

**THE BADARIAN CULTURE OF ANCIENT EGYPT IN CONTEXT:
CRITICAL EVALUATION**

by

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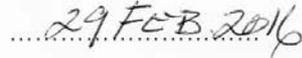
DECLARATION

Student number: 02578565

I, LAMBERT VORSTER, declare hereby that 'BADARIAN CULTURE OF ANCIENT EGYPT IN CONTEXT: CRITICAL EVALUATION' is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



L.VORSTER



DATE

DEDICATION

This dissertation is dedicated to the memory of Guy Brunton, 1878–1948 (OBE), without whom none of this would have been possible.

ACKNOWLEDGEMENTS

First and foremost, I wish to thank Prof Fanie Vermaak for his years of patience and forcing me to persevere.

Secondly, but not least, to Ms LF van Vuuren for her time and effort in getting all the dots to make sense.

ABSTRACT

This study aims to determine whether current and past research on the Badarian culture of early Egypt accurately reflects the evidence uncovered in the past and the evaluation of the excavation reports by the early excavators. An archaeological re-evaluation of the Badarian culture and relevant sites is presented in the introduction.

Inter-regional development of the Badarian is crucial to placing the Badarian in the temporal ladder of the predynastic cultures, leading up the formation of the dynastic era of Ancient Egypt.

The following thesis is not meant to be a definitive answer on the origins and placement of the Badarian people in the Predynastic hierarchy of ancient Egypt, but one of its aims is to stimulate discussion and offer alternatives to the narrative of the Badarian culture.

A set of outcomes is presented to test all hypotheses. Research questions are discussed to determine whether the Badarian culture is a regional phenomenon restricted to a small area around the Badari-Mostagedda-Matmar region, or as a wider inter-regional variable carrying on into the later Nagada cultures. To reach a hypothesis, the chronology of the Badarian is analysed, in-depth study of the original excavation reports and later research on the Badarian question. An important facet of this study is a literature review of the Badarian culture, past and present.

The Badarian culture had always been a subject of speculation, especially in terms of its chronology and regional development. There is no consensus on the chronology of dispersion out of the desert to the Nile Valley, as well as areas north and south of the Nile Valley.

It is important to establish the concept of an agronomic sedentary lifestyle by the Badarian, and to re-evaluate the evidence for the long-standing idea that the Badarian was in fact the first farmers of the Nile Valley, also in terms of their perceived exchange and trade networks.

KEYWORDS: Egyptian, Neolithic communities, Predynastic, Badarian, Chronology, Lithics, Pottery, Grave goods, Brunton, Petrie, Caton-Thompson.

LIST OF ABBREVIATIONS AND ACRONYMS

AAR	African Archaeological Review
AAR	African Archaeological Review
AERA	Ancient Egypt Research Associates, Inc.
BASOR	Bulletin of the American Schools of Oriental Research
CA	Current Anthropology
CPE	Combined Prehistoric Expedition
DOP	Dakhleh Oasis Project
GJ	The Geographical Journal
IJAHS	The International Journal of African Historical Studies
JAH	The Journal of African History
JAMT	Journal of Archaeological Method and Theory
JAR	Journal of Anthropological Research
JARCE	Journal of the American Research Center in Egypt
JEA	The Journal of Egyptian Archaeology
JFA	Journal of Field Archaeology
JNES	Journal of Near Eastern Studies
JRAIGBI	The Journal of the Royal Anthropological Institute of Great Britain and Ireland
JRASGBI	Journal of the Royal Asiatic Society of Great Britain and Ireland
JWP	Journal of World Prehistory
NAR	Norwegian Archaeological Bulletin
PPS	Proceedings of the Prehistoric Society
SAAB	The South African Archaeological Bulletin
SAFA	Society of Africanist Archaeologists
SD	Petrie's Sequence Dating
TL	Thermoluminescence
WA	World Archaeology

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CHAPTER 1: THE BADARIAN CIVILISATION

1.1 INTRODUCTION

At the closing of the 19th century and during the first quarter of the 20th century a number of sites produced items of a civilisation not connected to the dynastic periods of Ancient Egypt. The term predynastic was assigned to these cultures. Pottery found at these sites did not match anything found at other predynastic sites. Petrie and his team assigned the name Badarian¹ to this group and this thesis is an attempt to place the Badarian in the context of the development of Egyptian culture. A literary review of the available sources is undertaken to determine the regional development and chronology to formulate a hypothesis of the Badarian in context.

It was in 1923 during the excavations in Upper Egypt, under the auspices of the British School of Archaeology in Egypt, that Guy Brunton and his team discovered this unknown pottery. It could not be assigned to any known period at that time and Brunton was of the opinion that it had an affinity with the Predynastic or Nubian period (Brunton & Caton-Thompson 1928:1). Brunton named the new finds the Badarian from Badari, the *merkaz* town of the district in which the sites are situated. In the following year, Caton-Thompson (1924) excavated the now famous site of Hemamieh, which lies on the way between Badari and Qau-el-Kebir, close to the little village of Hemamieh. Brunton excavated the area at Qau and Badari for three seasons, 1922–3, 1923–4, and 1924–5. The results were published by Brunton (1928). Brunton (1937, 1948) returned to the Badari district and excavated more Badarian sites from 1927 to 1928 (Mostagedda) and again during two seasons, 1929–30 and 1930–31 (Matmar).

After the excavations at Armant by Mond and Myers (1937), no major expeditions to search for Badarian predynastic sites took place in Upper Egypt for 30 years (Friedman 1994:3). North of the el-Badari district along the Nile Valley, no predynastic sites have been discovered for over 300 km (Bard 1999:26). It was not until 1989 that a team again excavated at Badari. In this year, Diane Holmes and Renée Friedman undertook a two-

¹ The Badarian culture is today recognised by most scholars as a major Neolithic culture in Upper Egypt (Gashe 2009:160).

week excursion at Badari and claimed to have found two more Badarian sites in the region (Holmes & Friedman 1994).

Only very limited investigations were made in the Badari region by other scholars, such as Steindorff (1914), Gabra (1930), Kaiser and Butzer (1961), Hays and Hassan (1984a), but does not add anything to our knowledge of the region. Our understanding of the predynastic of Badari comes only from the publications of Brunton and Caton-Thompson with later illuminations by Friedman and Holmes.

Finkenstaedt (1985:145) reports that during personal communication with Mrs J Crowfoot-Payne, a British expedition to Kom Ombo attempted to find Hemamieh without success, concluding that the site was now quite probably eroded beyond retrieval.

During a visit to the Badari region in January 2012, I could find no trace of any of the Badarian sites. The only site still visible is the once great rock-cut tombs at Qau el-Kebir. Today they are reduced to mere holes in the rock-cliff. They are not preserved in any manner whatsoever. Throughout the region from just south of Assuit the areas that once contained the predynastic cemeteries and settlements are completely covered by agricultural fields and villages, right up to the escarp. Any visit to the area is fraught with danger by aggressive locals and should be avoided. There is no sign left of the ancient villages of Hemamieh, Mostagedda and Matmar. A canal was built less than 50 m from the base of the escarp running parallel with the scarp, with planted fields on both sides. The predynastic sites are therefore gone forever and chances of any new discoveries lie underneath the fields and in the desert toward the west. The development in the oases of Kharga and Dakhla leads me to believe that any discoveries in these areas are so remote that it cannot even be considered.

Apart from the research done during the establishment of the Badarian predynastic, later research focused on analysing and interpreting the original research reports. For many years no primary research was done on the Badarian. The majority of the work was done up to the outbreak of the World War II. The excavation reports done by Brunton (1948) at Matmar, as an example, was only published 18 years after the

excavations were completed. Investigations done on the Predynastic until the outbreak of World War II included the excavation of over 65 cemeteries from more than 25 sites. This was done as far north as the Fayum at Gerzeh and as far south as Sayala in Nubia (Friedman 1994:2).

As there are no written records or inscriptions of any kind in the Predynastic period, a direct connection could not be made with the well-dated sequence of the Pharaonic period. The Predynastic scholars have to rely solely on variation in artefact style to establish some kind of order in the remains found in the cemeteries. This is especially relevant in the studies of the Badarian culture.

Numerous scholars studied the Badarian to determine its position in the early formation of Egyptian society using what evidence was and is available from the primary sources. Important elements to be considered are the temporal and spatial distribution of the Badarian. Who, where and when principles must be applied and based on factual evidence, whenever possible. Elise J Baumgartel (1947) was the first of later scholars who was not involved in the excavations to study the Badarian in any great detail. She began her research in 1936 and published the first volume in 1947, with a focus on stone tools. Some time elapsed before interest in the Badarian flared up again. Arkell (1975:30-34) devotes some four pages to the Badarian with a focus on the grave goods. Michael A Hoffman (1979) began to speculate on the possibility of the Badarian being the first Nile Valley culture to experiment with life after death (Hoffman 1990:143). A comprehensive study on the Badarian pottery was done by Friedman (1994). A comparative study of the lithics was done by Holmes (1989). Midant-Reynes (2002:152-167) devoted a substantial part to the Badarian with a focus on the possible origin of the culture.

As with sections of prehistoric studies devoted to the Badarian in books, numerous articles on the subject were also published. Stoessiger (1927) studied the Badarian crania; followed by Morant (1935) and Keita (2003) who focused on the examination of the Badarian skulls. Posnansky and McIntosh (1976) recorded radiocarbon dates for Northern and Western Africa, important in the determination of the chronology of the Badarian. Hassan (1985) presented his radiocarbon chronology of Neolithic sites and

predynastic sites. Ward (1992) contributed to the chronology of Egyptian chronology in his article. Newton (1993) presented an updated chronology of Egypt. Anderson (1992) presented a comprehensive paper on the Badarian burials relating to the evidence of social inequality in middle Egypt during the early predynastic era.

1.2 RESEARCH QUESTIONS

Several questions arise when discussing the Badarian culture as a regional phenomenon restricted to the el-Badari region, or as a wider inter-regional variable carrying on into the later Amratian and Nagada cultures. This is a considerable task and requires a thorough familiarity with Egyptology data, as well as that of prehistory. In spite of certain limitations, data on the above subjects is plentiful, with thousands of graves, pots, amulets, smaller objects and skeletal remains. The data must be systematically gathered and analysed (Weeks 1980:97).

1.2.1 Determining an understanding of the regional developments on the Badarian

It has been considered by a number of scholars² that the Badarian did not develop in isolation and the inter-regional variability observed for other areas must be taken into account. This is a bold statement in the face of the possibility that the Badarian may have been local development. Even though at this time not many scholars accept this hypothesis, it is the stand-out possibility that will be studied. It is important to note that given the number of reports available as concerns the surrounding areas, a study of this evidence will be essential, although the focus will be on the core Badari area.³ How they will help must come out in the study of the body of evidence.

1.2.2 The importance of chronology in placing the Badarian in context

One of the major problems existing in the study of prehistoric cultures is the question of reliable dating. In this regard an in-depth study of the contemporaneity of regional

² Cf. the discussion in Chapter 2: Literature Review.

³ It is important to note that the study of other sites that could possibly contain Badarian artefacts suggesting a Badarian presence will not form part of this thesis as it falls outside of the intended contribution to an understanding of the Badarian culture proper.

variants as indicated by lithics, ceramics and to a lesser extent, beads and grave goods, may highlight the need for an improved chronological framework. The study will have to involve regional settlement sequences where available. In this exercise confusion as to time and tradition must be avoided. The diachronic evaluation must ask the question why and how the evidence was obtained and then interpret its value.

1.2.3 Comparative study of the excavation reports

The capture of detailed excavation reports and to determine their value, especially in its presentation to the academic work in regards of its framework, the details presented and the correctness and ease of understanding. It is imperative that up to date reports be consulted. One of the major problems in the study of the Badarian is of course the fact that the major sources date back seventy years or more. It is therefore of importance to be able to analyse the methodology of the earlier reports and place them in the correct context of later and more modern reporting.

1.3 HYPOTHESIS

1.3.1 Regional development hypothesis

If the material record allows a symbiotic relationship with regional elements, such as the Nile Valley sites, it will prove to be very useful to place the Badarian in proximity context, and if not, evidence from further afield, such as the Oases of the Western Desert, and if necessary even further away, will have to be considered. It all depends on where the material remains fit in and if one can apply the test of corroboration. For the purpose of this thesis, however, the main focus of understanding the Badarian is centred round the core area as excavated by Brunton and Caton-Thompson. Throughout the study of the prehistory of ancient Egypt, scholars had shied away from treating the Egyptian Neolithic as a separate discipline and therefore not enough was done to formalise this very important phase of the development of the Egyptian dynasty that lasted for more than three thousand years.

1.3.2 Chronology of the Badarian

The chronology of the Badarian culture has been a cause for speculation from the beginning, and to date had not been satisfactorily explained. The application of the sequence dating system by Petrie (1899) was initially used. With the discovery of the carbon dating process it was hoped that the chronology of the Badarian could be firmly established. The dates published for the Badarian vary by almost 1000 years and to just derive at a mean of about 4400 to 3800 BC (Close 1988:152) compounds the problem. It is imperative to establish a proper chronology in order to define the cultural component being investigated. It will be very difficult to understand the development of the Badarian as a separate cultural attribute, or quite possibly an offshoot of the terminal Saharan Neolithic. A comparative study using a number of associated markers will hopefully narrow the time-span of the Badarian to an acceptable hypothesis.

1.3.3 In-depth study of the original excavation reports on the Badarian

In the final analysis a hypothesis on the origins of the Egyptian culture at the beginning of the predynastic should be forthcoming from the evaluation of the previous research questions. To date the origin of Egyptian culture is attributed to influence from all four quarters of the compass, including local development. None of these had been proven to any point of clear acceptance. A definitive answer may not be forthcoming but at least with all the facts at our disposal at this time a directive for future research may be established. Corroboration could include further discoveries.

1.4 SOURCES

The four main areas of research, the Chronology; the Lithics; the Pottery and the Grave Goods of the Badarian each provide a source base but requires some illumination.

Quite a number of attempts had been made to establish a firm chronology for the Badarian, but as yet it is still inconclusive. Initially Petrie's Sequence Dating method was used to place the Badarian before the Nagada I (Amratian) culture. Petrie's SD started at SD 30 for the Nagada I period and the Badarian was placed between SD 21 and SD 29 (Petrie 1939:4). Based on the use of copper and glass, the Badarian was placed

later than the Khartoum Neolithic, as well as possibly later than the Fayum Neolithic (Arkell 1975:30).

Several attempts have been made to date the Badarian by chronometric means.⁴ The dates vary from 5500 BC to around 3400 BC. It is concluded that the most probable date for the Badarian is around 3715 BC as reported by Hays (1984).

1.4.1 Badarian pottery

The unique Badarian pottery is without doubt the main marker for identifying the Badarian culture. The finest pottery of the Egyptian Predynastic was produced by the Badarian potters. The pottery found in the graves has been used to define the Badarian culture, especially their temporal and social development. To date the Badarian pottery received the attention of many scholars, from its identification by Flinders Petrie in 1923 and the subsequent excavations of the Badarian graves and settlement sites by Guy Brunton at Badari, Mostagedda and Matmar in Upper Egypt, assisted by Gertrude Caton-Thompson who conducted the first stratigraphic excavation at Hemamieh.

The unique rippled pottery had been used to attempt to identify Badarian presence outside of the core Badarian region of Badari-Mostagedda-Matmar in Upper Egypt on the east bank of the Nile River (Murray & Derry 1923:129; Mond & Myers 1937:2; Debono in Holmes 1989:181; Friedman 1994:20; Adams 1999:372; Hendrickx 1999:289; Bard 1994:273; Hays 1976:552).⁵

⁴ Damon et al (1974:350); Caton-Thompson & Whittle (1975); Hays (1984); Hassan (1985); Jones et al (2014).

⁵ Possible presence of Badarian was researched in several sites outside of the core area of Badari-Mostagedda-Matmar. Notably at Gebel Ramlah in Egypt's southwestern desert; Ras Samadai on the Red Sea coast; Wadi Hamamat, also in the eastern desert; Armant on the west bank of the Nile; El Kab on the east bank of the Nile; Maghara 2 on the west bank of the Nile and El Khatara on the west bank of the Nile. None of these sites produced conclusive evidence, but although for the purpose of this thesis they fall outside the scope of the investigation, they are discussed in more detail in Chapter 3. The Western Desert and its numerous sites also fall outside the scope of this thesis.

As with other Badarian artefacts, the pottery was recovered from the cemeteries with pottery sherds from the middens, thought to be settlement or village sites by Brunton and Caton-Thompson. The recovered artefacts were distributed to various museums and universities where they remain to be studied by later scholars. Thus the primary sources are the excavation reports by Brunton and Caton-Thompson with secondary studies done on the curated items found in the museums and universities.

Whenever the Badarian culture is mentioned, the pottery is used as its marker and many authors writing about the Badarian does devote a section to the pottery. Apart from the very detailed illustrations by the initial excavators later scholars did not add substantially, although the illustrations by Raphael (1947: plates v-vii) are probably the most useful. However, Renee Friedman (1994) presented the most detailed analysis of the ceramics of Hemamieh, Nagada and Hierakonpolis.

As with the other recovered artefacts, the distribution of the pottery is invaluable in determining the temporal and spatial movement of the Badarian culture. It is the most easily identifiable object of the Badarian artefact assemblages.

1.4.2 Badarian lithics

The Badarian flint industry was a local one using surface flints and is considered to be of a low standard of workmanship (Baumgartel 1947:24). Apart from the typology and descriptions by Brunton and Caton-Thompson (1928), little was done in terms of the study of the Badarian flints up to 1989 when Diane L Holmes (1989) presented a detailed study of the Predynastic Lithic Industries of Upper Egypt. Baumgartel (1960) devotes less than two pages on the Badarian flints (Baumgartel 1960:24-26) and a total of 20 pages for the whole of the predynastic lithic industries (1960:24-43). Although archaeological projects were ongoing after 1960, little was published concerning lithic artefacts, so we have a division of older analysis (pre-1960) and moving into a modern era with better sampling procedures, more attention to debitage and tool classes, and a more detailed analysis of available material (Holmes 1989:26).

The Badarian lithics are divided into two areas of excavation, the Badari-Mostagedda-Matmar graves and village sites, and the site of Hemamieh excavated by Caton-

Thompson from February-March 1924 to February-March 1925 (Brunton & Caton-Thompson 1928). The reason for the distinction is that the site of Hemamieh constitutes the first (and only) deeply stratified site with levels representing three distinct predynastic periods, the Badarian, Amratian and Gerzean. Although stratified deposits of predynastic sites have been found at Hierakonpolis, they do not include the Badarian (Holmes 1989:42). The stone tools recovered from Hemamieh forms the core of later Badarian lithic studies.

The one unique feature of the Badarian lithics is their use of raw material for the manufacture of the flints. Instead of using the better quality tabular flint found in the nearby cliffs they opted for the flint nodules found on the surface of the desert. This resulted in the initial thought that the Badarian flint working is primarily a core industry and not of high standard (Baumgartel 1947:22; Baumgartel 1960:24; Arkell 1975:32, 34; Trigger 2006:29). This perception was based by the various authors on the first impressions offered by Caton-Thompson 1928. However, this was found not to be so and it was later classified as being predominantly a flake-blade industry (Holmes 1989:187).

What the evidence should show us is an insight into the composition of the Badarian people in terms of their daily life and subsistence activities. Whether the lithics would release the necessary information remains to be seen. The later predynastic lithics are somewhat different, especially in its use of raw materials and quality of workmanship.

1.4.3 Badarian grave goods

Apart from the pottery and stone tools, the Badarian graves contained numerous other artefacts buried with the dead. The most prominent of the small items found are the beads. Brunton (1928) recovered thousands of them. The grave goods recovered at Badari are described in detail by Brunton (1928:27-35). The absence of faience or glazed frit is a unique feature of the Badarian beads and all are of stone, glazed or plain, with some in ivory, shell and for the first time in the archaeological record, copper is found. Semi-precious stones such as carnelian, red and green jasper, and various other natural pebbles were used. Other stone such as slate, breccias, white, green and

yellow calcite, limestone in various colours such as red, pink, grey, green, pink and white banded, also with alabaster, was found. Steatite, both white and glazed bluish green, is quite common. Soapstone and serpentine was also used. There is some doubt as to the use of turquoise as it was difficult to distinguish it from the glazed steatite in the field. Shells are very common and beads/shells were usually worn as necklaces. Girdles of beads and as bracelets are also found (Brunton & Caton-Thompson 1928:27).

The copper and steatite beads point to foreign trade as there is no evidence of local manufacture. The numerous Red Sea shells found in the graves point to contact with the Red Sea areas, either through excursions to the area or by trade with itinerant traders. This is speculative and requires closer inspection.

The first art appears in the Badarian as small figurines, animals on spoon handles and amulets (Arkell 1975:30).

Analysis of the Badarian grave goods is a tool to provide us with very useful information regarding the economic and social structures of the people at that time. Social stratification, economic activities and possibly the beginning of some sort of belief system such as after-death questions.

1.5 RESEARCH METHODOLOGY

The focus of this study is to critically evaluate the data of the Prehistory of Egypt culminating in the Badarian culture in Upper (Middle) Egypt. It is important to note that a detailed study of the archaeology of these sites falls outside the scope of this thesis. A great deal of work was done since the discovery of the Badarian culture by Brunton in the district of el-Badari. As mentioned in section 1.3, several authors presented us with broad overviews of certain aspects of the Prehistory of Egypt. It is well accepted that research on sites spanning the sixth through fourth millennia is important and basically lacking when the work of Hoffman (1990) and Midant-Reynes (2002) was published. During the last two to three decades an immense amount of work was done to cover

this lacuna and it is now probably as good a time as any to collate and integrate what information is now readily available.

The study of material remains in prehistory can only be conducted by using typology as the main tool. The value of conclusions will depend on the primary sources available for the study. The primary sources inevitably will be the excavation reports of the researchers or excavators of the earlier sites. These are normally contained in the books that were published. As it turns out the major works on the Badarian culture is the books published by Guy Brunton and Gertrude Caton-Thompson. Unfortunately, detail is lost when publishing excavation reports in book form. For many years, attempts have been made by scholars to obtain the tomb-cards completed by Brunton on his excavations in the el-Badari district.⁶ It was hoped that the tomb-cards will give a lot more information than what is contained in his books. Fortunately, most of the excavated material from the el-Badari district is housed in the Petrie Museum attached to the University College in London. Many of the excavated material were also dispatched to museums and universities all over the world. The collections sent to South Africa were not well preserved and catalogued. The result is that they are not of much help. The material had been studied by a number of scholars, Baumgartel, Holmes and Friedman, to name a few. The results of their research will form part of the core study field.

The village at Hemamieh-North Spur was initially excavated by Caton-Thompson in 1928 and re-examined in 1989 by Holmes and Friedman. The result of their research was published in two articles which will form part of the source material (Holmes 1988; Holmes & Friedman 1994).

⁶ I myself exhausted all clues and sites in South Africa where Brunton spent a lot of his time. His legacy of books is in the library of the University of the Witwatersrand, but no tomb-cards. What remained of his wife's family in South Africa and who had some of his items could not help either. It must be accepted that the tomb-cards, if not in the Cairo Museum archives, are lost. Similarly, Caton-Thompson suffered a tragedy in that the Repository at Turnham Green where her possessions had been stored was totally destroyed by a direct hit during a raid on the night of September 26th and 27th 1940. Included were all her field note-books of her digs between 1921 (Abydos) and 1929 (Zimbabwe). It is difficult to imagine what they contained (Caton-Thompson 1983:211).

The excavation results of sites such as Armant, Hierakonpolis and el-Tarif is important and will be evaluated for any possible incorporation in the final analysis.

Tertiary sources, such as articles, form a vital part of formulating a hypothesis as to the place of the Badarian culture in the formation of the Egyptian culture per se.

Earlier projects in the Western Desert, such as the investigation of the Kharga Oasis by Caton-Thompson (1952) and Arkell in the Sudan (1949), provide vital information in the regional development theories, but the study will not focus on them as primary source material.

A number of other projects, especially during the last twenty to thirty years contributed a great deal to the understanding of the role the Western Desert and other parts of North Africa had played in the development of the Neolithic cultures of the Nile Valley. The Combined Prehistoric Expedition under the leadership of Fred Wendorf is one such project that started in the late sixties to study the Egyptian and Sudanese Prehistoric periods. The Dakhleh Oasis Project (DOP), which is still ongoing, provides invaluable data. It is especially crucial that projects such as the abovementioned be launched as they consist of multidisciplinary scholars, leaving very little to chance.

1.6 LAYOUT

1.6.1 Chapter 1

Chapter 1 is the first of the introductory chapters and is an outline of the historical background of the prehistory research in Egypt. It continues with a review of the literature on prehistoric research. The research questions are briefly discussed and a possible hypothesis on the formation of the Badarian culture and subsequent origin of dynastic Egypt is outlined.

1.6.2 Chapter 2

In this chapter the most important reference work on the Badarian is presented. The emphasis is on the more important works and it must be clearly understood that it by no means represents the complete bibliography that will be consulted.

1.6.3 Chapter 3

The Badarian culture as described by Brunton and Caton-Thompson is primarily restricted to the core area of Badari-Mostagedda-Matmar on the east bank of the Nile in Middle Egypt. Few of these sites are more than a few centimetres in depth which leave them to be easily deflated. It has been reported that typical Badarian artefacts have been found in other sites such as Gebel Ramlah, Ras Samadai, Wadi Hamamat, Armant, Hierakonpolis, El Kab, Maghara 2 and el Khatara. The validity of the claims will be investigated.

1.6.4 Chapter 4

As with all archaeological sites the chronology of the Badarian is of vital importance. The chronological estimates for the Badarian are the result of conflicting reports and analysis. The various methodologies and results are discussed.

1.6.5 Chapter 5

The most important marker for the Badarian culture is its distinctive pottery. The manufacture of Badarian pottery exhibits a high degree of sophistication. The quality and craftsmanship of the Badarian pottery was never again equalled in the succeeding Nile Valley cultural phases. An analysis of the Badarian pottery manufacture and various wares are discussed.

1.6.6 Chapter 6

One of the important markers of the Badarian group is their lithic assemblages. The Badarian flint-working is not of a particularly high standard and it was alternately described as being a core industry or a flake –blade industry. Various implements are

discussed and a comparative study is attempted. An in-depth study of the sites and assemblages are made.

1.6.7 Chapter 7

The burial of the dead with various objects seem to have been of a particular interest and importance to the Badarian. Although a large number of objects were recovered from the cemeteries in the Badari-Mostagedda-Matmar area, the most important assemblage consisted of the various beads and their significance will be discussed. Analyses of the grave goods gives a remarkable insight into the way the Badarian people started to treat their dead. It also revealed that the Badarian had contact with other areas in exchange and trade.

1.6.8 Chapter 8

This is an important chapter and lays out the hypothesis as envisaged in chapter 1. It explores the regional development of the Badarian. The subsistence, trade and exchange networks of the Badarian and later Predynastic phases are researched. The inter-regional distribution of the Badarian lithics and ceramics are considered. The Badarian grave goods are placed in context and a final conclusion as to the temporal position of the Badarian is presented.

CHAPTER 2: LITERATURE REVIEW

Abstract

The primary excavation resources are the books published by Brunton and Caton-Thompson on the Badarian civilization and the two reports on the excavations at Mostagedda and Matmar by Brunton. Flowing from the initial reports, a number of scholars used the primary sources for further study and examination to formulate various interpretations of the Badarian. Later scholars such as Holmes and Friedman conducted their own on-site investigations and published several articles on their findings.

2.1 GENERAL OVERVIEW

The material remains of the Badari region, dated from 4800 BC to 4200 BC, with an earlier date of 5500 BC, obtained by the thermoluminescence method on potsherds from Hemamieh (Caton-Thompson & Whittle 1975:97), is believed to be inaccurate. A time range beginning earlier than 3850 BC is considered more representative for the Badarian (Anderson 1992:51). The chronological estimates of the Badarian are still a problem and underscore the establishment of a relationship between the Badarian and other predynastic cultures. With this in mind, it must be mentioned that several scholars claimed to have found Badarian remains at sites outside of the el-Badari district. Notably De Bono at Wadi Hamamat, Hays at El-Khattara, Myers at Armant (Mond & Meyers 1937:1-2), Hendrickx at El-Kab (1999:289) and Hoffman at Hierakonpolis (1972:45). Hays (1964:273) mentions Badarian pottery and other products at Armant, and also Badarian sherds in the basin of the Wadi Hammamat. These sites, however, consist mainly of a few sherds with rippled decoration and thus loosely described as being Badarian. Holmes (1999:162) rightly points out that this could possibly merely mean trade with the Badari region. I very much doubt this as the paucity of material cannot possibly give any definitive answer. Holmes (1988:72) confirms the limited studies done in the Badari district since the field investigations of Brunton and Caton-Thompson, as done by Gabra (1930) and Fathi Afifi of El Ahzar University.

In 1989, Holmes and Friedman undertook a short season of fieldwork in the Badari region in Middle Egypt.⁷ The result of the fieldwork was published in two papers, one by Holmes (1992) and a further paper by Holmes and Friedman (1994). Wendy Anderson

⁷ The focus of the project was to obtain preliminary new data on the Predynastic period as represented in the area. The fieldwork carried out consisted of survey and test excavations. The results are discussed later on.

(1992) undertook a research into the Badarian burials to determine social equality in Middle Egypt during the Early Predynastic era. She made a quantitative analysis of the excavated mortuary remains from several Badarian cemeteries. Arkell and Ucko (1965:150) contributed a paper on the Badarian, but again, stating that 'our knowledge of this culture comes from several cemeteries in the vicinity of Qau in the Badari district of Middle Egypt excavated by Guy Brunton and from an occupation site at Hemamieh in that area excavated by Caton-Thompson'.

Two of the relatively recent studies on the Predynastic of Egypt, to include the Badarian, were done by Holmes (1989) on the lithic industries of Upper Egypt, and a second very comprehensive study by Friedman (1994) on the ceramics of Upper Egypt.

The work by Holmes on the predynastic is a focus on the lithics of three major regions: Badari in Middle Egypt, and the two most important Predynastic sites in Upper Egypt, Nagada and Hierakonpolis. The study is very important but does have certain drawbacks, such as correlation of past economic activities, especially their adaptation for different uses in different environments such as the Western Desert, Fayum and Nile Valley. Comparing lithics from cemeteries and settlements is problematic and Holmes was right in the need for more excavated settlement data. This does affect her statistical analysis of the lithics and it could thus only be considered as preliminary. A major problem as far as I am concerned is the illustrations of the lithics. These are done only in line drawings which make interpretation and manufacturing information very difficult. Many of the drawings are not accompanied by any scaling, which is an absolute must when lithics is to be illustrated (Bard 1992:204). A number of other questions need to be answered, such as the spread of social and economic technologies into the Nile Valley from other regions, not only the lithics, but also pottery, agriculture and other goods (Bard 1992:204). These will be addressed later.

The study done by Friedman (1994) is for her PhD dissertation and is a comparative study of the ceramics of Hemamieh, Nagada, and Hierakonpolis. It is a very similar study as the one done by Holmes, with the focus of course on the pottery. It is a very detailed study of over 900 pages. Friedman describes the aim of the study as 'to

describe and compare the full range of diversity found within the ceramic assemblages of these settlements over time and space' (Friedman 1994:69).

As with most of the later scholars, the material used in both the above studies were from collections in museums and other institutions. An exception was the study on the sherds found at Hemamieh with both samples from the excavations done by Caton-Thompson (1928) and a re-examination of the Hemamieh-North Spur by Holmes and Friedman in 1989.

Prior to the work of Holmes and Friedman, Baumgartel (1947; 1960) published two volumes covering the cultures of prehistoric Egypt. Her work was mainly based on material stored in museums, especially the Petrie Museum Collection housed in the University College, London. The material was from excavations collected prior to World War II. In the first book (1947), Baumgartel's discussions are too generalised to be of any great help to solve the prehistory of Egypt, but in fairness the book stimulates thought on the complexities of the Egyptian predynastic beginnings. It stresses the need for thorough investigation of additional village sites (Kantor 1949). In the second volume (1960:24-43) some 20 pages are devoted to the study of Predynastic lithic industries. Some of the shortcoming of the book is notable in the description of the flints. Baumgartel continuous with the emphasis on core industry for bifacially worked flints, even though they are made on blades or flakes. This is misleading and is altogether lacking in certain categories, particularly for debitage (Holmes 1989:26). The book is not without its merits and the classification schemes for lithics are far superior to preceding classifications.

Amongst all the publications on ancient Egypt two books on the Prehistory of Egypt stand out in the last two decades of the 20th century. Michael J Hoffman (1980) published his *Egypt before the Pharaohs: The Prehistoric foundations of Egyptian civilization*. The title immediately attracts anyone interested in the emergence of Ancient Egypt from the earliest times. The book is well written with both popular concepts and a scholarly objective. Unfortunately, the result is that neither one of the two achieved the desired objective. His idea is to use the careers of specific archaeologists to advance our knowledge of the prehistory of the region. In terms of the chronology of the region,

Hoffman accepts the 6th millennium date for the Badarian on thermoluminescence results taken from Hemamieh. He contends that the Amratian and Gerzean are from the 4th millennium. These chronologies are, however, in doubt as will be explained later. Unfortunately, his book was also published prior to recent evidence from Wadi Kubbaniya, casting doubt on his exposition on food developments that were centred south of the Sahara and associated with the Khartoum Mesolithic tradition, and the Neolithic influences that originated farther north or reached the Sahara from southwestern Asia or the Maghreb (Trigger 1982:78).

A number of other drawbacks occur in the general layout of the book, which puts certain constraints on it as a good reference work for serious cultural study of the periods in question. As an example, although the bibliography is excellent, it is self-contained and in the absence of systematic citation a student will be unable to follow up on many references (Davis 1985:25). The book also contains references that were never published (Bard 2001:198). Severe criticism on the illustrations had been levelled by Davis (1985:26): 'many photographs are very uninformatively captioned, many line-drawings require scales, many plans and reconstructions are so inadequately labelled as to be useless ...'.

In terms of the Egyptian Paleolithic, Hoffman's book, especially Part Two (pages 35-102) is excellent. Weeks (1980:97) remarks on this section: 'It can be recommended as the best general synthesis yet published.'

Importantly, Weeks (1980:97) contends that as Hoffman moves forward into the Neolithic and toward the emergence of Egyptian civilisation, the book weakens considerably. This brings me again to the research questions and the mass of data available. The data gathered during the three decades from the date of this publication, will require a systematic analysis and cannot be recorded in a book of this kind. Numerous questions are treated superficially by Hoffman, such as development, dating, and interconnections. The Neolithic chronology, which is a principal concern, is also treated in a cursory manner (Weeks 1980:97).

Béatrix Midant-Reynes published *Préhistoire de L'Égypte* in 1992. The book was translated into English by Ian Shaw in 2000 and published under the title, *The prehistory of Egypt. From the first Egyptians to the first Pharaohs*.⁸

The book begins with a historical overview of the Predynastic investigations in Egypt, with a brief discussion of the environment and an overview of the Paleolithic cultures in Egypt. Unfortunately, the book was written before important discoveries were made in the Western Desert. In the translated version it was stated that the text and bibliography was updated in order to incorporate various archaeological discoveries that have taken place during the 1990s. This is not really the case and important investigations done by *inter alia* the Dakhleh Oasis Project on the Paleolithic sequence is not mentioned. Evidence of the use of pottery in the 8th millennium BC discovered in the Western Desert is omitted. The Western Desert is mentioned in the context of “Neolithization”, but this is not really defined and the research used is based on somewhat older and outdated sources. The work of Midant-Reynes is an improvement on the book published by Hoffman, but it is still only a general overview of sites and other evidence of Egyptian prehistory that was published before 1990 (Bard 2001:198).

2.2 MAJOR REFERENCE WORK ON THE EGYPTIAN-SAHARA PREHISTORY

As previously mentioned, the definitive work on the Badarian culture is the work done by Brunton and Caton-Thompson, published as *The Badarian civilisation and Predynastic remains near Badari*, 1928 (see below for a detailed review). However, to place the Egyptian Predynastic in context, it is imperative that one must study the prehistory of the Nile Valley and surroundings (Western Desert and Sudan).

It is difficult to isolate studies done on the prehistory of North Africa, but I will attempt to highlight some of the books and articles that contributed the most on our knowledge of this vast subject.

⁸ The references made concerns the English translation.

A full report of the excavation of a low mound in the centre of Khartoum was published for the Sudan Government (Arkel 1949). This work is very important, for not only is it the beginning of the study of the prehistoric cultures of the Sudan, but equally importantly is its contribution to the reconstruction of early cultural development in Egypt and further afield in North Africa (Kantor 1951:413).

Although the site was extensively disturbed by later activities such as later burials and natural forces, it revealed no architectural remains, but the archaeological material and skeletal remains was studied in detail.

The site revealed a culture consisting of hunter-gatherers and appeared to be older than any found before in the Sudan. The most important archaeological find at the site was the discovery of pottery sherds with Wavy Line decoration,⁹ as well as Dotted Wavy Line ware combining lines and impressed dots.

In addition to the pottery sherds, the stone industry consisted of Microlithic items, lunates, various types of points, and borers with very rare transverse arrowheads. Arkell was of the opinion that the stone rings found was maces and the grooved stones used as net sinkers for fishing. The pebble and disc grinders appeared to have red and yellow ochre stains, causing Arkell to surmise that they were used for other purposes than grinding grain. The bone tools that were found consisted of harpoons and spear points.

In terms of the age of the site, or the specific cultural phase, Arkell suggests that the Wavy Line Culture is prehistoric, although the evidence does not demonstrate without doubt that it is Mesolithic. The age is important, but it is the wider implications of Arkell's discoveries that are of importance. Arkell suggests that the Sudan and Nubia, instead of being influenced by Egypt, in reality contributed to the development of Prehistoric Egypt. One of his hypotheses is that the Wavy Line pottery contributed to the development of the Badarian rippled, polished pottery, and not the other way around. This is, of course, one of the questions, regarding the influence on early Egypt from the south. In truth, the

⁹ The lines were made by combing with catfish spines.

difference between the Wavy Line and Badarian rippled ware is considerable, but the dispersal of the Wavy Line throughout the Saharan and Western Desert of Egypt is one of the items under discussion. The connections of the Wavy Line Culture seem to be more common across the African continent to the west at the same latitude as Khartoum (Kantor 1951:415). There is no doubt that Arkell's work in the Sudan is important in the study of the cultural development in Western Africa and Egypt.

Huzayyin (1941) published an important book on varied aspects on the study of prehistory in north Africa. It consists of two parts, with Part I focusing on past climates of the Old World. It is however, Part II which is of greater interest in this thesis. It considers the place of Egypt in the cultural-sequence of Paleolithic, Neolithic and post-Neolithic times, and is again divided into Sections I through III, with Section III being of major interest in the thesis. It covers the Neolithic and Post-Neolithic stages with a synopsis of culture complexes and contacts of Egypt in Late Prehistoric and Proto-historic times, with special reference to Flint Industries. Huzayyin asks pertinent questions of how the Egyptian civilisation came to pass. I am addressing the following questions in this study: is it autochthonous? Or is it of outside extraction? It was contended by Huzayyin that even though a number of scholars attempted to solve the problem at that time, mainly used tradable goods such as pottery and a number of other tradable articles such as beads, ornaments etc. to arrive at a suitable conclusion. Huzayyin was then the first to suggest using flints as the main contributor in discussing local facies of culture. He considered a comparative study of pottery as misleading and is better suited for dating and correlating cultures. He was quite correct to consider a comparative study of flint implements as being less misleading and states as follows:¹⁰

Groups of stone tools may therefore offer a useful check on data from pottery, beads, ornaments, etc.; and the check is all the more welcome when we come to study culture sequence and correlations in widely separated areas. It is for this reason that we thought a comparative study of the flint industries of Egypt and its neighbouring regions may be a helpful complementary to what we already know from studies on other classes of remains (Huzayyin 1941:276).

¹⁰ As mentioned above, Holmes conducted the first systematic comparative study of the flint industries of the Badari, Nagada and Hierakonpolis cultures. This was done and published in 1989, some 48 years later than the publication of the book by Huzayyin.

Huzayyin continues and discusses three main approaches of Egypt in regards of culture contacts in Neolithic and post-Neolithic times. The so-called Western approach being the Sahara and North-West Africa, the Southern approach which extends into Nubia and the Sudan Plains with last, the North-East approach, limited to the Syrian-Palestinian horn of the Fertile Crescent. I am not going into the merits of his discussions, except that he offers detailed correlations to the various aspects of cultural diffusion from the various areas, but fails to convince which approach is the most probable during the early formation stages of the Egyptian predynastic, i.e. the Badarian.

Huzayyin is also not convinced that the Badarian follows on the Tasian (Huzayyin 1941:305), but the question of the Tasian as a separate ethnic and cultural group as he contends, is extensively discussed by later scholars. His observation, especially with the information available at that time, is greatly insightful and forms a basis from which to work from. He continues a short discussion on the Badarian, but it is based on the work done by Brunton and Caton-Thompson and does not add to the corpus of knowledge on Upper Egypt. His discussion on Armant and Nag'Hammedi is correct and it is worthwhile here to mention his very extensive treatment of the lithics found at Armant (Mond & Myers 1937).

Huzayyin (1941) continues with a cursory treatment of the Pre-Dynastic periods of the Amratan, Gerzean and the Semainean. He summarises the 'Neolithic' and 'Post-Neolithic' Culture-Complexes in Egypt from pages 314 to 323. Importantly he acknowledges that introduction of early Neolithic elements into the Sahara and North West Africa may be from without, but he states: 'Though from where, it is not fully known as yet' (see footnote (1) page 316).

In conclusion, the work by Huzayyin, although done 70 years ago, is still very much relevant today, and some of the factual and theoretical models is a very good basis from which to work on the problem of the early development of the Nile Valley cultures, leading to the early dynastic periods and eventually to the state formation of a unified Egyptian empire under a single pharaoh.

The definitive work on the Badarian was done by Guy Brunton and Gertrude Caton-Thompson published in 1928 (Brunton & Caton-Thompson 1928. *The Badarian Civilisation and Predynastic remains near Badari*. London: Bernard Quaritch). The volume deals with the work done under the auspices of the British School of Archaeology in Egypt and Egyptian Research Account Thirtieth Year 1924, University College. It is an account of much of the work done during the seasons 1922–3, 1923–4, and 1924–5. This volume places the focus mainly on the Badarian, with previous three volumes under the title of Qau and Badari, I, II and III, which treat the later period Peake 1929:252).

This volume is divided into Part One and Part Two. In Part One the first 10 chapters deal with the Badarian Civilisation proper with a detailed description of the village sites, cemeteries, pottery, flint implements and various objects that were found. Three-hundred graves in cemeteries were excavated and meticulously documented. The remainder of Part One is an admixture of predynastic and Badarian objects found in settlements at Hemamieh and Badari. It covers the village sites, ten cemeteries and the contents of their graves. In Part II, Caton-Thompson describes the settlement excavation on the North Spur at Hemamieh. This is the first site subjected to proper stratified excavation and for a considerable time it was the only site where three of the four main Predynastic cultures were represented. From the top it starts with the Gerzean through the Amratian to the Badarian. The site is the remains of a sequence of small Predynastic villages and produced an abundance of pottery sherds, as well as lithic artefacts. The result of the site is recorded in great detail. The levels between 6 ft. and 4 ft. 6 ins. produced the most numbers of Badarian rippled ware sherds. Caton-Thompson describes in great detail her methodology used in the excavation of this small site (60 x 35 feet) in pages 70 to 72 of the book. Through the years the value of her contribution to the knowledge of the Badarian and later Predynastic cultures had not diminished at all.

The excavation reports and results of the settlement at Hemamieh form a great part on the comparative study on the lithics of Upper Egypt by Diane Holmes (1989).¹¹ For her

¹¹ For reference, the Petrie Museum at the University College, London, houses a total of 334 lithic artifacts from the settlement site of Hemamieh (Holmes 1989:46).

detailed comparative study of the Predynastic Settlement Ceramics of Upper Egypt, Renée Friedman (1994) makes extensive use of the information from the excavation reports contained in this volume. Two other excavation reports on the Predynastic of Upper Egypt were published by Guy Brunton under the titles, *Mostagedda and the Tasian culture* (1937), and *Matmar* (1948).

Mostagedda and the Tasian culture describes the excavation results of the Brunton expedition to the area of Mostagedda in the Badari district of Asyut Province during the two seasons 1927–8 and 1928–9. The book also contains a chapter by Dr GM Morant on the skulls of the Badarian period. Brunton was accompanied by his wife, Winifred and some students.¹² The book consists of 147 pages of text with numerous photographs, maps and hand-drawn illustrations (done by Mrs Brunton) of the artefacts recovered. What is important is that the book also has a distribution list of items sent to other institutions. This is especially valuable for future studies on the subject and I am surprised that no compilation and/or study to collate this (also in conjunction with his other books) have been done thus far. The index is reasonably complete and a welcome addition. The sites produced settlements of almost every period of ancient Egypt, from the early, or Tasian culture, through the dynastic ruler right into the Arab period. The Badarian and Tasian discoveries, however, is the most important and of the greatest interest (Kirwan 1939:107-109; Brunner 1940:94-95).

As the title suggests, the Tasian culture is discussed, but it is in this volume that Brunton expresses doubt as to the possibility that the Tasian is a separate culture, and could be just an earlier phase of the Badarian (Hornblower 1939:25).

Following on *Mostagedda and the Tasian culture*, Brunton (1937) wrote an account of the British Museum Expedition to Middle Egypt from 1929 to 1931 on two season's work on sites north of the area covered by his previous expedition. It was published under the title *Matmar* in 1948. The book consists of 96 pages of text, 76 plates (maps, photographs and line drawings), a distribution list and an index.

¹² Among them Oliver Myers who later became Director of the excavations of the EES at Armant.

This is the last account of excavation in the el-Badari district for almost 60 years when Holmes and Friedman (1994) conducted a short test-excavation at Badari (see above). At the time of the Holmes and Friedman visit the sites were severely deflated and ruined through years of encroachment of the agriculture and human expansion in the area. This leaves the account of Brunton as being the best possible research available to present day scholars. Fortunately, the work is meticulously done and recorded, especially in view of the resources available to the excavators at that time.

Some seven pages of text refers to the Badarian villages and cemeteries with detailed descriptions covering the human remains, grave goods such as pottery, beads, shells, palettes, needles, flints, and some other objects such as fish hooks and natural products. The robbing of the Matmar graves appear to have been quite severe in antiquity, more so than at Mostagedda and Badari. On the Tasian Brunton is of the opinion that no remains of any importance were found. The dearth of objects found, leads Brunton to surmise that they may have been Badarian instead of true Tasian (Brunton 1948:4).

The remainder of the text and accompanying plates describes later cultures and dynastic periods, from the Protodynastic (1st, 2nd and 3rd dynasties). The research moves onto 4th, 5th, 6th, 7th–8th, 9th–10th, and continuous through the Middle Kingdom with the New Kingdom quite extensively presented. The excavation continues through to the Late and Ptolemaic Periods with some 5 pages of text (and corresponding plates) describing the Roman and Coptic graves.¹³

In 1929 an expedition by Mond and Myers (1937), under the auspices of the Egypt Exploration Society, commenced with excavations at the site of Armant, situated about 9 km south-west of Luxor on the west bank of the Nile (Bard 1988:39). The excavation apparently ended in 1933.¹⁴ The excavation reports appeared in two volumes. Vol. I contain 300 pages of text and Vol. II with 75 plates. This work is a valuable contribution

¹³ For a cursory review see Arkell (1949:140).

¹⁴ The two volumes, Vol. I with text and Volume II containing the plates, do not give dates for the excavation period. In the Preface viii of Volume I, the following is stated: 'With this volume we have published everything found or bought on the concession from the beginning (1929?) of excavations there until the summer of 1933.'

to the knowledge of Predynastic Egypt. Some criticisms are levelled at certain aspects of the technical finishes to, especially the plates,¹⁵ but in all the work is valuable for future studies.

In terms of the Tasian and Badarian finds, I have my doubts, but nevertheless it is reported (Mond & Myers 1937:1, 2) that two sherds of Tasian period was found and in three separate areas remains of Badarian were found. Importantly Chapter XIV on flints by Suliman Huzayyin is very well written and supplies a wealth of information on the flint industry of Armant¹⁶ – see also the review on the cemeteries of Armant by Pittioni (1939).

Numerous grave goods were found of which pottery was the most abundant. Two important studies were conducted because of this, one the work by Kaiser (Friedman 1994:46) who revised the Sequence dating of Petrie,¹⁷ and the article by Bard (1988) on quantitative analysis of the Predynastic burials in Armant Cemetery, 1400–1500.

After the end of World War II, the more important reports to appear was the first volume of *The cultures of Prehistoric Egypt*, by Elise Baumgartel (1947), followed some thirteen years later by the second volume under the same title by Baumgartel (1960).¹⁸ Both volumes are valuable on an entry level understanding of the Predynastic cultures of Ancient Egypt. Volume one published in 1947 contains two parts, with the first part preparing the reader to a general survey of the whole period from the Badarian to the beginning of historical Egypt. A good many misconceptions are prevalent in this section and a number of scholars pointed this out in their reviews of this work (*inter alia* Murray 1956; Caton-Thompson & Waechter 1948; Maxwell-Hyslop 1950; Kantor 1949). Volume Two published in 1961 is a revised work on Volume One. As with her previous work, it is based on a study of museum collections and collections in other institutions and repositories. She places her focus on the excavated material of known provenance and

¹⁵ See the review by Murray (1940:30).

¹⁶ It is important to note that the chapter is written on information from the museum collection on Armant as Huzayyin was not part of the excavating team.

¹⁷ Kaiser revised Petrie's Amratian, Gerzean and Semainian roughly into Nagada 1, Nagada II and Nagada III.

¹⁸ It is hereby noted that *Matmar* by Brunton appeared in print in 1948, but based on excavations done in 1929 onwards.

ignores the mass of material available with doubtful, but with particular interest. Her descriptions and some of the conclusions are of great value to the student of the prehistory of Ancient Egypt. The major drawback, as I see it, is that she completely ignores the Paleolithic and Neolithic periods, which forms the backbone for any studies of prehistoric Egypt. As with Volume One some scholars are critical, especially of her interpretations of the material at hand in forming highly suspect theories on the origin of the first cultural units in the Nile Valley. She places virtually no value on the contribution made by the Delta area, and instead focuses more on the cultures of Upper Egypt.¹⁹

To support the study of the Badarian, especially if we can believe that it represents the first agriculture in Upper Egypt, I must also look at all the studies done concerning the periods before the Neolithic of the Nile Valley.

A number of intensive projects were launched in various areas of the Western Desert of Egypt. Some of the major research done started with scholars such as Caton-Thompson with her detailed study of the Kharga Oasis in three seasons work. The first season was from 9 December 1930 to 9 March 1931. The second season was from 10 November 1931 to 10 March 1932. The third and final season took place from 9 November 1932 to 10 March 1933. Unfortunately, due to several factors, the least being the advent of World War II – 1939–1945, the publication of her results were delayed until the appearance of her book in 1952.

Caton-Thompson treats the Paleolithic in great detail and it takes up more than half of the book. The remainder brings to light two later stone age horizons what she terms the “Bedouin Microlithic” and the “Peasant Neolithic” (Howe 1955:125).²⁰ The work of Caton-Thompson is important to establish if any connection can be found with the first appearance of the Neolithic in the Upper Nile Valley. She uses her vast knowledge of the Badarian cultures from her excavation at Hemamieh, el-Badari. Later scholars used her work extensively in finding corresponding markers, especially with other depressions in the Western Desert of Egypt and the Nile Valley.

¹⁹ For detailed reviews, see *inter alia* Murray 1961; Badawy 1961; Harris 1961.

²⁰ For further illumination, see Murray (1953) and Arkell (1953).

A number of studies have been done in the Western Desert and surrounds, with some still ongoing. One of the first expeditions into the desert area was the Bagnold Expedition to Gilf Kebir and 'Uweinat 1938 (see Bagnold et al 1939). The evidence from these studies, as well as studies from Dungul and Kurkur Oases, gave rise to the study of *inter alia* climatic change in the Sahara and also perhaps the study of long-term cultural adaptive behaviour. The Combined Prehistoric Expedition (CPE) began a systematic study of the area in 1972 (Wendorf et al 1976). The CPE was founded in 1962 and remains the longest lasting international prehistoric expedition in North-eastern Africa (Schild & Wendorf 2002). Some of the reports published by the Southern Methodist University is *Loaves and fishes: the prehistory of Wadi Kubbania*, assembled by Wendorf and Schild, edited by Close, 1980. This volume is part of a series of reports describing the results of archaeological and geological investigations. Following is the *Prehistory of Wadi Kubbania* by Wendorf, Schild and Close, published in three volumes in 1989. Volume 1 describes the Wadi Kubbania skeleton: Late Paleolithic burial from Southern Egypt (1986). Volume 2 describes the Stratigraphy, Paleo-economy, and Environment of Wadi Kubbania (1989), with Volume 3 describing the Late Paleolithic Archaeology of the Wadi Kubbania (1989). Of special interest to my research is Volume 3, in view of its very detailed treatment of the lithics of the site.

Following on the success of the CPE and work done by Ahmed Fakhry (1973 & 1974) on some of the oases of the Western Desert in Egypt, the Dakhleh Oasis Project was initiated in 1977. This is also a long-term project and up to 2006 already 366 titles were published by members of the Dakhleh Oasis Project on the research of the project.²¹ The titles include a number of PhD theses, some of which are not published. This is a very important study and aligns the oasis with the Nile Valley, especially from prehistoric times. Of course the project follows the development of Egypt throughout dynastic times to the present. Numerous articles are of great importance in this study, to name but a few of the scholars; MMA McDonald, MR Kleindienst, MF Wiseman, L Krzyzniak, K Kroeper, DM Tangri, AR Warfe, and so the list goes on.

²¹ <http://arts.monash.edu.au/archaeology/excavations/dakhleh/assets/documents/bibliography.pdf>
Retrieved 14:15, December 19, 2011.

It is of course impossible to list all of the literature consulted in the research, but to conclude several other important publications need to be mentioned, such as *Encyclopedia of the Archaeology of Ancient Egypt* (1999), edited by KA Bard; *The Archaeology of Africa* (1995), edited by Shaw et al; The research done by the Polish Academy of Sciences, Poznań Branch published as *Origin and early development of food-producing cultures in North-Eastern Africa* 1984, edited by L Krzyżaniak and M Kobusiewicz, is the first volume in a series of Studies in African Archaeology. Volume 2, *Late Prehistory of the Nile Basin and the Sahara*, is not available anymore with volume 4, *Environmental change and human culture in the Nile Basin and Northern Africa until the Second Millennium BC* (1993) and volume 5, *Interregional contacts in the Later Prehistory of Northeastern Africa* (1996), and volume 7, *Research into the Stone Age of Northeastern Africa* (2000), being of special interest. *The Cambridge History of Africa*, Vol. 1, edited by JD Clark (1982); *Egypt at its Origins*, 2004, Studies in memory of Barbara Adams, edited by Hendrickx, S, Friedman, RF, Ciałowicz, KM & Chłodnicki, M; *Droughts, Food and Culture. Ecological change and food security in Africa's later Prehistory*, 2002, edited by Hassan, FA; finally, it is important to note the definitive work on lithics done by Tixier, J. 1963. *Typologie De L'Épipaléolithique Du Maghreb*.

2.3 CONCLUSION

Apart from the publications already mentioned the following bibliographical books on the prehistory of Egypt is also available; Weeks (1985) and Hendrickx (1995). Since the lists were published many reports, articles and books came out of research projects such as the DPE and DOP. Where possible the most up to date information will be used in the dissertation.

CHAPTER 3: THE KNOWN AND POSSIBLE BADARIAN SITES

Abstract

The universal drawback in the study of prehistoric cultures is the lack of textual evidence. Thus the reliance on the demarcation of the initial civilisations has to be based purely on the material remains. The discovery of pottery like no other before at Badari became the benchmark for identifying the Badarian Culture as it became known. Subsequent to the discoveries by Brunton and Caton-Thompson at Qau-Badari, Hemamieh and later by Brunton at Mostagedda and Matmar, several other sites produced what the scholars deemed to be Badarian. A critical review of the evidence is undertaken. This is a very important segment of the study as it is used to determine the spatial distribution of the Badarian. It has an influence on its trade and cultural exchange mechanisms and is crucial in the determination of its temporal place in the early history of the formation of the Egyptian Culture (Figure 3.1).

3.1 INTRODUCTION

In 1923–4 the British School of Archaeology became interested in the rock-cut tombs of the Middle Kingdom at Qau el-Kebir (Antaeopolis) in Middle Egypt, on the east bank of the Nile (Kamrin 1999:666), in what became known as the el-Badari district (26° 50' - 27° 10' N, 31° 16' - 31° 31' E). The tombs were excavated in the beginning of the 20th century by the Italian Archaeological Mission (1905–6) and the Ernst von Sieglin Expedition (1913–14) before the advent of the BSA investigation (D'Amicone 1999:653). The expedition of 1923 was entrusted to Brunton and he selected the Qau region to begin excavating. He noted that a large number of predynastic artefacts turned up in the village shops, leading them to investigate further in case something was left in the cemeteries before further plunder took place (Brunton 1927:2). This was the beginning of the excavation of the culture later to be known as the Badarian.

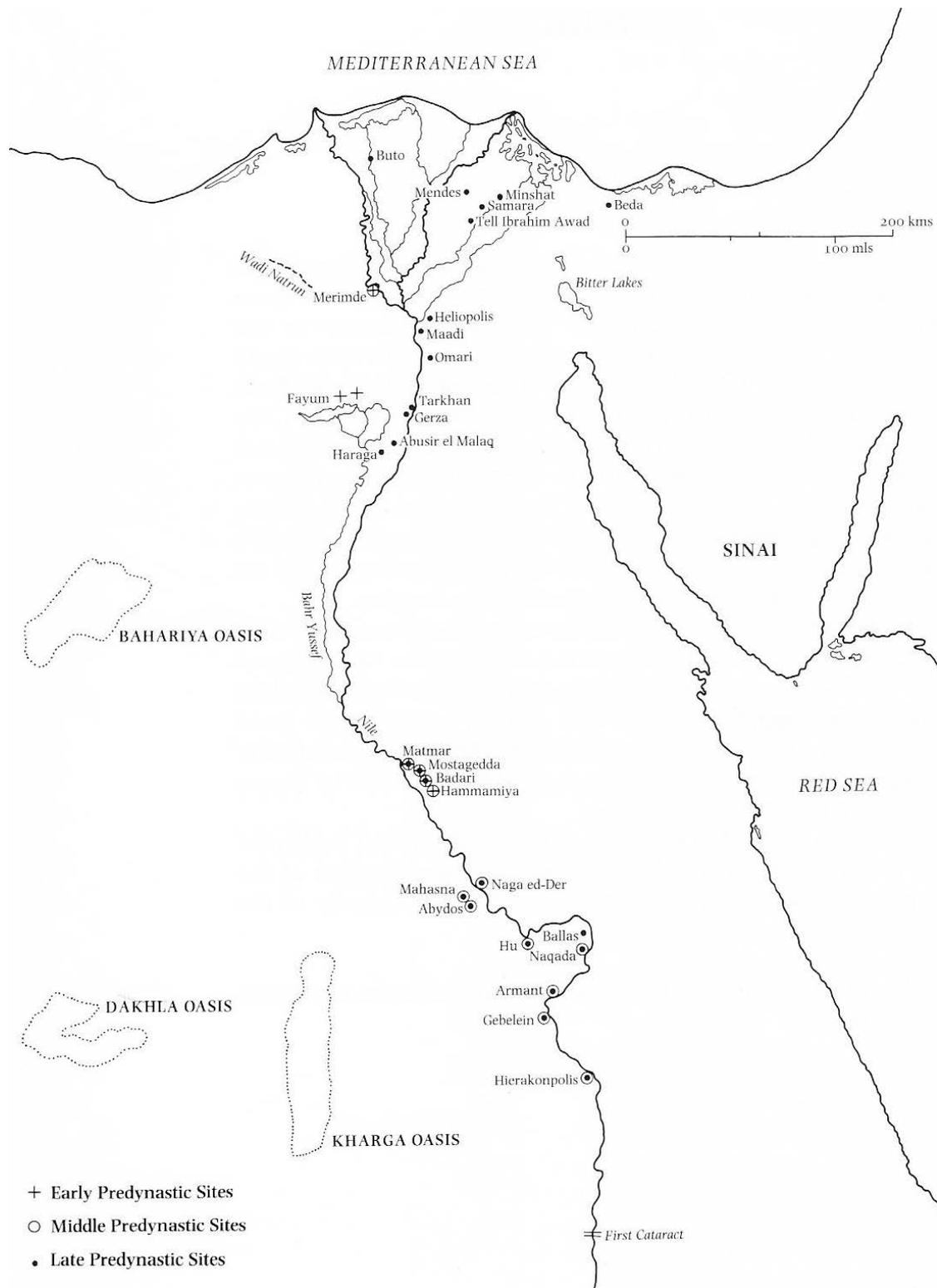


Figure 3.1: Predynastic Sites (Spencer 1993:8)

3.2 QAU AND BADARI

Although conflicting reports exist as to the division of the sites near Qau and Badari, it is clear that in the 1922–25 seasons Brunton and his wife, Winifred, worked on the

cemeteries around Qau el Kebir with Petrie being the director of the excavations, spending most of his time in the 1923–24 season recording the rock-cut tombs (Drower 1995:359) while Brunton continued recording the cemeteries.²² In 1923, Petrie brought with him a number of students, among which was Gertrude Caton-Thompson. She was later to play a very important part in the excavations at Hemamieh. During the three seasons, 1922–3, 1923–4 and 1924–25, Brunton and his team recorded over 600 prehistoric graves in the cemeteries and a large number of settlement sites. About 308 of the graves could be assigned to known Predynastic periods, the rest contained artefacts never before discovered or recorded (Hoffman 1979:136). According to some sources, the ‘new’ artefacts (especially pottery) was named ‘Badarian’ by Petrie, after the district Badari where the work was being done in 1923 (Drower 1995:361; Petrie 1931:252).²³ In her autobiography, Caton-Thompson (1983:91-2) writes the following:

The second of the two discoveries left over from the preceding season had been the find of some exquisitely fine sherds in the up throw from the looted cemetery. By common consent they were Predynastic, but fitted into none of the three categories of Petrie’s sequence dates. They were as thin as the finest china and the black or brown surface had been rippled and then burnished. J.L. Starkey, whose sharp eyes had first noticed them, was intent on finding out more about them. Irrespective of who named the different pottery found it gave rise to the pushing back of the predynastic to a much earlier date.

3.2.1 Petrie at Qau and Badari

Apart from being the director of the excavation project at Qau, Petrie participated actively in the excavations at the predynastic cemeteries in the area of Qau and the village of Badari. The bulk of the work, however, was entrusted to Brunton who in 1923 was sent out by Petrie to excavate the cemeteries. Unfortunately, Petrie’s interpretation of the origins of the Badarian was misplaced (he considered them immigrants from the east), Petrie still controlled the excavations and his guidance proved invaluable (Petrie 1931:252). Petrie, together with Brunton and his team, was responsible for the recording of the graves, and with Brunton they were entrusted with doing the photographic work (Brunton 1927:1).

²² There existed a number of small settlement sites on the low-lying spurs on the east bank of the Nile. On the spurs of the desert they were far enough away from the yearly inundation of the Nile yet close enough to the fertile fields of the Nile to work them (Baumgartel 1975:28).

²³ Other sources quote Brunton as the person responsible for naming the new finds Badarian (Hoffman 1980:140).

3.2.2 Brunton at Qau and Badari

After working with Petrie in the years following the end of the World War I, Brunton and his wife were given their own concession at Qau el-Kebir in 1922. Under the auspices of the British School of Archaeology, Brunton and his team worked in the Qau-Badari district for the three seasons of 1923, 1924 and 1925. Brunton selected the Qau region for a number of reasons, which he explained in the first volume (Brunton 1927:2). His focus was on the general cemetery, which he thought may prove to contain more objects not removed by the local population.

In the first year, 1922–1923, only one camp was required and the personnel for the season's excavation consisted of Brunton and his wife, CHG Bach and JL Starkey. Work started on 1 December 1922 and ended on 4 April 1923. In addition to the above personnel, H Frankfort joined the party for six weeks on 14 December. Prof DE Derry spent four days with the group from 26 January in order to give them his opinion on the mineralised human bones. The following year Petrie occupied his own camp at Qau and he was assisted by new students, S Yeivin, TR Duncan Green, NF Wheeler with Mrs WJ Benson, and Gertrude Caton-Thompson. Excavations started around the beginning of December 1923 and lasted until April 1924. Petrie returned to Britain in March 1924.

Brunton's own party consisted of the same personnel as the previous year with the addition of a Mrs G B Aitken and Miss Irene Donne. The 1925 expedition was on a limited scale and consisted only of Brunton and his wife. They were later joined by Caton-Thompson.

Excavations concerning the dynastic periods were described in the three volumes entitled *Qau and Badari* (1927, 1928 & 1930). The Badarian is described in Brunton & Caton-Thompson (1928). It is the excavations done as presented in this volume that I will concentrate on.

Brunton focused on the cemeteries near Qau el-Kebir (Etmanieh), close to the houses of Ezbet Ulad el Hagg (See Figure 3.2). It was here that they found a number of hand-made pottery sherds unlike any other found in Egypt at that time. The pottery had a different finish than any other found to date and its rippled appearance suggests that it was combed in some way or the other. The sherds were found in the rubbish of the much used area (Brunton 1928:1).

The search was on to find more of the Badarian sherds. A few graves were found to contain some objects of Badarian age. The low desert strip was investigated by JL Starkey as far north as the town of Badari about 16 km away. During his search, Starkey found a number of rippled sherds indicating the presence of the Badarian people in a number of cemeteries or settlements (Brunton 1928:2). During the course of his investigations Brunton cleared over fifty Badarian settlements with almost 750 burials.

Brunton had an ingenious way of numbering the tombs to enable anyone to recognise the site, year, and the excavator with the number of the grave (Brunton 1927:3). They are:

- Numbers 100 and 200 for isolated cemeteries;
- Numbers 300-1200 for the main Etmanieh cemeteries;
- 1300 for the isolated hill with “Pan” graves; 1400 for tombs on the hillside under the cliffs;
- 1450 for tombs in the level ground at the foot of the hill;
- 1500-2100 for the Hemamieh site;
- 3000-6000 for the various cemeteries near Badari running from north to south; and 6500 for the few graves found by Caton-Thompson in the settlement north of Hemamieh;
- 7000 for Petrie’s graves from the cemeteries in the centre of the Qau Bay.

The topography of the Qau area can be described as being a great desert bay extending for about 10 km or more from point to point. The limestone mountains surrounding the bay recede from the cultivation some 16 km to the east and is roughly

bisected by a shallow *wadi*. To the north where the *wadi* meets the cultivated fields lies the village of el-Etmanieh, which used to be called Qau el Kebir. The terrain of the desert is flat, pebbly, flint strewn and interspersed with low hillocks. Overall the terrain is not suitable for graves and therefore the main Qau cemeteries are to be found on the rise to the north of the main *wadi*, there being no high ground available. The graves were generally in poor state because of rising damp, but an absence of salt made things somewhat easier. The Nile also changed its course during the hundred years preceding the excavations (Brunton 1927:3).

The northern limestone cliffs dominate the landscape with a narrow strip of desert running north for about 8 km with series of spurs or foothills of limestone detritus. The village of Hemamieh is south of a *wadi* that is found in the centre. Another feature to identify the area is the sculptured rock-tombs of the fourth dynasty close to Hemamieh. The ancient cemeteries lie to the north and south of the *wadi*.

Brunton and his team investigated the spurs from the north. They numbered the spurs from 1 in the north to number 24 in the south. North of number 1 was too far from their camp and in any event did not look promising. According to Brunton (1927:4), many of the South Cemetery graves of Qau, although being of great extent, was well worked over by the local villagers. Cemetery 400, adjoining the houses of Ezbet Ulad el Hagg Ahmed, produced the first few sherds of handmade pottery with the peculiar rippled or combed surface. This cemetery was completely turned over by Brunton. Starting from the south and clearing right up to the houses. A fresh line was started from the east clearing toward their first clearance. In the low areas where the graves were marked 800, they left some ground without exploring them.

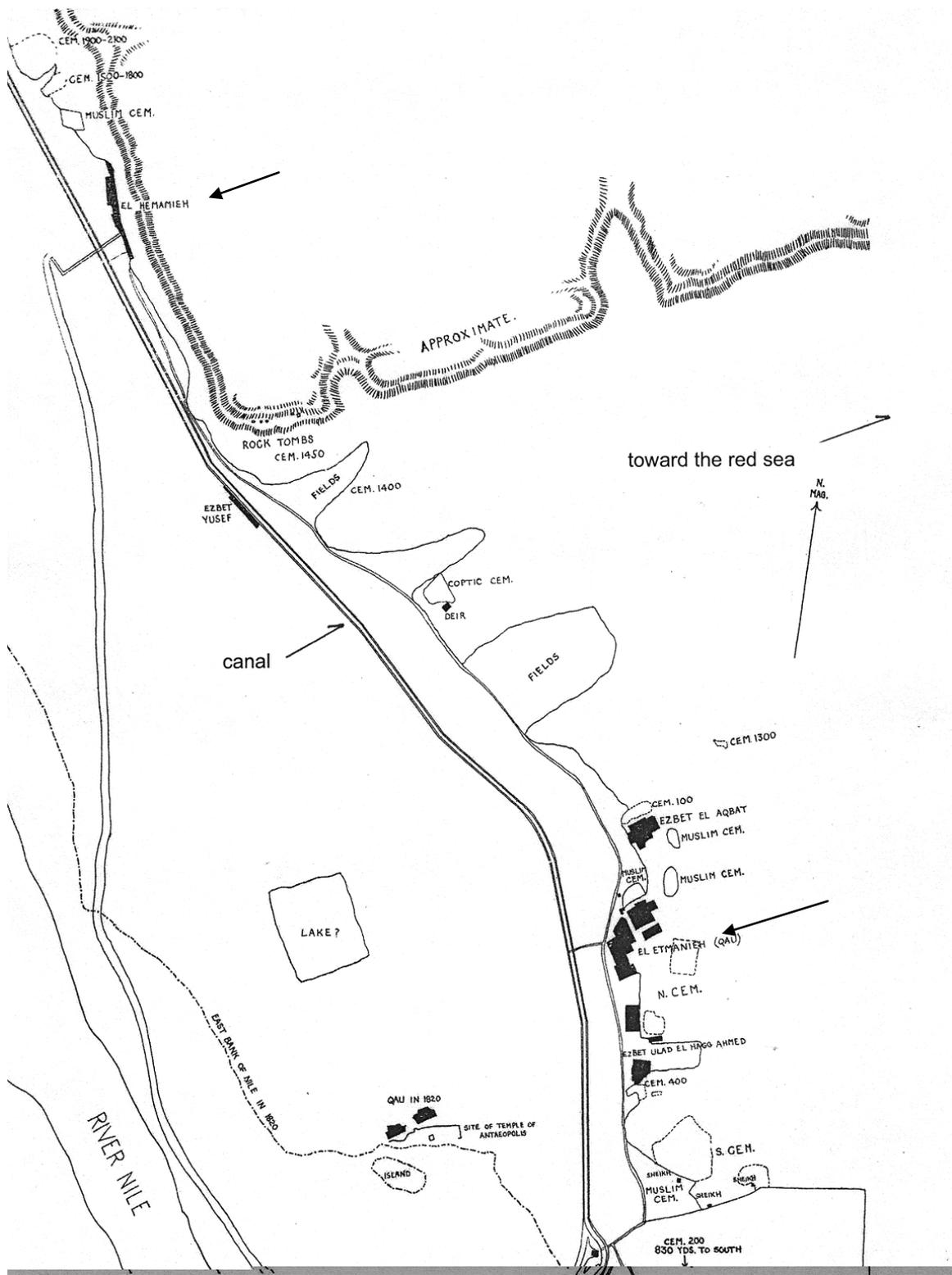


Figure 3.2: Map of Qau and Hemamieh District (Brunton 1927:PL 1)

Intermittent sections were cleared by Brunton and Petrie working from the east end, but the results were poor and they started from the west side. Overall the results were poor even though Petrie, working toward the north, cleared many graves.

At Badari they completely cleared Spur 6, 15 and 16. Cemeteries 4800, 5100, and 5300–5800 were also completely cleared. Cemetery 5200 and 6000 were found to have been badly plundered and the other spurs did not produce much.

The Hemamieh North Spur, examined by Caton-Thompson, will be discussed separately.

The third season was a short season and for most of the time Brunton and his wife was alone or with Caton-Thompson. Caton-Thompson divided her work between the Fayum and Hemamieh with the latter lying between Qau and Badari. Her work at Hemamieh was, however, quite independently of the Brunton's work at Badari. This season was important in the sense that Brunton focused his attention exclusively to the excavation of the Badarian sites.

3.3 HEMAMIEH NORTH-SPUR

Caton-Thompson was convinced that Predynastic studies were not fully covered by research based only on the excavation of cemeteries. She approached Petrie with the idea of excavating a village site and he gave her permission to go ahead and find a suitable area to investigate. He gave her three Qufti workman to help with the excavation.

Caton-Thompson spent a few days studying the talus slopes between cliffs and the cultivated flood-plain. She decided on this area where a few Badarian sherds had been found (Caton-Thompson 1983:92). The site she decided on became known as the North-Spur and was about two miles from their camp. The area excavated by Caton-Thompson was very small, only some 35 m x 45 m (approx. 1600 m²), with only 26 burials (Caton-Thompson & Whittle 1975:90).

After one full day's excavation, the site turned up decorated, blacktopped, white-cross-lined, and combed-ware sherds, as well as flints and other objects. In her autobiography (1983:92), she describes the site: 'It was even more promising than I had hoped, providing a more or less stratified succession of the two main Predynastic periods underlain by the Badarian, over 6 feet in depth in all.'

Caton-Thompson, in her own words, preferred the investigation at Hemamieh to be from a settlement-stratigraphy rather than from a cemetery-typology angle (Brunton & Caton-Thompson 1928:70).

One of the more important objectives of Caton-Thompson was the necessity to obtain data for the correlation of flint types with pottery types. She was of the opinion that by approaching the Predynastic periods in Egypt from an historical point of view other than Egyptologist she would achieve more. It is understood that on average only 1 in 20 Predynastic graves contained flint work at all and then it was restricted in type (Brunton & Caton-Thompson 1928:70).²⁴

Caton-Thompson already in 1928 asked the important questions of regional distributions and people movements (Brunton & Caton-Thompson 1928:70).

For instance, to take an example, at about SD 40²⁵ we know that a radically new conception of pottery form and decoration was filtering into Egypt – by what route we do not yet feel certain – and gradually supplanting old indigenous styles. Is this due to culture-drift, racial-drift, or invasion? How far does the flint work change to at this period, and if so in what particulars? Is the overlap of changing pottery and flint types more apparent in Upper Egypt or in the North?

²⁴ Friedman (1994:22) is of the opinion: 'Holmes considers the Badarian units as an early cultural phase only in the Badari region because lithics characteristics of the culture have not been found elsewhere. This view begs the question of whether ceramic traditions must co-vary with lithic industries'.

²⁵ SD – Sequence Dating. The system introduced by Petrie for the dating of the pottery of the predynastic periods.

Adding to Caton-Thompson's resolve to elevate the settlement theories, was the discovery of the Badarian pottery. This gave her a second motive for testing her convictions that the information gathered by excavating only cemeteries, will not provide enough answers to formulate a proper movement model for early Egyptian Prehistory.

It is important at this time to illuminate the work done at this site further as it proved to be the most important work done for placing the early pre-dynastic sequence in perspective. The geological strata found on the site contains two distinct markers above and below the midden earth forming the greater part of the excavation activities. The topmost layer consists of a layer of wash of clean limestone scree of variable thickness, but nowhere exceeding 275 mm (11 in) deposited on the slope since Old Kingdom times. Below the midden material at approximately 1.8 m (6 ft) is a layer of limestone scree, cemented by percolating mineral rich water to such a hardness that Caton-Thompson calls it a 'breccia'. This deposit is nowhere thicker than 250-300 mm (10 to 12 in), but is of such hardness that even the Old Kingdom grave shafts did not penetrate it (Brunton & Caton-Thompson 1928:72). It contains no archaeological artefacts. The midden and the material below the breccia deposits are very important for several reasons. Initially Caton-Thompson thought that the hard layer constituted the bedrock of the settlement and made some preliminary soundings without finding any signs of archaeological deposits. It was during the second season that they again removed some of the breccias to find Badarian sherds in the ground beneath. In all she collected thirty-six Badarian sherds, as well as three sherds of uncombed polished red ware and also three worked flints (Brunton & Caton-Thompson 1928:72).

Caton-Thompson (1928:73) does raise the question of the relation in point of time between the Badarian sherds below the breccias and those found above the breccias. At the time she considered the formation of the breccia to have taken place in a relatively quick time, and therefore the Badarian sherds above and below are close in a relative time-span. What is interesting is that she makes the following remark: 'It is quite clear that the site in its pre-breccia days was not used by the Badarian as a settlement. The rarity of their sherds and flints and the cleanness of the ground point to no more than a passing presence. Perhaps their settlement proper was lower down, in the now alluvial plain' (Brunton & Caton-Thompson 1928:73).

In 1975 Caton-Thompson and Whittle published a series of thermoluminescence dates for the Badarian. This will be discussed in Chapter 4.

3.4 MOSTAGEDDA

In the three seasons from 1922 to 1925 they worked on the edge of the eastern desert, the area covered stretched from Nauwara in the south to Naga Wissa on the north in the Badari District of the Asyut Province. The activities of the British School of Archaeology were transferred to Palestine with no future plans to excavate any further in Middle Egypt. Having found the Badarian culture in the area excavated by the BSA, Brunton was convinced that more Badarian sites were to be found. The area north of Naga Wissa was cursorily inspected and found to contain more Badarian remains. On the strength of his previous success concerning the Badarian, Brunton decided to continue searching for more evidence of this culture. The Trustees of the British Museum sponsored the project in so far as it paid for the facilities in packing and unpacking the antiquities. Brunton and his wife paid for the rest themselves. In two seasons, 1927–28, and 1928–29, Brunton excavated over three hundred graves containing Badarian objects (Brunton 1937:43).

The ground earmarked for excavation was similar to the areas previously inspected. It consists of low-lying desert between the cultivation and the high eastern cliffs. Wide bays formed where the cliffs receded and are present at Qau, Naga Wissa, and Mostagedda (Nazlet el Mostagedda). South of Mostagedda the cultivated fields run up to the limestone cliffs for about 1.25 km. When the Nile is in flood the area is impassable, except for a track high up on the cliff face.

The low desert slopes from the foot of the cliffs toward the cultivated lands and when reaching the fields, it forms a very steep slope, at times 8 meters high. With cascading waters from the cliffs numerous *wadis* cuts the area into spurs. All likely spots and even those that looked suspect were turned over (Brunton 1937:3).

A number of predynastic graves were found but having been thoroughly worked over by the local population, proved to be of little value and no further attention were paid to

them. Varying degrees of value were ascribed to graves, villages and settlements inspected by Brunton. These were more fully described in his tomb registers.

At this time, it must be pointed out that Brunton still believed that a separate culture, the Tasian, preceded the Badarian. Various schools of thought exist concerning the Tasian as an earlier culture, separate from the Badarian. Most scholars today consider the Tasian as part of the Badarian and it is for this reason that I will not include a discussion on the Tasian, mindful that it should be considered early Badarian (See footnote 29, p. 51). At Mostagedda he spent some time on describing the Tasian, but even then he has misgivings about the validity of his finds, he contends that 'the very difficult question of the distinction between the two classes of burial, Tasian and Badarian, will be discussed later'. It is quite possible that in many cases the description as Tasian is not warranted (Brunton 1937:5). It is so that the settlements ascribed to be Tasian are generally small and scattered, making it very difficult to decide the exact period that they belong to (Brunton 1937:8).

3.5 MATMAR

Following on his success during the two seasons 1928 and 1929 in the Badari district of Middle Egypt, Brunton decided to continue with his work along the edge of the eastern desert farther north in the hope of finding more evidence of predynastic or earlier cultures. An application for a concession to continue this work was successful and the stretch from Khawaled on the south to Ghoraieb in the north, approximately 10 km, was investigated by Brunton and his team during two seasons, 1929–30 and 1930–31.

Two distinct sections of the concession area were identified to be excavated. From Khawaled to Matmar, a distance of some 6 km, the desert edge continues in a curve to the village of Matmar where it runs almost due west. The broken-up and well-marked spurs found south of Khawaled, is absent in this area where the cliffs, following the general north-south direction, recede from the cultivated plain with the stretch of low desert becoming more wide going north. Beyond Matmar the topography is markedly different with the desert edge reverting to its more northerly trend with no cliffs to form

the characteristic rampart prevalent to the south. The desert is more of a level plain gradually rising from the cultivated fields and is unmarked by either spur or watercourse.

Significantly the ground covered was found to be mostly devoid of antiquities even though, according to Brunton (1948:3), a very thorough examination was made. In general, the sites investigated were of less significance as those around the area of Qau. The Badarian (and Tasian) remains became less and ceased entirely where the high spurs disappeared and the falling of the low desert tract to the edge of the cultivated fields.

In terms of the Badarian civilisation, the area north of Matmar appears to be the upper limit of occupation with no Badarian sites found in the Nile Valley to the north. In total, Brunton recorded 88 Badarian sites (42 cemeteries and 46 settlement sites) in the Badari to Matmar region, this to include the work done at Hemamieh (Holmes 1989:180). Friedman (1994:356) records 97 Badarian sites attributed to Brunton (45 burial localities and 52 settlements including Hemamieh). This serves to illustrate how the interpretation of Brunton's contribution to the work done in Middle Egypt is subject to certain variations.

3.6 OTHER POSSIBLE BADARIAN SITES

Within the main Badarian area, Gabra (Holmes 1989:180) found a Badarian cemetery near the village of Deir Tasa. During a short season from February to early March 1989, Holmes and Friedman revisited the Badari region with the main aims being 1) to relocate the Brunton sites; 2) to see what sites were in such a state of preservation to warrant a repay; and 3) to assess the impact of modern land use on the preservation of the archaeological sites in the area (Holmes 1992:67).

3.6.1 Gebel Ramlah

In the course of the *Combined Prehistoric Expedition's* program of archaeological investigations in Egypt's South Western Desert in January and February 2000, the team discovered a cluster of Neolithic sites along the shores of a fossil playa Kobusiewicz

(2004:566). The site, 22° 42'37" N and 30° 30'17" E, contained 13 burial pits with an assortment of human remains and grave goods. Although being earlier, Kobusiewicz (2004:574) remarks that

Based on typology of pottery and other grave goods, the Gebel Ramlah material culture, as evident in the cemetery, is similar to that of the Badarian. Most significant is the presence of black-topped pottery. The characteristic tulip-shaped beakers with flared rims also point toward a Badarian connection. The cemetery at the base of the Gebel Ramlah is the first to be found in the South Western Desert belonging to a group of transhuming pastoralists from the Neolithic period around the mid-5th century BC. The elaborate grave goods and trappings found in the internments point to a complex group of cattle-herders. It is reported that the cemetery is "contemporary with the oldest radiocarbon dated occupations in the Nile Valley attributed to the Badarian" (Kobusiewicz 2004:577).

3.6.2 Ras Samadai

Murray discovered a single grave during an expedition to the Red Sea coast of Egypt at Ras Samadai which sits on the coast due east from Edfu (Murray & Derry 1923:129). Although the grave was plundered she recovered enough artefacts to consider it being of Pre-Dynastic origin. One of the items found was a rectangular slate pale palette, which was later identified by WFE Resch as being Badarian (Holmes 1989:181).

3.6.3 Wadi Hamamat

The Wadi Hamamat lies on the shortest route between the Nile Valley and the Red Sea approximately 60 km from Quft (the ancient Coptos) on the Qena Bend and 60 km from Quaseir on the Red Sea coast. In 1949, Debono led an expedition to survey the Wadi Hamamat and at a place called Bir Hamamat he discovered a grave containing predynastic objects. Amongst the objects were two slate palettes which he described as being typically Badarian (Holmes 1989:181; Friedman 1994:20). He furthermore discovered in the Laqeita area internments of two children, which he also considers being Badarian. Several potsherds of Badarian style was also recovered in the Hamamat area.

3.6.4 Armant

From 1926 to 1933 Sir Robert Mond and Oliver H. Meyers investigated a Predynastic village and Predynastic Cemetery in the Armant area (25°37' N, 32°32' E), situated on the west bank of the Nile, 9 km southwest of Luxor (Bard 1999:25).

A number of objects were identified as being Badarian, such as animal burials, lithics, vases, implements, pots and sherds, and human remains (Mond & Myers 1937).

3.6.5 Hierakonpolis

The modern name of the site is Kom el-Ahmar, adjacent to the village of Kom el-Gemuia, and is located on the west bank of the Nile, 17 km northwest of Edfu (25°05' N, 32°47' E). Its ancient name was Nekhen and was the Predynastic capital of Upper Egypt (Adams 1999:371).

In 1927, Brunton investigated the desert-edge settlements and discovered what he thought to be Badarian sherds at the site (Adams 1999:372; Brunton & Caton-Thompson 1928:21). Fairservis discovered a few rippled sherds in the Great Wadi (Holmes 1989:181). No other Badarian artefacts, however, were found in this very extensive predynastic site.

3.6.6 El-Kab

The site of El-Kab is situated on the east bank of the Nile at 25°07' N, 32°48' E, about halfway between Luxor and Aswan, more or less opposite Hierakonpolis.

Predynastic remains have been found dating to the 4th millennium BC. Scattered rippled sherds believed to be Badarian has also been found (Hendrickx 1999:289). Vermeersch, who was excavating at the site, was of the opinion that the site is Badarian (Holmes 1989:182).

3.6.7 Maghara 2

The Leuven University excavated a predynastic site called Maghara 2, about 10 km south of Qena on the west bank of the Nile. The site did not yield any signs of agriculture practices by reason of the floodplain being very narrow, as well as no grain remains being found in the storage pits. Amongst the pottery that was found, Blacktopped Red class and a Ripple-faced class, associated with the Badarian stands out. A ceramic lip-stud of the Badarian type was also excavated. Calibrated dates of 4130–3665 BC suggest an occupation of the site around 4000 BC (Bard 1994:273).

3.6.8 El Khatara

In line with the need to find more Predynastic sites in Upper Egypt, the National Science Foundation and the Smithsonian Institute supported a survey of the El Khatara site, approximately 3 km north of Nagada on the west bank of the Nile. The site was investigated by Hassan and Hays in the 1970s (Kozlowski 1999:825). Three sites were excavated which were quite large and consisted of several mounds of middens up to 1 m thick. The middens produced numerous items, which included clay, stone and bone artefacts, charcoal, and animal and plant remains (Hays 1976:552).

Hays (1976:553) raises the question of correlation between the excavated artefacts of El Khattara with characteristics of the Predynastic cultures previously published. The El Khattara lithics were made from nodules recovered from the Eocene gebels, but were also readily available in the wadis adjacent to the sites, corresponding to the Badarian culture that also used the flint nodules rather than the tabular flint that had to be quarried. As far as typology is concerned, the El Khattara tools show a great affinity to the later Gerzean, except for the absence of fancy bifacially flaked flint knives. This comparison, however, cannot be exclusive of the Badarian as the latter living sites produced a limited tool list with the consequence that the differences in tool types may not be significant. This lack of data made the authors of the results at El Khattara turn to the ceramic criteria to decide on cultural affiliation to other assemblages such as the Badarian and Amratian. No characteristic white-cross-line, which is distinctive of the Amratian, is present, as well as no light-coloured decorated or wavy-handle pottery typical of the Gerzean is found either on the surface collections or in the excavations in

El Khattara. Black-topped rippled ware sherds characteristic of the Badarian do occur (Hays 1976:553). Hays (1976:554; 1984:213) contend that 'on the basis of the previous ceramic schemes, the El Khattara sites should be described as part of the Badarian culture'.

3.7 CONCLUSION

In considering the localities of Badarian occupation, it appears to be doubtful if any long-term or even short-term settlement of the Badarian people took place outside of the core area from the Badari-Mostagedda-Matmar region. The evidence provided by the few objects found in the scattered localities may at best have been due to trade or wandering nomads from the core Badari region. A detailed study of the continuation of the Badarian lithic and ceramic tradition is to be made first.

CHAPTER 4: CHRONOLOGY OF THE BADARIAN

Abstract

Accurate chronology of the prehistory of Egypt is vital in placing the various groups of people in the correct temporal development. To accommodate the earlier chronology question, Flinders Petrie developed his Sequence Dating (SD) method based on the various distinctive pottery types. The SD method was developed before the advent of chronometric dating, but because of the unreliable results obtained from the scientific dating methods on the early predynastic material, the sequence dating method is still widely being used. In this chapter the various methods and application thereof is discussed, especially concerning the Badarian phase.

4.1 INTRODUCTION

Chronology of the Badarian (to include the Tasian)²⁶ has been a major problem for scholars over the past almost 90 years. There are apparent conflicting dates available in the various publications adding to the problem. There are two types of dating systems in use, relative dating and absolute dating. The latter is scientific dating methods, such as radiocarbon dating. Petrie developed a method of sequence dating (which is relative dating) to establish a temporal order of the graves in Nagada and Ballas (Hassan 1988:138). The method of sequence dating was used to present the Predynastic into three units, the Amratian, Gerzean and a final unit which he called Semainian. Later scholars referred to these units as Nagada I, II and III. Hassan (1988:138) divided the units into:

Early Predynastic	4000–3900 BC
Middle Predynastic	3900–3650 BC
Late Predynastic	3650–3300 BC
Terminal Predynastic	3300–3050 BC

²⁶ During the excavation of the area south of Mostagedda, Brunton discovered what he considered a 'new Predynastic Middle Egyptian culture'. He called the find the Tasian and considered it to pre-date the Badarian (Brunton 1937:26). No stratigraphic evidence could be obtained and many scholars prefer to consider the Tasian part of the Badarian (Baumgartel 1947:20; Hoffman 1990:142). For the purpose of clarity this thesis will consider the Tasian as part of the Badarian.

They correspond roughly to the Badarian, Nagada I, II and III. See Table 4.1.

Table 4.1 Radiocarbon dates of Predynastic sites by various authors

Petrie	Kaizer	Hassan
Badarian	Badarian	Early Predynastic
Amratian	Nagada I	Middle Predynastic
Gerzean	Nagada II	Late Predynastic
Semainian	Nagada III	Terminal Predynastic

With the discovery of a unit older than the Amratian by Brunton and Caton-Thompson at Badari, termed the Badarian, a further dimension was added to the Predynastic sequence of ancient Egypt. It has been pointed out by Hassan (Friedman 1994:11) that these divisions are relative in sense and are primarily ceramic assemblage units. For the best part the boundaries of the units are vague in time and space as they are variable in regional placement. To better understand the chronology, or lack thereof, of the Badarian, I will describe in detail Petrie's Sequence Dating, the modification by Kaizer and carbon dating numbers available at this time.

4.2 SEQUENCE DATING

One of the major breakthroughs in establishing some kind of relative dating system for the numerous graves and tombs in prehistoric Egypt came with the publication of Flinders Petrie's *Diospolis Parva* in 1901. The dating of the Egyptian Predynastic Period has always been problematic. In line with Worsaae's Law,²⁷ dating the items found in the graves and tombs are the only way to provide the archaeologist with either an absolute date or a relative date. At the beginning of the 20th century no method for absolute dating (i.e. chronometric dating) was yet developed. The archaeologist had to make use of the available methods of relative dating. In writing a review of the book, F. L. Griffith (Griffith 1902:11), mentions that this dating is not by years but by sequence. In 1899, Petrie (Petrie 1899) wrote a paper outlining sequence dates for prehistoric Egypt. This system was later refined in his account.

²⁷ Worsaae's Law states that all grave goods are items that were in use at the same time (Rowe 1962).

Petrie utilised his observations and those of Quibell, Randall-McIver, and others on the prehistoric remains of Egypt for establishing a system of dating them. The sequences are those of development or changes of style, which will not serve to place them all in historical order and may not be relevant over the country as a whole. The prehistoric cemeteries do not have any stratification and no superposition to guide the archaeologist. Petrie's sequence dating was therefore the first attempt to create a chronological framework for the Predynastic period (Midant-Reynes 2002:257). Up to that point in time it was standard procedure to call any particular civilisation that could not be dated as prehistoric. This is particularly inadequate and the norm was to generally say that one period was before another (Petrie 1901:4).

Petrie (1901:4) was of the opinion that if you can use any definite scale of sequence where the scale of absolute time is unknown, you can deal with a period clearly as if the scale of years was provided. The problem facing Petrie was that the contents of hundreds of graves had to be recorded and how to sort them out into their original order.²⁸ To find a suitable object Petrie had to decide on a variation of artefacts and choose those best suited for him to construct a scale. In this regard, he chose the pottery found in the graves as this gave him the opportunity to rapidly compare them with the contents of every other grave. Thus, the pottery alone is dealt with for arranging the graves, as they were very abundant and varied. He did not disregard the other objects, stone vases, slate palettes, flints, beads, amulets etc., as they were arranged according to the results of the study of the pottery and served as checks on the correctness of those results (Petrie 1901:4).

To start with, Petrie (1901:4-12) used a system of cards to compile records of 900 graves by putting the pottery and other finds into a chronological sequence of 18 groups of 50 graves each. Their number were between 31-80, which means that a certain type of pottery having a SD range of say, 35-50 means that it first appeared in a grave from group 35 and continued to appear until grave 50 where it stopped to appear (Orton 1980:81). This was done by writing out the numbers, which express the forms of pottery that were found, on the card. Petrie identified nine kinds of pottery:

²⁸ Petrie's system of sequence dating is based on the excavation of 900 graves from the cemeteries at Abadiyeh and Hu (Midant-Reynes 2002:257).

- Black topped pottery [B]
- Polished red pottery [P]
- Fancy forms [F]
- White cross-lined pottery [C]
- Black incised pottery [N]
- Wavy-handled pottery [W]
- Decorated pottery [D]
- Rough-faced pottery [R], and
- Late pottery [L]

The card slip was ruled in nine columns, one for each kind of pottery. Thus, the whole of the pottery found in a given tomb was shown by a row of numbers which could be rapidly compared with the numbers of any other tomb record. In using this method, it would then be possible for exact definition and rapid comparison. Petrie developed a table of 50 sequence dates (SD), numbered from 30 to 80. Petrie decided on the 50 stages to refine the gradation in order to express the relative ages of varieties. The 50 stages were thus adopted to cover all in this period. As a precaution to future discoveries Petrie started the scale at 30 in case some earlier periods may be found (Petrie 1920:40);²⁹ terminating at 80 to leave enough numbers before 100 to join up the historic times in future. In *Diospolis Parva*, pp. 8 to 11, Petrie sets out to table his findings. He also explains the use of such tables by using pottery found in tombs at Abydos that consist of the fullest and most varied groups.

Petrie's work is quite intricate and consequently difficult to grasp at first. It is perhaps necessary at this stage to explain the question of stratigraphic relationships. Mathematically speaking, it is easier to solve a problem in an unconstrained situation where there are no stratigraphic constraints to speak of, such as graves. A lot of work has gone into devising techniques that will order graves with no constraints (both finds evidence and stratigraphy simultaneously). These techniques, collectively called Seriation, has gained a bad reputation. The premise being that it is not necessary to pay

²⁹ As it were, Guy Brunton later discovered the Badarian culture at el-Badari, which turned out to be earlier.

too much attention to stratigraphy on site as it can later be sorted out by Seriation. This is a fallacy and any information lost on site cannot later be recovered (Orton 1980:81).

Pursuant to the sequence dating devised by Petrie three major cultural changes were identified resulting in corresponding chronological phases (Midant-Reynes 2000:258-9):

- Naqada I (Amratian) consisting of SD30–38, which entailed the maximum development of the Type 'B', black-topped red ware and vessels with white decorations painted on a red body (type C).
- Naqada II (Gerzean) consisting of SD39–60 and contained pottery with wavy handles (type W) and the Type R (coarse ware) and brown painted decorations on a cream body.
- Naqada III, (Petrie's Semainean), and consisted of his 'late' or Type L pottery. This was classified from SD61–SD79/80.

In 1957, Werner Kaiser revised Petrie's sequence dates by using his so-called 'Stufen' (stepping) system.³⁰ Kaiser used as basis for his model his studies at Armant (Crowfoot Payne 1990:79). The main flaw in Kaiser's system is the fact that his studies are based on discoveries at the site of Armant, where Naqada III is poorly represented. It is still based on Petrie's system with his three phases divided into eleven sub-phases. Barry Kemp also contributed to a revision of the sequence dating system using mathematical Seriation.³¹ In essence it uses the multidimensional scaling routine grouping together objects or graves together which are similar.³² My own observation after looking at the models as mentioned in the footnote, is that as mathematical exercises, they may have some value, but no real application can be found in archaeology.

³⁰ Kaiser used material from cemetery 14/1500 at Armant to correct and refine the sequence dating system that stood the test of time for almost 60 years (Midant-Reynes 2002:258).

³¹ The technical term 'Seriation' replaced the Petrie term of 'Sequence' (Kemp 1982).

³² For a detailed study, see Kemp (1982:5-15), Dunnell (1970), Gelfand (1971), Shuchat (1984) and Kendall (1969, 1970).

Importantly, each numbered group in Petrie's observation, while constituting a period of time relative to one another in reference to the typological sequence of grave assemblages, does not represent a specific time or equal duration of time (Friedman 1994:41).

Petrie himself expressed the view that the numbering of the pottery does not imply equal intervals of time (Petrie 1920:4). It was supposed to be equal numbers of burials in the cemeteries of Nagada and Diospolis. He, however, was adamant that the burials at Nagada represented every period of the prehistoric that was yet found in Egypt at that time (the Badarian yet to be discovered). Petrie also raises the question of the historical length of the period, but admits that it is a futile exercise at the time (Petrie 1920:4).

4.3 SEQUENCE DATING OF THE BADARIAN

Petrie was of the opinion that the amount of Badarian material available to the excavators limited the possibility of making a complete sequence system (Brunton & Caton-Thompson 1928:26). To facilitate some system, he assigned sequence dates to groups that he sorted out to be the most representative. Consequently, he divided them into nine sections, numbered SD 21 to 29. The results for dates of the types and dates of the tombs can be found on plate xix A, in Brunton and Caton-Thompson (1928). He based this on the premise that the lower most layers of the settlement would be the earliest and the later styles from SD 31 onward be connected to the upper sequence of layers. Petrie (1939:4) was of the opinion that, 'as the pottery of this age is found beneath that of the Amratian and later ages, the succession is unquestionable'.

Because of the dearth of material available from the tombs insofar as their numbers and diversity are concerned, any attempts to date them was abandoned (Friedman 1994:42).

Even though Petrie's assumptions in dividing the Predynastic graves into three phases, Amratian, Nagada and Gerzean came under criticism by later scholars, it does not affect the placing of the Badarian as being earlier than the Amratian. This has never

been in dispute. The effect on the Badarian in terms of the different interpretation of the ceramic sequence dating system has to do with the placing of the Badarian in historical terms. Given the geographical distribution of the pottery of the different cultures defined by Petrie, a number of scholars found serious flaws in his methodology and assumptions. The first concern was voiced by Scharff (1926:73) when he compared that the globular Wavy-handled jars noted by Petrie, occurs at Abusir el Meleq in contexts much later than the SD ascribed to them by Petrie. Scharff (1928:265) continues with stating the following: 'So long as white-on-red and black incised pots, disk-shaped mace-heads and other objects typical of the First Civilization³³ have not been found north of Kau el-Kebir we have no right, in my opinion to assume the existence of the First Civilization for the whole of Egypt equally. Consequently, the SD system with its First and Second Civilizations in chronological succession applies only to southern Upper Egypt'. Scharff was of the opinion that Petrie was correct in his application for Nagada only. This, however, was disputed by Baumgartel (1947:41) who contends that there is no reason to restrict the sequence dating to Upper Egypt only. This has little bearing on the question of dating the Badarian, except to limit the possibility of using known later dates as applied to certain pottery types and then apply them to place the Badarian in a type of historical sequence.

In conclusion it is fair to assume that the sequence dating system, together with excavating techniques, was valuable insofar it established that the Badarian was earlier in the archaeological record than the subsequent Amratian and Nagada cultures.

4.4 CHRONOMETRIC DATING OF THE BADARIAN

Until the advent of the development of radiocarbon dating in 1950s, the method of relative dating system to the comparison of cultural developments in different regions of the Nile Valley was, and actually still is, a useful tool in understanding the formation of the early agricultural communities along the Nile Valley, and also their relationships with surrounding areas (Hassan 1985:97).

³³ Scharff (1928:265) refers to Amratian as being the First Civilization and Nagada as being the Second Civilization.

In the knowledge that the earliest settlements along the middle to upper Nile Valley called the Badarian predated the subsequent Amratian and Nagada Predynastic sequence in the earlier development of the Egyptian Dynastic Period, it is imperative to assign a chronometric date for these assemblages. This is especially true as the reliance on relative dating has led to many different interpretations of the correct sequence of events to enable scholars to attempt a credible framework of the cultural changes that led to the rise of Egyptian civilisation.

Earlier material collecting for radiocarbon dating was based on the solid carbon method which proved to be quite inaccurate. This is especially true of the material gathered by Petrie at Nagada and Caton-Thompson and Gardner at the Fayum. Later refining of the method by using the half-life of 5568 years produced more accurate figures, but this was still compromised by suspect material, the lack of information and the lack of appreciation of the statistical nature of radiocarbon dates. Even though numerous radiocarbon dates are now available for the Neolithic and Predynastic sites of Egypt, it is still not enough to develop an accurate detailed chronological framework (Hassan 1985:97).

Although a number of radiocarbon dates exist for the Egyptian Neolithic and Predynastic periods, none were calibrated by tree-ring corrections that became available in the early 1970s. Radiocarbon dates without calibration are not in agreement with conventional solar dates and the discrepancy reaches a maximum from 4060 BC to 7350 BC, when radiocarbon dates are too young by 800 to 870 years (Damon et al 1974:350). The systematic radiocarbon and stable carbon isotope analysis of dendrochronologically dated specimens of wood is used in the conversion from radiocarbon years to solar years.

Hassan (1985) was the first scholar to derive an estimate of the most probable chronological age of the main sites and divisions of the Neolithic/Predynastic period in Egypt. Hassan (1985) used the conversion tables published by Damon et al (1974), but preferred the tables supplied by Damon et al (1974) as the other tables available provide a range rather than a midpoint and a standard deviation, although the corrected dates in most cases does not differ by more than a few decades (Hassan 1985:97).

In dating the Badarian only one site provided the necessary stratigraphic sequence for the possible chronometric dating of the Badarian through to the Gerzean, and that is the site at Hemamieh, excavated by Caton-Thompson (Hassan 1985:106).

Table 4.2 Thermoluminescence Dating of the Badarian (Caton-Thompson & Whittle 1975:97)

Museum reference	Context	Description	TL date BC
UC 19678	2.5 ft level	Decorated ware	3775 ± 330
1925.586	3.5-4.0 ft level	Badarian rippled	4360 ± 355
1925.586A	5.0-5.5 ft level	Polished red	4330 ± 355
1925.586B	5.0-5.5 ft level	Badarian rippled	4450 ± 365
1925.589A	6.0 ft level; on breccia	Rough Badarian	4690 ± 365
1925.589B	6.0 ft level; on breccia	Polished red	4510 ± 475
1925.590A	6.0 ft; beneath breccia	Rough Badarian	5495 ± 405
1925.590B	6.5 ft; beneath breccia	Rough Badarian	5580 ± 420

Whittle (1975:97) does try to explain the unexpectedly high dates beneath the breccias by claiming that it 'may be due to the environmental dose-rate being in error for this context or it may be explained by assuming a long phase' (see also Hays 1984:213). I am not convinced of the 'long phase' theory and this only leaves us with an error in testing the samples.

After a study of all the data on the radiocarbon dates available for the Badarian (including thermoluminescence dates),³⁴ see Table 4.2. Hassan (1985:107) determined that the weighted averages of the three Predynastic sequences are the following:

Badarian (beneath breccia)	5535 ± 290 BC
Badarian (above breccia)	4660 ± 290 BC
Amratian (Nagada I)	4378 ± 205 BC

³⁴ Caton-Thompson and Whittle (1975) published eight thermoluminescence dates taken from Badarian potsherds recovered from the site of Hemamieh by Caton-Thompson in the period 1921–1926. See Table 4.2.

Hassan (1985) concludes by admitting that the thermoluminescence (TL) dates are not sufficient to place the Badarian in any firm temporal range. It is apparent that more radiocarbon dates for the Badarian are needed, but according to Hassan, he places the Badarian at Hemamieh somewhere between 4400 and 4000 BC.

There are, however, a number of other dates available, but appears to be based on questionable assumptions. Hoffman (1980:142) discusses the dating of the Badarian by comparing the two known radiocarbon dates on Badarian material (one of 3160 ±160 BC corrected to 3920 ±190 BC from El Badari and one of 4875 ±108 BP corrected to 3892 ±108 BC from Locality 11 at Hierakonpolis), and by comparing them to the new TL dates from Hemamieh, comes to the conclusion that the Badarian can be dated between 5500 and 3800 BC. I have my doubts whether the sample from Hierakonpolis actually represents the Badarian culture.

Similarly, the artefacts found at El Khattara in Upper Egypt (see Chapter 3) are reported to be Badarian and nine radiocarbon dates with 2 thermoluminescence (TL) dates seem to support the theory. See Tables 4.4 and 4.5.

Table 4.3 Comparison of chronometric dates for the Badarian in BC by various authors

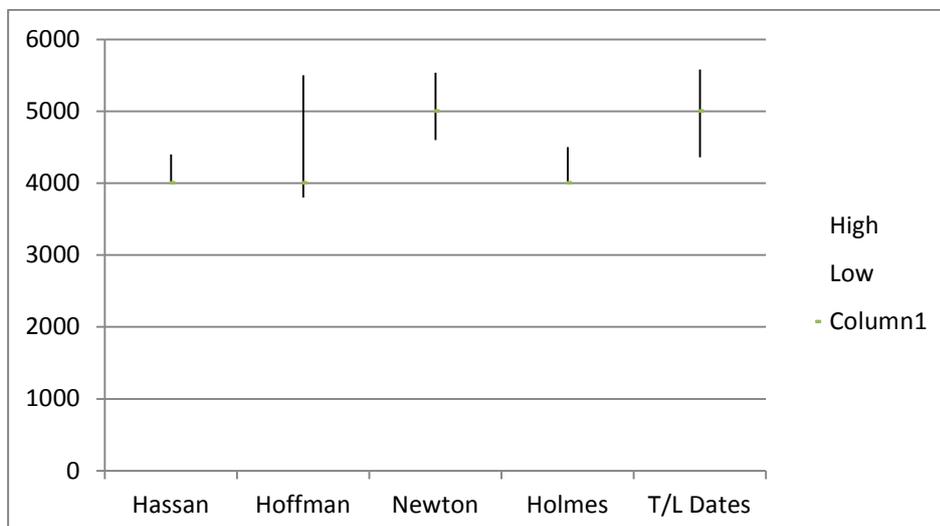


Table 4.4 Thermonuclear dates for El Khattara Badarian (Hays 1984:214)

Culture	Site	Sample	TL Date (BC)
Badarian	Khattara KH 1	OX206 a2	3 800 ±400
Badarian	Khattara KH 3	OX206 b4	3350 ±550

Table 4.5 Radiocarbon dates from the site of El Khattara (Hays 1984:214)

Culture	Site	Sample	¹⁴ C Age (BP)
Badarian	Khattara (KH 1)	SMU-351	4930 ±70
Badarian	Khattara (KH 1)	SMU-360	5030 ±100
Badarian	Khattara (KH 1)	WSU-2256	5270 ±100
Badarian	Khattara (KH 3A)	TX-2340	4970 ±70
Badarian	Khattara (KH 3A)	SMU-353	4780 ±70
Badarian	Khattara (KH 3B)	SMU-493	5214 ±54
Badarian	Khattara (KH 3B)	WSU-2255	4960 ±100
Badarian	Khattara (KH 6A)	SMU-303	5005 ±69
Badarian	Khattara (KH 6A)	SMU-355	4810 ±80

There are conflicting statements regarding the work done at that time and it has become clear that a reappraisal of the evolutionary sequence of the Predynastic development in the Nile Valley is required. Hoffman (1990:141) raises the possibility that the Badarian and Amratian might overlap, followed by the Gerzean.

The most recent radiocarbon dates were done on Mostagedda burial textiles by a team of researchers (Jones et al 2014:2) and they formulated the following:

Table 4.6 Radiocarbon dates on Mostagedda burial textiles (Jones et al 2014:2)

Sample	Historical Date	Material	Radiocarbon Date
33.40.44	Badarian	Linen	4316-3986 cal BC
33.30.80	Badarian	Linen	3635-3372 cal BC
33.30.83	Badarian	Linen	3989-3800 cal BC
33.30.92	Nagada II	Linen	3339-2933 cal BC

Sample 33.40.44 came from grave 3538 at Mostagedda. It contained an intact Badarian Bowl SB5h and a female skeleton with matting all over and a trace of cloth near the knees but none on the body. The grave also contained shells and a small skin bag, a

single string of shell and blue-glazed steatite beads with six *Conus* shells all threaded on two strands of cow's hair (Brunton 1937:43, pl. 10).

Sample 33.30.80 came from Badarian grave 1215 at Mostagedda. It contained a partial male skeleton with a pot, BR25e, some cloth, flint and a needle, grain and resin (Brunton 1937:38, pls. 8, 17, 23, 25).

Sample 33.30.83 came from Badarian grave 1214 at Mostagedda. It is described as having the remains of a female wrapped in matting and cloth. A pot (BB71d), bone spoon (with malachite) and remains of a basket were close together near the feet (Brunton 1937:38, pls. 8, 15, 19).

If we take only the later end of the radiocarbon calibration then sample 33.40.44 is approximately 600 years earlier than sample 33.40.80, and 186 years earlier than sample 33.30.83. The difference between 33.30.80 and 33.30.83 is 428 years with both samples coming from the same cemetery.

The historical dates are from the archaeological evidence found in the various graves and identified by Brunton (1937) as being Badarian.

The vast difference in the radiocarbon dating is of concern to me and it makes for a chronological sequence that cannot be accepted without further research.

4.5 QUANTITATIVE ANALYSIS OF THE BADARIAN

Attempts have been made to date settlement and grave areas with pottery assemblages without great success. Already in 1928, Caton-Thompson at Hemamieh concluded that the majority of sherds in a settlement context contained mainly utilitarian 'rough' ware through all levels. They were coarse brown-red ware, containing much straw, which is a characteristic of Predynastic rough wares (Brunton & Caton-Thompson 1928:71). Caton-Thompson at Hemamieh did, however, use the occurrence and frequency of the ceramic wares to provide relative dates for the excavation levels, but in so using only the clearly quantified selected ware and clearly identifiable rim sherds (Friedman

1994:56). Due to the vast number of sherds from any one locality, and the number of sherds it breaks into, it is difficult to quantify the fragmentary materials as there is no direct relation to the fragments and complete vessels, especially to its size or shape (Friedman 1994:56).

To arrive at some date for the Badarian utilising relative dating of the ceramics wares requires that we work back from better known later Predynastic phases. This is, however, subjective and the comparisons of the phases will vary by site.

Newton (1993:410) revised the commonly accepted dates given by Hoffman as being unacceptable and determined by working back from the dynastic period that the Badarian should be placed between 5825 and 4583 BC.

4.6 CONCLUSION

Although it is clear that no firm relative dates can be established for the settlements, the radiocarbon dates cover only a very few areas. Some scholars have tried to integrate the Sequence Dates devised by Petrie into real time values for each of these dates.

Petrie himself attempted to integrate his sequence divisions into real time by estimating that each division spanned approximately 50 years. In doing so he estimated that the predynastic period lasted from about 8000 BC (Petrie 1920:6). Utilising the radiocarbon chronology, Hassan (1985:112) is of the opinion that the sequence date divisions correspond to an average of about 300 years and a maximum of 550 years, concluding that each division would therefore correspond to an average of about 10–20 years.

It appears that the cultural development of ancient Egyptian civilisation occurred with agricultural developments that took place, at first in the Delta area and not much later in the Upper Nile valley. It took about 1500 years to reach an accelerated rate of change which happened for about 500 years and in the following 350 years during the Archaic (Early Dynastic) period the main elements of the Pharaonic period was established.

Continuing the Old Kingdom lasted for about 600 years with the rest of the dynastic periods following (Hassan 1985:112).

To recap, estimated dates for the Badarian culture period are from ca. 4800 to 4200 BC. The early date of 5500 BC obtained on potsherds from Hemamieh by using thermoluminescence is now considered to be inaccurate. A time range beginning earlier than 3850 BC is considered more feasible. The calibrated radiocarbon date of 3715 BC for the Badarian-like remains at el-Khattara as reported by Hays (1984) is as far as I am concerned the most likely (Anderson 1992:53). The Ancient Egypt Research Associates considers the Badari phase to be from 4100–3700 BC (Wodsińska 2010:79).

CHAPTER 5: BADARIAN POTTERY

Abstract

The main marker for the identification of the Badarian has been its distinctive pottery. In discussion will be the distinctive features of the Badarian pottery, its possible origins and manufacturing processes. In line with the pottery forms devised by Petrie the Badarian classification is discussed and analysed.

The Badarian pottery spatial distribution and finally the distribution of the Badarian culture as perceived by other scholars, especially in terms of the possible Badarian pottery, finds at other sites.

During the 1923 excavations in the great cemetery of the Dynastic age at Qau el Kebir (Etmanieh), more especially in the region known as Cemetery 400, adjoining the houses of Ezbet Ulad el Hagg Ahmed, a few sherds of hand-made pottery with a peculiar rippled or combed surface had turned up from the rubbish of that much used piece of ground (Brunton & Caton-Thompson 1928:1).

5.1 INTRODUCTION

The discovery of the pottery sherds of a type never seen before in any of the excavations was deemed to be of a predynastic tradition preceding the known Predynastic cultures at the time.

The most distinctive feature of the Badarian pottery was the fine or coarse rippling on the most of the pottery surfaces, the rippling was done to the outside of the vessels, sometimes over the whole of the outer surface, at times only halfway down and at least where the rippling is present it is at the rim. On rare occasions rippling is done on the inside and then only on wide dishes or bowls. Other characteristics of the Badarian pottery are as follows:

- prominent class of black-topped brown or red rippled or combed bowls,
- various degrees of fineness,
- at times a white powder was rubbed over the markings to emphasise them,
- some of the rippling was done in a spiralling way,
- importantly the clay was thinned out with some of the edges so fine as to be almost sharp before baking.

In the interior of some of the vessels designs are found pointing to burnishing with a pebble (Friedman 1978:18). A coloured wash or slip applied to the better class of pottery also shows sign of burnishing and Brunton (1928:21) was of the opinion that this was done with a pebble, similar to present day polishing of pottery with a pebble in South Africa. The three distinct colours of the finished product are probably directly related to the temperature the wash was subjected to. The black surface appearing after baking, is due to less oxygen present in the process with the bright red attributed to a complete oxidisation. The brown surface could be in between the two, except if another material is used, which at the time of writing seemed to be the most probable (Brunton 1928:21).

The black-topped brown polished pottery (see the classification below) is unique in the manufacturing of pottery in the Nile Valley. It is the finest example of ceramic manufacture, not found elsewhere in Egypt and not since the Badarian was it ever equalled (Brunton 1928:21; Friedman 1994:18).

The Badarian potters produced a very thin walled ceramic, some with designs on the interior made by a burnishing pebble, as well as carinated or keeled vessels. The pottery was all handmade (Spencer 1997:44).

Unfortunately, most of the pottery that was found was broken and the drawings of the early excavators do not paint the correct picture. The fine and thin walls and rims of the ceramics made the vessels prone to attack by salts, and any movement in the graves resulted in the pots being shattered (Brunton 1928:20-21).

Up to this point, the focus has been mainly on the lithic industries of the prehistory of northern Africa. Pottery had been discussed with the lithics and other artefacts on occasion, but I will now turn my attention to a more detailed comparative study of ancient pottery, to determine its place in the advancement of the first hunter-gatherers to a fully-fledged sedentary lifestyle in the Nile Valley of Egypt. Pottery is an almost indestructible artefact and its use in the study of ancient cultures is almost as important as the study of the lithic industries. In the last two decades, the research into pottery as

one of the material traits important in the cultural development of early societies has escalated and has become a legitimate research focus (Rice 1999:2).

The origins of pottery have received much attention and support the idea that early humans had knowledge of the properties of earthy materials. It is suggested that the earliest pottery makers are to be found at sites in middle latitudes at low-attitude, riparian coastal or estuarine situations coupled with indicators of non-sedentary and non-agricultural subsistence/settlement patterns (Rice 1999:21). To the riparian sites, we can also add the lacustrine environments of the oases and playa areas of the Saharan Africa. Even though it is difficult to categorise area-specific environments of the Pleistocene-Holocene transitional millennia, some scholars have found that early pottery sites lack evidence of full year-round occupation and that it is probably long-term semi-sedentary foraging and collection with movements on a seasonal basis from riparian (riverine as in the case of the Nile) to interior campsites (Rice 1999:24).

The origin and development of pottery is extremely widespread, but for our purpose, I will focus only on the pottery evidence of northern Africa (including Egypt). Reviews of data on the origins of pottery in early northern Africa indicates that it probably occurred along the southern area of the Sahara and in and around the central Nile valley of the Sudan, sometime during the middle 10th millennium before present (Close 1995; Rice 1999). Arkell (1949:111) is of the opinion that the so-called “wavy line” of the Khartoum Mesolithic, which he termed the Wavy Line Culture, is very much earlier than the Badarian or any predynastic pottery.³⁵ This hypothesis is very likely given that the Sahara at that time was moderately well watered grassland with the Nile valley being a rich habitat of fauna, fish and fowl. The earliest known pottery (Khartoum Mesolithic c. 9500–8000 bp), held no correlation to production. Grinding stones were present, but probably used to grind wild grasses, although Arkell is of the opinion that the grindstones were there to grind red and yellow ochre for pigments, and clay for pottery (Rice 1999:17; Arkell 1949:108).

³⁵ Before being finally dried and fired. It is not claimed that the *beginnings of pottery have been found*, but the Wavy Line ware, although at first sight sophisticated, and made by potters who took trouble to prepare a clay that would fire hard, is decorated with a very simple tool; and is more primitive in type than Badarian and predynastic pottery (the italics are mine).

The early African forms were simple decorated with comb, cord or rocker stamping in a variety of forms (Rice 1999:18; Close 1995:26). Burnishing of the surface appeared much later, even after ca. 6000 bp. Standard manufacturing methods in the Mesolithic and Neolithic periods in the middle Nile consisted of coiling the clay, and gradually the walls became thinner, tempered with mineral temper and at times chaff was used (Welsby 1997:28, 30; Rice 1999:18). The advancement in early north African pottery was accelerated to the point where they were so well formed and fired that scholars came to the conclusion (to date unproven) that manufacture of the pottery had to have a long period of development, possibly in the Sahel belt (Close 1995:26). See Figure 5.1.

The use of the early African pottery is not known. In the eastern Sahara and Tadrart Acacus,³⁶ the paucity of sherds leads to the conclusion that the lack of sufficient potsherds does not warrant a theory that they had any importance in cooking, storage, holding water or any everyday use. It is possible that its significance lies in a social and symbolic meaning (Rice 1999:18). In contrast, the middle Nile has abundant pottery sherds etc., so as to suggest that pottery was used in important and common practices, storage, processing and others, like the distinctive Neolithic calciform beakers for funerary use (Rice 1999:18).

As we move on to the Badarian sites, pottery becomes the benchmark by which the people of the Upper Nile Valley at that time is identified.

³⁶ A number of carbon-dates for the area on the eastern side of the Tadrart Acacus in the Libyan Sahara, conducted during the 1970s, shows the occupation as being around the 7th millennium BC (Barich et al 1984:411). Arkell (1949:111) is of the opinion that the "Wavy Line" pottery may have inspired the "decoration characteristic" of the Badarian pottery of Egypt, which was first combed and then burnished over the combing.

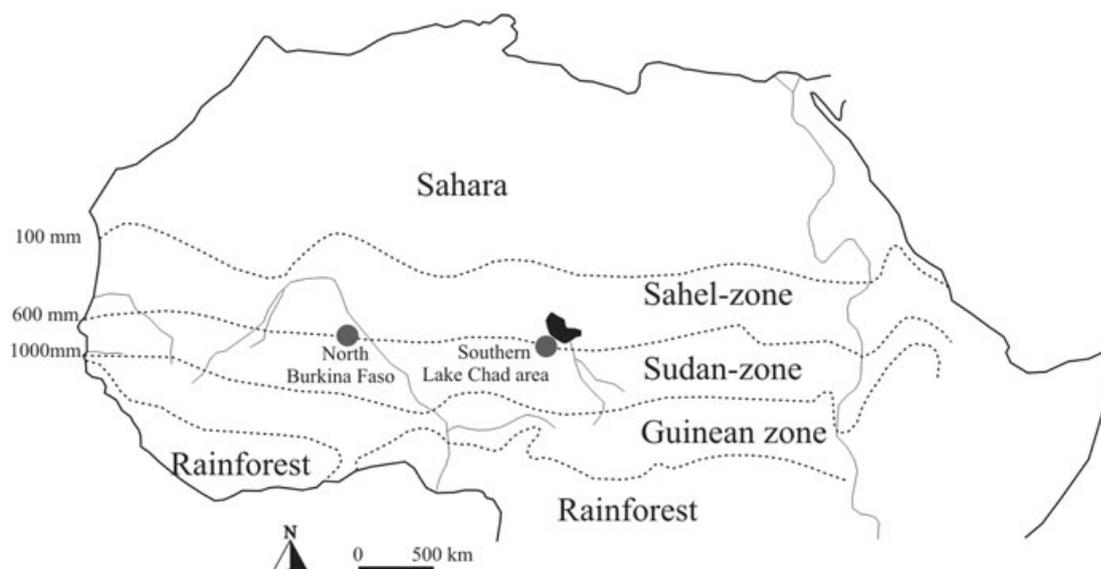


Figure 5.1: Sahel Belt (Close 1995:26; Linseele 2010:44).

5.2 BADARIAN POTTERY CLASSIFICATION

The classification of the Badarian pottery by Brunton, although roughly based on Petrie's Corpus,³⁷ does not follow it as it is not based on form but on the quality and finishing of the pottery surface.³⁸ Brunton also used a two-letter abbreviation to avoid confusion with Petrie's classification (Brunton 1928:21-24). Avoiding form as a basis for classification, Brunton came up with five easily distinguishable classes dividing them into finely polished and the unsurfaced or only poorly burnished:

- BB which stands for black-topped polished brown,
- BR for black-topped polished red,
- PR for plain polished red,
- SB for smooth brown,
- RB for rough brown.

³⁷ Petrie's Corpus started at SD30 around the Amratian, which postdates the Badarian. Petrie purposefully left the sequence date from 0 to 30 open in case earlier cultures were discovered (Petrie 1921).

³⁸ The following classification is based solely on the classification by Brunton (1928) and does not conform to the modern approaches of classification that uses the concept of ware as the fundamental criterion (Friedman 1994:109; Rice 2005:286).

Within the major classes, Brunton also divided all-black smooth or polished pots and together classed them as AB. A small number of fancy forms and decorated pots were grouped together as miscellaneous, MS.

Class BB. The black-topped brown polished pottery is the predominant distinctive Badarian type and represents the best of the Badarian potter's products. The pots are extremely thin and have the finest and closely spaced even rippling (Figure 5.2 and Figure 5.3).



Figure 5.2: Black-topped brown polished pottery (UCL Petrie Museum)



Figure 5.3: Detail of UC9045 – Figure 5.2 (UCL Petrie Museum)

The black areas on the pots are not the same in each and the blackened areas vary from a small band around the rim of the pot to the whole area of the surface. Brunton (1928:22) continues and describes the pots as being intermittently black, with some

brown with the black pots being in general the finest. The interior of all pots are black and as they were baked mouth down the black is always confined to the upper part of the vessel. Rippling is varied and at times fine, distinct and regular to feint or none. On three light brown pots that were combed the rippling is vertical. Brunton (1928:22) describes the wash as grey, or dark neutral earth-brown lighter coffee-brown shade and also some with pale brown tint, sometimes even pinkish, confined to pots showing no rippling.

Forms in the BB class is mainly (50%) represented by having sharp or distinct angles between the more or less upright sides with a flattish or rounded base. Virtually no distinct ornamentation is observed on the BB class pots. The ornamentation observed is also limited to two pots, one where the interior black surface is brightly burnished in a wavy line at an angle formed by the sides and base, and one that has a cross-hatched Maltese cross burnished on the inside (Brunton 1928:22).

Class BR. In the black-topped polished red class, pots with a smooth surface represent about 20 percent of the corpus of pots recovered by Brunton. This class is distinguished by the bright-red or brown-red slip with one example of, what Brunton (1928:22) describes as being 'plum-red, which is usual in the Middle and Late Predynastic periods' (Figure 5.4).



Figure 5.4: Black-topped polished red pottery (UCL Petrie Museum)

This class of pottery displays more decorations on the insides than those of the brown-polished class. The decorations vary from fine burnished lines to branches (possibly palm leaves) and are found in shallow bowls to deeper bag-shaped vases. Contrary to the brown-polished class which frequently shows a sharp angle between the sides the BR class is mostly round bottomed which eliminate the sharp angle.

Class PR. There are not many of the polished red class of pottery. The pots are identified by the red wash applied to the vessels.

The amount of wash applied varies considerably with the rippling of the surface almost non-existent in the sample collected by Brunton and his team. The amount of polish or burnish is also quite variable. Exclusive to this class are the large flat dishes and then only rarely.

Class AB. Again this is a class of pottery with a small corpus. They are all black and apart from the usual bowl shapes, they also have various other forms. Some of the uncommon forms include a bottle, forms with distinct necks and forms with projecting rims. The pottery of this group is somewhat thick and invariably polished.

Class MS. The miscellaneous class comprises a number of unique items of which most are represented by single examples. Some of the examples consists only of a few scattered sherds. It also appears that many of the examples were not collected *in situ* by Brunton and his team, but found elsewhere or even bought at the antique shops in the villages.³⁹ The polished red-ware is identified by a base that is flat and has a projecting rim and the best form is black-topped. Various examples of the type are to be found in the Brussels Museum, Cairo Museum, Ashmolean Museum, Oxford and in the Petrie Museum, University College. Most of the examples were bought. Descriptions of the pots and fragments are to be found on page 23 (Brunton 1928).

³⁹ Brunton (1928: pl XVI) illustrates 25 examples of his miscellaneous (MS1-25) ceramics.

Class SB. Brunton (1928:23) placed the smooth brown pots in this class and are generally thicker and less well made than its counterparts found in the black-topped polished red class (BR) or the polished red class (PR). No rippling is found and the pots are generally polished. The forms are shallow or deep bowls (Figure 5.5).



Figure 5.5: Smooth Brown Pots (UCL Petrie Museum)

Class RB. The rough class consists of the remainder of the pottery and are generally badly baked and coarse. Also present in some of the clay, Brunton found chopped straw to strengthen the pots. This class is utilitarian ware and seldom placed in the graves (Figure 5.6).



Figure 5.6: Rough Brown Pots (UCL Petrie Museum)

5.2.1 Modern approaches to pottery classification

In the early description of ceramics little attention was paid to pottery ware as an approach to classification. The Badarian ceramics were all made of Nile silt with some sand inclusions and organic material (chaff, straw) for larger vessels (Wodzińska 2009:75). The lack of proper analysis of the ware is evident in attempting to use the earlier published descriptions for comparative samples (Friedman 1994:109). In recognising that one of the foremost problems in archaeology is the cross-cultural classification of ceramics, Ericson and Stickel (1973) came up with a proposal that a classification system based on solid geometry be established. They conducted a study with a theoretical viewpoint based on the assumption that the major focal point of ceramics is that the morphologies of all ceramic vessels on archaeological sites were determined by their functions. They contended that the morphology (size, form and structure) of pottery is the most important criteria for a classification system which can be applied cross-culturally (Ericson & Stickel 1973:357-367).

In the modern approach to Egyptian pottery, classification ware is used as the basis for standardising ceramic description and to aid in the comparison of pottery classes across time and geographical areas of interest (space), especially in the study of the development of ancient Egyptian pottery. Ware is being defined using a number of attributes and include paste composition (composed of specific clay or combinations thereof, and tempering agents); manufacturing technique (firing, method of construction) and surface treatment (colour, glazed ware, surface coating, surface decorations, or lack thereof such as incisions, painting or impressions). To define 'type', a combination of ware and form is required (Rice 2005: 285; Friedman 1994:109).

It is envisaged that systematic incorporation of the ware concept into classification systems would bring about a major step in the extension of classificatory procedures. There are, however, several drawbacks, such as proper identification of composition properties without extensive and at times costly laboratory analysis. This is especially true of detailed investigations of pottery fabric. The texture of the clay, composition of non-plastic materials, porosity and permeability and transverse strength of the fabric are important to an understanding of the ceramic technology of the time or area. It must also be recognised that clay in itself can be a temper as it is common for potters to mix

clays of different colours and properties (Rice 2005:119). It is very difficult to determine some of the more complex properties outside of the laboratory, but is essential in providing insights into the method of the manufacturing of the pottery at the time, especially clay preparations, forming and firing (Friedman 1994:110).

To standardise the description of the variety of Egyptians fabrics, the International Group for the Study of Egyptian Ceramics developed the Vienna System. It was designed to incorporate the ware concept and was initially developed to classify the Middle Kingdom ceramics. Clay is graded by the size (Wentworth scale) and quantity of sand grains within the matrix. The natural clay from the Nile silts and marls are used in the Vienna system. The fabrics are then graded according to size of sand particles and also by the frequency of the voids left from the combustion of organic material (Friedman 1994:111).

It must be emphasised that the Vienna System groupings is based on sherds from the Middle Kingdom, the Second Intermediate Period and the New Kingdom. It is therefore understandable that the system works best within these periods (Bourriau & Nicholson 1992:30).

5.2.2 Badarian pottery forms

As with most pottery from the early periods the Badarian ceramic assemblage is fairly simple. The most common forms are bowls with straight rims and rounded bases, some are hemispherical bowls with incurved rims. Oval bowls and large basins are known. Completing the variations are neckless jars and globular jars with some fancy forms, such as jars with spouts, spoon-like bowls. There are some handles and these appear to come mainly from settlements where the pottery variations are larger than those from the cemeteries (Wodzińska 2010:79).

Brunton (1928) provided us with a corpus of 62 shapes constructed mainly from whole pots to some which could be reconstructed. He divided the pots into shallow to deep with a subdivision on the type of base found, flat or round (Friedman 1994:320). Brunton described the forms of the Badarian pottery as quite distinctive for the period with forms

like shallow or deep bowls, some with carinated or straight walls and straight or simple rims, forming the greater majority. The outstanding feature is the simple rim, which according to Brunton (1928:24), is “almost always straight; there is hardly anything in the nature of a neck, and a turned-out lip is very rare”. See Figure 5.7 for the explanation of potter nomenclature.

Pottery recovered from the graves produced an endless number of restricted shapes such as bowls. The variation in form and surface treatment found in the settlement contexts, although mainly from broken pots and sherds, may indicate a much more varied character of pottery shapes as that which is found in the graves. It will be noticed that almost all the pots, which present marked peculiarities of form, come from the village areas, and were not found in graves. We may deduce from this that the Badarian pottery was much more varied in character than the endless succession of bowls found in the graves would lead us to believe (Brunton 1928:24).⁴⁰

Shape classification of ceramic vessels is in general very difficult as clay is malleable and its use is dependent on several manufacturing uncontrolled variables, such as the personal touches of individual potters and his or her technical abilities, manufacturing methods, vessel function and style. It is the intentional variation in shape and decoration that can serve as markers for regional and chronological determination (Friedman 1994:213).

For comparisons with whole pots, Petrie’s lack of identifying sherd material to whole pots is a drawback, but this is addressed by Brunton (1928: plates XII to XIX). For the purpose of this study, it does affect the possibility of placing the Badarian in either a late Neolithic or early Amratian if other markers point in that direction.

⁴⁰ In terms of ceramic pottery shape variation, the Badari assemblage is relatively simple and consist of mainly simple bowls with straight rims and rounded bases. Other variations are hemispherical bowls with incurved rims, some carinated or bent walls, oval bowls, with some large basins also present. There are some fancy forms and handles are very rare (Wodzińska 2010:79).

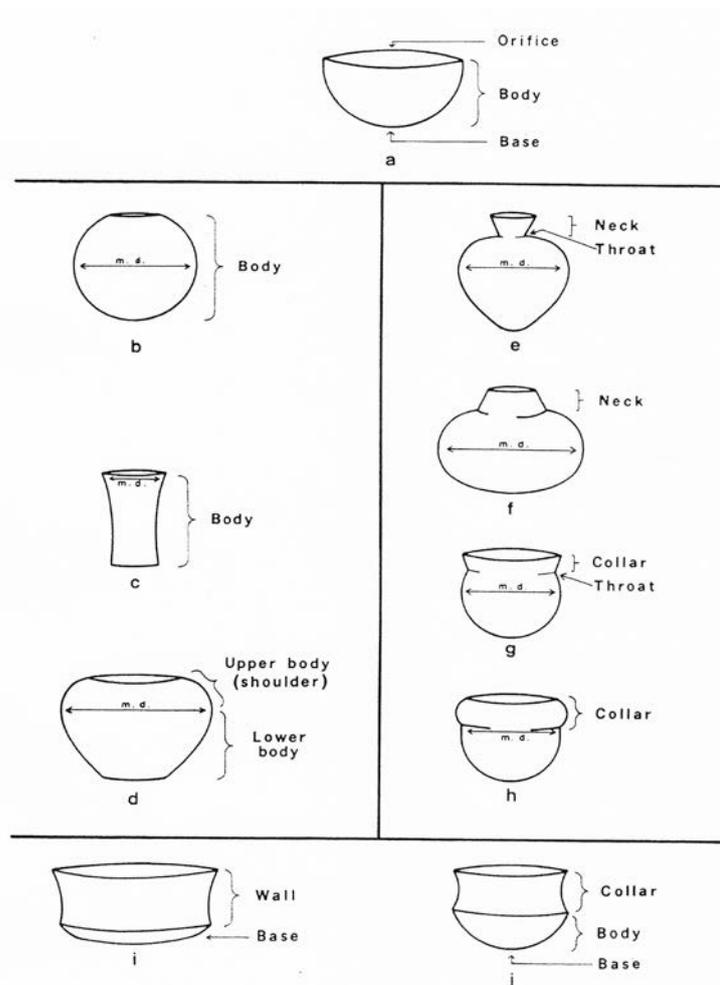


Figure 5.7: Pottery vessel shapes (Rice 2005:213)⁴¹

At the time of Petrie's corpus, it was the only available way of placing pottery at the graveside in at least an identifiable type and therefore in a sequence date. Petrie revised his original corpus, based primarily on his excavations at Nagada, to a new corpus from over 3000 vessels belonging to 700 numbered types (Friedman 1994:215).

By his own admission, Petrie (1921:5) described his Corpus of Prehistoric Pottery as being a tool for the identification of pottery at the graveside. This is to facilitate the ease of writing up the various pots, especially if you consider that through the course of excavating the predynastic periods thousands of pots were recovered. Petrie admitted that in unifying the type convergence, many irregularities were unavoidable. Adding to the difficulty, Petrie also admits that inversions of order occur due to the number of

⁴¹ Figure 5.7 describes pottery vessel shapes; *a*, divisions of a simple vessel; *b-d*, vessel body; *e-h*, neck, collar, and throat; *i-j*, base and body on composite forms.

features being used to group the vessel, thus making a single-line order illogical. As a result, many forms with different corpus numbers, but of similar shape and date are found scattered throughout Petrie's Corpus and later additions (Petrie 1921:5; Friedman 1994:215).

Statistical analysis of Petrie's Corpus has not been met with success. The irregular weight given to certain morphological attributes results that a Corpus number is not always indicative of the overall shape. Unfortunately, no systematic revision of the entire corpus has been completed. Kendall (1963:680) attempted such a statistical approach, but in the end he apologised for a lengthy, but inconclusive paper.

In applying the Petrie Corpus to the work done by Brunton, it is clear that it applied only to certain excavated graves and especially one of the most serious drawbacks of Petrie's Corpus is his lack of comparing sherd material to his complete vessel types. Especially in the case of the Badarian villages not many complete vessels were found and a great deal of reliance was placed on compiling a Corpus of Badarian pottery using the multitude of sherds that scattered the village sites. This situation makes it difficult to compare Corpus forms with possible Badarian finds outside of the type sites found by Brunton. Repaired pottery was quite common pointing to the value placed on the pottery. Holes were bored on either side of the crack and the two parts laced together probably with wet thongs (Brunton 1928:25).

It further complicates the matter of sequencing the Badarian graves as the changes in style is based on values obtained from groups of pots, and in the case of the Badarian, groups were not sufficient to attribute any value to them (Brunton 1928:26; Friedman 1994:215).

It is clear that a corpus of shape alone will not provide sufficient answers and in order to facilitate a more complete study other attributes, such as decoration and fabric must be added.

5.2.3 Badarian pottery decoration

Apart from the distinctive rippling (Figure 5.8, 15) found on some of the Badarian pottery, it appears that various decorations are found as well. Raphael (1947) combined the line drawings of Brunton (1928) in one plate for easier reference (Figure 5.8) and I will refer to the illustrations found in Brunton’s original work to explain the pots more fully.

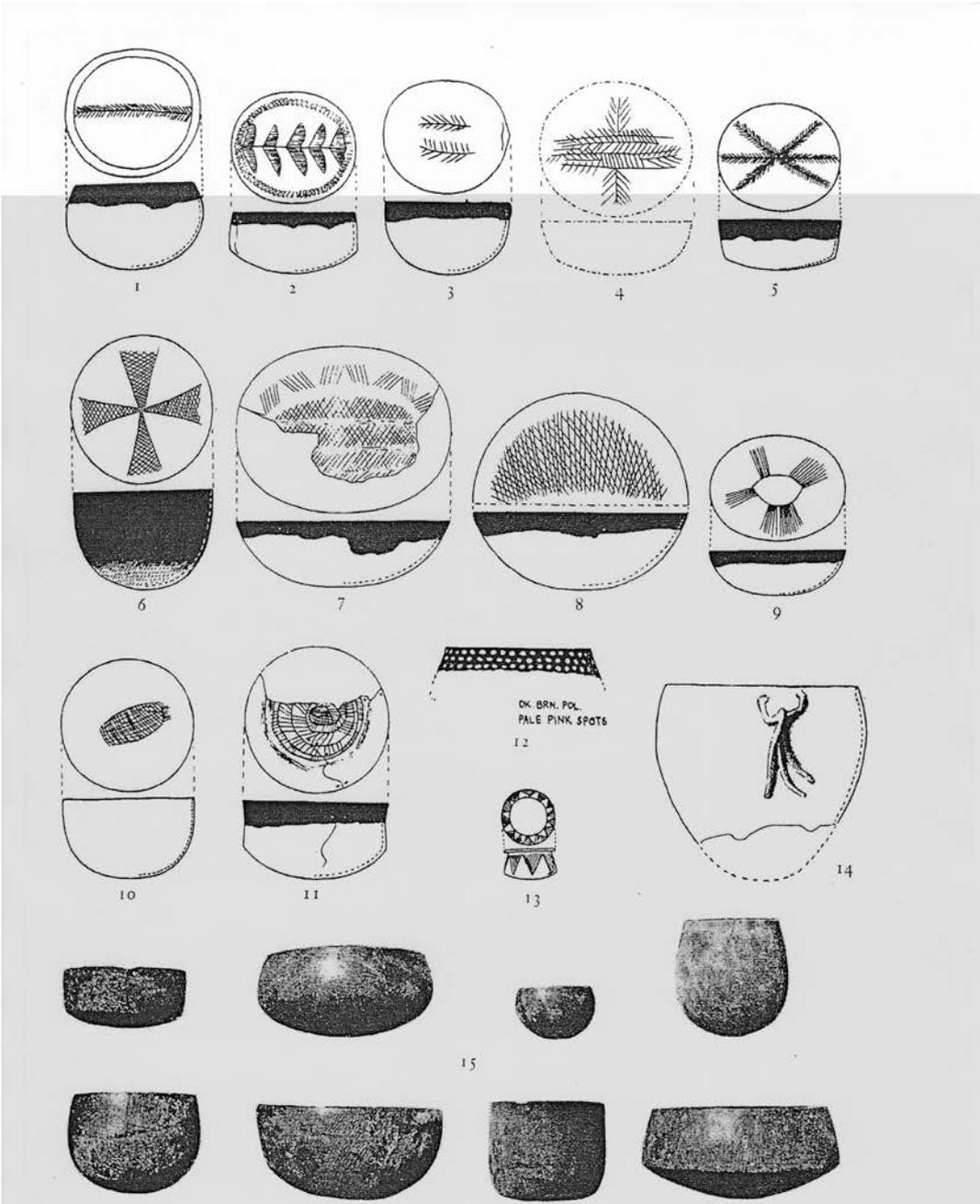


Figure 5.8: Badarian decorations (Raphael 1947: PI VII)

Of the black-topped brown polished (BB) class only two are decorated. The 28h (Brunton 1928: pl XII, not illustrated in Raphael) has the interior black surface brightly burnished in a wavy line at the angle formed by the sides and base. The other BB pot decorated is 49F in Brunton (1928: pl XIII) and illustrated as number 6 in Figure 5.7. It has a cross-hatched Maltese cross burnished on the inside. The BR class (black-topped polished red) has more decoration on the inside than the BB class. In plate XIV (Brunton 1928), the following decorations on the pots are illustrated with corresponding numbers in Figure 5.8:

15e as a modified cross, 9 in Figure 5.8;

30e shows single, possibly palm-branches, 1 in Figure 5.8;

15p shows again possible palm-branches in parallel, 3 in Figure 5.8;

15m a rough cross is depicted, 4 in Figure 5.8;

3d is a six-rayed star, 5 in Figure 5.8. This type of decoration is illustrated in a rare photograph pl XXV, no. 4803 in Brunton (1928).

15H has no ripple but shows burnished lines and band across centre, 8 in Figure 5.8.

In Mostagedda (Brunton 1937:49) the pots are described as a little incised AB19 (pl. xviii), but Brunton is of the opinion that this could be of foreign origin from its form, decoration, and ware. It is also illustrated in Figure 5.8 (13).

The miscellaneous group (class MS) contains a number of pieces with decorations (Figure 5.9). Of this Corpus only 23 is also illustrated in Figure 5.8 described as having Dk. Brn. Pol. Pale Pink Spots.

The remainder of the pots illustrated in Figure 5.8 (by Raphael 1947), being no's 2, 7, 10, 11, and 14 comes from the descriptions in Mostagedda and the Tasian culture by Brunton (1937: pl xvi; pl xviii), where pl xvi is under the heading, Badarian Pottery: New Corpus Types. BR 1-24, and pl xvii is under the heading, Badarian Pottery: New Corpus Types. PR 1-51.

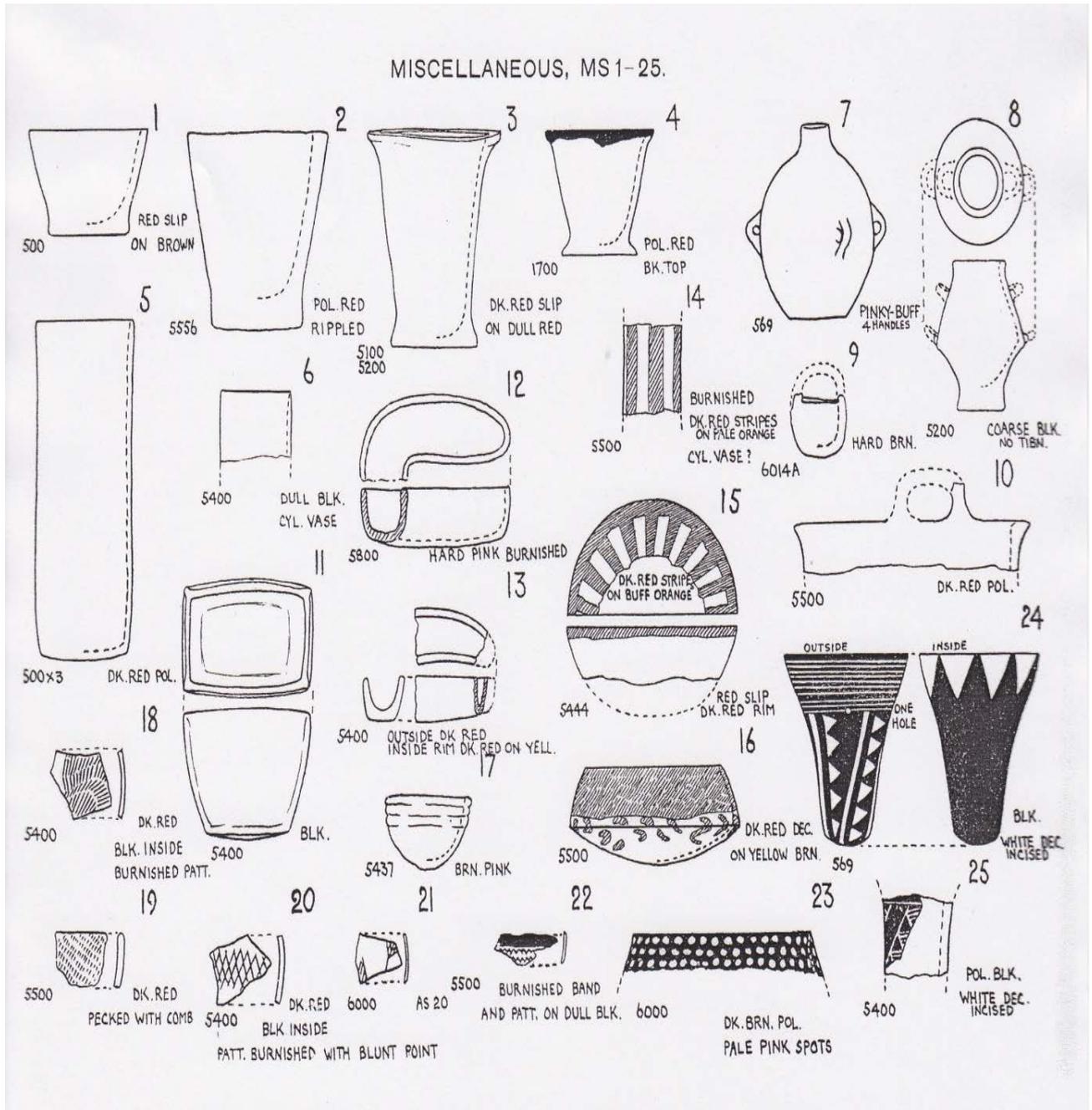


Figure 5.9: Badarian Miscellaneous Group (Brunton 1928:pl xvi)

Decorated Badarian pottery from Matmar (Brunton 1948) is limited to one example of the MS class illustrated in Brunton (1948:pl iv – 18) and described as having red stripes painted on paler tan after baking. Raphael (1947) does not have this pot as Brunton only published Matmar in 1948.

Apart from the rippling the decorations found on the Badarian pottery is limited to 15 examples only and a few that was bought and some which found their way to Brussels Museum and Cairo Museum, but not from any of the known Badarian sites although Brunton identified them as being Badarian (Brunton 1928:23). The example in the Cairo Museum comes from Sahel el Baghlieh and is of polished red pottery with a decoration on the inside, of triangles in thick white paint. It is illustrated in Quibell (1904:pl 19, 11501).

5.2.4 Pot marks

There are no pot marks noted on the Badarian pots (Brunton 1928:24). Even later research shows no pot marks.

5.3 POSSIBLE SPATIAL DISTRIBUTION OF BADARIAN POTTERY

Although a small number of possible Badarian 'rippled' sherds have been reported from other sites outside the region of Middle Egypt, not many of them could be definitely confirmed. Brunton (1928:25) reported even in the early stages of the discovery of the so-called rippled Badarian pottery that, 'ripple-surfaced pottery is hardly ever to be found recorded from other Egyptian sites'.

The evidence for Badarian material outside of the Middle Egypt region was limited to isolated reports. Fieldwork in the late 1980s and 1990s produced 'new' evidence of Badarian culture existence in sites outside the Middle Egypt region. The results will be discussed below.

Brunton reported a number of pottery material that was considered to be Badarian (Brunton 1928:26). Two pots in the Ashmolean Museum are rippled, but are from Nagada, the one given a date of SD 63 and one of SD 56. A vertically rippled bowl was found at Hierakonpolis. It has a thick flattened rim unlike the Badarian pots. Similar bowls were found at Abusir el Meleq, they are rippled vertically with a broad flat rim, and Brunton (1928:26) is probably right in considering them imports. Some pots are

displayed in the Aswan Museum and although some characteristics with the Badarian exist, they are considered to be from the Old Kingdom period (Brunton 1928:26).

Even though acknowledging that evidence for Badarian material outside the region of Middle Egypt has been limited, Friedman (1994:22) states the following: 'Nevertheless, recent fieldwork is making substantial additions to this list and the Badarian can no longer be considered so regionally confined.' The statement needs some clarification and I will look at the 'substantial additions' in detail to either refute, or confirm it.

In 1989, Holmes conducted a short survey (1992:68) to the Badari region to establish in the main the following:

- To relocate the sites that Brunton originally recorded.
- To establish if the sites are suitably protected to be investigated again at some later date.
- To assess how the modern land-use impacted on the preservation of the archaeological sites in the area.

In total some 36 sites recorded by Brunton and Caton-Thompson were surveyed and Holmes comes to significant conclusions, contradicting yet again some of the hypothesis on the regionality of the Badarian culture. Without a doubt the Badari region remains the most important area for the study of the Badarian as being the oldest Predynastic tradition in Upper Egypt, as well as being the, most likely, earliest agricultural society in Upper Egypt. However, she writes the following: 'The Badarian cannot simply be recognised on the mere presence of rippled ceramics. Rippled wares form only one aspect of Badarian pottery. Hence there is a need for analysis newly excavated artefacts' (Holmes 1992:80). I am in complete agreement with the above statement and significantly virtually all of the sites outside the Badari region termed Badarian are based on some semblance of 'rippled' pottery without any other material remains that could support the pottery. This anomaly will be looked at in detail.

During the expeditions to the Badari region, Brunton recorded a total of 97 Badarian sites (45 cemeteries and 52 settlements to include the site of Hemamieh). During the re-visit of the Badari region in 1989, Holmes discovered two possible sites, BD-1 and BD-2, that could be new sites not excavated before (Holmes 1992:72; Holmes & Friedman 1989:15; Holmes & Friedman 1994). A test pit at the site of BD-1 resulted in the conclusion that this site was disturbed and could not be considered Badarian, although some sherds assignable to the Badarian was recovered (Holmes & Friedman 1989:18). This is the core area of the Badarian and all of the artefacts are supported by numerous lithic, pottery and items of everyday use, as well as body adornments and grave goods.

Attributing Badarian to the rippled Nubian A-Group, added to the confusion of placing the Badarian outside the core region (Friedman 1994:356). The A-Group of pottery was widely used in exchange during the Nagada Predynastic periods (Takamiya 2004:41). The vertically rippled black-topped red bowls pottery found at Hierakonpolis, Nagada, and Abusir el Meleq is undoubtedly Nubian A-Group and not Badarian (Friedman 1994:356).

There is an argument that settlement excavations outside the Badari region leave little doubt as to the presence of the Badarian culture in these areas (Friedman 1994:357).

The excavation of Armant by Oliver Myers in the early 1930s are published in two volumes, Volume 1 containing the text and Volume II the plates. In the text Myers designates the Badarian as E.P.III (Early Predynastic III). In the concession excavated at Armant, four areas contained remains which Myers considered to be Badarian (Mond & Myers 1937:2). A total number of 210 datable sherds were removed and deemed to be Badarian. Two wares were considered by Myers of deserving special attention, smooth-brown (SB) sherds of which some may have come from black-topped brown (BB) pots (Mond & Myers 1937:166).

The Badarian material were tabled by Myers (Mond & Meyers 1937:169-171) from three levels with a total of 37 sherds, which he considered to be Badarian.

There is, to my mind, a great deal of confusion as to the dating of the material described as Badarian in this fashion. The dating for Level III starts at SD 35 and it explained away as probably being the fact that the Badarian techniques continued into the Late Predynastic upper level of the settlement long after they had ceased to occur in tombs (Mond & Myers 1937:175). The rippled sherds classified as Badarian is considered by Myers as being rare survivals and not intrusive (Mond & Myers 1937:175). Keeled bowls are not indicative of Badarian presence and those found in Armant are probably from later predynastic origin. Pattern point-burnished sherds at Armant continue into the Amratian in both settlement and cemetery locations. One of the burnished sherds is smooth brown and those identified as Amratian is black-topped red beakers with direct rims (Friedman 1994:359).

The depth of the deposit of the settlement is a mere 30 cm as opposed to the deeper strata found at Hemamieh. The site was also greatly disturbed by later Roman burials (Myers 1937:169).

Significantly, Myers (Mond & Meyers 1937:175), in referring to different point-burnished patterns, found in the interior of his Badarian bowls hints at an interplay of the Badarian and Predynastic cultures, and considers the practice of pattern burnishing as a regional variation in the Amratian localised at Armant. Until this can be proven by future excavation, remains to be seen, but it stands now that its use as a marker of a Badarian date has to be ignored (Friedman 1994:359).

A further question on the validity of the sherds in the settlement is that apart from the pottery and lithics, very few objects were discovered. A total absence of beads is also remarkable, although according to the excavation reports, the material was thoroughly inspected and sieved (Myers 1937:190).

There is some inconsistency in the use of the above material to positively identify Badarian material remains at Armant. Friedman (1994) on the one hand was convinced that the evidence from area 1800 at Armant 'provides more unmistakable evidence of the Badarian' (Friedman 1994:357), on the other hand she alludes to the 'demise' of the

Badarian outside the core Badari region by trying to qualify the excavation results as a Badarian link to the Amratian (Friedman 1994:360).

Most scholars reporting on the prehistory of Egypt refers to Armant as having 'Badarian' artefacts without really qualifying the statement (Midant-Reynes 2002:152; Wilkinson 2003:180).

Given the paucity of proper radiocarbon dates on the material at Armant and the vague excavation reports, I am not convinced that the site of Armant can truly be considered as having a true Badarian presence preceding the Amratian.

The site of Mahgar Dendera 2 is situated some 12 km south of Qena at a distance of about 500 metres from the Nile and 14 meters above the floodplain on the west bank of the Nile, and was discovered in 1981 by a team lead by P.M. Vermeersch. Under threat from impending agricultural development it was excavated in 1987. The site finally disappeared in 1992 (Hendrickx et al 2001:103).

As the site had already been damaged by quarry activities, the authors of the excavation report, Hendrickx, Midant-Reynes and Van Neer (2001) estimated that Table 5.1 represents known radiocarbon dates from the sites believed to be Badarian (Gebel Ramlah will be discussed later).

Only 30% remained to be investigated. It consisted of a very small area of only 250 to 300 square meters.

Table 5.1 Calibrated age of Badarian sites

Site	Cal. BC	Material	References
Mahgar	4460	Charcoal	Hendrickx et al
Dendera 2			2001
Hearth A			
Mahgar	4450	Charcoal	Hendrickx et al
Dendera 2			2001
Hearth E			
Mahgar	4050	Wood	Hendrickx et al
Dendera 2			2001
Tree Trunc			
Maghar	4250	Wood	Hendrickx et al
Dendera 2			2001
Tree Trunc			
Maghar	4250	Charcoal	Hendrickx et al
Dendera 2			2001
Hearth			
Gebel Ramlah	4720	Charcoal	Kobusiewicz et al
			2004
Gebel Ramlah	4540	Charcoal	Kobusiewicz et al
			2004
Gebel Ramlah	4520	Human bone	Kobusiewicz et al
			2004
Badari Region	4610	Soot	Hedges et al
			1994
Badari Region	4460	Charcoal	Hedges et al
			1994
Badari Region	4350	Charcoal	Hedges et al
			1994
Hemamiya	4450	Charcoal	Holmes & Friedman
			1994
Hemamiya	4320	Charcoal	Holmes & Friedman
			1994
Hemamiya	4450	Charcoal	Hassan 1985

The site was located in Aeolian deposits and was quite thin. Apart from stone-based hearths, the recovery of structures was very much hampered by the thinness of the deposits. In spite of this, storage pits and emplacements for vessels, with some pots still in situ, was found. Postholes and probable stone supports remain, but no evidence of

walls was found. In the Sudan stone supports to mitigate damage done by termites is still in use today.

Analysis of the lithics revealed mostly borers and denticulates, resulting in the authors to conclude that there had been some kind of specialised economic activity of an unidentified material. The probable use of the stone tools and the thinness of the deposits lead the excavators to suggest that this may have been a seasonal camp.

The pottery sherds found at the site proved to be the most important marker for the possibility of a Badarian date for the settlement. Contrary to other predynastic sites where pottery pieces outnumber the lithics in large numbers at Maghar, Dendera 2 is the opposite and the pottery pieces are much less in number than the lithics. Some 560 sherds were studied out of a total number of over 4000 recovered. The reason for the small sample studied is that the sherds on the site were very much damaged by exposure. An interesting observation was the repair holes found in an unusually large number of sherds, leading the authors to deduce that pottery was relatively scarce when the settlement was in use (see Figure 5.10). There is no evidence that the pottery was made on site, hence the large number of repair holes. The pots show limited ripple burnishing and some are incised and also a very limited number of black-topped pots were found. The pots appear to have been used for storage and domestic purposes only with no cooking vessels being present. Even so the authors believe they fit better with the Badarian culture, although it is possible that the site is contemporary with Tarif A. Ripple-burnishing and incised and punctuate decoration is not confined to the Badarian and characterise Sudanese Neolithic and the A-Group. Even in Egypt the characteristics is not uncommon. However, the C-14 dates (see Table 5.1) agree closely with a date in the late 5th millennium BC of the Badarian culture (Hendrickx et al 2001:103).

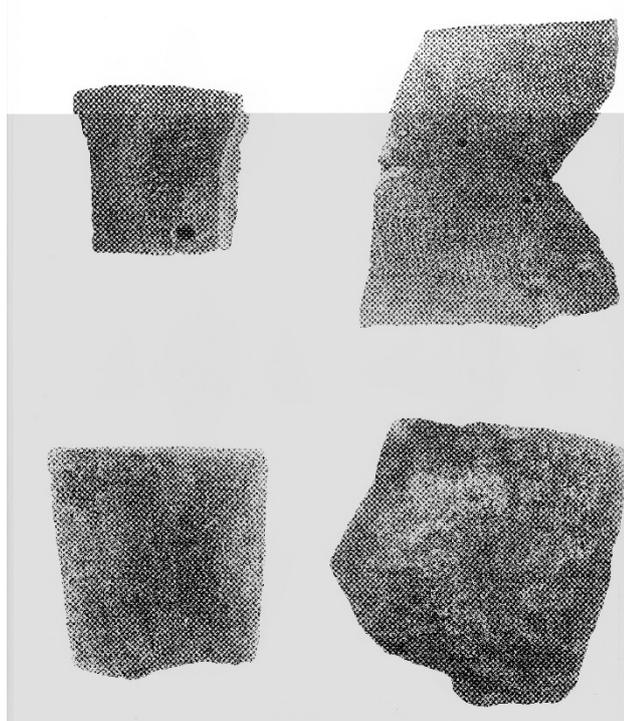


Figure 5.10: Maghar Dendera 2 (Hendrickx et al 2001:pl. 48)

Notwithstanding the C-14 dates, the few objects that were found such as bone points, clay plug and tusk-like ornaments of clay also occur in the southern Sudan and in the Nubian-Group.

Apart from the specialised toolkit and utilitarian ceramics, the authors deduced from the faunal remains that the site was inhabited during periods corresponding to the level of the Nile at the time, and probably consisted of young men who used the site as a temporary campsite and that 'the majority of the people would have stayed at the main settlement' (Hendrickx et al 2001:104). This of course is a scenario described by the authors and the site of the main settlement is yet to be found.

As with Armant, I find it difficult to summarily accept that the Maghar Dendera 2 site is a true Badarian culture site. As the site is destroyed, one must rely solely on the primary excavation report of the authors. Keeping this in mind, it could be that the site, being seasonal, was connected to the Badarian people of the Badari region and especially use of the pottery, which may have been transported from that region, hence the repair holes indicating that the pottery may not have been locally made and valued as from another area.

The site of Gebel Ramlah in Egypt's south western desert is considered the first Neolithic cemetery discovered in the Western Desert. The area investigated in 2001 is approximately 100 km west of Lake Nasser and some 70 plus km north of the Sudan border, (22° 42' 37" N and 30° 30' 17" E) and consisted of an area only 6 x 6 metres (Kobusiewicz et al 2004:566-67).

The burials in the area was concentrated in the southern half of the excavation site in an area of some 4.5 m by 3.3 m. Altogether 13 burial pits were found with nine of them containing single burials. Four pits contained multiple burials. One burial (12) contained grave goods but no human remains. Curiously it appears that the remains were reburied at the site from somewhere else after all the soft tissue had disappeared. This could explain how that many could be buried in such small a space (Kobusiewicz et al 2004:568).

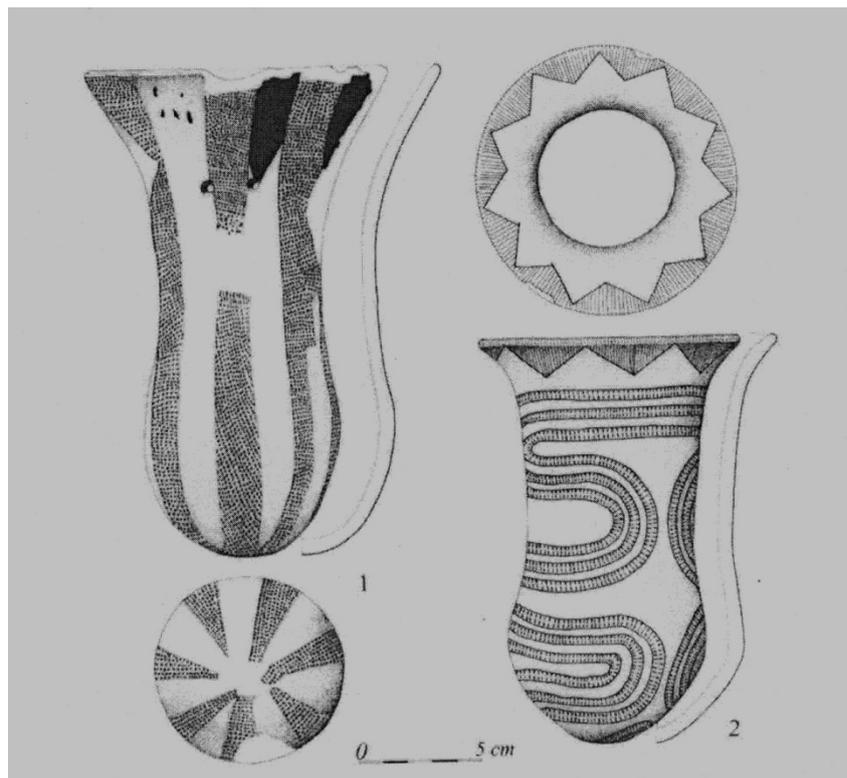


Figure 5.11: Ornamented Tulip Beakers (Kobusiewicz 2004:569)

According to the authors numerous grave goods were found in the burials of which the pottery vessels described as tulip-beakers were the most prominent (See Figure 5.11). They have a flared-rim with incised decoration both inside and outside. Each has its

own different patterns of decoration such as geometric figures with triangles, diamonds or curved bands filled with a rocker stamp design. Figure 5.11 (1) exhibits two holes and the placing of the holes gives the pot an appearance of being anthropomorphic (Kobusiewicz et al 2004:569).

Pottery sherds found with the above consist of black-topped variants and ripple wares (Figure 5.12). The vessels are made mostly of alluvial clay and are believed to have been made locally. The pottery found is according to the authors, similar to that of the Badarian, as they state that 'most significant is the presence of black-topped pottery. The characteristic tulip-shaped beakers with flared rims also point toward a Badarian connection' (Kobusiewicz et al 2004:574).

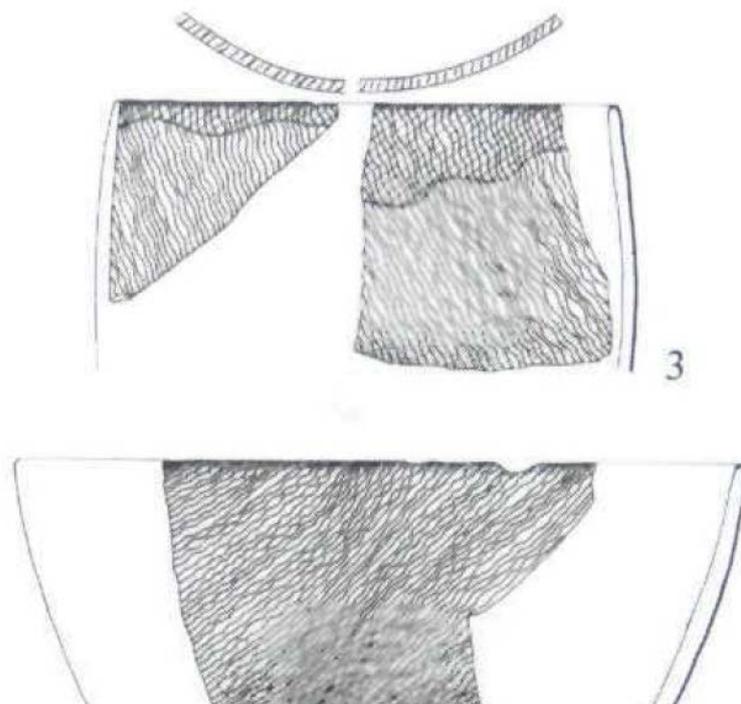


Figure 5.12: Gebel Ramlah. Black-topped and ripple ware (Kobusiewicz 2004:570)

Three AMS dates were measured by the Poznan Radiocarbon Laboratory (see Table 5.1). These date the Gebel Ramlah cemetery to the first half of the 5th millennium BC (calibrated). The authors also are convinced that the lack of more sophisticated products like copper objects and anthropomorphic figurines confirms an early date for

the site and significantly they state, 'preceding the Nile Valley Badari Culture' (Kobusiewicz 2004:575).

In supporting this view, it is also known that black-topped pottery was found at Nabta Playa dating back to the early Late Neolithic. This predates the Badarian of Upper Egypt by about 1000 years and significantly the authors states that 'all of these findings suggest that at least some elements of the Badarian, and succeeding cultures, may have originated in the South Western Desert' (Kobusiewicz et al 2004:576). Either the above or simply that early Badarian had not yet been found in the Nile Valley.

Other sites other than the Badari region had been reported through the years, but at best they are tenuous and reference to them cannot be supported by sustainable facts. In 1923, Murray (Murray & Derry 1923:129) discovered a plundered grave on the Red Sea coast close to Ras Samadai. She described the objects as being Pre-Dynastic, which contained amongst other objects a rectangular slate palette with green malachite stains. This was later described by Resch as being Badarian (Holmes 1989:181).

Near Bir el Hamamat in the Wadi Hamamat between Qift and the Red Sea, an expedition lead by De Bono in 1949, found a grave containing two slate palettes, which he considered as being Badarian. In the same area he also found potsherds, which he considered being Badarian (Holmes 1989:181). Two rippled pots from Nagada were reported by Brunton (Brunton & Caton-Thompson 1928:25-26).

At the El Khatara sites, just north of Nagada, Hays (1976: 553-554) reports burnished black-top red or brown ware and a few black-topped rippled ware sherds, which he considered to be characteristic of the Badarian culture. The sites produced charcoal dates of 4941 B.P. \pm 88 and at its lowest level 4970 B.P. \pm 70. Hays was of the opinion that 'on the basis of the previous ceramic schemes, the El Khatara sites should be described as part of the Badarian culture. On the other hand, acceptance of the radiocarbon dates casts doubts on previous radiometric dating' (Hays 1976:554). The dates point to the later Amratian.

The few Badarian sherds found by Brunton (1932) and Fairservis (1972) at the Predynastic site at Hierakonpolis are considered late or at best early to middle Amratian, based on the radiocarbon dates obtained from this site cluster (Holmes 1989:181).

A few rippled sherds were recovered from the site of El Kab by Vermeersch (1978) and he considered the site as being Badarian. It is situated on the east bank of the Nile, almost directly opposite Hierakonpolis. This is disputed by Holmes (1989), who considered the associated lithics found at the site as being closer to the Gerzean assemblage found at the South Town of the Nagada area (Holmes 1989:330).

5.4 SUMMARY OF POTTERY MANUFACTURE IN THE SAHARA AND SURROUNDING AREAS

The earliest indication of pottery manufacture in Africa is found in Central African massifs, in the eastern Sahara and the Nile valley. Luminescence and ¹⁴C (about 30) dates points to the emergence of ceramics in the Nile valley and Sahara between the 10th and 9th millennium cal BC. This follows the re-settling of the Sahara during the onset of a warmer and wetter climate in the early Holocene after the hyper-arid phase of the last glacial maximum (Huysecom et al 2009:906).

It is clear from the above that movement back and forth from the desert areas to the Nile valley occurred many millennia before the first semi-permanent settlements were established in the Nile valley. As pottery formed part of the toolkit of Palaeolithic and Neolithic people, one can safely assume that the manufacturing techniques evolved over time and depending on the raw materials available were universal to certain nomadic groups. Ceramics were mainly utilitarian and entirely made by hand and throughout the early periods into the Egyptian predynastic periods. That the potters probably adapted to new techniques from contact with other groups is quite possible, but I am of the opinion that for many thousands of years the techniques stayed the same with the only exception the clay types and the advent of firing the clay to obtain durability. Innovations like temper, colouration (blackened), burnishing, shapes and exterior motives followed.

Some scholars maintain that the black-topped pottery follows the tradition of the Khartoum Neolithic (Midant-Reynes 2002:154). This may well be so, although the Nubian ceramics is distinct and separate. What is unique, however, is the rippling effect found only in the Badarian assemblage. Let us consider the following.

A significant number of excavations had been done in the Central Nile region of ceramic-bearing sites known as the Khartoum “Mesolithic” and Khartoum “Neolithic”. Despite criticism, Arkell’s typology of the ceramics of the Central Nile still forms the basis of subsequent discussions. Two ceramic decorations stand out as the modal ceramic markers, the ‘wavy line’ motif associated with the Khartoum Mesolithic and the ‘dotted wavy line’ with the Khartoum Neolithic. However, how meticulous Arkell had been with his work, it created a perception that only two types of modal components existed, whereas it became clear in later research that his ‘wavy line’ and ‘dotted wavy line’ definition contained a number of variables, such as fabric, ware, temper and firing. As a type the ‘wavy line’ exhibits motifs produced by different methods, such as combing, rocker stamping and various other implements. Similarly, the ‘dotted wavy line’ exhibits a mixture of variables. What is important in the context of chronology is the fact that Arkell stated that the wavy line developed into the dotted wavy line. Later investigations into the ceramic assemblages from his sites do not support this. It is generally accepted that Arkell’s ceramic typology holds true for the early study of the period ceramics, but given the increased data being assembled, especially taking into the consideration of the long period of time 8th to 4th millennium BC, and especially the very wide area that it covered, around 5300 km east-west and some 1500 km north-south, it needs a review (Mohammed-Ali & Khabir 2003:30).

It was the lack of differentiation by Arkell that later scholars supplemented his classification in order to compare his pottery with pottery from other sites to determine the extent of the wavy line and dotted line found in the Khartoum area. Figure 5.13 depicts design motifs recognised for the Early Khartoum pottery and include (a) straight line, (b) wavy line, (c, d) dotted straight line, (e) dotted wavy line, (f, g) woven mat, (h) linear mat, (i) dotted para-sawtooth, (j) dotted wolftooth, (k) chevrons, and (l) fern branch (Hays 1974:27). The idea of a ‘Culture area’ was used to determine whether the Early Khartoum pottery was in fact a broad cultural unit spreading from the Sudan

outward to other areas. For the hypothesis to be tested, sites along the Nile Valley were identified containing pottery similar to Early Khartoum. It appeared that one decorative style was used throughout much of the Sudan during the early 4th millennium BC. No whole pottery was found in the sites and all sherds at the localities were unburnished and primarily decorated with motifs by comb impression (Hays 1974:28).

It is important to note that the diffusion of the Khartoum variants may have been due to the movements of people, although it can be expected that people will not generally transport pottery from one area to another. The results of regional differentiation of ceramics shows up in the examination of differences in decorative motifs, temper and clay content. As the differences of the above analysis did not appear to be conclusive, Hays (1974) undertook a detailed analysis of stone tool typology and technology.

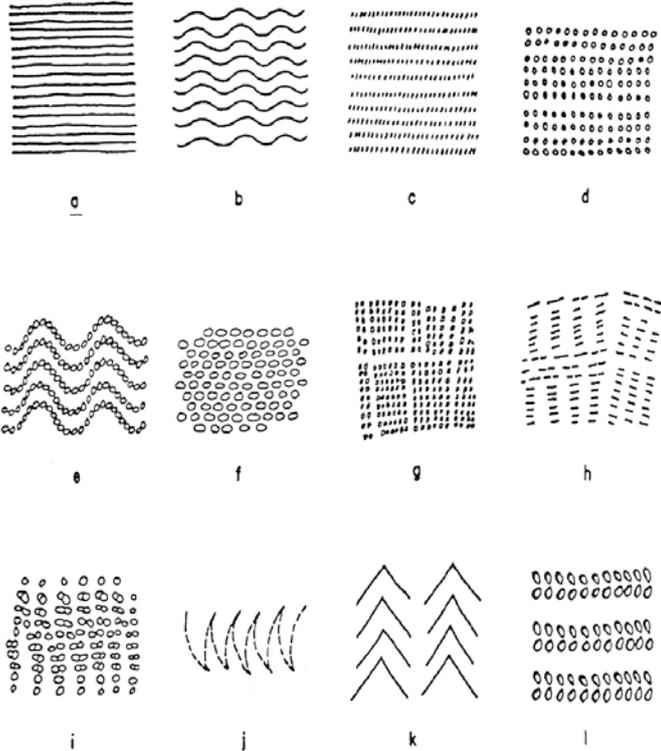


Figure 5.13: Design elements of the Sudanese Neolithic (Hays 1974:28)

Without going into the detail of the study, Hays (1974) concluded the following: 'As a result of this study the idea of a homogeneous "Khartoum Culture Area" along the central Nile resulting from a movement of people must be disregarded' (Hays 1974:31). Hays (1974) concludes by labelling the pottery as the Khartoum Horizon Style, due to the common pottery design style found in the whole of the Khartoum-Nile area. This has been met with criticism as being based on very broad similarities in a single motif, failing to explain the differences in the decorative patterns. The preconditions for a 'horizon style' have to take into account the duration of the apparent stylistic horizon, and the uniformity of the ceramics in the horizon (Mohammed-Ali & Khabir 2003:31).

Nordström (1972) published a detailed study of the Sudanese Nubia Neolithic and A-Group ceramics. Nordstrom agrees broadly with Hays and concludes that the Khartoum variant is a Nubian industry, identified by a specific combination of lithic artefacts and pottery. The cultural context has to include both lithics and potsherds and cannot be determined by only one component. He is of the opinion that the name of the industry implies a close relationship with the Khartoum Mesolithic and Neolithic, as described by Arkell (Nordström 1972:9). At this time no assemblage of the typical Khartoum variant had been observed to the north of Ballana in Egyptian Nubia (Nordström 1972:10). Nordstrom's classification remains primarily technological concepts without any detailed chronological sequence. This is mainly due to his material being derived from cemeteries and Nubian sites, which rarely contained stratified data (Nordström 1972:35; Mohammed-Ali & Khabir 2003:31).

5.5 THE DISTRIBUTION OF BADARIAN CULTURE: APPROACH BY OTHER SCHOLARS

A number of scholars published their views on the distribution of the Badarian outside the core area of Badari-Mostagedda-Matmar. As the main marker for the identification of the Badarian culture is its unique rippled pottery, I will, for the continuation of this chapter, focus mainly on the possibility of pottery finds in other areas, as described by the various authors and their conclusion as to the validity of the expansion of the Badarian or not.

The first theory on the distribution of the Badarian can be found in a statement by Petrie (Brunton & Caton-Thompson 1928:68): ‘... and it is to Palestine and Syria that we must look for any traces of the earlier history of the Badarians’. This idea does not necessarily preclude Badarian presence in other sites in Egypt, but it did place a view in the mind of the scholars at that time to look no further south or west of the Badari area.

In the same publication (Brunton & Caton-Thompson 1928:40), Brunton is of the opinion that ‘the Badarian culture appears to have developed, or rather degenerated further, in Nubia, where it was much less affected by foreign influences’. Other Badarian objects (which will be discussed later), such as flints and bone awls are found in the early Predynastic, as well as Nubia. Rippled pots are also found in Nubia and the most common Badarian pottery form, the bowl, is found in Nubia where it continued for centuries (Brunton & Caton-Thompson 1928:40).

At the site of Hemamieh, Caton-Thompson (1928) observed that it would be difficult to reach important conclusions based on the excavation of one settlement and declares that to find a similar sequence in settlements along the Nile Valley would be problematic. Semi-nomadic tribes moving from one area to another, from the western to the eastern deserts at frequent intervals, may have a distinctive pottery manufacturing style and may settle for longer at one site and arrive later at another (Brunton & Caton-Thompson 1928:74).

Baumgartel (1947) only mentions the few sherds of black-topped brown pottery at Hierakonpolis and furthermore states that in addition to the black-topped classes of Badarian pottery, several pieces of Tasian ware was found at the site (Baumgartel 1947:22).

Similarly, Midant-Reynes (2000) only reports what had been found at Armant and Hierakonpolis, but categorically states that they were Badarian. She also mentions the so-called ‘Badarian’ grave found by Debono in the Wadi Hammamat (Midant-Reynes 2000:152). Quite surprising, the paragraph relating to the above statement by Midant-Reynes can be found, almost verbatim, in Brewer (2005:77).

To continue in this vein would be futile, as to date none of the above sites have been confirmed and those found at other sites, Maghar Dendera 2 and Gebel Ramlah, are not mentioned. To quote Holmes (1989:182): 'Thus for the time being, the Badarian seems to an early cultural phase represented only in the Badari-Mostagedda-Matmar area, though the status of the "Badarian" sites in the Wadi-Hammamat and near the Red Sea coast remains uncertain.'

5.6 CAN CERAMIC ETHNOARCHAEOLOGY BE APPLIED TO THE BADARIAN CERAMIC CORPUS?

In recent times ethno-archaeology had become part of the research into ceramic traditions. Especially in the last 10 to 15 years, archaeologists had begun to consider contemporary pots and potters in terms of particular problems facing archaeologist working with prehistoric pots and potters. Unfortunately, most summaries on the topic had focussed on processual literature that largely ignores non-American research (Stark 2003:194).

Although ceramic ethno-archaeological research has been conducted throughout many parts of the Ancient Near East, recent turmoil in the area restricted the research, which lacks conclusive application (Stark 2003:196).

Although Africa, especially sub-Saharan Africa, has been prominent as a location for ethno-archaeological research, the Middle East, as well as the areas north of the Sahel, has lagged behind. Because local scholars have the benefit of African literature, ethno-archaeology becomes a cheaper alternative to archaeological surveys and excavation (Stark 2003:197).

It is perhaps now relevant to study the definition of ethno-archaeology to understand its position in the material and social construction of past cultures.

Following is a list of definitions by various scholars, cited in David and Kramer (2001:12):

- Stanislawski (1977:370): the direct observation study of the form, manufacture, distribution, meaning, and use of artefacts and their institutional setting and social unit correlate among living (generally nonindustrial) peoples.
- Gould (1978c:vii): ethnographic research for an archaeological purpose, linking material remains to the human behaviour from which they resulted.
- Schiffer (1978c:230): the study of material in systemic context for the purpose of acquiring information, both specific and general, that will be useful in archaeological investigation.
- Hanks (1983:351): the application of archaeological methods to ethnographic data.
- Gallay and Huysecom (1989:49) (translated): archaeology's science of reference. While archaeology allows one to reconstruct historical scenarios and tries from them to deduce typological regularities, ethno-archaeology tries to discover through observations made in the present, the cause of the observed regularities by studying the mechanisms that lie at their origin.
- Staski and Sutro (1991:2): the study of ethnographic or historical situations, either through first-hand observation or documentary research, to extract information useful for understanding the relationships between patterns of human behaviour and material culture in all times and places.

- Longacre (1991b:1): the study *by archaeologists* of variability in material culture and its relation to human behaviour and organisation amongst extant societies, for use in archaeological interpretation.

- Vossen (1992:4, 5): the connecting link between cultural sciences of ethnology and archaeology ... From a methodological perspective, ethno-archaeology embraces two different research approaches: “living archaeology” and “experimental archaeology”.

- Khan (1994:83): study of modern (contemporary) and traditional processes, which result in specific phenomena which might also be observable archaeologically.

- MacEachern (1994:245): the intersection of living people and archaeological constructions.

- Martinez (1994:137): Presently two definitions of ethno-archaeology exist: one in a broad and the other in a restricted sense. The first includes all the connections between anthropology and archaeology ... The second definition refers exclusively to ethnographic *fieldwork* carried out by archaeologists (or by anthropologists with archaeological training) with the same purpose as the former, that is to say to assist in archaeological interpretation ... in practice both approaches intermingle.

- Kramer (1996): ethnographic fieldwork carried out with the express purpose of enhancing archaeological research by documenting aspects of sociocultural behaviour likely to leave identifiable residues in the archaeological record.

Ethno-archaeology is therefore the use of ethnographic observations of contemporary societies to explain patterning of cultural remains in the archaeological record (Gould 1996:207).

All of the above definitions follow the basic rule of analogy, and that is working from the known to the unknown. This was a common feature of early ethno-archaeology and it was the use of ethnographic analogues to identify and explain prehistoric artefacts and structures to count for patterning on a larger scale. The premise is to project modern behaviour into the past by studying modern populations. Numerous examples exist where this had been applied to study socio-economic behaviour in for instance the !Kung Kalahari Bushmen to determine the lifestyle and related population habits of nomadic Bushmen thousands of years ago. There is a longstanding attempt to relate ethnographic information about traditional hunter-gatherers like the Paiute in the Great Basin of North America. This attempt uses the 'direct historical approach', continuously back through time to archaeological assemblages from earlier sites (Gould 1996:207).

LR Binford (1978) developed a concept which he calls "middle range theory" in relation to ethno-archaeology to identify cultural processes that amongst other cases, still depend on defined domains of human behaviour such as hunter-gatherer mobility, or social status as reflected by mortuary assemblages (Gould 1996:208). The concept of ethno-archaeology has moved beyond the domain of hunter-gatherers to include pastoral nomads, farming communities and maritime cultures. It sounds convincing, but in reality its application is constrained by presenting material patterning in the archaeological record based on ethnographic observations.

For analogy to work, a certain degree of historical data is required. There must be some direct link in social and behavioural patterns. In the case of the Badarian, there are still too many unanswered questions to link them with any other culture that continued for any length of time. It is unclear whether they were still in the final phases of hunter-gatherers, nomads or pastoralists. Their sedentary patterns are obscure and we know very little of their social and economic traditions. With the exception of their mortuary practices, which display a certain degree of rank, and is reflected in the comparative richness of their grave goods (Holmes 1996:195). It is therefore extremely doubtful that ethno-archaeological techniques could be applied to the Badarian.

5.7 CONCLUSION

The Badarian culture is best known from the material remains found in the graves of the cemeteries, not so much from the so-called settlement areas. The pottery vessels placed in the tombs reflect the most distinctive characteristic of this culture. The pottery was hand-made, using clay of varying fineness and characterised by the rippled surfaces. Friedman (1994) determined that the rippling is most often, but not exclusively, reserved for potsherds, which she classified as being of fabric class 22. That is very fine untempered Nile silt. The sample subjects were from the Badarian levels at Hemamieh, and almost all are black-topped brown and rippled. They are furthermore distinguished by their thin walls and fine tactile hardness (Friedman 1994:390).

Brunton used the variations in the surface quality and finish to propose his classification system. Incorporated in the system were the generally simple shapes amounting to straight sided bowls, at times carinated with rounded bases. The distinctive vessels were generally combed before firing, then polished to produce a light unique rippling effect. The majority of the vessels in the highly polished category comprise the red-polished, black-topped pottery, which may be foreshadowed in the Khartoum Neolithic. Other types are the brown burnished pottery and rough ware. These included large cooking vessels, which were rarely found in the tombs. They were most frequently found in the settlement areas. There are also the vessels that do not fall into any of the above types (Midant-Reynes 2000:155).

It is concluded that only the areas originally defined as Badarian in the Badari-Mostagedda-Matmar region can in fact be regarded as Badarian. Sherds of ceramics found in other areas outside the core area were shown to be Amratian or Gerzean. It is also important to note that none of the sites away from the core area of the Badarian, yield any assemblages of Badarian lithics (Holmes 1989:188).

The above is a brief summary of the Badarian pottery, but does not explain how and where the unique types developed and originated from. Numerous attempts have been

made to expand the Badarian pottery spatial distribution, but as far as I can see from the available evidence this had not been successful.

The increased aridity of the desert areas in both the western and eastern desert compelled people to move out of these areas to the narrow fertile strips along the Nile. It is not unreasonable to conclude that the earliest settlements along the Nile were not through the movement of one group from a specific area, but a coming together of various groups, the causing and intermingling of various races and cultures. Although not conclusive, the migration of various groups is supported by the introduction of new materials and skills, such as the unique blend of pottery found in the Badarian culture.

In terms of the early settlements in Egypt, only a very cursory mention is made of the Badarian culture and only in relation to the Amratian. The insert does not add to our knowledge of the Badarian (Nordström 1972:5).

Despite voluminous research on the topic the Nilo-Saharan Neolithic ceramic connection remain elusive. It is important to note that with the present knowledge it appears that the pottery manufacture and the wavy line pottery was present on the Nile some 2000 years before it appeared in the eastern Sahel region (see Figure 5.1). The Sahel cannot therefore be linked to the Nile Valley by the rapid spread of any ceramic style (Mohammed-Ali & Khabir 2003:50). As far as the ceramic component of the prehistoric Nile and Sahara-Sahel Belt goes, the wavy line and dotted wavy line wares form an integral part. With the present volume of information at hand, it is still not clear on the distribution of the wavy line and dotted wavy line varieties though time and space together (Mohammed-Ali & Khabir 2003:52).

In considering the above, there is no evidence to suggest that the Badarian ceramics has any affinity to the wavy line or dotted wavy line of the Khartoum Neolithic.

The refinement of the potter's art became very evident in the Badarian culture where a class of black-topped brown or red rippled or combed bowls and accompanied by rough

ceramics appeared. Interior decorations made by a burnishing pebble appear, as well as carinated or keeled vessels. The most outstanding feature is the care taken by the potters in thinning the wall and refining the clay (Friedman 1994:18).

What we now have is two distinct types of ceramic ware. One is rough and used as utilitarian tools and the other is the very fine black-topped and rippled pottery found mainly in the graves.

The distinction between the two main types is probably because the one served the practical end and the other the ideological end of providing the dead for use in the afterlife. Although this is very much a hypothesis, it could explain why the finely made pottery is found in the graves and no whole pots in the settlement debris. It is therefore quite possible that the placing of the pots in the graves were later replaced by other goods and that may be the reason why the very distinctive fine pottery characteristic of the Badarian disappeared. With its thin walls the black-topped rippled pottery was probably not that suitable for practical use, hence its disappearance from later cultures.

CHAPTER 6: BADARIAN LITHICS

Abstract

The lithic industry of the Badarian is a generalised flake-blade industry and on this base, it is assessed and discussed in this chapter.

Although Predynastic cultures in Upper Egypt have been studied for over one hundred years, very little attention has been given to lithics, which far outnumber copper tools in this culture (Bard 1992:203).

Chapter 6 is introduced to present an overview of the lithics and basically to support the regional or local development of the Badarian. In the main the examples pictured in this study is from the areas excavated by Brunton and captured in his books based on his observations and collections from the various Badarian sites. From the data it shows that the assemblages from the sites are consistent to that of a single industry. There appears to be no major differences between the collections from the village sites and cemeteries and are thus treated as a single industry.

6.1 INTRODUCTION

Since the discovery of the “New Race” by Petrie in 1896 and the subsequent renaming into the Predynastic of Egypt, several sites were excavated in the 1920s and early 1930s. For a period of more than thirty years, the Predynastic was largely ignored by Egyptology scholars. Interest in the Predynastic period of ancient Egypt only really came into focus again in the early 1980s. Even now, most of the literature on the Predynastic is largely based on the work done by the earlier archaeologists. Quite a number of later expeditions to the known Predynastic sites in Egypt were done by modern scholars. Very little, if any, new evidence was forthcoming as most of the sites are in poor state of preservation, or simply deflated.⁴² Most of the modern research is done on the recovered artefacts of the earlier pioneers, housed in collections in museums, universities and in private collections. This includes their excavation reports, which in some cases are not complete, or of poor standard. It makes the work of modern scholars difficult.

The problem in the case of lithics is that only in rare instances, sufficient representative collections were assembled in any given site. Of all the artefacts found at settlements and cemeteries, stone tools received the least attention.

⁴² As many of the Predynastic sites are in low-lying desert the effect of wind erosion is severe.

There is also an argument that the early collections also show a degree of bias towards the more exotic and intricate bifacial tools. The debris, which included cores and discarded flakes from stone tool manufacture, would not have been of interest to the earlier archaeologists working in Egypt (Bard 1992:203). This oversight diminished the broader importance of analysing the stone assemblages as a whole. Especially how they were made, how the raw material was selected and prepared. It is like a puzzle and unless you use all the pieces, gaps may appear and a different conclusion may follow.

Apart from the lithics described from De Morgan in 1896 through to the middle thirties of the following century, the next study was made by Massoulard in 1949 in a detailed overview of Predynastic stone implements (Holmes 1989:25). As in later cases, his information came from various excavation reports published before 1949. Vandier, 1952, also deserves a mention. He again used all the work previously done and wrote fairly detailed summaries. It turned out to be a merely repetition of the work already done (Holmes 1989:26).

Elise Baumgartel devoted 20 pages on the flint and stone implements in her 1960 work (pages 24-43).

The most recent and comprehensive work on the predynastic lithics was done by Diane L Holmes, which was initially done for her PhD dissertation at the Institute of Archaeology, University College London. Because of the paucity of lithic research, the BAR International Series published a monograph in two volumes soon after the acceptance of the dissertation (Holmes 1989).

The monograph reinforces my attitude that the major contribution to the study of the predynastic lithics was done by Brunton, Caton-Thompson and Petrie. Later contributions by Hassan and Hoffman are also important. Holmes's work is of course a focus on regional variations and not necessarily the excavation contributions done by the earlier Egyptologists. She does use their collections extensively and in so doing pose the question of how secure is her thesis in terms of any new and relevant

information, especially in terms of the past economic activities, which is to be seen in the production, distribution and exchange of lithics. Her line drawings of the lithics are at times not illustrative enough and in some cases no scale is present (Bard 1992:204). The lack of such basic information does not add to the knowledge already published by the earlier Egyptologists.

The approach to the analysis of stone tools changed over time and after the 1960s a more systematic sampling procedure developed. Stone tool assemblages were not merely collected for their intricate beauty, but every scrap of flint was properly recorded and analysed. This, however, does not deter one from using the earlier stone tools analyses, especially in a comparative sense. The earlier records cannot be discarded as they are in most instances all later scholars have to work with. Their potential source of information must not be underestimated and used in the context of earlier excavation techniques and methodology. Even though the earlier and even later scholars do not discuss in any detail the uses of the lithic assemblages in different regions, such as desert, oasis or the Nile valley. The actual use of a specific tool is in many cases open to speculation, but it does beg the question of going back to the earlier collections with their excavation reports and so attempt such a project (Bard 1992:204). This of course is not evident in Holmes's work.

6.2 STONE IMPLEMENTS FROM QAU AND BADARI

The excavation reports on the research done at Qau by Petrie and Brunton were published under the title, *Qau and Badari I, II and III*.⁴³ All the discoveries of dynastic dates are recorded in the mentioned three volumes. The *Badarian Civilisation* (1928) by Brunton and Caton-Thompson is confined to the description of the cemeteries and settlements of the Predynastic age in the Qau and Badari region.

Next to the pottery, the flint-work of the Badarian turned out to be the artefacts receiving the most discussion. Fortunately, most of the implements recovered from the cemeteries and villages of Badari were photographed, albeit in black and white and

⁴³ Cf. Brunton, Gardiner & Petrie (1927); Brunton (1928) and Brunton (1930).

published in Brunton and Caton-Thompson (1928).⁴⁴ The plates are reproduced in Figures 6.1 through to 6.6. Included in the groups are flakes and cores. Brunton (1928:35) emphasises the carefully finished implements in his description as being: (i) arrowheads, winged or barbed, sometimes tanged;⁴⁵ (ii) saw-edged knives, serrated on one side, rarely on both; (iii) a variety of forms, knives, adzes, lance-heads, all of which are rare. What Brunton also found were the very rough flints, innumerable flakes and the cores. In the graves, and for what purpose he could not explain, he found many flakes, as well as some cores.

6.2.1 Winged arrowheads

The winged arrowheads are not that common in the predynastic sites. Brunton found twenty-four of them in the Badari-district, 14 from graves and ten from the surrounding areas or loose in cemeteries. In general, only one arrowhead was found in a grave, except for two graves which contained a couple each.

Figure 6.5 illustrates the varied type of arrowheads as follows (Brunton & Caton Thompson 1928:pl. xxix):



Figure 6.1: Badarian flint implements (*Bad.* Plate xx)

⁴⁴ The flints are all noted in the "Register of Badarian Graves and Town Groups", Plates v to viii in the *Badarian civilisation* (1928)

⁴⁵ Tanged arrowheads are extremely scarce in his collection and I could not identify one good example amongst the implements. An example of a tanged arrowhead is illustrated in Figure 6.7.

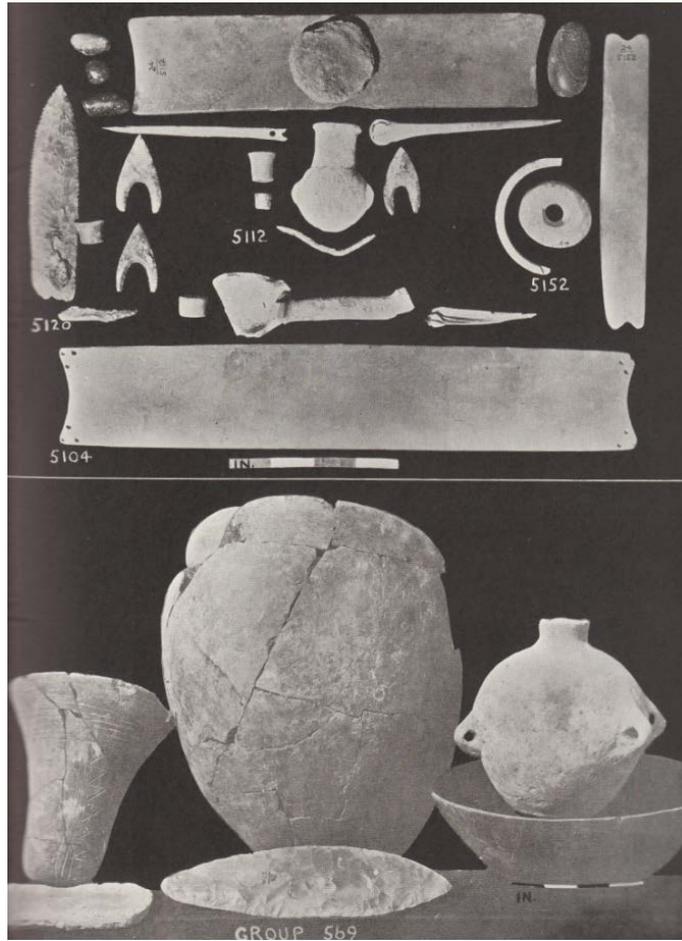


Figure 6.2: Badarian flint implements (*Bad.* Plate xxvi)

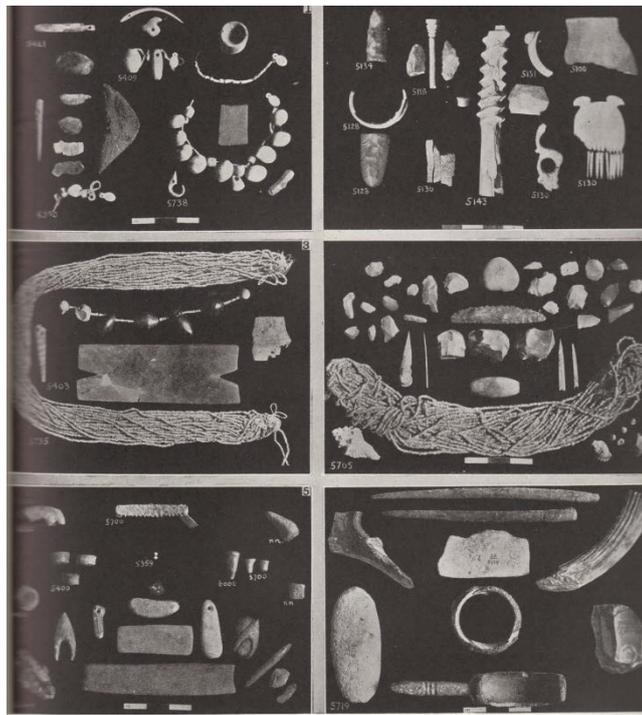


Figure 6.3: Badarian flint implements (*Bad. Plate xxvii*)

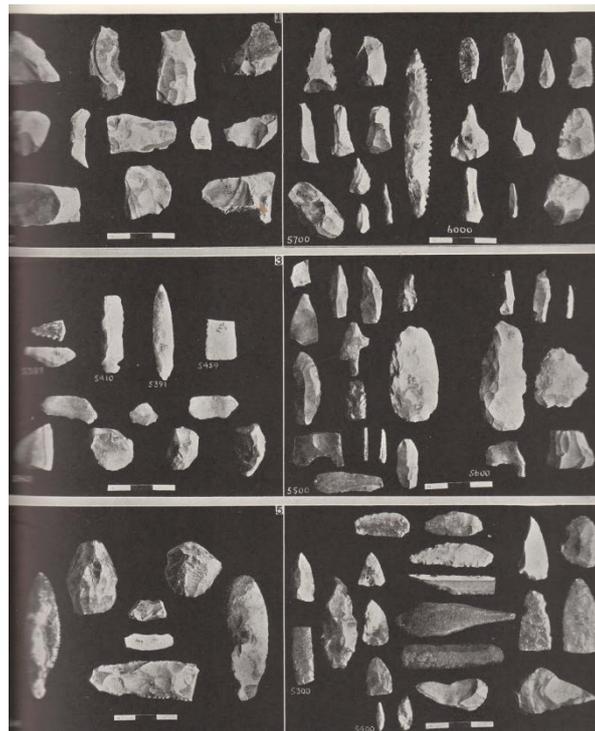


Figure 6.4: Badarian flint implements (*Bad. Plate xxviii*)

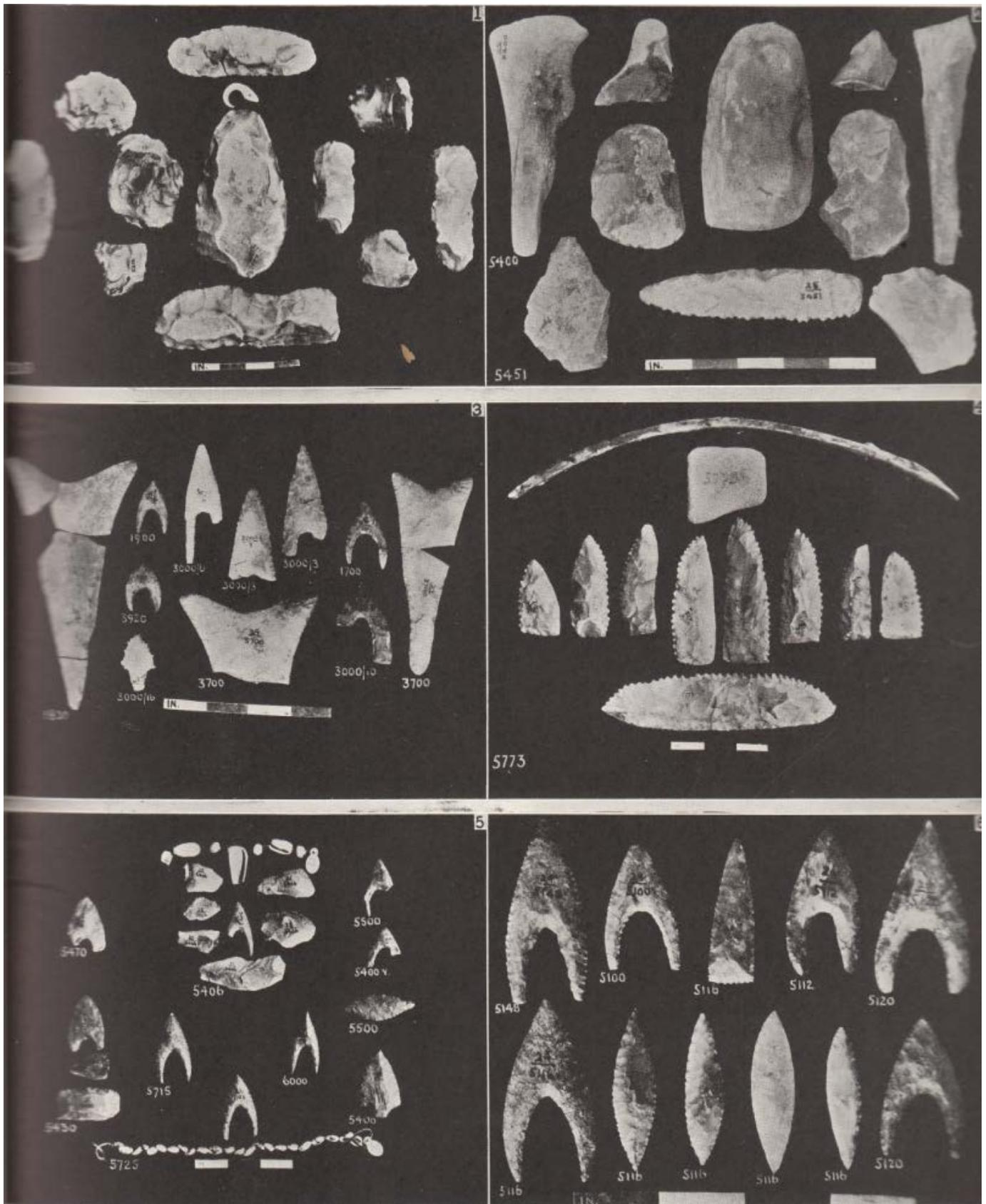


Figure 6.5: Badarian flint implements (*Bad. Plate xxix*)

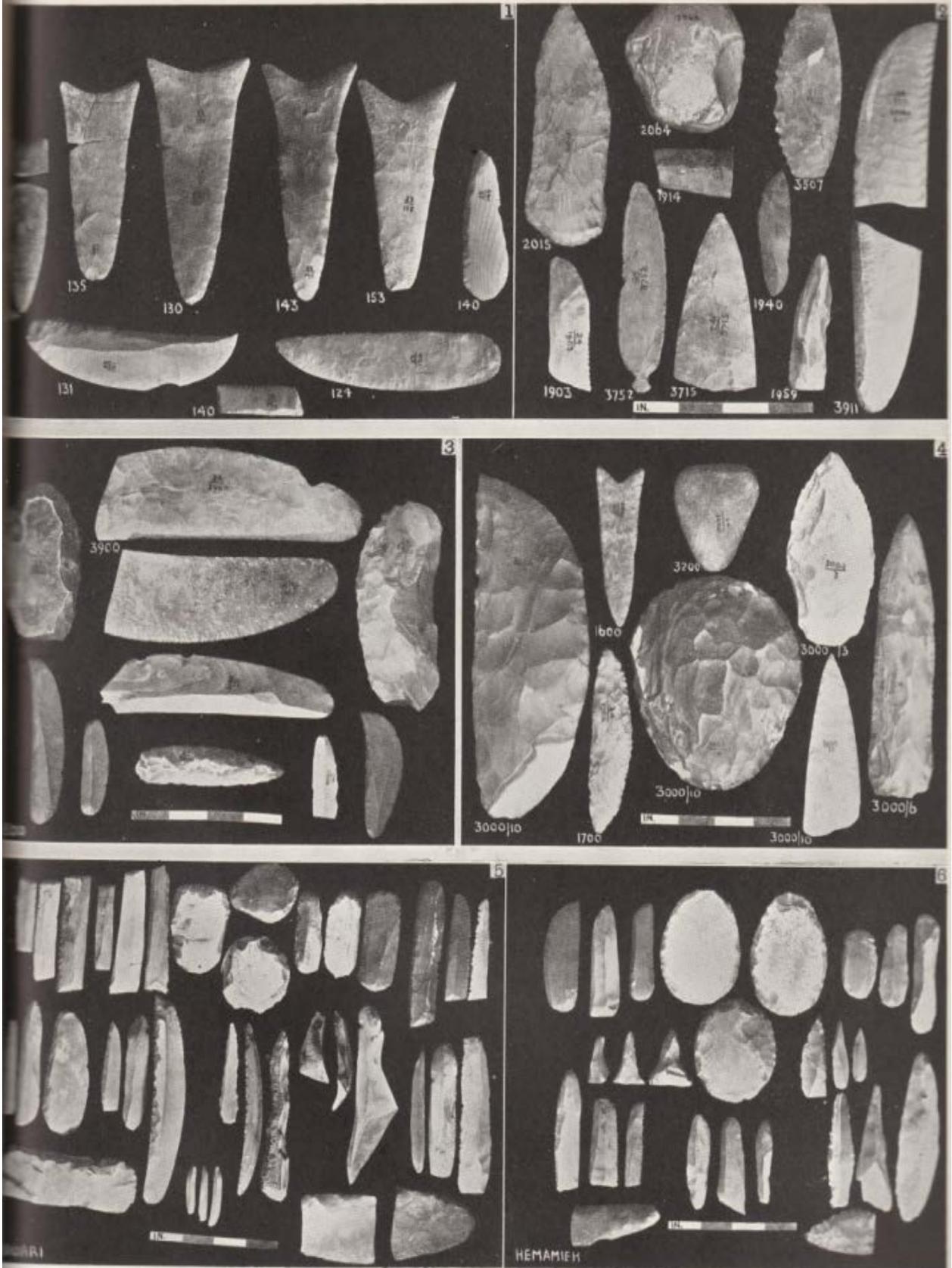


Figure 5.6: Badarian flint implements (*Bad. Ch.2, Plate lvii*)

Description	Grave no.	Photograph no.
Squat and rounded	3920	3
Long and narrow	5148	6
Wing angle wide and curved	1700	3
Narrower and pointed	5715	5
Square-tipped wings	5100	6
Pointed tips	1700	3
Wide	5740	5
Narrow	1700	3

An intricately point with long and particularly straight wings were recovered from an Early (Amratian) village (Figure 6.5, Photograph 3, 3000/6). Brunton in the Badarian sites (Brunton & Caton-Thompson 1928:35) did not find such types.

In a rare instance, Brunton refers to previous sources describing finds of winged arrowheads in Egypt and Nubia (Brunton & Caton-Thompson 1928:35-36). They were found in the Fayum in great quantities.⁴⁶ The problem with the arrowheads from the above sites is that very few have been dated. According to Brunton (1928:36), the Mahasna examples appear to have a connection with the Early Predynastic (Amratian). It is significant that Brunton (1928:36) is of the opinion that 'scarcely any are with pottery that can be classified. The arrow from 5112 (pl. xxix, 6) should be of an early type (Figure 6.5), if the pottery is as early in the series as it appears.⁴⁷ On the other hand, 5406 (pl. xxix, 5) should be a late example'. The dating and paucity of samples are, however, inconclusive, but I feel that the quality of the photographs and descriptions by Brunton is adequate for the period.

⁴⁶ For reference, see the following (no attempt is made to correct the format presented by Brunton): Currelly 1913; Petrie and Quibell, *Naqada*, pl. lxxxii, 55, 57, 58, p.56; Garstang, *Mahasna*, pls iii, iv, p.7; Reisner, *Arch. Survey of Nubia*, 1907-8, pl. lxxii, b 16, grave 17, 50; Quibell, *Hierakonpolis 1*, pl. xxiv, 12, 12a, p. 8; De Morgan, *Origines*, Figures. 189 (Dimeh), 199 (Tukh, Naqada), 200 (Abydos), 201 (Khattarah). As well as Quibell, *Archaic Objects*, pl. lxii; Oric Bates, *Eastern Libyans*, pl. viii; Reisner, *Boston Museum Bulletin*, xix, April-June 1921, nos 112-13.

⁴⁷ Cf. Petrie's Sequence Dates (Petrie 1899).

6.2.2 Tanged arrowheads

Only one (possible) example was found at Badari. See Figure 565, (5400 pl. xxix, 5). Brunton considers the example 3000/16 (pl. xxix, 3) as a Predynastic imitation.⁴⁸ Dated to the Amratian (Nagada I),⁴⁹ examples come from Nubia and Nagada (Brunton & Caton-Thompson 1928:36). Furthermore, Brunton (1928:36) mentions elaborate samples from the 1st dynasty at Abydos, Figures 6.7(a) and 6.7(b) in Petrie, *Royal Tombs II*, pls. iv, vi. The arrowheads in plate iv varies in length from 25 to 50 mm and those in plate vi from 62 to 48 mm. It appears that hundreds of arrowheads were found during the initial excavation of the royal Tombs of the 1s Dynasty by the French expedition,⁵⁰ but none could be found in the Cairo Museum (Petrie 1901:22). De Morgan (Brunton 1928:36) also figured many others from Abydos in his publication *Origines*, Figures 202-225.

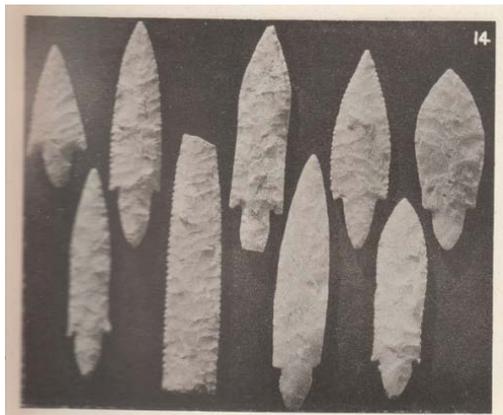


Figure 6.7(a): Flint arrows⁵¹

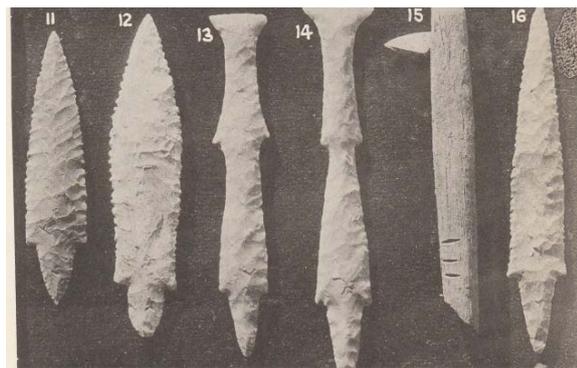


Figure 6.7(b): Flint arrows⁵²

Items 13, 14 and 15 in Figure 6.7 (b) does not fall under the tanged arrowhead discussion.

⁴⁸ I am not sure what he means by it.

⁴⁹ Petrie's Sequence Dates SD 37 and SD 43-56 (Friedman 1994:42).

⁵⁰ Petrie was extremely critical of the work done by Mariette at Abydos and he describes it as follows: 'It might have seemed a fruitless and thankless task to work at Abydos after it had been ransacked by Mariette, and been for the last four years in the hands of the Mission Amélineau' (Petrie 1900:1-2).

⁵¹ Petrie (1901). Part II. Pl. iv.

⁵² Petrie (1901). Part II, Pl. vi.

6.2.3 Saw edged knives

The description of the saw edged knives by Brunton (1928:36) is not very detailed,⁵³ but fortunately they were all photographed.⁵⁴ Sixteen knives in total were found, of which six were in graves and ten in deposits in the villages. Of the ten found in the deposits, nine were found grouped together. The lengths varied from approximately 50 mm to just over 175 mm. The serrations were found on the curved side and varied in coarseness. The exception was example 5120 (Figure 6.2) which is finely serrated on both edges. Brunton (1928:37) thought this to being a dagger, but it looks more like a spear point. With varying width, the most of the saws are ended off square at the butt and all are pointed at the top. Two of the examples were pointed at each end. None of the examples were squared at both ends, which can be found at many of the Predynastic sickle flints. In comparison, Brunton was of the opinion that these paralleled examples from Nubia and quotes Reisner 1908. In using this information, Brunton is of the opinion that the date for the knives could be SD 37 (1928:37).

6.2.3.1 Other knife forms

Brunton continuous and describes a number of various types of knives found in various locations. These are photographed and described as two oval knives pointed at each end (Figure 6.2, 569, shows a knife over 8 inches (200 mm) long). From tomb number 5739 (Figure 6.1, pl. xx, 16) is illustrated a similar knife of about the same length, but with one end squared. Two rough knives were from tomb 5814 (Figure 6.4, 5), and a broad one with an almost square end from tomb 2015 (Figure 6.6, 2). Two have nicks on the one side of the base, probably for hafting (Brunton 1928:37). The one is very rough, tomb 5410 (Figure 6.4, 3), and the other a well-worked knife with a fine chipped edge, 5814 (Figure 6.4, 5).

In reference to the “dagger” from 5120 (Figure 6.2), Brunton mentions a long lance-head or dagger from 5391 (Figure 6.4, 3) as being similar, but is smaller and narrower.

⁵³ The technical details of the Badarian flint work were left for Caton-Thompson to complete in her section of the book dealing with Hemamieh. Brunton explains that his recording of the Badarian flints only involved his recording of the circumstances under which they were discovered in the cemeteries and villages at Badari (1928:35).

⁵⁴ Figure 6.1 (Pl. xx, 16); Figure 6.2 (Pl. xxvi); Figure 6.3 (Pl. xxvii, 2,4); Figure 6.4 (Pl. xxviii, 2,3); and Figure 6.5 (Pl. xxix, 2.4).

At Hemamieh a similar one in form was found in area 1700 (Figure 6.6, 4). In 5400 (Figure 6.4, 6) is an adze-like tool and Brunton is of the opinion that it looks out of place, and a likewise part of an implement is shown in 5459 (Figure 6.4, 3). In 5400 is a tool similar to the serrated knives from 5773, but without the serrations. Two small worked flints, which Brunton calls “flint rods”, is described as possibly being wings of arrow heads which have been broken off.

In Figure 6.5 (pl. xxix, 6) five leaf-shaped implements are illustrated, which Brunton describes as possibly being the finest examples of Badarian flint work. They are finely notched on all sides and four are pointed at each end with one having a flat base. They are made of translucent flint and Brunton was of the opinion that they may be models of the large serrated knives mentioned above (Brunton 1928:37).⁵⁵ Gopher (1994:32) also describes many Neolithic arrowheads from the Levant, i.e. from Abu Maadi (nos. 8-14).



Figure 6.8: Neolithic arrowheads from the Sahara – © L Vorster

6.2.4 Flint flakes

Brunton identified the abundance of flakes found in the area as being largely waste, although he also mentions that a large number were found in the graves suggesting that they were in fact used some way or the other.⁵⁶ He was later proved to be correct and flake tools and Debitage became very important sections of lithic analysis (Andrefsky 2000). The erroneous belief that Brunton may regard some of the flakes as models of full-sized implements is due to the paucity of research that had been done on lithics at

⁵⁵ I am of the opinion that these were arrowheads, probably from the earlier periods, or imported from areas more to the southwest. Many Neolithic arrowheads from the Sahara display similar characteristics (see Figure 6.8).

⁵⁶ The recycling of flint flakes was for many years not properly addressed and the earlier archaeologists like Brunton did not have the technological means at their disposal to discuss the retouching of flakes. That it had been done is not the question, and modern researchers like Bradbury et al (Bradbury et al 2008:233-251) present a detailed philosophy behind the curation of flakes.

that time (Brunton 1928:37). However, what is important is the fact that he collected the flakes, photographed and curated them for later studies. From the graves a number were photographed and published in Brunton and Caton-Thompson, 1928.⁵⁷

It is also important to note that photographs were published of the pieces from the deposits.⁵⁸

The abundance of flakes found in the area made Brunton surmise that the flaking (chipping) was done locally. It is certain that the raw materials used in the manufacture of the stone tools are from flint nodules gathered from the desert surface as indicated by the orange weathering seen on the cortex (Holmes 1989:105).

Brunton also mentions the discovery of, what he terms 'extremely rough lumps of flint', found in holes in the ground (1928:37). They were scattered either in the cemetery areas or the village areas, i.e. in the cemetery 5206, he found 19 pieces and in 5213 (Figure 6.5, I), he found 22 pieces.⁵⁹ At 5451 he found among the rough flints and pieces of chalcedony a bone tool, animal bone, a pottery cup, a saw knife and a celt.

Additional to the tools already described above, Brunton also mentions the following: 5527 (Figure 6.4, pl xxviii, I) with nine good saw knives, a long rib needle and a flat piece of grit-stone, and 6017 with a number of rough flints, and a flake implement of hard stone.

Most of the lithics came out of the cemetery areas and less from the village areas. There is no discernible difference between the collections from the cemeteries and

⁵⁷ Figure 6.1 (5739, pl. xx, 16); Figure 6.2 (5120, pl. xxvi); Figure 6.3 (5390, pl. xxvii, I); Figure 6.3 (5705 pl. xxvii, 4); Figure 6.3 (5738 pl. xxvii, I); Figure 6.3 (5744, pl. xxvii, 5); Figure 6.4 (5389, pl. xxviii, 3); Figure 6.4 (5401, pl. xxviii, 3); Figure 6.5 (5406, pl. xxix, 5).

⁵⁸ Figure 6.3 (5118, pl. xxvii, 2); Figure 6.4 (5814, pl. xxviii – described later as three rough knives, two flakes, and two cores); Figure 6.4 (5300, 5400 pl. xxviii, 6); Figure 6.4 (5500, 5600, pl. xxviii, 4); 6.4 (5600, 5700, pl. xxviii, 2). The cores from which the flakes were struck are represented in the following photographs: Figure 6.3 (5719, pl. xxvii, 6); Figure 6.3 (5744, pl xxvii, 50); and Figure 6.4 (5387, 5401, pl. xxviii, 3).

⁵⁹ 5213 also contained the rough flint of a shell hook, animal bones, and Badarian sherds.

village areas and according to Holmes (1989:105), they represent a specific and consistent industry.

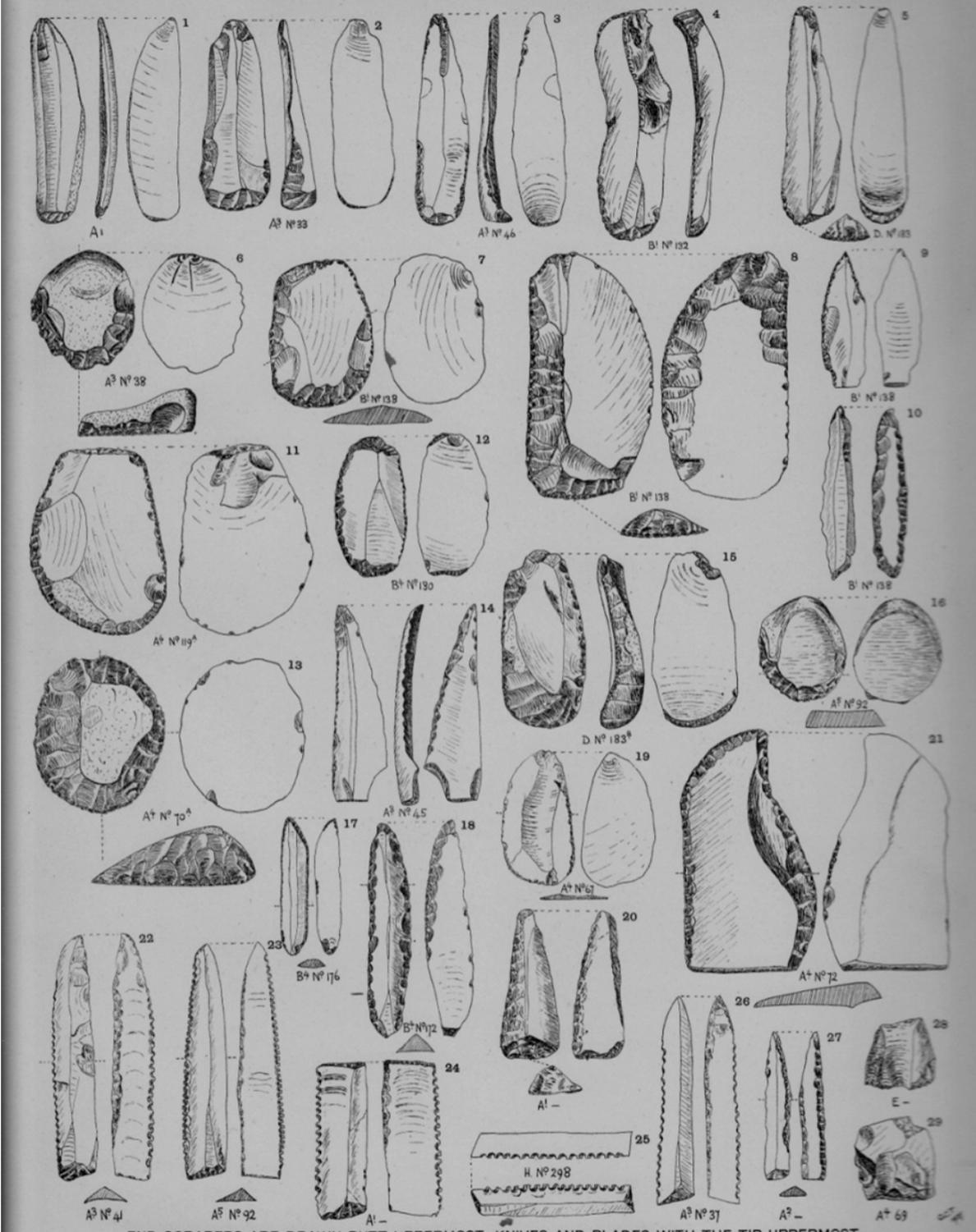
6.3 LITHICS FROM THE PREDYNASTIC SETTLEMENT, NORTH-SPUR HEMAMIEH

Hemamieh was excavated by Caton-Thompson (Idem: 265-272) and her typology for the Badarian flint industry is still the definitive publication on the subject (Baumgartel 1960:24; Holmes 1980:49). Caton-Thompson identified the levels excavated at Hemamieh according to the pottery sherds. Caton-Thompson posited that the associated flints belong to the same horizons (Caton-Thompson 1928 75).⁶⁰

Caton-Thompson excavated the site in 6-inch (150 mm) increments and the top levels descending down to the 3-ft (900 mm) level produced a very fine flake industry with a variety of beautifully fashioned end scrapers and a variety of knives. The lower levels consisted mainly of a core industry (Brunton & Caton-Thompson 1928:75).

Caton-Thompson identified three levels, each with corresponding transition zones. The levels 6 ft. or deeper to 4 ft. 6 ins. produced the most Badarian rippled ware sherds and Caton-Thompson regarded this level as representing the “true” Badarian civilisation. In line with the change in pottery, the flints start to show an overlap between the 4 ft. 6 ins. level and 3 ft. 6 ins. levels. Caton-Thompson is of the opinion that this is the transition level between the Badarian and Amratian horizon. The level between 3 ft. 6 ins. and 3 ft. represents the Amratian or Early Predynastic period. The 3 ft. to 2 ft. level represents the transition between the Amratian and Gerzean. The 2 ft. to surface levels represent the Gerzean proper (Holmes 1989:44).

⁶⁰ See Caton-Thompson in Brunton & Caton-Thompson (1928:79) for a Comparative Pottery Table of Levelled (sic) Sherds.



END SCRAPERS ARE DRAWN BUTT UPPERMOST, KNIVES AND BLADES WITH THE TIP UPPERMOST.

Figure 6.9: Flints: Plate Lxxviii (Brunton & Caton-Thompson 1928)

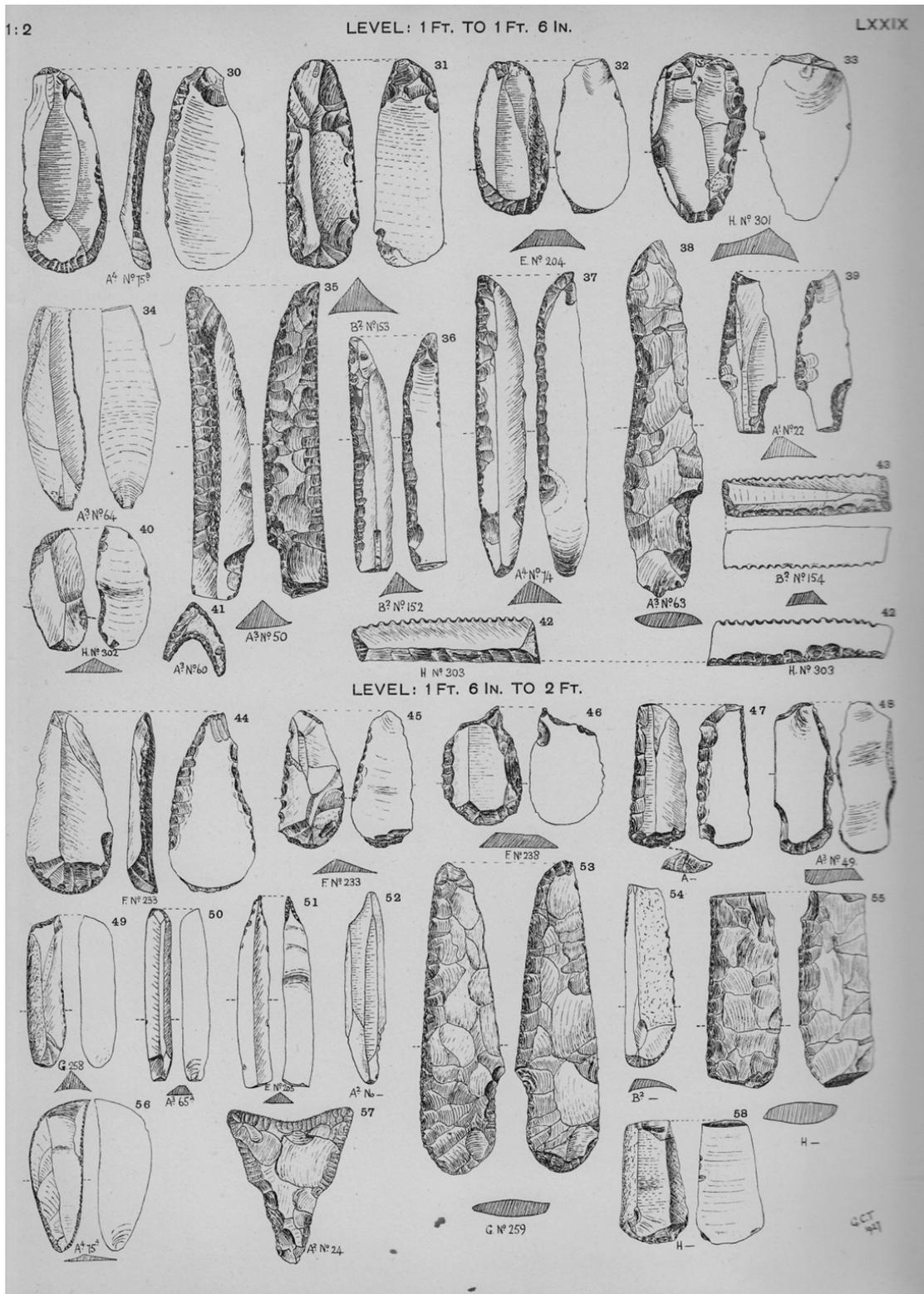


Figure 6.10: Flints: Plate Lxxix (Brunton & Caton-Thompson 1928).

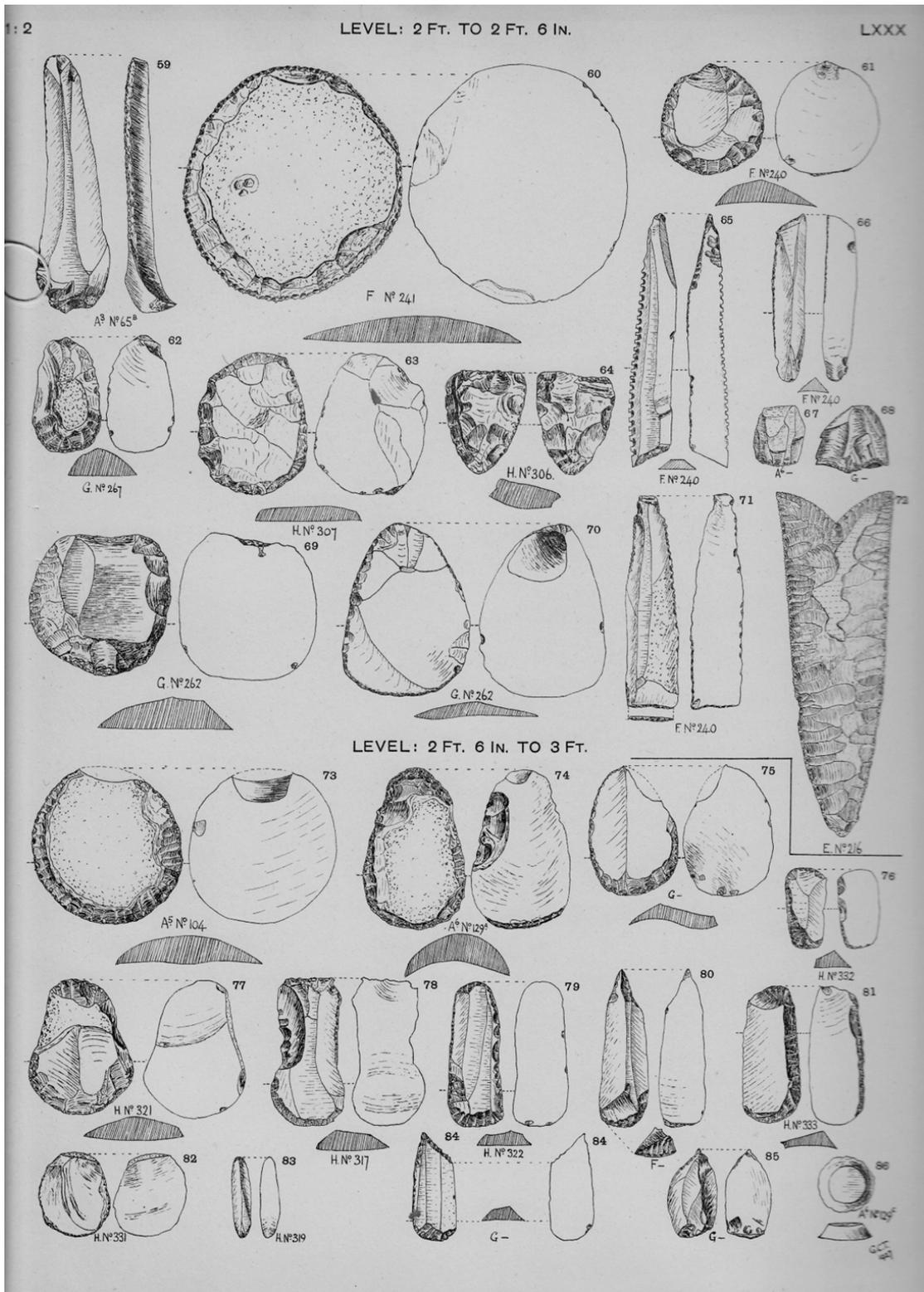


Figure 6.11: Flints: Plate Lxxx (Brunton & Caton-Thompson 1928).

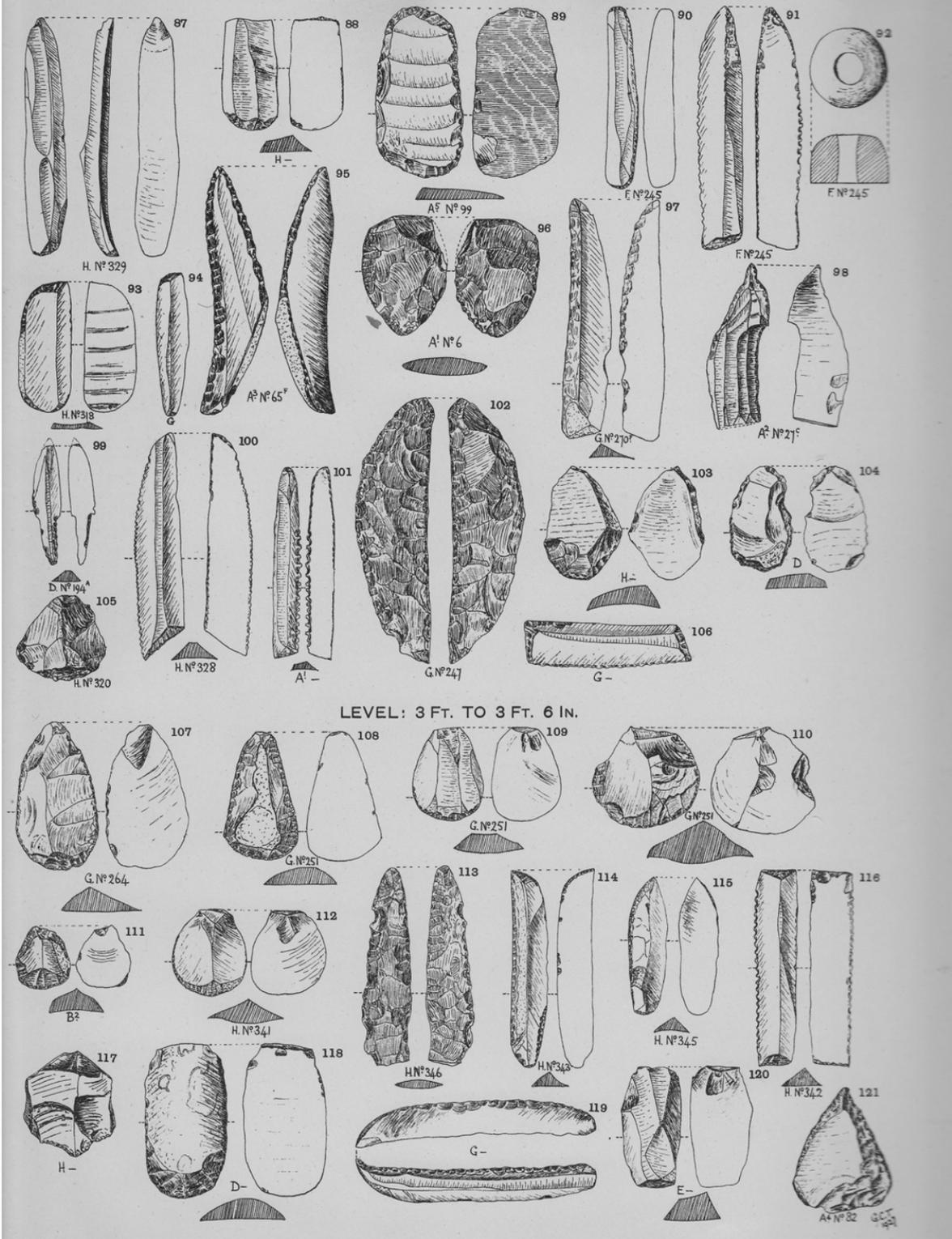


Figure 6.12: Flints: Plate LxxxI (Brunton & Caton-Thompson 1928).

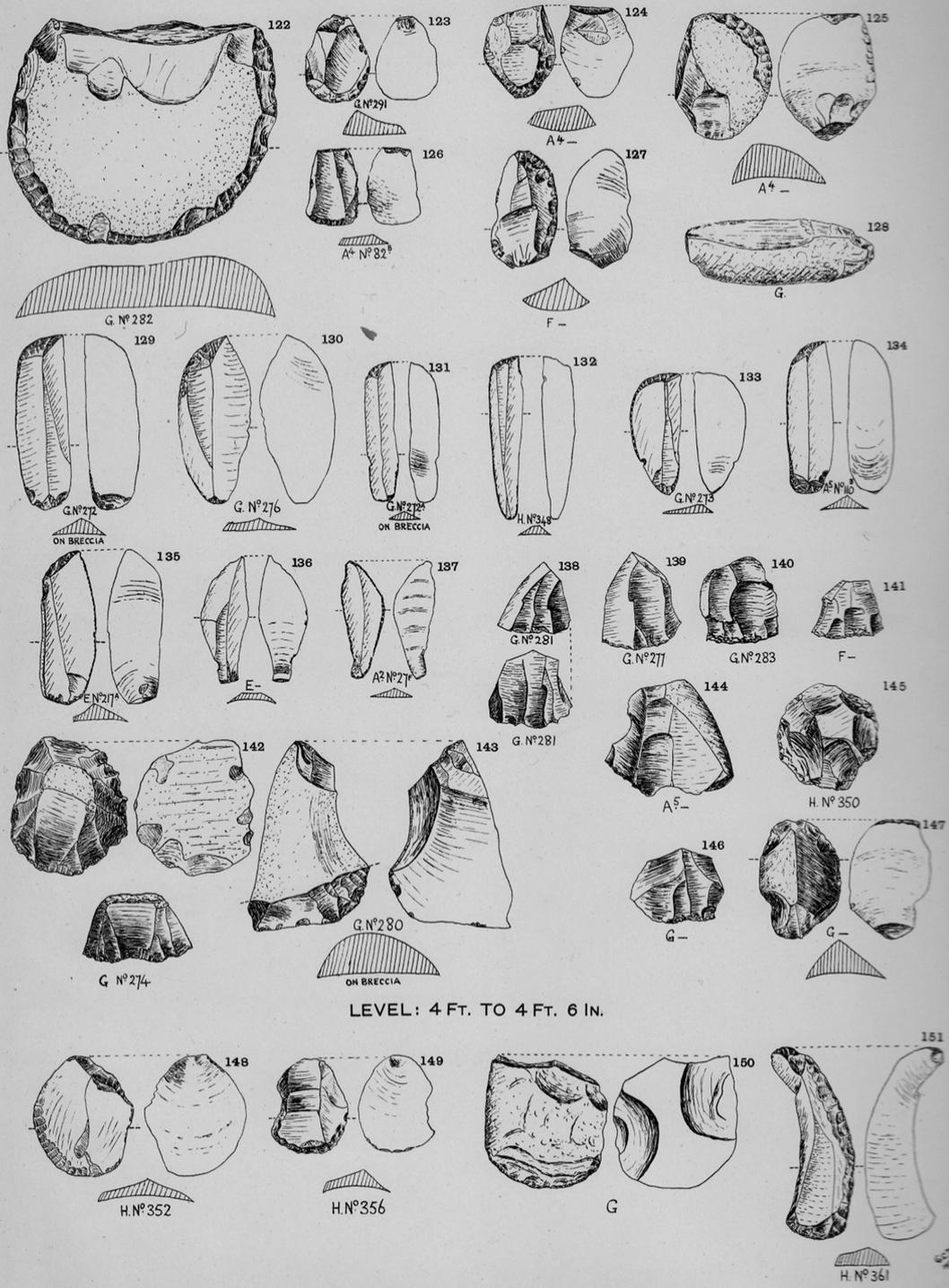
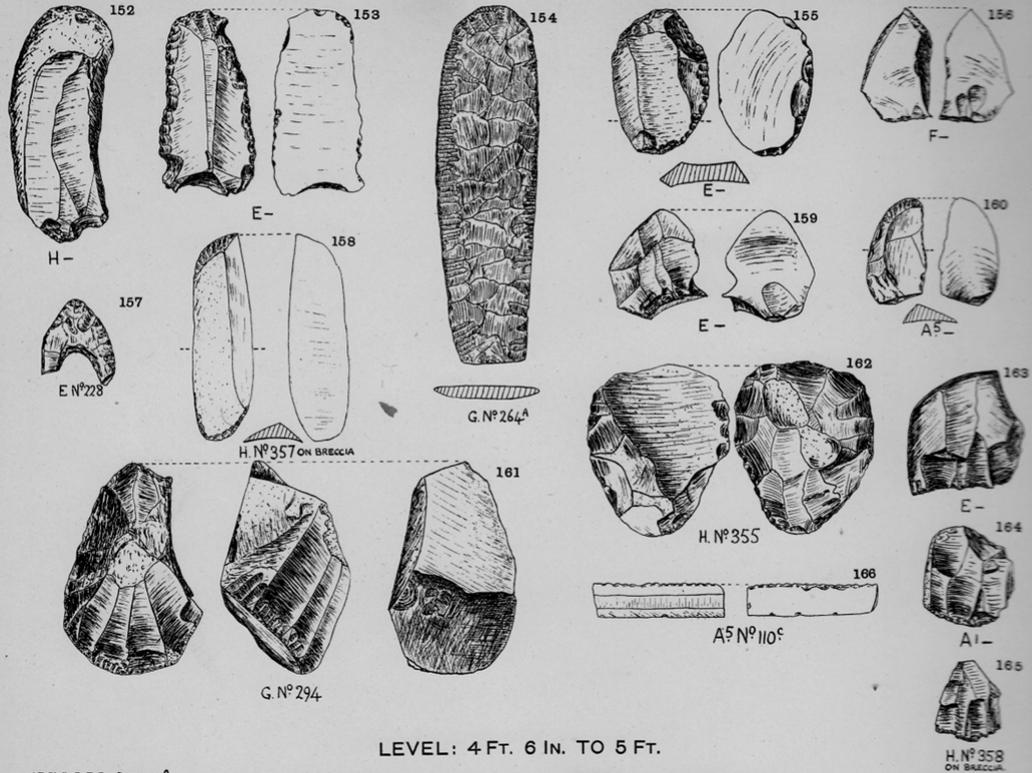


Figure 6.13: Flints: Plate Lxxxii (Brunton & Caton-Thompson 1928)



LEVEL: 4 FT. 6 IN. TO 5 FT.

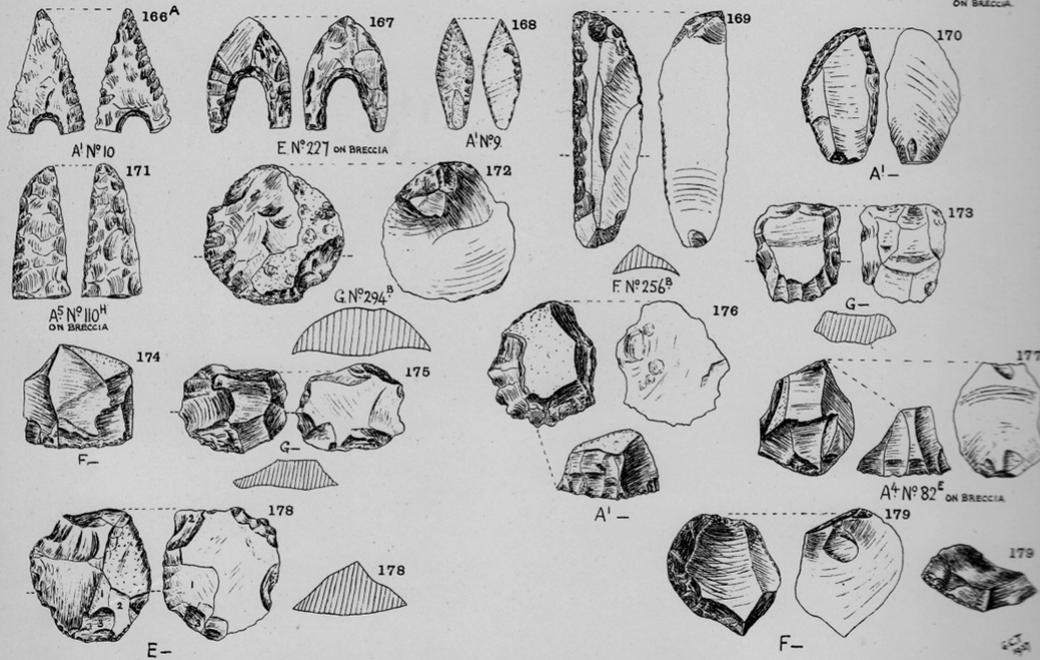
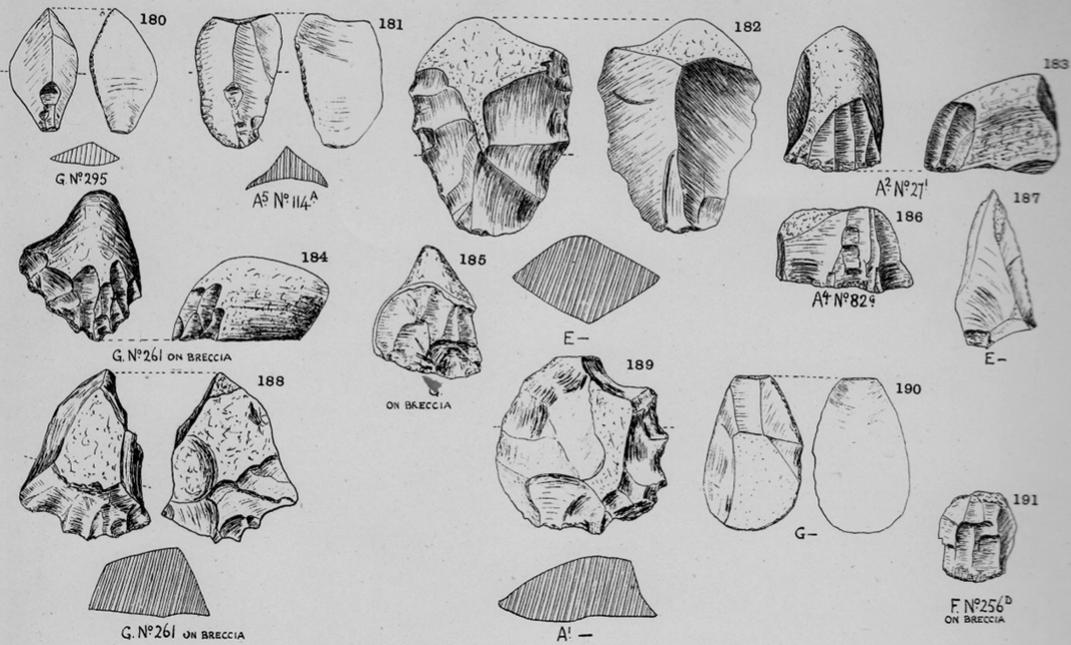


Figure 6.14: Flints: Plate Lxxxiii (Brunton & Caton-Thompson 1928)

LEVEL: 5 FT. TO 5 FT. 6 IN.

LXXXIV



LEVEL: 5 FT. 6 IN. TO 6 FT.

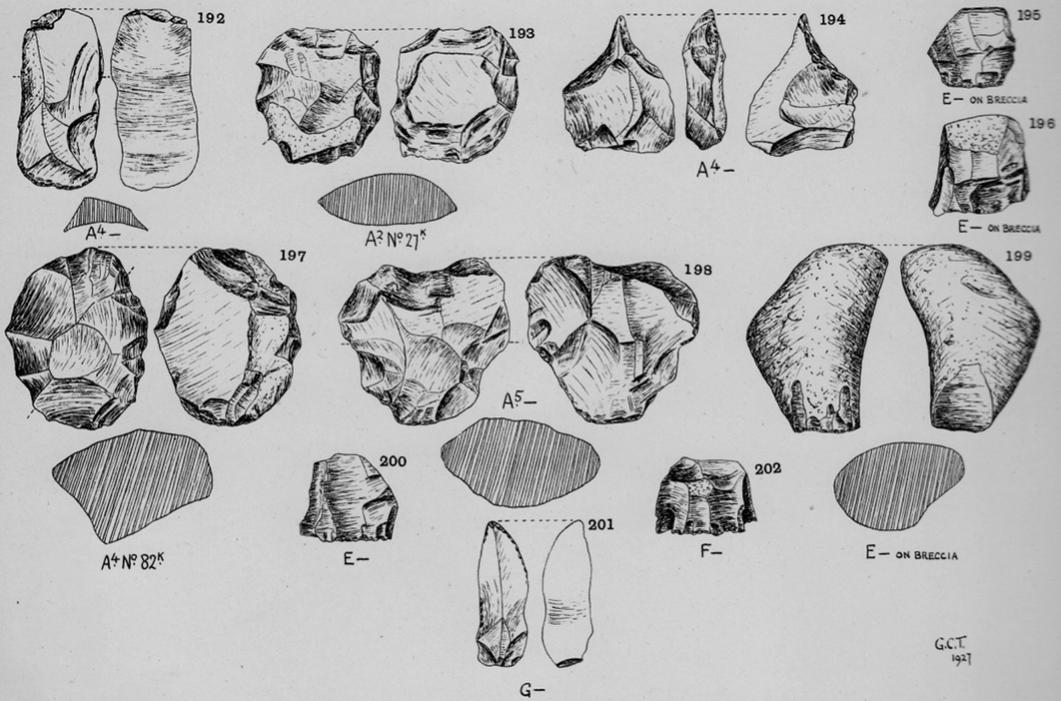


Figure 6.15: Flints: Plate Lxxxiv (Brunton & Caton-Thompson 1928)

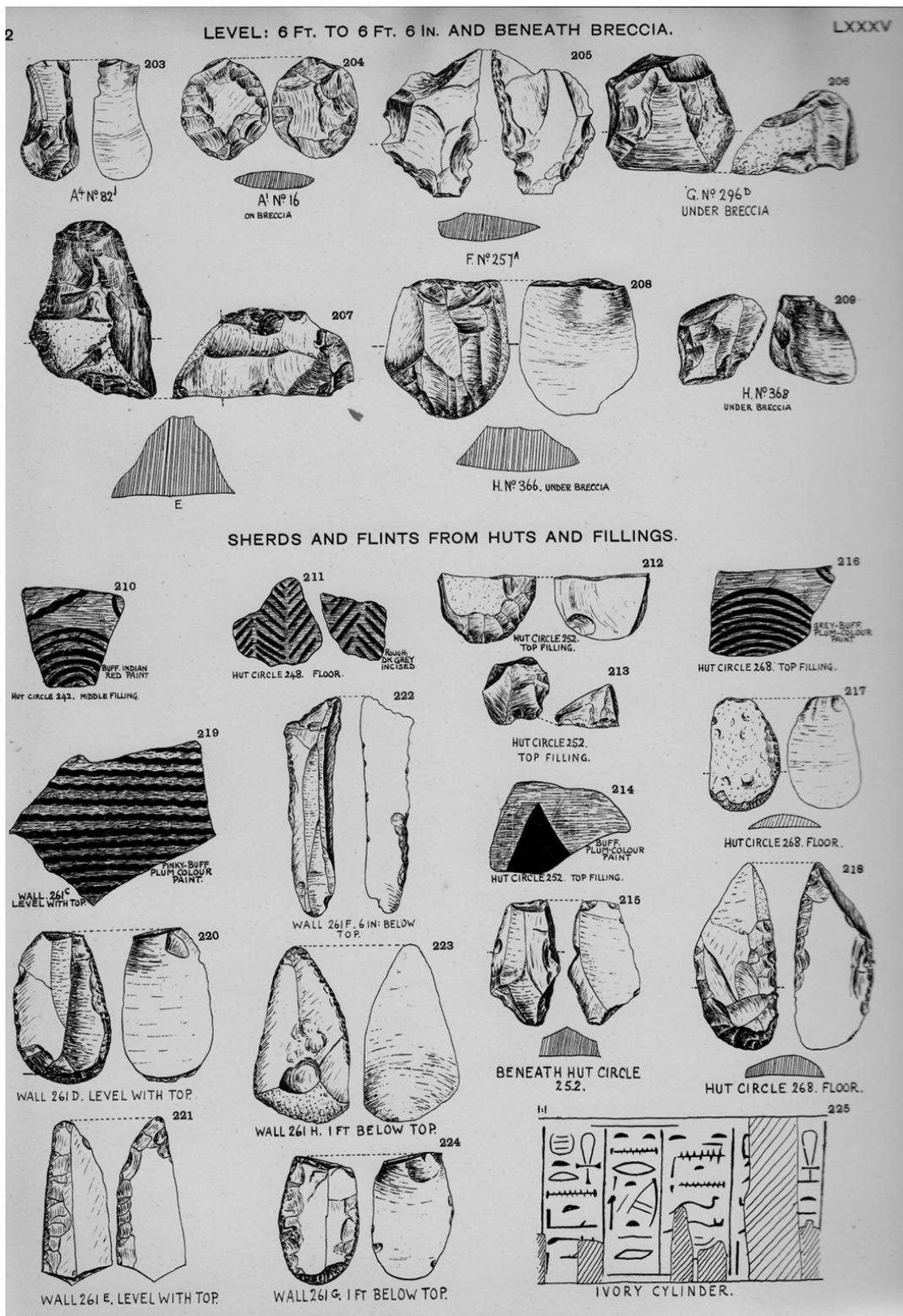


Figure 6.16: Flints: Plate Lxxxv (Brunton & Caton-Thompson 1928).

Apart from the correlation with the pottery sherds, Caton-Thompson also observed a marked improvement in manufacturing technique of the flints in the higher levels (Brunton & Caton-Thompson 1928:75).

Lithic raw material selection is important as a factor that influences technological organisation when it comes to raw material availability, abundance, form and quality. The length of time and detail in the making of a tool and how it is prepared, used and maintained is in direct relation to the above factors.

Raw materials for lithic manufacture can usually be placed in a certain area providing extremely useful information on the mobility of the tool manufacturers, the movement of the stone and human land use (Andrefsky 2008:9).

The above elements can be directly observed in the raw material use by the Badarian. Caton-Thompson (1928), in her excavation at Hemamieh, points out an excellent example of the value of the provenance of the lithic raw materials used in the manufacture of tools in a specific area. One of the important features she observed was a difference in the choice of raw material in the upper levels. The Badarian seemed to be content to recover a rough nodule from the desert surface as the preferred objective piece. This is clearly identified by the crackled orange cortex revealing long-time exposure on the desert floor (Brunton & Caton-Thompson 1928:75).⁶¹

The Eocene cliffs of the Nile valley cover a very large area and continue as far south as Esna. It consists of alternating beds of indurate limestone and friable chalk with scattered or banded nodules of chert (Said 1990:456). The nodules were fine pink-grey chert and the preferred raw material for tools by the later Predynastic people. The difference in raw material used by the Badarian and later Predynastic peoples led Caton-Thompson to surmise that the Badarian were unfamiliar with the *in situ* flint material that had to be quarried and they therefore originated from an area where this material was not available (Brunton & Caton-Thompson 1928:75). She leaned toward an origin pointing north to the Mediterranean, and could be followed north-eastwards into Palestine. She admits that this is purely a speculative assumption. Holmes (1989:171) is of the opinion that the material lying on the desert surface, near their settlements, was adequate for their manufacturing skills and tools made that served its purpose at the time. This is probably quite correct as the value of the larger tabular and

⁶¹ It appears to be especially evident in the Badarian flints from the sites excavated by Brunton (Holmes 1989:171).

superior quality chert was not worth their effort and they relied on the minimal cost strategy (Binford 1979:260). During the later Predynastic the tools became larger and in some cases quite large. The larger tools required a better quality flint than the weathered material found in the low desert, and they reverted to the *in situ* tabular pieces found in the nearby limestone *gebel*. The difference is more apparent in the regular blades by comparing the sizes between Figures 6.11 to 6.14 (Surface to 3ft) and Figures 6.15 to 6.17 (3ft 6in to 6ft). Figure 6.18 is more representative of a core industry, which continuous to below the breccia in the settlement.

6.3.1 The Badarian flint industry at Hemamieh

Baumgartel (1960:25) supports the view of Caton-Thompson (1928:75) that the most prominent Badarian flint tool is the so-called push-plane. Described by the latter as ‘a heavy, nodular, push-plane or steep-ended scraper’. There is some contradiction in the reasoning for not using the larger tabular chert in the limestone *gebels* by Holmes, as the push-plane is being described as being made from ‘a massive flat-bottomed nodule of roughly plano-convex section’ (Caton-Thompson 1928:75).⁶² In her description of the main tools of the Badarian, Holmes does not regard the push-plane as an important tool in the Badarian collections (Holmes 1989:172). Caton-Thompson was of the opinion that the tool was used for leather-work⁶³ and its manufacture consisted of removing a few flakes on the one end with the domed cortex of the upper face utilised as a hand-grip (Baumgartel 1960:25).⁶⁴ In addition to the push-plane another form, which is described by Caton-Thompson as possibly being Badarian, is a series of small knives made on flakes, (Figure 6.15, pl. Lxxxii, 129-135) and also photographed (Figure 6.19).

⁶² The chert for this kind of tool consisted of having a rough, orange or brown crust, indicating long exposure to surface weathering (Caton-Thompson 1928:76).

⁶³ Caton-Thompson (1928:76) described the tool as being as distinctive to the Badarian as their combed pottery. She could find no comparable tools in later predynastic collections and discarded the idea that they could be for agricultural use, or as a weapon.

⁶⁴ Specimens of this tool is illustrated in Figure 6.13, pl. Lxxxii, 142-143; Figure 6.14, pl. Lxxxiii, 161; Figure 6.15, pl. Lxxxiv, 183-184; and Figure 6.16, mpl. Lxxxv, 206-207.

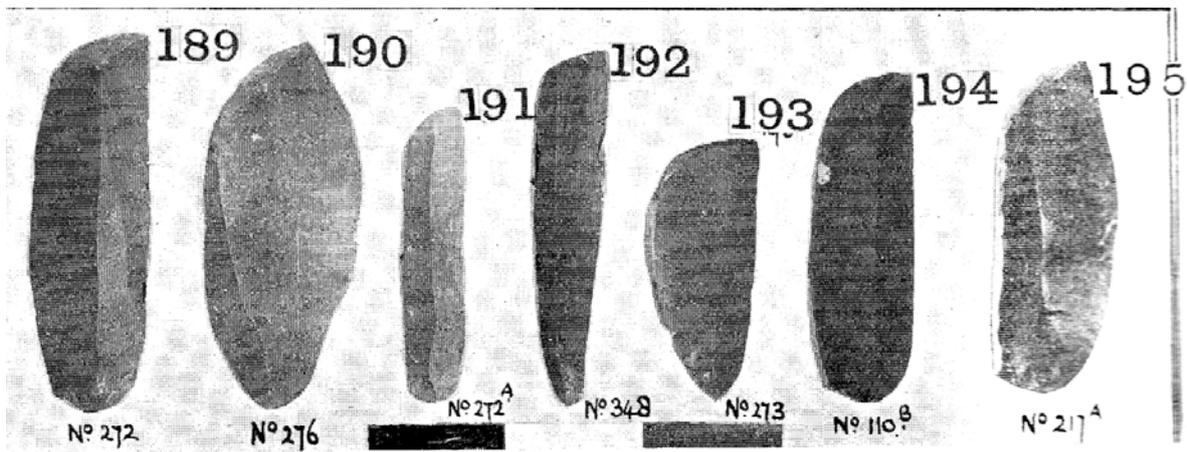


Figure 6.17: Small knives (From pl. Lxxiii, Caton-Thompson 1928)

They are of a very good workmanship in dark-grey, almost black chert.⁶⁵ They appear to be from about 3 to about 3½ ins. long. The flakes are extensively worked where the upper face shows longitudinal flake marks with low single or double flake ridges. The percussion bulb on the plain face has been trimmed in all cases by terminal retouch, resulting in ripple marks being left showing the direction of the blow. The curved tip and butt, as well as the entire back margin, have been delicately worked reminiscent of the Chateauperron point. By her own admission, the distribution of the small blades in the Hemamieh settlement does not entirely support her claim that they are of Badarian origin (1928:76). The distribution is as follows:

Qty.	Interval (Depth)	(Illustration)
1	1 ft. 6 ins.	Figure 6.10 pl. Lxxix, 40.
1	2 ft. 6 ins.	Figure 6.11 pl. Lxxx, 66.
2	3 ft.	Figure 6.14 pl. Lxxxi, 93, 94.
1	3 ft. 6 ins.	Figure 6.14 pl. Lxxxi, 115.
7	4 ft.	Figure 6.13 pl. Lxxxii, 129-35.
1	4 ft. 6 ins.	Figure 6.14 pl. Lxxxiii, 158.

⁶⁵ Caton-Thompson is of the opinion that the material is not from a local source (1928:76), but offers no clue as from where the chert may have originated.

In support of her belief that the blades are of Badarian origin, Caton-Thompson refers to an identical specimen found under a Badarian combed ware pot, found in the shallow settlement in Qau Bay. The area in Qau Bay is unquestionably Badarian and also supporting her identification is the number of specimens under the 4 ft. level.⁶⁶

Caton-Thompson's typology for the Badarian flint industry at Hemamieh was described by Baumgartel (1960:24) as still being the definitive work on the Badarian flints to include:

- Push-planes
- Disc-scrapers and borers
- Sickle-stones and knives
- Arrow-heads
- Flakes

6.3.2 The Intermediate Early Predynastic Levels at Hemamieh

The following level above the underlying Badarian/Amratian transition levels is in the 3 ft. to 3 ft. 6 ins. level and is provisionally placed in the SD 40 (Amratian) group.⁶⁷ This level exposed the remains of nine hut circles confirming traces of a more settled occupation. A notable change in the pottery is observed in this level with an abundance of black-topped and red-polished items. Replacing the nodular steep-ended scrapers of the lower levels, the flake industry emerges with circular or oval scrapers made on a flake (Figure 6.12, pl. Lxxxi, 107-112). In contrast to the nodular flint material of the lower levels, the material used was of the locally obtained tabular chert. In some scrapers the white calcareous crust is still evident.

⁶⁶ Baumgartel (1960:25) is also doubtful and she comments that in her opinion it is very difficult to uphold the Badarian horizon for the small knives. The distribution in the settlement of Amant also favours a later date for similar small knives.

⁶⁷ Throughout this report Caton-Thompson refrains from using specific name branding for differentiated levels such as Amratian and Gerzean levels. The exception is her profuse use of Badarian culture. For the rest she relies on terminology, such as: Intermediate Levels. Early Predynastic Strata – denoting Amratian. 3 ft. 6 ins. The following level is The Upper Early Predynastic and Lower Middle Predynastic Levels. 3 ft. to 2 ft. This is the Amratian/Gerzean Transitional levels. Finely the Upper Levels. 2 ft. to Surface. This is the Middle Predynastic (Gerzean) levels (Caton-Thompson 1928:76-78; Holmes 1989:44).

Of the sickle-flints found in this level, Caton-Thompson highlights the difference between the Badarian and later implements, where the Badarian is pressure-flaked over both faces with a thin oval section, the later form is a type edge-trimmed only, with triangular or angular section (Figure 6.12 pl. Lxxxi, 116). The sickle-flints are intricately described by Caton-Thompson as the upper face showing anticlinal longitudinal flake-scars, and one or more flake ridges. The under face has the percussion bulb removed by end-trimming with only one lateral margin denticulated. Caton-Thompson points out the difference in this regard between the Badarian and Fayum sickle-blades where a small proportion has a double saw edge, and none on the ordinary Predynastic type (Caton-Thompson 1928:77).⁶⁸

6.3.3 The Upper Early Predynastic and Lower Middle Predynastic Levels. 3 ft. to 2 ft.

In this level all traces of Badarian combed ware is replaced by a mixture of scarce decorated and wavy-handled jars appear. A couple of more pieces of white-crossed-lined wares were found and the black-topped and red-polished sherds have all but disappeared. This is most likely the transition between the Amratian and Gerzean levels (Holmes 1989:44).

Similarly, the flint work contains various types, but the majority is becoming Middle Predynastic in character. The scrapers on flakes are becoming more evident and in numbers of various types, especially circular forms (Figure 6.12, pl. Lxxxi, 60, 61, 69 and 73), and for the first time end scrapers made into long thin blades are noticed (Figure 6.12, pl. Lxxxi, 87 and 90). Reworked tools are also evident in a fragment of a rippled-flaked knife, which has been retouched to be used as an oval scraper (Figure 6.12, pl. Lxxxi, 89). Other distinctive items are an awl with a beautifully fluted shaft (Figure 6.12, pl. Lxxxi, 98), and an arrowhead with a carefully worked tang (Figure 6.12, pl. Lxxxi, 99).

⁶⁸ See Figure 6.9, pl. Lxxviii, 22, 23, 26; Figure 6.10, pl. Lxxix, 42. Some variations do occur; see Figure 6.9, pl. Lxxviii, 25 and Figure 6.12, pl. Lxxxi, 116.

One of the best examples of grave goods workmanship is seen in a very fine fish-tail knife (Figure 6.11, pl. Lxxx, 72). Caton-Thompson is of the opinion that these pieces are articles of some specialised everyday utility of some higher value. Another piece recovered (Figure 6.10, pl. Lxxxix, 57), has been very much used and broken and re-used until little of the shaft remains (Caton-Thompson 1928:77).

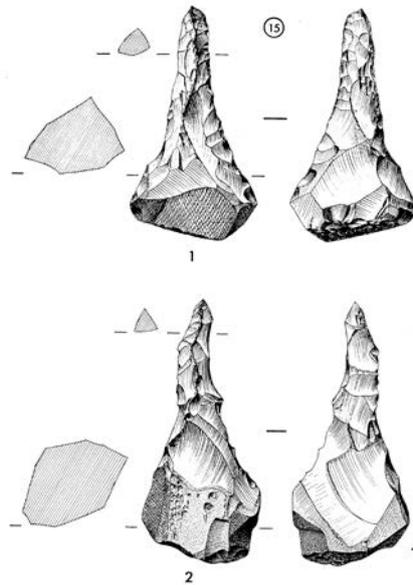


Figure 6.18: Large drills (*Grande Perçoir*) from Tixier (1963:65)

There is another possibility in that the item 57 could be a drill and not a knife as suggested by Caton-Thompson. Figure 6.18 depicts Neolithic drills as was found in the Maghreb, Algeria, and described by Jacques Tixier (Tixier 1963:65). See also Holmes (1989:399).

Similarly, the two small Badarian knives, Figure 6.12, pl. Lxxxi, 93, 94, is possibly from a lower level and found by the later group and put to use. They are made of the same dark grey chert as mentioned on page 336 (Caton-Thompson 1928:77).

6.3.4 The Upper Levels. 2 ft. to surface

The upper levels are defined by Caton-Thompson (1928:77) as definitely being the Middle Predynastic (Gerzean) period, again based on the decorated pottery, 59 of the total number of 67 sherds shows the design of the familiar types.

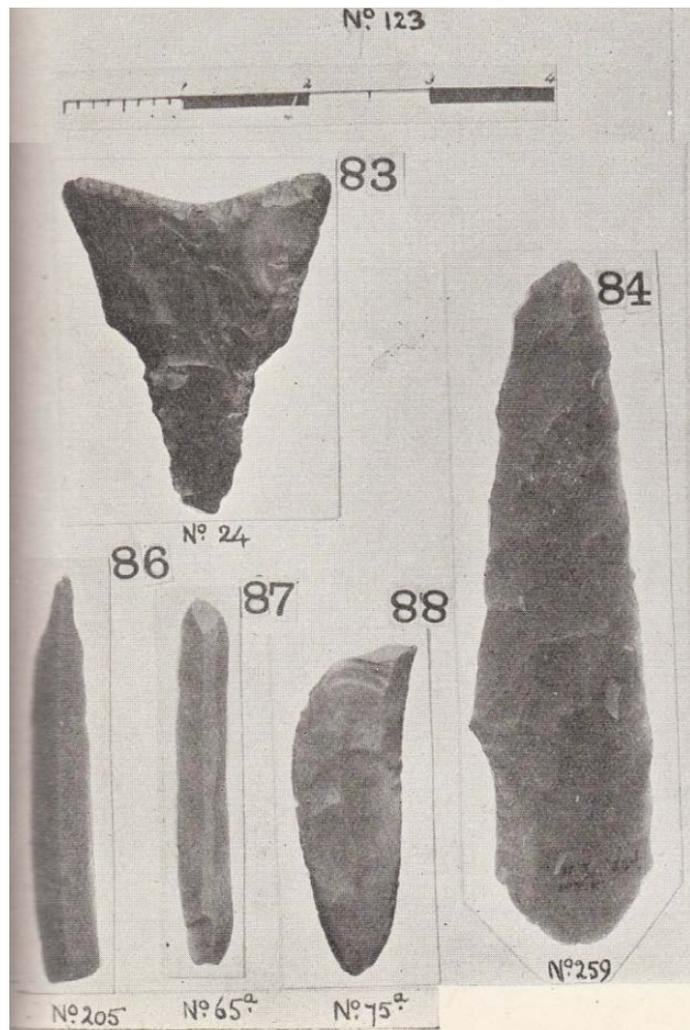


Figure 6.19: Pl. Lxxi (Brunton & Caton-Thompson 1928)

The flints consisted of the following:

- Long knives of various forms
- Sickle-flints
- Single end scrapers
- Ovate and circular scrapers
- Double-ended scraper
- Small knife
- Concave base arrowhead

Illustrated in Figure 6.10, pl. Lxxix, 53, as well as photographed (Figure 6.20, 84), is the long, straight, shouldered knife. Irregular flaking is done over both faces. Variations of

the flint knife is illustrated in Figure 6.10, pl. Lxxix, 35, and is made on a twisted and curved flake with a triangular section. This specimen is shouldered whereas the normal type in the Middle Predynastic period is usually unshouldered and not often flaked on the underface as is evident in the above specimen. The above flints, together with a number of rough flints were all found in a pot, which has a long sequence date run with the Middle Predynastic and therefore unsuitable for dating purposes (Brunton & Caton-Thompson 1928:78).

Ordinary Predynastic sickle-flints are also in evidence as illustrated in Figure 6.9, pl. Lxxviii, 22-26. The sickles are made on pointed or squared flakes. Friction polish is evident on the serrated edges. Extreme wear use is visible on one item (Figure 6.9, pl. Lxxviii, 26). In Figure 6.9 the no's 23, 24 and 25 show deep and squarely cut denticulation.

The last five of the flint implements described by Caton-Thompson (1928:78), is the single end scrapers on long flakes with striking terminal retouch as can be seen in Figure 6.9, pl. Lxxviii, 1-3,5; and Figure 6.10, pl. Lxxix, 30 and 31. According to Caton-Thompson, they are common in the Gerzean Period, all on flake under-surfaces, a feature similar to the ovate and circular scrapers. A small knife of, as Caton-Thompson (1928:78) puts it, "miraculous thinness", a curved tip and marginal retouch (Figure 6.10, pl. Lxxix, 56). She does not ascribe any other period to this item so the assumption is that it belongs to the Gerzean group. Two other items not relating to the Gerzean level are a small tanged arrowhead suggesting a Protodynastic⁶⁹ form (Figure 6.10, pl. Lxxix, 39),⁷⁰ and a concave base arrowhead (Figure 6.10, pl. Lxxix, 41).

This concludes the lithics described by Caton-Thompson at Hemamieh.

⁶⁹ Such as found during the 1st dynasty types at Abydos.

⁷⁰ In Plate Lxxix (Figure 6.10) the tanged arrowhead is marked number 39. In her reference on page 78 Caton-Thompson erroneously marks it as no. 38.

6.4 BADARIAN LITHICS FROM THE SITE OF MOSTAGEDDA

Brunton under the title *Mostagedda and the Tasian culture* published the results of the excavations at Mostagedda (1937). For the sake of comparison, I will retain the division between the Tasian and the Badarian culture bearing in mind that the Tasian is probably just an earlier phase of the Badarian. Baumgartel (1960:24-25) is of the opinion that Brunton's work at Mostagedda does not add to the typology inventory as defined by Caton-Thompson at Hemamieh. There are distinct characteristics to the Mostagedda industry, but it is important to note that at the site of Mostagedda the Badarian industry is characterised by a continuum of small flakes and blades, and the Mostagedda industry is identified by large, regular blades and dates primarily to the Nagada II phase of the Upper Egyptian Predynastic (Holmes 1999:566).

The flints described by Brunton (1937), come from three sources of the area investigated around the village of Mostagedda – graves, village and flint implements bought by Brunton and believed by him to come from the village areas.

6.4.1 The graves

The flints described from the graves received special attention from Brunton (1937:55), as they were the easiest to date. The most common flint implement recovered from the twenty-one of the thirty-eight graves consisted of *flake* types. They were quite small and in general pointed at one end with some working on one face in evidence. Care had to be taken to separate the implements in the graves from the village rubbish, which had in some cases been mixed with the grave filling. This is a major problem with the predynastic grave goods as the disturbance of the graves could have taken place at the time of the burial or, as in most cases, at the time when the graves were first disturbed. However, according to Brunton (1937:55), the majority belonged to the internments that makes for the more accurate dating as previously mentioned. Some of the implements were found under skeletal remains in the graves and other inside a pot, as well as with

a group of objects. This is conclusive evidence that the flints were interred with the bodies at the time of burial and could therefore be dated quite accurately.⁷¹

The concave-base arrowheads found at the Badarian sites in the Mostagedda (Figure 6.23 – 13-25) and Matmar areas, are predominantly similar to the incurving, ogival-tipped tapering barbs, as found in the Badarian sites, found in the Badari district (Holmes 1989:177). Arkell (1975:32) mentions that in the Badarian (Tasian?) culture hunting was still important as indicated by the concave base arrowheads, as in the Fayum Neolithic. Leaf-shaped arrowheads (Figure 6.24 – 2800) is also present.

Rough flints (Figure 6.21, 41-45); Oval scrapers (Figure 6.23, 175, 178); Flat scraper (Figure 6.22, 50); Pointed implements (Figure 6.23, 39, 42); Flint knife, 25 cm long (Figure 6.22, 2); Scraper (Figure 6.22, 25; Figure 6.23, 151); Pointed tool (Figure 6.22, 19; Figure 6.23, 146); Flint flake (Figure 6.23, 120, 121); Saw edge knife (Figure 6.22, 29, 30, 32, 118, 119, 120, 122); Small scraper (Figure 6.23, 160); Tabular flints (Figure 6.22, 48, 54, 55); Pointed flakes (Figure 6.22, 93, 94, 98); Rough knife (Figure 6.22, 64); Arrowheads (Figures 6.23, 12-26); “Push-plane” (Figure 6.22, 71); Borer (Figure 6.23, 133,139; Figure 6.22, 81); “Twisted” knife with socketed tang (Figure 6.22, 36); Microlith? (Figure 6.23, 136); Notched flake (Figure 6.22, 31); Small axe (Figure 6.21, 48; Figure 6.23, 80); Triangular scraper ((Figure 6.23, 72); Axe (Figure 6.21, 46); Leaf-shaped knife (Figure 6.22, 66); Adze (Figure 6.23, 82); Sickle-flint (Figure 6.22, 39).

⁷¹ On page 55, Brunton (1937) notes that a flake photographed and displayed on Plate xxiii, is item number 61. This is a mistake as no such implement is in the photograph. This in itself is not a major issue, but seems to highlight the problem of writing reports or books based on notes and excavation results many years after the project on site was completed. The excavations at Mostagedda was completed in 1929 and the book only appeared in 1937. Similarly, Matmar (excavated in 1929–1931) was completed in 1948. Some light on this appeared in a letter written to a family member by his wife, Winifred, around Christmas 1937 and I quote: “His (Guy Brunton) big book came out a month ago – & he is already busy at the next one. Of course it has to be done in the evenings after he gets back from the Museum”. In the same letter, Winifred also expresses concern about the job security at the Cairo Museum and she mentions that at that time there were only two expatriates left on the staff. This all must have weighed on Brunton’s mind and it is actually astonishing that he had the energy at that time to complete both manuscripts. It still took him another 11 years to finish Matmar! In another letter, Winifred mentions that their home in London had been “blitzed” during World War II and this could have resulted in some of his notes, and the tomb-cards being lost. The bombing of civilian homes is reminiscent of the loss suffered by Caton-Thompson in the same period. The loss suffered by the academia is enormous. To return to the Badarian sites is futile, as they have all but disappeared (idem.p.302; Holmes 1992:79-80). Most of the flakes were photographed and can be seen in Figure 6.20, pl. Lxxii, 33; Figure 6.21, pl. Lxxvi, 141; Figure 6.22, pl. Lxxvii, 27, 29, 30-33, 41, 44-46, 92-96, 98-100, 102, 103, 109, 110. Flakes from four other graves were not photographed.

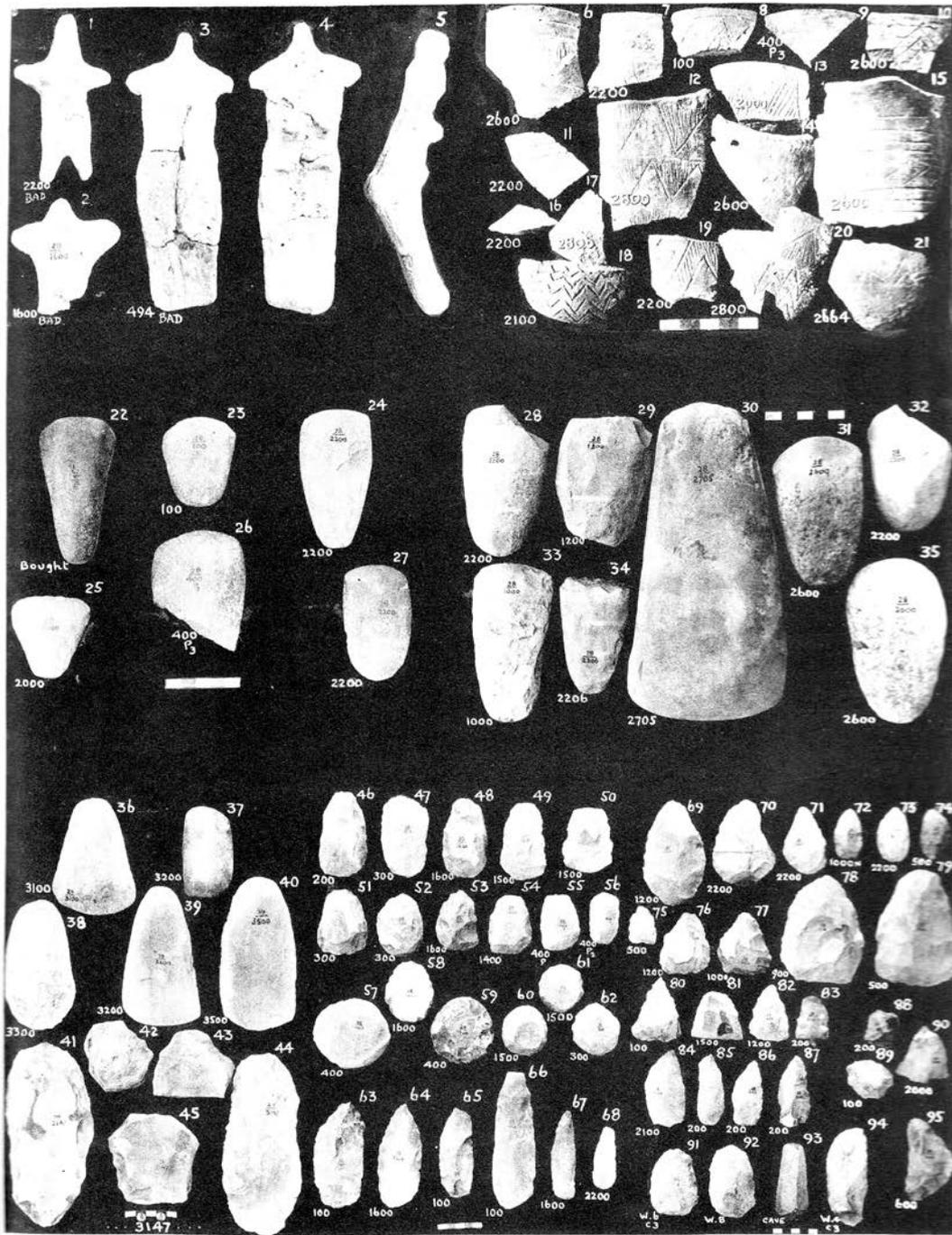


Figure 6.21: Mostagedda. Flints. Pl. xxvi (Brunton 1937)

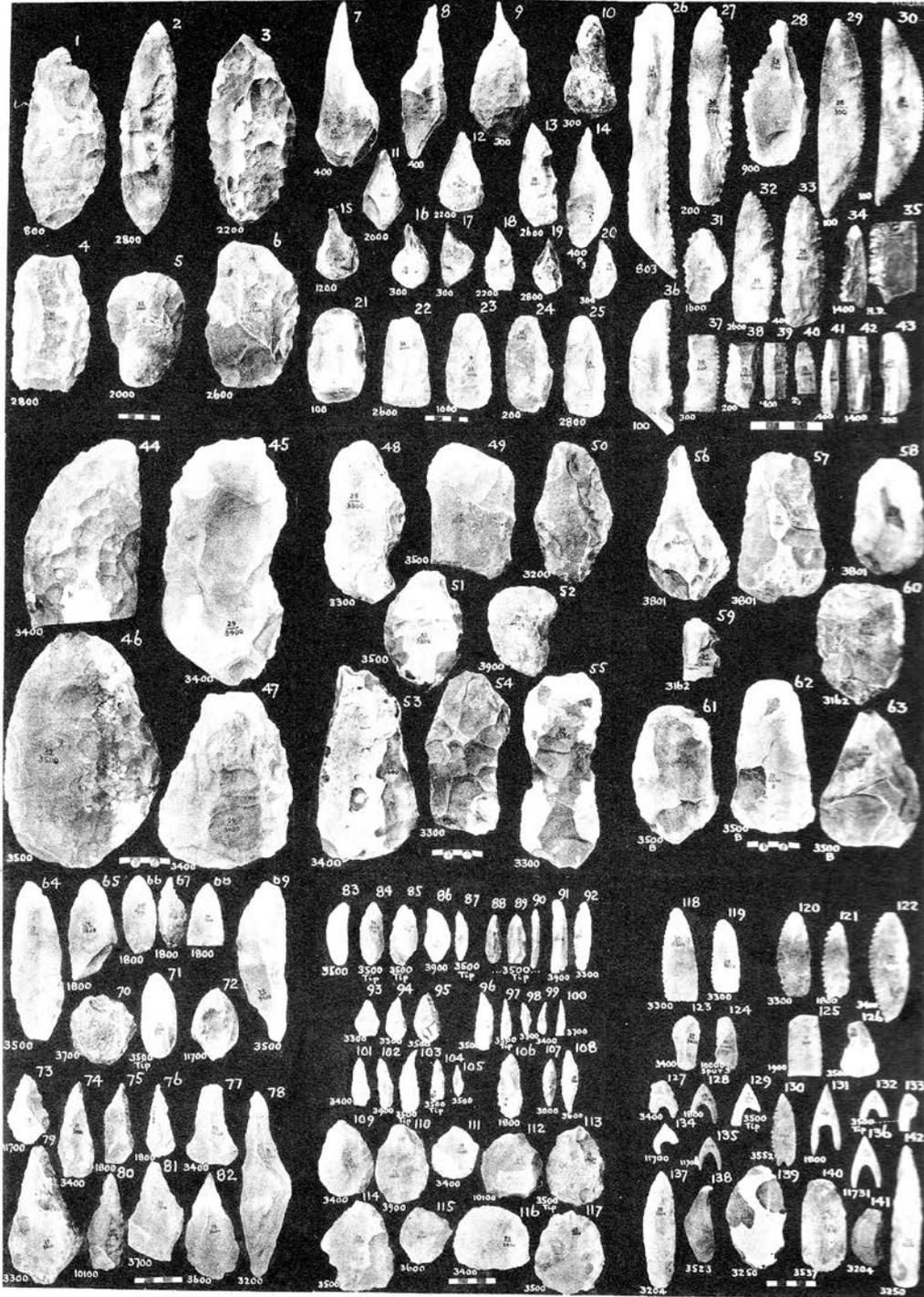


Figure 6.22: Mostagedda. Flints. Pl. xxvii (Brunton 1937)

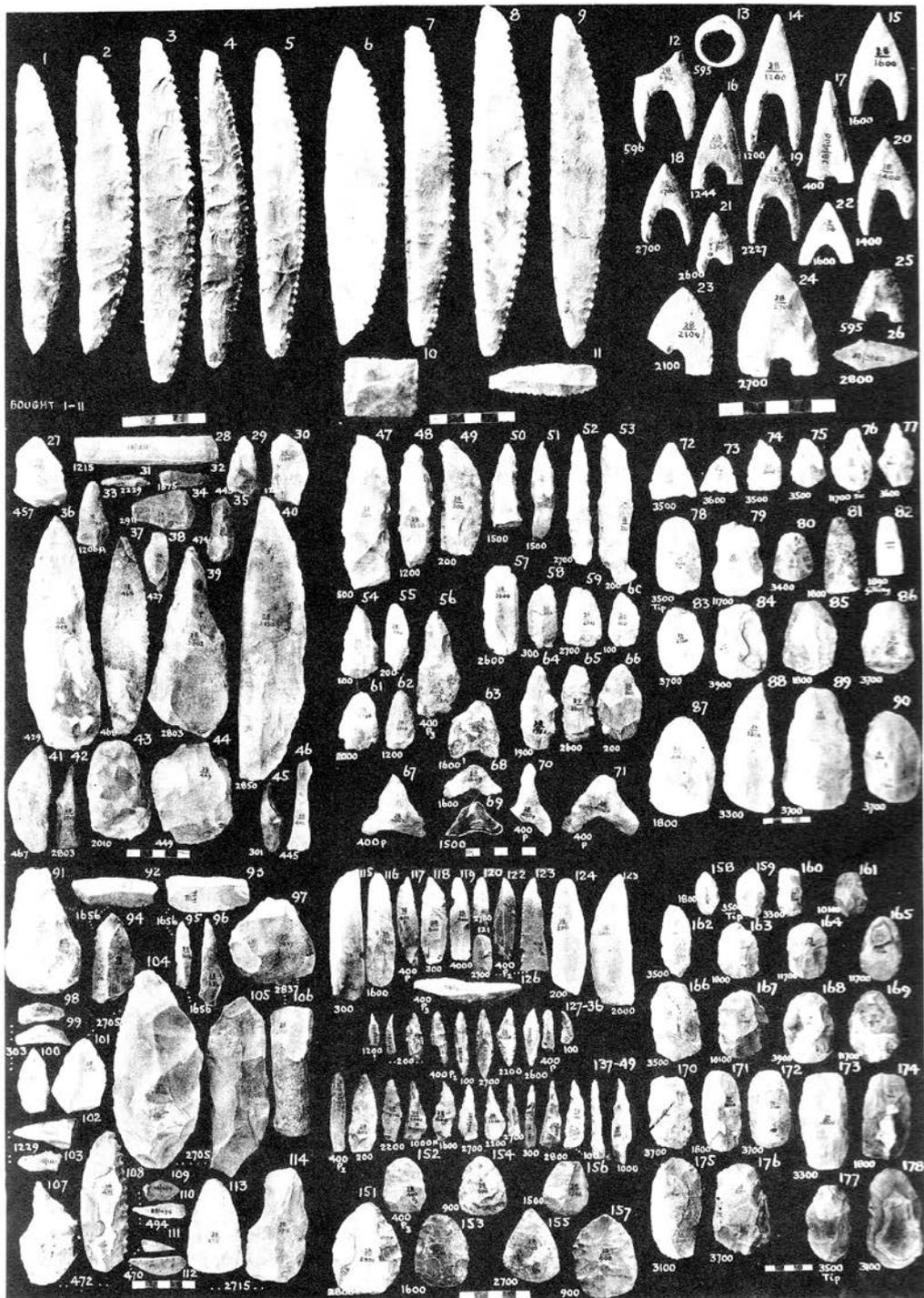


Figure 6.23: Mostagedda. Flints. Pl. xxviii (Brunton 1937)

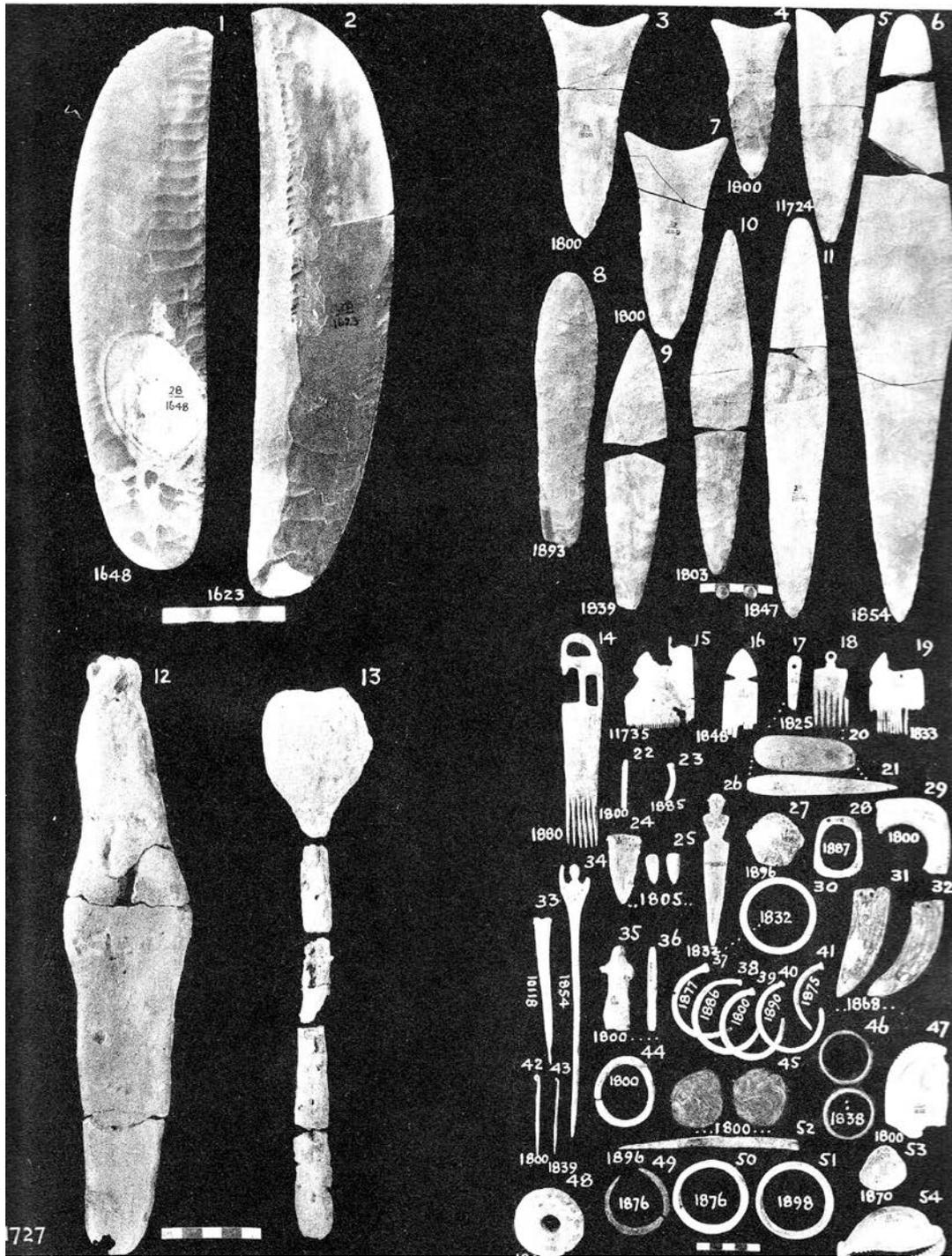


Figure 6.24: Mostagedda. Flints. Pl. xl (Brunton 1937)

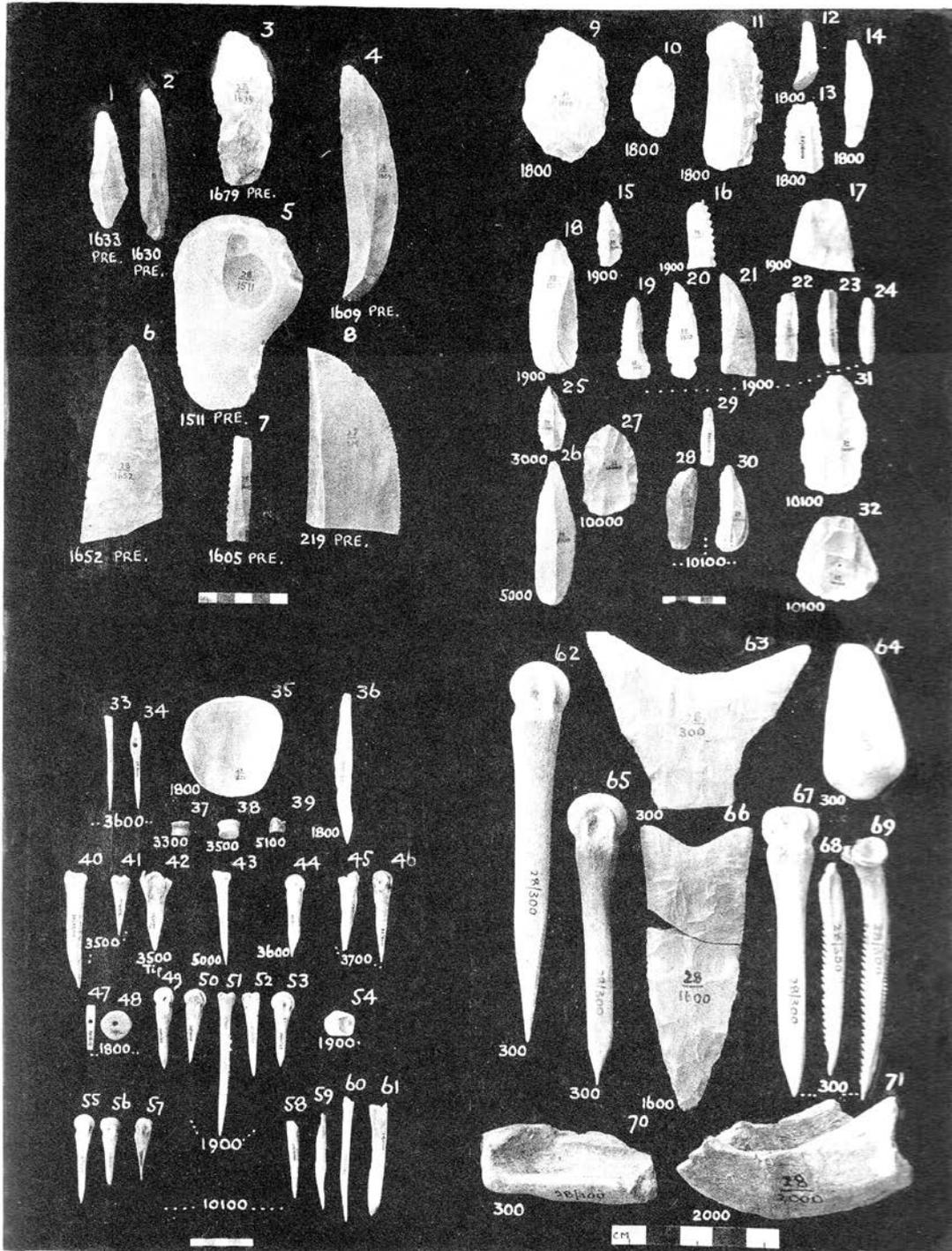


Figure 6.25: Mostagedda. Flints. Pl. xli (Brunton 1937)

In Mostagedda (1937), Brunton variously describes the flints as follows:

Area 1800 and 1900 illustrated in Figures 6.24 and 6.25 does not add any new objects to the collection mentioned above (Brunton 1937:21-22).

In the Mostagedda area Brunton and his team recovered and described a total of 438 flint items, as well as a number of notes, only mentioning “several” groups lying together without stating actual quantities.

Axes seem to be extremely scarce in the Badari-Mostagedda-Matmar region during the Amratian and Gerzean periods. This is not a reflection on the collection methods used by the excavator, but more of the rarity of the axes themselves. Brunton recovered some specimens from the Mostagedda/Matmar area (Figures 6.22 and 6.23), but he seems to regard these axes as ‘Tasian’ (Holmes 1990:11).

Not included is the items made from material other than flint, i.e. hard limestone, gritstone and igneous rock. These were described variously as querns, celts, pounders and grinders.

Holmes (1989:177) summarises the categories of Badarian stone artefacts recognised by Brunton as follows:

- Winged arrow-heads
- Tanged arrow-heads
- Saw-edged knives
- Knives
- Lance-heads
- Flakes
- Cores
- Celts
- Adzes
- Oval scrapers

Caton-Thompson is in agreement with all of the mentioned categories except that she describes a certain tool as a “push-plane” or steep-ended scrapers. Baumgartel (Holmes 1989:177) repeats the “push-plane” description. I am not sure where the description of a “push-plane” fits in, and I am in agreement with Holmes that they in fact turn out to be small flake cores that have been practically exhausted.

The “saw-edged knives” found at Mostagedda is not present in die Badari district, but the implication thereof is uncertain. The concave or winged arrowheads found in the Badarian areas from Mostagedda and Matmar correspond to those found in the Badari area (Holmes 1989:177).

It is difficult to assign any importance to the occasional tools on regular blades found by Brunton, especially the sickle blades from the settlement areas around Mostagedda. The assumption is that they could point to the manufacture of regular blades as found in the end of the Badarian or that that they could be intrusive and could probably be Amratian rather than Badarian. The latter is the most likely as we find a marked difference in the tool assemblages termed the Mostagedda culture in the Amratian and even later cultures (Holmes 1989:180).

It is unfortunate that the flake debris or debitage⁷² in the Badarian collections is very limited and reflects the reduction of the core consisting mainly of secondary blanks into broad flakes, elongate flakes, blade and bladelets. The blade and bladelets of the succeeding Amratian and Gerzean periods are much more regular (Holmes 1989:179).

Flake debris is very important as a source of information on tool-using activities and is increasingly becoming important to lithic analysis, although it was largely ignored in the earlier studies. Brunton (1928) does mention that flakes in the Badari region were found in abundance suggesting that chipping was done locally. He is also of the opinion that

⁷² The term ‘flake’ is widely identified and understood by archaeologists, but the debris left over after a flake has been detached from a larger piece is not easily defined. The best description is probably that flakes are the waste product of lithic production. Debitage is often used collectively for flakes, whereas ‘debris’ can be applied to flakes lacking the normal platform and dorsal faces, sometimes called ‘shatter’ by archaeologists. The terms debris and flake debris is preferred for all waste material as a result of human actions in lithic reduction (Shott 1994:70).

the presence of many flakes in the graves implies that they had their uses and were not merely flake debris (Brunton & Caton-Thompson 1928:37).

The term “reduction sequence” is used mainly in documenting technical practices. It can also be used to determine socio-political factors such as scale and labour specialisation. Thus, the use of flake debris reconstruction can aid in the analysis of cultural inference. However, collection and especially curation,⁷³ can seriously complicate this argument. Unfortunately, this is about always the case in the early collection of lithic assemblages. It is based solely on finished tool assemblages, and had been curated and removed for use elsewhere. If collected properly, and to compile a complete record of production and use, both debris and tools must be studied together. It had been remarked that debris can ‘more accurately reflect human behaviour than the tools found at the same site’ (Shott 1994:71).

The lack of proper collection and curation of all the stone tool parts found has the implication that analysis of the Badarian lithics is reduced, especially in terms of human behaviour and cultural infinities of the Badarian. In actual fact it reduces the discussion of the Badarian lithic collections almost to a descriptive conclusion only.

6.5 BADARIAN LITHICS FROM THE SITE OF MATMAR

The site of Matmar lies north of the Mostagedda area and stretches for approximately 10 km from the village of Khawaled in the south to Ghoraib on the north (Brunton 1948:2). Modern scholars regard the two sectors as being merely an extension of the el-Badari district with the region being demarcated as the area between and including two

⁷³ The term ‘curate, curation, curated’ needs some clarification in terms of lithic studies. Traditionally the term ‘curate’ is understood to mean placing a collection in a museum or university or a place where it can be preserved and studied, hence the name ‘curator’ for the head of a museum. Since the term ‘curation’ was introduced by Binford in 1973, it has been used prodigiously especially in lithic studies as applied to the transport of tools (Shott 1996:260). Since then it was used to mean a number of things, tool transport between tool sites, caching and recycling of tools, as well as later use, manufacture in advance of use, design for multi-functionality, and maintenance amongst others. This ambiguity invited criticisms to such an extent that some scholars proposed that the term be abandoned altogether (Shott 1996:263). Shott (1996:267) proposed the following definition: ‘curation is the degree of use or utility extracted, expressed as a relationship between how utility a tool starts with – its maximum utility – and how much of that utility is realised before discard’. In summation, the term ‘curation’ in the museum sense does not differ much from the above definition as it also implies retaining objects for later use.

large wadis, Wadi el-Asyuti and Qua Bay, which in total is approximately 60 km long (Holmes 1999:161).

It is important, however, to record the results of the excavations at Matmar given the paucity of Badarian sites in the Nile Valley. It is also necessary in appreciation of the work put in by Brunton and his small team. Without the artefacts and publications, our knowledge of the Badarian culture would be very limited.

As with the previous sites the Badarian excavations were done in the village areas, as well as the grave areas.

6.5.1 The Badarian villages

Six areas were investigated by Brunton, area 2000, area 2100, area 2200, area 2400, and areas 3000, 3200. The sites investigated was chiefly surface areas with the overlying ash, etc., being very thin and denuded implying that they were originally much thicker (Brunton 1948:4).

In terms of the flints the following were found as pictured in the photographs:

- Area 2000:

Five rough flints (Figure 6.27, pl. vii, 17, 19, 20, 21, 22).

Adze (Figure 6.27, pl. vii, 23).

Apart from a flint core, two rough scrapers (Figure 6.27, 24, 25) and three others from the surface (Figure 6.27, pl. vii, 26-28) a large quern and part of a large quern was found.

- Area 2200:

The site was again very shallow and the finds were not of great importance (Brunton 1948:6). The flints were,

An unusual dagger (Figure 6.26, pl. vi, 13)

Two scrapers (Figure 6.27, pl. vii, 5, 7)

A small axe-head (Figure 6.27, pl. vii, 6)

Five rough flints from village rubbish (Figure 6.27, pl. vii, 9-13)

Another rough flint from the surface (Figure 6.27, pl. vii, 8).⁷⁴

- Areas 2400, 2700:

The only flints from the area were a pair of saw-edged knives with notched butts (Figure 6.26, pl. vi, 10, 11).

- Areas 3000, 3200:

Only two items are noted by Brunton, a flint knife (Figure 6.28, pl. xvii, 2) and a flint arrow-head (Figure 6.26, pl. vi, 15).

6.5.2 The Badarian graves

The graves in the Matmar area are mainly of later predynastic cultures and only a few contained materials that could be identified as Badarian. Brunton lists the following (1948, pl. iii):

- Arrow (Figure 6.26, pl. vi, 14),
- Knife (Figure 6.26, pl. vi, 16)
- Flake (Figure 6.27, pl. vii, 3)
- Scraper (Figure 6.28, pl. xvii, 73).⁷⁵

Many of the graves, both female and male, were robbed in ancient times leaving very little for the excavators to work on.

⁷⁴ Brunton (1948:6) erroneously wrote pl. xii but it should be pl.vii.

⁷⁵ Brunton lists the item as "arrow: scraper" in the Register of Badarian Graves and Own Groups, plate iii. In studying the item in plate xvii, it definitely does not come close to being an arrow, so what he means by the description is unclear.

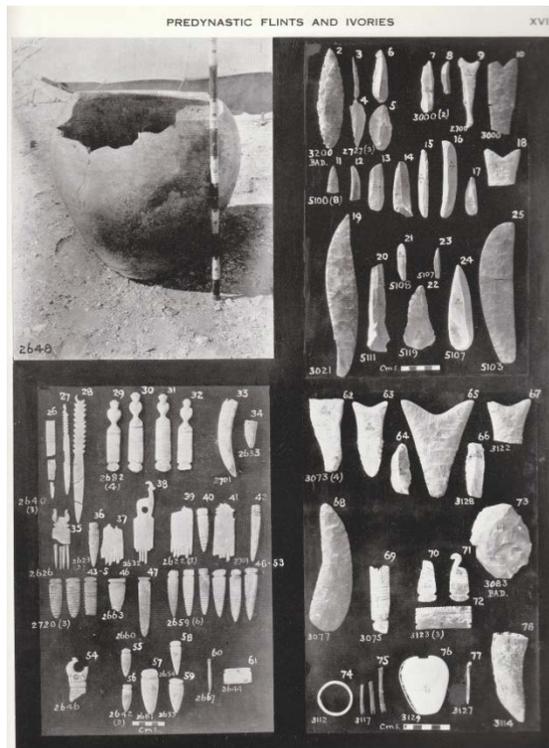


Figure 6.28: Matmar Flints. Pl. xvii (Brunton 1948)

6.5.3 The Tasian period

In the Matmar area very little evidence of the Tasian culture were found. A group of six tabular flints with red cortex was found and compared to what Brunton has so far considered Tasian (Figure 6.26, Pl. vi, 17-22). Other flints which Brunton surmised may be Tasian were a tabular flint with cortex (Figure 6.27, Pl. vii, 30), a small pointed implement (Figure 6.27, Pl. vii, 29), a rough flint core (Figure 6.26, Pl. vi, 9) and a long very rough pointed flint tool with cortex (Figure 6.27, Pl. vii, 1). Brunton is cautious in identifying the flints as Tasian and rightly so is of the opinion that they may be Badarian.⁷⁶ A subject of much debate is the finding of eight celts, four of grey igneous rock (Figure 6.26, Pl. vi, 4, 5, 8) and four of hard whitish limestone (Figure 6.26, Pl. vi, 2, 3, 6, 7), the longest measuring 26 cm (Brunton 1948:4).

6.6 LITHICS FROM THE BADARIAN CULTURE AT ARMANT

The site of Armant is situated on the west bank of the Nile some 9 km southwest of Luxor.

The chapter (Chapter XIV, *Armant*, 1937) on the flint industry was contributed by Suliman Huzayyin of the Egyptian University, Cairo.⁷⁷ Chapter XIV on the flint industry at Armant is based on museum work, as the writer was not part of the excavating team (Mond & Myers 1937:191). The fact that Huzayyin was not a member of the excavating team does tend to cast some doubt on the reliability of the report. However, his interpretation of the pieces in the museum is of such a high standard that it becomes a moot point.

In my opinion Huzayyin raises a very valid point *vis-à-vis* the placing the myriad of types of stone tools into a cultural setting. He cautiously argues that although special classes of flint implements show a similarity in type and form their technique may show

⁷⁶ See footnote 29.

⁷⁷ Chapter XIV, in Part II (Mond & Myers 1937:191-253).

differences (Mond & Myers 1937:192). Huzayyin continues that to a large extent “type” is sometimes the outcome of “technique” (Mond & Myers 1937:193).⁷⁸

Huzayyin (Mond & Myers 1937:227) is further of the opinion that the flint industry at Armant displays some facies that could only be described as being of local origin. Somewhat contradictory, he mentions that the ‘greater part of the artefacts were prepared (and perhaps even finished) at some flaking site or sites somewhere in the neighbourhood’ (Baumgartel 1947:16-17).⁷⁹

Without deviating from the importance of the expedition to Armant and the very detailed excavation report, it is necessary to mention the doubts Huzayyin had in terms of the cultural and chronological connections between Armant and other late prehistoric settlements of Egypt. He finds no correlation in the technique and typology between the Neolithic of northern Egypt and the industry at Armant. The published material concerning the Tasian of Upper Egypt is also different and although some unpublished remains from Mostagedda show strong connections with Armant it is not conclusive.⁸⁰ As for the Badarian he states: ‘The Badarian culture proper shows again very little relation to Armant’ (Mond & Myers 1937:229).

Baumgartel (1947:40) concurs with Huzayyin and dates the settlement at Armant from about SD 35 to 72 or 78.⁸¹ Baumgartel considers the lowest stratum, III, to date from the

⁷⁸ The discussion around type, technique and classification is very critical in my opinion. The outcome of the manufacture of a tool surely depends very much on the person making it, the technique he uses and the raw material at his disposal. The combination of the factors will therefore influence the classification of the various tool types. In my opinion, it is not clear cut whether tool types are solely dependent on cultural horizons, and care should be taken not to expand the classification lists to try to cover all variations in tool types. An inordinately large number of descriptions could lead to confusion, and the lack of a specific tool type so described and not found in other sites, may lead to isolation of one site from the other, and assigning a different cultural horizon to it.

⁷⁹ Huzayyin (Mond & Myers 1937:227) contends that the finds of Vignard at Nag Hammadi may point to an area between Armant and Nag Hammadi for the collective manufacture of the flints. Edmund Vignard is credited with discovering evidence of Egyptian late Paleolithic stone tools in the plains of Kom Ombo (Hoffman 1990:78).

⁸⁰ Huzayyin mentions the Tasian, but I think it was done in the light of Brunton’s reports from Mostagedda and I still maintain that the Tasian is chronologically part of the Badarian, and in the case of Armant even the presence of Badarian is inconclusive.

⁸¹ See Chapter 4 for a discussion on Petrie’s Sequence Dating.

end of the Naqada I to the beginning of the Naqada II.⁸² In 1956, Werner Kaiser (Bard 1999:163) suggested that the Badarian cultural phase found in the el-Badari area may well be contemporary with the Naqada I phase of other areas in the Nile Valley. This could account for the discrepancy in the chronology of the E.P.III found in Armant. Pots and potsherds found in Armant point to a possible Badarian presence, but this is not borne out by associated flints (Mond & Myers 1937:6).

According to Holmes (Bard 1999:162), although the Badarian is considered to be the oldest agricultural culture in the Nile Valley, there is a possibility that the Nagadian culture in the Armant area may be partly contemporaneous with the Badarian.⁸³

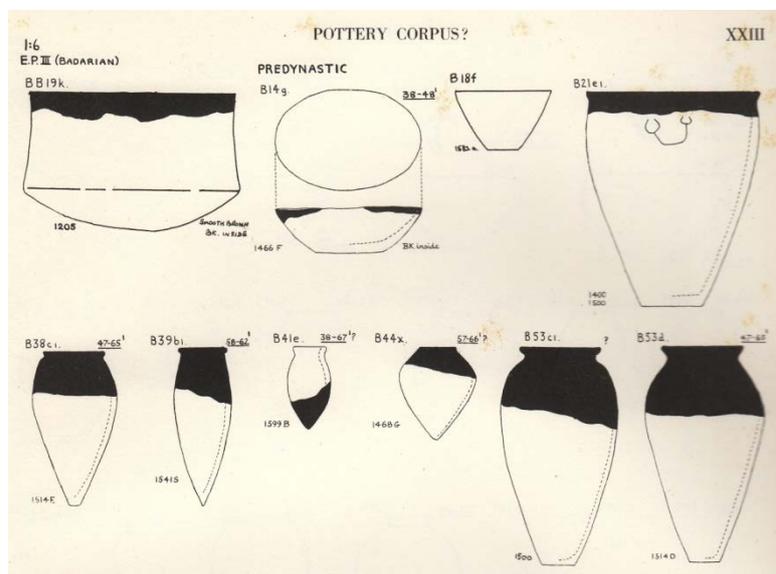


Figure 6.29: Armant. Pl. xxiii (Mond & Myers 1937)

The evidence for Badarian in Armant is very limited and Myers (Mond & Myers 1937:6) describes one item as follows: ‘Nearby, in a hole in the desert surface 1209B, was found the undoubtedly E.P.III (Badarian) pot, BB 19 k.’ (See Figure 6.29, pl. xxiii).⁸⁴ Other evidence consists of a few sherds (some of them rippled) at the bottom of a wadi (Mond & Myers 1937:8).

⁸² Myers (Mond & Myers 1937:60) defined the Early Predynastic into subdivisions, namely the Early Predynastic IV (E.P.IV), the E.P.III for the Badarian, and the E.P.II for the period called the Tasian.
⁸³ Large trees, later to be identified as *Ficus sycamorus* was first identified by Brunton at Qau, but clear proof of their date is difficult to establish, but at Armant Myers believed it to be contemporary with the E.P.III (Badarian) period.
⁸⁴ For comparison from the Badari district, see 5108 in pl. I of Brunton and Caton-Thompson (1928).

Given the paucity of the evidence, it is unclear whether the Badarian culture extended to the west bank of the Nile at Armant.

6.7 CONCLUSION

Without conclusive evidence from other sites in Egypt, it is an open question on how the Badarian tradition came into being. One can only surmise that small groups of people migrated from the desert areas comprising of the nearest oases settlements, such as Dakhleh, Kharga, Farafra and Bahariya.

Examination of the available lithic artefacts alone will not answer the question fully, but is an essential part of the problem solving mechanism, as in most cases stone tools are all we have in the archaeological record.

Stone tool technology had developed over thousands of years and in terms of description the problems of typology remain inconclusive. We can be in agreement that the manufacture of stone tools involves thinking, even though the technology may be transmitted from one generation to another and from one toolmaker to another within or across cultural boundaries. It is common for the archaeological record to suggest that lithic artefacts display changes both spatially and temporal within and between cultures. To most scholars this indicates that there must be some kind of continuation in the production of lithic artefacts. There are occasions when major changes in settlements and behaviour patterns did not result in any notable changes in lithic artefacts (Hassan 1988:282).

Bearing the above in mind, it is reasonable to compare some of the elements of the Badarian lithic assemblages to the Saharan lithics. The lithic industry found in campsites at the Dungul Playa consists of a pattern of subsistence that, at least on the face of it, could be ancestral to the later food-producing cultures of the Nile Valley. A date of 5950 BC \pm 120 years was determined from a hearth at the Dungul Playa (Hobler & Hester 1969:124). It is important to note that for the first time in local prehistory the industry moved away from the traditional Levallois technique of core preparation to a blade industry.

The flake and blade technology found in the Badarian is common in the Libyan and Western Desert. Ground axes, concave-arrowheads and lens-shaped arrowheads are some of the items that show affinity (Holmes 1989:184).

Axes with transverse edging are found at Hemamieh in the Badarian (Brunton & Caton-Thompson 1928:36),⁸⁵ and the Nagadian in sites dated within the 6th millennium bp (Tangri 1992:115). At Kharga the examples are found in the Peasant Neolithic period (Caton-Thompson 1952, pl. 103, 1-3; pl. 104, 1-2). Comparative study by Huzayyin (Caton-Thompson 1952:173) shows that they appear in the predynastic of Upper and Middle Egypt. Village sites of Badarian or Tasian have yielded them (Brunton 1928:36, pl. xxix; 1937, pls. xxvi, xxvii, xxviii). Their continuation into the later Predynastic periods has been established at Armant. The Late Neolithic Khargan sites are dated between 5450 and 4740 bp, which leads to the conclusion that the Predynastic and Khargan axes are contemporaneous. Tranchet axes also occur first in the Nile Valley at Tarifian sites. In reviewing the appearance of the axes in the desert, simultaneously to those in the Nile Valley, Tangri (1992:115) is of the opinion that this type does not support the 'desert origin' model.

At el-Omari in Lower Egypt (close to modern day Cairo) polished axes from the later phase point to a southern tradition form, the Badari region (Hikade 2010:6). Often repeated is the fact that the Upper Egyptian industry was a flake blade industry with various retouched pieces, drills, and end scrapers as the dominant tools (Figures 6.4, 5.5). What is important is that later scholars consider the Badarian as a late Neolithic tradition (Hikade 2010:6). If this is the case, then the Badarian may well be closer to the Neolithic and further supports the possibility that it consisted mainly of a loose number of nomadic groups settling in the Badari area for a period of time, but not continuously.

Lens-shaped⁸⁶ arrowheads are found in several locations. The Badarian examples were found at Hemamieh (Brunton & Caton-Thompson 1928, 37, pl. xxix, 6),⁸⁷ with only one other from the Badarian settlement locality (Area 5500) in the Badari district (Holmes

⁸⁵ Brunton describes the axes as being *celts*.

⁸⁶ In Brunton and Thompson (1928) the lens-shaped arrowhead are named as the *leaf-shaped*.

⁸⁷ See Figure 6.8 for a colour photograph of the Saharan Neolithic arrowheads.

1989:416). From the 8th millennium bp sites at Kharga (Caton-Thompson 1952, pl. 99, 17-21). In Dakhleh, McDonald dated them to the 8th millennium bp, from the Bashendi A unit (Tangri 1992:115). The large gap between the Bashendi and the Nile Valley, with the lack of examples from the Tarifian and the Nagadian makes for poor correlation (Tangri 1992).

Not many of the lithic assemblages can be used to trace definitive links between the oasis and the Neolithic groups of Upper and Lower Egypt. The following list is instructive enough to form some kind of conclusion: arrowheads, axes and a group of items in the toolkit, such as notches, denticulates, and retouched pieces, can be considered (Warfe 2003:184).

It is important to note that we use lithics as an aid-marker for the different cultures because it is the most visible of all archaeological records. For lithics to be effective as a marker it has to be used in conjunction with other objects, especially pottery. It will be very difficult to use it as a stand-alone marker for especially from the 5th millennium BC onward. I must also agree with Hassan (1986:73) that 'the proper interpretation of lithic artefacts must rest on an understanding of the hidden cognitive processes and learning'. The concept of using experimental research and ethno-archaeology could answer many of the questions, but to date we only have the benefit of the use of objects and material culture (Hassan op. cit.). One of the most neglected material remains are the so-called flake debris which in itself an integral part of tool knapping. In most cases flint debris is all that is left of the knappers efforts, and should on proper analysis present the archaeologist with sufficient data to form an opinion on cultural traits of the specific group of people responsible for the debris field (Shott 1994:110). Unfortunately, such a project was not attempted at the Badarian sites.

It must be noted here that the arrowhead types found in the desert are virtually identical to those found in the Nile Valley, albeit separated by a long gap in time. There is a question mark over the current thought that the similarities reflect the possibility that they could be because of ethnic groupings. Arrowheads had similar functions and producing specific types may have been because of its use at the time. Hafting made use of concave bases or tangs for a specific reason and the functional constraint could

have been the reason for finding arrowheads of the type from different areas and periods of time. The lens-shaped, tanged and concave based arrowhead seems to be common wherever arrowheads were made (Tangri 1999:121-122). We find them all over the known world; see Figure 6.30 for concave base arrowheads from Peru, where we are very certain no contact with outside Neolithic influences was possible.

Research in and around the Dakhleh Oasis by the Dakhleh Oasis Project (DOP) has produced some interesting comparisons with the Neolithic cultures of Egypt. In terms of the dating the Bashendi B (6480 ± 130 bp) is contemporary with the following Neolithic cultures of Egypt (Warfe 2003:183):

- Fayumian Desert Fayum (6480 ± 170 bp)
- Merimde Western Delta (6130 ± 110 bp)
- Badarian Upper Egypt between 6350/5950 bp (Hassan 1985:107)
- Tarifian (6310 ± 80)⁸⁸

The inclusion of the Tarifian in this grouping requires some clarification. Given its proximity to the Nile Valley it stands to reason that the Tarifian should represent the earliest movement from groups occupying the central desert region en route to the valley. The Tarifian does share a variety of traits with the Bashendi, but tracing the relationship with other early cultures of Egypt does pose a problem (Warfe 2003:184).

It is especially in regard of the flint industry that many difficulties arise. Ginter and Kozlowski (1984:255) is of the opinion that the sequence below the breccias (6.5 ft.) at the Badarian site of Hemamieh would seem to reflect some similarities: 'The lower part of the Badari sequence, beneath the breccias, consists of sediments of the limestone debris type. These yielded flint products, mainly flake tools including a large number of scrapers and high end-scrapers as well as numerous denticulated and notched tools.

⁸⁸ The Tarifian comes from the site El-Tarif on the west bank of the Nile about 5 km north of Sheikh Abd el-Gurna at the foot of the Theban hills. The site was discovered in 1826, later again investigated by Schiaparelli and Petrie in 1908–9. Arnold continued in 1970–4 and Ginter and Kozlowski in 1978–82. The Tarifian is a small site and classified as early Holocene (Epipaleolithic). The main find concentrates around about 3200 flints, dominated by retouched flakes, scrapers, perforators and denticulated – notched tools (Kozlowski 1999:824-5)

Such artefacts correspond to, in a general sense, the Tarifian assemblage and are quite different from those appearing in the later layers.’ The pottery from El-Tarif does not possess any direct links with the Nagada ceramics in terms of technology or sources of raw materials.⁸⁹ It is possible that the Tarifian pottery came from an older, or other tradition, but the dearth of materials makes it difficult to identify (Ginter & Kozlowski 1984:259).

The Tarifian has not yet yielded any evidence of it being a food-producing culture, such as the Fayumian, Merimde and possibly Badarian. The Tarifian is described as being similar to Paleolithic camps, especially in view of the fact that there are no traces of an economy based on agriculture or pastoralism. It appears that in terms of their technological traditions in ceramics and flint production, the Tarifian culture did not play any significant role in the forming of the Predynastic cultures in Upper Egypt (Ginter & Kozlowski 1984:259). Warfe (2003:183) describes the Tarifian as follows: ‘To put it briefly, the Tarifian was an ephemeral, enigmatic culture whose impact on the Egyptian Neolithic, or Predynastic for that matter, was minimal or non-existent.’

In terms of sharing traits with the Bashendi by the early cultures of Egypt, the following can be stated:

The lithic industry is predominantly a flake orientated with an abundance of projectile points, a variety of notches, denticulates, perforators and retouched pieces. Also present, scrapers made on side-blow flakes, and bifacial tools with occasional planes, burins and end scrapers (Holmes 1989:354; Warfe 2003:184).

Also present in the relevant assemblages are grinding stones, beads from ostrich eggshell, as well as shell fragments, some small polished axes or sometimes called celts.

⁸⁹ The oldest pottery at Hemamieh is dated by TL to 5,580 ±420 BC, for the level below the 6.5 ft. breccia, and 5,495±405 BC for 1.33 ft. below the breccias. The El-Tarif pottery at this level is dated 4,690±350. The Nagadian at El-Tarif (TL 4,340 and 3,810) agree with the Badarian dates of 4,330 and 3,810 at the level of 5.5-5.0 (Ginter & Kozlowski 1984:256).

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It must be noted here that the arrowhead types found in the desert are virtually identical to those found in the Nile Valley, albeit separated by a long gap in time. There is a question mark over the current thought that the similarities reflect the possibility that they could be because of ethnic groupings. Arrowheads had similar functions and producing specific types may have been because of its use at the time. Hafting made use of concave bases or tangs for a specific reason and the functional constraint could have been the reason for finding arrowheads of the type from different areas and periods of time. The lens-shaped, tanged and concave based arrowhead seems to be common wherever arrowheads were made (Tangri 1999:121-122). We find them all over the known world; see Figure 6.30 for concave-base arrowheads from Peru, where we are very certain no contact with outside Neolithic influences was possible.



Figure 6.30: Concave-based arrowheads (obsidian) from ancient Peru (© L. Vorster)

The concave-base type is found during the Neolithic period and later times in the Sahara and Nubia. The method of manufacture seems at all times to be both soft-hammer percussion and pressure flaking like the Badarian examples, described by Holmes (1999:83) as follows: 'These arrowheads are bifacially worked. They have relatively large, flat, broad scars in the centre area which suggests that they were possibly initially shaped by soft hammer percussion.'

Tangri (1999:122) concludes that as the concave-based arrowheads is close to optimum in functional terms, 'the Nilotic and Saharan examples may be similar for functional, rather than ethnic reasons'.

The concave-base arrowhead is present in the Badarian (Brunton & Caton-Thompson 1928:35-36),⁹⁰ and are found in the desert areas at Kharga, Dakhleh, with one example from Bir Kiseiba. The arrow-heads from the desert are generally dated within the 8th millennium while the Badarian concave-based arrowheads are much later, by some two thousand years (Tangri 1992:114-115). Warfe (2003:186) is of the opinion that the concave-based arrowhead is of northeast African origin and can be traced back to mid-Holocene contexts across the Eastern Sahara. The arrowheads from Kharga are thought to belong to the Peasant Neolithic dating to c. 7500 bp (Tangri 1992:114). Caton-Thompson (1952:185) was of the opinion that the 'Peasant Neolithic in Kharga is unquestionably later than the Fayum A group, and probably later than the Badarian'. The Fayum arrowhead wing ends are usually rounded or pointed, whereas the Kharga collection is angular and the Badarian are normally rounded or pointed. Unfortunately, the comparative differences will not be solved by the study of surface material alone and it is certain that the Egyptian prehistory is notorious for supplying us with disparate types of arrowheads being used at the same time (Caton-Thompson 1952:186). As said many times before, the manufacture of items as small as arrowheads is very much dependent on the raw material and the expertise of the manufacturer. It is virtually impossible to duplicate two items exactly by using hand-made expertise.

⁹⁰ Brunton describes the arrow-heads as *winged*, p. 35. See Figure 11.5 in Chapter 11.

The concave-base arrowheads are also absent in the Tarifian and Nagadian. The only points found in the Nagadian are the leaf-shaped points dating to the end of the 6th millennium bp (Tangri 1992:115).

There is a difference of opinion with regards to the type of flint industry the Badarian practiced. In the older literature the Badarian flint industry was described as being predominantly a core industry shaping the flint nodule by flaking from both sides. The resulting assemblage so obtained contained mainly push planes, bifacial sickles and concave arrowheads (Baumgartel 1960:24). Later scholars, however, accepted that the Badarian is essentially a flake-blade industry and the collections represent end scrapers, perforators, axes, concave-base arrowheads, bifacial sickles, as well as retouched pieces and worked tabular slabs (Holmes 1989:336). The question is what does this mean in terms of placing the Badarian in time and space with regards to the development of the Egyptian predynastic?

It is, however, unfortunate that more could have been done to gain relevant information from the lithic raw materials regarding correlation source location, shape size, durability, and abundance to increase our understanding of the Badarian stone tool technological organisation. To this end, with the limited resources available, the Badarian source material was correctly identified, but unfortunately a more in-depth study should have been undertaken.

Because of their propensity to use the rough flint nodules from the desert floor other than the finer tabular, calcareous-coated bands of chert in situ in the Eocene limestone cliffs in her findings at Hemamieh, Caton-Thompson (1928) proposed that the Badarian originated from areas outside of the chert-bearing limestone regions. She did not state that the area is toward the south as she described the limestone areas in the eastern desert ceases at a latitude of about 25° whereas the western desert boundary is further south. The tertiary limestone extends unbroken to the north right to the Mediterranean and into Palestine (Caton-Thompson 1928:75). This was frequently and mistakenly interpreted as to imply that she meant that the Badarian originated from the south (Baumgartel 1947:22; Holmes 1989:336).

The Badarian lithics had been described as being of poor quality workmanship if compared to later predynastic periods (Baumgartel 1960:24). The large amount of flint refuse and debitage found on the Badarian sites is an indication that the tools were made on site. This is an indication that the Badarian people did not carry the raw material from other sites and may also explain why they used the easily available flint found on the desert floor. It would have been easier for them to use the available flint material on the surface, as the recently weathered flint from the limestone cliffs required additional effort and in some cases the outcrops were further away (Holmes 1989:171). This also supports the idea that the Badarian were most certainly semi- or wholly nomadic, moving from one site to the other without the burden of carrying unnecessary materials. This is typical of relict populations who had survived in ecological refuge zones of the Sahara (Huysecom et al 2009:2). Climatic change in the Sahara and Egyptian regions is considered a major factor in the initial establishment of predynastic culture in Upper Egypt, and its temporal and area expansion in the Nile Valley (Hoffman 1990:141). This concept is consistent with the possibility that the Badarian people came from the desert areas. In examining the lithic evidence from the terminal Paleolithic and Epipaleolithic cultures of Upper Egypt of the period between 10 000 and 5 500 BC, it is clear that the Badarian contrasts markedly and the assumption must be made that they were from areas other than the Nile Valley. The idea that they may have been an indigenous group adapting to new ideas and technology cannot be entertained (Hoffman 1990:143).

At present the Badarian culture appears to be centred round the Badari-Mostagedda-Matmar region of Upper-Middle Egypt, and it can also be reasoned that this group of people does not come from a single ancestral source, but came from various groups of nomadic people converging on the fertile east bank of the Nile Valley at that time (Holmes 1989:185). In terms of mobility, inferred patterns are frequently based upon sources of raw materials for stone artefacts (Close 2000:50). In the case of the Badarian, this model has no relevance as the raw material came from the immediate vicinity of settlements.

It is important, however, to realise that lithic artefacts made, used and then discarded in a cultural setting very much unlike that exists today. To understand stone tool life

histories, it must be realised that it was probably a common chore to identify the activity a stone tool is used for, search for raw material, the making of the tool and ultimately the retouch or discard of the tool after initial use. The whole process of tool-making and use is part of a certain set of rules and are vastly different from modern task accomplishment (Andrefsky 2008:14).

The raw material used is a natural product and subjected to natural formation and flaws. The equipment used by the stone tool maker is certainly not standardised and although the maker has a good idea of the final product, repetition cannot really be exact. For this reason, I think one has to be vigilant in using very modern variable statistics and intricate measurements to compare and ultimately use the results in a pre-historical cultural context.

In summation of the lithics, it would seem more logical to consider the Badarian as being closer to the terminal Neolithic cultures than the succeeding predynastic cultures of the Nile Valley.

CHAPTER 7: BADARIAN GRAVE GOODS

Abstract

As most of the information on the Badarian came from cemeteries and not village or settlement areas, a discussion on the recovered grave goods of the Badarian is of vital importance to understand the development of this unique culture. To date the grave goods recovered at Badari, Mostagedda and Matmar had yet to be placed in context and this will be discussed. The Badarian is unique in the sense that it appears to be the first group of semi-settled people on the banks of the Nile in Upper Egypt. A study of the grave goods presents us with a perspective on the cultural development of the early Egyptian peoples of the Nile Valley. It also provides us with an idea of trade and cultural exchanges.

7.1 INTRODUCTION

7.1.1 General description of the Badarian graves

A total of 18 cemeteries in the Badari, Mostagedda and Matmar regions along the east bank of the Nile were excavated. They contained a total of 725 graves (Anderson 1992:54). The Badarian graves or tombs are dug in soft, sandy gravel or limestone detritus, which made it easy to construct using primitive implements.⁹¹ They were grouped into separate sections of the strip of desert between the cultivated land and the limestone massifs toward the eastern desert. There was no definite shape with rough oval pits being the most common and at times a simple circle. Only two were found to have straight sides with rounded corners, but in the whole the graves tapered to the bottom without any shelf or recess visible. The graves were not of uniform size and considerable variations occur in various sections of the cemeteries. The depth of the graves also varied considerably and apparently no fixed measure was applied. In general, the depths varied between 36 in (90 cm) to 40 in (100 cm), the level of internment could vary due to deflation of the desert floor over time. In general, the larger graves, apparently containing more grave goods, were plundered in ancient times, leaving the smaller and less rich graves untouched. Hoffman (1990) theorised that this is an indication of the beginning of marked differences in wealth as some graves

⁹¹ There are Badarian graves mixed with Old Kingdom graves at Badari suggesting that the Badarian and Predynastic burial grounds in the area were re-used during the Old Kingdom. There is no definite evidence of continuous use, but burials with some time lapse is attested. In placing the cemeteries on the spurs, the Badarian were confronted with limited space, but it appears that they did seek out new space for later cemeteries rather than reusing existing sites (Gashe 2009:179).

contained a quality and number of exotic prestige items not found in other graves (Hoffman 1990:143).

In closer inspection of the plundered graves it is noticeable that in most cases imported materials were found. Locally made artefacts and pottery were found in the undisturbed graves. In analysing the data, it appears that certain highly visible graves were plundered and that such graves comprised a minority of the total burials in the cemeteries (Anderson 1992:60). Resources from outside the region, such as ivory, steatite, copper, turquoise, carnelian, slate and malachite were cited by Brunton as evidence of possible trade goods. Whatever the case, these are the goods sought after by the grave robbers during the Badarian times. They were dispersed in a minority of Badarian graves (Anderson 1992:61). The unequal distribution of material wealth, even if only in a minority of graves, does point to social and economic differences that could have existed in the Badarian community. In terms of the spatial distribution of graves in the cemeteries, it appears that the graves with the wealthier number of grave goods were clustered together with the large group of poor burials containing less than thirty-five objects, and a smaller group of wealthy graves containing more than thirty-five objects. Again, the grouping of graves suggests a corresponding social difference in the Badarian population (Anderson 1992:65).

There are no indications of multiple inhumations in one grave (Brunton 1928:19), although Midant-Reynes (2002:153) reports that there are occasionally multiple inhumations, but does not cite any reference supporting this statement.⁹²

No indication of roofing was observed except for matting against the sides of the graves with some sticks to probably act as some kind of revetment against the body being covered by falling sand or gravel. If this is the case, then one could assume that some kind of roofing also existed. The more delicate pots in the graves were almost always crushed, as well as the skulls, which were rarely intact. The sticks in the graves could have been to support some kind of roofing, but this is inconclusive. In general, the

⁹² This is just one of many instances where later scholars wrote treatise on the Badarian without citing proper references. In most cases the information is the opinion of the author. The primary source for all Badarian material is the excavation reports by Brunton and Caton-Thompson as reflected in their books. To move beyond that is pure speculation and none of it could be substantiated.

positions of the bodies in the graves were natural with no enhanced contractions as suggest by Midant-Reynes (1928:153) (see footnote 96). The most common attitude was one of loose contraction where the tightly contracted position with knees to the chin were rare. It is noticeable that all of the bodies were in an attitude of someone in a comfortable sleep (Brunton & Caton-Thompson 1928:18).

An interesting fact about the body position was that they tried to, in most cases, for the deceased to look to the west, irrespective of body position. This is reminiscent of the Palaeolithic burials at Ofnet, with the heads facing sunset (Brunton & Caton-Thompson 1928:19). This could be construed as a pointer to the Badarian ancestry being a continuation of the Palaeolithic into the Neolithic, and eventually settling on the east bank of the Nile before disappearing altogether.

No sign of preservation of the bodies or any form of embalmment was found (Brunton & Caton-Thompson 1928:19). The question of preserving the bodies is discussed in greater detail later in the chapter. No sign of dismemberment was found.

Animal skin was used as clothing material with most of the pieces found showing that the skins were worn with the hair inside. A few were with the skin on the outside and in some cases the hair was removed. The kind of skin varied and Brunton (1928:19) thought that it could be goat, but some were finer, probably gazelle. What animal it came from is therefore inconclusive and no inference could be drawn from it. Some linen was found and fragments recovered shows that it was very well tanned and sewn together like a karos.

The Badarian graves contained no trace of wooden coffins, or coffins made of clay. In one grave reeds and sticks formed a distinct rectangle giving the impression that it could have been a bier or, as Brunton put it 'the bottom of a hamper coffin' (Brunton & Caton-Thompson 1928:20). Another possibility was that the sticks and matting found around the body could have formed some kind of tent screening the grave from sand filling it, and this could also be the reason why no roofing was uncovered.

This is all conjecture and as the graves were dug in soft material thousands of years ago, the winds and moving sand could have destroyed much of the evidence.

7.1.2 Background to the Badarian grave goods

For a good many years the discovery of stone tools overshadowed the accompanying beads with scant attention being given to them. Beads and amulets are non-utilitarian items and therefore they had to have a certain meaning to the owner or wearer in a social and aesthetic context, and had to be primarily symbolic. Bednarik (2005:538) argues that beads are always symbolic and is therefore found in a complex social context. The statement that beads are always symbolic is debatable as it is without question something pleasing to the owner in the form of jewellery, whether it is a sign of rank, some kind of award, or amuletic and protective, it is always intrinsically decorative (Andrews 1990:7).

The use of beads as body adornment dates back many thousands of years and Bednarik (2005:539) describes a dated set of perforated ostrich beads found in Libya as being 200 ka. Ostrich shell beads from southern Africa is abundant dating back to 75 000 years ago. Throughout the millennia beads and amulets had been worn by people across the globe as for warding off evil spirits or as lucky charms (Coles & Budwig 1997:6). It is quite possible that with the advent of the Badarian also came the beginning of decorating the dead as a forerunner of the very intricate Egyptian concept of the afterlife. The meaning of beads has been a subject of debate for a very long time, yet its true meaning may be so varied as to escape a single definition (Erikson 1993:165).

To date archaeologists treated beads as trade goods or for ornamental purposes, which ignores the possibility that these goods are in fact more apt to be part of the social networks of exchange that existed in the social reference framework, and still does by certain parts of traditional peoples. The distribution of beads throughout the Delta, Middle Egypt and Upper Egypt during the formation of the pre-dynastic period leading up to dynastic Egypt, is important and should be viewed as having a social and economic influence during the exchange processes (Hoffman 1990:189).

For the purpose of this thesis, grave goods will be defined as those items found in the graves by following the layout as presented by Brunton (1928). A great number of beads were found, as well as many shells, with the amulets being very limited in number if the definition of an 'amulet' is restricted to an ornament made in the form of an animal or inanimate object (Brunton & Caton-Thompson 1928:27). The grave goods described below are from the core Qau, Hemamieh, Badari, Mostagedda and Matmar cemeteries.

7.2 BADARIAN AMULETS

If we adhere to the above definition of what constitutes an amulet and exclude pierced pebbles and shaped pendants, then only two items were found at Qau and Badari in two disturbed graves both with beads. One is described as being possibly the head of a gazelle and the other the head of a hippopotamus. Both the items are carved in bone (Brunton & Caton Thompson 1928:27).

Only one amulet representing a hippopotamus was found at Mostagedda, made from a green jasper pebble (Brunton 1937:51). There are no amulets described in the Matmar collection.

7.3 BADARIAN BEADS

The bead forms do not display any remarkable features and the type most found are short cylinders (see Figure 7.1) and thick ring beads with flat edges. There are no long cylinders. Thick ring beads with sides that are uneven are from Badarian graves and appear to be cut from a long cylinder. Barrels, spheroids and rings with round sides are the exception and the most carefully formed beads are rings with sharp edges. In grave 5399, a fancy cylinder is cut from ivory, and a bead of steatite in fancy barrel with chevron incised grooves was recovered from grave 5164 (Brunton & Caton-Thompson 1928:27).



Figure 7.1: Badarian beads (Courtesy of the Petrie Museum, UCL)

Beads and shells were usually worn as necklaces by women and children with the men wearing only a single long bead at the neck. Bracelets, not as numerous as the necklaces and some anklets, were also found. In three graves girdles made from green glazed steatite were found wrapped numerous times around the waists of men (Lucas 1959:53). See Figure 7.2 for an example of a belt with numerous strings of beads from grave 5735 (Brunton & Caton-Thompson 1928:pl viii).

Cow's hair and flax was found to be used to thread the beads (Brunton & Caton-Thompson 1928:27-28).

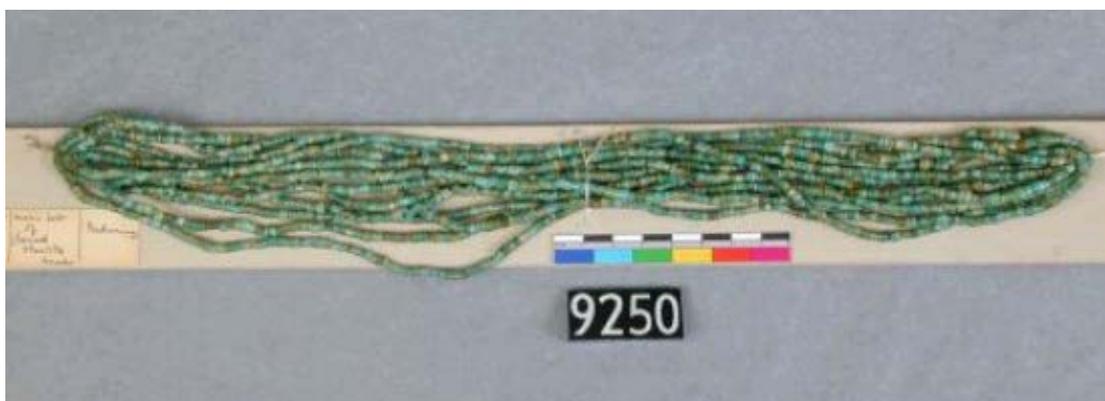


Figure 7.2: Badarian bead belt (Courtesy of the Petrie Museum, UCL)

7.3.1 Bead material

The beads were mainly made of stone glazed or plain, with others made in ivory, shell and for the first time copper was used. The hard stone beads were made from carnelian (see Figure 7.3, string of 13 carnelian beads from Tomb 5449, Badari District),⁹³ red and green jasper and a variety of stone pebbles.



Figure 7.3: Badarian string of beads (Courtesy Petrie Museum, UCL)

The softer stone used was mainly steatite in both white and glazed bluish green; also slate, breccias, calcite (white, green and yellow); and variegated limestone ranging from red, pink, grey, green and pink and white banded and alabaster; some soapstone and serpentine was also used. See Figure 7.4 from the Petrie Museum. String beads, 5 blue steatites; 2 pink limestone; 1 white and orange limestone; 1 breccia; 2 shells, all from grave 5112. See also the Register of Badarian Graves and Town Groups (Brunton & Caton-Thompson 1928: pl v). Turquoise⁹⁴ was probably used, but Brunton found it difficult to distinguish it from glazed steatite (Brunton & Caton-Thompson 1928:27). See Figure 7.5 displayed in the Petrie Museum, UCL and described as a string of turquoise ring beads found in cemetery 6000, Badari District. According to Brunton (1928:27), the one feature of the Badarian beads are the absence of faience or glazed frit.

⁹³ See also the Register of Badarian Graves and Town Groups (Brunton & Caton-Thompson 1928:pl vii)

⁹⁴ If turquoise was used, it probably meant that contact was made with its source, which is the Sinai Peninsula (Said 1990:564). This could have been through trade or mining excursions into the Sinai. The likely hood of the Badarian mining for turquoise at such a distant place seems very remote.

The blue glazed steatite was probably due to the method of producing faïence and it is possible that Brunton made a mistake (or not) in not identifying it as such. It is attested by various authors. Lucas (1959:197) described the earliest glaze as of Badarian date on steatite. It was also not colourless as speculated, but blue from the start. The oldest glaze known was an alkaline glaze on solid quartz or a body of powdered siliceous quartz crystals. This occurred in the early 5th millennium BC in Sumeria, but it is its discovery in Badarian and Predynastic Egypt that gave the glaze the incorrect name of 'Egyptian faïence' (Wulff et al 1968:98).



Figure 7.4: Beads from Tomb 5112 Badari District. (Courtesy of the Petrie Museum, UCL)

Brunton (1937) continues with the beads found at Mostagedda. The materials used are similar to the ones found in the Badari region and consist of various stones, some hard but mostly soft, copper, organic bone, ivory, shell organ coral and quite possibly white

coral. Small ring beads made from a hard black stone could be obsidian (Brunton 1937:51).



Figure 7.5: String of turquoise ring beads from cemetery 6000 (Petrie Museum)

The softer stones consist of calcite, alabaster, grey, white and black limestone, hard red clay, serpentine, soapstone and steatite. As at Badari, the steatite is generally glazed and the colour varies from blue, through all shades of green, brown and stained white. No faience was found at Mostagedda in the Badarian horizon.

The graves at Matmar produced little of value and is described by Brunton (1948:10) as being 'poor, and there is very little of new interest in what was found'. However, some of the items is worth mentioning, such as one grave of a male with the remains of a bead belt of blue glazed steatite beads, typical of the belts found in the male graves, but in addition there were white shell ring beads which clearly had been strung with the others.

Numerous shells were found, and were more used in the Badarian than in later predynastic periods.⁹⁵ In the el-Badari region shells were found in forty-two graves. All of the shells found in the Badarian graves come from the Red Sea. The *Nerita* kind is the commonest and was found in 19 graves; the *Ancillaria* in 13; the *Conus* in 8, and *Olivia* and *Natica* in 6 each. The latter two were not found with men, but it could be that due to the low occurrence this is accidental. All shells and beads are more frequently found in the graves of children than with adults (Brunton & Caton-Thompson 1928:27). In the Mostagedda area, Brunton (1937:52) found 19 graves with beads and 18 others without beads. As with previous finds, the shells are from the Red Sea and the most usual kind was *Ancillaria* found in 19 graves, often in long strings, followed by *Nerita* in 17 graves with one string and *Conus* in 17 graves, mostly singly and sometimes filed. *Natica* shells were found in 8 graves with only one string. Of the *Columbella*, *Oliva*, *Purpura*, and *Triton* shells, only two or three graves contained some. One cowry and pink tubes of organ coral was also recovered. Of the graves at Matmar, only seven contained shells. The most usual shells were *Conus*, *Nerita* and *Ancillaria*. Three graves of children yielded *Clanculus* shells, and in one other some cowries (*Cypræa*), neither of which have previously been found in the Badarian graves. In two graves *Oliva* and in one grave *Triton* shells were found and they correspond to previous finds (Brunton 1948:10). See Figure 7.6 for an example of shell beads.

The earliest copper objects found in Egypt are from the Badarian period and consist of beads, borers and pins (Lucas 1959:228).⁹⁶ The copper beads found at Mostagedda (1937) are of two types. In one grave (2229) two were found made of thin rectangular sheet-metal, bent round so that the sides overlapped and a tube was formed. In grave 569 there was one of thin metal ribbon wound up spirally to form a ring, and three others which were quite different (Brunton 1937 51-52). Three others were mentioned as being small copper cylinders found in grave 2507 at Matmar (Brunton 1948:10). In addition, at Matmar (1948), turquoise pendants were found in grave 3094 and, very few beads of carnelian occurring in only three graves, 2507, 2509 and 3094 (Brunton 1948:10).

⁹⁵ It is important to note that although the shells have now faded in colour to white, they were originally found in bright colours, making them very sought after from the earliest times onward (Brunton & Caton-Thompson 1928:27).

⁹⁶ In the Badarian period only small items were found hammered into shape from raw copper. Although copper could have been mined in the mountains of the Eastern desert, it is thought that they may have been imports from Palestine (Ward 1991:16).



Figure 7.6: String of 12 *ancillaria* shells from cemetery 5100, Badari district.
(Courtesy of the Petrie Museum, UCL)

7.3.2 Placing of the beads as body adornments

The wearing of beads in antiquity are one of the main contributors to the development of personal adornment in the history of Egypt. They date back to the early Neolithic onwards and carried on until today. The beads were worn round the neck, arm, waist, or ankle (Lucas 1959:52).

In the Badari area the cemeteries containing Badarian burials are all described by Brunton (1928) with the Grave Register (pls. v-viii) containing all the principal details of each grave or village group. It is unfortunate that the detail found in the Grave Register does not always correspond with the description given in Chapter III.⁹⁷ Details of the position of the beads on the bodies are described in Chapter III (Brunton & Caton-Thompson 1928:2-18). The Badarian cemeteries are numbered 5100, 5200, 5300, 5400, 5500, 5600, 5700, 5800 and one cemetery as 6000. The graves in the cemeteries are numbered as 5102, 5201, 5301, and so forth. The graves containing no objects are

⁹⁷ It is important to again refer to the previous mention of the loss of the tomb cards completed during the excavation, which could have made cross-referencing much less complicated.

not mentioned in the notes. A sketch map of the cemeteries and villages of the Badari district is found on a foldout page (pl II) in *The Badarian Civilisation*, 1928.

Cemetery 5100 appeared to have the place of interment for the more important people of the Badarian, as their graves were greatly plundered in ancient times with some of the graves containing beads, but not in any quantity.

According to the catalogue in the Petrie Museum, University College, London, grave 5105 contained a *Spatha* shell and a string of beads consisting of eight small steatite beads and one carnelian bead. This is not mentioned in the Grave Register by Brunton.⁹⁸ (See Figure 7.7. See also Footnote 88.)

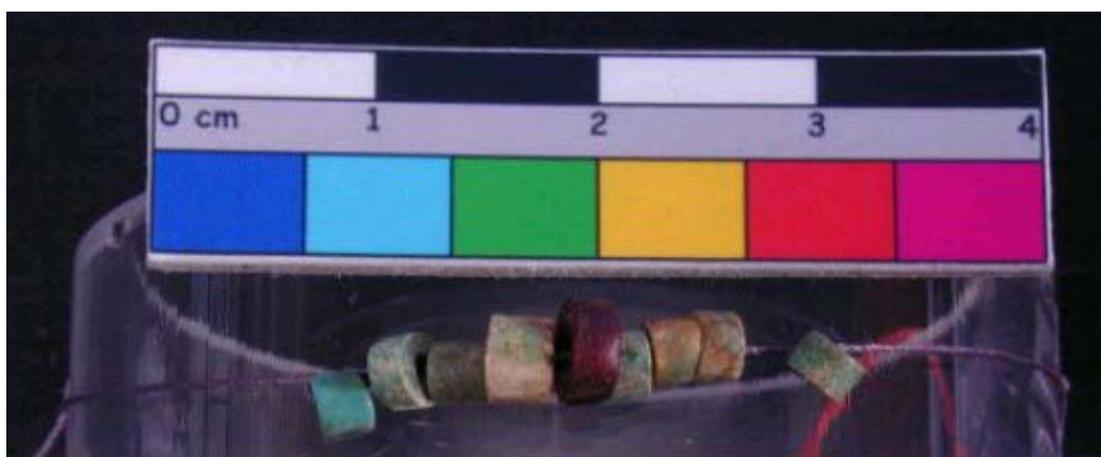


Figure 7.7: String of Badarian beads from grave 5105. (Courtesy of the Petrie Museum, UCL)

Grave 5107 contained a few cylinder beads of steatite and possibly turquoise, 5111 a few shells and beads in limestone and steatite, 5130 two beads in red jasper, and in 5132 a few beads of carnelian and blue glazed steatite was found. Grave 5133 contained three white steatite cylinder beads, 5140 a few beads of blue glazed steatite from the filling. Grave 5148 contained only one alabaster bead, 5155 a few blue glazed steatite beads, 5163 a few beads of beads of shell and possibly slate, and grave 5164 of a robbed body of an immature person, probably a male. It contained a bead or two of jasper, agate and white steatite according to the details of the Badarian Villages and Graves (Brunton & Caton-Thompson 1928:9). This description is somewhat misleading

⁹⁸ A tag on the objects by the excavators identified it as coming from grave 5105.

as a string of beads and shells housed in the Petrie Museum with a tag confirming it as being from grave 5164, as consisting of 8 shell *Ancillaria* beads, one red jasper barrel bead, and one white steatite barrel bead with fancy engraving, and an agate pendent (Figure 7.8).



Figure 7.8: String of beads and a pendent from grave 5164. (Courtesy of the Petrie Museum, UCL)

Cemetery 5200 was north of the spur that contained cemeteries 5100, 5700 and 5800. It was very much disturbed and re-used, and it was impossible to say if the objects found were from the village rubbish or graves. The graves were devoid of beads.

Cemetery 5300-5400 contained the majority of Badarian graves found by Brunton (Brunton & Caton-Thompson 1928:10). The area was not greatly disturbed by later graves and even though the Badarian graves were found to be seldom plundered in

ancient times, they were quite poor in objects, however, a number of graves contained significant beads still on the human remains.

In grave 5364 an immature body was found with a short string of shell beads, with two, possibly turquoise, cylinders at the neck. Around the waist were a number of pierced shells of six different varieties.

Grave 5390 contained the remains of the first female found in this cemetery and at the wrist were four beads of alabaster and ivory, and one *Nerita* shell. Graves 5393, 5397, 5399 and 5406 all contained loose beads, but the graves were badly plundered with no complete human remains. Grave 5409 contained the legs and pelvis of probably a male with three beads in alabaster and steatite at the ankles.

Grave 5413 contained the earliest copper beads found in ancient Egypt (Lucas 1959:228). In the grave of an infant with beads round the neck, still on the original string, was found a few beads of blue glazed steatite or turquoise, two carnelians and one shell bead. But, most importantly, it had two copper beads with the metal shaped into a ribbon and wound round spirally to form rings (Brunton & Caton-Thompson 1928:12; pl. L, 86w₃).

Grave 5418 contained the disturbed body of a woman, with one *Conus* shell on a piece of the original fibre, and a string of small green glazed steatite or turquoise cylinder beads.

Grave 5449 is not described in Chapter III, but it appears in the Register. The Register shows that it contains the body of a male. Figure 7.3 illustrates 13 carnelian beads housed in the Petrie Museum, University College, London. However, in the Register in addition to the string of carnelian beads, a barrel bead of turquoise? and, a carnelian pendant is also noted. Please refer to footnote 88 to explain the dilemma of cross-referencing the items with the available information. As with many other objects, the tomb-cards would have provided many answers.

Cemetery 5600 had only a few Badarian graves, which were mostly robbed in antiquity and contained next to nothing.

Cemetery 5700 contained a number of graves of particular interest. Grave 5705 was of a male and at the neck there was a large barrel bead of alabaster (see Figure 7.9), with around the waist a massive string of green steatite cylinder beads of good original colouring (Figure 7.10).



Figure 7.9: Barrel bead of alabaster from grave 5705. (Courtesy Petrie Museum, UCL)



Figure 7.10: String of steatite beads from grave 5705. (Courtesy Petrie Museum, UCL)

Grave 5708 were of an infant of about two years old with four odd beads and four *Nerita* shells at the neck.

Grave 5710 were that of a child about ten years, in an undisturbed grave with a long string of shell, one carnelian, and a short string of blue-glazed steatite ring beads, running from the neck to the wrists.

Grave 5711 contained a body disturbed by a later Roman burial so as to render it impossible to determine the sex. What is notable being that at the neck was a string of blue glazed steatite and a few shell beads of *Ancillaria*, while at the right arm was a large pendant of black and white mottled limestone.

Grave 5718 is of a woman with a number of blue steatite beads, shell, black and brown soapstone, with a few of grey limestone, calcite and one carnelian around the neck and perhaps at the wrist.

Grave 5721 of an adult male is undisturbed and another example of possibly a girdle of a large number of green glazed steatite cylinder beads. They were scattered halfway up the spine and one or two near the head, but mostly at the waist.

Grave 5735 is of an undisturbed male with a pelt of fine fur, described by Brunton as being like that of a cat. Around this fur at the waist a mass of green glazed steatite beads, forming a long string wound round and round the body, was found (see Figure 7.2). At the left wrist a large green stone pendent attached by a twisted thong was found (Brunton & Caton-Thompson 1928:15).

Over three hundred Badarian graves at Mostagedda (1937) were examined. Of these 36 contained beads. As with the Badari area the most common placement of the beads were around the neck, where ten children, three women and two men were found with beads around the neck. Less common are beads round both wrists with one each of a

child and one male. Beads were also found around both ankles of one child and two women, as well as beads around the waist, in the hair or beside the body.

Although the necklaces found in the graves were mainly beads or shells, they were mixed at times with some even containing alternating shells and coloured beads. In three graves strings of beads were found around the waist, most certainly forming belts or girdles. Two of the graves had been identified as being adult male with the third probably also an adult male. This compares with the girdles being found at Badari in the graves of three adult males (Brunton 1937:52).

The various species of shells were not mixed in any one string and were worn at the neck, hands or feet with two children having them at the waist. Weak correlation could be found between the species of shells and the sex of the people wearing them. There seem to be some favourites in the species with *Ancillaria* being worn exclusively by woman and children, with *Nerita*, *Conus* and *Natica* found with both male and female equally and also with children. Three of each, *Triton* from males and *Oliva* from females, are noticed. At Badari *Oliva* were also found with females, as well as children (Brunton 1937:52).

The site of Matmar to the north consisted of a concession area of approximately 10 km and the two seasons' work was completed in March 1931. The excavation report published in book form appeared in 1948. This delay is quite unfortunate, as I believe much information may have been lost during this period. Matmar appears to be the most northern boundary of the Badarian as no sites of any significance has been found elsewhere.

The Badarian graves were quite poor and only a few contained any beads or bead material worth mentioning. The significance of this is that in general the graves had been disturbed, either by robbing in antiquity, or by intrusion of later burials.

Apart from grave 3094 with the remains of the bead belt previously described, grave 2507 yielded small copper cylinders, three graves of children yielded *Clanculus* shells, and one other *Cypræa* (cowries), of which neither have been found in previous Badarian graves (Brunton 1948:11).

7.4 OTHER BODY ADORNMENTS

Apart from the beads, worn as necklaces, armbands, girdles, other items were found of which the most important is the wearing of armbands (bracelet or bangles), ear studs (plugs), and possibly nose studs (plugs), and finger-rings.

7.4.1 Bracelets (armbands, bangles)

All the bracelets, apart from the bead armbands, found, appear to be of ivory. Again there is no correlation between the details of the cemeteries and the register of Badarian graves. In grave 5111 part of an ivory bracelet is mentioned and illustrated in pl. xxiii, 12. However, the grave recorded on pl. xxiii, 12 is 5112 and not 5111 (Brunton & Caton Thompson 1928). According to the Register, grave 5111 does not contain any ivory bracelet or part thereof.

In grave 5115 parts of an ivory bracelet is recorded with corresponding mention in the Register describing it as an ivory bangle. Grave 5126 was robbed in antiquity, but even so two ivory bracelets were found still on the bones of a fore-arm. Scraps of incomplete bracelets were found in graves 5128, 5131, 5143, 5150, 5151, 5152, 5402, 5403, 5406, 5428, 5705 and 5762.



Figure 7.11: Ivory bracelet from cemetery 6000. (Courtesy of the Petrie Museum, UCL)

Figure 7.11 is of an ivory bracelet identified as being from cemetery 6000 in the Badari area.⁹⁹

Unique to the Badarian culture are the ivory bracelets with central ridge running round, varying from broad to narrow. One is decorated with blue glazed steatite beads inlaid in a series of chevron. Some are plain with rounded profile and three have a simple knob on one side. All seem to have been worn by males only. They are drawn on pl. xxv, 1-13, xlili, 16 and photographed, pl. xxii, 11, 12 (Brunton 1937:53).

At Mostagedda the bracelets were mainly of ivory, but some were of leather, horn or perhaps tortoiseshell, vegetable fibre and possibly ebony, all for children. The excavation report on the finds at Matmar (1948) does not describe any Badarian bracelets.

⁹⁹ This is another example of items received by the Petrie Museum, University College, London, identified by a tag as being from cemetery 6000 without any record being found in the excavation reports.

7.4.2 Ear studs?



Figure 7.12: Ear stud? from grave 5143. (Courtesy of the Petrie Museum, UCL)

A number of little clay plugs were found (see Figure 7.12), which Brunton deemed possibly to be ear plugs. They were made from fine clay, mainly grey. Seven of these little objects were found at Badari in settlement areas and seven were found in graves of cemetery 5100. See also pl xxiv, 7-12 (Brunton & Caton-Thompson 1928). All of the graves had been robbed in antiquity and area 5100 showed signs of habitation, and it is possible that most, if not all, of these objects came from domestic occupation sites. At Mostagedda, four of these were found in village rubbish and all were of fine grey clay. The use of the objects is uncertain and Brunton is of the opinion that it may well have been domestic and not ornamental (Brunton 1937:53).

Also illustrated in pl. xxiv, 13 (Brunton & Caton-Thompson 1928) is a little stud of pale green stone sticking in the skin of the wing of the right nostril in grave 4359. The body was that of a male wrapped in skins and matting.

7.4.3 Finger-rings

At Badari four finger-rings were found in the cemeteries. In grave 4803 an ivory ring was recovered. This was one of three Badarian graves found in cemetery 4800 which consisted mainly of graves from the 6th-11th dynasties. A horn finger-ring was recovered from grave 5438 and one from grave 5448 in cemetery 5400, and a bone finger-ring from grave 5762 in cemetery 5700.

At Mostagedda, Brunton (1937:53) found only one item that could have been used as a finger-ring. It consisted of a pebble from which a fossil had dropped leaving a round hole, but it was also recovered from a grave that was completely disturbed.

7.4.4 Miscellaneous objects

Apart from the pots and body adornments, a number of other items were found in the Badarian graves.

Three female figures were found in the Badarian graves at Badari, grave no's 5107, 5227 and 5769. One is of baked clay, one form elephant ivory and one of unbaked clay. These three figures in the round are the oldest found in the Nile Valley (Brunton & Caton-Thompson 1928:30).

Of the more important objects found in the Badarian graves are the cosmetic slate palettes. Next to pottery, slate palettes are the most frequent object found in prehistoric graves. They continued throughout the history of Egyptian society. The earlier ones, such as the ones found in the Badarian graves contain no fancy forms but later they evolved into various geometric, human and animal forms (Petrie 1920:36). Twenty-one palettes were found in the Qau and Badari cemeteries with none being found in the villages. Most of the palette-forms were rectangular with one having a sharply pointed oval. With eight of the palettes grinding pebbles and in some cases cosmetic paste, such as malachite, red paint and some unidentified white substance, were found (Brunton & Caton-Thompson 1928:31).

At Mostagedda, six whole Badarian palettes were found and four that were broken up. All were from graves with one scrap, which was found loose, but probably came from a burial.

A total of five Badarian palettes were found in the graves at Matmar. They represent the whole range of types, from the straight ended to those deeply notched. In one grave (2021) a grinding pebble was found with the palette (Brunton 1948:10).

One of the striking features of the Badarian culture is a number of ivory spoons found at Badari occurring in ten graves.



Figure 7.13: Ivory spoon from grave 5719. (Courtesy of the Petrie Museum, UCL)

Some of the spoons are round while others have a deep rectangular bowl (see Figure 7.13). In most examples the spoon handles end in animal forms of some kind, but difficult to identify. Some end in a single animal form, but a few has a carving on both sides of the handle. It appears that the spoons were utilitarian and used for eating, unlike the later use in toiletries during dynastic times (Brunton & Caton-Thompson 1928:31).¹⁰⁰ Four ivory or bone spoons were recovered from graves at Mostagedda (Brunton 1937:53).

When using pottery as a date marker, it appears that the round bowls with handles carved in double animals are the earliest, while the rectangular bowls and handles of double heads or single antelopes are later. The square bowl only occurs again at the end of the Predynastic period (Brunton & Caton-Thompson 1928:32). The archaeological record shows a period devoid of spoons between the Badarian and later predynastic.

¹⁰⁰ It is important to note that Petrie (1920:31) remarks that (at that time), the spoon seems to have been unknown in earlier times, from his so-called first civilisation even to the earlier part of the second period.

The anomaly of the gap between the Badarian and later predynastic, lends credence to the hypothesis that during the early Badarian there had to be contact with areas south of the Egyptian Nile Valley. The use of ivory leaves this in little doubt. How the contact was established is open to speculation and could have been through occasional contact with travellers or through trade. The latter is important as it could be possible that the Badarian was a trade hub for connecting with the Red sea, Africa to the south and west into the desert areas.

Numerous other items were discovered in the graves which continued throughout the predynastic to the present. Two items that Brunton describes as throw-sticks were found in one grave lying close to the hand of man (Brunton & Caton-Thompson 1928:32). One was lying on top of the other. The lower one was complete while the top one was missing the upper part. The wood was extremely light and had to be treated before handling. The size of the throw-stick is only 18.75 cm (5½ in)¹⁰¹ and examples are very rare, with them only appearing in the archaeological record during the 12th dynasty onwards. No such items were found in any other Badarian site. Throw-sticks occur in the hieroglyphic script as a determinative, especially from the 12th dynasty onward (Spalinger 2008:141).¹⁰² It is also found as a hieroglyph together with flying ducks and seen in tomb paintings of bird hunting scenes. Other scenes of hunters also show them with the usual hunting weapons and also at times carrying throw-sticks (Brunton & Caton-Thompson 1928:32). At Mostagedda, Brunton found throw-sticks in two graves, but not as a pair, leading him to remark again on the possibility of them being castanets or really throw-sticks (Brunton 1937:56).

¹⁰¹ The small size of the items, as well as that two, was found close to the hand of a man and could point to them being either clappers or castanets. During the excavation at El Amrah, a predynastic decorated pot was recovered, depicting two men and a dancing woman. One man holds two angled objects in his hand and it appears that the other also holds two. See Figure 7.14. With regards to the pot, Maclver remarks: 'In the present case the persons depicted seem to be dancing and playing the castanets' (Randall-Maclver & Mace 1902:42, pl xiv).

¹⁰² The throw-stick determinative is used in identifying foreign lands and especially their nomadic nature (Spalinger 2008:141).



Figure 7.14: Dancing figures with castanets? (Randall-Maclver 1902: pl xiv)

Apart from the stone tools several other objects were found in the graves used as tools for making or repairing goods. A number of needles, all made of bone, were recovered from the graves. Some of the needles are straight and in varying lengths with others being curved. The complete needles show the eye and also one where the original eye broke and a new one bored just below it. The needles were used for leather, basket-work and sewing linen. In the sewing of linen Brunton was of the opinion that copper needles were used, but this is only speculation as none were found (Brunton & Caton-Thompson 1928:33).

A number of Badarian bone needles were also recovered from village areas and graves at Mostagedda (Brunton 1937:54), as well as from graves at Matmar, with one example with thread wound round it from a male burial (Brunton 1948:10).

The only copper implement came from a robbed grave, which had to be Badarian as all the associated objects found with it were undoubtedly Badarian with no other period graves nearby which could have contaminated the robbed grave. It was a pin almost 75 mm (3 in) long, quite heavy and could have been used as a borer (Brunton & Caton-

Thompson 1928:33).¹⁰³ Other pins were made from ivory or bone but could have been parts of a needle with the eye missing, or teeth of combs. Several pins or pointed sticks were of wood in various lengths.

A large number of bone awls or piercers were recovered mostly from village areas, but a dozen were found in graves. They are made from the femur of some bird (Brunton & Caton-Thompson 1928:33). One of the obvious uses was the piercing of holes in leather items. A number of bone awls were also found in the Badarian village sites and graves at Mostagedda (Brunton 1937:54).

Hooks were not common in the Qau-Badari area and only three were found, of which two, one of ivory and the other of shell, were found in two graves. The third of shell was found in a hole. At Mostagedda only three were recovered from graves and made from either ivory or shell. The graves were plundered, so little information could be gleaned from these little objects. They had pierced eyes and were probably used with a fishing line (Brunton 1937:56). At Matmar a pair of hooks of shell and another pair of ivory were found in the graves of children (Matmar 1948:11). This is somewhat curious, as one would have expected more evidence of fishing activity, unless it was done exclusively using fish-nets or other forms of trapping.¹⁰⁴

A number of objects were recovered from the graves, such as fish-spines, baskets (which could not be removed due to its extremely fragile condition), pottery boats and pottery animal figures. A disc of breccia from 5152, as well as one of pink limestone from the village group 5548, could have been Spindle Whorls. Hippopotamus tusks came from four graves, animal horns and crocodile plates were also recovered. Polished pebbles used for grinding malachite on slate palettes came from several graves, but no palettes were recovered. Pebbles were probably also used for other purposes such as polishers for pottery. A large slab of selenite was recovered from

¹⁰³ Although malachite was found in the Badarian period, it was ground to be used in cosmetics. There is no evidence that it was smelted for copper. We again find discrepancies in regard to the practice of agriculture and also the chronology of the Badarian as it was considered that during the Badarian period (c. 4400–4000 cal. B.C.), when agriculture was first practiced in Egypt, the Badarian had some ornaments made from copper, as well as copper implements. It is not known if these were made from native copper or smelted ore (Killick 2009:402/3).

¹⁰⁴ Fishing with nets is well attested by tomb paintings from 3000 BC.

grave 569 with feint traces of wood around the edges suggesting that it may have been used as a mirror. Resin in small scraps with a little group of four Olivia shells, a piece of pierced branch coral and a flint pebble with a natural hole recovered suggests parts of a rough necklace (Brunton & Caton-Thompson 1928:35).

Although not found in a grave, a pair Porphyry Palettes found in the village domestic group 5548 can also point to southern contact. They are well-made flat rectangular slabs with a grinding pebble of flint. According to Brunton (1928:35), the nearest parallel are the Nubian palettes described by Reisner (1907-8, pl. lxiii c).

Wood pieces identified by Brunton as possibly cedar (Brunton & Caton-Thompson 1928:61-2), resulted in a number of scholars presume that trade or exchange has taken place early during the predynastic period with the import of cedar wood (Frankfort 1924:117; Kantor 1942:201; Prag 1986:71). Lucas (1959:489) also confirmed that cedar was found during the predynastic period.¹⁰⁵

Many of the artefacts found at Byblos, for instance, date to the 4th dynasty. The only conclusion is that regular contact between Egypt and Western Asia started no earlier than the Early Bronze Age with relations beginning, not in northern Levant, but in Southern Palestine (Ben-Tor 1991:4).

7.5 INTERPRETATION OF BEADS AND OTHER OBJECTS IN PREDYNASTIC BURIALS

Although the possibility of inequality and social stratification had been touched on in the beginning of this chapter, a discussion on the social relationships regarding the development of mortuary rituals in Egypt requires a special section, especially in view of the vast number of grave goods found in the graves. Literally thousands of beads were

¹⁰⁵ However, on examination of the sources, especially Brunton, the following is worth looking at; Brunton does not mention cedar beams and describes most of the pieces of wood as being 'unidentified' with various kinds of pine, juniper or cypress. What probably prompted the import thesis is the remark by Brunton that 'it is therefore evident that even at this early time, timber was traded from Syria to the Nile Valley' (Brunton & Caton-Thompson 1928:63). Amnon Ben-Tor (1991:4) disputes this and contends that cedar was only imported during the Old Kingdom onward. This again raises the suspicion of assumed contact with the Near East at such an early date.

recovered and the only whole pots of the Badarian came from the graves. In the annals of death and dying the preoccupation of death by Egypt is mentioned in many articles and books dealing with the subject (Gallery 2001:170-1). For this reason, a general discussion on the dawn of burial practices by the Egyptians would be relevant, especially as we see early signs of social relationships in the burial practices of the Badarian (Stevenson 2009:175). If we are to consider the Badarian as part of the beginning of the predynastic of ancient Egypt, then we can relate to the suggestion by Hoffman that the elaboration of mortuary cult ‘... was one of the most socially, economically, and politically sensitive indicators of the rise of the state’ (Hoffman 1980:336). The number of grave goods found in the Badarian graves then had to be considered as part of this elaborate scheme of treating the dead as an integral function of the Egyptian social development, and ultimately the foundation of the dynastic state formation. Already in the Badarian we notice within certain communities displaying individuals with greater status (Wilkinson 2001:29).

It is difficult to compare the most basic mortuary activities of the Badarian grave ornaments with the most elaborate Egyptian cult that developed in later dynastic periods, whereby the rituals became real and the deities were no fictions, but real powers (Assmann 2001:47). However, if we consider the two broad approaches used in the interpretations of early Egyptian burials, whereby the first attributes funerary elaboration to cater for the needs of the afterlife of the deceased, and the second approach places the emphasis of the investment in funerals comparable to the social status of the deceased and thereby a measure of social hierarchy, it can be said that both the approaches are evident in the Predynastic period (Stevenson 2009:178).

For anthropologists the terms ‘chiefdom’, ‘state’, ‘ranked’ and ‘stratified society’ used by Egyptologists is confusing and their use of the terms is somewhat loosely constructed, and is not supported in the archaeological record. As an example, Anderson (1992) concluded that in the Badarian burials a two-tiered social structure may have existed and that it was already stratified. In Nagada II, the elaborate child burials point to ‘a ranked society’ (Wilkinson 1996:83). This adds to the confusion as we now see a movement from a more complex stratified form in the Badarian to a less complex ranked society in Nagada II (Savage 2001:111). This is another indication that the burial

practices by the Badarian were more complex and more research on the practices needs to be conducted. To couple later Egyptian state formation to the Badarian burial practices is at this stage not possible.

Even so various scholars have attempted to find some common thread, beginning with the Badarian burials. In the study of burials, the one item that stands out as material indicators of status and wealth of the deceased are the beads, especially those made from exotic or rare materials. Their presence suggests contact with economic networks that would point to a rise in hierarchy and prestige (Stevenson 2009:185).

The use of beads among other objects as personal items, as well as possibly an expression of interpersonal relationships, can be found in many prehistoric cultures, such as the !Xharo exchange systems of the Southern African Bushmen (Smith et al 2004:73), and Eastern cultures. The !Xharo gift exchange system is the integral part of building and maintain social relationships. They can also relate the deceased to multiple geographical locations often found in the nomadic cultural systems (Gashe 2008:71-81).

It is important to note that apart from the Badarian graves the cemeteries contained graves throughout the predynastic periods, Old Kingdom and through to modern times. Bearing in mind that the cemeteries at Badari, Hemamieh and Qau have been destroyed through erosion and land use, the excavated reports from the work done by Brunton and Caton-Thompson are the only reliable source.

Modern archaeologists and anthropologists are interpreting grave goods in a very sophisticated way attributing relationships between people, places and things in an evocative way that could 'visually impress the moment of internment upon memory' (Stevenson 2009:187). The venture of predynastic scholars into the realm of social sciences it poses a problem and although social differential and stratification are characteristic trends, the over-reliant on social-economic models does not take into account other possibilities. It does not take into account the specific historical contexts in which these transformations in Predynastic society occurred. The terms of reference

for the early societies vary considerably in different regions and cannot be considered on a single axis of differentiation (Stevenson 2009:192).

7.6 CONCLUSION

If we accept that this is the rise of the first agrarian¹⁰⁶ group in the Nile Valley and then placing objects with the deceased in burials signalling the beginning of the later evolved majestic tombs and structures dedicated to the dead, the importance of the grave goods cannot be underestimated. It is well known that the smaller items recovered from cemeteries and village areas received scant attention in the early 20th century archaeological hunt for rare and valuable Egyptian artefacts. The exception to this practice started with Flinders Petrie and continued with his students such as Guy Brunton. For this reason, we have the wealth of grave goods recovered by Brunton at Badari, Mostagedda and Matmar. With the exception of the lithics and pottery, the Badarian grave goods have received only cursory mention and have never been fully analysed and discussed by later scholars.

It is clear from the preceding analysis that the Badarian were prone to wearing ornaments in the shape of necklaces, bracelets and anklets. In general, the men wore a single large bead at the neck or on the arm. In cases where they could afford, they wore ropes of greenish blue beads round the waist, while woman and children wore necklaces, girdles and head-bands of shells. Brunton (1928:40) commented that the Badarian were akin to most 'primitive Africans' in wearing these types of ornaments alluding to the possibility that they were of African descent. The penchant for adornments is like the other predynastic groups; distinguish the Badarian from their contemporaries to the north in the Delta and also the groups in the Western Desert (Hoffman 1979:143).

¹⁰⁶ It is often repeated in the literature that the Badarian were the first agrarian society in the Nile Valley as described by Brunton. However, the description given by Brunton is extremely vague and does in effect not support the agrarian concept. The animal found in grave 5422 and 5423 is variously described as a large bovine without a head and a sheep or goat? (Brunton 1928:12). Even later descriptions of skins found with bodies are described as probably goat with no real identification. In terms of the domestication of cereals, Brunton is also very vague and states that 'cereals were known, but what species is uncertain' (Brunton 1928:41). Other scholars consider the Fayum oases and Merimde Beni-Salama in the Lower Egyptian Nile Valley as the earliest farming community with crops grown there originating from southwest Asia (Linseele 2010:51).

The large number of cosmetic palettes and recovered colouring pointed to a society that ground and mixed green malachite to paint their eyes. Combs were worn as ornaments with the men wearing their hair long and the women sometimes wearing theirs in plaits, or twisted tresses and at times with curly fringes (Brunton & Caton-Thompson 1928:41). This all points to a developed society and raises the question of whether the Badarian were a nomadic culture or rather a more sedentary group, which points to the beginning of a more sophisticated society. Without even reading into the pottery and lithics of the Badarian, it is becoming abundantly clear that they are a much more complex group of people and more advanced into the true Egyptian sense than originally thought (Midant-Reynes 2000:164).

Wilkinson (2003:183) argues that the Badarian were not confined to the narrow Nile floodplain in the Badari-Mostagedda-Matmar area, but moved constantly toward the east and the Red Sea. They showed a life on the move with little possessions, lightweight and easily portable. I find it difficult to put any scholarly value to this assumption as Wilkinson does not cite any source for it. He is correct in stating that they had an affinity for body decorations in the form of jewellery.

The Badarian treatment of their dead is not that of a nomadic group without a formal set of basic principles regarding internment. From the available excavation results, we cannot establish a hierarchical structure except in the isolated cases where certain men were buried with girdles of beads, indicating someone wealthier than others. This does not mean that it was totally absent and as we analyse the items recovered from the graves and villages, it is clear that trade played a role in the acquisition of materials and items not locally available. Along with trade comes a hierarchy based on wealth and subsequently power dividing the society into classes.

The inhumation of persons with valuables during the development of the Badarian is significant as it could be the forerunner of the later elaborate tombs and burial chambers of the Pharaonic period. It is also important to note that many of the graves were robbed in antiquity and we notice this for the first time in the Badarian period. This is also an indication of later, more sophisticated mortuary practices that defines the Egyptian practices of pyramids, tombs and mortuary temples (Hoffman 1979:143).

The elaborate bead belts described above were restricted to the graves of adult males and could suggest that they are symbols of high status and authority in the individuals. Even though the evidence may point to group leaders being present, it has to be noted that the Badarian inequality may have been incipiently developed pointing to recognition of inherited prestige within an egalitarian context (Anderson 1992:63).

In line with the above thinking, very recent research on the burial wrappings from several graves found at Mostagedda and identified as being Badarian, points to the possibility that the idea of mummification may already have been experimented with some 3000 years before the height of mummification during the Middle Kingdom. During the excavation of Badarian cemeteries at Qau and Badari in the early 1920's, 16 burials were found with woven material (linen?) next to the skin, under the wrappings. In seven cases cloth wrapping was found around the head. In one case some material could be traced at the hips and another male with a pad of cloth at the hands (Brunton & Caton-Thompson 1928:19).

As all previous observations were based on physical appearance only, it was decided to do a proper sophisticated scientific analysis on some of the material held in the Boston Museum. Badarian and Predynastic samples were selected from Mostagedda for chemical investigations, and nine samples of wrappings from Badari and 42 from Mostagedda were microscopically examined by the team of researchers for traces of resins (Jones et al 2014:2).

The samples were subjected to a combination of gas chromatography-mass spectrometry and thermal desorption/pyrolysis. The researchers found that the recipes consist of a plant oil or animal fat base forming the bulk of the balms and lesser amounts of conifer resin and an aromatic plant extract, also minor amounts of a wax and a plant/sugar gum.¹⁰⁷ These relative abundances are consistent of those used in the mummification process of ancient Egypt's 3000-year Pharaonic history. They concluded the following: 'As such, the scientific findings presented here push the origins

¹⁰⁷ In later embalming processes the following materials were found to have been used: beeswax, bitumen, cassia, cedar oil, *cedri succus*, *cedrium*, cinnamon, gum, henna, juniper berries, lime, natron, ointments, onions, palm wine, resins (including gum-resins and balsams), salt, sawdust, spices, and wood tar or wood pitch (Lucas 1959:347).

of this central and vital facet of ancient Egyptian culture back by some 1500 years' (Jones et al 2014:12).

This is perhaps stretching the combination of science and history a bit far, although it does support the idea that already at this early stage in the ancient Egyptian history the dead deserved special treatment, such as internment with pots and other personal items. However, at the time of the excavation of the cemeteries at Badari, Brunton (1928) concluded that 'there was no sign that the bodies had been preserved in any way' (Brunton & Caton-Thompson 1928:19).

If this is the first attempt at preserving any internment, then it begs the question of whether this was a local development or if the idea was imported from outside. To date I could not find any connection in this regard with other sources from the South, Western Desert, Eastern Desert or from the Northern Nile Valley.

CHAPTER 8: SUMMARY AND CONCLUSIONS

8.1 SUMMARY

The Predynastic period existed in Egypt between the terminal Neolithic¹⁰⁸ times at around 5000 BC until the rise of the true Pharaonic or Dynastic period around 3100 BC. In short, the Predynastic is a term devised to describe the various pockets of sedentary groups forming in the Nile Valley from the first cataract to the Mediterranean at the end of a long period of Nilotic adaptation. In contrast to the Neolithic populations of the Sahara and the Sudan, the Predynastic people forged ahead and through agriculture and surplus became equal partners with the established and formidable civilisations of the Middle and Near East (Midant-Reynes 2000:152).

In the beginning of the 5th millennium two distinct groups of post Neolithic peoples appeared, in the north (Lower Egypt) at Maadi and in the south (Upper Egypt) at Nagada. The Maadi culture ceramics, named after the Maadi site, extended from Buto in the north to areas just south of Cairo and into the Fayum region. It is postulated that these people evolved from indigenous Neolithic cultures (Bard 1999:23). Unfortunately, the reporting of Maadi suffered from the same dating malaise as most other predynastic sites and subsequently the chronology of many of the finds is suspect (Hoffman 1979:201). Apart from the internal dating of the settlement which is problematic, the more important external dating posed numerous questions, because of the lack of excavated and relevant publication of the predynastic settlements in both Lower and Upper Egypt, as many of the stone objects found at Maadi does not have a parallel anywhere. Secondly, most of our knowledge of the predynastic period comes from the excavation of cemeteries where the classes of objects are different than the objects recovered from the settlement area and therefore there is no correlation possible. Thirdly, items put into the graves are normally of lower value and pieces such as stone vessels with other items that could yield a proper sequence are absent. Another action that contributed greatly to the dirge of more valuable items in predynastic graves were the consistent ransacking of the cemeteries for the goods leaving many graves disturbed and unreliable for sequence dating. Lastly, a valid and important argument

¹⁰⁸ It is difficult to assign a beginning or end to the Neolithic period as basic agriculture and domestication of certain plants and animals are evident as early as 10 000 years ago (Wenke 1999:21).

exists in trying to establish a typological and chronological framework in spite of the vast number of predynastic material that exists in museum and collections worldwide. This is especially true of the chipped stone industry where the post-Neolithic assemblages consists mainly of the better pieces with scant attention paid to the normal set of tools and debitage (Rizkana & Seeher 1988:73).

Although the above set of uncertainties are applied to Maadi and Lower Egypt as a whole, it can be applied equally to the very large site of Hierakonpolis and other Predynastic sites in Upper and Middle Egypt (See Figure 8.4 for major predynastic sites).

The chronological sequence of the Predynastic remains extremely difficult and is still not fully resolved. Initially Petrie considered the predynastic to fall under the Amratian, followed by the Gerzean and the Semainean periods. They were replaced by Kaiser's Nagada I, II and III, and a complicated set of 11 to 15 sub-phases. The Semainean was ultimately rejected and replaced by the term 'Proto-dynastic period' (Kantor 1944:136). Referring to Petrie's sequence dating, the discovery of an earlier culture by Brunton and Caton-Thompson was placed at 21-29 SD, whereas the Amratian started at SD 30. With the later development of carbon dating the sequence dating system was replaced with a radiocarbon dating chronology recognising four absolute periods in the Nile Valley: (1) the Early Predynastic (ca. 5000-3900 BC; (2) the Middle Predynastic (ca. 3900-3650 BC), (3) the Late Predynastic (ca. 3650-3300 BC), and (4) the Terminal Predynastic (ca. 3300-3050 BC), roughly corresponding to the Badarian, Nagada I (Amratian), Nagada II (Gerzean) and Nagada III (Protodynastic) (Savage 2001:106).

In the preceding chapters I have dissected the Badarian in some detail and basically ignored the follow-up phases such as Nagada I (Amratian) and Nagada II (Gerzean). Virtually all of our information on the Predynastic comes from pioneering excavators dating back to the end of the 19th century. This leaves us with a great many questions unanswered, especially in terms of the Nagada I phase. The El-Badari excavations in 1989 by Diane Holmes and Renée Friedman, caused them to remark that the Badarian did not precede the Nagada I (Amratian) altogether, but chronologically overlapped it. Their project revealed that the Predynastic sites that they visited in the Badari region

appear to belong either to the Badarian or the Gerzean with little material attributed to the Amratian. This is part of the problem with the dating of the early Predynastic, and to determine the relationship of the Badarian in the Badari region to the Amratian in other parts of the Nile Valley would require many more radiocarbon dates (Holmes & Friedman 1989:18). To date this has not happened and we are left with an extension of the previous hypothesis.

Upper Egyptian artefacts found at Maadi resulted in the Maadi chronology to be divided into three distinct phases. At the site of Maadi the earliest phase corresponding with the last half of Nagada is present. The second phase is more concentrated around the area of Heliopolis and the earlier levels at Buto. This corresponds with middle Nagada and the final phase also called Dynasty 0 is found only at Buto. At the end of Nagada II (c. 3350 BC), the development of Egyptian political centres in Hierakonpolis, Nagada, Maadi and Buto shows a merger of the local traditions into a definable national Egyptian character in both Upper and Lower Egypt (Brewer 2005:107).

The area where the lack of knowledge of the predynastic is most prevalent is in the excavation and subsequent reporting of the settlement areas. Virtually all of our knowledge comes from cemeteries and graves and this is true from the Badarian times where the beginning of Egyptian settlement took place and throughout Egyptian civilisation. In contrast to the archaeological discoveries in Upper and Middle Egypt, which are mainly from cemeteries and graves, the evidence from Maadi and Maadi related sites come from settlement excavations. There is a marked difference in interpretation of settlement patterns and civil developments from cemeteries and graves and settlement/village areas. For this reason, it is important to look at the Egyptian Predynastic as one unit, at the most divided into a few phases, but not as separate cultures. This will be discussed in the conclusions.

8.2 CONCLUSIONS

8.2.1 Regional development hypothesis

As we are working in the prehistorically times without the benefit of any written material, it is essential that the artefacts at our disposal be placed in such an order that they

present us with a chronological framework to enable us to formulate an acceptable hypothesis on the development of early Egyptian society and state formation. For this reason, the previous chapters are valuable in terms of the picture they present us with and therefore the great detail in which they were discussed.

A great deal of research on the transition from hunter-gatherer to agriculture and sedentary lifestyle in ancient Egypt had been done. In terms of the Badarian suffice, we can say that the people of this Upper Egyptian area chose to settle on the east bank of the Nile and begin, what is considered to be the first agriculture group in Middle and Upper Egypt. Again, research had shown that climatic changes leading to severe aridity in the Sahara coincided with the emergence of agricultural communities in the Nile Valley. Evidence of the onset of agriculture appeared in Lower Egypt at Merimde Beni Salama in the Western Delta and Fayum, dated around 6300 bp. At about 5220 bp., vetch, flax and weeds appeared at El Omari, a site on the eastern bank of the Nile south of Cairo. It was at the site of Badari in Upper Egypt, dating to 5200 bp., that emmer, six-row barley, flax and weeds were identified by Brunton in 1930. At Nagada,¹⁰⁹ also in Upper Egypt, at a slightly later date, cereals, emmer, six-row barley, pea and other wild plants were identified (Barakat 2002:118).

It is virtually impossible to get consensus on the chronology of dispersion out of the desert to the Nile Valley and also to areas south and north of the Nile Valley. The periods ascribed to the movements by various scholars are therefore very much subject to revision, but the general timeline of migrations does give a rough indication of how the peoples moved from the various areas during the Early Holocene through to the establishment of the predynastic cultures in the Nile Valley.

¹⁰⁹ Savage (2001:116) concluded the following: 'Farming and herding were already well established in the Nagada region by Badarian times. By Nagada I, Predynastic peoples were growing barley and wheat, raising sheep, goats, cattle and pigs'. This suggests that the Nagada I period was contemporaneous with the Badarian where agricultural practices still have to be proven.

Early Holocene Developments c. 10,000-7,000 bp.

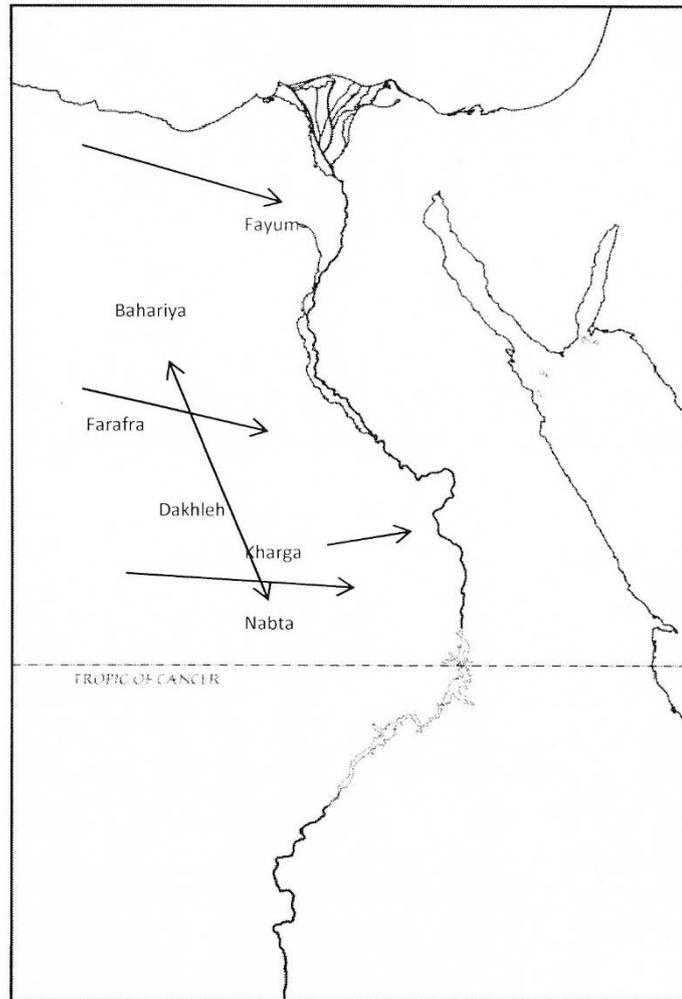


Figure 8.1: Developments ca. 10 000-7000bp (After Holmes 1989:383)

It is accepted that agriculture was absent in the Nile Valley during the early Holocene (Figure 8.1), as sufficient food supplies in the riverine environment such as fishing and gathering of root plants, precluded the more strenuous security of domesticates. Barakat (2002) is further of the opinion that wild progenitors of wheat and barley were also absent in the area (Barakat 2002:119).

Climatic upheaval during the period around 7000–6000 caused severe arid conditions to develop in the desert areas resulting in dispersal of its inhabitants to the Nile Valley (See Figure 8.2). The resultant migrations of the desert dwellers with their livestock towards the Nile Valley also met with drifters from the Levant who brought domesticated crops. The resultant mix produced an interesting combination of indigenous dwellers

and newcomers. What we now have is the beginning of domesticated animals, incoming crops and a subsistence agriculture that adapted to a riverine environment (Barakat 2002:119; Holmes 1989:384).

Mid-Holocene and later developments c. 7,000-5,070 bp. Movements from the desert areas. Neolithic in Northern Egypt. Initiation of Predynastic in Upper Egypt

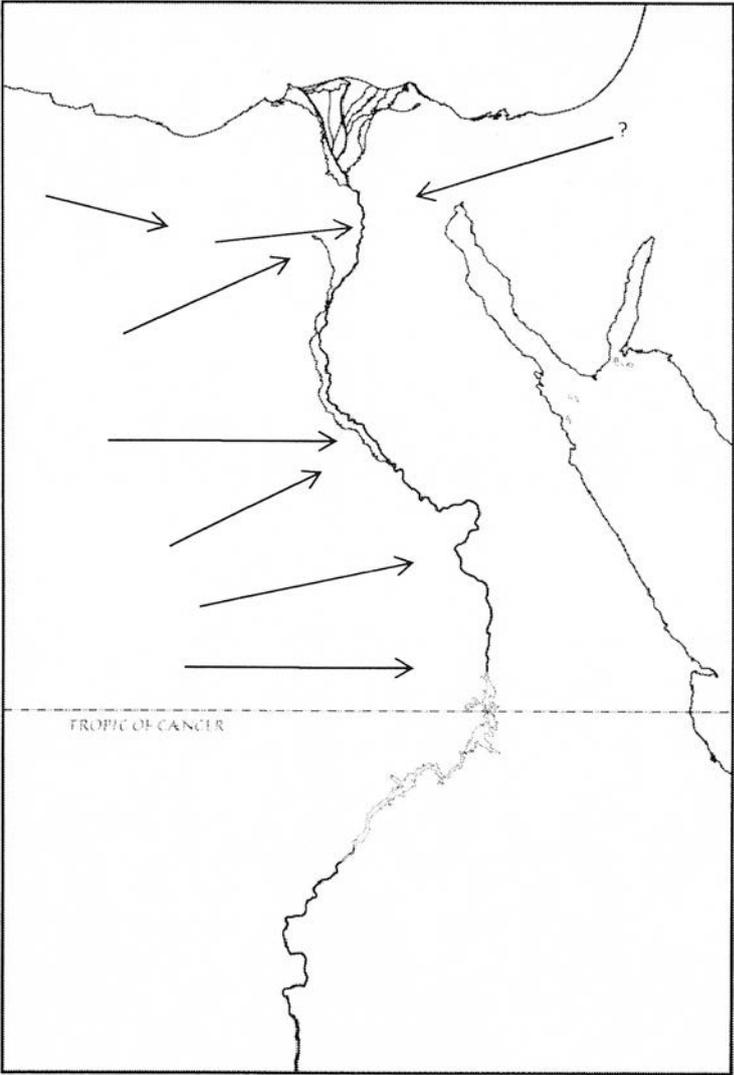


Figure 8.2: Developments from 7000 to 5070 bp (After Holmes 1989:383)

Predynastic Developments c. 5,070-4,600 bp. (3,900-3,400 BC. Exchange networks and cultural development.

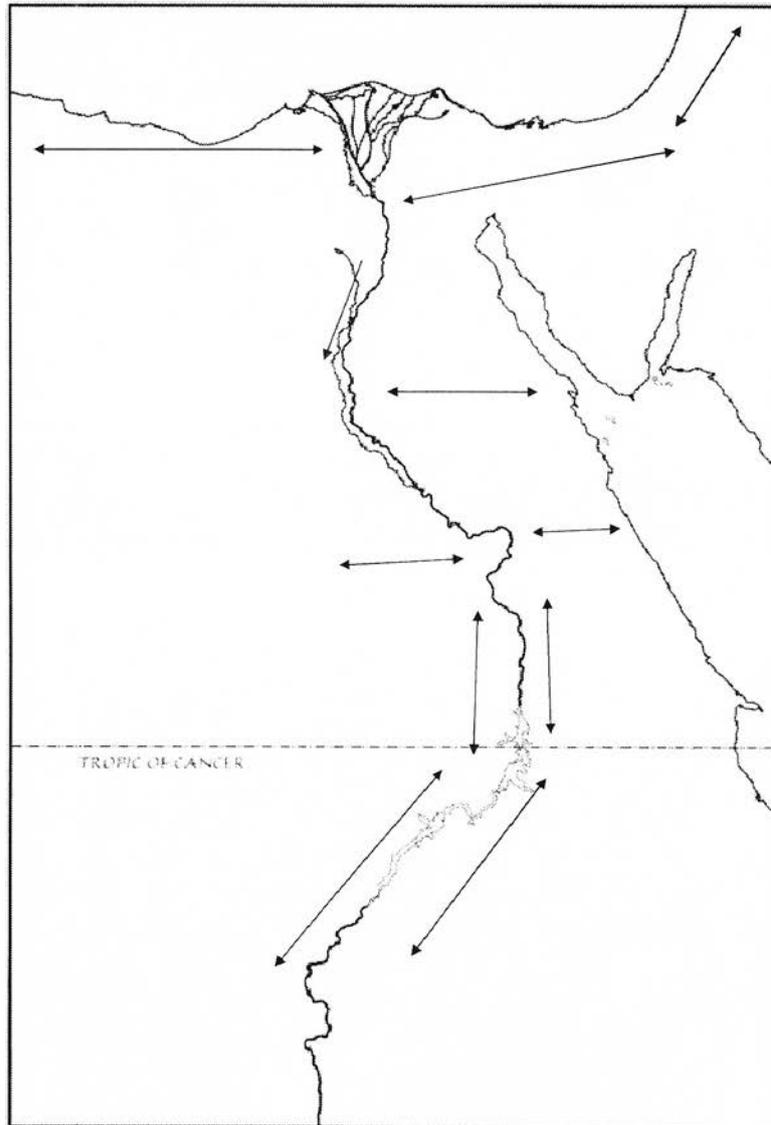


Figure 8.3: Predynastic developments from 5070-4600 bp (After Holmes 1989:383)

The 6th millennium saw the emergence of the Badarian tradition and a Western Desert influence is by all accounts the major source or the establishment of the phase, but the introduction of domestic wheat and barley may ultimately be of Levantine origin introduced by the Neolithic traditions from Lower Egypt (Holmes 1989:385; Barakat 2002:119).

Some scholars are sceptical of the Western Desert origin for the Badarian and some even suggested that the Eastern Desert, and ultimately southwest Asia, should be

considered as points of origin for the Badarian, whilst others suggest that the Badarian emerged from the south (Midant-Reynes 2002:163).

Figure 8.3 illustrates the development of the Predynastic, and by 5070 bp or ca. 3900 BC the Predynastic of Upper Egypt had fully emerged (Holmes 1989:185).¹¹⁰ At this time the Badarian were producing high quality ceramics and also made use of small simple metal tools. This continued and expanded in the successive phases commonly called the Nagada period (Brewer 2005:111, Figure 7.1). The conditions on the desert margins of the alluvium were suited to hunting, gathering, and pastoralism, and the people of the Badarian and later phases focused less on plant cultivation at this time (Wenke 1980:473).

My own research showed a distinct possibility that the semi-circle formed by the oases of Bahariya, Farafra, Dakhla and Kharga showed that the people of the oases had a propensity to pastoralism and subsistence during Neolithic times. Numerous sites produced evidence of human habitation from the earliest times. The migration dynamics to the east was probably due to the increased aridity of the desert areas. In so far as the domestication of plant species found during the Badarian, it has to be assumed that they may have come from the Near East via the northern Neolithic sites and this should not negate the desert hypothesis for the origin, at least in part, of the Badarian.

What is important is that the Badarian does not originate from one single source, and that the Badarian tradition is much more complex and should be considered as the beginning of a true Egyptian form, and that the later powerful Egyptian civilisation, at least in Upper Egypt developed using these original forms not found elsewhere (Midant-Reynes 2002:164).

¹¹⁰ At the same time the Developed Chalcolithic of the southern Levant is contemporary with the Badarian tradition in Upper Egypt. There are ceramic similarities between the Badarian and the southern Levantine Chalcolithic (Joffe & Dessel 1995:512). However, Joffe (1995) contends that 'further research will be necessary to identify mechanisms and pathways that might account for these similarities and to explain their similarities'.

8.2.2 Subsistence, exchange and trade networks of the Badarian and later Predynastic phases

There is little doubt that the subsistence base of the Predynastic people was animal husbandry, hunting and plant gathering. Some cultivation of barley and emmer had been observed through the archaeological record. This makes for quite a varied number of activities and had to lead to surplus that is the bases for exchange and trade.

There is evidence of intensive internal trade in various raw materials used in the agricultural economy. For this to work, it is quite possible that local products such as dried fish and perhaps grains were exchanged. The presence of foreign items in the cemeteries of the Badarian is evidence of trade and exchange with foreign lands and points to an active and complex economy and also cultural exchange (Hassan 1980:439 in Williams and Faure). See also Figure 8.3 for a schematic of overall movement directions.

Many assumptions were made as to the establishment of settlement localities in the Nile Valley. In a study conducted by Hassan (1980) on the suitability for shelter and protection from flood damage and access to the basic necessities, such as water, firewood, transport logistics and economic use of resources in the immediate areas, he came to the conclusion that the outer margin of the floodplain and the desert pediment overlooking the flood plain were the most suitable.

An important conclusion that came out of this study shows that the area of a number of Predynastic sites, such as Merimda, Maadi, Nagada and Hierakonpolis, as well as the large cemeteries found at Badari and Mostagedda (over 100 graves), appear to point to large settlements that were permanent (Hassan 1980:441).



Figure 8.4: Major Predynastic sites (Savage 2001:103)

Using the available information on Predynastic sites in Egypt and data from the Near East, Mesoamerica and even modern villages, Hassan (1980) compiled tables for estimated populations as reflected in Tables 8.1 and 8.2.

Table 8.1 Estimated population sizes according to Butzer (Hassan 1980:443)

Site	Population
Merimda	16 000 persons
Hemamieh	20 persons
Nagada	1 500 persons
Armant	110 persons
Hierakonpolis	4 700-10 000 persons

Table 8.2 Estimated population sizes based on Marcus (Hassan 1980:444)

Site	Population
Merimda	900 persons
Maadi	900 persons
Nagada	250 persons
Hierakonpolis	5 000 persons

Table 8.1 is based on a study done by Butzer in 1980, using data from more than 15 000 recorded graves and 50 settlements in Dynastic and prehistoric sites (Hoffman 1990:149). Table 8.2 is based on very limited data and we can see the big discrepancy between the two studies.

Other estimates attempted by calculating square meters occupied for the settlement areas given one hut of 65 m² with 6 inhabitants per hut, concluded that for the Badarian the settlements did not comprise of more than 20 persons. For other sites the estimates were as follows: Merimde 16 000; Maadi 600; Mahasna 1000; Abydos 105; Naqada 1500; Armant 110; and for Hierakonpolis 4700 – 10 000 (Mortensen 1991:28).¹¹¹

¹¹¹ It had been calculated that a time span of 500-200 years for a cemetery gives on average a society of 47-118 persons (Mortensen 1991:28).

In a closer look at the Badarian, the question of the economic situation at that time came under the scrutiny by Baumgartel (1947), and she expressed serious doubt if the Badarian really represented an agronomic unit and if they were already sedentary in the Nile valley, or whether they were still nomads or semi-nomads (Baumgartel 1947:23).¹¹² I think that later scholars used the assumption that the attraction of the Nile valley was such that where grain could be sown year after year the people would be forced to abandon their nomadic way of life. Unfortunately, the archaeological record lacks definitive proof of a permanent settlement with all the socio-economic features one can expect from such a group. It is some of an enigma if the Badarian did possess herds of cattle, sheep and goats.¹¹³ This of course begs the question of how the animals survived and were there sufficient grazing or were their diets supplemented by fodder. If the Badarian supplemented the diet of the livestock, then surely they had to domesticate or at least cultivate the necessary feedstock. Another important question arises with the presence of sheep and goats in Upper Egypt. These animals are not indigenous to North Africa and the closest source is deemed to be South-Western Asia (Baumgartel 1947:23). This still leaves us with the question of how agriculture and animal domestication spread to Egypt. There is a significant gap of 1000 to 1500 years between the Epipaleolithic and early Predynastic cultures, like the Badarian in Upper Egypt and the Merimden in Lower Egypt (Hoffman 1990:102).

More data needs to be collected and more finds need to be made to answer the questions of pastoralism in Egypt. We of course cannot isolate Egypt, especially the Nile Valley from the rest of Africa. Pastoralism archaeology in Africa is still under research and questions, such as what constitutes a 'domesticated' animal and the forces behind the transition from hunter-gathering to food production, requires much more data and research. In a paper by Smith (1992), he raises some of these fundamental questions. In Egypt the Fayum produced evidence of animals during the Qararian, dated between the 6th and 7th millennium BC, such as hares, canids,

¹¹² In a study by Hamdan (1980:296), the combined area of Siwa, Baharia, Farafra, Dakhla and Kharga depressions is close to 22,000 sq.km. Smith (1980:483) calculated the population density of the West African Sahel nomads at 0.3 persons/sq.km., whereas Le Houerou (1970:249) estimates the population of the Libyan Desert zone at 0.1 person/sq.km. In using these figures Hassan (1986:69) considers the potential pastoral population in the Western Desert of Egypt at the time in the range of 2500 to 8000 people.

¹¹³ Arkell (1975) mentions: 'Apart from cattle, sheep and goats, probably domesticated (though the remains were not carefully studied, and have since disappeared at the British Museum, Natural History) ...' (Arkell 1975:32). To call cattle, sheep and goats 'probably' domesticated negates the whole statement.

gazelles and cattle, none which can be identified as being domesticated. As there was perennial water in the playas and around the Fayum, as well as grasslands, the cattle could have survived without human intervention. He came to the conclusion that the circumstantial environmental evidence for domestication is questionable (Smith 1992:93). A Near Eastern connection to Egypt is confirmed by a gradual south-western movement and supporting radiocarbon dates. A problem arises with this relationship in the Nile Delta where most or virtually all of the Neolithic sites have been buried beneath the silt accumulation. The closest site for comparison is Merimde beni-Salame on the eastern edge of the Delta where the settled communities kept cattle, ovicaprids and pigs. These sites were occupied during the same period as the Fayum. An important observation concerns the burial patterns of Merimde. Cemeteries like those found in the Badarian of Upper Egypt do not occur in Merimde. The Merimde graves lack the profusion of grave goods found in the Badarian graves. The Merimde graves normally contained only a few personal items such as a bead, amulet or matting (Hoffman 1990:174). This pattern is repeated among the prehistoric pastoralists of the Sahel and southern Sahara (Smith 1992:94). The conclusion that I come to is that the lack of pastoral activities by the Badarian, despite numerous authors alluding to the unproven fact that they did practice animal husbandry, supports a seasonal nomadic lifestyle, but with an emphasis on more elaborate internments for whatever reason.

Hassan (1980) is also of the opinion that the inhabitants of the Nile did not consider agriculture a viable replacement for their use of the Nile aquatic resources and the economic scheduling of their activities. It is probably for this reason that the farming communities in the Nile Valley became established 2000 years after the advent of agriculture in South-East Asia and about 1000 years after its spread into the desert adjoining the Nile Valley (Wendorf et al 1976:112). Consensus opinion does not dispute the migration to the Nile River because of the onset of aridity in the desert regions. This probably led to the convergence of the desert Neolithic groups to the Nile Valley and the resultant adoption of agriculture came about through the combined efforts of different groups resulting in the unique economic model of the Neolithic/Predynastic phase. This combined model centred on the herding of Asiatic domestic sheep and goats, cultivation, desert hunting and exploiting the aquatic resources of the Nile and surrounding marsh areas (Hassan 1980:447). How the adoption of domesticates came about is still an area of much debate. There is no complete agreement among

researchers regarding the origin of some of the plants and animals that were domesticated and formed the core of the agricultural model in Europe and North Africa.

As with a number of areas concerning the Predynastic settlement studies, economic data and demographics, the same hope is expressed that sometime in the future new and reliable field evidence will turn up.

With modern land use in the Nile Valley and adjacent areas this hope is unfortunately a rapidly fading one. It therefore appears that the only data available to scholars are the excavation reports of the initial discoveries and the artefacts housed in museums and collections.

I am in concurrence with the results and this reinforces the idea that during the Badarian the foreign items found in many of the cemeteries came through trade and exchange with external peoples from further afield, whether it be from deep south, east to the Red Sea and north to the sites in Lower Egypt that already at that time had contact with southwest Asia. Numerous scholars have used the same argument about the complexity of the Badarian, but I must at this time point out that they all seem to have been using the same source, and whichever way one looks at the development of the early Egyptian society in the Nile Valley, many lacuna exists and may never be satisfactory explained.

As far as trade is concerned, it is sufficing to say that in every Predynastic settlement along the Nile, and it includes the Badarian, imported objects were present. This is not surprising given the advantage the river gives as a means of transportation and communication.

There is no doubt that there was a great deal of trade going on up and down the Nile, as well as east toward the Red Sea, West into the Desert and south into the Sudan. The question is how to identify genuine imports and equally important “what was supplied in return” for goods? Research has shown that most of the material culture of Predynastic

Egypt is based on objects found in Upper Egypt. These items made their way to Lower Egypt and are considered to be imports. They include *inter alia* black-topped pottery, certain items of flint tools, slate palettes, mace heads and some basalt vessels (Rizkana & Seeher 1989:77).

8.2.3 Background to a revised sequence of the Predynastic

To be able to place the Badarian in context we can look at several sources for assisting in the development of the most prominent characteristics of the Badarian. When we examine the Khartoum Neolithic pots it becomes clear that some of the pots with burnishing over impressed decoration were on the verge of developing into rippled ware. In the Khartoum Neolithic attempts were also made to produce fine pottery to resemble gourds and had a V decoration burnt on them, which probably developed into the black-topped pottery. From these early pottery techniques, the black-topped ripple ware so characteristic of the Badarian followed (Arkell 1975:26).

If we follow the above line of reasoning, then the Badarian must be later than the Khartoum Neolithic. The same argument can also be applied to the Fayum Neolithic as copper ware is found in the Badarian but not in the Fayum Neolithic. Simple copper awls, copper beads and the first glass (glazed steatite) beads are found in the Badarian but not in the Fayum Neolithic. This must make the Badarian phase later than the Fayum Neolithic (Arkell 1975:30).

A few markers exist pointing to possible contact with the Levantine, such as the glazed beads and copper objects.¹¹⁴ They could have been brought through the travels of itinerant traders and this could also explain the prolific use of Red Sea shells in the Badarian collections. These traders could have travelled from Asia via the Red Sea, bringing with them the foreign items (Arkell 1975:30).

¹¹⁴ To claim that the presence of two or three native copper objects in the Badarian graves constitutes trade with some distant land is speculation, not based on fact.

Stratified horizons at Hemamieh shows that the Badarian preceded the Amratian. This is the generally accepted view, although some scholars are of the opinion that the Badarian and Amratian are contemporary (see p. 60). Caton-Thompson (1928:88) at that time came to the conclusion that the hut circles found at Hemamieh, overlying and with some material mixed with Badarian sherds and flakes, are indeed made between SD 35-45, putting it in the Amratian period.

To re-iterate, the Badarian has been identified in a number of areas, but all of those outside the Badari-Mostagedda-Matmar core area are suspect. What research to date had shown is that the majority of the so-called Badarian sites outside this core area are in fact Amratian or later with their lithic assemblages being quite different from the Badarian (Holmes 1988:81).

8.2.4 Inter-regional distribution of the Badarian lithics

The Badarian lithic industry is identified by its flake-blade typology and is characterised by non-bifacial tools made on flakes, blades and on occasion on nodular pieces of flint, although bifacial also occur, such as axes, bifacial sickles, concave-base arrowheads and various non-standardised tools (Holmes 1988:83).

As with most of the objects recovered from the early Badarian site excavations a very selective collection of lithics is housed in the Petrie Museum of Egyptian Archaeology (University College, London). The early excavators collected mainly easily recognisable and prominent pieces. It is also true that they described the material very briefly. Although most scholars consider this a serious drawback in analysing the toolkits and using the analysis for comparisons with other regions and levels, I do not consider it that much of a problem as you have sufficient material from all sites to derive at a very functional and comparative classification of the assemblages. It is postulated that the earlier scholars placed the emphasis on bifacial tools and failing to recognise the many other tools described later as notches and denticulates. However, for the sake of comparison and placing the tool assemblages in a specific horizon I feel that the typology scheme, as described by Tixier, will be sufficient. This opinion is not shared by lithic scholars who is critical of the earlier schemes as being insufficient for the huge

range of stone tools existing in the predynastic assemblages, and they prefer the terms 'classification', 'class' and 'subclass' to the terms 'typology', 'type' and 'subtype' (Holmes 1989:395).

Whatever criteria is used, it is clear that the Badarian and Mostagedda industries are restricted to the Badari and adjacent areas excavated by Brunton. The claims of Badarian sherds being present in other sites are suspect and contain no lithic assemblages, which in any way resemble the collections from the core Badarian sites. At most the sites are Amratian or Gerzean with the occasional Badarian sherds suggesting contact with the Badari-Mostagedda-Matmar region during the later Predynastic periods. It is also possible that the Mostagedda industry did not extend beyond the core Badari area and certainly not along the whole length of the Nile Valley as there are other regional traditions to the north and south (Holmes 1988:83).

8.2.5 Inter-regional distribution of the Badarian ceramics

The most important component in the placing of the Badarian in context is the uniqueness of its pottery. It has a distinctive class of black-topped brown or red rippled or combed bowls together with an assemblage of monochrome (rarely rippled) red, black and brown polished ware and rough ceramics (Friedman 1994:18).

The fine quality of the Badarian potters' work is unique to the area and was never equalled in any subsequent period. This makes the Badarian ceramics very identifiable and as a result it is not difficult to demarcate the Badarian pottery in a well-defined region. As with the lithics, it is limited to the Badari-Mostagedda-Matmar area and this of course begs the question whether ceramic traditions must co-vary with lithic industries (Friedman 1994:22).

An important question arises in analysing the combination of lithics and pottery in a temporal priority of whether the Badarian is a cultural phase, followed by the Amratian and subsequent Gerzean phases? Kaiser was of the opinion that the Badarian does not have a link with the direct development sequence of Predynastic Upper Egypt. He

considers the Badarian as a regional development isolated in the Badari-Mostagedda-Matmar area contemporary with the Early Amratian elsewhere (Friedman 1994:22).

In line with this thinking, it has to be considered that pottery was locally manufactured and not mass-produced at a central facility. This would make the previously traditionally accepted thought, that some culturally homogenous unit during the whole Predynastic periods existed that extended the entire length of Upper Egypt from just south of Cairo to Aswan in the south, a distance of some 600 km, not viable. This changes the whole complexity of the Predynastic sequence as we know it.

With the Nile as the single most visible mode of communication, all the Predynastic communities living on its shores had no other choice but to be connected in some way or another, whether it be trade or cultural exchange, to name but a few. This does not negate the possibility that there were a number of regional traditions or groups, each probably having some form of political autonomy, and were in regular contact with each other. If we accept that each group had its own specialities and cultural affinities then the possibility of the Predynastic as being a model of a single straight line tradition evolving through the Amratian, Gerzean and Protodynastic periods, cannot be seriously considered (Holmes 1989:328).

8.2.6 The Badarian grave goods in context

Having analysed the bulk of the grave goods found in the Badarian grave sites of Badari, Mostagedda and Matmar it is clear that some form of exchange with people outside of the core area took place. The purpose of placing the objects in the graves is open to speculation and the possibility of the beginning of the Egyptian fascination with the afterlife had been already discussed. Another facet of the burial customs needs to be examined and that is the possibility of Social Inequality of the burial sites.

The development of the Egyptian society in terms of the political, social, economic and ideological order after the formation of dynastic times around 3100 BC is well documented, however, the practice of placing valuable items with the dead is already evident during the Badarian period. Although the Badarian, widely regarded as being

the earliest agricultural producers in Upper Egypt, according to some archaeologists show no propensity towards wealth or social differential, there are some suggesting the opposite (Anderson 1992:51). Tomb robbery during the Badarian also supports the theory that certain graves contained more valuable items than others. This could mean that already during the Badarian a hierarchy of social inequality could have existed (Hoffman 1990:143).

The concept of using burial data for determining social organisation had been discounted by various scholars who argue that burial practices are unstable, and are more the product of fashion, and that in the grave context the absence of differentiation based on age, sex, and status does not necessarily indicate the absence of social differential during life. It is furthermore postulated that burial practices do not necessarily imply correspondence between the mortuary practices and the social organisation of a particular society. All of the arguments are based on the same surmise that burial practices may not be closely correlated with other aspects of social structures or beliefs (Anderson 1992:51).

It is difficult to apply the above arguments to the development of mortuary practices in the Nile Valley where corpses were buried in cemeteries since the Mesolithic age. There is undisputed evidence that grave goods, such as pottery, ivory artefacts, beads, slate palettes and other small items were used as status markers throughout the Ancient Egyptian period from the Badarian to the 4th century AD. It is especially prevalent throughout the Egyptian Dynastic period, as well as during the preceding Gerzean and Amratian periods (Anderson 1992:52).

8.2.7 Reconstruction of the Badarian culture

Reconstruction of the Badarian culture is almost totally reliant on the summary reports of Brunton and based on his own interpretation (Brunton & Caton-Thompson 1928:41). Flowing from the work done by Brunton the Badarian are variously depicted as being semi-nomadic agriculturalists. Food was plentiful with herds of oxen, sheep and goats, which may have been domesticated. They apparently lived in crude dwelling structures. They stored grain in clay bins from which bread was made and Brunton even suggests

that porridge may have been a common form of food. They hunted game, made crude stone implements and interred grave goods with their dead (Anderson 1992:54).¹¹⁵

Similarly, Trigger (2006:27) describes the Badarian as being semi-sedentary and although there is no evidence of house structures, he believes that they lived in skin tents or huts made of mats hung on poles. To me this is pure speculation based on very limited information supplied in the excavation reports by Brunton and Caton-Thompson (1928:41). Any reference to the Badarian way of life by scholars after Brunton uses the same source base and any deviation or added information must be treated as suspect and speculation with no substantive basis at all.

For the above claims to be substantiated sufficient evidence should be available. However, little evidence for Badarian agriculture exists, although Brunton (Brunton & Caton-Thompson 1928:41) declares that the Badarian had no scarcity of food with herds of oxen, sheep and goats, which surmises were domesticated. However, in terms of domestic animals, the keeping of them for husbandry is limited to a find of animal bones in grave 5435 at Badari and variously described as being an ox or a buffalo. In grave 5423 a skull of an animal was found and described probably as a sheep. This is the extent of the quadrupeds described by Brunton (Brunton & Caton-Thompson 1928:38). Concerns about the lack of corroborating evidence on the practice of husbandry are also expressed by Anderson (1992:54).

No remains of housing structures were found in any of the Badarian sites so any reference to the type of house or shelter they may have had is pure speculation.

The work done by Brunton on the Badarian had never been fully examined and it is very unfortunate that all his tomb-cards from the various sites are also lost. This leaves the reconstruction of the Badarian socio-economic system very open to interpretation that is not based on conclusive archaeological evidence.

¹¹⁵ The Badarian had been variously described as being pastoralist, but if we look at the simplest and most general definition of pastoralism, it is used as a synonym for stock keeping. It also refers to highly mobile human groups with stock keeping as their primary economic activity with a strict cultural affinity to the domestic stock. The Badarian archaeological record and evidence to date does not support this (Linseele 2010:45).

Brunton offers a limited summary of his interpretation of the Badarian as follows:

Of trade we have ample evidence. It is a matter of dispute from what neighbouring lands certain materials and objects come; but it is quite certain that they were not found or manufactured locally. The basalt vases were probably traded up the river from the Delta region or from the north-west. Elephant ivory may have been local, but was more likely imported from the south. Shells came in quantities from the Red Sea shores. Turquoise possibly came from Sinai; copper from the north. A Syrian connexion is suggested for the four-handled pot of hard pink ware. The black pottery, with white incised designs, may have come directly from the west, or indirectly from the south; and the celts suggest intercourse in the same directions. The porphyry slabs are like the later ones in Nubia, but the material could have come from the Red Sea Mountains. The glazed steatite beads, found in such profusion, can hardly have been made locally. We see, then, that the Badarian were not an isolated tribe, but were in contact with the cultures of countries on all sides of them. Nor were they nomads; their pots, some of them both large and fragile, were absolutely unsuitable for the use of wanderers (Brunton & Caton-Thompson 1928:41-42).

Contrary to the above assumptions no clear-cut evidence of permanent settlements existed in the Badarian. Even though the occupation middens in the Middle Egyptian Badarian cemeteries are described as 'villages', the archaeological record shows no evidence of a permanent constructed complex. Even in her meticulous excavation at Hemamieh, Caton-Thompson describes the site as a temporary camping ground (Brunton & Caton-Thompson 1928:74; Wengrow 2006:63).

To reiterate, the terms settlement or villages as applied by several scholars to the Neolithic habitation sites along the Nile Valley is misleading as no evidence for permanent dwelling or organised sedentary life has been found (Wengrow 2006:63). Karl Butzer (1976:14) is of the opinion that 'the "desert savannah" vegetation, which must be assumed for all but the core of the Libyan Desert, was suitable for modest seasonal exploitation by herdsman from the Nile Valley or nomadic pastoralism by small, desert-based groups'.

Midant-Reynes (2002:160) describes the Badarian as agriculturalists, probably pastoralists and certainly fishers and hunters. She based her opinion on the frequency of sickles among the tools used. Brunton (1928:6) was of the opinion that the grain from the Badarian sites were probably pulled out and thrashed as sickle-flints were not found.

There is therefore very little evidence, if any at all, that cereal cultivation was practiced on any economic scale in Egypt prior to the so-called Nagada I (4th millennium BC) period (Wengrow 2006:62).

The two indigenous plant domesticates found in the Sahel-Sudanese belt is *Sorghum* sp. and *Pennisetum* sp. The latter is called millet and although *Sorghum* is a tropical summer crop and expected to have grown north of The Tropic of Cancer, seeds could have found their way north to the Badari region. *Pennisetum* is less known and Ethiopia has been suggested as its centre of domestication. This millet could also have found its way to Upper Egypt (Mohammed-Ali 1984:68).

As the type of grain seeds found at Badari is inconclusive the above mentioned grasses could provide the answer. It therefore again strengthens the argument that the Badarian people did necessarily have contact with south-west Asia.

The identification of wild from domesticated animal species is more difficult than cereals in the archaeological record. The three species under consideration is *Bos*, *Capra* and *Ovis*. The wild ancestors of the goat (*Capra*) and sheep (*Ovis*) is believed to be indigenous to the mountains of south-west Asia. If they are found in North Africa both goat and sheep had to therefore come from south-west Asia and the only route possible was across the Sinai. In contrast to the above species, *Bos* sp was found over the whole of Africa north of the savannah during the Pleistocene. It had been suggested that cattle migrated from Southern Europe and the Mediterranean islands, but no archaeological record had been found to support this theory. During the Neolithic no common cultural trait between North Africa and Southern Europe existed. One must therefore stand by the evidence from the Sahara that argues for a local domestication of cattle before the 5th millennium BC (Mohammed-Ali 1984:70).

As the remains of cattle found at Badari are inconclusive, it should be quite clear that it is possible that they are of the local species and definitely not from Southern Europe.

To substantiate the possibility that the Badarian culture is the first known agricultural tradition in Upper Egypt, Friedman (1994:20) reports that layers of sheep/goat droppings 20-30 cm thick occurs in some settlements and refers to Trigger (1983:29) for this. This is important and should prove beyond doubt that a good number of sheep/goats were present. However, Trigger does not mention any sheep/goat droppings in the reference given apart from the repeated vague references to possible cultivation and animal husbandry. No mention of this could be found in any other literature on the Badarian. This very same fact is reiterated by Wenke (1991:137) without any definitive proof.¹¹⁶

It has been posited that the hunting and gathering in the Nile Valley was of such a potential that the people, although possibly aware of agricultural and pastoral activities at first had no incentive to give up their way of life. By the 4th millennium BC the Badarian falls under the same set of conditions, and although they excelled in pottery and even started to manufacture small simple metal tools, they still had no real propensity to exert themselves to the activities of agriculture (Wenke 1980:473).

Therefore, there is no evidence that the Badarian had herds of cattle, sheep or goats and if they had some domesticates it does not appear clear-cut in the archaeological record of the known Badarian sites. Again, based on dubious evidence the Badarian are considered to be the first agricultural culture dating to approximately 4400–4000 BC. With the associated lithics, pottery, and other artefacts making up the Badarian, it is considered to be the first defined unit in the predynastic cultural sequence that shows continuity with dynastic Egypt (Keita 2005:193). In fact, little evidence for Badarian agriculture exists (Anderson 1992:54).

Several attempts were made to discuss the skeletal remains, especially cranial measurements in order to determine possible source areas of migration into the Nile

¹¹⁶ Lobban, Jr (1994:61) quotes: 'At Hemamieh, near Badari, in Upper Egypt in about 4000-4500 BC, sedentary Badarians with pottery and emmer wheat agriculture also had domesticated pigs, sheep, goats and cattle'. This is again a misconception as no record of this exists in the excavation reports from Hemamieh. The ox burial reported for Hemamieh is scanty and was confined to the region of the old Kingdom burials (Brunton & Caton-Thompson 1928:91). It is clear that most authors assign agricultural practices to the Badarian culture, but that they in fact should be assigned to later stages although they are from the same cemetery or site.

Valley (Morant 1925; Stoessiger 1927; Petrie 1928; Morant 1935; Berry, Berry & Ucko 1967; Strouhal 1971; Baumgartel 1980; Keita 2005; Keita & Boyce 2008).

Fifty-nine crania were taken from the Badari region during the 1924-25 excavations and sent to England, and placed at the disposal of the Biometric Laboratory in London. A complete set of measurements were taken and an attempt was made to compare the results to other available data from Egypt and elsewhere (Stoessiger 1927:110).

The craniology of Ancient Egypt had been studied in great detail, probably more so than any other culture. It has also produced the most varied of theories as regarding the origin of the Egyptians (Morant 1925:1). Initially the people of Early Predynastic Egypt were divided into two distinct races of man living in Egypt, Upper Egypt and Lower Egypt types (Stoessiger 1927:116).

Flinders Petrie concluded that 'it is to Palestine and Syria that we must look for any traces of the earlier history of the Badarians' (Brunton & Caton-Thompson 1928:68).

Similarly, comparisons concluded that the Badarian race does not resemble the Mediterranean or any Negro type outside of Egypt, but more closely with the primitive Indian, the Dravidian and the Veddah (Stoessiger 1927:147).

In a chapter¹¹⁷ dedicated to a discussion on the Badari skulls by GM Morant (1935), he found that the Badarian type resembles the other Predynastic Egyptian series available, but with a closer affinity to the early Predynastic series rather than the late Predynastic series. In his opinion the Egyptian type changed over the course of time with it losing more of its Negroid features continuing throughout the whole of the dynastic period and later Ptolemaic and Roman times. With the latest Egyptian types differing quite markedly from the Badarian in being less Negroid. He also considers some resemblance with Sardinian types but none from other European areas. Mention is made of possible Indian connections, but as with the Negro connections a large part is

¹¹⁷ Brunton, G, with a chapter by GM Morant.1937. *Mostagedda and the Tasian culture*. Bernard Quarich: London.

missing. The Negro connection implies that the Badarian is somewhat connected to the south, but this is very much an assumption and inconclusive (Brunton 1937:63). Two craniological series of the Badarian culture were analysed, the first series excavated by the British School of Archaeology in 1924–5 and the second series in 1928–30. Both series were found to be morphologically close representing a basically identical population. Later analysis on 117 skulls (53 skulls in Cambridge and 64 skulls from Cairo) showed that 15 were found to be markedly Europoid, 9 Mediterranean, 6 North African Cromagnon, 8 Negroid being close to the Negroid types occurring in East Africa, and the majority of 94 skulls showed mixed Europoid-Negroid features with some overweight to the Europoid side (Strouhal 1971:5).

It is still not clear when Neolithic farmers? settled in the Nile Valley or their specific origin. Some scholars believe a date of the 6th millennium is the most likely with a likely source from the eastern Mediterranean. Some Negro population of the Sudanic savannah belt probably moved north into the Sahara latitudes with some groups penetrating down the Nile as far as Upper Egypt. This could account for the Negroid and Europoid biological contacts which appears some 1000 to 1500 years later in the Badarian skeletons (Strouhal 1971:6). There can be little doubt that the people of the Badarian are of a mixed origin with some having a fine, and some having a heavily built skull (Baumgartel 1980:473).

It appears if considerable cultural affinities existed among the riverine Neolithic populations from Central Sudan all the way north into the Badarian during the 5th millennium BC. This cultural uniformity disappeared in the 4th millennium BC during the Nagada periods. This period also saw the rise of sedentary societies and cereal cultivation transforming the cultural life in the Nile Valley to a marked degree. There is strong evidence for long-distance exchange during the Neolithic period between Egypt and middle Nile areas. Ideas and artefacts were moving, such as beads, polished stone axes and mace heads. During the 4th millennium BC increased contact and trade were evident between Upper Egypt and northern Nubia (Edwards 2007:217).

In determining cultural regional development in Ancient Egypt the scholar is confronted with the analysis of archaeological artefacts as the main source of evidence. The value

of the artefacts in terms of determining socio-economic systems of the early Predynastic is very much dependent on impeccable excavation procedures, reports and curation.

In Upper Egypt Predynastic villages settled along the river in alluvial lands on elevated hills, or deeper on raised portions of the low desert, or into the larger wadis to the area where the limits of cultivation were situated. During this period the Sahara borders and highlands valleys of the Red Sea hills were greened and fit for cultivation, whereas the bottomlands placed the larger valleys within easy reach of the river's food and transport resources. The sites at Hierakonpolis and El-Badari were spread out and shallow resulting that no structural remains are to be found. This is one of the main reasons that information on settlement patterns is seriously lacking. The lack of adequately excavated settlement sites severely hampers the reconstruction of the relative population density of the different regions in Upper Egypt to assess their impact on the development of Egyptian civilisation. Most of the Predynastic excavation efforts were placed on recovering objects from the cemeteries, and without the dedicated efforts by Brunton and Caton-Thompson our knowledge of the Badarian would have been extremely limited (Hoffman 1990:149).

The presence of objects deemed to be Badarian in several others sites does not necessarily mean that the Badarian culture was present at these sites. Previous scholars lamented the fact that poor publication obscured the fact that a number of areas, identified as Badarian outside the core area, were not incorporated into the chronological placement of the Badarian (Friedman 1994:356). I do not agree with this statement and must re-iterate that finding the odd rippled potsherd, or single slate palette at a distant site does not constitute a Badarian presence per se in the region. Apart from the ivory, shell, certain bead materials and copper, not many foreign imports were recovered from the Badarian cemeteries or village areas. The imports of raw materials are problematic and to trace them is very difficult. This is especially true of organic materials. At a glance the items found at Badari point to the four directions, north, south, east and west and it may be possible that there was trade in items such as ostrich feathers, skins, and other exotic materials. This is also true of technological imports and that is why black-topped pottery from the south is common, wavy-line pottery from other parts of the Sahara and Africa could have found its way into the

Upper Nile Valley. The lack or scarcity of perishable goods found in the Badari area could point to trade in a limited scale (Rizkana & Seeher 1989:77).

Finally, I would like to remove the Badarian culture from the sequence of Predynastic cultures and place it in a position outside of the in-line development of Nile cultures that followed on to further advanced phases until reaching the Dynastic era of Ancient Egypt. See Table 8.3 for a proposed revised sequence for the predynastic phases of Ancient Egypt. In this proposal the Badarian is removed and the term First Phase will include the Amratian (Nagada I), and the Gerzean (Nagada II) will fall under the Late Phase. The Semainian (Nagada III) or proto-dynasty should be considered as the Final Phase of the Predynastic sequence. The subsections as described by Kaiser will fall away.¹¹⁸ Given the resources at our disposal of the Badarian at this time, it is clear to me that the Badarian group of people that settled, albeit seasonally, on the east bank of the Nile between Badari and Matmar, consisted of groups from the adjoining desert areas and developed a unique way of life. Their stone tool industry did not progress into the Amratian, neither their pottery designs. It appears that they flourished on a semi-sedentary lifestyle, contemporary to the Amratian and post-Neolithic peoples without developing further.¹¹⁹ They quite possibly were assimilated into the later Predynastic phases but there is no real evidence of this.

One can reasonably assume that population movement into the Nile Valley took place over a long protracted period of over a millennium and undertaken by small groups or even individuals (Hassan 1986:71).

The influx of people from Shamarkian Neolithic, Neolithic of Nabta Playa, between the Fayum Neolithic and the Great Sand Sea, and between the Kharga Neolithic and the Predynastic of Nagada would have led to marked differences in the cultural landscapes along the Nile. This we can see in the archaeological record, post Badarian. We can

¹¹⁸ Kaiser based his revised sequence dating on cemetery 14/1500 at Armant excavated by Mond and Meyers (1937) in the 1930s. He confirmed the three Nagada phases, but refined them into 11 subphases or *Stufen*. The problem is that Kaiser's sequence dating is based on a single site where the local sequence varies, but it does not address regional or temporal differences (Friedman 1994:12; Midant-Reynes 2002:259)

¹¹⁹ Given the extremely low estimates for the settlement occupations, the possibility of temporary campsites appears to be the best scenario of the Badarian peoples (see paragraph 8.3).

see this in the shared similarities between artefact assemblages, such as pottery, bifacial lithic artefacts, arrowheads and eggshell/beads (Hassan 1986:71).

Following on the Badarian, the Amratian (Nagada I) unit is considered the undisputed beginning of the Egyptian predynastic cultures, which continues to the Gerzean (Nagada II) period and on to the Dynastic times of ancient Egypt.

Where the Badarian was restricted to a relatively small area in the Badari-Mostagedda-Matmar region, the Amratian spanned a very large area, from Matmar in the north to Wadi Kubbaniya and Khor Bahan in the south.¹²⁰ Many thousands of graves were discovered by Petrie and Quibell with two large areas of settlement – Nagada South and Nagada North (Midant-Reynes 2002:170).¹²¹

With the distinction between the Neolithic and the Predynastic somewhat artificial, it therefore seems more reasonable to place the Badarian in the terminal Neolithic.¹²²

I would therefore propose that we dispense with the Badarian as being the first Predynastic or agrarian culture in the Nile Valley, and place it in the terminal phase of the Neolithic cultures of the Western Desert of Egypt.

¹²⁰ It is important to note that the Predynastic settlements and cemeteries in the Badari district are of a very small scale and scattered along spurs from Qau el-Kebir in the south to Matmar in the north (approx. 60 km). This is very limited in comparison to the Predynastic culture found at several major sites in Upper Egypt (Bard 1987:87).

¹²¹ There are some scholars that even consider the Badarian, Amratian and Gerzean to be contemporaneous, at least in part dating from ca. 6000 B.P. to 5600 B.P. (Hassan 1980:439).

¹²² During an excursion to the Badari district in 1989 by Holmes and Friedman (1989), it was found that no sites were found belonging exclusively to the Amratian. This suggests that in the Badari district the Badarian is not a cultural unit which entirely preceded the Amratian (Bard 1994:276).

Table 8.3 Proposed revised sequence for the Predynastic phases

Petrie	Kaiser	Hassan	Proposed
Badarian	Badarian	Early Predynastic	Terminal
			Neolithic
Amratian	Nagada I	Middle Predynastic	First phase
Gerzean	Nagada II	Late Predynastic	Late phase
Semainian	Nagada III	Terminal Predynastic	Final phase

Given the likelihood of no Badarian sites being discovered under the alluvium along the Nile any reconstruction of human habitat, and subsequent economic and social activities can only be considered by analogy with similar climatic regions today. Unfortunately, the paucity of data precludes the transfer of knowledge on behavioural and cognitive processes, and the focus is still on similarities and differences among lithic artefacts. What still eludes us is the demographic, linguistic, ethnic and societal make-up of hunter-gatherers and pastoral nomads (Haaland 1995:157; Hassan 1986:73).

The fields of ethno-archaeology and experimental research can be valuable in restructuring pre-historical cultures, but to date they have been focussed mainly on material culture and tangible objects.

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