individuals. OES beads have been recorded in 27% of the tombs, associated with both male and female burials, whist carnelian and glass beads have only been found in female burials.



Graph 5.39. Relation of presence/absence of artefact by tomb type during the PUGAR phase



Graph 5.40. Relation of presence/absence of categories of goods and sex

The most prolific finds are made of organic materials. These include the matting placed on the grave floor and textile and leather associated with burial shrouds. One type of artefact that is

distinctive from the burials of this period is the wooden headrest, recorded at Zinkekra. Wooden containers and botanic remains of food offerings (found in 18% of the tombs of both males and females), have also been recorded. The few remnants of ochre were recovered from female burials.

There seems to be more grave goods associated with burials of females in relation to those of males[4]. With the exception of the pottery, only found with females, the categories of goods represented for both sexes and children are more or less the same. The female burials contained more beads, associated with jewellery, than males. In general, in all of the investigated cemeteries from the PUGAR phase, there are no indications of social differentiation.

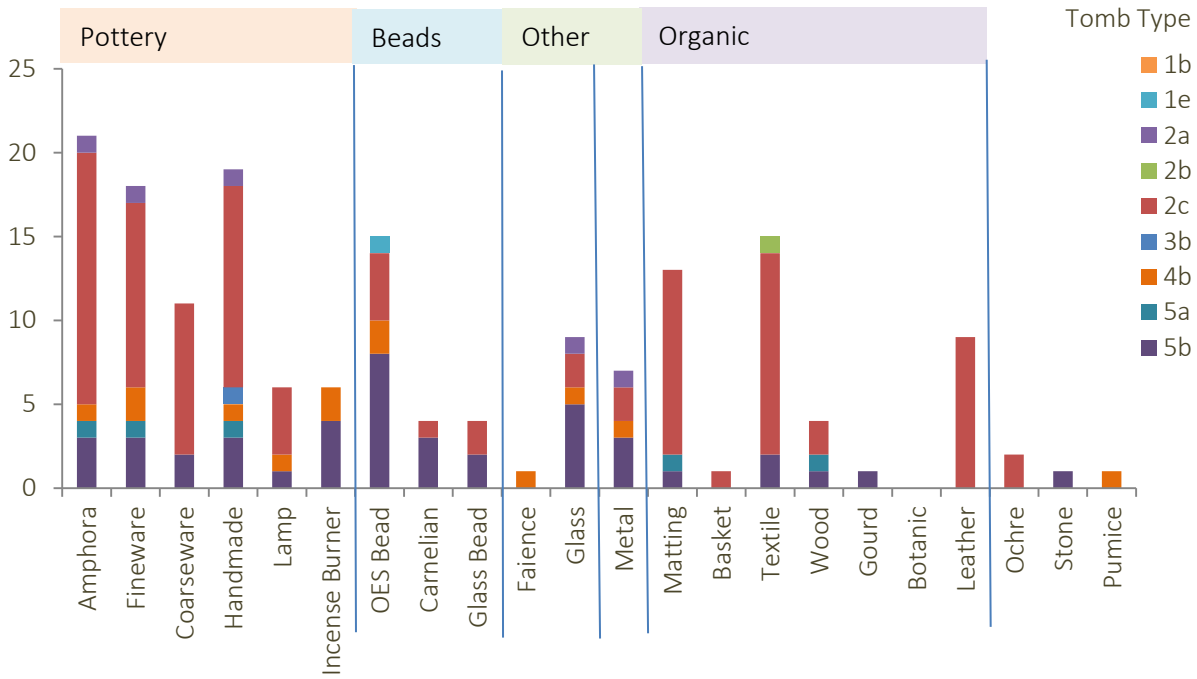
CGAR

If we consider the PUGAR phase as a formative period where the communities living in the Wadi al-Ajal were maintaining burial areas and creating a closer sense of identity and community, the CGAR period was when the Garamantian capital flourished, with its monumental architecture with Mediterranean influence. The Garamantian cultural identity, as seen in the funerary rituals, was eclectic, maintaining some of the established aspects of the PUGAR period but introducing foreign artefacts, indicative of the connection with Rome. With regards to the funerary monuments there is an extraordinary variability in the choice of type, ranging from cairns to stepped tombs.

The most common grave goods were ceramic artefacts, a high proportion of them being imported. In Taqallit particularly, we can see a clear combination of the more 'traditional' organic artefacts with some imported wares, whilst the presence of organic containers and materials was reduced across the Wadi al-Ajal, indicating a clear preference for the newly, and relatively widely, available imported ceramic artefacts. Items of personal adornment, textile garments and leather containers and shrouds are also present in these tombs. In this period, the following categories of grave goods were identified:

[4] The association of artefacts with female burials may be a reflection of the number of female burials excavated in comparison to those of male.

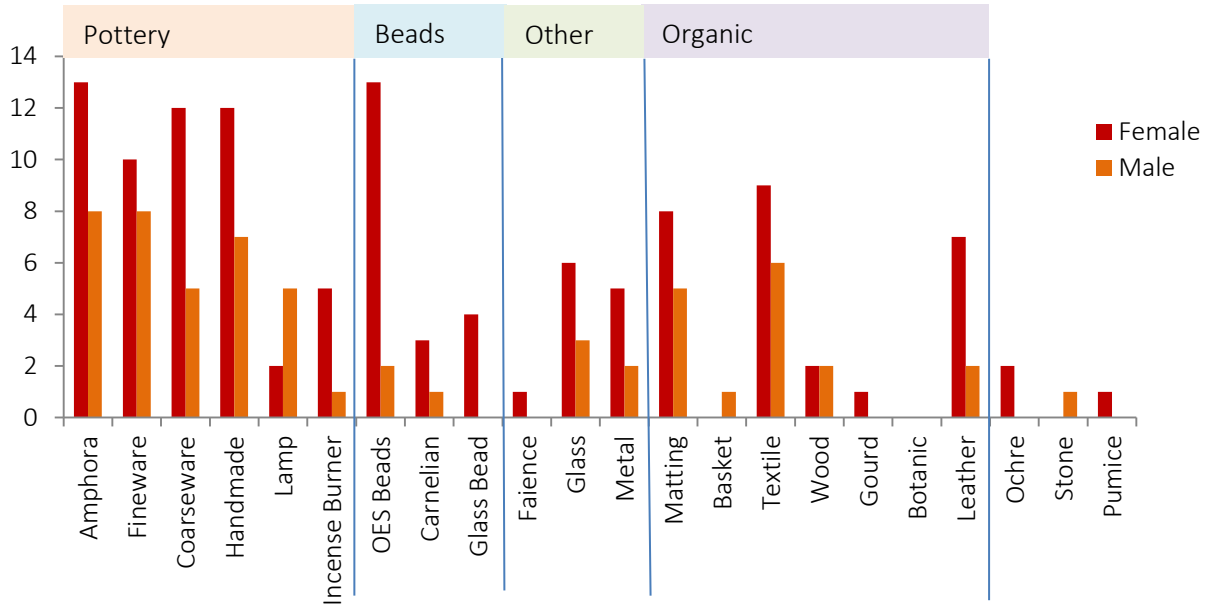
- Pottery, with a high proportion of them being amphora, present in 40% of the tombs, followed by handmade jugs (36%), imported finewares (34%), coarsewares (19%), lamps (13%) and incense burners (11%).
- Personal adornment: necklaces, bracelets and belts have been recovered producing abundant OES, glass and carnelian beads. There is also jewellery made of metals and ivory.
- Glass: imported drinking vessels and small containers.
- Organic materials are still represented by the matting (25% of the tombs) and textile garments and shrouds (29%). Leather is used to make small containers and the shrouds.
- Colorants: small pieces of pigment composed of red ochre.
- Stone, pumice



Graph 5.41. Relation of presence/absence of artefact by tomb type during the CGAR phase

With regards to the correlation between a particular set of artefacts associated with a specific type of tomb, it is clear that pottery predominantly encountered in the more monumental tombs, Types 3, 4 and 5 but was also present in Type 2c shaft burials. The quantity and quality of imported ceramics from the Mediterranean world seen in funerary contexts seem to have had its apogee in the 2nd century AD, indicative of close trading relations between Fazzan and the Roman world. The presence of ceramics was not influenced by the identity of the individual and both males and females were presented with imported grave goods, which indicates a good level of equality in these communities at least at the time of death. The same can be said for the other categories of artefacts, with the exception of personal adornment, which is more prolific in female burials. The increase of imported artefacts, both pottery, glass and faience, seems directly related to the

reduction in the use of organic containers. There are some exceptions, like some cemeteries at Taqallit, particularly TAG001, where more eclectic burials can be seen, introducing some imported pottery, mainly flagons, at the same time maintaining a more 'traditional' style burial, with flat organic containers and incense burners. The intensification of imported goods is emphasised more in the areas closer to Garama, where it is possible that the Roman goods were easier to access. Interestingly, the excavations in settlement areas have not produced large amounts of imported goods, which may be an indication that these were kept for specific practices, like the mortuary rituals.



Graph 5.42. Relation of categories of goods and sex

In relation to personal artefacts, beads are the most prolific. However, bracelets made of ivory and glass, and earrings and rings made of metals have been recorded. The small number of metal objects encountered in these tombs appears significant, with only 3.6% of the burials containing some metal. One explanation could be that metal was too valuable to include in the grave assemblages, but then how can we explain the presence of gold leaf in TAG012 or silver in GSC030? It can be suggested that metal was one of the reasons why these tombs were looted in antiquity. The significant number of beads encountered in some tombs, where the upper bodies were highly disturbed or missing all together can be an indication that the Garamantes may have worn metal adornment in the head. This is not implausible, given the living conditions of the area; the Garamantian clothing could have included a headdress for protection from the sun and wind, just

as the Tuareg living in the area still do. But more than just for purely practical reasons, the headdress can express life stages, class and gender and it can be important features of transition and rites of passage (Rasmussen 1995: 39-40).

As I will argue in Chapter 6, social differentiation, concerning status, can be suggested, given the quality and quantity of assemblages and the monumentality of some of the funerary monuments. The Garamantes amalgamated their own culture and beliefs, developed during the previous millennium, but particularly in the second half, with Mediterranean influence seen in monumental architecture, the mausolea and the materials which they adopted and adapted to serve their own purposes.

Chapter 6. Spatial analysis of funerary assemblages in the Wadi Al-Ajal.

In the preceding chapters, the funerary landscape of Fazzan and the morphological analysis of the cemeteries and funerary monuments were presented. This was the first stages of the analysis of the mortuary programme of the Garamantes. The placement of the grave monuments within the cemeteries and these within the wider landscape provided the initial steps towards an understanding of funerary rituals. The construction of the graves, their shapes and orientations as well as the funerary furniture accompanying them has been presented in Chapter 3. This was necessary in order to contextualise the spatial analysis and the interpretation of the funerary assemblages incorporated in this chapter. The purpose of this chapter, therefore, is to present the results from the spatial analysis of the funerary assemblages within the tombs excavated in various at Zinkekra, Watwat, Taqallit, Saniat bin Huwaydi and the Jarma escarpment. This chapter starts with an overview of the aims of the spatial analysis and an outline of the methodological framework for the analysis. I have carried out a systematic analysis of the human remains and grave goods of the Garamantian cemeteries where adequate documented records of the excavation of the graves, and information about the human remains, grave goods are available. Conclusions are drawn on the analysis following a diachronic approach as well as considerations based on sex and age.

6.1. Introduction

The focus of this chapter lies in the analysis of the funerary rituals/ceremonial practices, their variability and diversity. The individual graves are the primary unit of analysis. In doing so, I am assuming that the construction of the tomb, regardless if it is for one individual or for more, is one funerary ritual, therefore instead of dealing with the interment of each individual I will be looking into the individual tombs. For instance, one of the tombs for analysis, GER011.T33 contained the human remains of two individuals, an adult and a child or sub-adult; the funerary features have been analysed as a whole in order to achieve a better representation of the ritual programme involved. Nonetheless, the individual remains have been taken in consideration (when possible) in order to establish the position and location of the body in relation to the tomb and its material assemblages. Therefore, the variables of orientation, facing and position of the body have been

applied to each individual skeleton and analysed using the individual remains as the units of analysis.

❖ The human remains in Fazzan

The understanding of the burial practices of the Garamantes would not be complete without the skeletal remains of the deceased. These human remains are directly related to the living and how they manipulate the memory and identity of the deceased through the handling of the bodies and how they are buried. It is outside the scope of this thesis to present an extensive analysis of the skeletal remains documented from Fazzan. The readily available information has been summarised within each individual cemetery and the sex, age and degree of preservation of the bodies at the time of excavation alongside the location and orientation of the bodies – the orientation is indicated by a head-feet direction, for instance an east-west alignment indicates the head was to the east and the feet on the west. These variables have been taken into consideration when interpreting and discussing the burial practices in the individual cemeteries and the further discussion for the diachronic analysis. The most recent campaigns in the Wadi al-Ajal contain more detailed documentation than previously excavated cemeteries where the bodies were seen and understood as static objects rather than central to the funerary ritual.

❖ Description of the primary analytical techniques: Sector spatial analysis

Analysis of the spatial distribution of grave goods in relation to the body has been undertaken by plotting the position of artefacts as points on a general scheme of the grave pit at its bottom level. Due to the variability in the levels of preservation of the human remains two different types of division of the grave into spatial sectors were carried out in order to examine the relevant data.

As explained in section 3.1. in Chapter 3 (pp. 9-10), the grave pits have been divided into 16 sectors organised in reference to the compass North and 7 sectors relating to the position of the body. In the case of the 16 sector divisions, sectors 1-4 relate to the North side of the tomb, whilst 13-16 relate to the South.

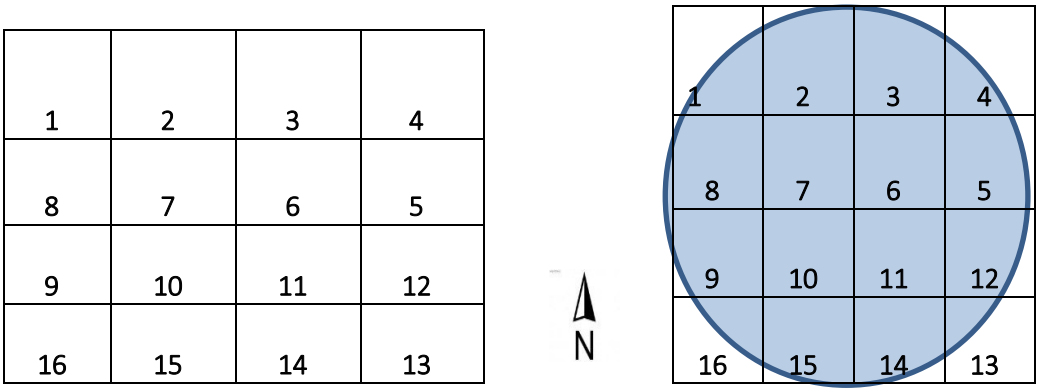


Figure 6.1. Sectors typology for spatial analysis of tomb assemblages.

With regards to the position of the body, sectors 1-3 relate to the area surrounding the head, 4 and 5 to the torso (and superior limbs), whilst 6-7 relate to the lower extremities and feet.

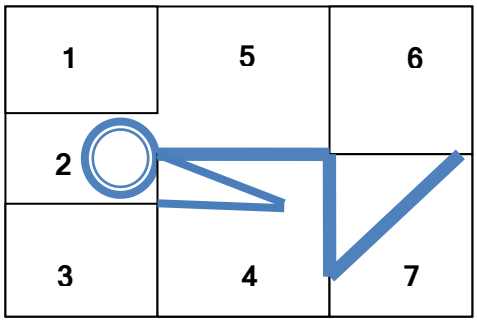


Figure 6.2. Sectors with relation to the position of the body.

These analyses have been carried out separately for every individual tomb. When the level of preservation of the human remains was poor or the recording of his/her accurate location and position did not allow an adequate examination of the funerary assemblages in relation to the body, only the 16-sector analysis has been carried out.

❖ The grave goods in Garamantian tombs

Within the 334 excavated tombs in Garamantian cemeteries, there were 236 graves where funerary assemblages were present, mainly inside the tomb, but not only so. The aim of this chapter is to consider the positioning of the individual type of artefacts within the burial chamber in order to recognise, if possible, recurring patterns and associations between the artefacts themselves and the identity of the deceased. Within the Garamantian assemblages there have been recorded organic material (in the form of seeds, matting, wooden artefacts and furniture,

etc.) and less perishable materials such as pottery (including imported and local wares), metal artefacts and personal adornment. These artefacts are studied as a whole assemblage within the individual tomb and in relation to the individual person buried there. In order to find out about variety and diversity of funerary rituals during the Garamantian periods it has been necessary to analyse these assemblages in groups depending on the type of material; for instance, pottery (with sub-groups when appropriate, explained in the individual sections of this chapter), glass, organic, personal adornment, etc.

❖ Grouping of artefacts

Multiple count artefacts often represent parts or portions of a composite artefact. The most obvious example in the case of the Garamantian cemeteries of the Wadi Al-Ajal in general, and particularly confounding in the cemetery site TAG001, are the necklaces, beaded belts and other personal adornments, composed of ostrich eggshell, stone and glass beads. To include an individual record of each individual component of these artefacts (for example the individual count of ostrich eggshell beads) would artificially inflate the number of culturally and ritually meaningful objects placed in the funerary feature. For instance, the catalogue of Saniat bin Huwaydi include 490 artefacts, if we take into consideration the individual count of beads this would be raised to 967 artefacts, which provides a false impression of the richness of the cemetery. An individual example, out of many, is the case of GER011.T25, if I were to take each individual artefact as such this tomb would have 294 artefacts, when in reality it has one imported coarseware vessel, two incense burners, one local made vessel and 290 ostrich eggshell beads. Therefore, I have decided to treat such composite artefacts as one item, giving a total of five artefacts for this tomb.

❖ Pottery typology

The typologies used to categorise the pottery recovered from the Wadi Al-Ajal and incorporated in this chapter relate to the FP Type Series, which includes both imported and locally produced wares in a wide range of fabrics and covering a long period of time (Dore *et al.* 2007: 305-431, expanded in Mattingly 2013). Further reference and specific information on these ceramic materials is available in a wide set of publications by Dore (in D.J. Mattingly *et al.* 2007a, 2007b, 2008, 2010a) Leitch (in D.J. Mattingly *et al.* 2009, 2010b, 2011) and Leone (in D.J. Mattingly *et al.* 2010b, 2011).

❖ Comments on the statistics of the funerary assemblages

In order to be able to summarise quantitatively the artefacts associated with the funerary monuments, I have added two variables: the artefact count and diversity of artefacts. Firstly, the artefact count, which is simply a count of the number of individual artefacts recovered from a burial. The second variable is the relative richness of the artefacts, which involves the calculation of different types of artefacts within the funerary assemblages. Taking into consideration the diversity of the objects inside the tomb rather than the quality is less subjective and less sensitive to distortion from incomplete databases (i.e. loss of information during excavation, analysis and reporting of data).

❖ Remarks on the cemeteries

The table below summarises the cemeteries available for the spatial analysis carried out in this chapter. The table also states the number of tombs analysed per cemetery. Out of the 46 Garamantian cemeteries excavated in the Wadi Al-Ajal, 23 have been published to the required information for the analysis to be carried out. The vast majority of these burials are inhumations and in order to fulfil the criteria for the spatial analysis a specific level of preservation and articulation of the human remains was necessary. There are a total of 143 individuals of various ages and sex. The age distinction, when possible, has been established in the summaries within the cemetery information in the individual sections.

Location	Cemetery	No. of tombs analysed in Chapter 6
Jarma (Saniat bin Huwaydi)	GER011	15
Jarma Escarpment	GSC030	10
Jarma Escarpment	GSC031	8
Jarma Escarpment	GSC042	1
Jarma Escarpment	GSC048	2
Watwat	UAT004	1
Watwat	UAT008	17
Watwat	UAT009	1
Watwat	UAT010	2
Watwat	UAT050	3
Watwat	UAT051	2
Watwat	UAT052	5
Watwat	UAT055	1
Watwat	UAT056	2
Zinkekra	ZIN013	8
Zinkekra	ZIN218	1
Zinkekra	ZIN220	5
Taqallit	TAG001	9
Taqallit	TAG006	2
Taqallit	TAG012	5
Taqallit	TAG021	1
Taqallit	TAG054	1
Taqallit	TAG063	2
		TOTAL: 104

Table 6.1. Summary of cemetery sites in the Wadi al-Ajal analysed in this chapter.

6.2. Saniat bin Huwaydi

6.2.1. General description of the dataset

In all, 64 burials were excavated at Saniat bin Huwaydi, of which 42 contained articulated human remains, including several double inhumations. In total, 490 artefacts were recorded and catalogued, in addition to 477 beads (of which 409 are Ostrich Egg Shell - OES). Out of these individual burials, for the analysis presented here, only the tombs with human remains in articulated state accompanied by artefacts were used. Most of these correspond to the excavations of Daniels as, unfortunately, Ayoub's records are scarce. The records provided by Daniels suggest that he encountered some funerary monuments with well-preserved skeletal remains but with no associated material found within the tomb (i.e. T20; T37; T46) or where the ceramic artefacts are recorded 'in the general area' (for example T24; T41; T50). I have disregarded these tombs for the spatial analysis. Therefore, the sample for the spatial analysis of funerary assemblages in the cemetery site of Saniat bin Huwaydi consists of 15 tombs[1] -23.4% of the excavated tombs - with the remains of 23 individuals and 179 artefacts (not including beads).

The treatment of the bodies in Saniat bin Huwaydi follows the same characteristics as the ones in Zinkekra and Watwat. The predominant type of burial is inhumation, despite Ayoub's claim to have recovered a cremation in GER011.TA2.3 (Mattingly *et al.* 2010a). The human remains have been recorded being crouched and wrapped in matting or leather. There are records of textile and red colouring (probably ochre) inside the tombs. The disturbance by robbing of the cemetery leaves an incomplete record of the position and orientation of the bodies within the graves. Also, the poor preservation of the human remains and the associated organic material has been affected by the water table in the oasis centre. Despite these, it can be suggested that most of the burials were on an east-west alignment.

[1] Tombs analysed in this section are; T1 (Late 1st century- early 2nd century AD); T9 (Early- mid 2nd century AD); T12 (2nd-3rd century AD?); T15 (Late 1st- early 2nd century AD); T17 (Late 1st century- early 2nd century AD); T25 (Mid-late 3rd century AD); T33 (2nd century AD?); T34 (2nd century AD); T40 (4th century AD?); T42 (Late 1st- early 2nd century AD); T45 (4th century?); T49 (4th century); T51 (Late 1st- early 2nd century AD); T52 (Late 1st- early 2nd century); T53 (Late 1st- 2nd century).

Tomb Number	Phase	Tomb Typology	Age	Sex	Orientation (head/feet)	Position
GER011.T1	CGAR/I	4b	Unknown	Unknown		
GER011.T9 (i)	CGAR/I	4b	Adult	Female	North-South	Left side facing east
(ii)			Sub Adult	Unknown		
GER011.T12	CGAR/II	3b	Adult	Unknown		
GER011.T15 (i)	CGAR/I	5b	Adult	Unknown	West-East	Left side facing north
(ii)			Adult	Unknown	West-East	Right side facing southwest
GER011.T17	CGAR/I	4b	Adult	Unknown	East-West	Left side facing south
GER011.T25	CGAR/II	4b	Adult	Female	West-East	Right side facing south
GER011.T33 (i)	CGAR/III	3b	Adult	Unknown	North-South	Right side facing west
(ii)			Child	Unknown	North-South	Left side facing east
GER011.T34 (i)	CGAR/II	4b	Adult?	Unknown		
(ii)			Child?	Unknown		
(iii)			Adult?	Unknown		
(iv)			Adult	Unknown	East-West	Left side facing south
GER011.T37	CGAR/III	3b	Child	Unknown	West-East	Left side facing north
GER011.T40	CGAR/III	3b	Child	Unknown	North-South	Right side facing west
GER011.T42 (i)	CGAR/I	5b	Adult	Male	East-West	Left side facing north
(ii)			Adult	Unknown	East-West	Left side facing north
GER011.T45	CGAR/III	3b	Adult	Male?	West-East	Left side facing north
GER011.T49	CGAR/III	2a	Child	Unknown	East-West	Right side facing north
GER011.T51 (i)	CGAR/I	4b	Unknown	Unknown		
(ii)			Unknown	Unknown		
(iii)			Adult	Unknown	West-East	Left side facing north
GER011.T52	CGAR/I	5b	Adult	Unknown	West-East	Right side facing south
GER011.T53	CGAR/I	4b	Adult	Unknown	East-West	Left side facing south

Table 6.2. Summary of human remains in tombs analysed in this chapter

Phase	Date
Phase I	Late 1st century to early 2nd century AD
Phase II	Late 2nd century AD to early 3rd century AD
Phase III	Late 3rd century AD to 4th century AD

Table 6.3. Chronological phases of Saniat bin Huwaydi

6.2.2. Material culture

The funerary assemblages of Saniat bin Huwaydi are extremely varied and rich. Although subject to plundering, especially of higher burials, the excavations provide an insight into the furnishings of the tombs. There is a wide variety of ceramic artefacts both imported and local wares. The imported wares are amphorae, finewares, coarsewares and lamps, along with the local handmade wares (incense burners and jars). It is worth noting at this point that despite the large number of ceramic vessels recovered from Saniat bin Huwaydi not all tombs contained a ceramic vessel.

There is poor preservation of organic materials due to the high water table, though the excavations noted the presence of textile, basketry, matting, leather and decorated gourd. This can now be compared to other contemporary cemeteries in the Wadi al-Ajal (for instance TAG001), where the preservation of organic material has highlighted the importance of these artefacts within the funerary assemblages.

Saniat bin Huwaydi has provided us with a large sample of amphorae recovered from the funerary structures: Ayoub's excavations retrieved a minimum of 61 amphorae (with another possible 50) along with 31 found by Daniels. The intact amphorae have been recovered from phase I tombs (1st-early 2nd centuries). Most of these amphorae seem to be of Tripolitanian production (Mattingly *et al.* 2010a: 332).

Finewares recovered from Saniat bin Huwaydi include Italian Sigillata, African Red Slip Ware and Tripolitanian Red Slip Ware. The most represented form is Dragendorff 18, a small dish with pedestal base (Mattingly *et al.* 2010a: 313). Some of these artefacts have stamps and graffiti. The stamps provide us with information regarding the provenance of the artefacts, mainly from Pisa. There are 35 imported lamps recovered from Saniat bin Huwaydi, dating from the 1st-5th centuries, which are mainly of African production. Imported coarsewares seem to be uncommon, with flagons and jugs – related to drinking, been the most prominent vessels. The coarsewares are of Tripolitanian and Tunisian origin (Mattingly *et al.* 2010a: 337).

Figure 6.3. Examples of lamps recovered from Saniat bin Huwaydi (Mattingly *et al.* 2010a: 223).

The local handmade ware is presented by incense burners, in the shape of a cup on a tripod on a flat base with a wide handle, and jars, commonly hand-painted in reds and whites with geometrical patterns (Figure 6.4). These local wares have been included in the tombs in addition to the imported vessels. The local wares in Saniat bin Huwaydi are handmade in a range of Berber Red fabrics (Mattingly 2010a: 339). The jars, although also recorded inside the tombs, are more usually found in the vicinity of the offering tables, outside the tombs.

Figure 6.4. Example of local ware from Saniat bin Huwaydi (Mattingly *et al.* 2010a: 237).

There are numerous examples of glass and faience vessels recovered from Saniat bin Huwaydi which parallels the ceramic assemblage in terms of the most common forms and shapes. Small dishes, flagons, bottles and cups have all been recovered from the tombs (Figure 6.5). The glass vessels relate to the earliest phase of the cemetery (late 1st century- early 2nd century AD). The most common are the pillar moulded bowls, frequently found in large numbers in Roman Africa. Other types of glass vessels are *modioli,* a cylindrical vessel with a single handle and out-turned rim (Hoffmann 2010: 416), which are the largest (in size) known examples of a generally small northwest vessel. This cemetery also produced surprisingly large tubular rimmed bowls, usually found in the Roman provinces. A square bottle (GER011.T51) and a small flagon made of mould-blown glass (GER011.TA1.6) have also been recorded (Hoffmann 2010: 415-417). Along with glass, there are 20 faience vessels dating to the first phase of the cemetery. The morphological types range from cups and bowls, to a rectangular dish and a figured urn (Hoffmann and Tagart 2010: 426).

Figure 6.5. Faience finds from GER011 (Mattingly *et al.* 2010a: 234).

Items of personal adornment in this cemetery have been found in the form of glass bangles, metal objects and beads. These have been manufactured from different materials, including faience, glass, carnelian, amazonite and ostrich egg shell. A fragment of a mother of pearl shell amulet has also been recovered. The metal artefacts recorded are two copper alloy rings and a couple of copper alloy riveted plates. A strip of copper from GER011.T53 has been interpreted as a belt or strap end used with leather or textile (Hoffman *et al.*2010: 475). Some iron fragments, in a poor state of preservation and corrosion due to the high water table, have been identified as a possible blade and two nails (Hoffman *et al.* 2010: 476). A note has been made of silver threads in GER011.T17, although there is no further information about these.

Interestingly, there are various tombs that have small pieces of pumice stone, imported from outside Jarma. Chalk and ochre are also encountered in these tombs. Along with these fragments, there are saddle querns, chronologically from the late 1st century AD. The saddle querns have been morphologically categorised as, firstly, a large flat oval type, manufactured from different type of stones and a narrower thicker form. The first type has been associated with tombs of the late 1st century AD, whilst the second type related to the 2nd century AD (Mattingly *et al.* 2010a: 341).

Finally, although very badly preserved due to the natural surroundings of the cemetery site, the presence of organic materials has been recorded in various tombs. Textile and leather shrouds are likely to have been part of the funerary dressing of the deceased, although what survives in the archaeological record is very fragmentary. The case is the same for matting and basketry and gourd. However, the preservation of these materials in other contemporary cemeteries in the vicinity of Saniat bin Huwaydi highlights the relevance of their inclusion in the funerary assemblages as well as morphological information.

6.2.3. Comments the data from Saniat bin Huwaydi for this part of the research.

Table 6.8 provides a summary of the sex and age of the individual tombs used in this part of the analysis along with the summary of the artefact categories. I have grouped specific individual artefacts together in order to represent the original state of the artefact rather than the recovered form from the archaeological record (for instance, when various sherds of an individual vessel are recorded).

Tomb Number	Phase	Age	Sex	Amphorae	Fineware	Local ware	Lamps	Incense burners	Flagon	Glass	Faience	Adornment	Metal	Organic	Stone	Grave diversity	Goods count
GER011.T1	CGAR/I	*Unknown*	Unknown	X		X					X	X			X	5	5
GER011.T9	CGAR/I	Young Adult	Female	X	X		X	X		X	X	X			X	8	13
GER011.T12	CGAR/II	Young Adult	Unknown		X		X		X							3	3
GER011.T15	CGAR/I																
(i)		Adult	Male	X	X		X	X				X			X	6	17
(ii)		Young Adult	Male														
GER011.T17	GAR/I	Adult	Unknown	X	X	X	X	X	X	X	X				X	9	73
GER011.T25	CGAR/II	Adult	Female		X			X				X				3	3
GER011.T33	CGAR/III																
(i)		Adult	Unknown	X	X							X	X			4	4
(ii)		Adolescent	Unknown														
GER011.T34	CGAR/II																
(i)		Young adult	Male		X	X		X	X							4	6
(ii)		Adult	Unknown														
(iv)		Mid Adult	Female														
GER011.T40	CGAR/III	Child	Unknown			X						X				1	2
GER011.T42	CGAR/I																
(i)		Adult	Male	X	X	X	X			X	X				X	7	22
(ii)		Adult	Unknown														
GER011.T45	CGAR/III	Adult	Male?			X										1	1
GER011.T51	CGAR/I																
(i)		*Unknown*	Unknown	X	X	X	X	X	X	X	X	X		X	X	11	31
(ii)		*Unknown*	Unknown														
(iii)		Adult	Unknown														
GER011.T52	CGAR/I	Adult	Unknown	X	X	X	X	X		X					X	7	30
GER011.T53	CGAR/I	Adult	Unknown	X			X			X	X	X	X		X	7	13
GER011.T54	CGAR/III	Adult	Female	X	X	X				X		X	X			6	7

Table 6.4. Age and sex relation and grave assemblages.

6.2.4. Results of the sector spatial analysis in GER011.

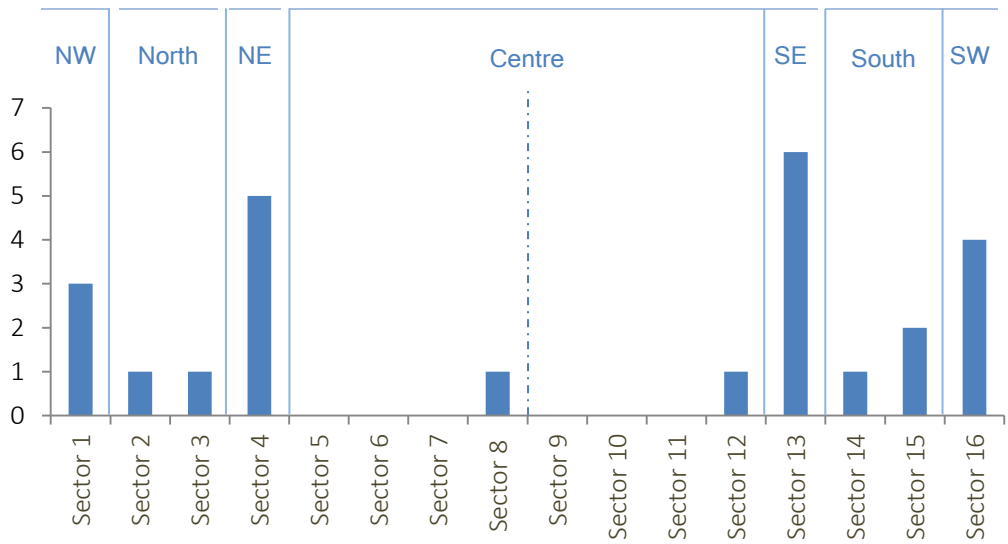
This section describes the position of main grave goods (amphorae, ceramics, lamps, glass, and faience) along with the funerary furniture and material culture recorded outside the burial chambers. Graphs are presented to indicate which artefacts appear more frequently and where in relation to the corpse and the tomb itself. The analyses were done for each individual tomb in which the position of the corpse was clear. The relative small sample size does not allow at this moment a comparative analysis based on sex and age, single and multiple burials.

❖ Amphorae

Only the amphorae from Phase I tombs have been used for the spatial analysis due the good preservation of both the tombs and the intactness of their contents. The amphorae had been opened before being added into the tombs.

Amphora Type	Description
Type 9	Amphoroid jar of which no parallels are known
Type 15	Small to medium amphora with ellipsoidal body and poorly developed shoulders
Type 18	Amphorae of Punic tradition (Van der Werff 1978), these are the earliest amphorae currently known in the Tripolitanian pre-desert
Type 19	Small cylindrical body with a short neck and a hollow basal spike. There are only ten examples of this type recorded and all of them were found in GER011
Type 22	Small ellipsoidal body with a conical neck. A stubby basal spike similar to the Tunisian 'Africana' series
Type 24	Mid Roman Tunisian amphora with a short cylindrical body and a conical neck. This form has affinities with the Tunisian 'Africana I' series
Type 26-28	Amphorae with short, broad, cylindrical body with a conical neck and flanged rim. Similar to the mid-Roman 'Africana' series of Tunisian origin (Dore et al. 2007: 353-356). All of the samples from these types have been recovered in the tombs from Phase I in Saniat bin Huwaydi.

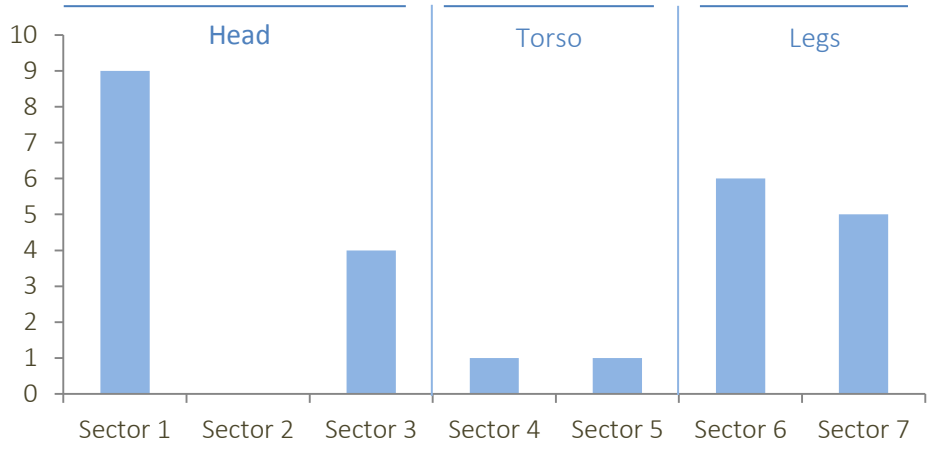
Table 6.5. Typologies of amphora recovered at Saniat bin Huwaydi (after Dore *et al.* 2007: 338-56)



Graph 6.1. Spatial analysis of amphorae in Saniat bin Huwaydi.

The amphorae in the tombs in Saniat bin Huwaydi were generally located behind the back and lower extremities of the corpse, and in the corners of the tombs. In relation to the position of the body, the most frequent location is behind the head (35%). Amphorae in Saniat bin Huwaydi were

never located near the crown of the head. 52% of the amphorae were located in the south side of the tombs. It must be noted that 44% of them were place in the eastern corners of the grave.



Graph 6.2. Spatial analysis of amphorae in Saniat bin Huwaydi in relation to the body.

❖ Fineware

Terra Sigillata is the most prolific type of fineware recorded in GER011, making 58% of the material, 65% of which consists of Type 515. Small amounts of Easter Sigillata, South Gaulish Sigillata are also represented alongside African red Slip Ware and Tripolitanian Red Slip Ware.

Fineware Type	Description
FW509	Eastern Sigillata A, late 1st century AD. Example recovered in T17 (1)
FW511	Italian Sigillata, mid-late 1st century AD. Example recovered in T17 (1)
FW512	Italian Sigillata, mid-late 1st century AD. Examples recovered in T17 (2)
FW513	Italian Sigillata, late 1st century AD. Examples recovered in T15 (1), T17 (2)
FW515	Italian Sigillata, late 1st century AD. Examples recovered in T15 (5), T17 (19), T42 (2), T52 (5)
FW516	South Gaulish Sigillata, late 1st- early 2nd century AD. Example recovered in T52 (1)
FW517	Glazed Ware (Italian?), late 1st century AD. Example recovered in T51 (1)
FW519	African Red Slip Ware, late 1st – early 2nd century. Example recovered in T15 (1)
FW529	African Red Slip Ware, 2nd century? Example recovered in T51 (1)
FW530	African Red Slip Ware, late 1st – mid 2nd century AD. Example recovered in T9 (1)

Table 6.6. Typologies of Fineware encountered in the tombs examined (after Dore et al. 2007: 328-335).

The spatial distribution of sigillata vessels (no differentiation has been made here by vessel form given the significant presence of FW515 form) is fairly even across the north (45%) and centre area of the tomb (30.5%). These artefacts were mostly placed in the area behind the head or in front of the buried individual.

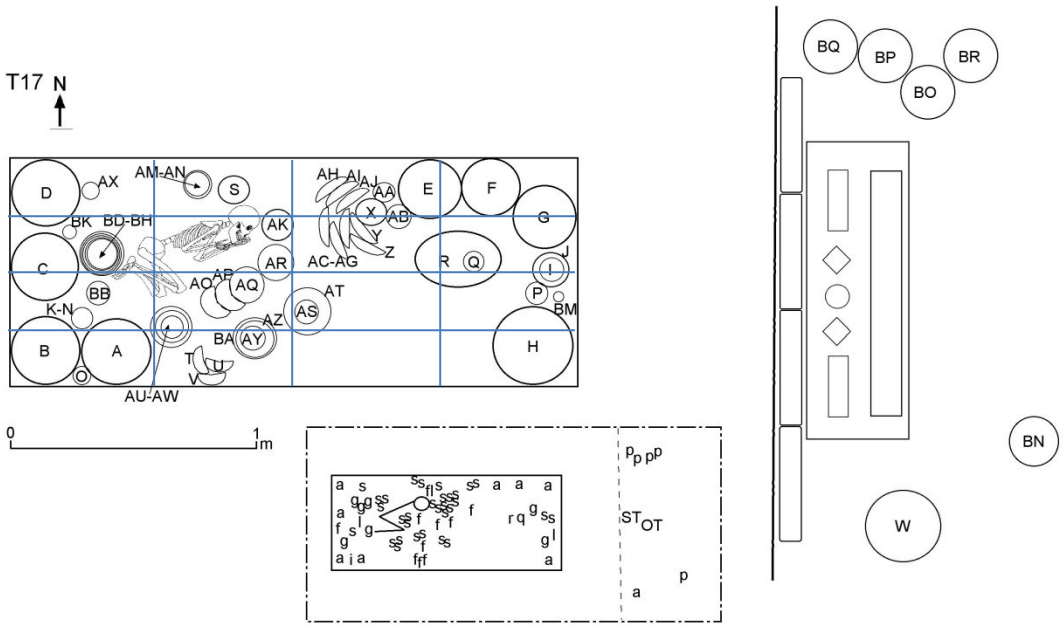
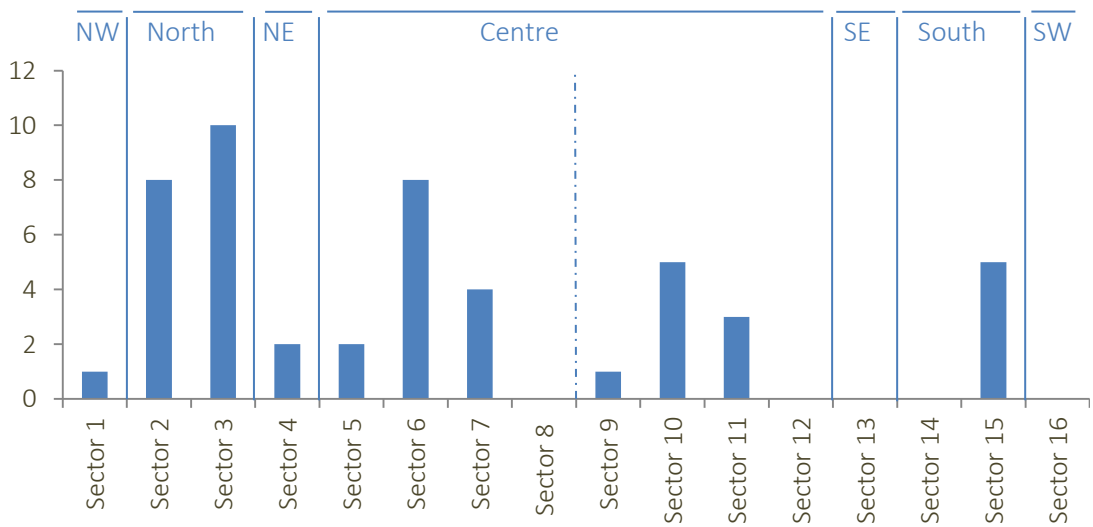
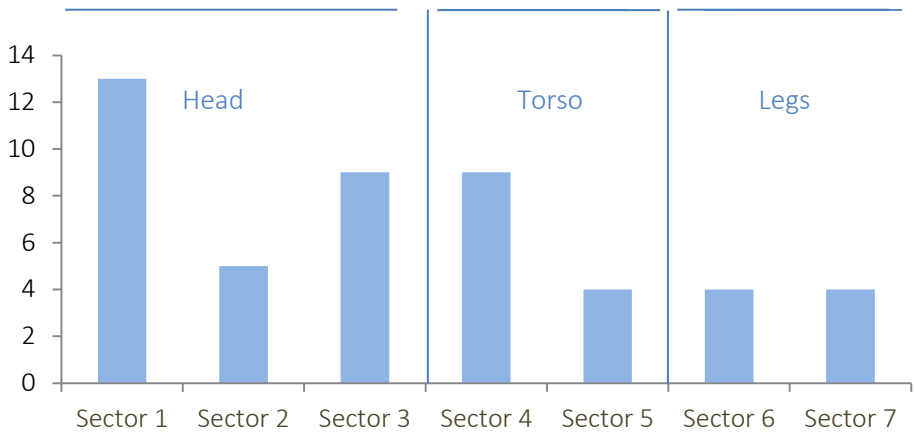


Figure 6.6. Schematic representation of T17, showing the position of artefacts within the tomb. The letters signify the catalogue number in the top drawing. The bottom image represents the type of artefact (a=amphora; g=glass; f=flagon; s=sigillata; q=quern; r=rubber; i=incense burner; l=lamp; p=handmade pottery (Drawing by Author).



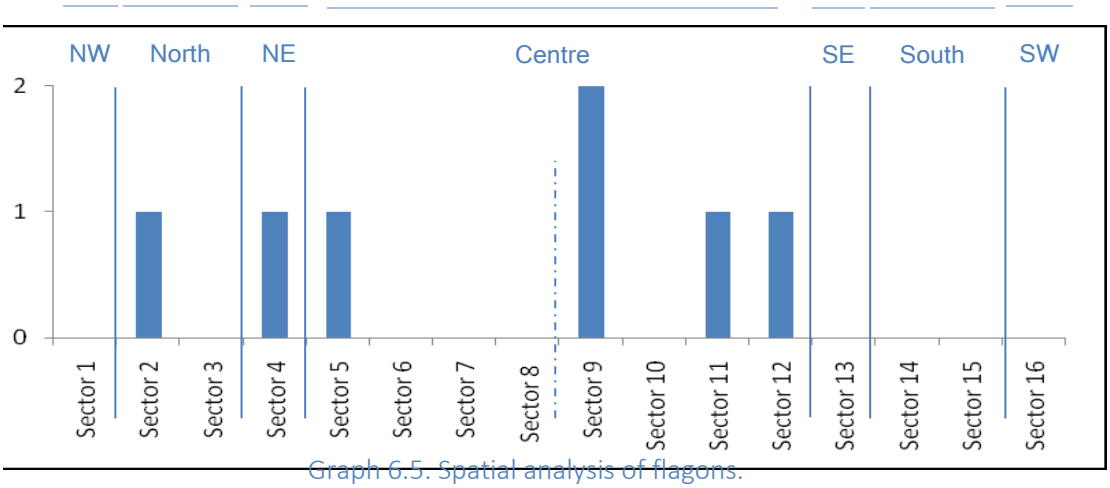
Graph 6.3. Spatial analysis of Sigillata vessels.



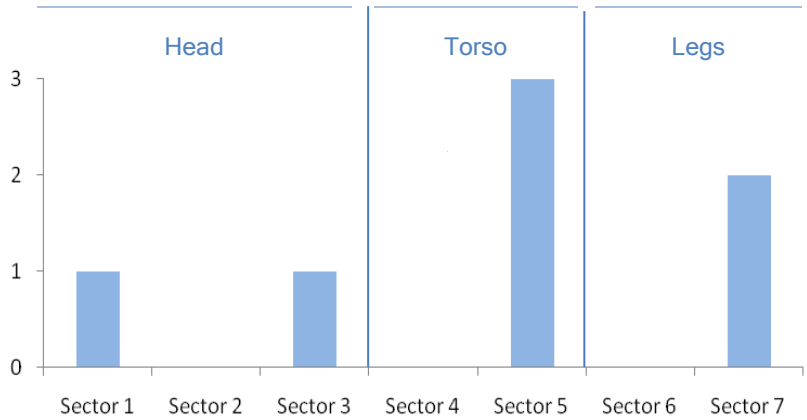
Graph 6.4. Spatial analysis of Sigillata vessels in relation to the body.

❖ Flagons

A small example, 7 flagons, has been recovered from GER011. This form appears evenly spread across the grave pits, yet avoiding the corners. In relation to the body, there seems to be a preference for the lower half and the back of the deceased.



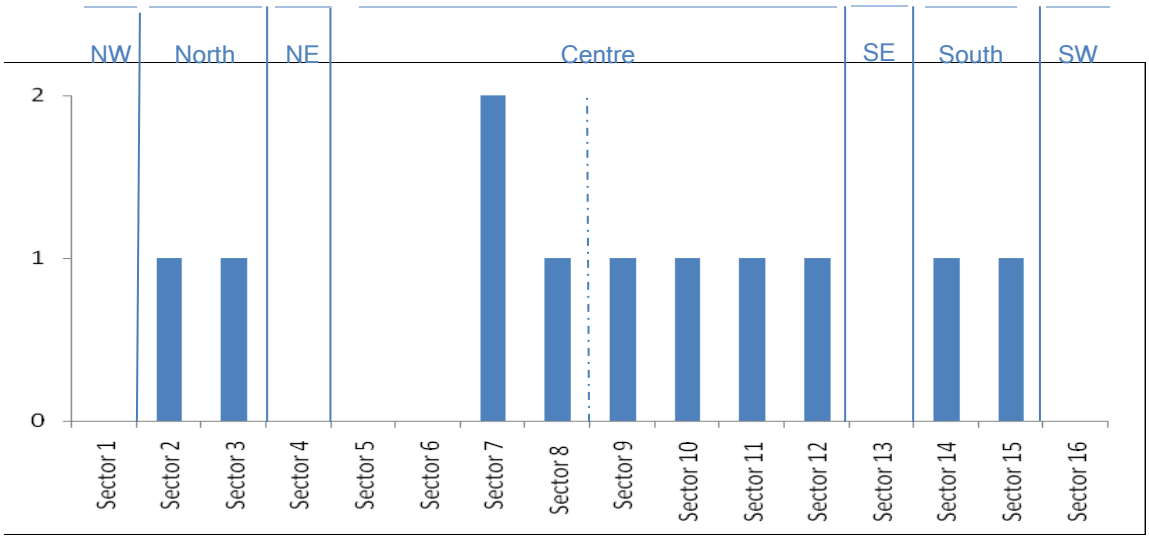
Graph 6.5. Spatial analysis of flagons.



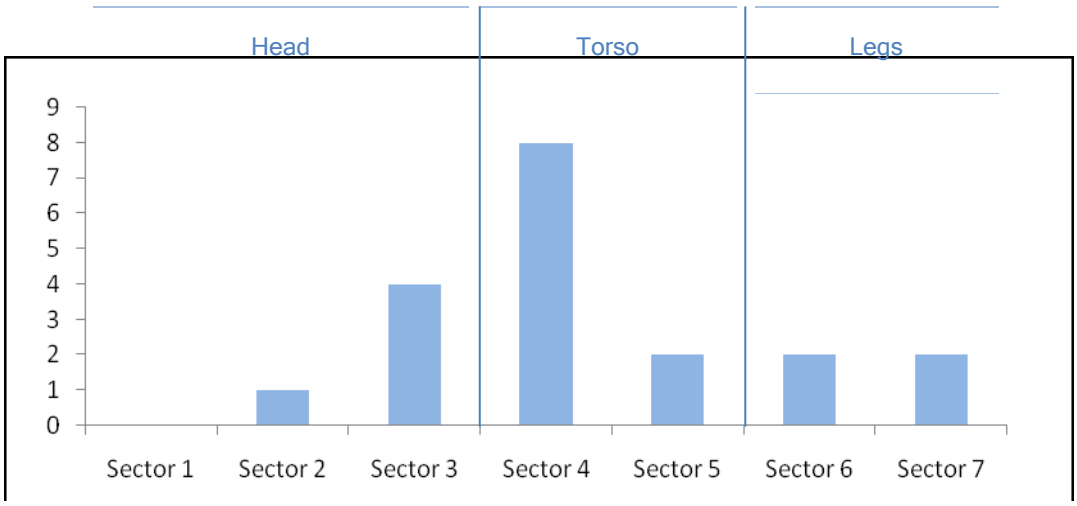
Graph 6.6. Spatial analysis of flagons in relation to the position of the body.

❖ Lamps

There are 35 lamps, the majority of African production (for details on these lamps refer to Mattingly *et al.* 2010a: 327-331), recovered from the excavations of Ayoub and Daniels. Out of these 35, 11 lamps have been recorded in relation to the body. The variability in the placement of the lamps within the grave pit is very high both in relation to the corpse and the whole grave. There is a preference for the front torso area, with 52% of the lamps being located close to the upper half of the body. The only place where there are no records of lamps is in the area directly behind the head.



Graph 6.7. Spatial analysis of lamps.

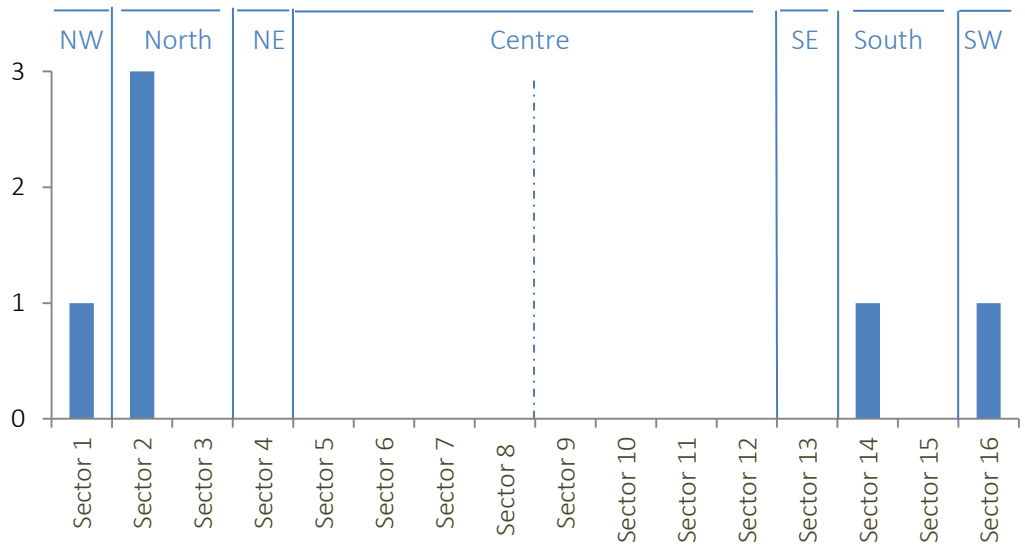


Graph 6.8. Spatial analysis of lamps in relation to the position of the body.

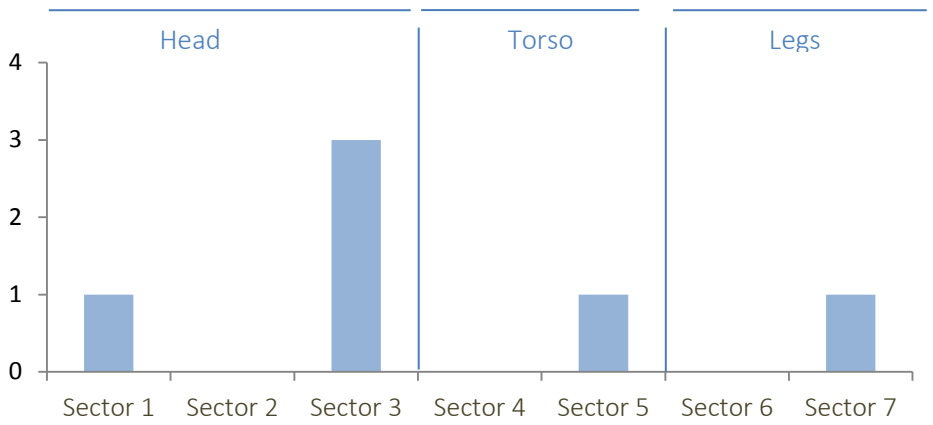
❖ Incense burners

The published records of Ayoub and Daniels highlight the presence of imported Roman ceramic assemblages and do not stress the importance and relevance of the locally produced artefacts that were included in burial rituals in the Wadi al-Ajal. There is a considerable presence of local handmade wares in the tombs, although the level of preservation is highly variable. Incense burners are one of the recurrent types of local wares. These incense burners take the form of a cup on a tripod over a flat base and a wide handle. Some of the incense burners are decorated with painted spots or stripes. Although 14 incense burners have been recovered from eleven tombs excavated by Ayoub and Daniels, only six have been used in the spatial analysis. It must also be noted that fragments of these artefacts are likely to have been missed due to their crumbly nature in the archaeological context.

Incense burners, handmade and locally produced, were concentrated towards the northwest corner of the grave pit (58%). In relation to the position of the body it is mainly found in the area near the head of the deceased, particularly in front of the face (43%). There is insufficient data on the sex and age of the human remains to be able to establish differential treatment neither between males and females nor between adults and children



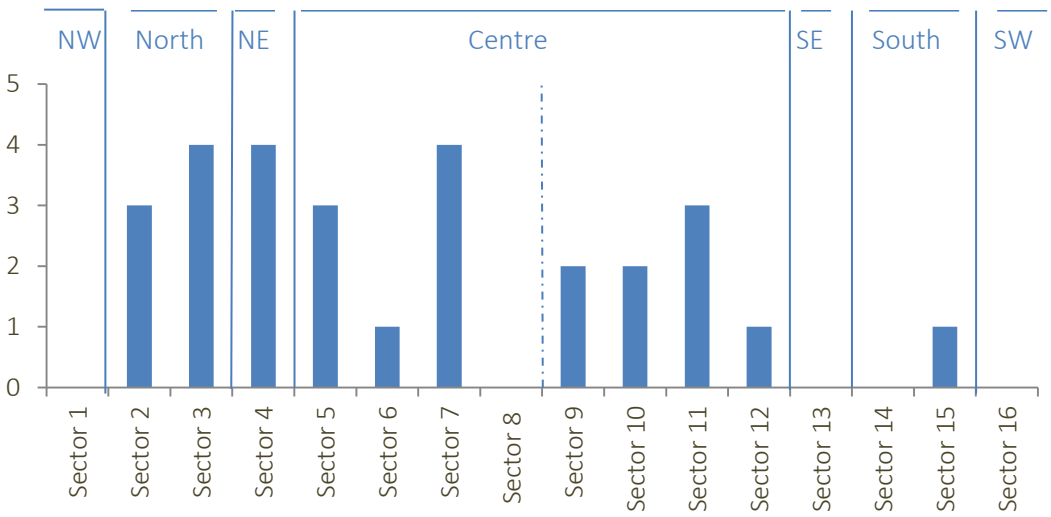
Graph 6.9. Spatial analysis of incense burners.



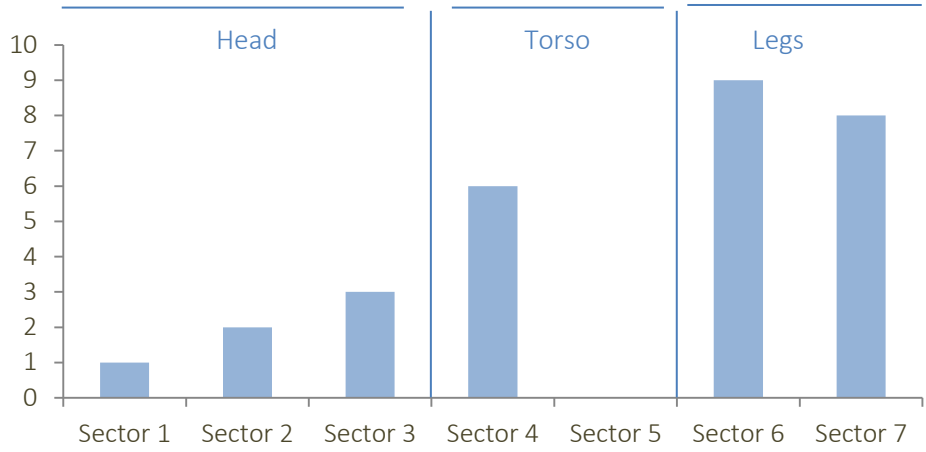
Graph 6.10. Spatial analysis of incense burners in relation to the body.

❖ Glass

Glass has a similarly wide spatial distribution within the funerary assemblages at Saniat bin Huwaydi, although there is a preference to avoid the corners of the tombs. In relation to the human remains, 58% of the glass in Saniat bin Huwaydi has been found in the area of the lower limbs and the front of the body.



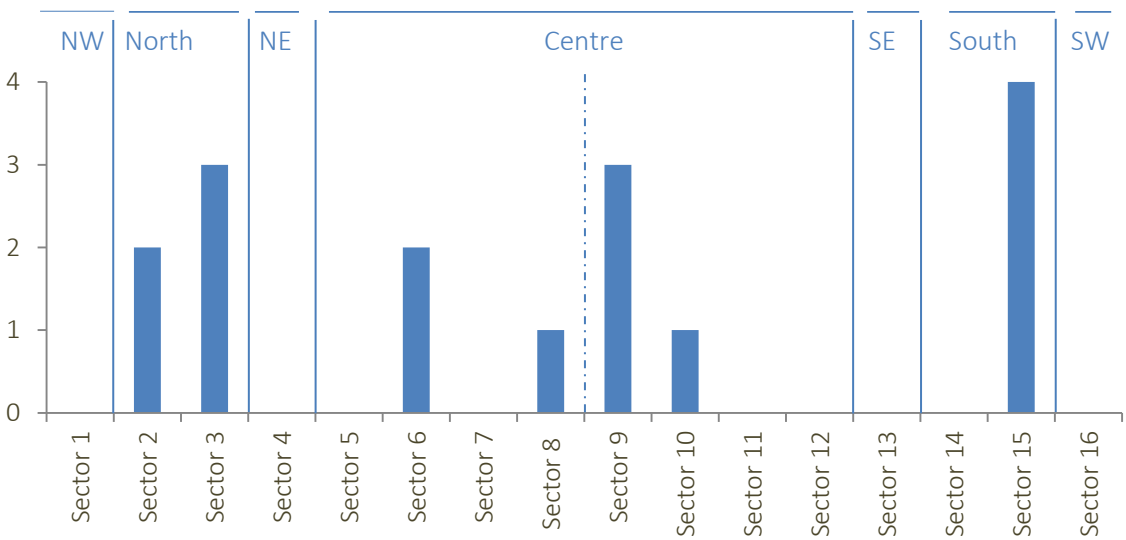
Graph 6.11. Spatial analysis of glass vessels.



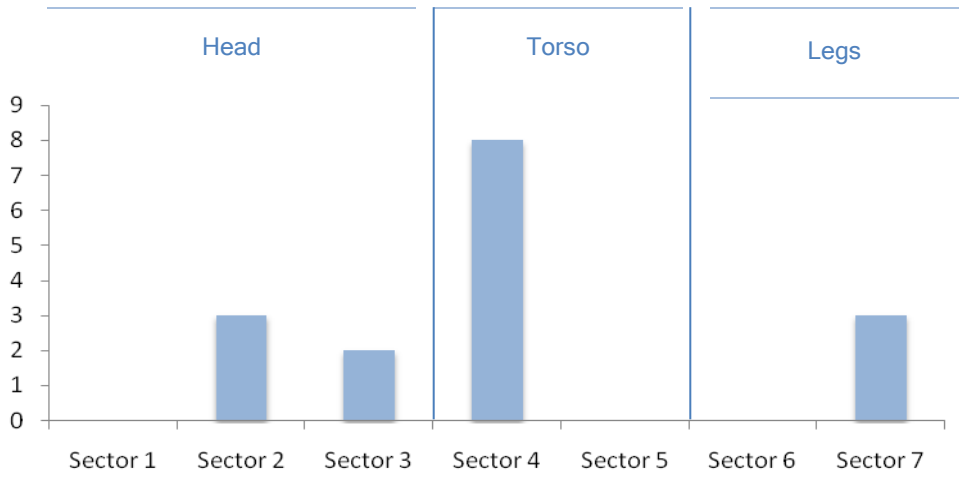
Graph 6.12. Spatial analysis of glass vessels in relation to the body.

❖ Faience

This type of vessel has a correlation with 82% of the vessels in front of the top half of the body and mostly in the area of the torso (50%). There is a fairly even distribution of faience vessels within the grave pit with a preference for the southwest side.



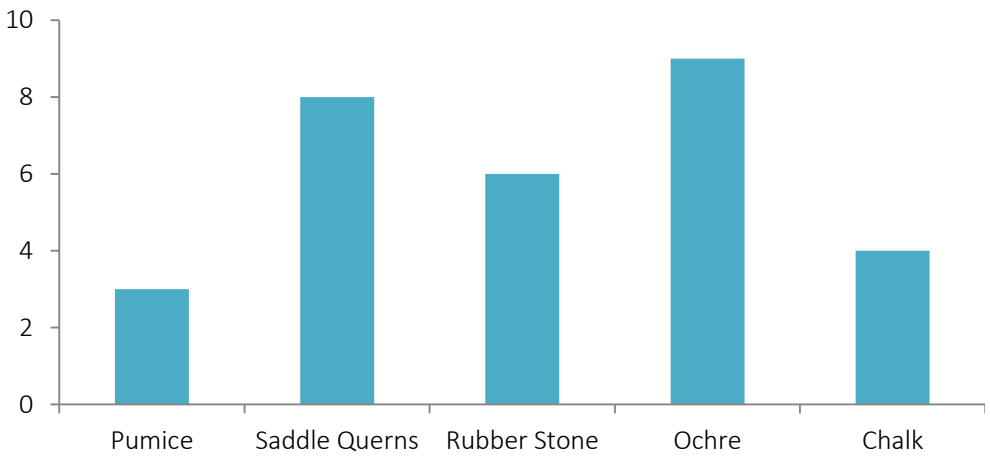
Graph 6.13. Spatial analysis of faience vessels.



Graph 6.14. Spatial analysis of faience vessels in relation to the body.

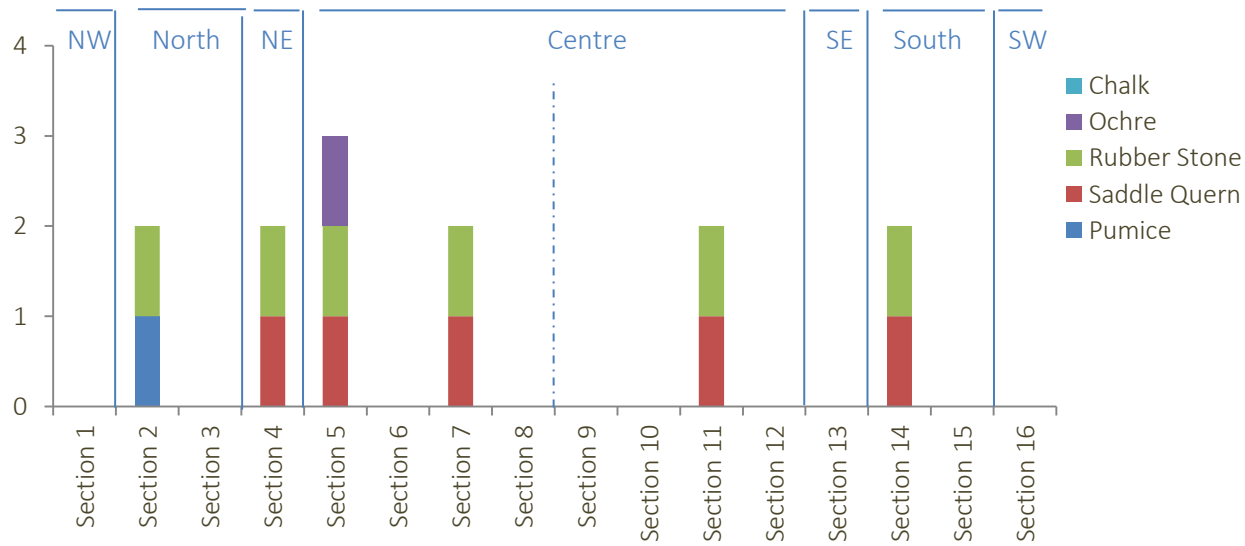
❖ Stone artefacts

Pumice has been an object of trade since antiquity. Steinhauser *et al.* (2010: 403) suggest that its physical properties (a volcanic rock of low density which enables its floating on water) may have earned its 'divine properties', which may explain its ritual deposition in both cult and funerary sites across the Mediterranean (also Steinhause *et al.* 2006; 2007 and Sterba *et al.* 2009). The excavation records of the tombs in Saniat bin Huwaydi reports the presence of small fragments of pumice. Saddle querns were found in tombs from Phase I and Phase II, dating back to the 2nd century AD, along with rubber stones and chalk.

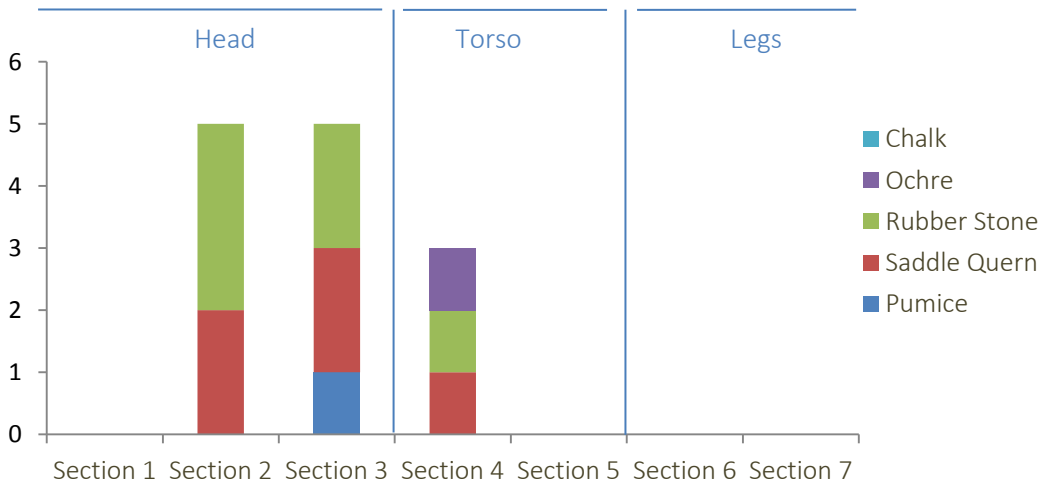


Graph 6.15. Presence of stone artefacts in tombs.

Despite the relative small sample of tombs where the position of the stone artefacts is known, the spatial distribution of stone artefacts is concentrated in the area in front of the head. Saddle querns and rubbers are the most prolific of these artefacts but the other two examples, the lump of ochre and the pumice were also place in front of the face of the individual.



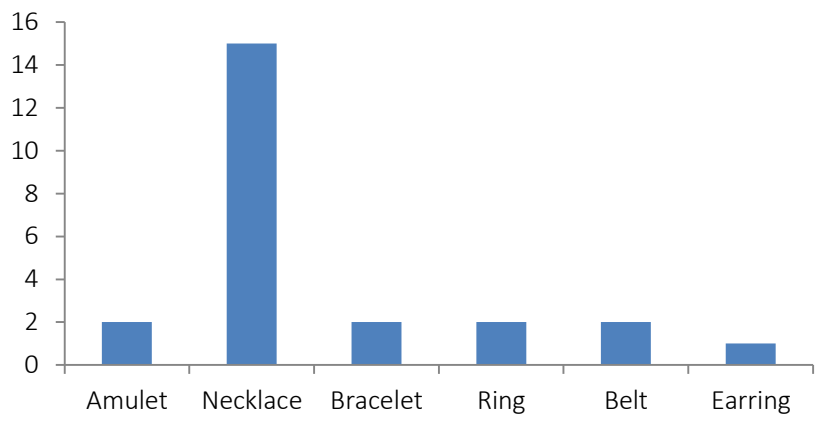
Graph 6.16. Spatial analysis of stone artefacts.



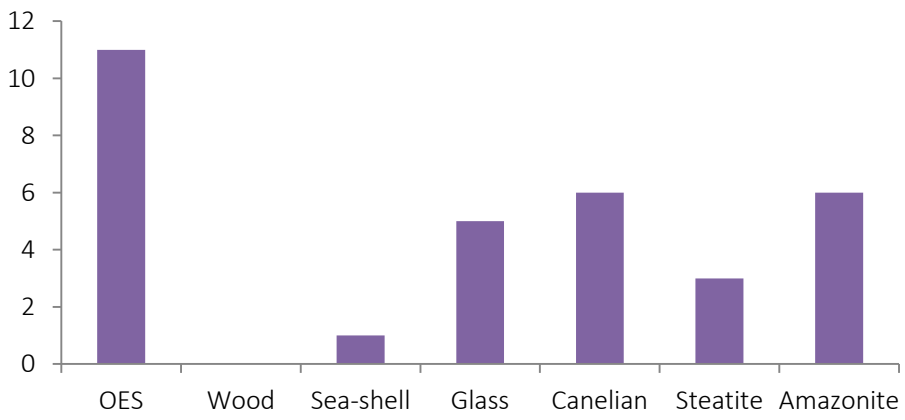
Graph 6.17. Spatial analysis of stone artefacts

❖ Personal adornment

Personal adornment takes the form of beads of different materials along with small metal artefacts. The grouping of the beads as necklace, bracelet or belt has been done in accordance to the location in relation to the body. This grouping has only been done when there is a clear record of the provenance of the beads; therefore if the beads are encountered around the pelvic area I have recorded the presence of a beaded belt (i.e. GER011.T54). The table below shows the number of tombs associated with personal adornment divided by type. In the discussion below (section 6.7), the relation between personal adornment with sex and age have been considered. It must be highlighted here that beads are not solely associated with female burials, as beads have been found with, at least one male burial.



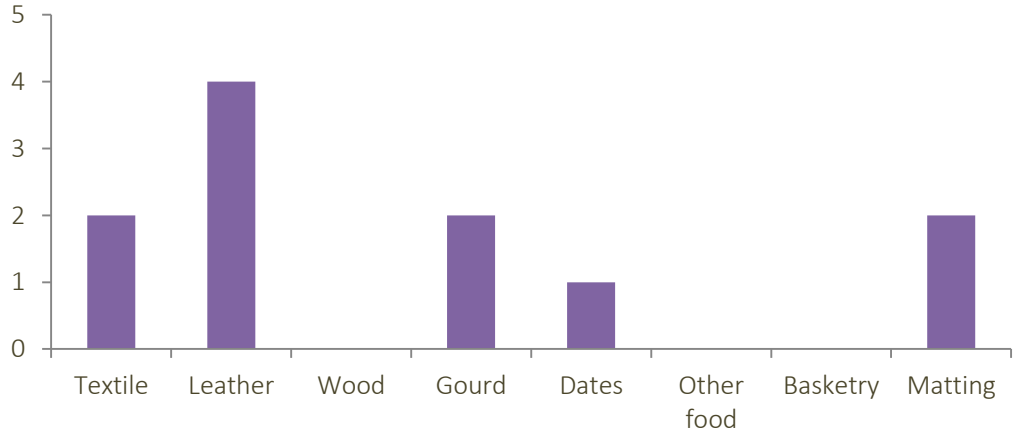
Graph 6.18. Personal adornment artefacts recovered from GER011.



Graph 6.19. Number of burials and different type of beads in Saniat bin Huwaydi.

❖ Organic material

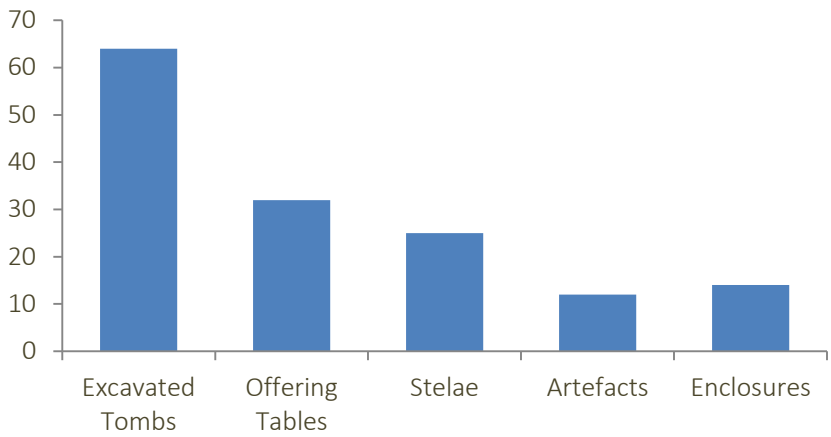
The level of the water table in the oasis has severely affected the preservation of organic materials. It was therefore not possible to establish the location and position of artefacts made of organic materials within many tombs. However, it is important to note their presence among the funerary assemblages. The graph below shows the number of tombs where the presence of organic materials has been recorded during the excavations of Ayoub and Daniels. It is likely that there were more that either were not identified or did not get recorded.



Graph 6.20. Organic materials recovered from the tombs in GER011.

❖ Funerary elements outside the tombs

There is a range of elements associated with the funerary structures, from architectural features such as enclosures to ceramic artefacts. The elements encountered at Saniat bin Huwaydi are offering tables, stelae, ceramic artefacts and enclosures. The morphological types of the tombs excavated fall into drum tombs (type 3b) with vertical outer shape and flat top with regular coursing overlying circular shafts; quadrangular tombs (type 4) with vertical outer revetment, flat tops and regular coursing and either rectangular or circular burial chambers; and stepped quadrangular superstructures (type 5b) with rectangular substructures. All of the stepped tombs (8% of excavated tombs) were recorded with both stelae and offering tables, whilst only 40% of type 4 tombs had offering tables and 44% had stelae. 56% of the type 3b tombs had offering tables and only 21% had stelae.

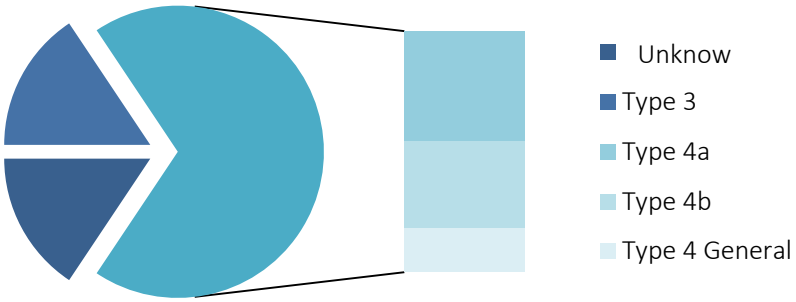


Graph 6.21. Comparison of number of excavated tombs and funerary elements outside the tombs.

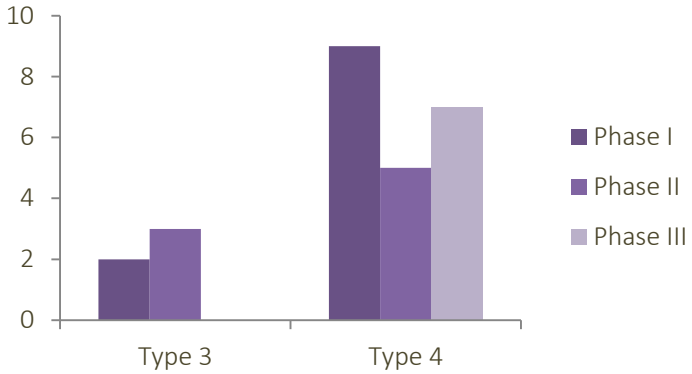
As discussed in Chapter 2, offering tables are a recurrent feature in the Garamantian cemeteries. The location of the offering tables at Saniat bin Huwaydi shows a preference towards the east side of the tomb, with 47% of the total recorded. It has been noted that when there is not sufficient space surrounding the tombs, the offering tables have been placed on the west side (16%). 37% of the offering tables recorded in Saniat bin Huwaydi were not *in situ*.

Graph 6.22. Location of offering tables in relation to the tomb structure (compass North).

Type 4 is the more usually encountered offering table (69%) (Refer to Chapter 3). Type 4 consists of a block of sandstone with a large elongated rectangular slot in the centre and smaller square cut depressions along the top horizontal line.



Graph 6.23. Division of offering tables by overall typology. The light blue colour on the pie chart relates to all Type 4 offering tables with detail of subtypes on the right.



Graph 6.24. Typologies of offering tables by phase

Stelae are normally found in association with offering tables. Therefore, as with the offering tables, the majority of the stelae (60%) recorded had been placed on the east side of the tomb.

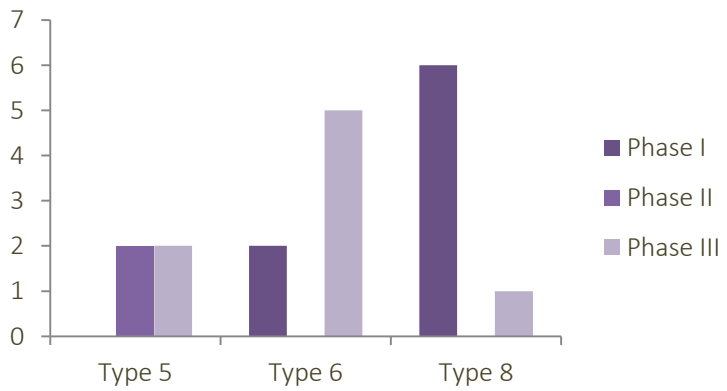
Graph 6.25. Location of stelae in relation to the tomb structure (compass North).

The types recorded correspond to the FP typologies 5, 6 and 8. Type 5 is a four digit hand manufactured from three different pieces of sandstone. Type 6 is a two digit structure cut from a

single stone whilst type 8 refers to four digit stelae of a 'picket-fence' form, all digits of equal length, as opposed to Type 5, where the outer digits are smaller than the central ones.

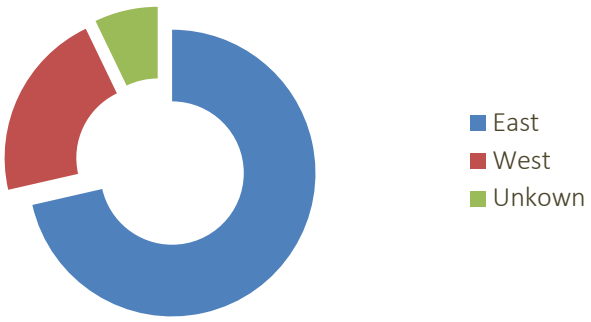
Graph 6.26. Division of stelae by overall typology.

Looking at the cemetery as a whole, it does not seem to be a particular preference of a specific morphological type of stelae (Graph 6.27). However, an analysis of the different phases of the cemetery starts to show some preferences. There is a clear inclination (75% of the tombs) towards Type 8 stelae during the first phase of the cemetery, late 1st century-early 2nd century AD. The more elaborate burials are from this phase, hence it can be suggested that the choice of stelae, as a tomb marker, was made with the same idea of lavishness. The same can be said for the stelae of Phase III, with 62.5% of the stele of this period being Type 6.



Graph 6.27. Typologies of stele by phase

Along with stelae and offering tables, another type of structure encountered outside the tombs are funerary enclosures. They are found in association with other funerary elements outside the tombs and therefore the location follows that of the offering tables and stelae with the east side being the most predominant one.

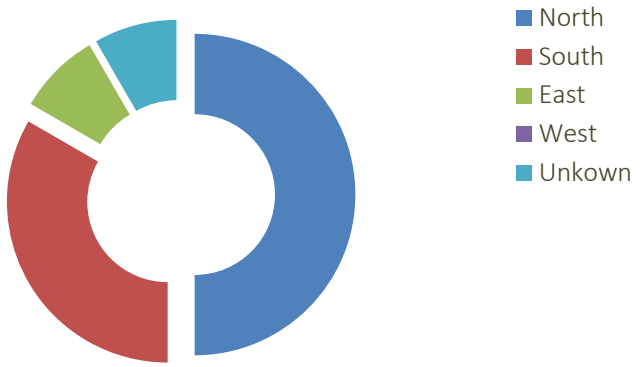


Graph 6.28. Location of funerary enclosures in relation to the tomb structure (compass North).

Out of the various morphological types recorded in the Wadi al-Ajal, the funerary enclosures of Saniat bin Huwaydi fall into two categories; small annexes (Type 1) in the form of two parallel walls containing the offering table and stelae, and type 5, which is a sub- rectangular structure completely surrounding the offering table and stelae.

Graph 6.29. Division of funerary enclosures by overall typology.

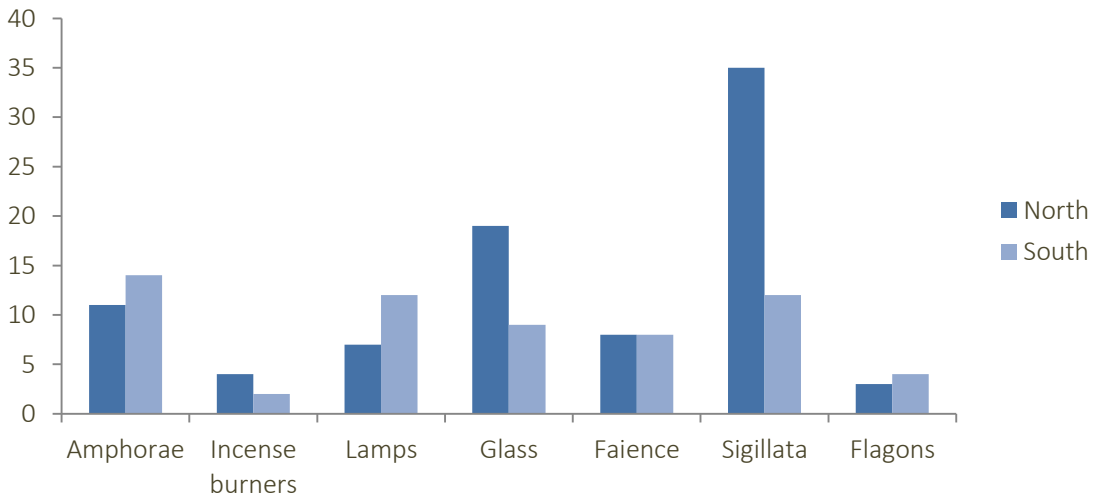
When discussing the material culture, it was noted that ceramic artefacts were recorded both inside and outside the funerary monuments. The ceramic vessels encountered are either amphorae or local made jars. These artefacts are located at either side of the offering tables or in front of it. The presence of ceramic vessels outside the tombs has been recorded in Garamantian cemeteries from various periods. Sometimes these vessels appear alone, other times associated with offering tables and stelae.



Graph 6.30. Location of artefacts outside the tomb in relation to the stelae and/or offering table.

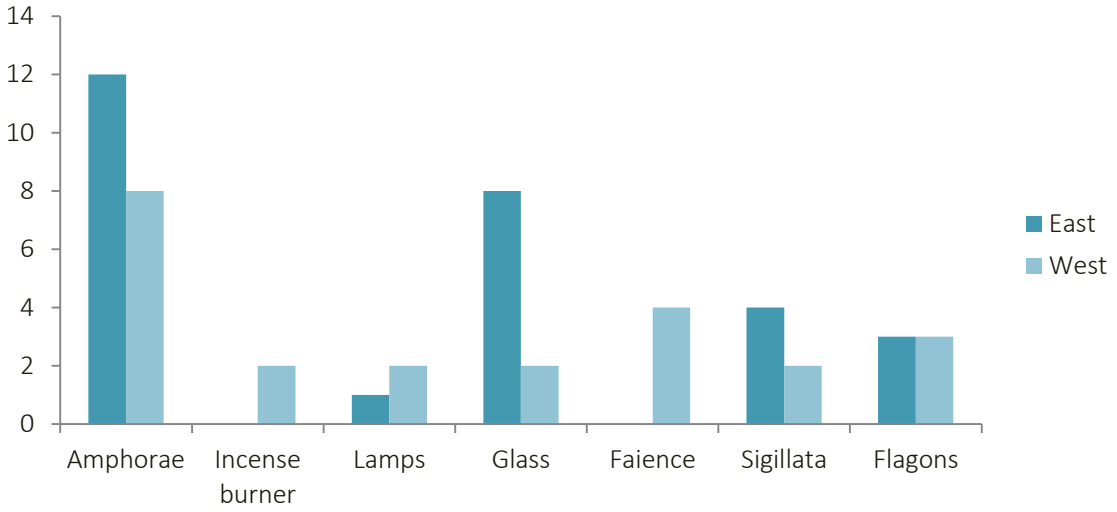
6.2.5. Comments on the funerary assemblages in Saniat bin Huwaydi.

Patterns are starting to emerge from the funerary assemblages at Saniat bin Huwaydi. Firstly, with regards to the 16 sector analysis related to the compass North (North sectors =1-8; South sectors 9-16), most types of artefacts are fairly even distributed with the exception of glass vessels and sigillata, where there is a slight preference for the north side.



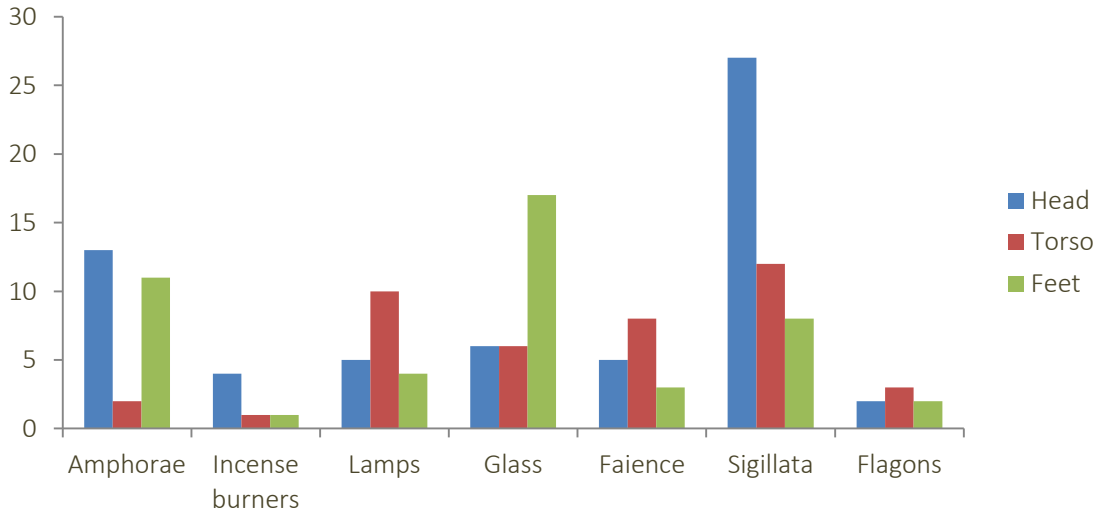
Graph 6.31. Distribution of funerary assemblages in relation to the northern and southern sectors of tomb.

In relation to the east and west sectors of the 16-sector analysis, (West sectors =1, 8, 9 and 16); East sectors 4,5,12 and 13), there is preference towards the eastern side of the tomb with a significant number of amphorae, sigillata and glass being placed on this side of the tomb.



Graph 6.32. Distribution of funerary assemblages in relation to the eastern and western sectors of tomb.

There is more variability evident when analysing patterns of the spatial organisation of the assemblages in relation to the position of the deceased. As the graph shows, the torso is the area where it is least likely to find artefacts, with the exception of sigillata, lamps glass and faience. In relation to faience it is worth noting that it appears to behave more like sigillata vessels than glass vessels. It is clear that the area surrounding the head is of importance with a significant number of artefacts mostly placed near the head of the deceased.



Graph 6.33. Distribution of funerary assemblages in relation to the body.

6.3. Jarma escarpment and Royal Cemetery

6.3.1. General description of the dataset of Jarma escarpment

The area of the Jarma escarpment comprises the so-called 'Royal Cemeteries' along with a series of nucleated cemeteries on the edge of the escarpment. This area has been particularly damaged in the past couple of decades due to the expansion of a quarry site and the construction of a road linking modern Jarma and the Hamada, with some cemeteries being completely destroyed (for example GSC016). Aside from the contemporary damage, the cemeteries in the Jarma escarpment have been subject to robbing in antiquity and therefore the collection of archaeological data in this area has been compromised. 27 tombs have been excavated in this area, of which 21 have documented evidence of grave assemblages. This section presents the grave goods and funerary furniture associated with the burials.

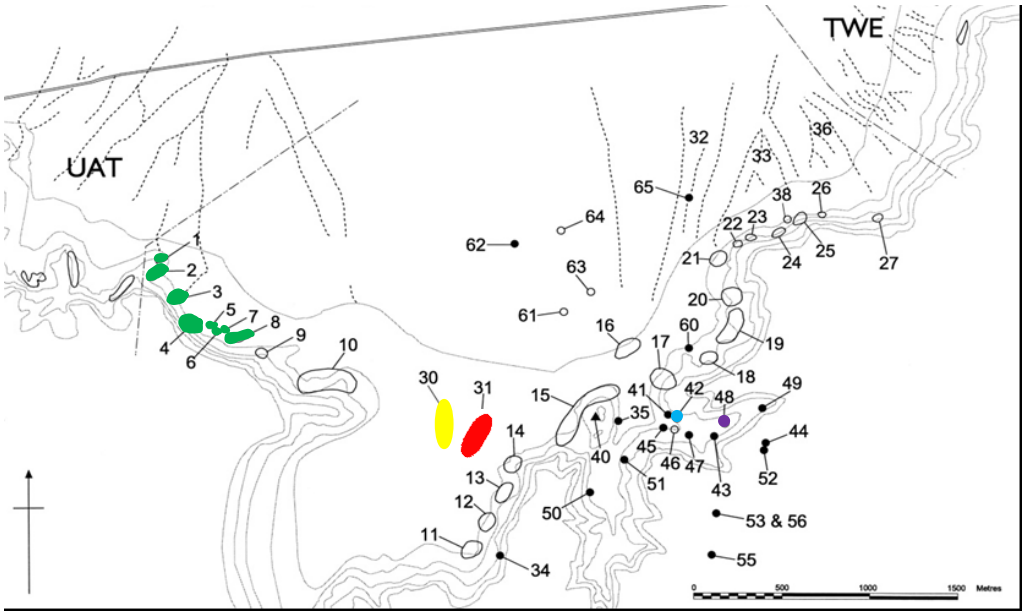


Figure 6.7. Map of Jarma escarpment with the location of excavated cemetery sites: GSC001-008 (green) the Royal Cemetery (GSC030= yellow; GSC031= red), GSC042 (blue) and GSC048 (purple).

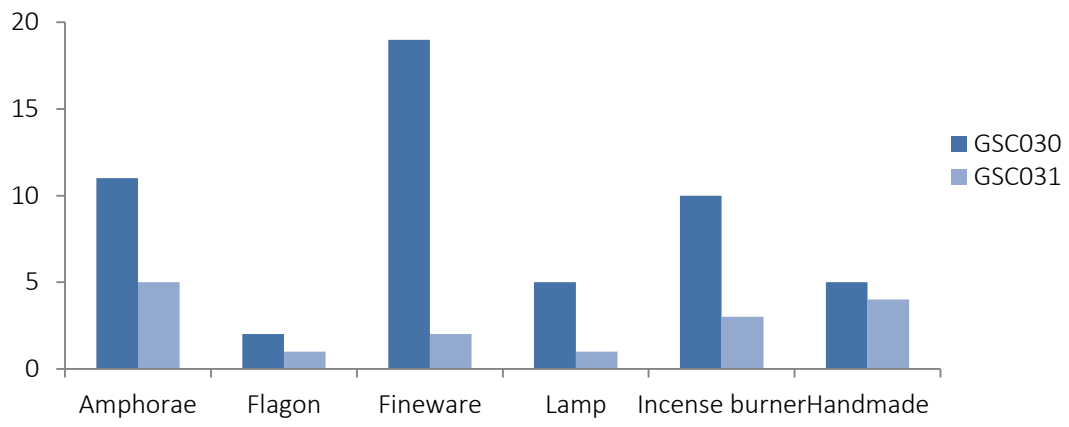
	Adolescent	Adult
Male		1
Female		3
Uncertain	1?	1
Total	1?	5

Table 6.6. Summary of age and sex in the 'Royal Cemeteries'.

6.3.2. Material culture

The most prolific grave assemblages recorded in the escarpment area are those in the 'Royal Cemetery'. Consequently, the majority of the material described in this section relates to these tombs, which are presented first, whilst the final part of this section refers to the smaller nucleated cemeteries studied in this area.

The funerary assemblages of the 'Royal Cemetery' are extremely varied and rich. Despite the reality of the significant damage caused as a consequence of the pillaging in ancient times, the excavations of these funerary monuments provide an insight into the Garamantian preparations of the tombs. There are six different types of ceramic artefacts, their provenance being both imported and local. The imported wares are amphorae, finewares and lamps, along with two categories of local handmade wares (incense burners and jars). Given the level of plundering in GSC030 and GSC031, most of the ceramic artefacts are in fragmentary form, whereby different artefacts have been interpreted from the various fabrics and shapes of the shreds. Yet, all the tombs excavated in the 'Royal Cemetery' have evidence of ceramic vessels contained within the tombs.



Graph 6.34. Comparison of number of ceramic artefacts by typology in the 'Royal Cemetery'.

The 'Royal Cemetery' has provided us with a fragmentary sample of amphorae recovered from the funerary structures. Unfortunately, the recovered shreds were not diagnostic. Nevertheless, it is worth noting the presence of bungs within the tombs (GSC030.T2, GSC030.T5), suggesting that the amphorae may not have been emptied before deposition, or they were taken to the tomb side and consumed there.

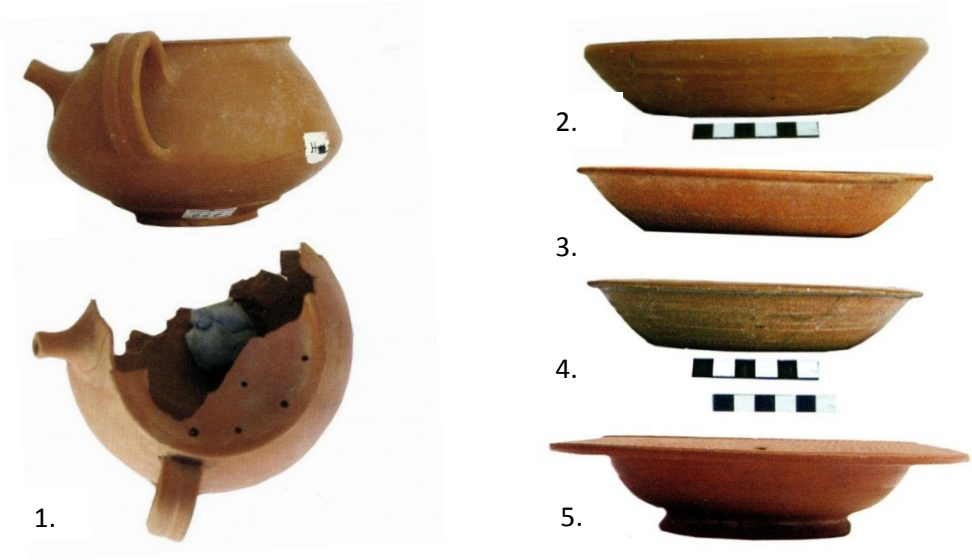


Figure 6.8. Finewares from the 'Royal Cemetery': 1. GSC030.T4 feeder bottle; 2. GSC030.T4 Hayes TRS 3 bowl; 3-4. GSC030.T3 Hayes TRS 2 bowls and 5. GSC030.T14 Hayes ARS 96 bowl (Mattingly *et al.* 2010a: 363, 364).

Finewares recovered from the 'Royal cemetery' include African Red Slip Ware (ARS) and Tripolitanian Red Slip Ware (TRS), again most of them in a fragmentary state. Nonetheless, there are four complete TRS bowls and a Hayes ARS type 121/1 feeder bottle (Edwards *et al.* 2010: 363). The TRS forms represented are Hayes 2 and 3 and ARS Hayes 96. There are six imported lamps, 3 from GSC030.T5, 2 in GSC030.T1 and 1 from GSC031.T7. Three of the tombs contained remains of flagons.

Figure 6.8. GSC031.T40 Garamantian pottery recovered outside the tomb (Photographs by Author).

The local handmade ware is present in the form of incense burners and jars made in a range of fabrics. The incense burners, 10 in total, albeit some in fragments, were in the shape of a cup on a flat base with a wide handle. They are incised with geometrical patterns and painted (see Figure

6.9). The jars are hand-painted mostly in reds and whites (although there are some blue and white fragments) with geometrical patterns (Figure 6.9). The incense burners and jars have been incorporated in the tombs alongside the imported vessels. The geometric patterned jar with straight rim (Figure 6.9 (4)) is characteristic of the Late Garamantian period. It is worth noting the handmade jar recovered in front of GSC031.T40, completely undisturbed and, as in those seen at Saniat bin Huwaydi, found in the vicinity of the offering table, outside the tomb (Figure 6.8).

Figure 6.9. Local wares from grave assemblages at the 'Royal Cemetery': 1. Incense burner from GGSC030.T30/32; 2. Neck of handmade jar from GSC030.T22; red on white decorated vessels from GSC030.T22 (Mattingly *et al.* 2010a: 365, 366).

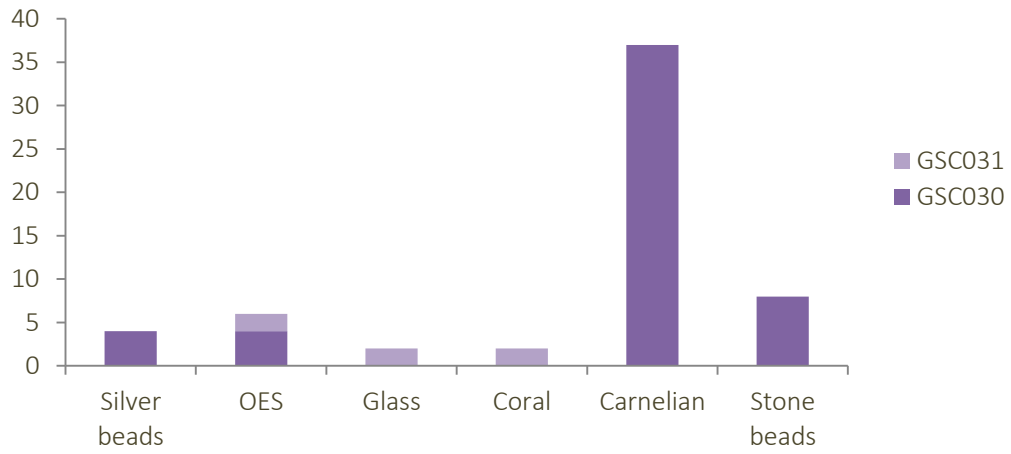
The most numerous artefacts recovered from the 'Royal Cemetery' are glass vessels, with fragments of at least 48 vessels. Small dishes, flagons, bottles and cups have all been recovered from the tombs (Figure 6.10). The glass vessels recovered from the 'Royal Cemetery' relate to the Late Garamantian period (4th-6th centuries AD) (Hoffman 2010: 412). The provenance of the glass vessels allocated to this cemetery is not unproblematic, even though some material in the Museum in Jarma and Sabha has been identified when compared to the interim reports and museum catalogues. Others, whilst not secure, it can be suggested they pertain to the 'Royal Cemetery' assemblages due to their chronology, morphology and quality. Some of the forms associated with this cemetery are large plates, deep bowls and dishes with conical rims, lamps, beakers and bottles. These vessels were made with various techniques including both moulded and cut glass, with abraded geometrical designs and wheel-cut decorations. The variety of the colour is also noticeable raging from clear glass to dark blues and purples. There is a particular vessel, from the

Museum of Jarma, which Hoffman (2010: 419) refers to as 'most unusual […] for the rarity of the design and quality'. It is a dark peacock green thick walled moulded glass. Although the provenance of this particular vessel is unknown, fragments of an almost identical vessel have been recorded from the vicinity of GSC030.T1. The fragmentary written records still highlights the quality and variety of the glass grave assemblages in some of these tombs. For instance, GSC030.T4 could have had up to 19 different glass vessels, including 1 blue large plate, 8 colourless bowls, 4 bluish-green bottles, 2 beakers and 4 olive green lamps (Hoffman 2010: 447-450). Glass fragments have been recovered from 14 out of the 18 tombs, 78% of the excavated burials in the 'Royal Cemetery'. Unfortunately the precarious condition of these tombs after the ancient looting does not allow an evaluation of the placement of the artefacts within the tombs.

Figure 6.10.Glass vessels recovered from the tomb GSC030.T8 (Photographs by DMP 2011).

Organic finds in GSC030 and GSC031 were not very abundant, but yet, there is evidence of the presence of textile, basketry, matting and leather. Only GSC030.T2 had an indication of basketry, whilst again only GSC030.T8 provided substantial sample of red painted leather from the burial chamber, probably a shroud. Textile fragments were recorded in both GSC030.T3 and GSC030.T4. Nonetheless, the sporadic presence in the archaeological record of these materials shows the significance of the inclusion of these artefacts within the funerary assemblages alongside imported glass and pottery vessels, for instance. One of the other items recovered in 2011 could be part of the funerary furniture included in the grave pit; three pieces of a wooden frame, which could have been used to carry the deceased, with carved polychrome decoration and dowel-holes (Mattingly *et al*. 2011: 99).

Items of personal adornment in this cemetery have been found in the form of bangles, silver rings, ivory combs and beads. These have been manufactured from different materials, including silver, glass, carnelian, coral and ostrich egg shell. The metal artefacts recovered from the grave assemblages are silver rings, at least 6 from GSC030.T8, and another one in GSC031.T7. Six copper studs were found in GSC030.T8. Four tombs contained ivory artefacts: GSC030.T2 and GSC030.T3 had triangular ivory combs with perforations in the narrow end and a row of teeth (13 and 8 respectively) on the lower edge, fragments of worked ivory where recorded in GSC030.T14 and 3 fragments of an ivory bangle was recovered from GSC031.T7. The most numerous beads in the 'Royal Cemetery' are made of carnelian (35). Of particular significance are the ones retrieved from GSC030.T8, they are highly polished oblate graduated of an average diameter twice of those recouped from other cemeteries across Fazzan (Mattingly *et al.* 2011: 99). In addition to these it is worth highlighting the coral beads from GSC031.T7, a definite imported exotic material. The silver beads were all recovered from one single tomb, GSC030.T2.



Graph 6.35. Number of beads by type of material encountered in the 'Royal Cemetery'.

Finally, three tombs in GSC030 contained stone artefacts, namely a small rubber in T1; grindstones (uncertain on the number) in T2 and a small Acheulean biface in a mixed layer of rubble and robber fill in T5.

There is an obvious dimensional difference between the funerary structures and artefacts in the 'Royal Cemeteries' in comparison to other Classic Garamantian cemeteries. The tombs are much larger in proportion, which seems to correlate with the size of the assemblages included in the graves. Ayoub's suggestion that these cemeteries belonged to the dynastic monarchy cannot be confirmed. However, there is something unusual about these cemeteries. It is likely that the

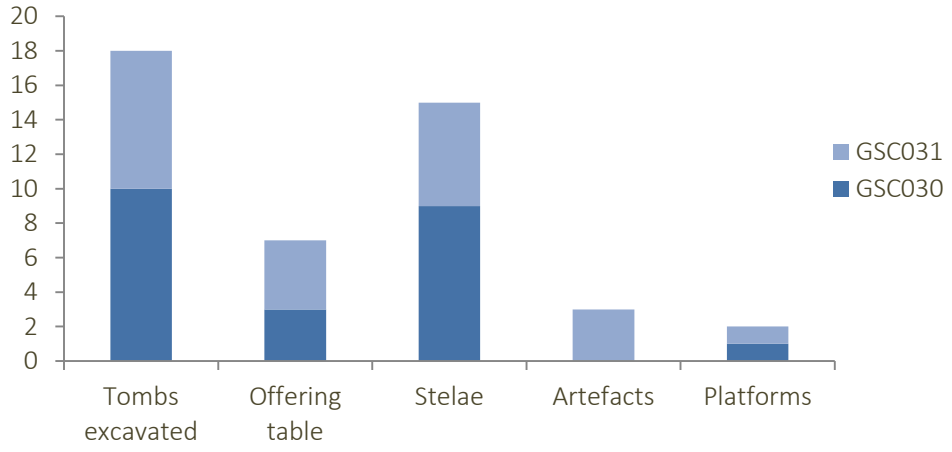
proximity to the Garamantian capital during its apogee may have make this the place of burial for individuals of high social status. The energy of time dedicated to building these funerary structures could be compared to those of the living accommodation. These tombs would have been visible from the oasis and it would have created a deep contrast between the black stone of the escarpment and the white mud plaster of the stepped tombs and the red of the funerary furniture.

6.3.3. Funerary elements outside the tombs

As indicated above with regards to the funerary elements outside the tombs in Saniat bin Huwaydi, in the 'Royal Cemetery' there is also a variety of architectural features such as enclosures and ceramic artefacts. The elements encountered in both GSC030 and GSC031 are offering tables, stelae, ceramic artefacts and enclosures. As stated before, 18 tombs have been excavated and recorded in the 'Royal Cemetery', 10 in GSC030, and 8 in GSC031, most of which were stepped quadrangular superstructures (type 5b) with rectangular substructures along with two excavated Type 3 tombs, circular stone structures over a circular burial chamber (GSC030.T22 and GSC030.T25).

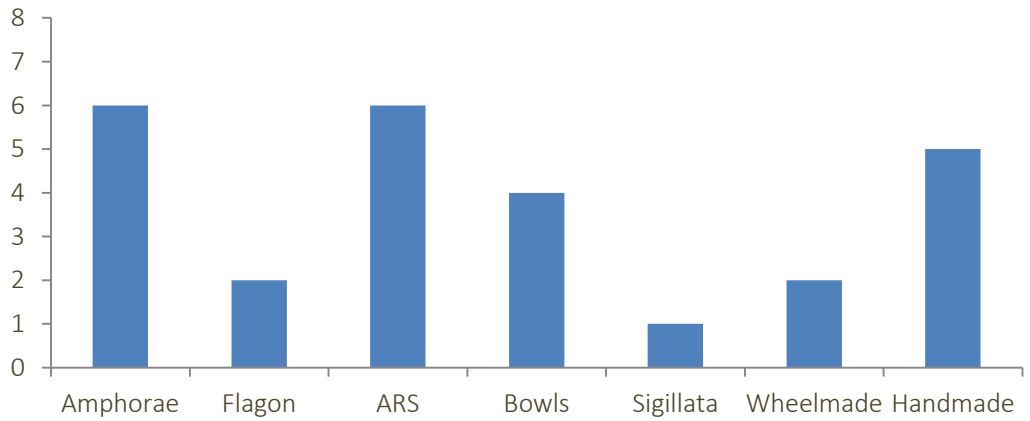
A significant proportion of tombs had funerary furniture placed on the east side.in both GSC030 and GSC031. Out of the excavated tombs, 13 had stelae *in situ*, 72%. All of these stelae are of typology 6c, large stones with two vertically elongated points, set in twos or threes, except the one in GSC031.T71, a single stone with four digits demarked by grooves (Type 2a).

All the offering tables recorded in association with funerary structures are morphologically type 4b; blocks of sandstone with a large elongated rectangular slot carve in the centre with smaller symmetrically arranged compartments on the top and sides. These offering tables were accompanying stelae and invariably located on the east side of the tomb. In addition to the offering table ceramic vessels have been recorded in GSC031 outside the tomb (see Figure 6.8).



Graph 6.36. Relation of tombs excavated and funerary elements outside the tomb.

Alongside the 'Royal cemetery', smaller nucleated cemeteries have been surveyed and five tombs excavated in the cemeteries GSC001-008 (marked in green in Figure 6.6). These cemeteries, small to medium nucleated cemeteries of Type 3, date to the Classic Garamantian period (1st-4th centuries AD). It has been noted that these cemeteries have been thoroughly looted in antiquity. Despite the fact that there is not a significant amount of surface pottery there is a suitable sample to provide an insight into the components of the grave assemblages in these tombs, which are consistent with similar structures of the same period in neighbouring areas of the Wadi Al-Ajal. The graph below illustrates the presence of ceramic artefacts recovered from the cemeteries GSC001-008. The y-axis shows the number of cemeteries whilst the x-axis relates to the presence of that particular artefact rather than the number of artefacts.



Graph 6.37. Presence of ceramic artefacts in GSC001-008.

As mentioned before, one tomb has been excavated in GSC042 and two in GSC048. These cemeteries were targeted for excavation due to visible damage caused by quarrying. This activity has instigated serious damage in the Garamantian funerary landscape in the proximity of Jarma. GSC042.T1, a sub-rectangular cairn with a corbelled chamber contained the remains of two individuals. Provided the disturbance of the tomb it has not been possible to carry out a spatial analysis of the grave goods. Nonetheless, this tomb had fragments of fineware, possibly two vessels, a glass vessel, a number of ostrich egg-shell beads, a rubber and what has been identified as the remains of a wooden bowl (Figure 6.11).

Figure 6.11. Wooden bowl from GSC042.T1 (Photograph by DMP 2007).

The upper structure of the funerary monument related to the child burial GSC048.T1 has been badly damaged by bulldozing. Only the lower extremities of the body were articulated, providing information on the position and orientation of the body. On the northwestern side of the tomb and next to the feet was a handmade bowl (see Figure 6.12). Remains of leather was also encountered in front of the tybias alongside a chain of 175 ostrich egg-shell beads, with the string still attached. The fragile state of the leather makes unclear whether it belonged to a shroud or a leather container. The record of this tombs indicates that this was a single string of beads looped directly around the legs. An ostrich egg-shell disc has been recorded in the east side of the bowl, possibly an amulet.

GSC048.T2, also badly damaged by bulldozing activity, contained the remains of a baby. Accompanying the body was a single pierced sherd of faience directly under the chin with a carnelian bead. Both items can be understood as amulets.

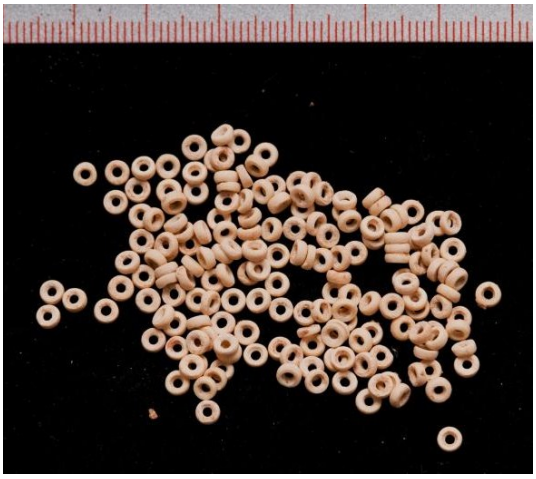


Figure 6.12. Bowl in situ and ostrich egg-shell beads recovered from GSC048.T1 (Photographs by DMP 2007).

Whilst archaeology rarely investigate children as individuals, with their own social identity, an interesting aspect of these two very young burials is that there seems to be no distinction between an adult and a child with regards to the time and energy expenditure of the burial ritual and the perception of the individual identity of children within the Garamantian society. It can therefore be suggested that a child in Garamantian society was probably seen as an individual person, with a particular place in the social order, rather than merely a 'biological category'. In other cemeteries we have encountered small children associated with an adult, usually a female, indicating a kin relation, or buried in a structure annexed to the adult's. Still, the infants are visible within the buried population across the Wadi al-Ajal.

Tomb Number	Date	Age	Sex	Amphorae	Flagon	Fineware	Lamp	Incense burner	Handmade	Glass	Silver ring	Ivory bracelet	Silver beads	OES	Glass beads	coral	Carnelian	Stone beads	Stone tool	Grindstone	Rubber	Wood	Textile	Leather	Basket	Grave Diversity	Goods Count
GSC030.T1	CGAR/LGAR			x			x	x		x											x					5	12
GSC030.T2	CGAR/LGAR			x	x			x		x		x	x					x		x					x	8	9
GSC030.T3	CGAR/LGAR			x		x				x		x						x					x			5	16
GSC030.T4	CGAR/LGAR	adult	male	x		x				x													x			4	23
GSC030.T5	CGAR/LGAR	adult		x		x	x	x											x							5	16
GSC030.T7	CGAR/LGAR			x	x	x			x																	4	4
GSC030.T8	CGAR/LGAR							x		x	x			x			x					x		x		6	18
GSC030.T14	CGAR/LGAR							x		x		x														3	3
GSC030.T22	CGAR/LGAR			x		x			x								x									4	6
GSC030.T25	CGAR/LGAR			x					x	x																3	3
GSC031.T1	CGAR/LGAR			x		x				x																3	3
GSC031.T2	CGAR/LGAR			x				x		x																3	3
GSC031.T3	CGAR/LGAR			x				x		x																3	3
GSC031.T7	CGAR/LGAR	adult	female	x			x		x	x	x	x		x		x										7	11
GSC031.T30 /32	CGAR/LGAR	adult	female					x		x				x												3	3
GSC031.T40	CGAR/LGAR								x																	1	1
GSC031.T62	CGAR/LGAR			x	x	x			x	x																5	5
GSC031.T71	CGAR/LGAR	adult	female						x	x					x							x				4	4
GSC042.T1	CGAR					x				x				x							x	x				5	5
GSC048.T1	CGAR	child												x												1	1
GSC048.T2	CGAR	infant															x									1	1

Table 6.7. Summary of artefacts per tomb in the cemeteries of the Jarma Escarpment

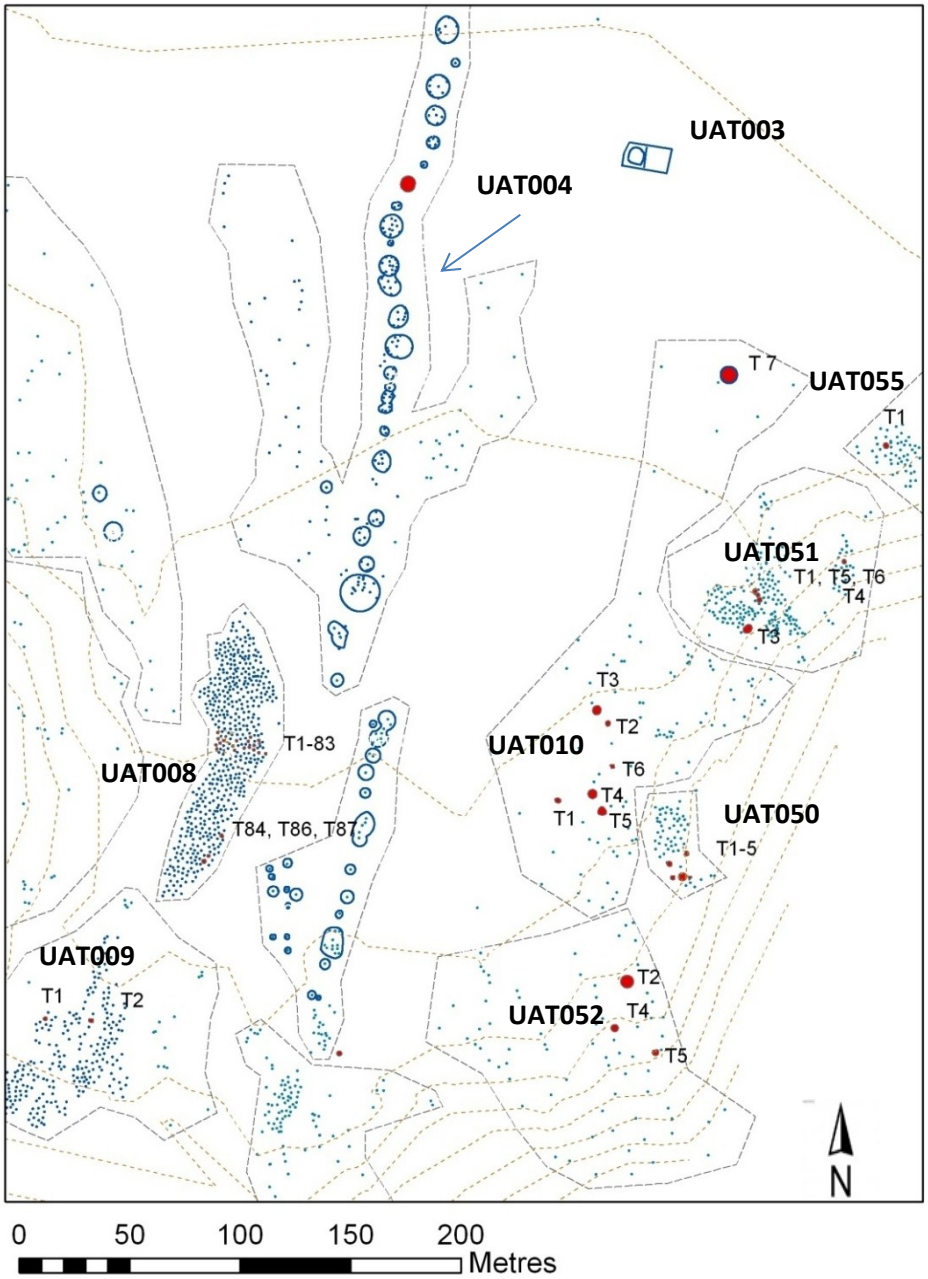
6.4. Watwat

6.4.1. General description of the dataset

The Watwat area is located immediately east of Zinkekra and contains, mostly, a series of nucleated cemeteries (see Chapter 4 and Chapter 5). The cemeteries at Watwat date from the Proto-Urban to the Classic Garamantian periods, indicating a continued use of this funerary landscape for almost one thousand years.

Tomb Number	Tomb Typology	Phase	Age	Sex	Orientation (head/feet)	Position
UAT010.T4	2c	PUGAR	Adolescent	Female		
UAT010.T5	2c	PUGAR	Adult	Uncertain	Northeast-southwest	Right side facing west
UAT052.T2	1b	PUGAR	Adolescent	Male		
UAT008.T5	2c	CGAR	Adult	Male	West-East	Left side facing north
UAT008.T16	2c	CGAR	Adult+ child	Female		
UAT008.T19	2c	CGAR	Adult	Female		
UAT008.T22	2c	CGAR	Adult	Female		
UAT008.T24	2c	CGAR	Adolescent	Male		
UAT008.T32	2c	CGAR	Adult	Female	West-East	Left side facing north
UAT008.T33	2c	CGAR	Adult	Uncertain		
UAT008.T38	2c	CGAR	Adult+Child	(Female)	South-North	Right side facing east
UAT008.T40	2c	CGAR	Adult	Female		
UAT008.T41	2c	CGAR	Uncertain	Uncertain	North-South	Right side facing west
UAT008.T42	2c	CGAR	Adult	Female		
UAT008.T75	2c	CGAR	Adult	Male		
UAT008.T77	2c	CGAR	Adult	Uncertain		
UAT008.T82	2c	CGAR	Uncertain	Uncertain	East-West	Right side facing north
UAT008.T84i	2c	CGAR	Adult	Uncertain	East- West	Left side facing south
UAT008.T84ii	2c	CGAR	Adult	Uncertain		
UAT008.T86	2c	CGAR	Adolescent	Uncertain	East-West	Left side facing south
UAT009.T1	2c	CGAR	Adult	Uncertain	North-South	Left side facing east
UAT050.T1	5a	CGAR	Adult	Male		
UAT050.T2	2c	CGAR	Adult	Male	North-South	
UAT050.T5	2c	CGAR	Adult	Uncertain	South-North	Left side facing west

Table 6.8. Summary of information provided in Chapter 5 about burials in Watwat analysed in this section.



● Excavated tombs by the Desert Migrations Project, with the clusters excavated

Figure 6.3. Map of excavated tombs in Watwat (DMP 2008).

Out of the 59 tombs excavated in Watwat, 33 are analysed in this section, 55% of excavated tombs. The reasons behind this are partly to do with insufficient information with regards to the positioning of individual artefacts within the grave as a consequence of the high disturbance in most of the tombs due to ancient robbing. Twelve of these tombs had human remains in various states of preservation and articulation, including two complete naturally mummified bodies in UAT008.T84 and UAT008.T87 and a partially disturbed one in UAT008.T86. Regrettably, most of

the human remains have been disturbed and despite the fact some individuals have been recovered with enough articulation to establish the position and orientation of the bodies (for instance, UAT050.T6 where only a foot remained *in situ*), the poor level of preservation does not allow a sector analysis relating to the body for the majority of the tombs. The information regarding the age and sex of the individuals has proven to be more complicated and there are only four bodies with full details of age and sex. This will influence the level of comparative analysis carried out in this section.

In total, *c.*174 artefacts were documented and catalogued. This number does not take into consideration the number of beads recorded (a minimum of 74). Glass and pottery fragments have been counted as one individual artefact when encountered within the same tomb, unless otherwise logged in the written record. For instance, five fragments of glass were recovered in UAT050.T1, as the written record does not provide information on the provenance of these fragments and whether or not they belong to the same vessel, I have considered these as one artefact and the fragments have not been individually added towards the grave goods count.

The tombs considered for the 7-sector spatial analysis of the funerary assemblages are those where the human remains were least disturbed and the material culture can be identified in correspondence to a particular individual. Therefore, the sample for this type of spatial analysis of funerary assemblages at Watwat consists of 12 tombs – 20.3% of the excavated tombs - with the remains of 13 individuals and 54 artefacts. Forty tombs have been considered for the 16-sector spatial analysis. It must be noted that not all artefact categories are present in the 40 tombs.

6.4.2. Material culture

There is evidence of leather and textile shrouds, some of which had beaded decoration and had been coloured. An excellent example of leather shroud was recorded in UAT008.T32. The mummified bodies in tombs UAT008.T84, UAT008.T86 and T008.T87 provide us with exceptionally preserved textile shrouds. Traces of ochre have been noted inside the tombs, sometimes dyeing the stone lining of the chamber or surrounding the body (for example, UAT008.T23). In relation to personal items, ostrich eggshell and other beads were recorded from 18 out of the 59 excavated tombs (30.5%). Other materials found include ceramic vessels, glass and faience.

Figure 6.4. Textile fragments from UAT008.T86 (Photographs by DMP 2008).

The textiles recovered in Watwat are of very high quality and show a significant variation in technique, possibly of local production. Out of the 59 tombs excavated in Watwat, 14 had fairly well preserved fragments of textile, including the three almost complete shrouds. The textiles of Watwat provide evidence of both coarse and fine woven shrouds, with a mixture of plain cream woollen fabrics and brightly decorated textiles with geometrical patterning (Figure 6.14). Lines of cream, ochre and red over blue fabric, blue and ochre squares over red fabric and alternating triangular shapes in blue and purple are some of the patterns of these textiles. Interestingly, tassels have also been encountered suggesting it may pertain to a small bag or purse (Mattingly *et al.* 2008: 253).

Figure 6.5. Fragments of dyed leather from UAT008.T22 (Photographs by DMP 2008).

Leather has been recorded in fifteen tombs in the Watwat embayment, mostly in association with textile. The fragments of leather, associated with burial shrouds, show evidence of the application of ochre, or another natural red pigment (Figure 6.15). These shrouds have been made by sewing together small panels, and some were decorated with beads.

The matting recovered in Watwat is very fragile and generally poorly preserved. No less than thirteen tombs had remains of matting in various states of preservation. The examination *in situ* has shown in some cases resemblances to the matting in ZIN218.T1 (see section 6.5), being made with twisted vegetable fibre and vegetal fibre cordage. It has been noted, however, that in Watwat there is a different type of matting made with bundles of wide-stemmed vegetable fibres bound together with rawhide strips crossed over each bundle (Mattingly *et al.* 2008: 256).

Other organic remains are gourd (associated with glass from UAT050.T5) (Figure 6.16a), wood fragments encountered in 4 tombs, and remains of charcoal. It is worth noting that Watwat has also produced evidence of basketry (Figure 6.19b) and wooden vessels (Figure 6.16b).

Figure 6.6. Pyro-engraved gourd from UAT008.T32 and fragments of wooden vessel in UAT008.T33 (Photographs by DMP 2008).

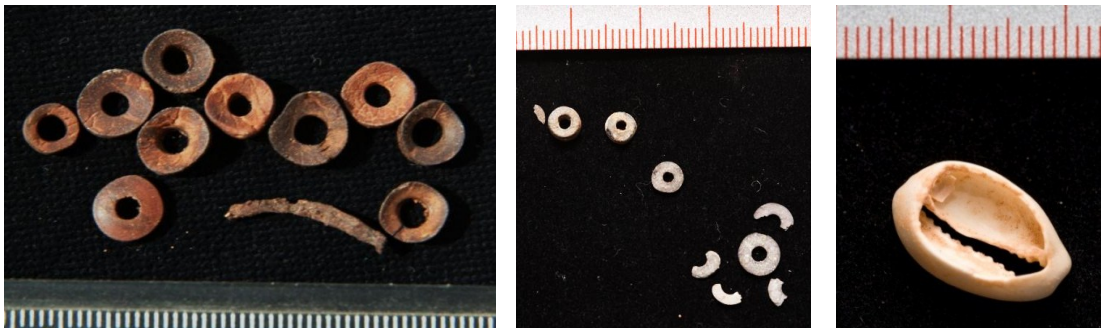


Figure 6.7. Examples of beads from Watwat: ebony (left), shale (centre) and cowrie (right) beads (Photographs by DMP 2008).

Items of personal adornment and jewellery have been seen in the form of beads. As at Zinkekra, ostrich egg-shell is the most prominent material mainly shaped as rounded discs, with the exception of 5 square beads recovered from UAT050.T6. Carnelian, amazonite and faience beads have been recorded in small numbers. UAT050 and UAT052 have provided examples of different

materials used in bead production, cowrie shell and laminated shale respectively. The beads would have been part of necklaces or bracelets, as well as sometimes being used as decoration of the funerary shroud. Along with the beads, an undecorated polished dark red stone, interpreted as an intaglio, was recorded in UAT055.T1.

Many of the tombs in Watwat have ceramic grave goods accompanying the body and funerary furniture outside the tombs. The density and range of surface finds varies from different parts of the Watwat embayment to others. There are a large proportion of imported Roman wares, including coarse and fine wares. The excavation of the tombs in Watwat has aided in establishing a positive correspondence between the surface finds with what was included in the graves, which has been used alongside the tombs morphological typologies to establish the chronology of these cemeteries. Roman pottery recovered from Watwat includes African Red Slip ware (ARS) dishes (55% of the tombs), amphorae (28.8% of the tombs), lamps (10.1%) along with few examples of handmade bowls and jugs (5%) (See Table 6.8 for summary of pottery recovered from the cemetery sites at Watwat).

Figure 6.8. Amphora recovered in UAT008.T19 (Photograph by DMP 2008).

Watwat provides a great variety of these types with a wide range in chronology and form. The amphorae from Watwat are of two main types; the Tripolitana I (mid Roman dating from 2nd to 4th centuries) and the Early Roman Tripolitanian (which dates from the late 1st century BC to the 1st century AD) (Dore *et al.* 2007: 310). The Tripolitana I (FP typology 19 and 20[2]), is characterised by a thick concave rim on the outer face with a high cylindrical neck which forms an angle with the

[2] FP Type 20 comprises miscellaneous rim and neck fragments of vessels probably of type 19 but cannot be unequivocally assigned (Dore *et al*. 2007: 350).

body. The handles are attached to the neck and shoulder and the body is long and cylindrical, ending in a conical spike. This type of amphorae was produced in Tripolitania and was widely distributed in the western Mediterranean[3]. On the other hand the Early Roman Tripolitanian (FP type 15) is a small to medium amphorae of ellipsoidal body of less quality than the Tripolitana I. The handles are attached to the rim from the base of the neck (Dore *et al.* 2007: 344).

Figure 6.9. Wheelmade bowl from UAT008.T32 (left) and African Slip Ware with impression of basketry (lid?) from UAT050.T5 (right) (Photographs by DMP 2008).

African Red Slip (ARS) refers to wide range of table wares (and coarser cooking wares) produced in Tunisia and widely distributed around the Mediterranean and across the north-west provinces during the late 1st to 6th centuries AD (Dore *et al.* 2007: 310). The full range of forms is immense, albeit there is a limited range recovered from the tombs in Fazzan, and its analysis is out of the scope of this thesis (refer to Dore *et al.* 2007 and Leone 2013). The earlier forms, i.e. plates, cups and bowls (first centuries AD), were inspired by the Italian Arretine ware and the Gaulish Samian ware. The later assemblages include an assortment of large shallow plates, small bowls and coarse-ware bowls. One of the tombs in the embayment of Watwat, UAT050.T5, has provided a significant number of almost complete ARS dishes typologically Hayes 3C (four samples), Hayes 4 and five examples of Hayes 6. Forms present in fragments are Hayes 6, 7 and 9, a dish with sloping wall and bead-rim (*Conspectus* 3.2).

Other ceramic artefacts from Watwat are lamps, recorded in 7 tombs. There is no representation of Garamantian incense burners as noted in other Classic Garamantian cemeteries in the Wadi Al-Ajal and there are only three tombs with locally made vessels. However, most of the ceramic

[3] http://ads.ahds.ac.uk/catalogue/resources.html?amphora2005 last accessed on May 6th 2011.

material encountered on the surface at Watwat cemeteries is local wares, which does not correspond with what is found inside the graves. This may relate to the looting in antiquity and the relatively fragility of the handmade fabrics. Surface collections of handmade pottery include examples of wide-mouth, narrow neck, deep and globular jars (some with painted decoration) and bowls.

The ceramic assemblages within the tombs and the surface pottery in the cemeteries of the Watwat embayment suggest that the use of this area of the Wadi Al-Ajal may have seen the highest level of activity during the Classic Garamantian period (1st -4th centuries AD).

Figure 6.10. Lamp (with gladiator theme decoration) from UAT008.T5 (Photograph by DMP 2007).

A glass *unguentarium* has been recovered from UAT008.T32. The *unguentarium* has a typical water drop form, with a long fluted neck and flaring rim, in green glass with a looped pattern of cream spirals around the length of the *unguentarium* and some iridescence.

Figure 6.11. Glass unguentarium from UAT008.T32 (Photograph by DMP 2007).

Pottery	Type	Chronology	Tombs	Surface Collection
African Red Slip Ware	Hayes 3a	Late 1st - Early 2nd century AD	UAT008.T33UAT008.T83,UAT008.T86	UAT005,UAT008,UAT063
	Hayes form 3b	Late 1st - Early 2nd century AD	UAT008.T33,UAT008.T87,	UAT005,UAT008,
	Hayes form 3c	Early - Mid 2nd century AD	UAT050.T5,UAT050.T5	UAT009
			UAT008.T86,UAT009.T1,UAT050.T5	
	Hayes form 6	Late 1st – 2nd century AD	UAT050.T5,UAT008.T74	UAT009,UAT050,UAT051
	Hayes form 7	4th – 5th centuries AD	UAT008.T5,UAT008.T19,UAT008.T38,UAT050.T5	
	Hayes form 8	Late 1st – 2nd century AD	UAT050.T5	
			UAT009.T1	UAT008
	Hayes form 9	Late 1st - Early 2nd century AD	UAT050.T7	UAT008
	Hayes form 14	Late 1st - Early 2nd century AD	UAT050.T5	
	Hayes form 15	Late 1st - Early 2nd century AD		
Amphorae	FP Type 15 (Early Roman Tripolitanian)	Late 1st century BC - 1st		UAT051
	FP Type 16	century AD		
	(Early Roman Tripolitanian)		UAT008.T75	UAT008, UAT009, UAT051/063
	FP Type 19 (Tripolitana I)	Late 1st century BC - 1st		UAT008, UAT010
	FP Type 20	century AD	UAT008.T86,UAT009.T2	UAT008
	(neck, body fragments of Tripolitana I)			
	FP Type 21 (fragments of Tripolitana II or III)	1st – 2nd century AD		UAT051
		1st – 2nd century AD	UAT050.T5	
		2nd - 4th century AD		
Coarseware	FP Type 108	1st century BC – 1st century AD	UAT006.T2	UAT013
	FP Type 143	3rd – 4th century AD		
	FP Type 179	2nd – 4th century AD	UAT008.T22,	
	FP Type 180	1st - 2nd century AD		
	FP Type 204	2nd - 3rd century AD		UAT051/063
	FP Type 216	1st century AD		
	FP Type 217	1st century AD		
	FP Type 219	1St - 3rd century AD	UAT051.T3	UAT051/063
	FP Type 222	1st – 2nd century AD	UAT008.T16	UAT008
Handmade	FP Types 301-3, 307, 321-25, 331	1st millennium BC	UAT006.T2,UAT008.T86,	UAT004,UAT006,
	FP Types 333, 337, 338, 341, 359	1st - 4th centuries AD	UAT008.T32,UAT008.T74, UAT008.T84	UAT008,UAT051/063
				UAT005,UAT008,UAT017,UAT051,UAT053,UAT063

Table 6.8. Summary of pottery typologies encountered in the Watwat embayment.

There is a significant number of examples of glass vessels recovered from the cemeteries in Watwat and mostly in fragmented form. Twelve tombs have records of glass present in the fill. UAT050.T5 provides the best examples of glass drinking vessels in Watwat. A bottle and cups have been found and recorded *in situ.* The bottle fragment consists of part of the rim and the straight neck in white glass. There are three different types of cups, all in white glass, a beaker with deep pinches (Figure 6.22 bottom left), and two conical bodied beakers with different shaped feet, a flat wide spreading disc shaped foot (Figure 6.22 top right) and a foot with the sides spreading outwards and downwards (Figure 6.22 bottom right). Following conservation of the glass fragments recovered from UAT050.T5 it is apparent that there were a total of 17 glass vessels in this particular tomb, in a variety of shapes and sizes. Some of these artefacts are: a short-stemmed wine glass, deep goblet with a flaring base, six narrow-necked multisided blown glass vessels, mould-formed deep bowls and think walled platters.

Figure 6.12. Glass vessels from UAT050.T5 (Photograph by DMP 2009).

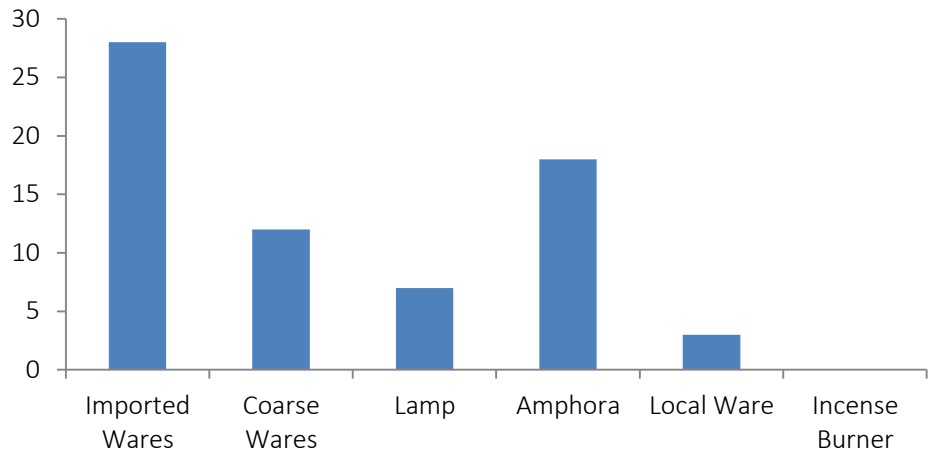
6.4.3. Comments and alterations on the published data

The tombs used for the sector analysis are partly published as interim reports (Mattingly *et al*. 2007 and 2008). Most of the tombs have not been fully published at the time of writing this thesis. The original archive is located at the University of Leicester and I have had full access to it. In

addition to this, I was part of the original excavation team and have actively participated on the recording of the tombs in UAT008-010. Still, some of the written records of Watwat show a continuous discrepancy in the level of detail in the recording of the material culture within the tombs and particularly the positioning of the assemblages within the tombs. If mention has been made of fragments of pottery or glass, there is no indication of where they were recovered from. Therefore, most of the information provided in the following section has been gathered through the analysis of the photographic record of the Desert Migrations Project as well as my own photographs, and notes, of the excavations.

6.4.4. Results of the sector spatial analysis

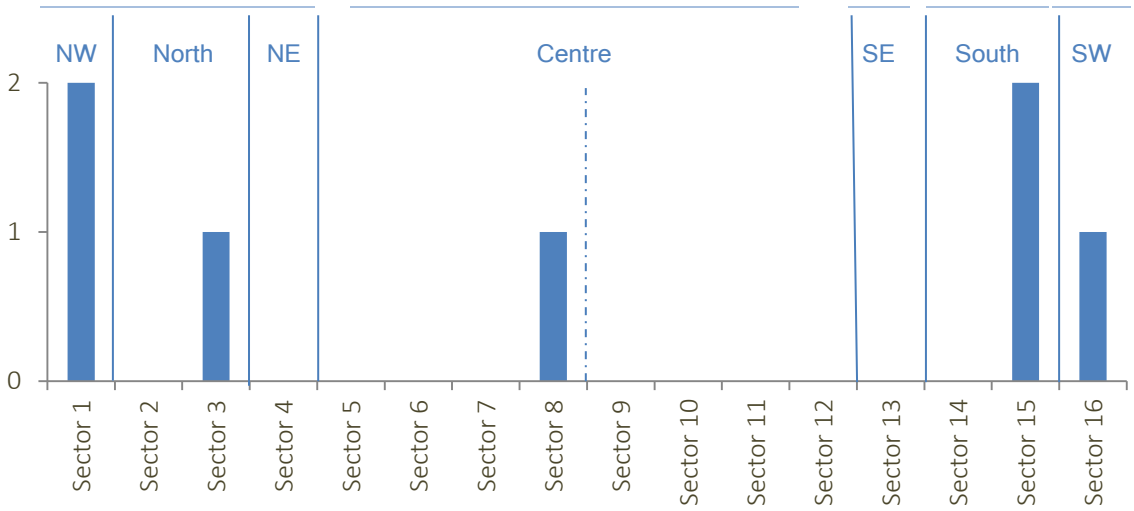
This section describes the position of the main grave goods (ceramic artefacts, glass, textile and items of personal adornment) recorded in the excavated cemeteries of the Watwat embayment. Graphs are presented to indicate which artefacts appear more frequently and where in relation to the corpse and the tomb itself. When the position of the body or of the artefact within the tomb has not been recorded, the presence/ absence of the different typologies across the cemeteries have been recorded, providing an insight into some of the material that was present in the tombs at the time of interment.



Graph 6.38. Number of tombs with presence of ceramic artefact (by typology) in Watwat.

❖ Amphorae

In total, there are 17 tombs (28%) in Watwat where amphorae have been recorded (either as fragments or complete vessels). Unfortunately, given the disturbed state of most of the tombs as a consequence of the ancient looting, most of the written records make reference to dislocated artefacts. Of those still *in situ*, the amphorae are concentrated on the west side of the shaft tombs. One of the amphorae (incomplete) was found outside the shaft, on the north side of the tomb (Figure 6.23).



Graph 6.39. Sector analysis of amphorae in Watwat.

Figure 6.13. Amphorae *in situ* in UAT008: T19 (top right) and T86 (left and bottom right) (Photographs by Author).

❖ Lamps

There are 7 lamps recovered from six tombs investigated during the excavations at the cemeteries of Watwat. Out of these 7, only 2 lamps have been recorded in relation to the body given the poor overall preservation of human remains within these cemeteries. Interestingly, both lamps were recorded in exactly the same location within the tombs, both in relation to the north and the position of the body (UAT008.T5 and UAT050.T5). The lamps have been placed in the area directly behind the head, as opposed to what has been noted in Saniat bin Huwaydi (section 6.4 below) and both lamps were recovered on the south (middle) side of the tomb. It is worth highlighting that the bodies were on different alignments, UAT008.T5 was on a west-east alignment facing north, whilst UAT050.T5 laid on a south-north alignment facing towards the west.

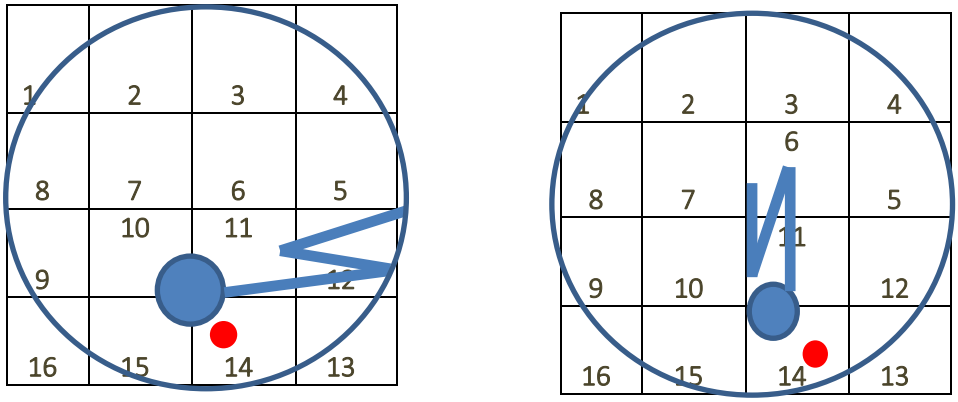


Figure 6.14. Representation of UAT008.T5 (left) and UAT050.T5 (right) with reference to sectors and position of the body.

❖ Finewares

10 out of the 28 imported wares recovered from Watwat come from the same tomb, UAT050.T5. These are almost complete or complete ARS dishes dating to the Classic Garamantian period (2nd century AD). The rest of the evidence of finewares relate to fragments encountered in 15 tombs. There are also small quantities of Italian Sigillata (1st century AD). Given the fragmentary nature of most of the finewares it is not possible to do a spatial analysis of their distribution inside the tombs. The only tomb that allows such analysis is UAT050.T5, which shows a concentration of the artefacts in the north and west side of the tomb, in stacks of up to 5 plates.

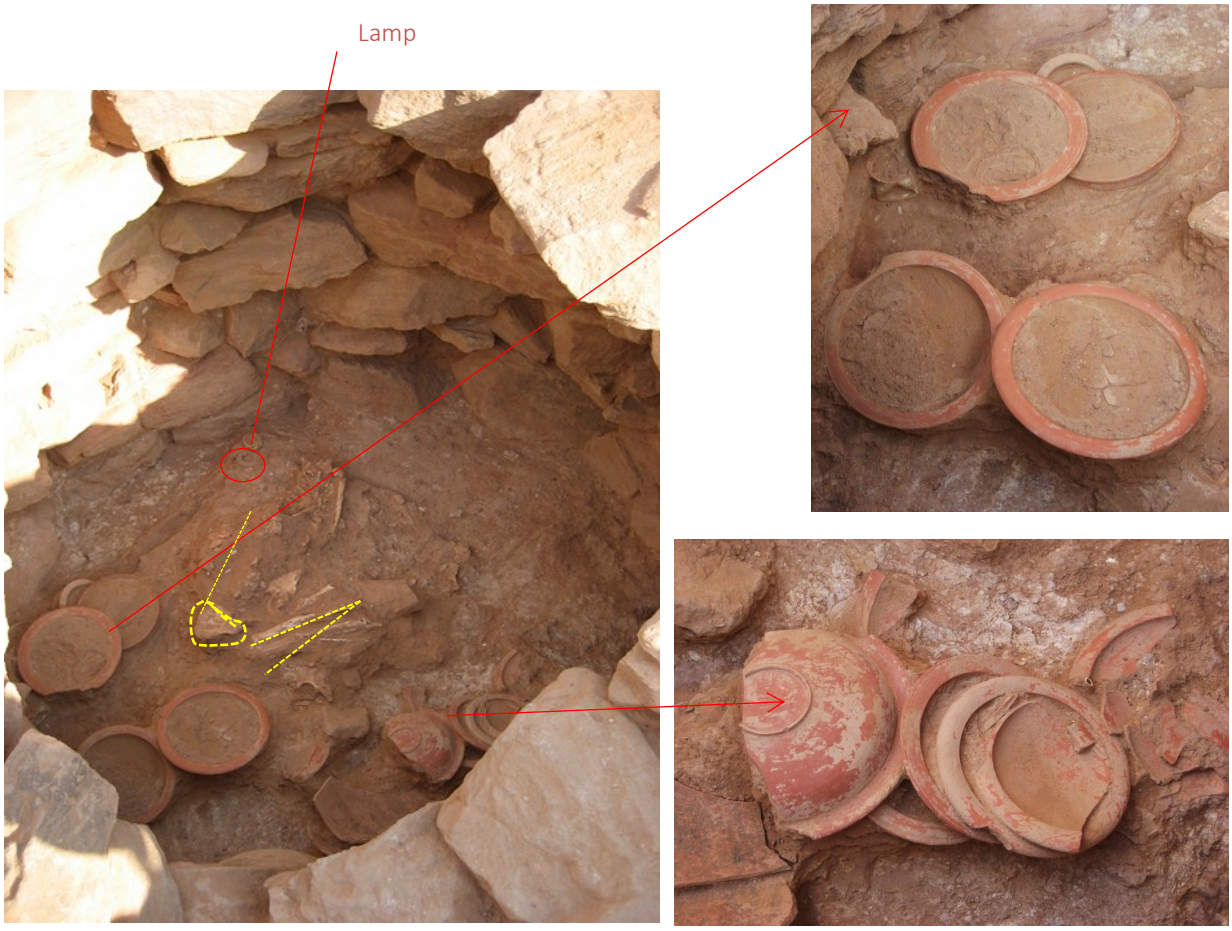
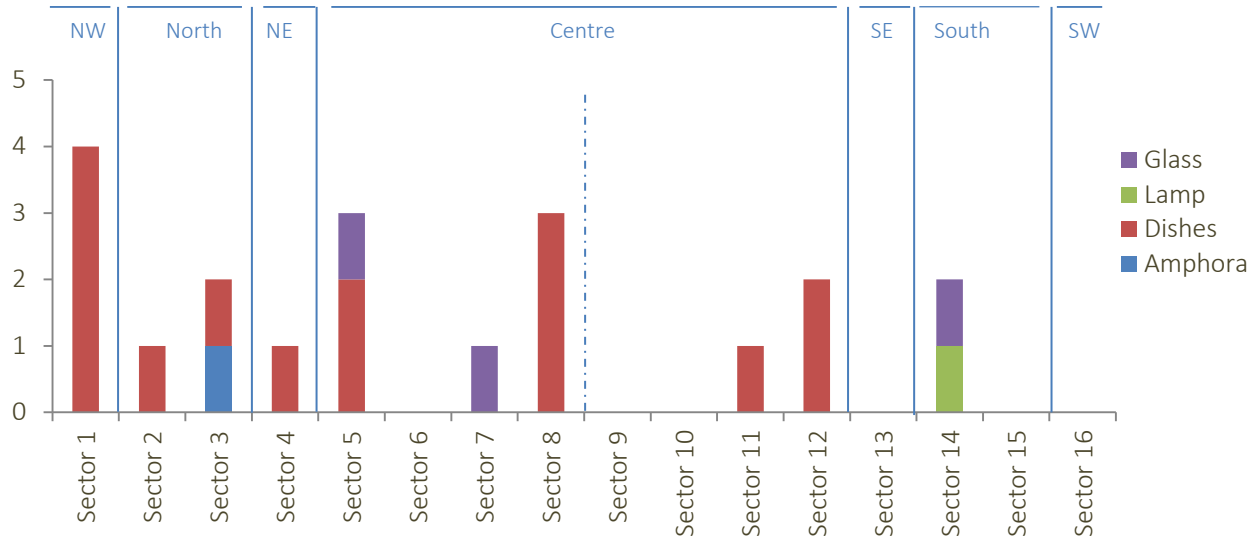


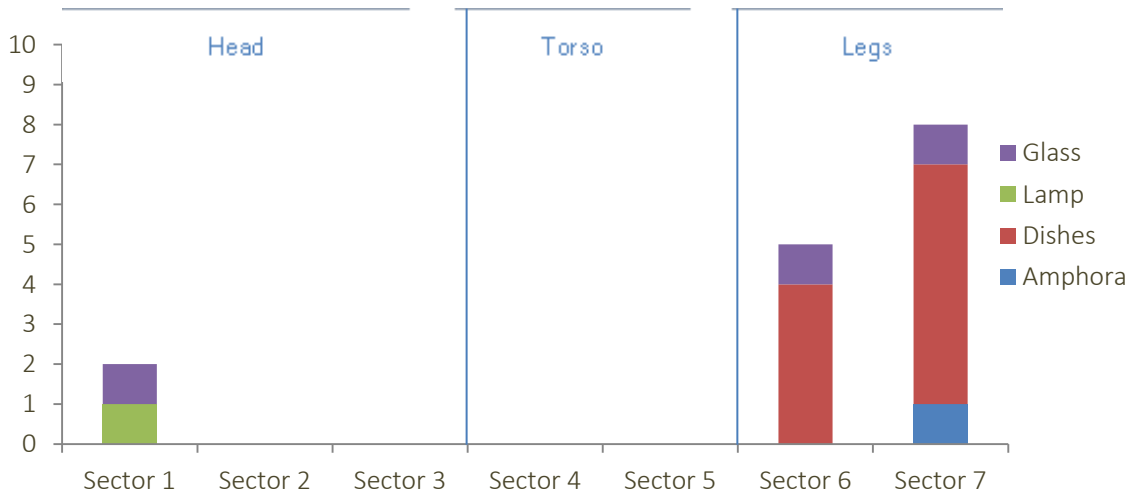
Figure 6.15. Fineware *in situ* from UAT050.T5 (facing south) (human remains highlighted in yellow) (Photographs by Author).

❖ Glass vessels

The high level of fragmentation of the glass vessels due to the disturbance of the burials in the past has not made possible an analysis of these artefacts individually. As the only complete samples have been recovered from UAT050.T5 along with the best preserved ceramic artefacts, I have carried both sector analysis, with regards to the compass north and the position of the body, for this particular tomb (Graphs 6.40 and 6.41). Glass vessels have been placed in centre and south side of the tomb, whereas the ceramic is concentrated on the north and centre of the burial chamber. In addition to this, whilst the ceramic artefacts are placed at the back of the torso area and behind the lower extremities, the glass drinking vessels are located across the body, the sectors around the back of the head, back and behind the legs have a presence of glass vessel, always encountered in association to a ceramic artefact rather than on their own.



Graph 6.40. 16-Sector analysis of the funerary assemblage in tomb UAT050.T5.

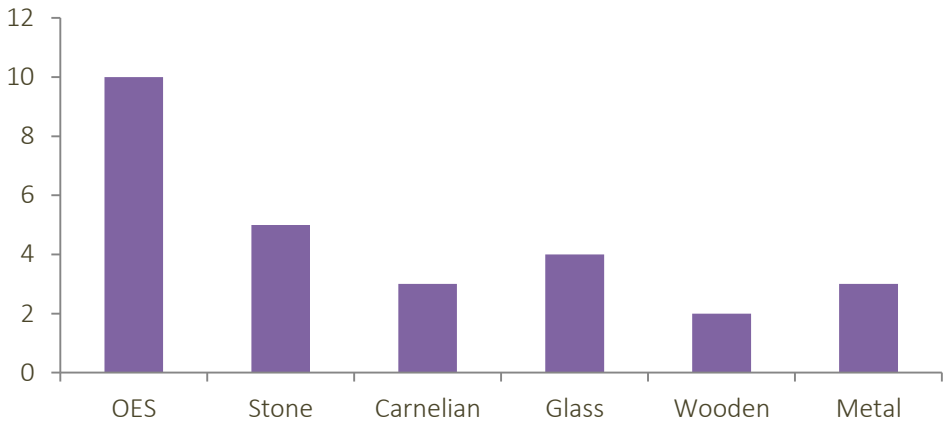


Graph 6.41. 7-sector analysis of the funerary assemblage in tomb UAT050.T5.

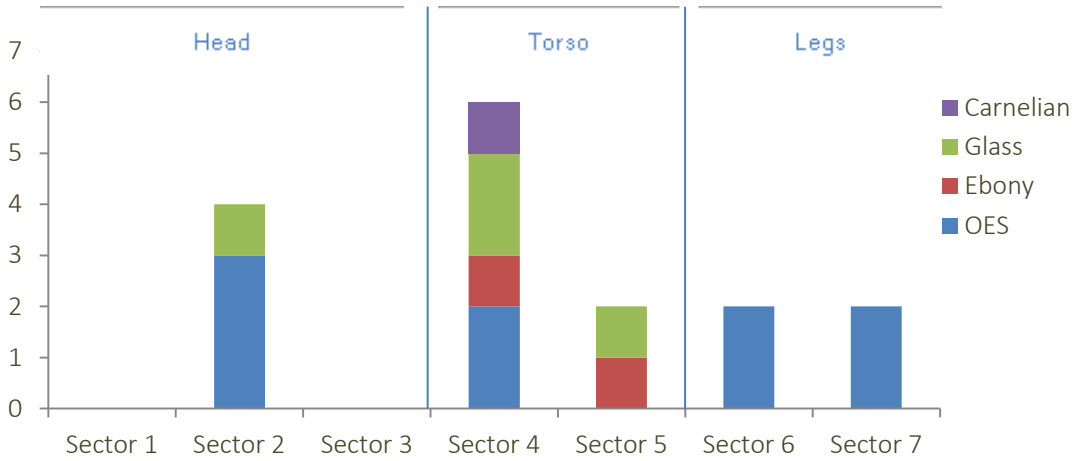
❖ Personal adornment

Personal items and adornment recorded in the cemeteries of Watwat are beads of different materials (see Graph 6.43) along with small metal artefacts, an unguentarium and tweezers. The grouping of the beads as necklace, bracelet or belt, when possible, has been done by the recorded location with regards to the body (Graph 6.44). This grouping has only been done when there is a clear record of the provenance of the beads. Unfortunately, although multiple beads have been encountered in 16 tombs, most have been recorded in the upper fills of the tombs due to the disturbance of the tombs. As Graph 6.42 shows, there is a significant presence of beads in sector 4 – referring to the front area of the torso and neck – suggesting the presence of a necklace, in all

cases a combination of different materials. For instance, the female buried in UAT008.T32, had a necklace made of ebony and glass beads as well as a shroud decorated with ostrich egg-shell beads (OES), suggested by the presence of the thread and beads along the shroud surrounding the lower extremities. Sectors 4 and 5 could therefore relate to the presence of a necklace. Also, there is a possibility of one bracelet (UAT008.T22), as the excavator's comments refer to beads 'around area of (the) hands'– given the crouched position of the bodies, the hands are placed in the proximity of the face. However, the photographic record does not allow a definite relation with the arm as opposed to the upper torso.



Graph 6.42. Number of tombs where there is a presence of beads (by material) in Watwat.



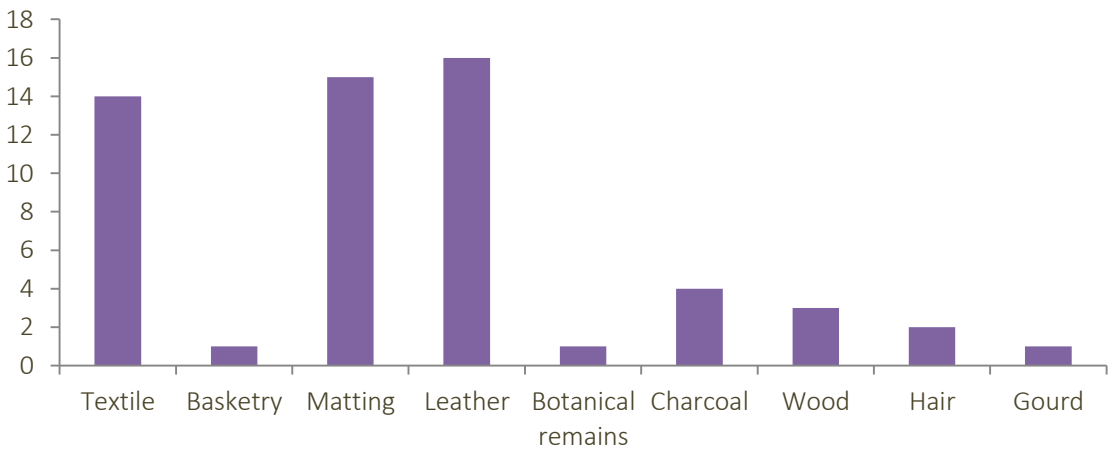
Graph 6.43. 7-Sector spatial analysis of the presence of beads (by type).

Along with the beads, other items recorded in Watwat with regards to personal adornment, are a pair of iron tweezers recovered from UAT008.T22 (Figure 6.26). As mentioned above, an intaglio was also recorded in UAT055.T1; unfortunately the position of the intaglio was not recorded *in situ*.

Figure 6.16. Iron tweezers from UAT008.T22 (Photograph by DMP 2008).

❖ Organic material

Twenty five tombs excavated across the embayment of Watwat have records of the presence of organic material. Only one tomb, UAT008.T32, has a record of gourd within the burial chamber, albeit dislocated from its original place. Botanical remains, aside from the vegetable fibre fragments – part of the matting, have been recovered from the cairn excavated in UAT004.T1. Charcoal fragments have been encountered and recorded as a small deposit associated with a concentration of local pottery fragments in UAT004.T1, south of the funerary chamber, and in the proximity of the bodies in UAT008.T32, UAT008.T41 and UAT008.T86. Small fragments of wood (presumed to form part of a wooden artefact) were recorded – albeit without accurate location within the funerary structures- in tombs UAT008.T33, UAT008.T40 and UAT050.T1.



Graph 6.44. Number of tombs with a presence of organic materials (by typology) in Watwat.

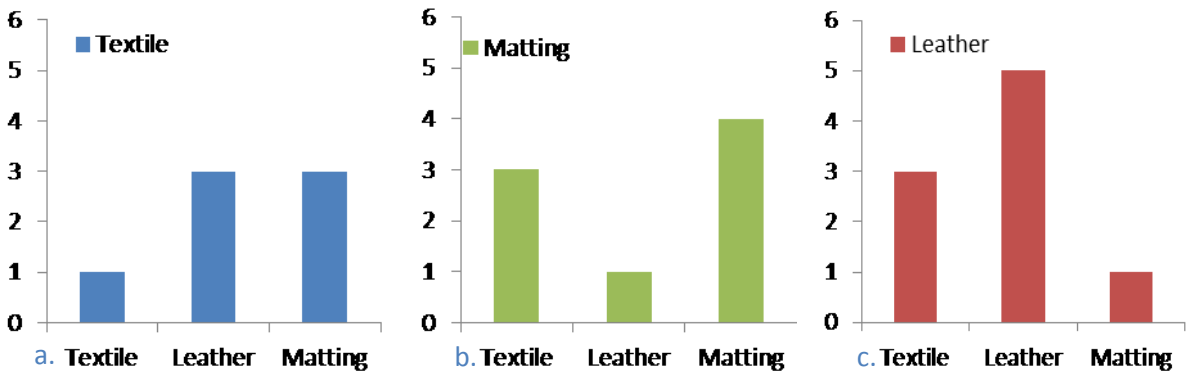
Along with the skeletal remains of the individuals, there are a number of tombs which have human hair and skin. It is particularly difficult with very small fragments to differentiate between leather and dried human skin. It must be remembered that Watwat has seen an extraordinary preservation

of organic materials, particularly in UAT008, where the remains of three naturally mummified individuals have recently been excavated. Once having seen these, and the aspect of the exposed skin, it is possible that some of what has been recorded as very friable and fragmented leather could be human skin rather that part of the shrouds, which, in many occasions have survived in a very good level of preservation (see Figure 6.27). The tombs investigated for this section of the analysis are those where the photographic and written records provide sufficient information with regards to the amounts and consistency of the leather fragments encountered in the tombs.

The presence of leather has been recorded in 16 tombs out of the 25 analysed in this section (64% if the tombs). Interestingly, in 31.25% of them, leather was encountered on its own, without any association with textile or matting. In three tombs it has been found alongside textile and in only one associated with matting (Graph 6.47).

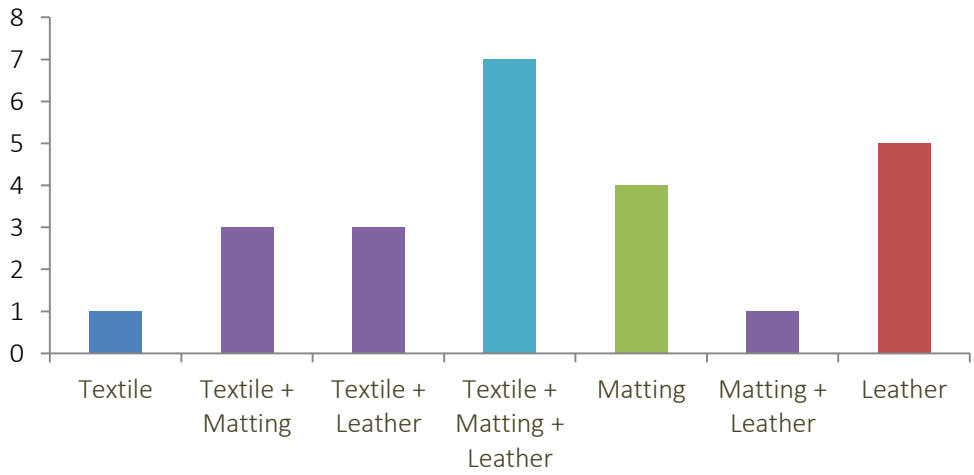
Figure 6.17. UAT008.T22: Example of leather recorded *in situ* (left) and detail (right) (Photograph by DMP 2008)

Matting has been recorded in 60% (15 out of 25) of the tombs examined. As with leather, in the majority of the cases, matting remains were encountered without an association with textile or leather. However, it must be noted that most of the tombs in these cemeteries have been heavily robbed and disturbed and therefore only the better preserved tombs have shown any possible association between the different materials readily observable.



Graph 6.45. Relation of number of tombs with presence of organic materials:
a. Textile; b. Matting and c. Leather.

Watwat, as mentioned above, has made available exceptional examples of textile (Figure 6.14) providing one of the largest collections of textiles in the Sahara, outside of Egypt. Textile fragments have been recorded in 14 of the tombs (56%), with the vast majority recovered in the western side of the embayment (UAT008 – 92.8%). Seven tombs[4], out of the 25 analysed, have evidence of all three, leather, matting and textile associated. Graphs 6.45 (a, b and c) have shown the number of tombs where there is a presence of either of the elements and its association with each other, but not the combination of the three. The graph below is a summary of all the combinations above, noting the tendency of both leather and matting being found by themselves in comparison with textile, which is mostly found in association with either matting or leather.



Graph 6.46. Variations in the combination of textile, leather and matting present in the tombs in Watwat.

[4] Tombs where there is a record of association of textile, leather and matting are: UAT008.T22, UAT008.T32, UAT008.T40, UAT008.T41, UAT008.T82, UAT008.T84, and UAT008.T86.

One of the correlations I was hoping to analyse was the choice of material (and/or combination of materials) with regards to the age and sex of the deceased. Unfortunately, the skeletal information retrieved from the burials in Watwat has not provided sufficient data to consider such a choice. What can be said is that in the least disturbed burials there is a presence of all three elements. The matting occupies the bottom of the grave pit, and in some occasions it has been found lining the burial chamber. It must be noted that not all the tombs excavated had a stone-lined shaft, which does not seem to affect the choice of presence of matting. As seen in Graph 6.47, not surprisingly, the best preservation of the matting, textile and leather is in the centre of the grave, directly below the body of the deceased, in the area of the legs and torso (Graph 6.48).

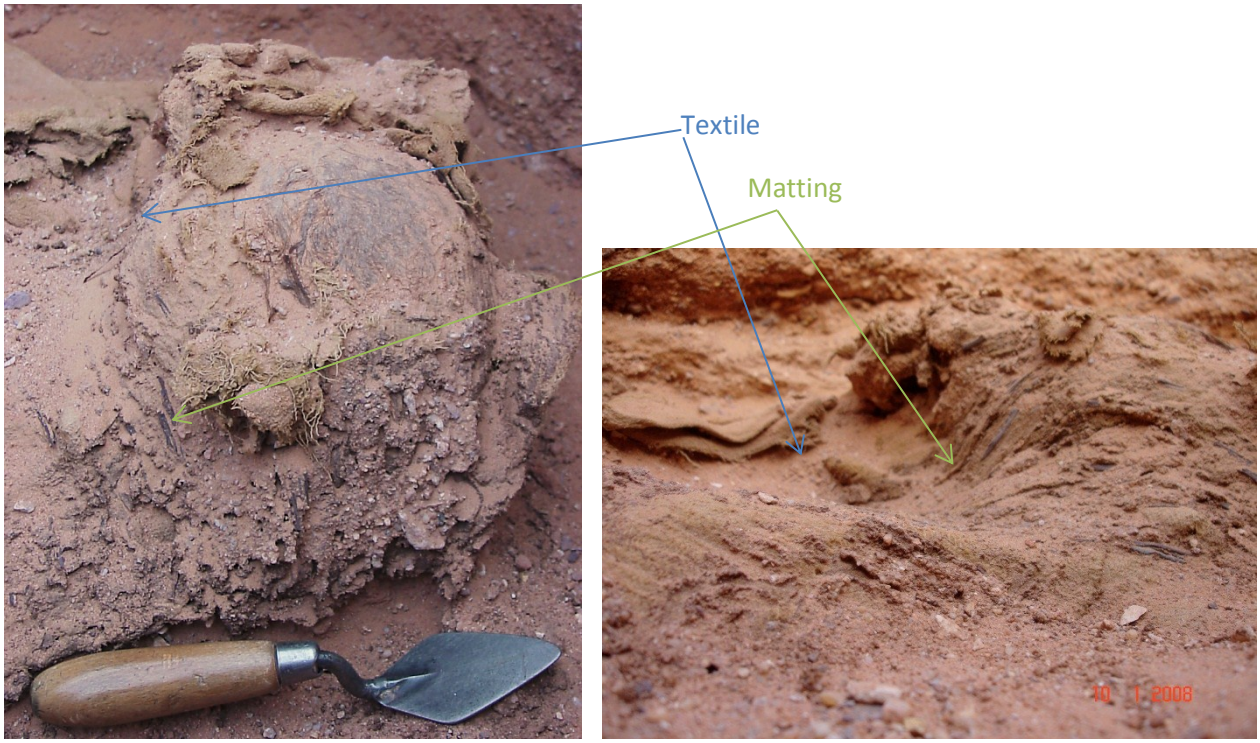
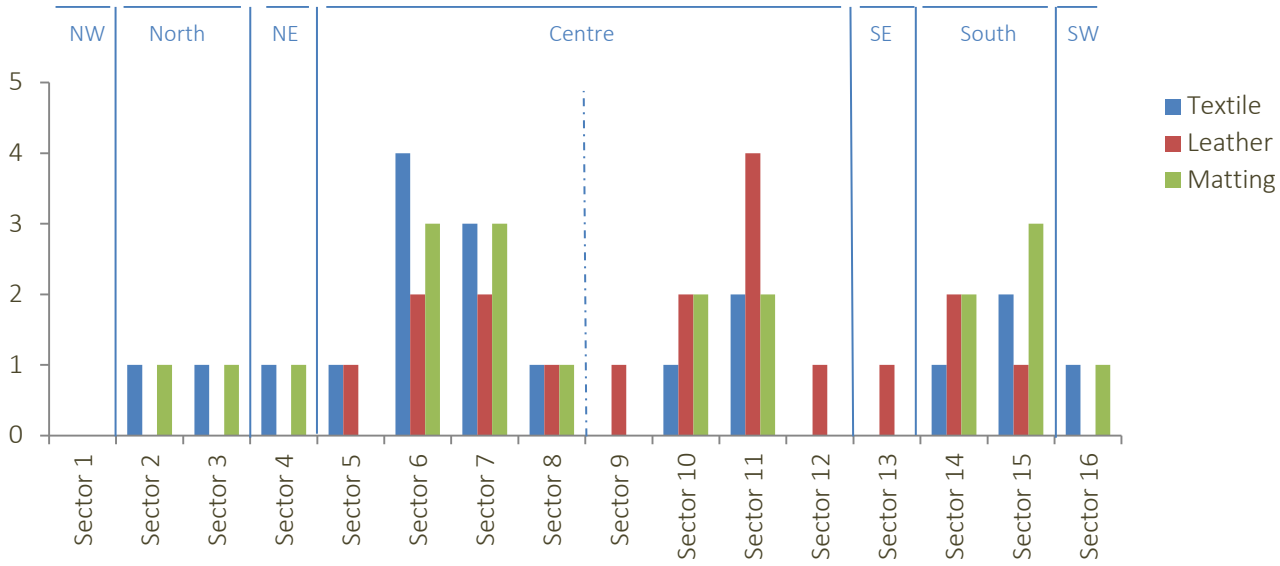
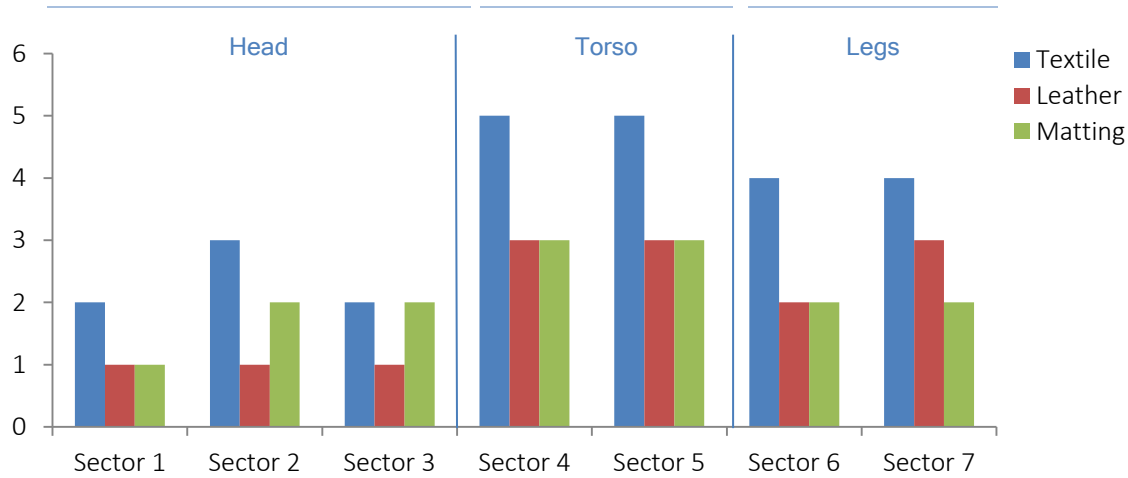


Figure 6.18. UAT008.T84 showing the association of the matting over the textile (Photographs by Author).



Graph 6.47. Position of textile, leather and matting in the tombs.



Graph 6.48. Sector analysis of textile, leather and matting, with reference to the position of the body.

Tomb Number	Phase	Imported Ware	Coarseware	Lamp	Amphora	Local ware	Glass	Faience	OES beads	Stone beads	Wooden beads	Carnelian	Amazonite	Glass beads	Metal	Quern stone	Textile	Matting	Leather	Botanical remains	Charcoal	Wood	Gourd	Ochre	Grave Diversity	Goods Count	Count (Including beads)
UAT002.T1	CGAR									x															1	0	31
UAT002.T3	CGAR				x																				1	1	
UAT002.T6	CGAR				2																				1	2	
UAT002.T8	CGAR	x			x		x																		3	3	
UAT002.T9	CGAR	x		x																					2	2	
UAT002.T10	CGAR	x	x	x			x	x																	5	9	
UAT003	PUGAR	x	x		x		x																		4	24	
UAT004.T1	PUGAR				x	x			x							x				x					5	4	5
UAT008.T2	CGAR		x				x		x	x															3	3	5
UAT008.T5	CGAR	x	x	x	x					x				x					x						6	5	7
UAT008.T16	CGAR				x												x		x					x	4	4	
UAT008.T17	CGAR	?															x	x							2	2	
UAT008.T19	CGAR				x													x							2	2	
UAT008.T20	CGAR				x														x						2	2	
UAT008.T22	CGAR	x			x		x		x	x	x	x	x	x	x		x	x	x						8	7	157
UAT008.T24	CGAR	x		x	x												x	x							5	5	
UAT008.T26	CGAR		x				x																		2	3	
UAT008.T27	CGAR	x					x																		2	2	
UAT008.T29	CGAR						x																		1	1	
UAT008.T30	CGAR	x			x				x									x							4	4	
UAT008.T32	CGAR	x					x		x		x	x	x	x			x	x	x		x		x		8	7	119
UAT008.T33	CGAR	x			x														x			x			4	4	
UAT008.T34	CGAR		x																						1	1	

Tomb Number	Phase	Imported Ware	Coarseware	Lamp	Amphora	Local ware	Glass	Faience	OES beads	Stone beads	Wooden beads	Carnelian	Amazonite	Glass beads	Metal	Quern stone	Textile	Matting	Leather	Botanical remains	Charcoal	Wood	Gourd	Ochre	Grave Diversity	Goods Count	Count (Including beads)
UAT008.T38	CGAR		x						x						x				x						4	4	
UAT008.T40	CGAR																x	x	x			x			4	4	
UAT008.T41	CGAR	x															x		x			x			4	4	
UAT008.T42	CGAR	?																x						x	2	2	
UAT008.T75	CGAR	?															x	x							2	2	
UAT008.T77	CGAR				x													x							2	2	
UAT008.T82	CGAR													x			x	x	x						4	3	4
UAT008.T84i	CGAR																x		x						2	2	
UAT008.T84ii	CGAR																x	x	x						3	3	
UAT008.T86	CGAR	x			x	x					x						x	x			x				7	6	14
UAT008.T87	CGAR																x								1	1	
UAT009.T1	CGAR	x		x																					2	3	
UAT010.T3	PUGAR					x																			1	1	
UAT010.T4	PUGAR					?						x	x												1		2
UAT010.T5	PUGAR								x?								x		x						3	2	3
UAT010.T6	PUGAR								x?																1	0	1
UAT050.T1	CGAR	x			x		x	x											x			x			6	10	
UAT050.T5	CGAR	x		x	x		x											x	x						6	31	
UAT050.T6	CGAR								x																1	0	5
UAT052.T2	PUGAR						x		x			x													2	1	14
UAT052.T3	PUGAR								x																1	0	1
UAT053.T3	PUGAR								x																1	0	1

Table 6.9. Summary of artefacts encountered in Watwat

6.5. Zinkekra

6.5.1. General description of the dataset

There are numerous burial sites on the hill of Zinkekra and its surroundings, with a good proportion of cemeteries being of Roman date. The data included in this part of my research comprises the published material from the excavations of Daniels (1968, 1970) and the Desert Migrations Project (Mattingly *et al.* 2007a; 2007b; 2010a).

In all, there are 23 excavated burials from various cemeteries located on the promontory of Zinkekra. Most of these tombs had human remains in various stages of preservation and disarticulation. Out of the burials where skeletal data was recorded, there are 13 articulated individuals, two of which are double inhumations; one of a female adult and an infant (ZIN220.T19) and two adults (ZIN013.T202/209). I have taken into consideration the skeletal remains with adequate articulation to distinguish the position and orientation of the body within the tomb. In total, a minimum of 85 artefacts have been recorded and catalogued. This number takes into consideration the count of beads recorded, but it must be noted that not all beads have been individually counted in each burial. In addition to this, it needs to be highlighted that wood and pottery fragments have been counted as one individual artefact when encountered within the same tomb. For instance, 9 fragments of wood were recovered from ZIN220.T4, I have considered these as one artefact and the fragments have not been individually added towards the grave goods count. Furthermore, mention of dates on the records did not specify the actual number of dates recovered, although special mention has been made when there has been a sole date. Therefore, the material count does not take into consideration the real number of dates, and it is consistent through the sites relating only to one seed regardless of the actual count.

The only tombs considered for the spatial analysis of the funerary assemblages are those where the human remains have not been disturbed and where the material culture can be identified in correspondence with a particular individual. Most of these relate to the fieldwork carried out by Daniels, with the exception of three burials (ZIN218.T1, ZIN220.T18 and ZIN220.T19) excavated by the Desert Migrations Project. Therefore, the sample for the spatial analysis of funerary assemblages in the cemetery sites at Zinkekra consists of 15 tombs - 65% of the excavated tombs - with the remains of 13 individuals and 38 artefacts (not including beads or date count).

Tomb number	Tomb Typology	Phase	Age	Sex	Orientation (head-feet)	Position
ZIN002.013.T44	2b	PUGAR	Adult	Female	North-South	Right side facing west
ZIN002.013.T45	2b	PUGAR	Adult	Male	East-West	Left side facing south
ZIN002.013.T54	2b	PUGAR	Adult	Female	West-East	Right side facing south
ZIN002.013.T170	2b	PUGAR	Adolescent	Male	East-West	Left side facing south
ZIN002.013.T171	2a	PUGAR	Adult	Female	West-East	Left side facing north
ZIN002.013.T202/209	2b	PUGAR	Adult	Male Female	North-South South-North	Left side facing east Left side facing west
ZIN002.013.T204	2b	PUGAR	Adult	Female	West-East	Right side facing south
ZIN218.T1	2b	PUGAR	Adult	Uncertain	South-North	Left side facing west
ZIN220.T4	2b	CGAR	Adolescent	Uncertain		
ZIN220.T6	2b	CGAR	Uncertain	Uncertain		
ZIN220.T8	2b	CGAR	Uncertain	Uncertain		
ZIN220.T18	2b	CGAR	Adult	Female	East-West	Left side facing south
ZIN220.T19	2b	CGAR	Adult Infant	Female uncertain	East-West	Left side facing south

Table 6.10. Summary of information provided in Chapter 5 about the burials in Zinkekra analysed in this section.

6.5.2. Material culture

The funerary assemblages recorded from the 23 tombs excavated in the cemeteries around the Zinkekra promontory are limited on contents. Despite this, there is a fair selection within the assemblages, of preserved organic materials, including textile, matting, leather, wood, gourd and dates.

Dates have been recorded in 5 tombs from various cemeteries along the promontory. There is no clear count of the number of dates within the tombs ranging from just one date to 'a quantity' of carbonised date stones (Mattingly *et al.* 2010a: 356). One piece of decorated gourd, with pyro-engraving was recovered from ZIN350.T16 (Figure 6.29).

Figure 6.29. Pyro-engraved gourd recovered from ZIN350.T16 (Photograph by DMP 2007).

Textiles, or traces of textiles, have been recorded in 7 tombs, including those excavated both by Daniels and the Desert Migrations Project. The fragments of textile recovered from these tombs are fine plain weave and most of them of a very high quality, with a weft numbering more than 30 threads per centimetre (Mattingly *et al.* 2007b: 146). Commenting on the textile remains recovered from a settlement site at Zinkekra (ZIN003.105), Wild (2010: 488) emphasised the importance of the Garamantian textiles and spinning tradition.

Figure 6.30. Textiles recovered from ZIN220.T19 (left) and ZIN220.T4 (right) (Photograph by DMP 2007).

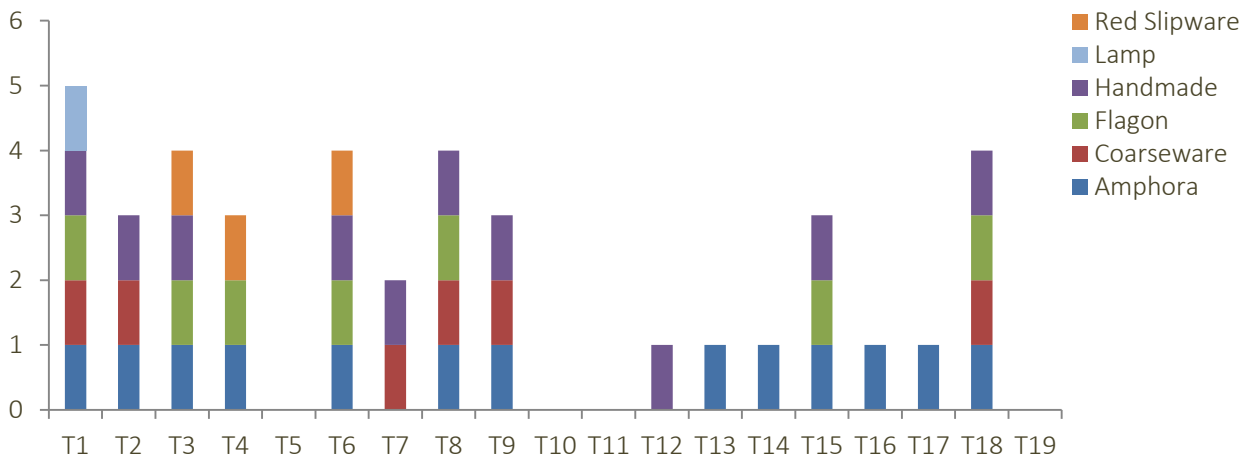
Figure 6.31. ZIN218.T1 showing matting in situ and detail of the wooden baton (top right) and remains of vegetable fibre cord (bottom right) (Photographs by Author and DMP 2007).

Matting, in the form of threads and cordage, has been recovered from 9 out of 23 tombs excavated. Despite its fragility, the examination *in situ* of the grave matting in ZIN218.T1 (Figure 6.31 left), which showed that the reeds had been perforated and joined by a two-ply vegetable fibre cord, can be seen as the characteristic traces of the perished materials (Mattingly *et al.* 2007b: 148). The matting in ZIN218.T1 had been stretched by a wooden baton (see Figure 6.31 top right).

Figure 6.32. Wooden vessel from ZIN220.T4 (left) and head-rest from ZIN218.T1 (right) (Photographs by DMP 2007).

Wooden artefacts in the funerary assemblages of the cemeteries at Zinkekra are represented in the form of headrests and vessels. The most common headrests recovered from the tombs in Zinkekra are made of an upright stalk, a horizontal base bar and two upward curving bars to support the neck (Figure 6.32 right). Another type of headrest was unearthed in ZIN002.013.T209, a single block with a depression in the centre. Along with the headrests, various fragments of wooden vessels were recovered (i.e. Figure 6.32 left). ZIN002.013.T209 was particularly rich in wooden artefacts, containing a wooden bowl, two wooden cups and a headrest.

The excavations in ZIN220 highlight the presence of a wide range of pottery typologies. Despite the disturbance in the vast majority of the tombs, fragments of amphora have been recovered in 68% of the tombs in ZIN220, 47% of the graves had handmade sherds and 37% contained flagons. Only 4 tombs out of the 19 excavated in this cemetery did not have any evidence of pottery inside the tomb.



Graph 6.49. Presence of pottery types in ZIN220 per tomb

The examples of pottery include red wares dating to the 1st and 2nd centuries AD (e.g. ZIN003.022-036) to wheel-made coarseware forms which date up to the 4th century AD (e.g. ZIN003.109). An almost complete example of a small jug with a single handle, FP Type 204, was recovered in ZIN218.T1 (Figure 6.33). This sort of jug has been recovered on sites along the coasts of Tunisia and Tripolitania and noted predominantly in funerary contexts (Dore *et al.* 2007: 386). Fragments of handmade ware (Zinkekra ware) dating to the first millennium BC we also found but are not closely diagnostic. Some of the forms present are jars, deep bowls and dishes with various degrees of decoration, which mainly consist of simple impressions, packed and single rocker and alternate pivot.

Figure 6.33. Ceramic vessel from ZIN218.T1 (Photograph by DMP 2007)

Beads recorded from Zinkekra are predominantly ring, circular or barrel shaped, and manufactured from ostrich egg shell (OES) and glass (cobalt-blue, turquoise-blue, amethyst translucent glass and blue-grey opaque glass) (Figure 6.34). The interpretation of the type of adornment was based on the location of the beads (when possible) and the number of beads encountered (for instance, if only one bead was recorded in the chest area this will be understood as an amulet as opposed to more than one bead, which would be considered a 'necklace').

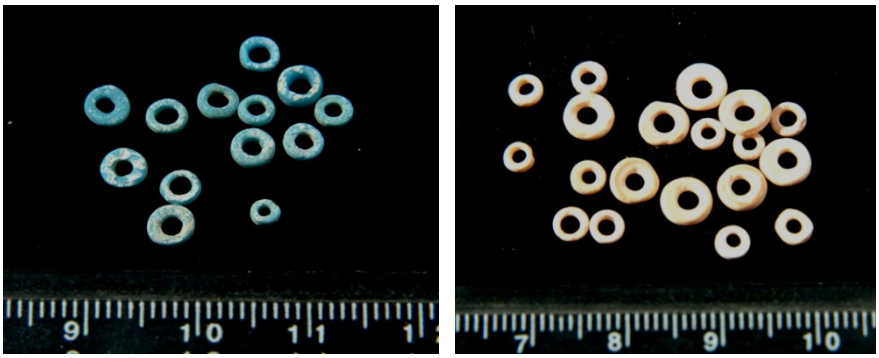


Figure 6.34. Sample of glass and ostrich egg-shell beads recovered from ZIN220 (Photographs by DMP 2007).

6.5.3. Results of the sector spatial analysis

This section describes the position of main grave goods (wooden artefacts - including headrests and bowls-, textile and ceramics) recorded in various cemeteries of Zinkekra. Graphs are presented to indicate which artefacts appear more frequently and where they were placed in relation to the deceased and the tomb itself. These analyses have been done for each individual tomb in which the position of the corpse was clear. Unfortunately, in Zinkekra there is relatively small number of tombs excavated and the nature of the funerary assemblages does not allow carrying out a thorough statistical prognosis. Furthermore, the small number of burials recovered where the human remains were in good state of preservation and not disturbed are even less. Therefore, it is not possible at this moment to carry out a comparative analysis based on sex and age. Still, note has been made where I feel there is a common pattern across the various cemeteries in relation to the absence or presence of specific artefacts.

- Pottery

As stated above, a limited amount of pottery was recovered from the tombs at Zinkekra and out of this only one vessel can be related to the body. The almost complete jar (wrapped in textile) was recovered in ZIN218.T1, a well-preserved burial of a young adult, cut into the underlying occupation deposits from the Early Garamantian phases of Zinkekra. The location of the jar within the tomb was in the centre towards the west of the tomb. Its position in relation to the body is in the torso area (sector 4). The grave pit area is relatively small in comparison to the size of the body, thus the body is in a very tight crouched position with the vessel in front of the chest and knees (Figure 6.35).

Figure 6.35. ZIN218.T1 showing location of pottery vessel (Photograph by Author).

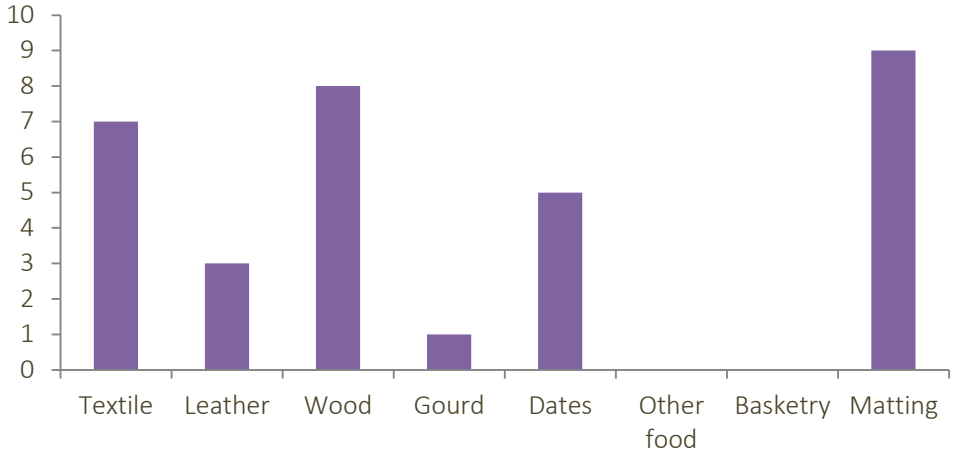
❖ Organic

Only 5 out of the 23 excavated tombs in the various cemeteries at Zinkekra did not show evidence of any type of organic material. The fragility of the organic material has meant that the spatial analysis of specific organic types was not possible (for example, matting or textile). In order to consider these materials I have assumed specific aspects of the burial practices based on better preserved examples of the same funerary structure, typology and chronology. For instance, the matting, which only in ZIN218.T1 survived in a fair condition, and based on this preservation, has been assumed to be placed underneath the body covering most of the grave pit. A similar assumption has been made in relation to the use of textiles in the burials at Zinkekra.

Figure 6.36. Burials in ZIN220 mentioned in this section: T18 (left) and T19 (right) (Photographs by Author).

The preservation of the textiles varies from shreds (Figure 6.37 – top right) to a near complete garment or shroud in ZIN220.T19 (Figure 6.36). This garment was woven in rectangular segments with at least two separate panels being sewn together. Most of the textiles in Zinkekra are woven to a very high quality. Unfortunately, not all the textiles can be directly related to the human remains. However, these textiles are likely to be shrouds as those seen in UAT008.T84 (see section 6.4).

Leather was in very poor state of preservation and therefore it was not possible to consider it in terms of spatial analysis. These fragments are likely the remains of leather shrouds the bodies were wrapped in. This is assumed given the heavy folding of the material recovered from the tombs, as opposed of them being evidence of leather bags or smaller artefacts. It must be noted that the recorded presence of leather in tombs is infrequent.



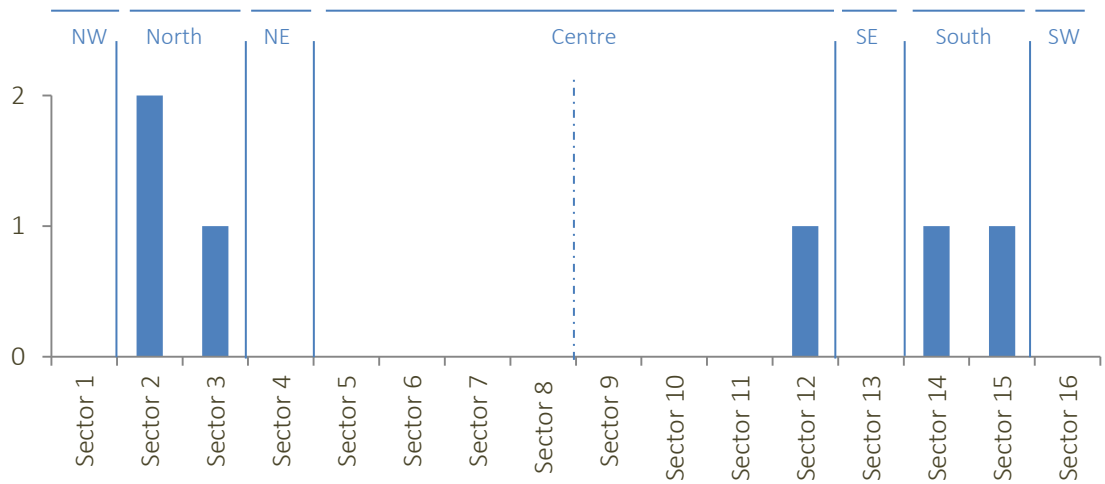
Graph 6.50. Number of tombs in Zinkekra with organic remains (by typology).

Figure 6.37. Details of organic remains recovered at Zinkekra. Basketry from ZIN700 (top right); detail of textile weave from ZIN220.T18 (top right); fragments of gourd in ZIN220.T18 (bottom left) and fragments of wooden vessel in ZIN220.T1 (bottom right) (Photographs by DMP 2007).

The fragmentary state of the wooden bowls and the lack of accurate written records regarding the concentration of other organic material (i.e. botanical remains) have made it impossible to suggest the spatial positioning within the tomb chambers. The only organic artefacts that can be readily analysed in relation to the spatial position within the tomb are the headrests recovered from six of the tombs excavated in Zinkekra. The sector analysis of these tombs reflects the alignment and position of the

bodies. Of the six tombs with headrests, four of them belong to adult female individuals. Still, the choice of alignment does not seem to be related to the sex of the individual as both male and females are placed with their heads to the north or south.

Figure 6.19. Wooden headrest in situ (left) and detail (right) (Photographs by Author).

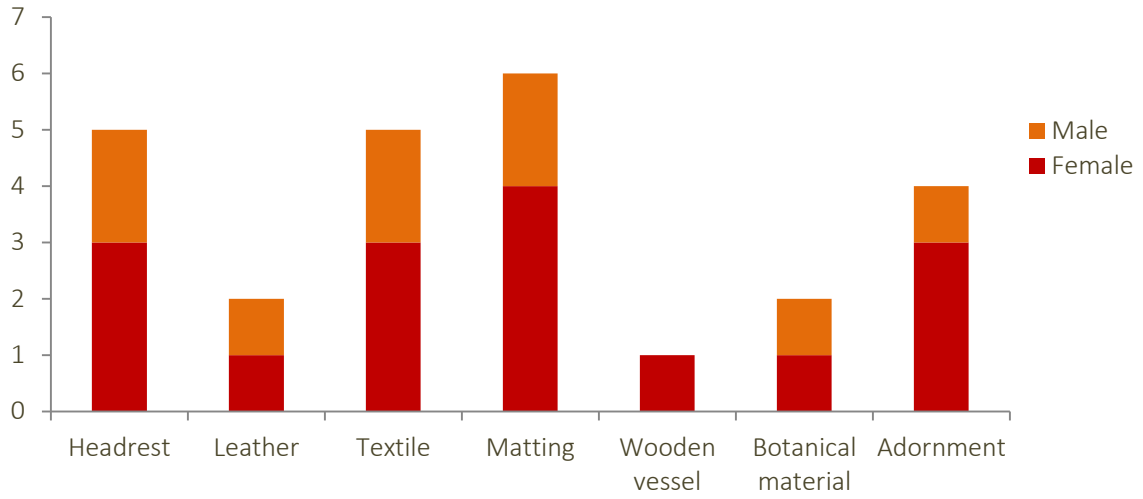


Graph 6.51. Sector analysis of headrests in Zinkekra.

❖ Personal adornment

Personal adornments from the excavated tombs in Zinkekra are represented in the form of beads. These beads are mainly made of dark blue glass, carnelian, amethyst and of ostrich egg shell (OES). Beads are for the most part disc shaped or cylindrical shaped. The number of beads recovered in the individual burials at the Zinkekra is low, ranging from one sole bead, maybe placed as an amulet, to 29 beads (26 OES and 3 faience) in ZIN220.T18. The presence of beads in tombs can be interpreted as

artefacts of prestige. The energy and time implicated in the manufacturing of these beads, particularly the 'precious' stone ones, highlight their social and cultural value.



Graph 6.52. Relation of sex of individuals and artefacts in Zinkekra.

The numbers in the table below are influenced by the level of disturbance of the cemeteries, and it is therefore more an indication of what is present rather than the full funerary assemblage. For instance, the tombs excavated in ZIN002.013 were intact and what has been recorded is likely to be the complete assemblage included in the tomb (even though it is likely that food offerings were included – as suggested by the botanical remains recorded), as opposed to the tombs in ZIN220. Nevertheless, the presence of a variety of artefacts and typologies in ZIN220, with the presence of both local wares and examples of imported Roman pottery, corresponds with the later period of this cemetery. It is therefore suggested that the presence of organic materials, including containers, and the limited number of pottery is indicative of the PUGAR cemeteries and the more diverse occurrence of pottery typologies and less perishable materials is suggestive of the Classic Garamantian date of ZIN220.

Tomb Number	Phase	Age	Sex	Headrest	Leather	Textile	Matting	Wooden vessel	Botanical material	Pottery	Adornment	Grave diversity	Goods Count
ZIN002.013 T44	PUGAR	Adult	Female	x	x		x		x		x	5	5
ZIN002.013 T45	PUGAR	Adult	Male	x	x		x					3	3
ZIN002.013.T54	PUGAR	Adult	Female	x		x	x					3	3
ZIN002.013.T170	PUGAR	Adolescent	Male	x		x	x				x	4	4
ZIN002.013.T171	PUGAR	Adult	Female		x						x	2	2
ZIN002.013.T202	PUGAR	Adult	Male			x						2	2
ZIN002.013.T209			Female	x		x	x	x	x		x	5	5
ZIN002.013.T204	PUGAR	Adult	Female				x					1	1
ZIN218.T1	PUGAR	Adult	Unknown	x		x	x			x		4	4
ZIN220.T2	CGAR	Unknown	Unknown							x		1	1
ZIN220.T3	CGAR	Unknown[5]	Unknown							x		1	4
ZIN220.T4	CGAR	Adolescent	Unknown			x	x	x	x	x		5	5
ZIN220.T6	CGAR	Unknown	Unknown			x				x	x	3	3
ZIN220.T7	CGAR	Unknown	Unknown							x		1	2
ZIN220.T8	CGAR	Unknown	Unknown						x	x	x	3	3
ZIN220.T9	CGAR	Unknown	Unknown							x		1	3
ZIN220.T12	CGAR	Adult	Unknown							x		1	1
ZIN220.T13	CGAR	Adult	Unknown							x		1	1
ZIN220.T14	CGAR	Unknown	Unknown							x		1	1
ZIN220.T15	CGAR	Unknown	Unknown							x		1	3
ZIN220.T16	CGAR	Unknown	Unknown							x		1	1
ZIN220.T17	CGAR	Adult	Unknown							x		1	1
ZIN220.T18	CGAR	Adult+child	Female							x		1	4
ZIN220.T19	CGAR	Adult+infant	Female			x						1	1
TOTAL				6	3	8	8	2	4	15	6		

Table 6.11. Summary of grave assemblages from excavated tombs in Zinkekra.

[5] Two adults were recovered from the backfill of this tomb, one female and one male. It is not possible to be certain who was the occupant of T3

6.6. Taqallit

5.6.1. General description of dataset of Taqallit.

Aside from those cemeteries of the Classic and Late Garamantian period (see Chapter 5); pottery was fairly infrequent in this area, which may be an indication that most cemeteries investigated belong to an earlier chronological period.

As with the previous cemeteries analysed, the human remains of the cemeteries at Taqallit had been disturbed by systematic looting (mostly noted from the east and south sides of the tomb) and only a few complete examples have been recorded. The bodies were found in crouched position, and there was evidence of matting and textiles suggesting that they had been buried in textile shrouds. The surface collection of the area recovered a wide range of pottery, both in chronology and style. Flagons and amphorae date to the 4th to 5th centuries AD. Along with these, there are examples of, incense burners and handmade vessels in local wares.

Items of personal adornment and organic materials (basketry, gourd and date stones) were also encountered in various tombs. Necklaces and belts made of carnelian, amazonite, glass and ostrich egg-shell beads along with metal rings and a large quantity of loose beads have been recovered from TAG001.

Earlier burials (e.g. TAG006, TAG063) follow similar rites to the CGAR burials of TAG001, but with few grave goods. At TAG006 a single date stone had been placed within the burial chambers. TAG006.T1, presented no artefacts other than the leather wrapping and fragments of vegetable fibres. TAG006.T2 contained the remains of a female with a necklace, a leather shroud with bead decoration sewn onto it and a lip plug. Taking into consideration the morphology of the funerary monuments alongside the absence of pottery inside the tombs indicates TAG006 is a Proto-Urban cemetery. Out of the 63 tombs excavated in Taqallit, 20 are analysed in this section, 31% of excavated tombs.

Tomb number	Tomb Typology	Period	Age	Sex	Orientation (head-feet)	Position
TAG001.T257	2	PUGAR			East-West	Right side facing north
TAG001.T262	2	PUGAR				Right side
TAG001.T270	2	PUGAR			East-West	
TAG006.T1	1	PUGAR	Adult	Male	West-East	Right side facing south
TAG006.T2	1	PUGAR	Juvenile	Female	West-East	Left side facing north
TAG021.T1	1	PUGAR	Adult	Male		
			Adult	Female	Northeast-southwest	Left side facing southeast
TAG063.T8		PUGAR	Adult	Female	Southwest-Northeast	Left side facing northwest
TAG063.T20	3	PUGAR	Adult	Female	East-West	
TAG001.T237	5	CGAR	Adult	Female	East-West	Right side facing north
			Infant	Uncertain	Southeast-Northwest	Right side facing east
TAG001.T238	5	CGAR	Adult	Uncertain	Uncertain	Uncertain
TAG001.T239	5	CGAR	Adult	Unertain	Uncertain	Uncertain
			Adult	Male	North-South	Right side facing west
TAG001.T240	5	CGAR	Adult		West-East	Right side facing north
TAG001.T242	5	CGAR	Adult		East-west	Right side facing north
			Infant			
TAG001.T244	5	CGAR	Adult	Female		
TAG001.T245		CGAR			East-West	Right side facing north
TAG001.T253	2	CGAR			West-East	Right side facing south

Table 6.12. Summary of human remains encountered in Taqallit

5.6.2. Material culture

The escarpment cemeteries provide a wide diversity of artefacts and the good preservation of organic materials offers a new insight into the funerary ritual. The ceramic artefacts recovered from the cemeteries in the Taqallit area range from the Proto-Urban period (500-1 BC) to the Classic Garamantian (AD 1-400), and possibly Late Garamantian. The pottery in Taqallit relates to coarsewares, amphorae, finewares and local handmade wares.

Imported wares have been recovered from the excavations if TAG001 and TAG012. At TAG012 three complete amphorae have been recovered and recorded *in situ.* There are two mid-Roman Tripolitanian amphorae, dating to the 2nd-4th centuries AD of the morphological typology AM26-27 (Dore 2007: 353). They have a short, broad cylindrical body with a conical neck and a flanged rim. Two handles springing from immediately below the rim and the shoulder attach at the neck (Figure 6.32). In addition to these, a squat ring-based amphora with incised decoration on the shoulder was encountered in TAG012.T12 (Figure 4.39 right). This amphora, of unusual shape, is of uncertain provenance but most certainly not from Tripolitania (pers. comm. with Dr V. Leitch).

Figure 6.39. Amphorae *in situ*, recovered from TAG012, T3 (top left) and T12 (top right) and squat amphora (bottom) with detail of incised decoration (Photographs by DMP 2009).

African Red Slipware (ARS) and Tripolitanian Red Slipware (TRS) were recovered from tombs in TAG012. A fineware dish with graffito on both the inside and outside dating to the mid-5th century (Late Garamantian period) was recovered from TAG012.T3 (Figure 6.40). Alongside this, ARS dishes, Hayes forms 3 (fragment), 6c, 67 and 68 (very small fragment), have been recorded ranging chronologically from the late 1st to the late 5th-6th centuries AD (pers. comm. with Dr. Leitch). The chronological diversity within the ceramic assemblage in one particular tomb (T3) is significant, indicating the possibility of re-using of artefacts from an earlier phase of the cemetery or the long utilization of some imports within the Garamantian society (Mattingly *et al.* 2009: 111).

Figure 6.40. ARS dish with incised decoration from TAG012.T3 (Photographs by DMP 2009).

Three amphoroid flagons were recovered TAG012 (T3 and T12) and TAG001 (T240 and T243). The flagons in TAG012 are made of a typically North African red fabric; one has a graffito on the handle (T3) and the other roulette decoration on the outer body (T12). Interestingly, the flagons in TAG001 are of a creamy fabric and of similar shape to the one in TAG012.T3.

Figure 6.41. Flagons recovered from excavated tombs in TAG001.T243 (left) and TAG012.T3 (right) (Photographs by DMP 2009).

Decorated incense burners have been recovered from nine of the 28 tombs excavated on the Taqallit headland, four at TAG001 and five at TAG012. These are decorated with incised geometrical patterns and painted in red, blues and whites. In addition to the incense burners, Garamantian handmade pottery vessels found in situ in TAG001.T262. These two small globular vessels with wide mouths have smooth outer surface and one of them has incised triangular motifs on the shoulder as the only decoration and chronologically later than the tripod form.

Figure 6.42. Incense burner from TAG001.T232 (Photographs by DMP 2009).

There are not many examples of glass finds in Taqallit, not including glass beads (see below). Two moulded glass rhyta have been recovered from the cemetery site TAG012. Morphologically, they have straight bodies with a broadly flaring rim, and a narrow flat base (T3) or thick pedestal foot (T12) (see Figure 6.43).

Figure 6.43. Glass rhyton excavated in TAG012.T12 (*in situ* – left) (Photographs by DMP 2009).

Most of the organic material in Taqallit has been poorly preserved, including matting, textile, leather, wood and gourd. Despite the preservation, there is a good written and photographic record of the organic material excavated in the cemeteries across Taqallit providing sufficient information to collate and analyse.

Traces of matting, though in poor state of preservation, have been found in nine tombs, both above and below the human remains. These have been recorded as impressions of the weave in the dried silt reflecting two different types of matting present in the burials in Taqallit: a z-spun thread through individual fibres, and a second type made with bundles of fibres bound with paired cords made from plaited fibres of the same material (Mattingly *et al.* 2010a: 102).

Figure 6.44. Example of textile fragments from Taqallit (Photograph by Author).

Remnants of textile have been encountered in eight tombs. The preservation of textile has been fairly poor and as seen with the matting, most of the textile has been *recorded in situ*, and in cases as impressions made on the dried silt. TAG001 provided one relatively well preserved example of coloured textile, likely to be originally green but recorded with darkened threads, a coarse edge attached to the textile body by sewing through individual bundles of fibre. The excavations in TAG063 provided the best example of textile from Taqallit, showing a strong similarity with those recovered from Watwat. The textile was plain woven as a single weft-faced piece with no indication of dyeing or colouring (Cole 2010: 102).

Only the cemeteries of TAG011 and TAG006 provide a small sample of leather, with the best preservation in the latter. The male individual buried in TAG006.T1 was wrapped in a single piece of leather, showing no signs of sewing, although the written records highlight a knot holding two pieces together. TAG006.T2, the burial of a juvenile female, also has a very fine leather shroud which may have been decorated with very small blue faience beads, albeit there is no evidence of how they would have been attached to the leather as there are no marks of stitching.

Figure 6.45. Tombs TAG006.T1 (left) and TAG006.T2 (right) showing traces of leather shrouds (Photographs by Author).

Small fragments of wood and gourd have been found in tombs at TAG001. As opposed to those recovered from other cemeteries, the fragments of gourd in TAG001 do not show any sign of decoration and are parts of bowls or containers for food offerings inside the tombs. Other organic artefacts recognised in these cemeteries are woven flat dishes or baskets, in various occasions containing remnants of fruit, mainly date stones (73 in total – ranging from 2, in TAG001.T256, to 60 in TAG001.T258) (Radini 2010: 100). It must be highlighted that although date stones have been recorded in Garamantian burials in the Wadi Al-Ajal, the ones encountered in Taqallit TAG001 and TAG063 not only have been found *in situ* but associated with baskets. This indicates the deliberate inclusion of the dates in the tombs and therefore it can be suggested they were food offerings as part of the funeray ritual.

Figure 6.46. Wooden bowl in TAG001.T239 (left) and remnants of baskets in TAG001.T245 (Photographs by Author).

As with other cemeteries in Fazzan, very small amounts of metal were recovered in Taqallit. The materials recovered are iron, copper alloy, and gold foil. Iron nails recovered from TAG012 indicate the presence of wooden artefacts that given the high water table in the oases have decayed (see discussion below). Iron rivets have been found in association with the glass rhyton found in TAG012.T12. Another rivet plate made of copper alloy was also recovered from TAG012 (Figure 6.40 left). Despite its minute size and not knowing its provenance, it is significant to record the presence of decorated gold foil in TAG012 which highlights the quality of the material incorporated with the deceased and the likelihood of more precious metal presence in burials which would have become a target for looters in antiquity.

Figure 6.47. Copper alloy ornament from TAG012 (left) and finger rings from TAG001.T236 (right) (Photographs by DMP 2009)

Along with this, there are several pieces of jewellery made from copper alloy, including an ear-ring (from TAG001.T240) and various rings in TAG001.T236 (Figure 6.40 right). A thick iron bracelet was likewise recorded in TAG012. Additionally, a miniature decorative copper alloy conical bell with the body made out of rings with an interlaced triangular motif was found in TAG012.T6.

Multiple beads (over 1500) of different materials, predominantly glass, carnelian, amazonite and ostrich egg-shell, have been recovered from the excavations in Taqallit, including strings of beads found and recorded *in situ* in TAG001. A type of bead not previously recorded is a silver-gilt glass bead found in TAG001, tombs T256 and T261, made by melting two layer of glass with a silver foil in between. One interesting aspects of the beads in Taqallit is that they have been found around the waist as well as around the neck. The graduated carnelian and glass beads forming a chocker necklace were found undisturbed, despite the fact that the head of the individual was missing (Figure 6.48).

Figure 6.48. Human remains of adult female with carnelian necklace from TAG001.T244 and post-excavation and cleaning (right) (Photographs by Author and DMP 2009).

The beaded belts have been made by combining three strands of beads – one made of large flattened carnelian with glass, the second one made solely of OES beads and the third made of long carnelian spacers with glass (see Figure 6.49 left). The beaded belt in TAG001.T244 had a mixed thread made of drilled coral spacer beads and OES and another with small glass and stone beads (Figure 6.49 right).

The social meaning of the waist belts is unknown. Anthropological and ethnographic studies show that some of the objects recognizable as jewellery in the Neolithic are still in use today as decoration, for instance cowrie shells and beads. There is an obvious expression of cultural identity through the emphasis on the physical decoration and enhancement of the bodies. Beads, their material and patterns can arguably be considered a prime example of the ways in which basic and available (and imported) material can make a substantial impact on a particular culture and individual identity. The tombs in Garamantian cemeteries suggest that beads were worn by all members of the society, female and male, adults and children. The beadwork recovered from Taqallit *in situ* has provided information on the aesthetic sense of the Garamantes. There seems to be a sense of patterning, balance and symmetry (for example the necklace from T244 in TAG001, showes the increasing size of the carnelian beads towards the centre where the glass beads – largest in the middle – have been placed). With regards to the social meaning of the bead work, both necklaces and belts, one can only speculate but it can be argued that they were more than items of personal decoration and that beads were used as expressions of identity. Ethnographic research on African living tribes record the use of beads as amulets, to guard against evil spirits or to mark specific aspects of life such as puberty, marriage, menopause (Falola and Amponsah 2012; Sciama and Eicher 1998).

Figure 6.49 Beaded belts from TAG001.T237 (left) and TAG001.T244 (right) (Photographs by DMP 2009).

An interesting and rare find recovered from Taqallit is a haematite labret found *in situ* in TAG006.T2 (Figure 6.50). Lip-plugs, have been worn by African women for millennia although it is not yet clear what the purpose of the labrets are; self-protection, as beauty ornaments to enhance features, protection against spirits and symbols of status and identity (of belonging to a particular tribe) are amongs some of the uses given by living African tribes (Fisher 1989: 137).

Figure 6.50. Labret recovered in TAG0106.T2, *in situ* (top) and detail (right) (Photographs by Author and DMP 2009).

Tomb Number	Phase	Age	Sex	Fineware	Coarseware	Amphora	Local ware	Incense burner	OES	Stone beads	Carnelian	cowrie	Glass beads	Metal	Textile	Basketry	Matting	Leather	Cord/Thread	Botanical remains	Charcoal	Wood	Gourd	OCHRE	Grave diversity	Goods count
TAG001.T232	CGAR	adult	female					x																	1	1
TAG001.T234	CGAR	adult	male	x	x			x																	3	3
TAG001.T236	CGAR	adult	female											x											1	1
TAG001.T237	CGAR	adult	female					x	x		x		x		x		x								4	6
		adult	male												x		x						x		3	3
TAG001.T240	CGAR	adult	Female		x	x	x		x				x												5	6
TAG001.T242	CGAR	adult	female						x				x												1	2
TAG001.T244	CGAR	adult	female		x				x	x	x		x												2	5
TAG001.T245	CGAR	adult						x							x	x	x								4	4
TAG001.T253	CGAR	adult	female		x			x									x								3	3
TAG001.T257	PUGAR	adult	female				x										x					x	x		4	4
TAG001.T258	CGAR	adult	female																	x					1	60
TAG001.T262	PUGAR	adult	female				x																		1	2
TAG001.T264	CGAR	adult	female		x																				1	1
TAG001.T270	PUGAR	adult	female												x			x				x			3	3
TAG006.T1	PUGAR	adult	male														x	x		x					3	3
TAG006.T2	PUGAR	juvenile	female								x	x	x					x		x					3	5
TAG021.T1	PUGAR	adult	male			x			x				x												2	3
		adult	female											x			x					x			3	3
TAG063.T8	PUGAR	adult	female								x				x		x		x					x	5	5
TAG063.T20	PUGAR	adult	female							x										x					2	5
TAG063.T21	PUGAR	adult	female		x																				1	1

Table 6.13. Summary of artefacts in the cemeteries at Taqallit

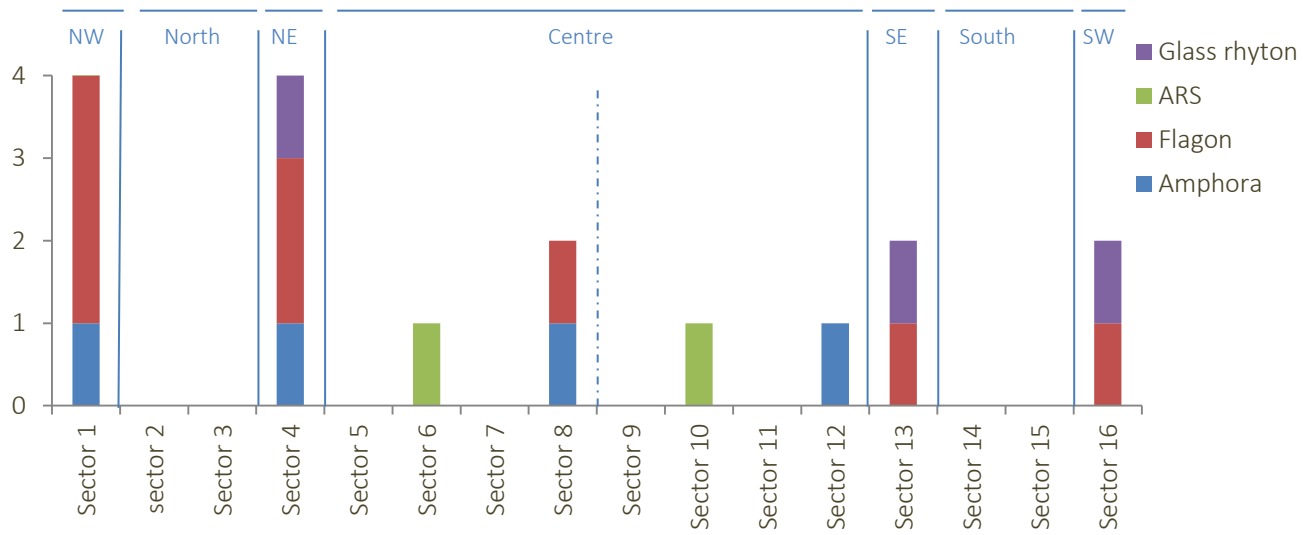
5.6.3. Results of the sector spatial analysis

The section below presents the spatial analysis of the cemeteries of Taqallit. The separation of the oasis and the escarpment cemeteries is due to, on one side, the lack of human remains in TAG012, and the different nature of the funerary assemblages on the escarpment cemeteries.

❖ Ceramic and glass artefacts in TAG012

Given the predominance of imported ceramic artefacts recovered from Taqallit TAG012, in comparison to other cemetery sites in the headland, an analysis of the spatial arrangements of assemblages in these tombs has been carried out. Out of the 8 tombs excavated, only two have no records of finds associated with the monuments. The graph below represents the imported wares recorded and their location within the tomb chamber. The funerary structures in TAG012 are mudbrick stepped tombs with sub-rectangular chambers; hence it is not surprising to find the corners of the tomb (sectors 1, 4, 13 and 16) as the most prolific in artefacts. Amphorae are found leaning against the walls of the chamber, especially on the north side. The corners of the tomb are also the

preferred place for the glass rhyta and the flagons with the dishes and bowls finding a more centre place. Unfortunately, it has not been possible to compare these with the position of the deceased given the poor level of preservation of skeletal remains and any organic material, which presumably would have been present. It must be highlighted that along with the artefacts considered, there are records of Garamantian incense burners. However, although 5 incense burners have been found, only one can be located within the tomb (T5, next to the amphoroid flagon in sector 8).



Graph 6.53. 16-sector analysis of ceramic artefacts and rhyta in the cemetery site TAG012

❖ Flagons

Only two out of the 37 tombs excavated on the escarpment have been recorded with flagons in the grave pit. T240 and T244 are two quadrangular steppted tombs situated in the area of TAG001 most damaged by bulldozing. Graphs 6.54 and 6.55 present the sector analysis of all ceramic materials encountered in these escarpment cemeteries.

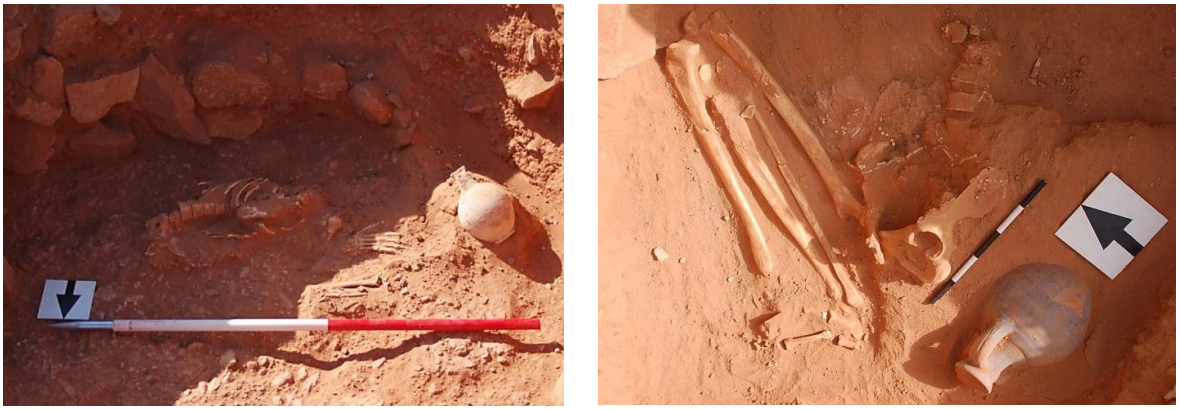
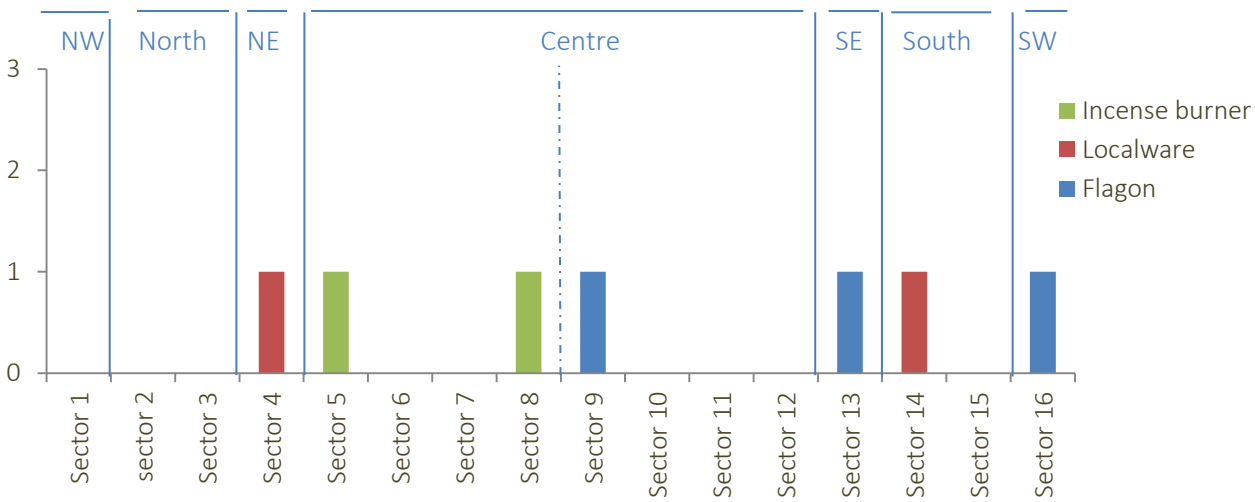


Figure 6.51. Flagon *in situ* with reference to human remains in TAG001.T240 and TAG001.T244 (Photographs by Author).

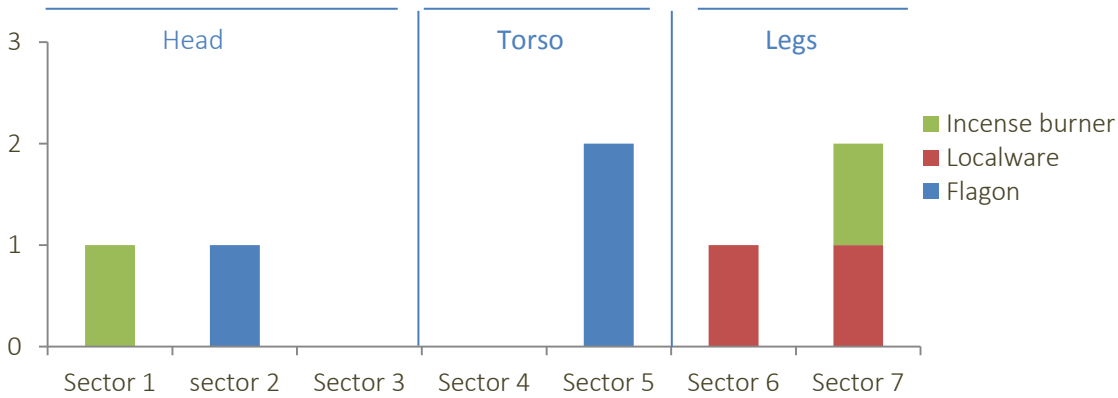
❖ Incense burners

Almost complete handmade incense burners painted and with incised decoration have been recovered in three tombs in TAG001 and other three contained fragmented evidence. Thus, incense burners were present in 14% of the tombs in TAG001. No other cemetery on the escarpment has provided evidence of incense burners.

Figure 6.52. Incense burner in situ in TAG001.T245 (Photographs by Author)



Graph 6.54. 16-sector analysis of ceramic artefacts in TAG001.

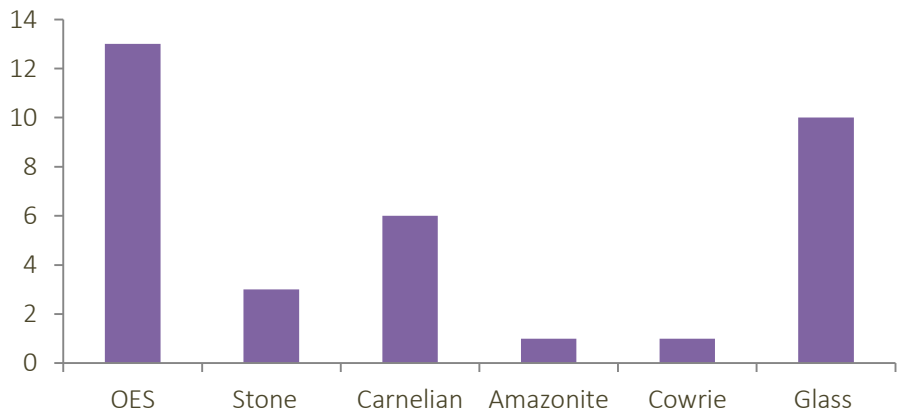


Graph 6.55. 7-sector analysis of ceramic artefacts in TAG001 related to the position of the body

The position of ceramic artefacts in relation to the body shows a slight preference for them to be associated with the lower part of the body. As with the 16-sector analysis, not much can be read into this given the small sample available.

❖ Personal Adornment

Personal adornment in Taqallit has been recorded in the form of beads of different materials along with small metal artefacts. As with the previous cemeteries, the beads are identified as necklace, bracelet or belt when there is a clear record of the provenance of the beads; if the beads are encountered around the pelvic area I have recorded them as a belt (Figure 6.53). It must be highlighted again that beads were not exclusively associated with female burials, as there is a number of males with beaded artefacts. However, the number of beads related to females is significantly higher than those accompanying men. However, the number of confirmed female burials excavated in Taqallit vastly outnumbers those of males, with 80% of the tombs belonging to females in the escarpment cemeteries. Nonetheless, the presence of beads (often OES) within the 28.5% of the excavated burials (including those whose sex is uncertain) must be noted. Two beaded belts, composed of twisted strands of beads have been recorded in TAG001, T237 and T244 (Figure 6.49). At least one female was buried with a necklace, recovered in T244. It is significant in Taqallit that a large number of burials where the upper part of the body has been targeted by robbing and the lower torso and extremities were left intact. Hence, it can be suggested that it is highly likely that more necklaces were originally included inside the graves, given the numbers of beads recovered from these tombs. In addition to these items, a small leather wrap recovered from TAG006.T2 seems to have been decorated, or contained, small blue faience beads.



Graph 6.56 . Presence of beads in tombs by type in Taqallit

A gourd pendant was found *in situ* associated with the necklace in TAG001.T239. The perforation in the gourd is likely to attach to the string of beads.

Along with the beaded decoration, four copper alloy rings were found near the hand of the woman buried in TAG001.T236, no further items were recorded with her. Another female burial, TAG001.T240, had a single cooper alloy earring. I have already noted the labret found in TAG006.T2 (Figure 6.50).

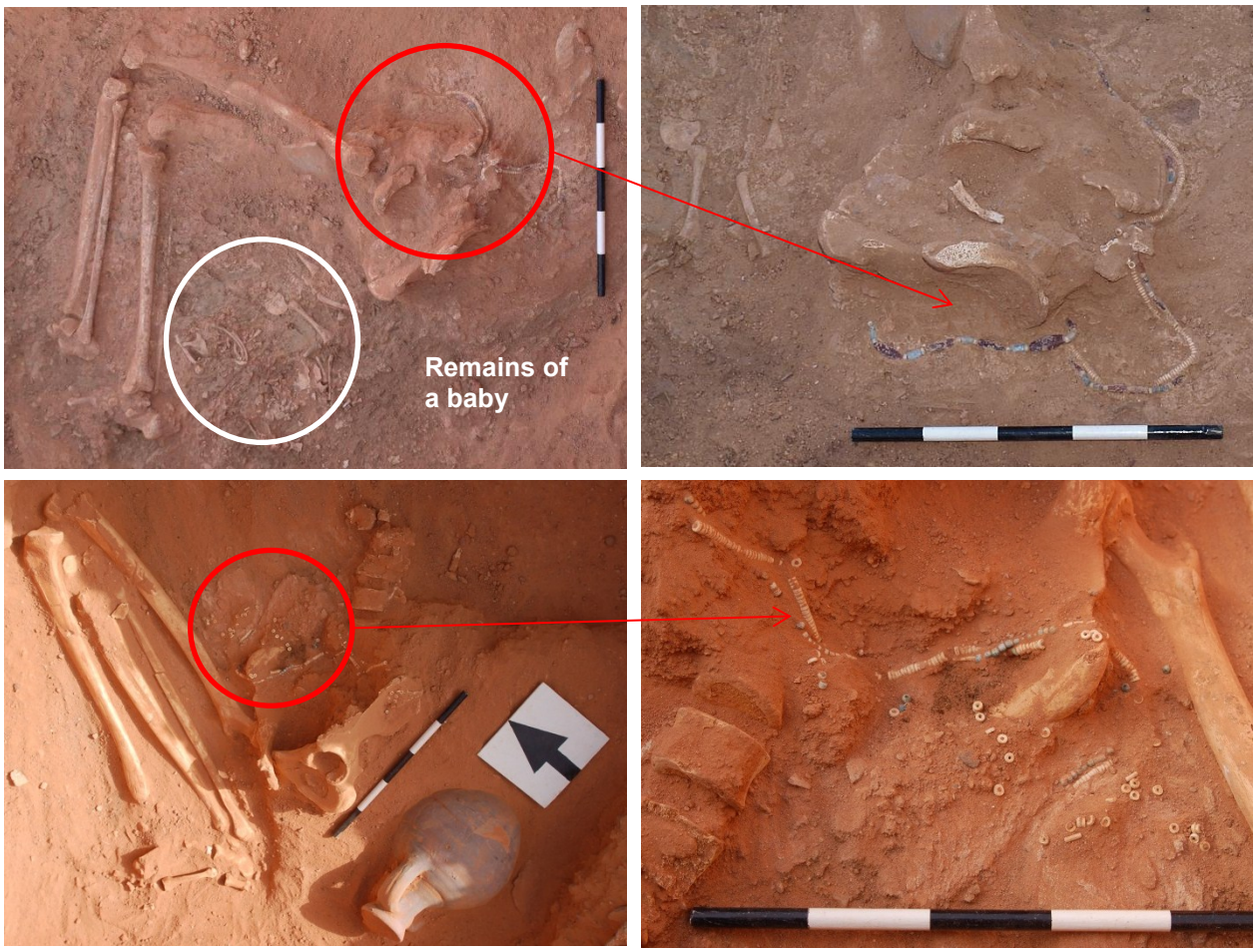
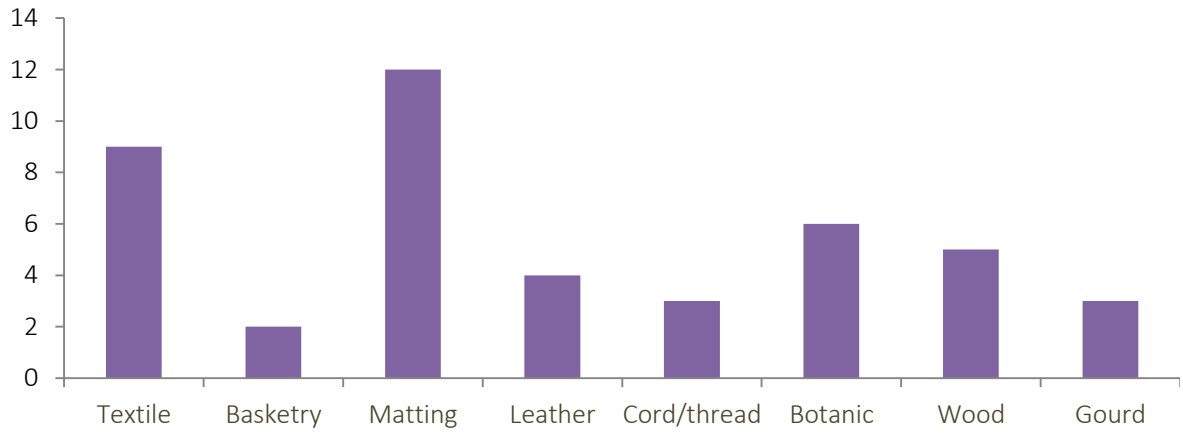


Figure 6.53. Belts recorded in situ in TAG001.T237 (top) and T244 (bottom) (Photographs by Author).

❖ Organic material and minerals/pigments

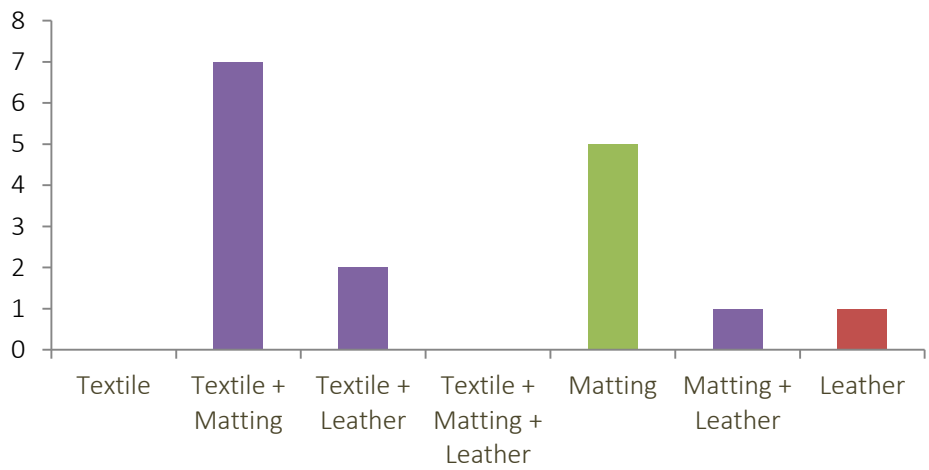
Mention has been made about the preservation of organic materials in some of the burials in Taqallit, which offers a glimpse into the material culture introduced in the graves. Matting, leather and textile shrouds have been reported in most tombs. Alongside these, there are a number of baskets, wooden bowls and gourd. Unfortunately, not many of these artefacts have been recorded in association with the individual and therefore the spatial analysis across different tombs has not been possible.

Nonetheless, comments can be made on the relation of pottery artefacts and organic containers as well as suggestive interpretation of the use and placement of these inside the tombs



Graph 6.57. Number of tombs with presence of organic remains in the escarpment cemeteries at Taqallit.

An interesting aspect, with regards to the position of organic materials in relation to the individual body, is that there is preference for the baskets, wood and gourd to be in front of the body, between the lower extremities and the torso. When more than one basket is present, it is still placed closer to the legs, even behind, rather than moved further towards the head, where we tend to find ceramic artefacts, when these are found in combination with organic. These baskets seem to be the containers for botanical offerings, as is indicated by the remains recorded in TAG001.T245 (Figure 6.52) and TAG001.T256. The poor preservation of samples has not allowed before a connection between the seeds and ritual. However, the samples from TAG001 provide evidence that dates were deliberately included in the tombs as part of the ritual offerings, and an indication that these could have formed part of funerary ritual which have not survived.



Graph 6.58. Relation of matting, leather and textile present in the escarpment cemeteries at Taqallit.

The preservation of textiles, leather and matting in Taqallit is relatively poor. However, textile has been recorded in 14% of the excavated tombs, although only shreds recovered. The only exceptions being the fragments from TAG001.T239 and TAG063.T20, which show similarities with those recorded in Watwat. Textile has only been found in association with matting and leather. Still, the presence of woven fabrics in the tombs continues to be an indication that Garamantian individuals were buried wrapped in shrouds. Leather has been found in only in 6% of the tombs, and it is mostly associated with textile. Leather is likely to have been part of the shroud. However, the excavated tombs in TAG006 indicate leather was used to make bags, or small wraps. 19% of the tombs contain vegetable fibre matting. As it has been suggested above, matting has sometimes been used to wrap the bodies, as it is indicated by the presence of matting both above and below the body.

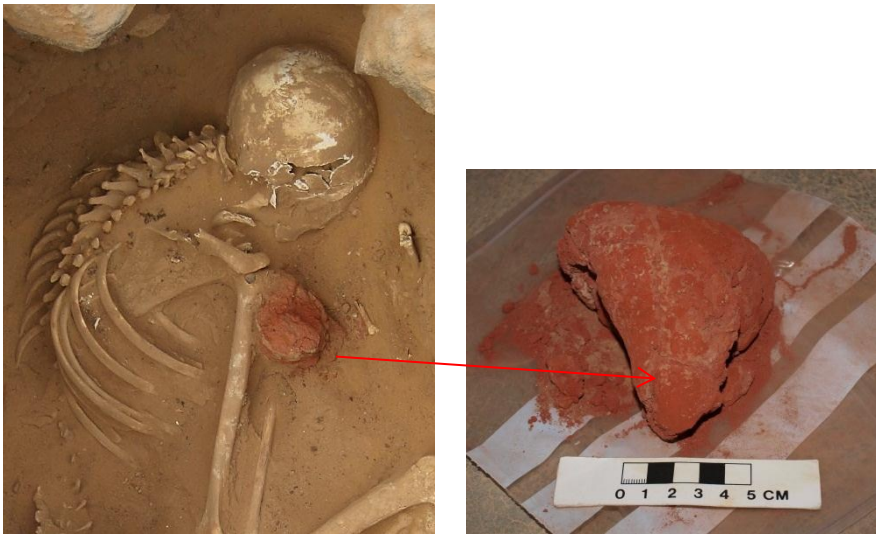


Figure 6.54. TAG063.T8, female with ochre (Photograph by Author and DMP 2010).

In addition to the organic materials, the cemeteries of Taqallit have provided samples of pigments and minerals as items included introduced in the tombs. The young female in TAG063.T8 had a piece of ochre attached to her right hand with a piece of cord.

❖ Funerary elements outside the tomb

The tombs excavated in the escarpment cemeteries did not have any funerary furniture associated with them. However, these features have been recorded in various cemeteries across the landscape at Taqallit, including TAG001, TAG021 and TAG063 in the escarpment and TAG012 in the oasis. The monumental cemeteries TAG001 and TAG012 had Classic stelae and offering tables, which have been

predominantly placed in the east side of the funerary monument. TAG021 show evidence of proto-stelae and Classic Garamantian offering tables and stelae whilst a significant number of proto-stelae (54) and stone bowls (12) have been recorded, generally on the east side of the tomb (Mattingly *et al.* 2009: 106), although there is a noticeable cluster of west facing offering tables and stele in the southern end of Taqallit. This may relate to the relatively undisturbed state of the cemeteries in this area in comparison to those in the northern side.

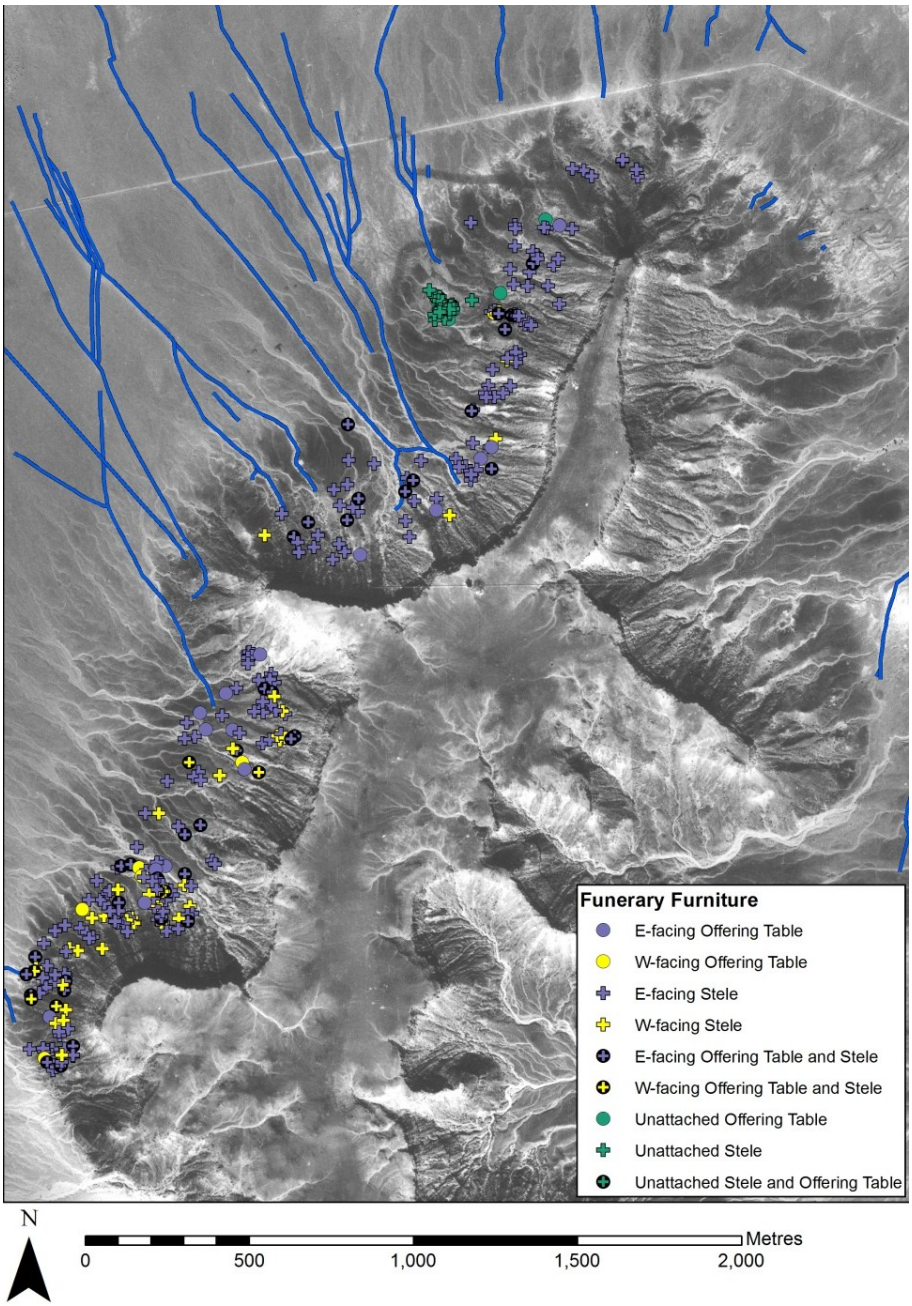


Figure 6.55.Distribution of funerary furniture (offering tables/vessels and stelae/proto stelae) (DMP 2010)

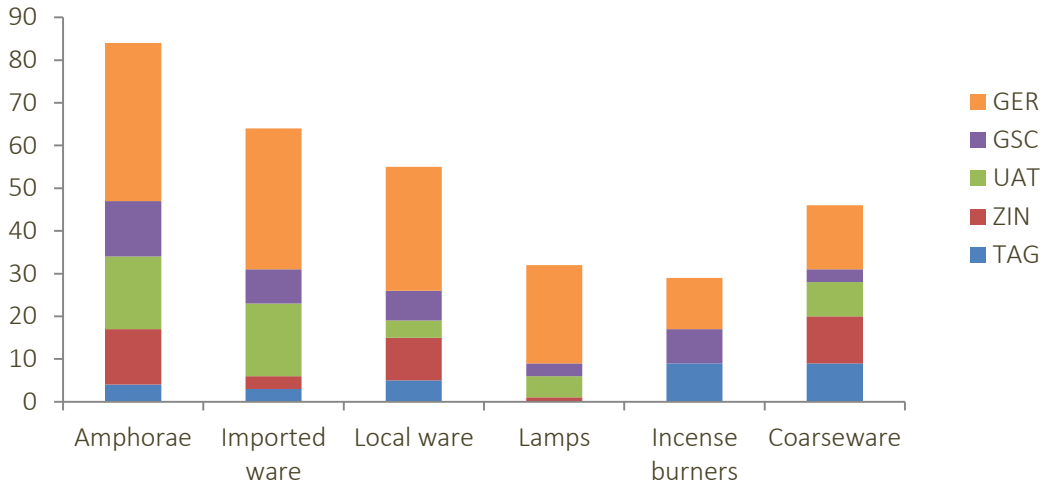
6.7. Summary and conclusions: Mortuary displays, materiality and variability

This chapter has dealt with the spatial distribution of grave goods. Some of the patterns are clearly the consequence of practicalities, for instance, the placing of the amphora against the walls of the chambers or in the corners to support them in an upright position. My aim was to establish whether the Garamantian funerary rituals were organised in relation to the identity of the deceased. One of the ways to achieve this was to collect and analyse the funerary assemblages from the tombs and to evaluate possible patterns. Having presented the different study areas and cemeteries individually, with the frequency of the artefacts in the assigned sectors, this section deals with overall patterns based firstly on the location of the different categories of artefacts and then the variability and diversity of the grave goods.

6.7.1. Spatial distribution of grave goods

❖ Pottery

The cemeteries in the Wadi al-Ajal have provided a wide range of ceramic assemblages. The graph below presents the overall presence of pottery in the funerary assemblages across the five study areas by type. As it has been noted, the vast majority of these have been recovered in fragmentary form and/or displaced from the original position and therefore the conclusions drawn here are based on a fraction of the assemblages.



Graph 6.59. Presence of ceramic artefacts in the excavated tombs per site

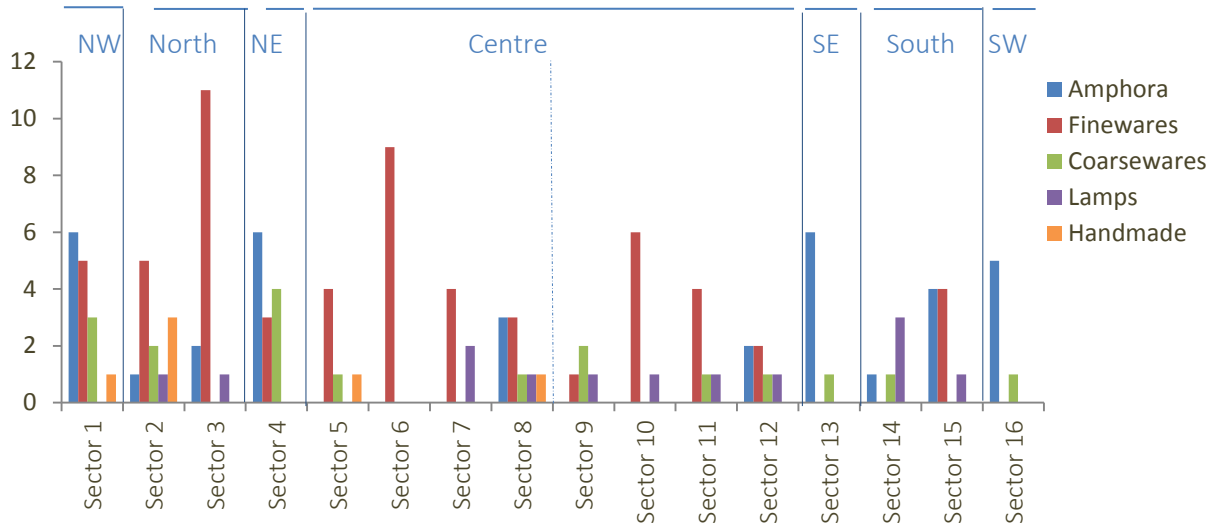
Ceramic vessels were generally found close to the walls of the grave chamber. In relation to the body, 49% were in front of the body and 38% behind the deceased. Graphs 6.59-6.62 present the distribution of artefacts in the burial chamber and in relation to the body.

Amphorae were mostly found in the corners of the tombs, and mainly behind the head, or, when there are more than one, in the back of the deceased. The preference of the corners of the tombs for amphora is seen across the different study areas and applies to both male and female burials.

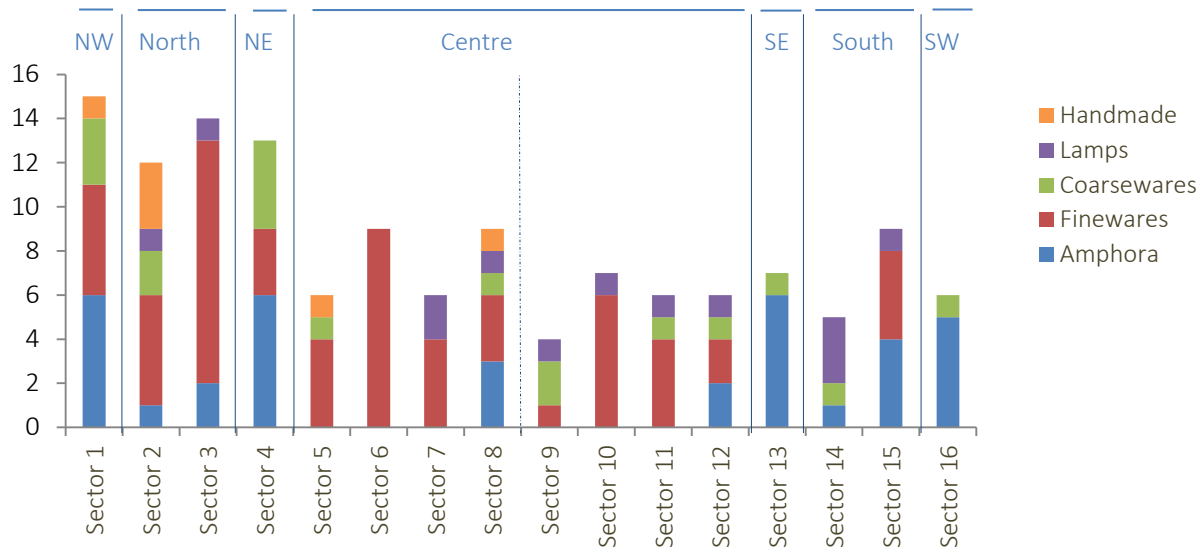
Imported finewares were introduced in the CGAR period. These were found in the form of dishes, bowls and cups, and distributed across the burial chamber, with a significant number, 72% of the artefacts, located in the northern side of the tomb. These were placed primarily in front of the body (57.5%). There was little difference about the placement of the vessels depending on the form. In relation to the identity of the deceased, the limitation of the data available does not facilitate the opportunity to draw firm conclusions. However, it can be suggested that the spatial distribution of the finewares was equal for both sexes. With regards to the age of the deceased, there were few children burials recorded and these did not have finewares associated with them.

Coarsewares were generally found around the head of the deceased or next to the back. The data available with regards to handmade wares indicate that these follow a similar pattern, and are placed mainly around the head of the individual, particularly those of female burials. It must be noted that, as discussed above, the friable nature of the incense burners' fabric is likely the reason for the poor survival of these artefacts and thus, I am dealing with very small number of preserved incense burners *in situ*.

Imported lamps were found spread across the burial chamber. A pattern can be seen when analysing their position in relation to the body. 57% of the lamps were found directly in front of the head or the upper torso.

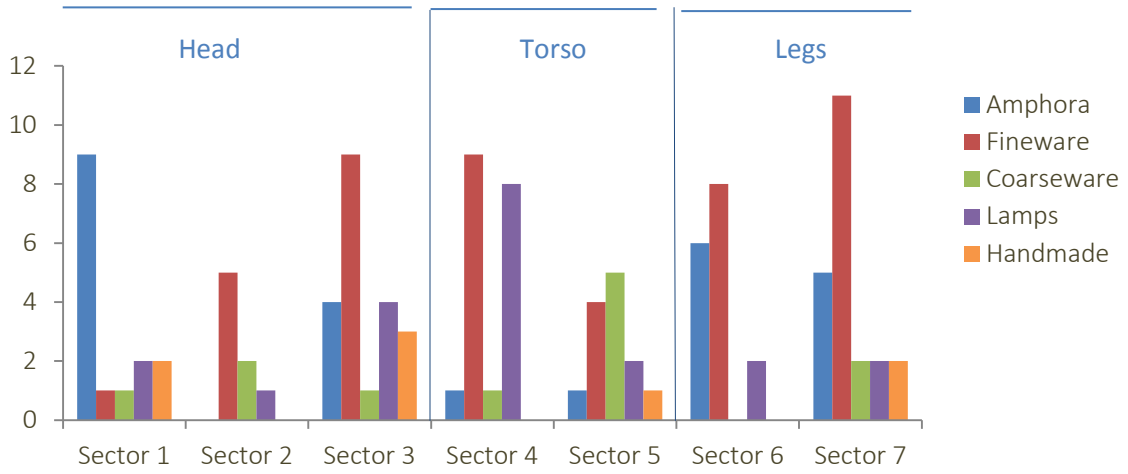


Graph 6.60. Spatial distribution of ceramic artefacts across the grave chamber (number of tombs)

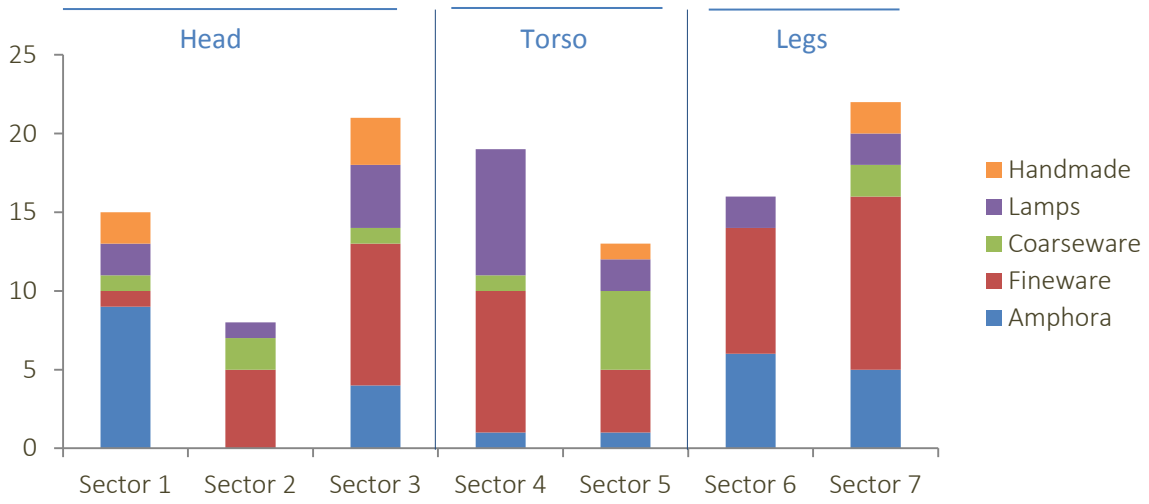


Graph 6.61. Distribution of artefacts in 16-sector analysis (number of tomb)

Overall, there seems to have been a significant variability in the placement of ceramic artefacts within the grave. Analysing the distribution of artefacts in relation to the body, some patterns can be suggested. The larger vessels, amphora and flagons, were found behind the head of the individual, regardless of the sex. Finewares were mainly found in front of the body and around the lower extremities. In terms of the significance of the placement of the grave goods close to specific parts of the body, there is no indication, with the data available, that it was influenced by the identity of the deceased. The few individual child burials show the same treatment as those of the adults.



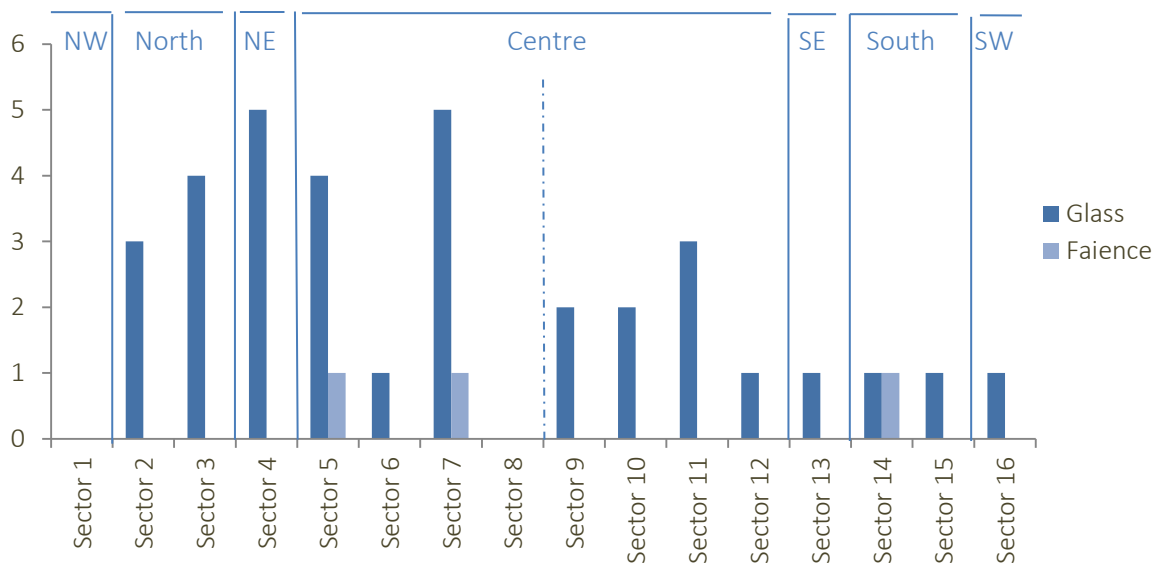
Graph 6.62. Distribution of artefacts in relation to the body (number of tombs)



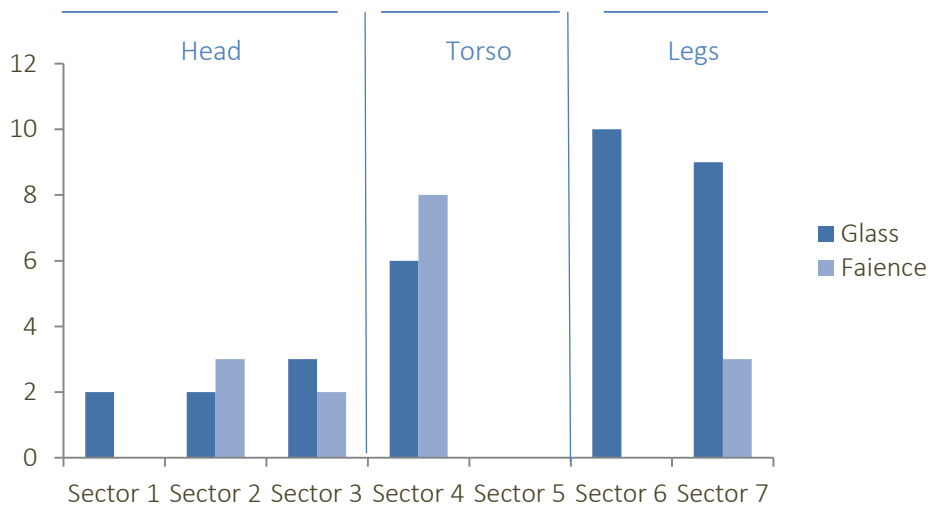
Graph 6.63. General use of the space in relation to the body

❖ Glass and faience

Glass objects were fairly evenly distributed across the different sectors of the grave pit, albeit with a notable concentration in the northern side of the tombs with 64.7% of all glass vessels recorded in this area. Glass artefacts were more often associated with the lower part of the body, around the legs (59.3%). With regards to faience, these artefacts were mainly found in the torso area, 62.5%, and the front of the head. Unfortunately, there is not sufficient data to establish whether the presence of glass was associated with male or female burials or if it was equally used for both.



Graph 6.64. Distribution of glass and faience across the grave pit



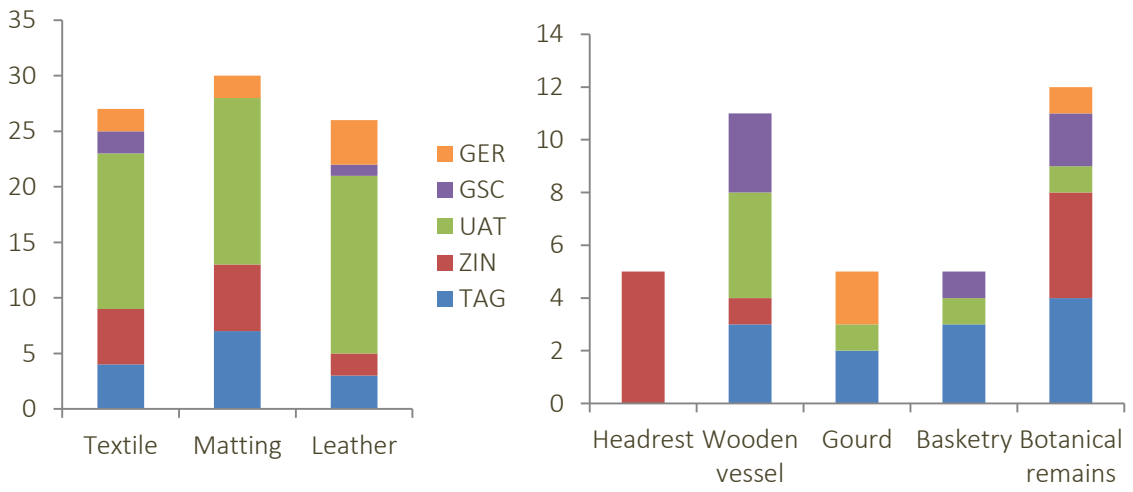
Graph 6.65. Distribution of glass and faience in relation to the body

❖ Personal items

Personal items have been recorded in 35.4% of the excavated tombs and they were clearly associated with the body. It can be safely assumed that the deceased would have been wearing items of jewellery such as necklaces, bracelets and rings and objects related to clothing, such as belts. Other objects, such as cosmetic related artefacts, could have been placed on the body of the deceased after positioning inside the tomb. Therefore, the majority of these items were found in the upper body, especially in front of the face. The exact location of most of these artefacts have not been recorded, given the small size which makes them highly susceptible to moving before and during excavation. Despite the seemingly large numbers of beads, only 32% of the excavated tombs had records of significant number of beads. These have been found in burials belonging to both sexes, children and adults alike, but the larger numbers were related to females.

❖ Organic material

The vast majority of organic remains in the Wadi al-Ajal come from the cemeteries at Watwat, where the conditions of preservation were especially favourable (Graph 6.65). Most of these are textile and leather, mostly related to the funerary shrouds but also to small bags, and matting. Out of these, 51.8% of the textile, 50% of matting and 61.5% of leather were recovered from the cemeteries at Watwat. The close association of these materials with the body is clear, and therefore the spatial distribution replicates the position of the deceased within the tomb.



Graph 6.66. Number of tombs with organic materials, by study area, in the Wadi al-Ajal

Containers made of organic materials, for example wooden bowls and baskets, have been recorded in small numbers, in 7.5% of the excavated tombs only. With the exception of Saniat bin Huwaydi, wooden vessels have been found in cemeteries in all four study areas, both in PUGAR and in CGAR tombs. PUGAR tombs had wooden artefacts, before introducing ceramic artefacts inside the tombs, as seen during the CGAR phase, when wooden containers were included alongside the pottery. Post-depositional processes have affected the preservation of organic containers that are likely to have been present in larger numbers across the Wadi al-Ajal.

Evidence of basketry has been recorded at Taqallit, the Jarma Escarpment cemeteries and Watwat, but the friable nature of these artefacts makes their natural preservation difficult and the identification and recovery in the archaeological record not easy. It is possible that there were more of these containers and flat dishes in other tombs, especially those where botanic remains have been found. The ritual offering of fruits inside the tomb is attested by the presence of botanical remains, particularly date stones. Despite the small number of examples available (only 5), baskets were only found associated with female burials and closely related to the body, usually in front of the arms.

❖ Other materials

Quern stones and rubbers are relatively rare encounters in the cemeteries studied, with the exception of Saniat bin Huwaydi (see section 6.2.4). The available data does not allow me to draw conclusions regarding the inclusion of stone artefacts and the identity of the deceased, given the limited information on the sex and age of the individuals. Despite this, the saddle stones recovered were associated with male burials and were placed in front of the body.

Ochre appears in some instances, as either nodules, in which case they are found in front of the upper limbs of the individual, or spread in the grave. Ochre colouring has also been noted on the stone lining of the chambers, offering tables and stele, and around the body of the deceased.

6.7.2. Variability and diversity of grave assemblages.

Mortuary rituals in ancient societies were repeatedly performed with variations, which can be meaningful. Despite the impossibility of understanding the full meaning of the funerary practice in the Garamantian society, there are interesting patterns in the treatment of the body and the materiality of death that can be highlighted. Following on the observations on the individual cemeteries made above, this final section will look at the variability of grave furnishings across the Wadi al-Ajal. As noted by Parker Pearson (1984: 64), living communities make a choice on how to stage the funeral and the grave assemblages, and consequently this can be used as a platform for 'acting out the social principles which they believe in'. As has been stated, vessels related to food and drink were the most common artefacts found in the Garamantian tombs.

On the whole, there are not many artefacts in or on the PUGAR graves, and their assemblage consisted of local wares and organic materials. The PUGAR tombs analysed were from UAT010, ZIN002.013 and TAG063. In these cemeteries the average diversity of grave goods is 2.5 which include the matting and shroud. With regards to the actual count of artefacts (not including beads or dates) 2.8 artefacts is the average per tomb. As discussed above, the majority of the artefacts included in PUGAR tombs are made of organic materials. With the example of burials available, there is no distinction between the sex and age of the individuals in relation to neither the diversity nor the amount of artefacts included in the tomb.

	PUGAR			CGAR						
	UAT010	ZIN013	TAG063	GER011	GSC030	GSC031	UAT008	UAT050	ZIN220	TAG001
Average diversity	1.5	3.13	2.67	5.47	4.7	3.63	3.42	4.33	1.53	2.47
Standard Deviation	1	1.46	2.08	2.85	1.49	1.77	2.02	2.89	1.19	1.41

Table 6.14. Diversity of grave goods

	PUGAR			CGAR						
	UAT010	ZIN013	TAG063	GER011	GSC030	GSC031	UAT008	UAT050	ZIN220	TAG001
Average number of artefacts	1.50	3.22	3.67	15.33	11.00	4.13	3.27	20.50	2.27	3.00
Standard Deviation	0.71	1.39	2.31	18.75	7.07	3.00	1.71	14.85	1.39	1.73

Table 6.15. Grave good count

There is more difference both in terms of the number of artefacts and the diversity of grave assemblages during the Classic Garamantian period. For this phase artefacts can be divided also between imported (meaning from the Mediterranean) and local. With regards to the 'value' of the grave goods, and their relation to wealth, I need to make two points. I reject the idea that the wealth of grave goods is directly related to the status of the individual. Furthermore, following the idea that the living are the ones making the decisions and choices regarding the funeral, it can be suggested that the grave goods represent, at least to an extent, the associations and beliefs of the mourners. Accepting this premise helps to explain and understand the 'wealth' of the child burial in GSC048.T1.

Two sites are particularly significant both for the diversity and number of artefacts, GER011 and GSC030, with a large number of imported ceramic and glass vessels (average figures of 15.33 and 11 respectively per tomb). The average of UAT050 is not 'real' as the majority of the artefacts in this cemetery (31) were recorded from one single tomb (UAT050.T5).

Most of the imported artefacts related to food and liquids. The majority of the local artefacts were incense burners and jars, the latter encountered outside the tombs, accompanying the offering table and stelae, indicating a continuation of offerings after the burial. The extensive distribution of imported artefacts across the Wadi al-Ajal is suggestive that the presence of Roman vessels in the tombs is not simply an indication of wealth, but rather the availability of these assemblages in the vicinity of Garama. Still, it is significant that the larger numbers of imported artefacts come from Saniat bin Huwaydi, the oasis centre cemetery of TAG012 and the 'Kings' Cemetery' GSC030. These are the cemeteries with the larger and more elaborate structures. Unfortunately, the lack of information on the identity of the individuals does not allow me to establish whether specific artefacts were used for particular people.

From the perspective of the variability of artefacts, the Garamantian 'materiality of death' seems to be an amalgamation of foreign and local materials, merged together thanks to the long distance trade between Fazzan and the Mediterranean. The seemingly wide availability of imported material culture was not limited to a possible elite, as amphorae, fine tablewares, wheelmade pottery and glass have been recorded in a wide array of burial types across the Wadi al-Ajal. Through the study of the funerary assemblages it has become clearer that Garamantian society had developed a tradition of textile manufacturing, dyeing of leather and textile and bead making. The continuation and value of local handmade wares is attested in the presence of these assemblages across the cemeteries analysed, including those with the largest amounts of imported wares.

Chapter 7. Death is another country: conclusions

The aims of this thesis were to examine the range of funerary rituals and their variability (spatial and temporal) to establish to what extent a shared set of mortuary practices can determine a shared identity in death and to what extent the Garamantian way of death reflected a way of life and a shared identity among the living. This final chapter is a reflexion on how the differences and similarities observed over space and time, during the Proto Urban and Classical Garamantian periods, in the Wadi al Ajal can help us to understand a changing identity process. I shall start by discussing the importance of the deceased and the dead body in the creation of a sense of identity and community, playing a central role in mortuary rituals and consequently in the place of the dead.

Research Questions	Aims
What range of mortuary and ritual practice can be observed within the Garamantian cemeteries?	1. Examine the spatial location of the cemeteries 2. Analysis of the individual cemeteries 3. Study the individual organization of each grave
How does variability in form, place and content reflect on chronology, belief and tradition?	1. Establish where the dead and the activities surrounding the dead were located. 2. Examine what factors determine the location of cemeteries or monumental tombs. 3. Determine what can account for the variation in timing and intensity of use of these cemeteries.
What was the specific treatment of the body? What variation related to age, sex and status emerge?	1. Analysis of the individual tombs in order to study whether the rituals are the same from every individual or they change according to sex, age and status. 2. Establish whether some items were reserved for specific groups
To what extent can a shared set of mortuary practices be said to express a sense of shared identity in death?	1. Analyse whether local patterns indicate the existence of social identities.
To what extent can the Garamantian way of death reflect a way of life and a sense of shared identity among the living?	1. Understanding of the relationships between the way of death as an expression of social identities.

Table 7.1. Summary of research questions and aims of this thesis.

The Garamantian civilisation (c.1000BC-c.AD700) flourished in the central Sahara when the desertification of the landscape was the same as it is today. The Garamantes, name given by the classical Graeco-Roman authors, brought significant developments to the central Sahara. These include the location and form of settlements, the arrival of new crops and domesticated animals, new agricultural practices. Trans-Saharan trade brought imported Mediterranean goods, which can have been found both in settlement and funerary contexts. Technological changes can also be observed in the manufacturing of textiles, beads, metallurgy and glass making.

The Early Garamantian period saw the establishment of planned settlements thanks to the development of an irrigation system, the foggaras, which facilitated cultivation and sustainability in the fertile oases. The Wadi al-Ajal, where the capital Garama is located, became the centre of this civilisation that extended to the Wadi Tanezzuft on the west, the Wadi ash-Shati to the north and the Zuwila-Murzuq-Barjuj depression to the west. During the Proto-Urban period there is an increase of settlements situated in strategic and defensible locations in the valley. These settlements were different from those of earlier pastoral peoples. The intensification of villages, some of which are densely packed, indicate an increase of the population, also evident from the numerous cemeteries on the sides of the escarpment, with the remains of over 150,000 tombs. This desert people, far from the image portrayed by the classical authors, who describe them as savage, indomitable and lawless (section 2.2.3), were a civilisation embracing their material culture and rituals and demonstrating a degree of cooperation, urbanism and organisation. Classical sources characterised the Garamantes as a nomadic and sedentary culture, referring to their cattle and cultivation of dates. Archaeological evidence attests that they were predominantly sedentary, settled and adapting to the desert landscape. The irrigation system enabled the Garamantes to maintain a relatively high level of population. The Garamantian phase of Saharan history not only saw the development of urbanism and irrigated agriculture but the introduction of the horse and camel, which greatly influenced trans-Saharan trade. The recent excavations in Fazzan have confirmed the exchange of material culture developed from the interaction between the Garamantes and the Mediterranean. The influence of this contact can be appreciated in the mortuary record which sees some traditional Saharan traditions alongside the incorporation of external material culture and influences.

My interest in this thesis was related to their funerary beliefs and rituals. The earliest burials in Fazzan date back to 8000-3000 B.P. The excavations in the Wadi Tanezzuft by Di Lernia and his team (Manzi and di Lernia 2002) provide us an insight into the Pastoral communities that went to become the Garamantes. As discussed in Chapter 2, I believe that activities linked with the funerary rituals represent a process through which emotions, material culture, memory and the deceased relate and interact. Chesson noted (2001: 1) funerary rituals provide the space and place in which the dead are mourned, social memories are created and a shared identity is renewed. Funerary rituals extend from the spatial location of the cemeteries, the place of the dead, their relationship with the settlement and how these *loci* are affected by environmental factors (Chapter 4); the organisation of the cemeteries themselves, the types of funerary monuments and the energy required for their construction, the presence of stele and offering tables, along with the information of the deceased, the body position and orientation, age and sex (Chapter 5); and finally, the individual organisation of the tombs, which includes the treatment of the body, the number of individuals contained per grave, the distribution of artefacts and the quantity and quality of the grave goods (Chapter 6).

In my MA dissertation (González Rodríguez 2008), I discussed how our understanding of the dead and our relationship with them is imperative in the formation of social identity. This begins with our understanding of the relationship between consciousness and the body and conceptualisations of death, which affect the way in which a society sees their human remains (González Rodríguez 2008: 7-14).

The ways in which each society deals with the dead body gives shape to central attitudes and understanding related to life and death, the living and the dead, personhood, and the role of the dead in society, etc. These cultural concerns play an active role in the creation of cultural identity. The funerary rituals serve as a formalisation of the death and an opportunity to mourn the dead. Bell (1992) argues that through the ritualization of death, the mourners are allowed to redefine the relationship with the deceased and to separate from the dead and at the same time accept death. Funerary rituals reaffirm the central beliefs and values within a culture and reinforce a sense of community, enhancing individual and group identities, and ultimately help the continued survival of the living community based on the creation of social memories of the past and the future

(Chesson 2001:7). Thus, if ritual is understood as expression of tradition and communal identity, it can be said that the study of death in the past can provide an insight into the perceptions and understandings the Garamantes had of themselves, their society and their world.

LANDSCAPE, MONUMENTS AND IDENTITY

The physical context where the burial of the dead person takes places is a conscious choice of space. The burials of the Pastoral communities inhabiting Fazzan in the millennia before the Garamantes have been made up in natural gaps in the rock or rock shelters with the bodies being wrapped in animal skins or basketry (Chremaschi and di Lernia 1998: 217-41). These developed into cairns of piled stone with multiple burials (di Lernia and Manzi 2002). The Garamantes constructed and maintained a mortuary landscape with significant morphological variability, ranging from scattered funerary monuments within a specific area to densely nucleated monumental cemeteries (see section 3.3.2). This landscape is on of the most characteristic feature of Fazzan and it provides us with a starting point to aid our understanding of the areas the Garamantes considered meaningful. Cemeteries, mirroring society, are important places expressing social changes, they are symbols of memory and generate collective identities. The study of the Garamantian funerary landscape (Chapter 4) demonstrates an interest in the maintenance of the dead as visible members of societies. The cemeteries were located in relative close proximity to settlements, indicating a continuing relationship between the living and the dead. The change of the Garamantian lifestyle saw the increase of the concentration of funerary monuments in specifically chosen places. This choice can be understood as part of the process of construction of individual and community identities which evolved from the communal cairns of the Pastoral societies to the individual burials in the transition period and the Early Garamantian phase.

The new organisation of the landscape seen during the Proto-Urban period, relating to the development of irrigated agriculture and urbanism, included a clear link between the cemeteries and the settlements in the oasis, creating a direct visual link between the living communities and their dead. Moreover, the pattern of placing the cemeteries in relation with the foggaras lines is seen across the Wadi al-Ajal, probably indicating a claim to the water.

As discussed in Chapter 4, the ideas of community, identity and memory can also been seen in the type of cemeteries. The development of nucleated cemeteries and the grouping of funerary monuments during the Proto-Urban period can be readily seen with the high presence of Type 2 cemeteries.

The funerary landscape of the Wadi al-Ajal during the Classic Garamantian phase provides an indication of movement of the population towards Garama, the capital. The Classical Garamantian landscape showed a clear grouping of monuments, creating densely packed cemeteries. This is a conscious choice of place, as there is no lack of space in the escarpment. Therefore I suggest that the density of these cemeteries is an indication of a strong sense of communal identity. The distribution of cemeteries in the Wadi al-Ajal is a strong indication of the extent of Garamantian habitation across the valley. During this phase, the cemeteries were located both in the escarpment, as in the Early and Proto-Urban periods, and the oases. If during the Proto-Urban period the claim for natural resources could have been a determinant for the placing of the dead, in the Classical Garamantian phase the irrigation systems and farming are flourishing and hence the claim to resources was not essential. Moreover, the Proto-Urban period also saw the establishment of reference points in the landscape and the Classical period would have formalised these areas. The wadi-centre cemeteries are composed of pyramid and stepped tombs and originated some of the richest burials, in terms of variability, quantity and quality of assemblages in the wadi. These cemeteries would have most definitely created new feature within the landscape. Further research would be necessary in order to fully understand the significance and relevance of these cemeteries.

A variety of tomb forms can be seen in the Wadi al-Ajal during the Garamantian period. Despite the general diversity of the funerary monument there is clear preference of the shaft burial. The Classical Garamantian period saw the introduction of more monumental and visually imposing types, the pyramid and stepped tombs, indicative of the interest of emphasising individual communities whilst maintaining the morphological types established in the Proto-Urban period. The monumental structures can be found both in the oases-centred cemeteries and the

escarpment. Although the material of construction is different, mud-brick in the oases and stone in the escarpment, the physical result would be identical given the fact that the escarpment tombs were plastered resembling those in the wadi. Thus, not only the cemeteries became more nucleated during the Classical Garamantian phase but the individual burials turned into marked reference points in the landscape. It is also during this period that funerary furniture was established and developed into morphologically diverse stele and offering tables, particularly associated with the monumental tombs. A correlation between these monumental funerary structures and the area in the vicinity of the Garamantian capital can be suggested, given that all mausolea, pyramid tombs and biggest stepped tombs are within a 50 kilometre radius from Garama.

The last phase of the Garamantian civilisation was a period of relative decline which is reflected in the funerary landscape by the abandonment of cemetery areas in the western side of the Wadi. The most significant change in the landscape during the Late Garamantian phase is the movement towards the east, where we find the more prolific areas. At this stage they are still using the nucleated cemeteries which seem to have continued until the introduction of Islam.

FUNERARY RITUAL AND THE RELATIONSHIP BETWEEN THE LIVING AND THE DEAD

As Hodder notes (1982: 201) in death people can become what they were not in life, thus the interpretation of the Garamantian funerary rituals needs to be done in terms of the Garamantian attitude towards death and the way in which this is integrated with the living. Taking the dead body as the starting point to discuss Garamantian identity, the treatment given to the dead body indicates the cadaver was never ignored and, certainly, was always taken care of and disposed of in a way that was culturally accepted and constructed, manipulating the remains of the dead to conform to cultural and social conventions of, in this case, the Garamantes (Stutz 2010: 35). Therefore the treatment of the body itself is a ritualised practice that is repeated, and without which the process of death could be considered incomplete. The lack of variability in this treatment is significant as it can be indicative of being a non-negotiable response to death in the Garamantian communities.

During mortuary ceremonies people adorn the dead with material culture that reflects the complex webs of relationships between the dead, the living and the community as a whole. Adornment of the body, in costume ornaments, ritual objects, and pigments, facilitates the assertion of personal and collective identities and social memories of what it means to be a member of the community (Chesson 2001: 7). The repetition of the preparation of the body, of which we can only know the final dressing of the deceased through the archaeological record (the rest, e.g. washing, oiling, etc., can only be speculated). The repetition of a set of practices for the preparation for the deceased before deposition would have become an initial separation of the mourners and the definition of the identity of the deceased. As discussed in Chapters 5 and 6, the vast majority of the burials examined in the Wadi al-Ajal are primary individual burials. The bodies were either in textile or leather shrouds, in crouched position, mainly on an east-west axis alignment. The dead individual, therefore, did maintain his/her physical integrity, still resembling who he/she once was. It can be suggested that the importance given by the Garamantian community to the physical integrity of the body can be an indication of the rare disturbance of early graves. The multiple cases of disturbance and robbing across the cemeteries in the Wadi al-Ajal, given the highly disarticulated remains, seems to have happened some time after the burial, where the decomposition of the body would have reached a different level whereby the integrity of the human skeletal remains were not assimilated as the individual.

The preparation of the body would have started within hours after death. The Garamantes buried their dead as primary burials, mostly in individual graves, with the body in crouched position, wrapped in leather or textile shrouds and placed on matting or, possibly, wooden platforms (e.g. GSC030.T5). The position and alignment of the body inside tombs, regardless of the age and sex, seems to have been formalised in the Classic Garamantian period when we see the bodies placed on the east-west axis. The significance of this can relate to the worship of the sun-god, and it can be suggested that the bodies were orientated within the range of sunrise or sunset. This position is highlighted by the placement of the stele and offering tables usually on the side where the head rests.

As stated above, the treatment of the body does not show variation through time and space. Whilst this part of the funerary ritual remained unchanged, other aspects seem to have been

renegotiated, i.e. the variation of the artefacts accompanying the dead. The Garamantian funerary assemblage was composed of artefacts, food offerings and ochre which were placed in the burial with the dead (Chapter 6). Despite the impossibility of understanding the full meaning of the materiality of death some conclusions can be drawn. The Garamantian materiality of death seems to be an amalgamation of foreign and local materials merged together. During the Proto-Urban period, on the whole, there are not many artefacts within the tombs. The Garamantes introduced perishable organic materials in the tombs, including wooden vessels, with a significant limitation to the use of local handmade ceramics. There does not seem to be a difference between the sex and age of the individual and the diversity or amount of artefacts. However, the Classic Garamantian burials show greater variability both in the quantity and quality of the artefacts deposited in the graves. The trade with the Mediterranean made imported goods available and widely accessible, as indicated by the extensive manifestation of Roman ceramics and glass in the Garamantian tombs of the Classic and Late Garamantian periods. This presence of imported ceramics suggests not only the introduction of the material culture but also of new tastes, for instance olive oil and wine. In fact, it can be said that the vast majority of the artefacts introduced inside the graves were related to drinking and eating, as suggested by the considerable number of jugs, flagons, amphora and drinking vessels. It is clear that pottery was more predominantly encountered in the monumental tombs, seeing its apogee in the 2nd century AD. The presence of ceramics was not influenced by the identity of the dead. There seems to be a deliberate organisation of these items within the tombs, as considered in Chapter 6. Despite this influx of imported wares, there is a development in the range of forms of handmade wares included in the tombs. Mattingly *et al.* (2010a: 528) argue that the evolution of handmade wares could be related to the movement of sub-Saharan people in the Wadi al-Ajal. The migrants would have introduced different ceramic forms. Finally, the study of the funerary assemblages provide an insight not only into trade and Garamantian contacts, but on new technologies applied in different aspects of daily life, for example the introduction of the rotary quern displacing the saddle quern. Furthermore, the quality of the textiles encountered in the Wadi al-Ajal is remarkable and provides evidence of the Garamantian manufacturing of textiles with the warp-weighted loom (Mattingly *et al.* 2010a: 528).

THE GARAMANTES OF THE PERIPHERY

Looking further away from Garama, the Wadi Tanezzuft became the southern border of the Garamantes. Unlike the Wadi al-Ajal, there is no sign of vast irrigation system of foggaras, but small canals and shallow wells. The level of population in this area is considerably smaller and what can be observed are fortified villages on the peripheries of the oases with field systems for agriculture. Before the contemporary Italian missions in this area limited research had been carried out, and a significant proportion was related to the Pastoral societies. Recent excavations in the Wadi Tanezzuft have provided an insight into the funerary practices of the Garamantes in the periphery, away from the influence of the capital. The funerary archaeology of the Garamantian period in Wadi Tanezzuft (see Appendix C) followed a similar pattern of treatment of the dead, individual funerary monuments accompanied by offering tables and stele, and the position of the cemeteries within the landscape. In Tanezzuft, as in the Wadi al-Ajal, the resources and energy devoted to the funerary monuments is substantial – in some cases comparable to the domestic architecture-, albeit the grave goods were not as prolific. Imported wares have been recorded outside the tombs in Fewet but are not encountered inside the tomb, suggesting Mediterranean ceramics were not widely available and accessible for these communities. The significance given to the integrity of the body and the tomb is highlighted by the presence of tomb markers indicating a continuous relation and care of the living for the dead and therefore preserving their memory.

The interest of the Garamantes in the integrity of the human body can also be attested by the development of significant funerary structures and cemeteries. There was not only a focus in the burial ritual and the preparation of the body, but also in the creation and maintenance of burial areas. There was a clear interest in the place of burial and the idea of being part of a particular space related to the community and its past. I argued in Chapters 2 and 4, the cemeteries are important *loci*, consciously chosen places, where the rituals related to the deposition of the body took place. These places were shaped by the funerary rituals and belief systems at the same time that they became a physical memory, becoming spatial reference points related to the Garamantian communities, a place with both personal and collective meaning and significance. The close proximity and visual link between the settlements and the cemeteries indicate a continuous

relationship between the living and the dead. The location of the Garamantian cemeteries in prominent places can be indicative of the interest of the communities to display and show their dead not just to themselves but to other communities, thus creating a sense of communal identity. It can be said that the places of the dead was part of the process of construction of identities alongside the repetition of the funerary activities that took place in these cemeteries. I already discussed in Chapter 4 how Garamantian ideas of community, identity and memory can be suggested through the analysis of the morphological character of the cemeteries, for instance the deliberate grouping of funerary monuments into heavily nucleated cemeteries. The diversity of both cemeteries and typologies during the Classic Garamantian phase can be an indication of a more complex society. The development of the tomb morphological typology from simple cairns and shaft tombs to stepped tombs with circular and rectangular plan can be traced during the Proto-Urban and Classic Garamantian periods (see Chapters 4 and 5). It is during this phase when there is a proliferation of funerary furniture: stele and offering tables. The tomb and grave markers identify the location of the burial place, which is meaningful for the living.

The analysis of Garamantian mortuary and ritual practice observed in the cemeteries of the Wadi al-Ajal, with their variability and similarities, provides an insight into Garamantian beliefs and traditions. The focus on the cemeteries, *loci* of remembrance and memory for individuals and communities, the reinforcement of the individual within that community through the individual funerary structure and grave markers and the treatment of the body, central to the ritual, and the grave goods accompanying the deceased can be seen as indications of the Garamantian sense of identity. The importance given to the cemeteries, tombs and burials, is ultimately suggestive of how the Garamantes conceptualised death and the dead body. Clearly, the archaeological record does not allow a full understanding of what death meant to the Garamantes. Firstly, the treatment of the individuals in death was the same for female and male members of society, and there is evidence that children are also treated in the same way as adults, which suggests that the Garamantes shared identity in death. With regards to the living, osteological analysis of the remains excavated in the Wadi al-Ajal indicate that the Garamantes were a diverse society, with both Berber and sub-Saharan groups represented in the tombs. This complexity can explain some of the variability in the grave assemblages and the personal adornment of some of the individuals buried in the Wadi al-Ajal. The Garamantes developed monumental circular and quadrangular stepped tombs, found in both the oasis and escarpment cemeteries. These were identical in design

with the only difference being the core material of the escarpment tombs was stone, as opposed to mud-brick in the oases, but they were covered with plaster and would have looked similar to those in the oases cemeteries.

The study of the Garamantian ways of dealing with death and the dead does provide us with an insight into their perception and understanding of their society. The treatment at the time of death seems to be egalitarian across the individual communities and the Garamantian society as a whole. There is no distinction given to the treatment of a female body or a male, a child or an adult. The necessity to preserve the integrity of the deceased is paramount for the rest of the funerary rituals. The change of status between the living and the dead understood by the Garamantes formalised a ritual whereby the body could be disposed of in a culturally acceptable manner and provides the living community to mourn and reaffirm their ideas, beliefs and identity. The Garamantes maintained the same funerary practices, adapting and integrating new elements, such as imported goods into the tombs. The continuity of this way of death and the repetitive practices associated with it would have aid community memory. Funerary rituals are a multisensorial experience (including food and aromas) that would have stimulated remembrance and maintain a relationship between the living and the dead.

Table A.1. Ancient sources referring to the geographical location of the Garamantes.

Source	*Book/paragraph*	*Date*	Description
Herodotus	*Histories 4.183.1*	*5th C.BC*	After ten days' journey again from Augila there is yet another hill of salt and springs of water and many fruit-bearing palms, as at the other places; men live there called Garamantes, an exceedingly great nation, who sow in earth which they have laid on the salt.
Livy	*Ab urbe condita 29.33*	*1st C. BC*	[...] accompanied by sixty troopers he (Masinissa) reached the Lesser Syrtis [...] he passed his time between the Carthaginian Emporia and the tribe of the Garamantes [...]
Strabo	*Geographia*	*1st C. BC*	The land above the Gaetulians is that of the Garamantes, which lies parallel to the former and is the land whence the Carthaginian stones are brought. The Garamantes are said to be distant from the Aethiopians who live on the ocean a nine or ten days' journey and from Ammon fifteen.
Mela	*De situ orbis 1.23*	*1st C. AD*	[...] the Garamantes separated from the Gaetuli by a track of desert... beyond Garamantes lay the Augilae, the Troglodytae and the Atalantes.
Pliny	*Historia Naturalis 5.26*	*1st C. AD*	Next comes forests filled with multitude of wild beasts, and further inland desolate haunts of elephants, and then a vast desert, and beyond it the Garamantes tribe, at a distance of twelve days' journey from Aujelah. Beyond these was formerly the Psylh tribe, and beyond them Lake Lynxama, surrounded by desert.
Ptolemy	*Geography 4.6.12*	*2nd C. AD*	[...] The great races which inhabit Libya are the Garamantes extending from the sources of the Bagradas river to the Nubas lake [...]
Tabola Peutingeriana		*3rd C. AD*	Garamantes between the river Giris and a salt lake to the south east of Lepcis Magna.
Isidore of Seville	*Ethymologies 9.125*	*7th C. AD*	The Garamantian people of Africa inhabited near Cyrene, named after King Garamante, a son of Apollo, who after his own name built a town, Garama. The neighbour nation is Ethiopia.

Table A.2. Ancient sources referring to Garamantian agricultural and pastoral practices.

Source	Book/paragraph	Date	Description
Herodotus	*Histories* 1.183	5th C. BC	There is a hill of salt, a spring, and a great number of fruit-bearing date palms, and the men who dwell here are called the Garamantes, a very great nation, who carry [humid] earth to lay over the salt and then sow crops. [...] Among them also are produced the cattle which feed backwards, because they have their horns bent down forwards, and [...] cannot go forwards as they feed, because the horns would run into the ground. Except for this, and the firmness of their hide, they do not differ from other cattle. With their four-horse chariots, these Garamantes hunt the cave dwelling, who are the swiftest of foot of all men.
Strabo	*Geographia* 17.3.11	1st C. BC	Somewhere here there are also copper mines and a spring of asphalt [...] Now on the mountain-side are said to be found the "Lychnite" and Carthaginian stones, as they are called [...] And some of the people have land that produces two crops of grain, reaping two harvests, one in spring and the other in summer [...] In the spring they do not even sow seed, but harrow the ground lightly with bundles of paliuri, and are satisfied with the seed-grain that has fallen out of the ear at the time of the harvest; for these produce a perfect summer crop.
Strabo	*Geographia* 17.3.19	1st C. BC	[...] and both horses and cattle have longer necks than those of other countries. Horse breeding is followed with such exceptional interest by the kings that the number of colts every year amounts to one hundred thousand. The sheep are brought up on milk and meats, particularly in the regions near Aethiopia.
Pliny	*Natural Histories* V: 35-38	1st C. AD	Hitherto it has been impossible to open up the road to the Garamantes country, because brigands of that race fill up the wells with sand — these do not need to be dug very deep if you are aided by a knowledge of the localities.
Mela	*De situ orbis* 1.45	1st C. AD	There are also herd animals among the Garamantes, and those animals feed with their necks bent at an odd angle since their horns, when directed at the ground, get in their way as they bend down.

Table A.3. Contact of the Garamantes with Rome according to ancient sources.

Source	Book/paragraph	Date	Description
Silius Italicus	*Punica* 2.62-63.		[...] She was the child of Hiarbas the Garamantian; and he was the son of Ammon and ruled with extended sway the caves of Medusa, daughter of Phorcys, and the Macae who dwell by the river Cinyps, and the Cyrenians whom the cruel sun scorches; he was obeyed by the Nasamones, hereditary subjects, by ever-parched Barce, by the forests of the Autololes, by the shore of treacherous Syrtis, and by the Gaetulians who ride without reins. And he had built a marriage-bed for the nymph Tritonis, from whom the princess was born
M. Annaeus Lucanus	*Pharsalia* 4.664-184	1st C. AD	From all these regions tribes unnumbered flock to Juba's standard: [...] Dark Garamantians leave their fervid home; and those whose coursers unrestrained by bit or saddle, yet obey the rider's hand which wields the guiding switch: the hunter, too, who wanders forth, his home a fragile hut, and blings with flowing robe (if spear should fail) the angry lion, monarch of the steppe.
Pliny	*Historia Naturalis* V:35-38	1st C. AD	After these a long range stretches from east to west which our people from its nature call the Black Mountain, as it has the appearance of having suffered from fire, or else of being scorched by the reflection of the sun. Beyond this mountain rage is the desert, and then a town of the Garamantes called Thelgae, and also Bedir (near which there is a spring of which the water is boiling hot from midday to midnight and then freezing cold for the same number of hours until midday) and Garama, the celebrated capital of the Garamantes: all of which places have been subdued by the arms of Rome, being conquered by Cornelius Balbus, who was given a triumph.
Tacitus	*Annals 2*.36	1st C. AD	Since it was noticed that the African, overmatched in solid fighting strength but more expert in the petty knaveries of war, operated with a number of bands, first attacking, then vanishing, and always maneuvering for an ambuscade, arrangements were made for three forward movements and three columns to execute them. One, in charge of the legate Cornelius Scipio, held the road by which the enemy raided the Leptitanians and then fell back upon the Garamantians. On another side, the younger Blaesus marched with his own division to prevent the hamlets of Cirta from being ravaged with impunity.

Source	Book/paragraph	Date	Description
Tacitus	*Histories 4.49-50*	1st C. AD	At that time the legion in Africa was commanded by Valerius Festus, a young man of extravagant habits [...] Later he settled the differences between the people of Oea and Leptis, [...] the people of Oea, being fewer than their opponents, had called in the Garamantes, an ungovernable tribe and one always engaged in practicing brigandage on their neighbors.
Florus	*Epitome* 2.36	Late 1st C. – early 2nd C. AD	Such were the operations in the north; in the south, there were risings rather than wars. Augustus put down the Musulami and Gaetulians who dwell near the Syrtis, through the agency of Cossus, who thus gained the name of Gaetulicus, a title more extensive than his actual victory warranted. He entrusted the subjugation of the Marmarides and Garamantes to Quirinus, who likewise might have returned with the title of Marmaricus, had he not been too modest in estimating his victory.
Ptolemy	*Geographia* 1.8.4.	2ndC. AD	[...] seeing that the Garamantes are themselves for the most part Ethiopians, and have the same king [...]
Ptolemy	*Geographia* 1.10	2ndC. AD	First, on the matter of a journey, from Garame to Ethiopia, he says that Septimus Flaccus, having marched from Libya, arrived before the land of Ethiopians from the region of the Garamantes after three months journeying towards the equator. Julius Maternus, from Leptis Magna and Garama at the same time as the king of the Garamantes was going to attack the Ethiopians, journeyed continuously towards the equator for four months before arriving at Agisymba, the country of the Ethiopians where the rhinoceros are to be encountered.
Claudianus (Claudian)	*De consulatu Stilichonis* 1.255	4th C. AD	[...] those who dwell beside the waters of Gir, most famous of the rivers of Ethiopia, that overflows his banks as it had been another Nile. There came at his summons the Nubian with his head-dress of short arrows, the swift Garamantian, the Nasamonian whose impetuous ardour not even the sinister predictions of Ammon could restrain.
	De consulate Stilichonis 1. 355		[...] deadly by neither the poisoned arrow of Ethiopia nor thick hail of javelins nor clouds of horsemen can withstand Latin spears. The cowardly Nasamonian troops are scattered, the Garamantian hurls not his spears but begs for mercy, the swift-footed Autololes fly to the desert, the terror-stricken Mazacian flings away his arms, in vain the Moor urges on his flagging steed.

Table A4. Social aspects of the Garamantes

Source	Book/paragraph	Date	Description
Strabo	*Geographies 17.3.19*	1st C. BC	The inhabitants are simple in their mode of life and in their dress; they marry numerous wives, and have a numerous offspring; in other respects they resemble the nomads Arabians. The necks both of horses and oxen are longer than in other countries.
Mela	*Cosmographies 1.45*	1st C. AD	No one has one specific wife. Out of the children, who are born here randomly from such indiscriminate sexuality on their parents' part, and who are not clearly identified, the adults recognise by their similar looks those whom they are to raise as their own.
Solinus	*Collectanea 30*	3rd C. AD	The Ethiopian Garamantes have no knowledge of marriage: it is the custom of the country to have the women in common. Hence only the mothers recognise their sons; the honourable title of father cannot be applied to everyone. Who could, in effect, distinguish a father in the midst of such moral licence? So the Ethiopian Garamantes are rightly regarded as a degenerate people, since, as a consequence of that promiscuity, the family name is sadly lost.

Appendix B. Summary of skeletal remains mentioned in Chapter 5.

Saniat bin Huwaydi (GER011)

- GER.011.T1

  Sex and age at the time of death: uncertain

  Position and orientation of the body: no trace survived

  State of preservation: N/A

- GER.011.T9

  Sex and age at the time of death: Female young adult (between 18 and 35 years old).

  Position and orientation of the body: contracted on the left side on a west-east alignment, facing towards the north.

  State of preservation: poor state of preservation, disarticulated, disturbed.

- GER.011.T12

  Sex and age at the time of death: uncertain sex, young adult.

  Position and orientation of the body: contracted on the right side on an north-south alignment, facing towards the west

  State of preservation: fair state of preservation, articulated, undisturbed.

- GER.011.T15

  Sex and age at the time of death: male adult (between 35 and 50 years old); the second skeleton is that of a male young adult.

  Position and orientation of the body: contracted on the left side on an west-east alignment, facing towards the north; the second body was contracted on his right side, on a north-south alignment, facing west

  State of preservation: the remains of the adult were poorly preserved; the preservation of the second body was rather poor, articulated and undisturbed.

- GER.011.T17

  Sex and age at the time of death: adult of uncertain sex.

  Position and orientation of the body: contracted on the left side on an east-west alignment, facing towards the south.

  State of preservation: very poor – described by Daniels as 'little more than a stain in the ground' (Mattingly 2010: 260).

Summary of human remains

- GER011.T25

  Sex and age at the time of death: mature adult female.

  Position and orientation of the body: contracted on the right side on west-east alignment, facing towards the south.

  State of preservation: well preserved, articulated and undisturbed.

- GER.011.T33[1]

  Sex and age at the time of death: male adolescent (between 12 and 18 years old); adult of uncertain sex.

  Position and orientation of the body: the first body was contracted on the right side, on a north-south alignment, facing west. The adolescent was contracted on his left side, on a north-south alignment, facing east.

  State of preservation: both bodies were in very poor state of preservation, partial articulation, disturbed.

- GER.011.T40

  Sex and age at the time of death: mature child (between 6 and 12 years old), sex not assessed.

  Position and orientation of the body: contracted on the right side on a north-south alignment, facing towards the west.

  State of preservation: good state of preservation, articulated and undisturbed.

- GER.011.T41

  Sex and age at the time of death: young child (between 2 and 4 years old), sex not assessed.

  Position and orientation of the body: contracted on the right side on a west-east alignment, facing towards the south.

  State of preservation: good state of preservation, articulated, undisturbed.

- GER.011.T42[2]

  Sex and age at the time of death: two young males.

  Position and orientation of the body: both bodies were contracted on their left side, on an east-west alignment facing towards the south.

  State of preservation: the first body (secondary burial) was in a moderately preserved whilst the second on (primary) was very poor and with signs of fragmentation on the second body; articulated and undisturbed.

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[1] Tomb 33 contained the remains of two people. Excavated by Daniels' team, it was recorded as both of them found at the same level, contemporaneous with each other. The fragmentary and poor preservation of the skeletal remains have not enabled to determine the sex of the second individual. It is suggested this is a double burial of an adult with a young adolescent.

[2] The first body was recovered in a rubble layer above the main burial

- GER.011.T45

  Sex and age at the time of death: male, mature adult (over 50 years of age)

  Position and orientation of the body: contracted on his left side on west-east alignment, facing towards the north.

  State of preservation: good state of preservation, articulated and undisturbed.

- GER.011.T49

  Sex and age at the time of death: child (approximately 6 or 7 years old), sex not assessed.

  Position and orientation of the body: contracted on the right side on an east-west alignment, facing towards the north.

  State of preservation: good state of preservation, articulated, partly disturbed.

- GER.011.T51[3]

  Sex and age at the time of death: uncertain.

  Position and orientation of the body: contracted on the left side on a west-east alignment, facing towards the north

  State of preservation: poor, disarticulated, fragmented and disturbed.

- GER.011.T52

  Sex and age at the time of death: adult, uncertain sex.

  Position and orientation of the body: contracted on the right side on a west-east alignment, facing towards the south

  State of preservation: fragile (the body did not survive the lifting), articulated and undisturbed.

- GER.011.T53

  Sex and age at the time of death: adult, uncertain sex.

  Position and orientation of the body: contracted on the left side on an east-west alignment, facing towards the south.

  State of preservation: very poor, articulated and undisturbed.

- GER.011.T54

  Sex and age at the time of death: adult female

  Position and orientation of the body: contracted on the left side on a south-north alignment, facing towards the west.

  State of preservation: fair state of preservation (did not survive lifting), articulated and undisturbed.

[3] This tomb contained the remains of three disarticulated bodies. Due to the poor preservation of the remains the sex and age of the individuals could not be assessed. However, the survival of the tibia and femur of the primary burial has allowed recording the position and orientation.

Jarma escarpment (GSC)

King's Cemetery (GSC030)

- GSC030.T1

Sex and age at the time of death: uncertain

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC030.T2

Sex and age at the time of death: uncertain

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC030.T4

Sex and age at the time of death: adult male and possible adolescent or young adult female.

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC030.T5

Sex and age at the time of death: remains of an adult of uncertain sex.

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC030.T14

Sex and age at the time of death: uncertain

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC030.T22

Sex and age at the time of death: uncertain

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

Queen's Cemetery (GSC031)

- GSC031.T2

Sex and age at the time of death: uncertain

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC031.T7

Sex and age at the time of death: adult female.

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC031.T30/32

Sex and age at the time of death: adult female.

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC031.T62

Sex and age at the time of death: uncertain

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

- GSC031.T71

Sex and age at the time of death: adult female.

Position and orientation of the body: uncertain

State of preservation: poor preservation, disturbed and disarticulated.

GSC042

- GSC042.T1

Sex and age at the time of death: Two individuals, one adult male and one uncertain, possible adult.

Position and orientation of the body: uncertain.

State of preservation: fair preservation, disturbed and disarticulated remains of two individuals.

GSC048

- GSC048.T1

Sex and age at the time of death: child of uncertain sex.

Position and orientation of the body: contracted on right side on a south-north alignment, facing towards the east.

State of preservation: good preservation, disturbed and articulated.

- GSC048.T2

Sex and age at the time of death: infant, approximately 9 months old, of uncertain sex.

Position and orientation of the body: contracted on the right side on an east-west alignment facing north.

State of preservation: good preservation, disturbed and articulated.

Watwat (UAT)

- UAT004.T1

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: fair preservation of the bones, disturbed and disarticulated

UAT008

- UAT008.T5

  Sex and age at the time of death: Remains of three adults, including one female, one male and one uncertain. The disturbed remains of the female are partially articulated.

  Position and orientation of the body: East west alignment, with the head towards the west.

  State of preservation: fair preservation of the bones, disturbed and disarticulated

- UAT008.T16

  Sex and age at the time of death: Female young adult with 3-6 year old child

  Position and orientation of the body: uncertain

  State of preservation: fair preservation of the bones, disturbed and disarticulated

- UAT008.T17

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

- UAT008.T19

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, but disturbed and disarticulated

- UAT008.T20

  Sex and age at the time of death: male young adult

  Position and orientation of the body: uncertain

  State of preservation: disturbed and disarticulated, bones in good state of preservation

- UAT008.T22

  Sex and age at the time of death: Young adult female

  Position and orientation of the body: contracted on the left side of on a north-south alignment, facing towards the east

  State of preservation: good state of preservation, disturbed but partial articulation

- UAT008.T23[4]

  Sex and age at the time of death: uncertain

  Position and orientation of the body: uncertain

  State of preservation: preservation of the remains is good, although incomplete

- UAT008.T24

  Sex and age at the time of death: male adolescent (15-18 years old)

  Position and orientation of the body: contracted, possible on the right side on an east-west alignment facing north.

  State of preservation: good preservation, disturbed and very partial articulation[5]

- UAT008.T30

  Sex and age at the time of death: mid adult of uncertain sex

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones but very disturbed and disarticulated

- UAT008.T32

  Sex and age at the time of death: young adult female

  Position and orientation of the body: contracted on her left side on a west-east alignment facing towards the north

  State of preservation: very good preservation, undisturbed and articulated

- UAT008.T33

  Sex and age at the time of death: uncertain[6]

  Position and orientation of the body: uncertain

  State of preservation: fair state of preservation of the bones, however the remains encountered were fully disarticulated and highly disturbed[7].

- UAT008.T35

  Sex and age at the time of death: Uncertain[8]

  Position and orientation of the body: uncertain

  State of preservation: fair preservation of the bones, disturbed and disarticulated

---

[4] Due to the robbing activity this tomb had disarticulated remains belonging to various individuals including a young adult, old child, female young adult and a male young adult. All of these individuals are incomplete and therefore it is not possible to establish the primary burial.

[5] Only part of the top extremities was in situ, whilst the rest of the body was disarticulated. The position of the arm is suggestive of the rest of the body, assuming the deceased was placed in crouched position.

[6] The remains of two bodies were recovered in T33, both young adults, one female the other male

[7] This is most likely the result of robbing of various tombs and the mixed backfill of the shafts

[8] The remains of two bodies were recovered in T35; a young adult female and a child between 8 and 14 years old.

- UAT008.T38

Sex and age at the time of death: double inhumation[9] of a young adult female and a small child between the age of 2 and 4 years old

Position and orientation of the body: The remains of the woman were disturbed and the position of the body is not certain, her body was placed on the east side of the tomb. The child is in crouched position on his/her right side on a south-north alignment facing towards the east.

State of preservation: good preservation of the skeletal remains. Disturbed but full articulation of the young child.

- UAT008.T40

Sex and age at the time of death: female young adult

Position and orientation of the body: uncertain

State of preservation: fair preservation, disturbed and disarticulated

- UAT008.T41

Sex and age at the time of death: female young adult

Position and orientation of the body: uncertain

State of preservation: good preservation, disturbed and disarticulated

- UAT008.T42

Sex and age at the time of death: female mid adult

Position and orientation of the body: she was crouched possibly on her right and on an east-west alignment facing southwest.

State of preservation: good preservation of the bones, disturbed and mainly disarticulated[10]

- UAT008.T74

Sex and age at the time of death: female young adult

Position and orientation of the body: uncertain

State of preservation: fairly poor preservation of the bones, disturbed and disarticulated

- UAT008.T75

Sex and age at the time of death: male mid adult

Position and orientation of the body: uncertain

State of preservation: good preservation of the bones, disturbed and disarticulated

---

[9] It is suggested that the woman was the primary burial in this tomb with the young child being interred afterwards, therefore reusing the same shaft. It can be argued the two individuals were related. There are other tombs in the Wadi al-Ajal where a young woman has been buried with an infant or child (see Taqallit below).

[10] Some articulation found of the lower part of the body, particularly the right pelvis and femur and the small displacement of the skull show an indication of the position of the body.

Summary of human remains

- UAT008.T76

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- UAT008.T77

  Sex and age at the time of death: unknown young adult

  Position and orientation of the body: uncertain

  State of preservation: fairly poor preservation of the bones, disturbed and disarticulated

- UAT008.T82

  Sex and age at the time of death: female mid adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and mainly disarticulated[11]

- UAT008.T83

  Sex and age at the time of death: unknown adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

- UAT008.T84a[12]

  Sex and age at the time of death: unknown adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

  UAT008.T84a[13]

  Sex and age at the time of death: unknown adult

  Position and orientation of the body: contracted on his or her left side on an east-west alignment and facing south.

  State of preservation: mummified remains, undisturbed and full articulation

- UAT008.T86a[14]

  Sex and age at the time of death: unknown adolescent

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

---

[11] Three vertebrae were recorded articulated, yet it is not possibly to confirm if they were *in situ*.
[12] Secondary burial
[13] Primary burial
[14] Secondary burial

UAT008.T86b[15]

Sex and age at the time of death: male mid adult

Position and orientation of the body: Contracted on his left side on a west-east alignment facing north

State of preservation: good preservation, disturbed and partial articulation of the thoracic area and lower extremities.

- UAT008.T87

Sex and age at the time of death: female mid adult (Figure 5.13)

Position and orientation of the body: extremely flexed contracted on her left, approximately in an east-west alignment facing upwards (south)

State of preservation: good preservation – mummified, undisturbed and fully articulated

UAT009

- UAT009.T1

Sex and age at the time of death: male young adult

Position and orientation of the body: contracted on his right side in a west-east alignment facing south

State of preservation: good preservation, disturbed and some articulation (thoracic area and upper extremities)

- UAT009.T2

Sex and age at the time of death: female young adult

Position and orientation of the body: uncertain

State of preservation: good preservation of the bones but disturbed and disarticulated

UAT010

- UAT010.T2

Sex and age at the time of death: female young adult and young child

Position and orientation of the body: uncertain

State of preservation: good preservation, disturbed and disarticulated

- UAT010.T3

Sex and age at the time of death: male mid adult

Position and orientation of the body: crouched on his right, on a north-south alignment facing towards the west

State of preservation: very good preservation, partial disturbance on the upper body, otherwise fully articulated.

[15] Primary burial

- UAT010.T4

  Sex and age at the time of death: female adolescent

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- UAT010.T5

  Sex and age at the time of death: male young adult

  Position and orientation of the body: contracted on his right side on a south-north alignment facing east.

  State of preservation: good preservation, undisturbed and articulated

- UAT010.T6

  Sex and age at the time of death: female mid adult and older child

  Position and orientation of the body: both bodies are contracted on the right on a south-north alignment facing east.

  State of preservation: fairly good preservation, slightly disturbed but articulated

- UAT010.T7

  Sex and age at the time of death: uncertain adult

  Position and orientation of the body: contracted on the right and a south-north alignment with facing east

  State of preservation: good preservation, disturbed and partially articulated

UAT050

- UAT050.T1

  Sex and age at the time of death: male mid adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

- UAT050.T2

  Sex and age at the time of death: male young adult

  Position and orientation of the body: contracted on his right side on north-south alignment facing west

  State of preservation: good preservation of the bones, disturbed but articulation of the thorax and mandible

- UAT050.T5

  Sex and age at the time of death: male young adult and male mid adult

  Position and orientation of the body: contracted on his right side, on an east-west alignment facing north

  State of preservation: fair preservation, disturbed, articulated

- UAT050.T6

  Sex and age at the time of death: female adolescent

  Position and orientation of the body: uncertain

  State of preservation: fair preservation, disturbed and disarticulated

- UAT050.T7

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- UAT050.T8

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: fair preservation of the bones, disturbed and disarticulated

UAT051

- UAT051.T3

  Sex and age at the time of death: male adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- UAT051.T4

  Sex and age at the time of death: female mid adult

  Position and orientation of the body: uncertain

  State of preservation: fair preservation of the bones, disturbed and disarticulated

- UAT051.T5

  Sex and age at the time of death: female adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

UAT052

- UAT052.T1

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

- UAT052.T2

  Sex and age at the time of death: male adolescent[16]

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

- UAT052.T3

  Sex and age at the time of death: female mid adult

  Position and orientation of the body: contracted on her right side on an west-east alignment facing south

  State of preservation: Good preservation of the bones, disturbed (partial displacement of the skull and thorax) but fully articulated

- UAT052.T4

  Sex and age at the time of death: male mid adult

  Position and orientation of the body: contracted on his right side on an east-west alignment facing north

  State of preservation: very good preservation of the bones, disturbed but full articulation of the upper body.

UAT055

- UAT055.T1

  Sex and age at the time of death: male adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

[16] It is possible the remains of two bodies were present in this tomb. The skeletal record identifies one as a male adolescent and the other as an older child. Both individuals are incomplete, but the count of bones does not rule out the possibility of being just one individual, the male adolescent, as the older child is suggested by dental development (Nikita 2011).

UAT056

- UAT056.T1

  Sex and age at the time of death: male adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

Zinkekra

ZIN002.013

- ZIN002.013.T44

  Sex and age at the time of death: female adult.

  Position and orientation of the body: contracted on the right side on a north-south alignment, facing towards the west.

  State of preservation: well preserved, articulated and undisturbed.

- ZIN002.013.T45

  Sex and age at the time of death: male adult.

  Position and orientation of the body: contracted on the left side on an east-west alignment, facing towards the south.

  State of preservation: well preserved, articulated and undisturbed.

- ZIN002.013.T54

  Sex and age at the time of death: female adult.

  Position and orientation of the body: contracted on the right side on a west-east alignment, facing towards the south.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN002.013.T170

  Sex and age at the time of death: adolescent male.

  Position and orientation of the body: contracted on the left side on an east-west alignment, facing towards the south.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN002.013.T171

  Sex and age at the time of death: female adult

  Position and orientation of the body: contracted on the left side on a west-east alignment, facing towards the north.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN002.013.T202[17]

  Sex and age at the time of death: male adult.

  Position and orientation of the body: contracted on the left side on a north-south alignment, facing towards the east.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN002.013.T204

  Sex and age at the time of death: female adult.

  Position and orientation of the body: contracted on the right side on a west-east alignment, facing towards the south.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN002.013.T209[18]

  Sex and age at the time of death: female adult.

  Position and orientation of the body: contracted on the left side on a south-north alignment, facing towards the west.

  State of preservation: well preserved and articulated, undisturbed.

ZIN218

- ZIN218.T1

  Sex and age at the time of death: female young adult.

  Position and orientation of the body: contracted on the left side on a south-north alignment, facing towards the west.

  State of preservation: well preserved and articulated, undisturbed – although the skull is missing[19] (see conclusions below)

[17] In same shaft as ZIN013.T209

[18] In same shaft as ZIN013.T202.

[19] The DMP excavations in Taqallit provided examples of a number of undisturbed tombs with the heads missing (see Gonzalez Rodriguez *et al.* 2009)

ZIN220

- ZIN220.T1

  Sex and age at the time of death: female adult.

  Position and orientation of the body: contracted on the right side on a north-south alignment, facing towards the west.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN220.T3

  Sex and age at the time of death: female adult.

  Position and orientation of the body: contracted on the left side on a west-east alignment, facing towards the north.

  State of preservation: disturbed with some articulation.

- ZIN220.T4

  Sex and age at the time of death: indeterminate adolescent.

  Position and orientation of the body: contracted on the right side on a north-south alignment, facing towards the west.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN220.T18

  Sex and age at the time of death: female adult

  Position and orientation of the body: contracted on the left side on an east-west alignment, facing towards the south.

  State of preservation: well preserved and articulated, undisturbed.

- ZIN220.T19

  Sex and age at the time of death: female adult and infant (>2 years old)

  Position and orientation of the body: contracted on the left side on an east-west alignment, facing towards the south.

  State of preservation: well preserved and articulated, undisturbed.

Taqallit

TAG001

- TAG001.T227

  Sex and age at the time of death: male adult

  Position and orientation of the body: Uncertain

  State of preservation: poor preservation, disturbed and disarticulated

- TAG001.T228

  Sex and age at the time of death: male and female adults[20]

  Position and orientation of the body: Uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- TAG001.T229

  Sex and age at the time of death: uncertain

  Position and orientation of the body: Uncertain

  State of preservation: poor preservation, disturbed and disarticulated

- TAG001.T231

  Sex and age at the time of death: female adult

  Position and orientation of the body: contracted on her right side on an east-west alignment facing north

  State of preservation: good preservation, undisturbed and articulated

- TAG001.T232

  Sex and age at the time of death: female young adult

  Position and orientation of the body: contracted on her right side on an west-east alignment facing south

  State of preservation: good preservation, incomplete.

[20] T228 contained the remains of two adult individuals, - this tomb has been robbed in antiquity and these bodies represent the backfill of two tombs rather than corresponding to a double inhumation as the volume of the shaft would not allow for two adult bodies to be buried together.

Summary of human remains

- TAG001.T233

  Sex and age at the time of death: uncertain[21]

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated.

- TAG001.T234

  Sex and age at the time of death: Male adult

  Position and orientation of the body: (assumed[22]) crouched of his right side in a west-east alignment facing south

  State of preservation: good preservation, disturbed minimal articulation

- TAG001.T235

  Sex and age at the time of death: male adult

  Position and orientation of the body: Uncertain

  State of preservation: good preservation, disturbed and disarticulated

- TAG001.T236

  Sex and age at the time of death: female young adult

  Position and orientation of the body: (assumed[23]) crouched on her left side, on a west-east alignment facing north

  State of preservation: good preservation, disturbed and minimal articulation.

- TAG001.T237

  Sex and age at the time of death: Adult female and infant of uncertain sex.

  Position and orientation of the body: the female was contracted on the right side on an east-west alignment, facing towards the north. The infant was found contracted on his/her right side on a southeast-northwest alignment and facing towards the east

  State of preservation: both bodies were in good state of preservation, but incomplete.

- TAG001.T238

  Sex and age at the time of death: female adult

  Position and orientation of the body: Contracted on an east-west alignment, possibly facing north

  State of preservation: good preservation, disturbed and disarticulated

---

[21] The remains of two individuals, a mid-adult female and a young adult male, were recovered from this robbed tomb.

[22] Only the feet survive *in situ*, but given the location of the body within the tomb, on the south wall of the shaft, the position of the body can be established

[23] Only the feet of the woman survive *in situ* but the position of the body within the tomb can be established given the location of the deceased in the far north wall of the shaft

Summary of human remains

- TAG001.T239

  Sex and age at the time of death: the first skeleton belongs to a 12 years old child of uncertain sex; the second remains were those of a male adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated.

- TAG001.T240

  Sex and age at the time of death: female adult

  Position and orientation of the body: contracted on her left side on a west-east alignment, facing north.

  State of preservation: good state of preservation of the bones, disturbed by partial articulation of the thoracic area and upper extremities

- TAG001.T241

  Sex and age at the time of death: male adult and 10 year old child[24]

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- TAG001.T242

  Sex and age at the time of death: female adult

  Position and orientation of the body: contracted on the right side on an east-west alignment facing towards the north.

  State of preservation: Good state of preservation and articulation.

- TAG001.T244

  Sex and age at the time of death: female adult

  Position and orientation of the body: Contracted on the right side on an east-west alignment and facing towards the north.

  State of preservation: good state of preservation

- TAG001.T245

  Sex and age at the time of death: Adult female

  Position and orientation of the body: Contracted on her right on west-east alignment facing towards the south

  State of preservation: Good preservation of the bones articulated but incomplete

[24] The remains of two bodies have been recorded in T241. This is a clearly robbed tomb and it is not possible to establish whether the bodies were interred in the same monument or backfilled into the shaft.

- TAG001.T246

  Sex and age at the time of death: male adult and 3 year old child[25]

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

- TAG001.T247

  Sex and age at the time of death: young female adult

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

- TAG001.T248

  Sex and age at the time of death: young adult female

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

- TAG001.T249

  Sex and age at the time of death: young adult female

  Position and orientation of the body:

  State of preservation: very good preservation of the bones, disturbed and disarticulated

- TAG001.T250

  Sex and age at the time of death: male adult

  Position and orientation of the body: contracted on his right side on a west-east alignment facing south

  State of preservation: Good preservation of the bones, disturbed but partial articulation (below the patella)

- TAG001.T251

  Sex and age at the time of death: female adult

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

- TAG001.T252

  Sex and age at the time of death: child between 6-12 years old of uncertain sex[26]

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

---

[25] T246 was heavily robbed and these remains were recovered from the backfill of the tomb.

[26] The level of disturbance in this tomb does not allow being certain that the child is the primary occupant. If this was the case he or she would have been the only individual child burial recovered from the monumental area of TAG001 given the fact that the other children have been found associated with an adult burial.

Summary of human remains

- TAG001.T253

  Sex and age at the time of death: female adult

  Position and orientation of the body: contracted on her right side on a west-east alignment facing towards the south

  State of preservation: Good preservation of the bones, slight disturbance but articulated

- TAG001.T254

  Sex and age at the time of death: young female adult

  Position and orientation of the body: contracted on her right side on an east-west alignment and facing north

  State of preservation: Good preservation of the bones, slight disturbance but full articulation

- TAG001.T255

  Sex and age at the time of death: adult of uncertain sex

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, very disturbed and disarticulated

- TAG001.T256

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, very disturbed and disarticulated

- TAG001.T257

  Sex and age at the time of death: female young adult

  Position and orientation of the body: contracted on the right side on a west-east alignment facing towards the south.

  State of preservation: Very good preservation of the bones, disturbed with partial articulation

- TAG001.T258

  Sex and age at the time of death: young adult female

  Position and orientation of the body: contracted on her right side on an north-south alignment facing towards the west

  State of preservation: Good preservation of the bones, undisturbed and articulated

- TAG001.T259

  Sex and age at the time of death: male adult

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, very disturbed and disarticulated

Summary of human remains

- TAG001.T260

  Sex and age at the time of death: male old adult (over 50 years old)

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, very disturbed and disarticulated

- TAG001.T261

  Sex and age at the time of death: adolescent of uncertain sex

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

- TAG001.T262

  Sex and age at the time of death: female young adult

  Position and orientation of the body: contracted on her right side on an east-west alignment facing towards the south

  State of preservation: Good preservation of the bones, undisturbed and articulated

- TAG001.T264

  Sex and age at the time of death: male young adult

  Position and orientation of the body: contracted on his right side on a west-east alignment facing towards the north.

  State of preservation: good preservation, undisturbed and articulated

- TAG001.T266

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: very good preservation of the bones, disturbed and disarticulated

- TAG001.T267

  Sex and age at the time of death: young child[27] of uncertain sex

  Position and orientation of the body: uncertain

  State of preservation: good preservation of the bones, disturbed and disarticulated

- TAG001.T268

  Sex and age at the time of death: older child of uncertain sex

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed and disarticulated

[27] The tombs where children have been encountered have been in association with adults. T267 and T268 are located in to the west of the main monumental area, and are smaller cairns. These have been systematically robbed in antiquity.

- TAG001.T269

  Sex and age at the time of death: male mid adult

  Position and orientation of the body: uncertain

  State of preservation: fair preservation, disturbed and disarticulated

- TAG001.T270

  Sex and age at the time of death: female young adult

  Position and orientation of the body: contracted on her right side on a west-east alignment facing towards the south.

  State of preservation: very good preservation, disturbed but some articulation of the lower extremities

- TAG001.T271

  Sex and age at the time of death: female young adult

  Position and orientation of the body: uncertain

  State of preservation: good preservation, disturbed, disarticulated

- TAG001.T277

  Sex and age at the time of death: female adult

  Position and orientation of the body: crouched on her right side on an east-west alignment facing towards the north

  State of preservation: good preservation, disturbed, some articulation

TAG006

- TAG006.T1

  Sex and age at the time of death: male young adult

  Position and orientation of the body: contracted on the right side on a west-east alignment and with the head facing towards the south.

  State of preservation: Very good

- TAG006.T2

  Sex and age at the time of death: Young adult/juvenile female?

  Position and orientation of the body: contracted on the left side on a west-east alignment facing north.

  State of preservation: Very good preservation

TAG012

- TAG012.T2

  Sex and age at the time of death: Young adult female

  Position and orientation of the body: uncertain

  State of preservation: fair preservation of the bones, disturbed and disarticulated

- TAG012.T3

  Sex and age at the time of death: Adult male

  Position and orientation of the body: uncertain

  State of preservation: Good preservation of the bones, disturbed and disarticulated

TAG021

- TAG021.T1a

  Sex and age at the time of death: Adult female

  Position and orientation of the body: contracted on her left side on a west-east alignment facing towards the north

  State of preservation: good preservation, disturbed partially articulated

  TAG021.T1b

  Sex and age at the time of death: Adult male (primary burial)

  Position and orientation of the body: crouched on his left side on an east-west alignment facing south

  State of preservation: Good state of preservation, undisturbed and articulated

TAG063

- TAG063.T8

  Sex and age at the time of death: young adult female

  Position and orientation of the body: the female was contracted on her left side on a west-east alignment facing towards the north.

  State of preservation: good state of preservation, undisturbed and articulated[28]

[28] The disarticulated remains of a young child were recovered from TAG063.T10. No further information could be retrieved.

- TAG063.T20[29]

  Sex and age at the time of death: male young adult

  Position and orientation of the body: Contracted on his left side on an east-west alignment facing towards the south.

  State of preservation: Good state of preservation, undisturbed and articulated

- TAG063.T21

  Sex and age at the time of death: female young adult

  Position and orientation of the body: Contracted on her right side on a west- east alignment facing towards the south.

  State of preservation: Good state of preservation, undisturbed and articulated

[29] The incomplete remains of an infant have been recovered from the backfill of T20

Appendix C. The funerary landscape of the Wadi Tanezzuft.

The archaeological investigations in the Wadi Tanezzuft date back to the 1950s with the research carried out in the Tadrart Acacus by Angelo Pasa. It is during this Italian mission that four Garamantian tombs in Kokaman were excavated (Gatto 2005: 22-3). Since 1965, multidisciplinary research has continued in the hands of Italo-Libyan missions. Especially since 1990, there has been a considerable increase in the study of inhumation areas and of funerary contexts. The archaeological evidence from these funerary contexts is of pre-Garamantian and Garamantian chronology. The Wadi Tanezzuft became the southern border of the Garamantes. In this area, unlike the Wadi al-Ajal, there is no evidence of complex irrigation in the form of foggaras, but small canals, now mainly buried under the dunes, and shallow wells (Chremasci and Zerboni 2010: 85). The key settlements in this southern zone of the Garamantian kingdom were in the areas of Ghat, Al-Barkat and Fewet. These settlements consisted of fortified villages, located on the peripheries of the oases, with field systems for agricultural exploitation (here too, as in the Wadi al-Ajal, archaeobotanical evidence suggest intensive agriculture).

In 1958, the body of a desiccated child mummy was discovered in Uan Muhiggiag by Pasa and published by Mori and Ascenzi in 1958. Manzi at the beginning of the 1990s excavated an almost complete adult skeleton of a male adult in the area of Uan Muhiggiag. This male was lying on its back, with the upper and lower limbs highly flexed but differently from the traditional crouched position of the many Saharan burials.

The Italo-Libyan campaigns during the decades of the 1960s and 1970s recorded small funerary areas and uncovered human remains dating back to the Pastoral period. One of these sites is Imennennaden which was discovered during research in the Wadi Imha, a burial area in the in the 1960s (Mori 1965). The excavations of this burial area uncovered at a relatively shallow level the undisturbed remains of an adult with that of an infant on top of it.

The site of Fozzigiaren was excavated in 1962, where a badly disturbed inhumation was discovered. The damage was caused by local people searching for salt. A few bone fragments were found,

including fragments of a mandible with small skin residues. Around the bone fragments, pieces of compressed fibres were recovered, suggestive of inhumation practices similar to those encountered in the Wadi Al-Ajal. The available evidence from the excavated sites during the 1960s and 1970s suggests that inhumations were distributed on wadi bottoms as well as on the highest terraces. Artefactual finds in these cemeteries are rare or none; therefore, no substantial conclusions can be drawn.

In 1999 and 2001 archaeological research, focusing on funerary areas took place in the Wadi Tanezzuft in a project directed by di Lernia and Manzi (2002). The aim of the project was to locate and define funerary sites through an extensive survey that concentrated on gaining an understanding of the human landscape during the Pastoral and Late Pastoral periods in relation to mortuary practice. The excavations were carried out in four of the surveyed areas and the selected structures chosen in order to test the results of the survey. These sites vary chronologically from the Late Pastoral phase to the transition with the early Garamantes, ranging over three millennia. Out of the 573 recorded funerary monuments during the extensive surveys carried out in the Wadi Tanezzuft, 17 tombs have been excavated in four different areas, containing the remains of 36 individuals. The excavations in the Titersin area and the Tanezzuft transect uncovered Late Pastoral inhumations, which confirmed the hypothesis of the emergence of formal burial areas in the third millennia BC (di Lernia 2002: 78). No Garamantian evidence was recorded. The area of In Aghelachem had a large number of Garamantian stone funerary monuments occasionally accompanied by offering tables and stele as those encounters in the Wadi Al-Ajal. This site and the excavated structures are of particular interest for my thesis as a point of comparison with the mortuary practices of the 'heartlands' of the Garamantes.

The Italo-Libyan team led by Mario Liverani (2005) highlighted significant areas of interest related to the settlement and funerary landscape of the Garamantes in the southern Tanezzuft. The Barkat Oasis has been surveyed and twelve cemeteries, with approximately 2250 tombs, have been located. These cemeteries range chronologically to the Early Garamantian to the Late Garamantian periods (c.850 BC-AD 750) (Castelli and Liverani 2005: 25) and have been recorded in the escarpment, and the most prolific cemetery, showing the highest concentration of tombs (*c.*600), is in the vicinity of Aghram Nadharif. Liverani (2005: 421) notes the substantial resources and expenditure the living devoted to the funerary monuments for the dead, despite the fact that the grave goods are rare, or rather poor when compared to the material culture available, confirmed by the excavations in Aghram Nadharif.

As seen in the Wadi al-Ajal, the presence of stele and offering tables in the Garamantian cemeteries of the Wadi Tanezzuft indicate a continuous relation and care of the living for their dead, perpetuating their memory.

Cemetery	Area	Tombs excavated
Kokaman	South Tanezzuft : Ghat	4
96/129	North Tanezzuft	8
97/5	South Tanezzuft: In Aghelachem area	5
00/98	Titersin	3
Aghram Nadharif	South Tanezzuft	1
00/195	North Tanezzuft	1
		Total = 22 tombs.

Summary of cemeteries excavated in the Wadi Tanezzuft (after di Lernia *et al.* 2002).

Garamantian tombs in the Wadi Tanezzuft

Before the contemporary missions in this area, Caputo and Sergi excavated a few burials in the Kokaman cemetery in the early 1930s and Leschi excavated in Tin Alkum and Barkat in the 1940s (Gatto 2005: 21). The human remains from the Kokaman excavations are badly preserved and therefore an analysis of these is impossible (Manzi and Ricci 2003:19). Limited research has been carried out in this area and a significant proportion of this research has been related to the prehistoric period. Garamantian cemeteries lack a systematic investigation, with that of Fewet being the one excavated in detail (forthcoming). The cemeteries in the proximity of Aghram Nadharif have been studying through satellite images (Liverani 2005: 25-28).

Having studied various cemeteries in the area surrounding the capital of the Garamantes, three cemeteries from the Wadi Tanezzuft are presented to compare similarities and differences in the burial rituals of the Garamantes in the borders of the state. The Italian-Libyan missions since the 1997 have targeted the Wadi Tanezzuft as their area of research. This area is *c.*400km south of Garama, yet it maintains strong cultural and commercial links with the Wadi al-Ajal. The cemeteries presented here are the large cemetery associated with Aghram Nadharif, a fortified citadel in the oasis of Barkat, the necropolis of Fewet and the area of In Aghelachem.

The published work by the Italian team has a different chronological phasing to that of the British team. The table below show the correspondences of the two chronologies. As established in previous chapters my nomenclature and typologies follows those of the British publications.

British	Early Garamantian					Proto- Urban					Classic Garamantian				Late GAR	
1000 BC	900 BC	800 BC	700 BC	600 BC	500 BC	400 BC	300 BC	200 BC	100 BC	AD 1	AD 100	AD 200	AD 300	AD 400	AD 500	AD 600
Italian		Formative Period				Mature Phase					Classical Period			Late Phase		

Aghram Nadharif

The settlement of Aghram Nadharif is located in a strategic place of route between the Tassili and Acacus in the Trans-Saharan trade in Garamantian times. The citadel was abandoned in the 4th century AD. Surveys of the Barkat oasis have recorded twelve cemeteries in the fringes, including the one facing the settlement of Aghram Nadharif (cemetery I) with an estimated *c*.600 drum tombs. Satellite images have been used to map and categorise these cemeteries. The numbers and typologies of the tombs in the Barkat oasis are not accurate as the main focus of the research in Aghram Nadharif was the settlement.

The life span of the cemeteries in this area is almost 1000 years, ranging from the Early to the Late Garamantian periods. The density of these cemeteries varies according to the chronological period. Thus, the earlier cemeteries have a low density with a minimum of 11 tombs (cemetery VIII) and a maximum of 116 (XI) (Castelli and Liverani 2005: 27). The cemeteries of the Classic and Late Garamantian period have a larger number of funerary monuments, with an average of 488 tombs.

Only one tomb has been excavated in the large cemetery I of Aghram Nadharif, belonging to a female and an infant (Liverani 2005: 420). Offering tables and stelae are present in the cemeteries. The size and structure of this tomb is suggestive of the effort and labour necessary to build funerary structures, which could be compared to the investment devoted to the houses excavated.

The lack of systematic excavations in the cemeteries at Aghram Nadharif does not allow discussing gender nor age specific practises, for example, orientation and material culture associated with the burial. The only comment that can be made is that, contrary to what is seen in close cemetery of Fewet, the infant recovered from the only excavated drum tomb is placed together with the female individual rather than in a separate annex.

Satellite image of cemetery sites in the vicinity of Aghram Nadharif (Castelli and Liverani 2005: 26) EGAR= blue; CGAR/LGAR= purple

Liverani suggests that the excavations of the citadel demonstrate the Garamantian community living at Aghram Nadharif was egalitarian, with domestic units of similar size and structure and likely to have a political dependence placed elsewhere (2005: 416). The same egalitarianism can be seen in the cemetery I, which shows uniformity in the morphological character and size of the funerary monuments. It would obviously be necessary to excavate here in order to support this suggestion by analysing grave goods and assemblages and have an insight into the population.

The lack of public buildings in the settlement site may be an indication that religious and funerary rituals were carried elsewhere. It has already been mentioned that the rituals related to mortuary practices were done near the funerary monument, hence the presence offering tables or bowls, broken pottery *etc.*

Fewet

The rural village of Fewet has been dated to the PUGAR period, 3rd century BC until its abandonment in the 1st century AD (Mori 2008: 21). The cemetery associated with Fewet, less than 1km away (Castelli *et al.* 2005: 85), has been in continuous used from the Early to the Late Garamantian periods. The dating of the cemetery has been based on the pottery analysis and analogies with dated sites in the area. Hence, the Early Garamantian pottery parallels that of Zinkekra (PUGAR), the Middle

Garamantian matches the pottery of the settlement site of Fewet (later centuries of the PUGAR period) and the Late Garamantian that from Aghram Nadharif (CGAR) (Castelli *et al.* 2005: 91). Most of the tombs in the cemetery at Fewet have been systematically robbed, only 48 remained intact of which 30 have been excavated (Mori 2008: 26).

The preliminary report of the survey notes the presence of over 1000 cairns and provides the initial analysis of surface pottery. Typologically[1], the tombs recorded are cairns, Types 1a and 1b, and drum cairns Type 3a. With regards to the populations, Castelli *et al.* have estimated the village of Fewet to hold *c.*125, which would certainly be indicative of the chronological range suggested, as the *c.*1350 cairns would have 'hosted the entire population of the oasis during the period of use' (2005: 94). The occasional presence of proto-stele, unworked slabs, has also been recorded.

The pottery recovered from the surface collection around 35 cairns (only 3.5% of the cemetery) indicates a wide range of typologies and chronologies. As observed in the Wadi al-Ajal, the Early and Proto-Urban Garamantian periods lack Roman pottery, and only local wares have been recorded with a variety of shapes, including bowls and globular jars and decorations (Castelli *et al.* 2005: 99-100). The funerary assemblages of the excavated tombs dating to the Classic Garamantian suggest the influence of trade, with the presence of Roman artefacts. These fragments of pottery are encountered only outside the tomb and there are no records from the excavated tombs in Fewet of grave goods inside the grave (Liverani 2005: 421). Regarding the position of the artefacts within the tomb, not analysis has been carried out[2]. However, mention has been made that pottery has been recorded outside the tombs, accompanying the funerary furniture and also on top of the tombs (including lamps), suggesting some sort of funerary ritual.

In contrast with the settlement, which chronologically belongs to the PUGAR period and has a life span of a few centuries, the excavation of c.30 cairns indicates that the cemetery at Fewet has been in used throughout the Garamantian period (Mori 2008: 21).

[1] Castelli and Liverani noted significant differences between the morphologies of the tombs encountered in Fewet and those in Aghram Nadharif highlighting that 'no type was shared […] suggested the need for a typology specifically developed for the necropolis at Fewet' (2205: 86). Here, I have used the corresponding morphological types as recorded in the Wadi al-Ajal.
[2] Forthcoming

The published results of the excavations in the cemetery parallel the funerary rituals recorded in the Wadi al-Ajal. The vast majority of the monuments belonged to one individual. Three seems to be an attempt to group families, as indicated by the small annexes, where small children were buried, recorded in relation to female tombs (Figure 1). With regards to the treatment of the bodies, remains of leather shrouds have been recorded. The individuals were placed in crouched position and a more systematic alignment pattern can be observed in the tombs at Fewet. The male individuals are placed with the head to the east whilst the females are found with the head to the west.

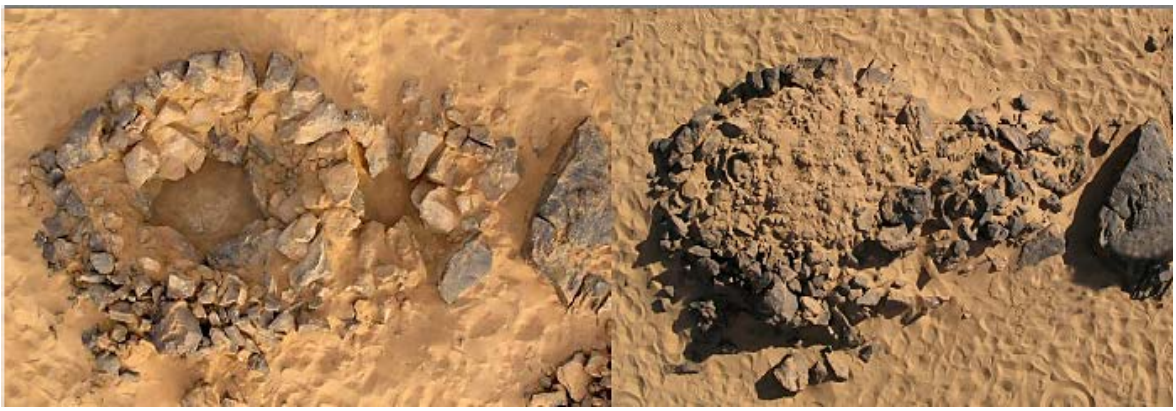

Figure 1. Drum cairn, before and after excavation, in Fewet with annex: a female individual was buried in the main tomb and an infant in the small annex (Mori 2008: 26).

One aspect provided by the excavation of intact burials is that it has provided an insight into the direct relation between the placement of funerary furniture outside the tomb and the identity of the individual. It has therefore been noted that the location of the stele and offering tables depends on the alignment of the body, hence, they will place placed on the east when the tomb belongs to a male and on the west if is that of a female. This pattern cannot be confirmed in the Wadi al-Ajal, not only because of the disturbance of the cemeteries, but also due to the lack of physical space between the tombs in highly compacted cemeteries, whereby the stele and offering tables were placed when it was physically feasible to do so.

In Aghelachem

The cemetery sites within the Wadi in Aghelachem are near the known caravan route of the Garamantes. This area, where the so-called Royal Tumulus is situated, is part of the contemporary touristic routes in the Southwest of Libya. This was taken into consideration when choosing the

funerary monuments for excavation, which would minimise the impact on the large funerary areas, including monumental tombs. Dozens of the sites here have not been dated and the material culture only provides an association with typologies found across the Libyan Fazzan, for instance the Zinkekra ware. This landscape shows the presence of both Late Pastoral, but mainly Garamantian structures, most of them robbed in antiquity.

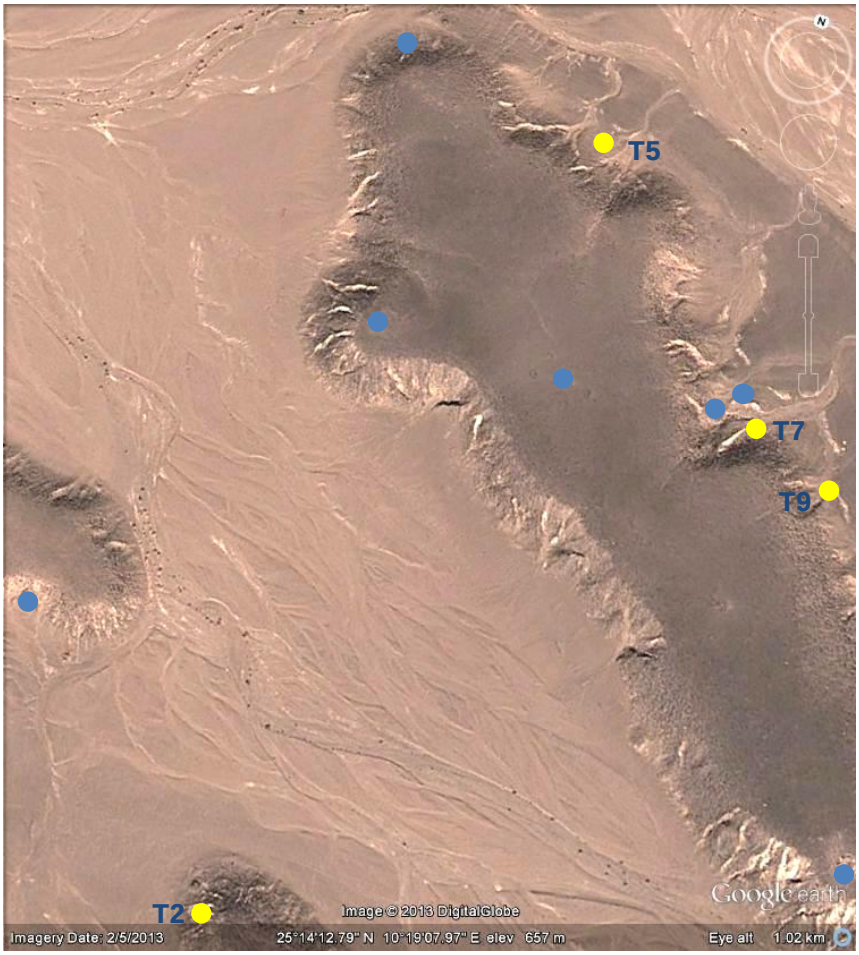

Figure 2. Google Earth image showing Garamantian structures in the northern side of the Wadi in Aghelachem.

The survey of the Wadi in Aghelachem has identified 55 funerary monuments, including 10 cairns (Type 1b) and 3 stepped tombs (Type 5a). Due to the ancient plundering, it has not been possible to carry out the spatial analysis of the grave assemblages encountered with most of these structures.

There is limited information published with regards to these burials; T6 belongs to an infant whose remains have been badly disturbed and were recorded in a state of disarticulation unable to consider

the position of the body when buried. An adult male, of approximately 25-30 years old, was buried in T7, again in very poor state of preservation and disarticulation due to plundering.

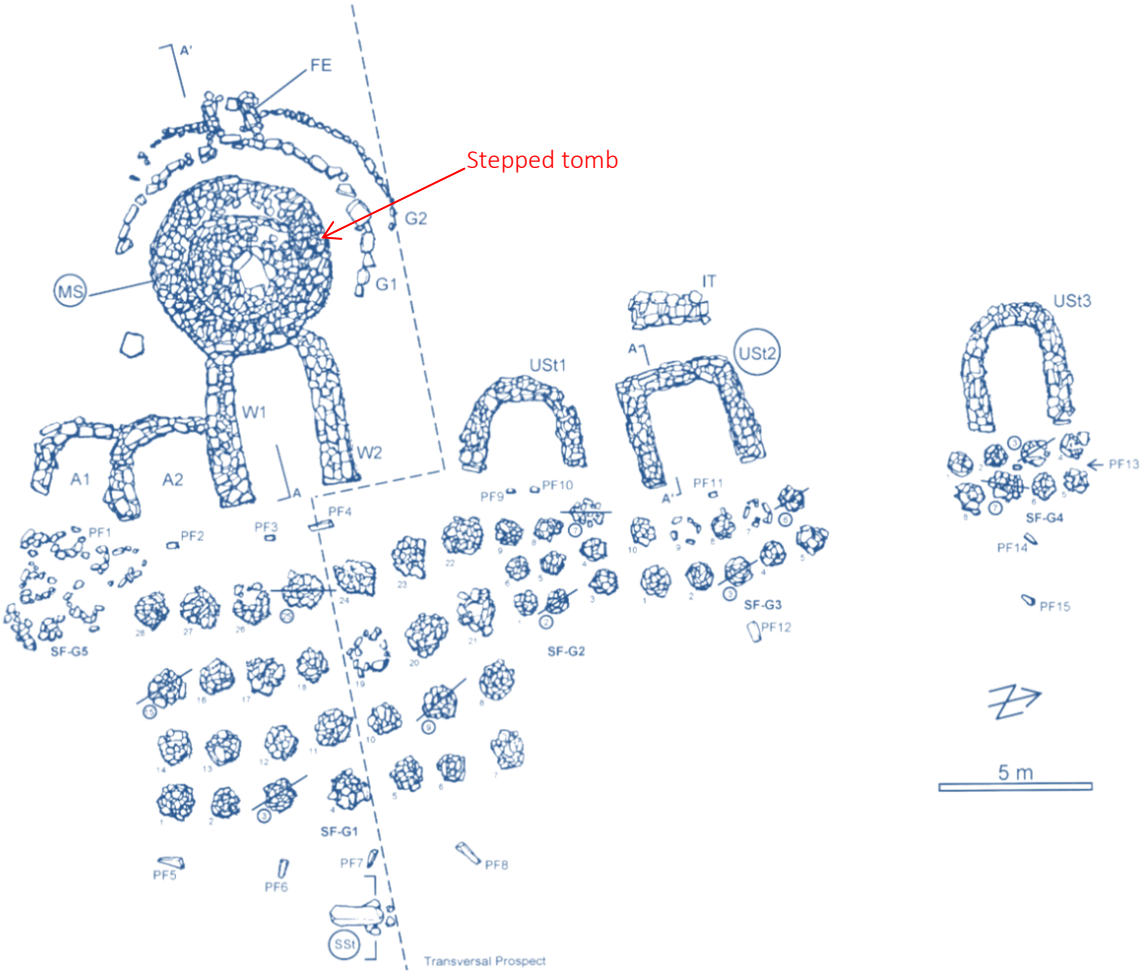

Figure 3. 'Royal Tumulus' (top left) and monumental site 97/5 (di Lernia *et al.* 2002: 104).

This area is best known for the monumental site 97/5 and the Royal Tumulus, which was excavated in 2002 by the Italo-Libyco team lead by di Lernia[3]. This unprecedented and unparalleled funerary monument is composed of a large stepped tomb and smaller structures, including heaps of stones and U-shaped structures. The stepped tomb (of 6 metres of diameter) has been robbed in antiquity, and therefore only fragmentary evidence of the human remains was recovered. There was partial articulation of some bones but nothing that could indicate the original position of the bodies within the tomb. The human remains of two individual were recorded, in two distinct contexts:

[3] It is not within the scope of this thesis to analyse the monumental site 97/5. For information please refer to di Lernia *et al.* 2002: 102-114.

- RT Skeleton 1 (H1)

  Sex and age at the time of death: young male adult, approximately thirty years old.

  Position and orientation of the body: Uncertain

  State of preservation: poor preservation, some articulation but badly disturbed.

- RT Skeleton 2 (H2)

  Sex and age at the time of death: male adult, approximately forty-five years old.

  Position and orientation of the body: contracted on the right side on a south-north alignment, facing towards the west.

  State of preservation: poor preservation, disarticulated and undisturbed.

The funerary assemblages recorded from the two burials excavated in the 'Royal Tumulus' are limited on contents, although within the assemblages there is evidence of preserved organic materials, including textile, matting, leather, fur and dates. Additionally, undecorated fragments of a wheel-made imported ceramic vessel have been recorded which belong to the body of an ovoid Roman jar (below) Interestingly, and similarly with what has been seen in other Garamantian cemeteries in Fazzan, there is no evidence of the missing parts of the vessel being interred with the body, suggesting that the jar was deliberately broken in antiquity and deposited in this condition.

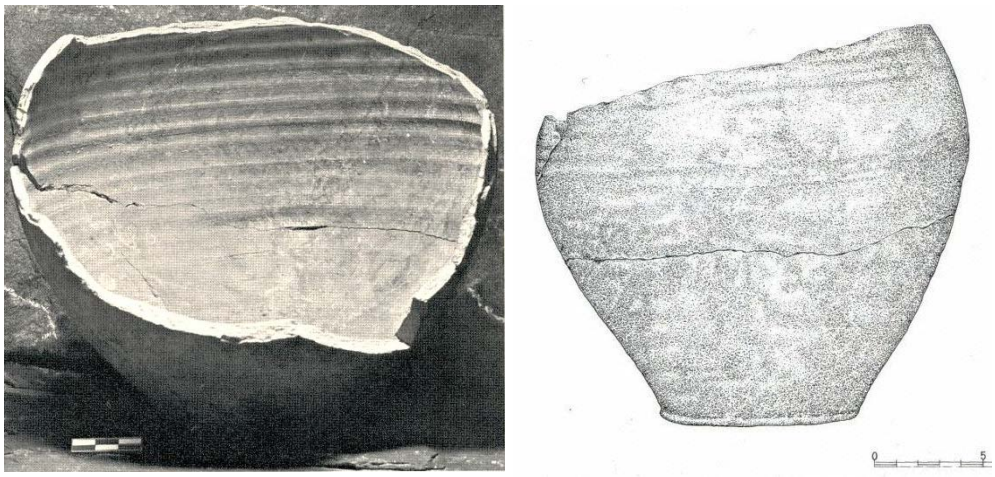

Figure 4. Photograph and drawing of flagon recovered from the Royal Tumulus (associated with an adult male) (Di Lernia and Manzi 2002: 109, 110)

Notwithstanding, the disturbance of the RT in antiquity, the remains of the funerary assemblages from these Garamantian burials show evidence of blue, red and yellow dyed pleated textiles and leather shrouds. Some of the fragments of textile, made of coarse and twisted threads, have been

interpreted as a kind of small rigid container (Pozzi 2011: 61). Furs were also recorded in the RT, with the hair still attached, belonging to both domestic and wild animals (Maspero *et al.* 2002: 160). According to Maspero *et al.* (2002: 168), the presents of wool textiles and skins of wool-bearing animals could indicate the processing of wool rather than leather making. The presence of a significant sample of wool and animal skins in the Royal Tumulus could suggest a local production.

Figure 5. Bronze bracelet associated with 30 year old male in the RT (di Lernia and Manzi 2002: 109)

A bronze bracelet with iron rivets was recovered in association with the first adult male. Despite the fact that this is the only metal find of this type in the Tanezzuft area, similar artefacts have been recorded in the neighbouring area of Tassili (Argelia) (di Lernia *et al.* 2002: 107). In relation to further personal adornment, the published record mentions one carnelian bead associated with the second burial in the Royal Tumulus.

Finally, in terms of archaeobotanical material recovered from these two burials there are very badly preserve seeds that have not been identified, along with a 'number of dates'. One must keep in mind that the Royal Tumulus is part of a much wider monumental area where a good sample of botanical material has been encountered. It is also important to notice the presence of horns of goats and further faunal remains (26 animals in total), both wild and domestic, within the excavated structures of 97/5. The organic remains suggest consumption of foods in an area that given its 'isolation' from specific settlements and the architectural uniqueness may indicate a landscape related to ritual and burial. Still, the rather small sample of the excavated structures does not allow further hypothesis without further research in the wider landscape and the identification of settlement sites.

Carbon dating of the various structures and the Royal Tumulus place these monumental structures in the 2nd-3rd centuries AD (di Lernia *et al.* 2002: 115). Interestingly, there are no Garamantian settlements in the immediate surroundings, the closest being the area of the Barkat oasis, Fewet and Ghat.

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