



BURIALS FROM WADI MUDAYFA'AT AND WADI ABU KHASHARIF, SOUTHERN JORDAN - RESULTS OF A SURVEY AND SALVAGE EXCAVATIONS*

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ABSTRACT

This paper presents the preliminary results of a survey and excavations conducted in 2006 on small cemeteries at Wadi Mudayfa'at and Wadi Abu Khasharif, which are located c. 30 km southeast of the village of al-Hussayniah on the Desert Highway in southern Jordan. In total five graves were excavated. Preservation was excellent including human and other organic materials (hair, leather, textiles). Preliminary scientific dating points to the period between the second and fourth centuries AD. The research questions discussed are: - the date, the relationship between the cemeteries and surrounding sites, the significance of this area, the identity of the groups buried, the burial techniques and practices adopted and what influenced them and the funerary gifts included with the dead.

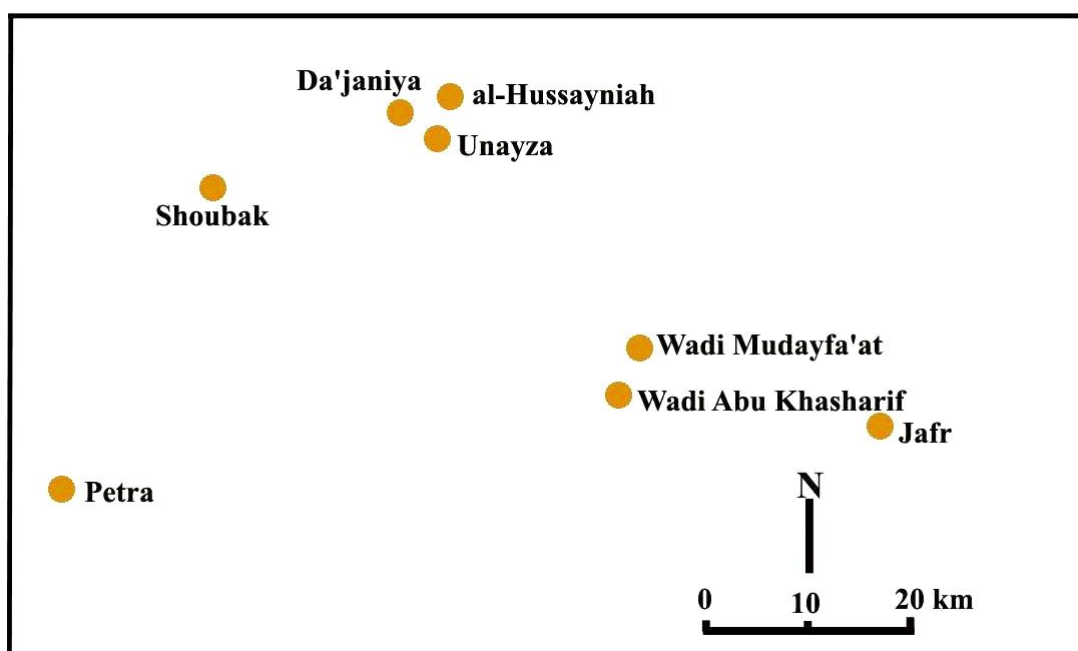
KEYWORDS: Burials, burial customs, Roman Jordan, Nabataeans

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INTRODUCTION

Towards the end of 2005 the inspector of Ma'an Antiquities was informed that there had been illegal diggings conducted in Wadi Mudayfa'at and Wadi Abu Khasharif by treasure hunters or grave robbers. These two *wadis* are located approximately 30 km south-east of al-Hussayniah village in southern Jordan (see Map 1). According to

eyewitnesses, remnants of disturbed bones taken out of the excavated graves had been seen on the surface. Accordingly, the inspector of Ma'an Antiquities, Hani Falahat, went to the site and found some robber pits, which had exposed graves. Partly excavated pits, excavated and empty graves as well as refilled pits were noted and recorded.



Map 1 The location of Wadi Mudayfa'at and Wadi Abu Khasharif

In the wake of finds uncovered by treasure hunters and in light of the eyewitnesses' testimony, a more intensive investigation of the cemeteries' area, which covers *ca* 1.5 square km, was begun by Hani Falahat under the auspices of the Department of Antiquities of Jordan. The intention was to get more details about the graves and the surrounding areas. The work comprised two main facets: a) surface survey to search out and plot the locations of any ancient site and structures and to study

the surface remains; b) excavations, in an attempt to determine the date and the cultural context of the burials. The results of this first season of survey and excavations are presented below.

A. SURVEY RESULTS

An intensive surface reconnaissance was conducted at the cemeteries' areas in Wadi Mudayfa'at and covered a circle of about 5 km in diameter. This surveyed area is remote and the terrain rugged. The ground is generally level

but rises gradually up to 910 m above sea level. The sediments are poor and the topography is mostly stony desert. The climate is typically semi-arid. Although, there are no perennial water sources there is rainfall but it varies greatly from year to year. Droughts are frequent and when it does rain floods can come and disappear suddenly. The surrounding wadis usually collect water from the nearby areas; these run near the newly discovered cemeteries. The current climate was seemingly similar to that of the second and third centuries AD, though recent studies have shown that there was a relatively short humid period between the second and third century and after that the climate became arid (Bruins 1994:307-308). Nowadays the region is totally uninhabited.

It has been noted by the excavator that the closest natural perennial water supply point is located approximately 12 km to the southeast in the al-Jafr area. Birket Da'janiya is the second closest water supply point located approximately 30 km from the cemeteries area. Of course, it is manmade but the large reservoir certainly goes back at least to the Roman fort there (c. AD 300) (Kennedy 2004: 169-172).

No remains of pottery, inscriptions and other archaeological materials have been found within the area surveyed. Additionally, no remains of human settlements, habitation or daily life activities have been observed, and there was no evidence above the ground that indicate that there are buried archaeological

remains underneath. There is no sign or gravestones on the surface, or that the graveyard had any sort of boundary marking. The gathered evidence from the survey therefore suggests that these cemeteries were not associated with a settled population, but possible one or several pastoral nomadic groups who left little other marks on the archaeological landscape.

B. EXCAVATION RESULTS

An initial season of rescue excavation was conducted by the Inspector of Antiquities Hani Falahat in 2006. We initially focused on the area where the eyewitness informants claimed to have seen one of the "mummified burials", in an area named Mudayfa'at 1 (MD 1).

Remnants of dyed long hair, finger bones, leather fragments with stitches and remains of textiles had been noticed. This led us to carrying out a salvage excavation in the same area around this apparent grave. Archaeological excavations have been carried out in three main areas in Wadi Mudayfa'at (MD A, B and C) (see Plate 1) and one area in Wadi Abu Khasharif (WAK A), areas that also sustained robbing activities. These excavations, though limited in scope, have produced significant results for the study of burial practices during the second and third centuries AD. in the southern part of Jordan. In total five graves were excavated (Table 1).

Table 1 Summarizing the excavated graves (dates are based on Perry Megan analysis (Perry, et al forthc.)

Burial number	Sex and age	Orientation	Textiles & leather	Grave goods
MD A 1	Robbed out, not available, but most likely for a female because there were remains of long, and dyed black human hair	East-West	Available	Available
MD A 2	Male, c. 7 years old	East-West lying on its right side, head towards the west facing north	Available	Not available
MD B 1	Male, possibly 50+ years old	East-West lying on its right side, head facing north south	Available	Not available
MD C 1	Female, 25-29 years old	East-West lying on its right side in a foetal position	Available	Not available
WAK A 1	Female, 16-18 years old	Disturbed grave, bones were placed in a large pile in the eastern half of the grave, skull missing	Available	Available



Plate 1. The Location of the Mudayfa'at Burials

MUDAYFA'AT BURIALS (MD)

1. Burial MD A1 (UTM 3364584 Elevation 906 m asl)

One grave in this area has been uncovered but unfortunately the tomb was disturbed, probably through illicit activities. The ovoid-shaped burial chamber measures approximately 1.70 m in length and 1.10 m wide at its centre, and is covered by sand and gravel fill. The 0.35 m deep burial chamber did not contain any architectural features such as a cist, although it likely was covered with capstones. The burial chamber is oriented east-west, narrow at the west end where the head lay and wide at the east to hold the bent position of the legs.

Finds in the grave included small leather fragments that indicate proficiency in leather working. Some pieces of leather showed repair and pieces had been stitched together using leather string to create the large leather burial "shroud". Additionally, fragments of coarse textiles, two fragments of fine woven textile decorated with small coloured check (Plate 2), remains of long, dyed and black human hair have been recovered from this grave.

The director of the excavation met one of the excavators (grave robbers) of the pit who gave him beads found in this grave. The discovered corpse has been sent to the Yarmouk University Anthropological labs for further scientific analysis.



Plate 2. Some of the textiles discovered in Burial MD A1

Burial MD A2 (UTM 3364584, Elevation 904 asl)

This grave is oriented east-west and the skull is facing to the south contradicting the eyewitness' report said that

the original orientation was facing north - not to the south. The individual was approximately seven years old when he or she died and skeletal analysis has indicated that the child "displayed some evidence of active infection and inter-

mittent childhood stress" (Perry *et al.* forthcoming.). The corpse was still covered with naturally mummified soft tissue. Remnants of skin are still covering some parts of the skull in addition to hair braids (see [Plate 3](#)). Remains of leather have been uncovered which confirms



Plate 3: Skull uncovered in MD A2 Burial

that treated leather was used to cover the capstones to protect the corpse below ([Plate 4](#)). Finds in this grave include also fragments of fine leather, remains of fine stitched fragments as well as fragments of fine white cloth.



Plate 4: Capstones covering MD A2 Burial

2. MD B BURIALS

MD B1 (UTM 3364488. Elevation 889 m asl)

The MD B Cemetery is located west of MD A and it is typically similar to it. Several pits were dug as bone fragments have been noticed scattering on the surface. The burial chamber, which is oriented east-west, is for a male, possibly 50+ years old ([Plate 5](#)) (Perry *et al.* forthcoming.), found laying on his right side and the corpse contained naturally mummified soft tissues. Linen is still covering the face of the skull.

It is worth noting that one of the guides and eyewitnesses informed the inspector that he had seen a skeleton of what may be a horse¹ buried in the same cemetery close to the MD B1 burial, and remnants of this skeleton have been observed and documented by the archaeological team ([Plate 6](#)). Further investiga-

tions in this pit have revealed remains for a human burial also. It is worth mentioning that the size of this pit is bigger than other graves excavated in the same area and the capstones used are a bit larger. This indicates that the burial was for a man and his horse. The preservation of this animal's skeleton and skin, although it was not treated, might be related to the nature of the soil which may contain certain preservatives that helped and maintained its preservation. The horse remains may be significant in showing some sort of connection with the practice of the nomadic pastoralists in this area, who were most likely descendants from the Nabataean Arabs. The Al-Khazna courtyard excavation at Petra has revealed animal bones inside the tombs discovered there and this includes bones of slaughtered and burnt rams and camels (Farajat and Nawafleh 2005: 392).



Plate 5: MD B1 Burial

A possible interpretation, therefore, is that this horse was buried intentionally by a nomadic descendant of the Nabataeans. Archaeological fieldwork conducted in Nabataea does not provide enough evidence for the practice of burying animals. The only relevant clue known so far is found in a Nabataean inscription from Wadi Rum which refers to a camel burial (Hayajneh 2006). Arabia, on the other hand, provides further evidence for Pre-Islamic animal burial practices and these include camel, donkey and snake burials (Hayajneh 2006; Potts 2007). The custom of burying horsesⁱⁱ was attested also in Arabia whose inhabitants were particularly fond of horses. A grave containing the skeleton of a horse placed alongside the dead man (his owner) was found at Meleiha in the United Arab Emirates (Ben Seray 2005:110 ff). This reflects the high rank of this animal in Arabia between the second century BC and the second century AD and confirms its religious and mythological significance.



Plate 6: Some ribs of the buried horse

MD C1 (UTM 3364488, Elevation 889 m asl)

After digging 1.0 m, undressed capstones were found measuring 0.50-0.60 m arranged beside each other, with small stones and gravels used to fill the gaps in between. Remains of a reddish-brown leather cover have been noticed directly above the capstones. It seems that this grave, which is oriented east-west, was undisturbed and the remains are still *in situ* (Plate 8). The whole skeleton is still well preserved. The corpse is lying on its right side in a foetal position. Around the corpse there are remnants of a relatively fine white

cloth, a dark yellowish coarse cloth and small stitched leather fragments (**Plate 7**). There were no grave goods with the corpse. This burial (MDC1) is of a 25-29 year old individual, probably a female, with little soft tissue preservation except for the scalp tissue with ca. 0.35 m long black wavy hair (**Plate 8**). Only one piece of dark textile was found, and no leather goods.



Plate 7: Stitched leather discovered in MD B2



Plate 8: Hair of the buried female uncovered in MD C 1 Burial in Mudayfa'at

Wadi Abu Khasharif (WAK A)

Wadi Abu Khasharif is located approximately 4 km south of the Mudayfa'at cemeteries. This cemetery is located beside the valley which runs around it from south and west. It is situated approximately 3 km south-west of the main road that connects al-

Hussayniah on the Desert Highway and al-Jafr east of Maan. Quick surface reconnaissance in the vicinity of the cemetery has indicated that there were no habitation, human settlements, or any evidence for human occupation. Additionally, there was no evidence on the surface that indicate that there are buried archaeological remains underneath. There were traces of about eleven excavated pits in this cemetery dug by robbers.

(WAK A) (UTM 3362100, Elevation 910 m asl)

Excavation started at a randomly-selected and already disturbed pit (Pit 9), and after digging for 0.90 m, a modern plastic cover appeared, placed there by the robbers. Beneath the modern plastic cover were fragments of leather, unidentified cloth, and the remains of a human skeleton. The burial chamber, which is oriented east-west, is 1.10 m long, and its width is 0.50 m and 0.50 m in depth. The grave depth from its bottom to the surface of the ground is 1.70 m. The grave has been recently disturbed and robbed out but all the bones had been collected and deposited in the eastern half of the grave by the tomb robbers. The placement of the bones themselves in a large pile in the eastern half of the tomb does not indicate secondary burial, but rather the bones were gathered in this place by the robbers, who systematically searched through bone materials for grave goods. This individual was between 16-18 when he or she died (Perry *et al.* forthc.).

Grave goods were discovered in this burial including small green beads and fragments of string that held them together. Near the legs, larger bead pieces were found. Additionally fragment of

decorated bone bracelet and metal wire about 3 cm long, probably used as a bracelet were found. This tomb was for a female and contains her jewelry.

Another pit was excavated thereafter. It typically parallels the first grave discovered at Wadi Abu Khasharif but it is a bit smaller because it was for a child. Its dimensions are 0.80 x 0.40 m, and oriented north-east south-west. It was completely robbed out. Finally, more pits have been excavated by the team and nothing has been discovered.

WAK B (UTM 3362188, Elevation 904 m asl,)

This area overlooks WAK A and is located approximately 300 m from it. There are some differences between the surface of this area and that of area A because it has been recently used by the Bedouins who disturbed the surface. Two pits were excavated by the team but nothing was discovered.

INTERPRETATIONS OF THE EXCAVATED GRAVES AND THEIR SURROUNDING AREAS

Attempts to answer a question in this article have raised several new questions and one of which is: to which ethnic group these burials belong? Before answering this question, the discovery areas should be studied in light of the available historical sources. Trajan annexed Nabataea in AD 106 and the *Legio III Cyrenaica* moved from north Egypt to Petra (Bowersock 1983: 81). Consequently, all the territories that belonged to the Nabataean Kingdom formed the new Roman Province of Arabia. Unfortunately, Roman maps do not delineate the location of the Roman provincial boundaries, but it seems and as archaeology reveals, that Wadi al-

Sirhan in the eastern Jordanian desert formed the eastern border but it seems reasonable to assume that the extent of the Roman Province was identical to that of the Nabataean Kingdom plus three of the cities of the Decapolis in the north (Gerasa, Adraha and Philadephia) (Bowersock 1983: 157). Bayir, therefore, was most likely one of the settlements that witnessed Roman occupation. During the Nabataean period, Bayir which is located approximately 50 km east of the newly discovered cemeteries, was one of the main stations located along the caravan route that merchants used to pass by when they travel between northern Arabia, Syria, Petra and vice versa (Glueck 1944: 7-17). It is located west of Wadi al-Sirhan which formed a passage for the caravans to go northward to Bostra and eastward to Babylonia and the Gulf and was furnished with water wells (Glueck 1944: 7-17; Winnett and Reed 1970: 56). Bayir was an important Nabataean and Roman caravan station which controlled commercial caravans as well as the movements of the Arab nomad tribes. Evidence for Nabataean and Roman occupation is represented by the quantities of Nabataean/ Roman pottery, the water reservoir and the Safaitic, Thamudic, Nabataean, Greek and even one Latin inscriptions discovered in this site (Calzini Gysens 1993; Calzini Gysens and Al-Khraysheh 1995: 355-364). A huge water reservoir was built, perhaps by Rome to provide for their army working in this eastern desert; perhaps earlier by the Nabataeans. The Roman army's existence in this area is very uncertain – the fort is badly damaged and undated and neither pottery nor a single Latin inscription are decisive. Nevertheless, a Roman military presence

here for at least a short time would be expected to control a major route post and nomadic movement.

BURIALS' IDENTITY

In an attempt to understand the nature and cultural context from which these burial emerged, it was necessary to thoroughly investigate the surrounding areas as well as their occupational history through the ages. As noted above, our preliminary investigations found no sign of human settlement in the cemeteries area or in their immediate surrounding vicinities.

The Roman fort at Da'janiya is located about 4 km west of al-Hussayniah and about 28 km from Wadi Mudayfa'at and Wadi Abu Khasharif. This *castellum* forms one of the series of the Roman forts built along the desert caravan road east of the *Via Nova Traiana*ⁱⁱⁱ, constructed to achieve protection against incursions launched by desert tribes (for more details see Graf 1978; Parker 1986: 93-94). It seems reasonable to assume that Wadi Abu Khasharif and Mudayfa'at were part of the controlled responsibilities of the Roman fort at Da'janiya, because of the short distance between them. This assumption is based also on the date of the discovered burials which is contemporary to the Roman occupation in this fort (c. AD 300: Kennedy 2004: 169-172). This area was a part of the Nabataean Kingdom before its annexation by the Romans in AD 106.

Qal'at Unayza^{iv} is located approximately 8 km south-east of Da'janiya. Archaeological fieldwork in the fort has uncovered traces of a larger rectilinear structure of which the present building is a remodelled part and pottery read-

ings suggest a possible Roman date (Kennedy 2004: 174).

Evidence of Roman troops of the *Legio III Cyrenaica* in Wadi al-Sirhan imply a concern for the traffic along the Wadi which means that this area was considered as a part of the new Province of Arabia, whose governor considered the territory "at least as far as Wadi Sirhan, to be within his area of responsibilities and jurisdiction" (Bowersock 1983: 99). Septimius Severus (AD 193-211) was concerned to strengthen the desert defences, which may have been due to his annexation of Mesopotamia, and his reign witnessed notable activities along the Wadi al-Sirhan area (Bowersock 1983: 158). Additionally, other parts of the new province were garrisoned and fortified to protect the Roman interests and to face the Bedouin invasions. Many studies have recently dealt with the nomadic threat that affected the settled societies during the Nabataean and Roman periods (Negev 1969: 14; Parker 1986: 131; Bowersock 1971: 227). Parker, for example, says that as soon as the Nabataeans sedenterized, their army and military fortifications were intended predominantly to control the nomadic tribes who roamed through their kingdom (1986: 118). It seems that these rebelling nomadic tribes, called "Saracens", represented a considerable threat to the security of the eastern frontiers during the late second and early third centuries (Graf 1978: 12) (Map 2).

Despite the relatively large amount of research published about the Saracens and the Roman frontiers, nothing tangible is known to us archaeologically. It might be interesting to study the newly discovered materials and try to establish connections between the available historical chronicles that shed

light on the Saracens and the archaeological evidence. A brief survey of the historical accounts will be viewed and

discussed below and compared then with these discoveries.



Map 2: The Roman Province of Arabia and the Eastern Frontier (Based on Graf 1978:2).

Some Roman and Byzantine historians and theologians refer to an ethnic group named "Saracens", who were threatening the Roman Province of

Arabia. These are described always as violent and warrior-like people and appear as enemies of Rome during the third century (Retso 2003: 512).

Stephanus of Byzantium^v mentions that *Saraka* is a region beyond the *Nabatoioi* whose dwellers are the *Sarakenoi* (Stephanus 566:3-4). They are mentioned also by Eusebius of Caesarea^{vi} who refers to Kedar as the "region of the *Sarakenoi*" (Onomasticon 60:7).

Epiphanius^{vii} in his *Panarion* said that the Manichaean Scythianus originated from "the *Sarakenia* and was raised in the borderland of Palestine, that is, in Arabia" (66:1:7).

Finally, Ammianus Marcellinus^{viii} provides the best account of Late Roman history. A comprehensive account on the Saracens is found in Ammianus' books, which refer to a campaign undertaken by the Roman emperor Julian, who was his friend, in AD 363. Ammianus mentions that the kinglet of the tribes of Saraceni had gone to Julian offering him their service as well as a golden crown (Ammianus 23.3.8). He provides the following account on the Saracens:-

"Among the tribes whose original dwelling extends from the Assyrians to the cataracts of the Nile and the frontiers of Blemmyae, all are warriors of equal rank, half nude, clad in dyed cloaks as far as the lions, ranging widely with the help of swift horses and slender camels in time of peace or of disorder. No man ever grasps a plough-handle or cultivates a tree, none seeks living by tilling the soil, but they rove continually over wide and extensive tracts without a home, without fixed abodes or laws; they cannot endure the same sky nor does the sun of a single district ever content them. Their life is always on the move..." (Ammianus 14.4.2).

This account fits what has been discovered in Wadi Abu Khasharif and

Wadi Mudayfa'at - the burials are for nomads whose life was always on the move, wandering widely throughout their lives and lived geographically within the limits of the Saracens' territory. Additionally, they used dyed cloths, swift horses and they did not cultivate trees or till the soil.

These historical chronicles confirm that the cemeteries under discussion are related to the Saracens' ethnic group. There is an extensive construction of Roman fortifications and a notable strengthening of the defensive system during the 2nd-3rd centuries AD (See Map 2) (Graf 1978: 13). The notable density of Roman fortifications is concentrated west of the cemeteries' area and none is located east of them. This might be attributed to the difficult climatic conditions of this region, which did not encourage the Romans to establish military defensive installations in the eastern desert. This demonstrates that the cemeteries' area formed the western part of the Saracen homeland, even though the Roman control went eastward towards Wadi al-Sirhan.

Dating criteria

Two samples were taken by Megan Perry from East Carolina State University for C14 analysis. Scientific analysis conducted by Geochron Laboratories of Cambridge, Massachusetts (U.S.A.), provided dates of 131-259 AD (calibrated) for MD B 1 Burial and 210-384 AD (calibrated) for MD C 1 Burial and those discovered in Wadi Abu Khasharif are seemingly dated also to the same period due to similarities between the discovered materials and the burial customs adopted in both cemeteries (Perry *et al.* 2007:540-542). These individuals were likely part of a nomadic

community which dwelt in this area for about four centuries.

It has been suggested by the excavators before taking the C-14 samples that these graves are dated to the period between the first and fourth centuries AD, depending on the general form of the grave, the burial customs as well as the discovered grave goods. Comparative study with other Nabataean burials uncovered in some regions in Nabataea is necessary to broaden our understanding of similar contemporary practices, since Carbon-14 analysis suggest contemporary dating. It is useful therefore to mention the main Nabataean burial practices known so far:-

Single burial where the grave may contain some constructed features such as a coffin, a cist, or capstones (Zayadine 1970: 117-135; Parr 1960: 124-135).

Secondary (multiple) burial. In this case the grave consists normally of more than one burial chamber, the deceased being placed one above the other in a shaft. Some burials were found in fragmentary status due to the nature of such burials (Horsfield and Conway 1938:87-115).

Full or partial cremation (Horsfield and Conway 1938: 87-115)

Nabataean burials were oriented in different positions, the deceased is lying on his back wrapped in stitched and sometimes decorated shroud and in some examples the corpse was placed inside a wooden coffin and grave goods sometimes were included with the dead also (Parr 1960: 124-135).

Wadi Mudayfa'at and Wadi Abu Khasharif graves orientation were East-West. This might reflect a belief associated with the sun, which was widely worshipped among the nomads

and the inhabitants of the Arabian peninsula, the Levant and other parts of the ancient Near East (Ben Seray 2005:100). Strabo in his *Geography* mentions that the Nabataeans "worship the sun, building an altar on the top of the house, and pouring libations on it daily and burning frankincense. (*The Geography* Book XVI, Chapter 4).

To sum up, an intensive comparison between some of the burials discovered in some of the Nabataean sites and those discussed here have shown some close similarities. Interestingly, the date of the discovered Nabataean burials nearly fits the results of the C-14 analysis, which dates the discovered anthropologic remains to the second and third centuries AD. Judging from the burial practices adopted and the grave goods it seems that these burials belong to native inhabitants who dwelt and died in an area that was under the Nabataean control for around four centuries and are dated decades after the annexation of Nabataea and the establishment of the Provincia Arabia and they all belong to pastoral semi-nomadic and movable society.

DEPOSITION AND TREATMENT OF ANTHROPOLOGIC REMAINS

The graves display similar construction techniques, the steps of which are outlined as follows: (see **Plate 9**):-

1. Grave excavators dug the upper part of the ground which is loose soil and easy to go through, and this part is generally wider than the normal size of the grave. At the bottom of this layer the grave chamber is normally dug. The thickness of this loose sediments layer is approximately 1.40-1.50 m

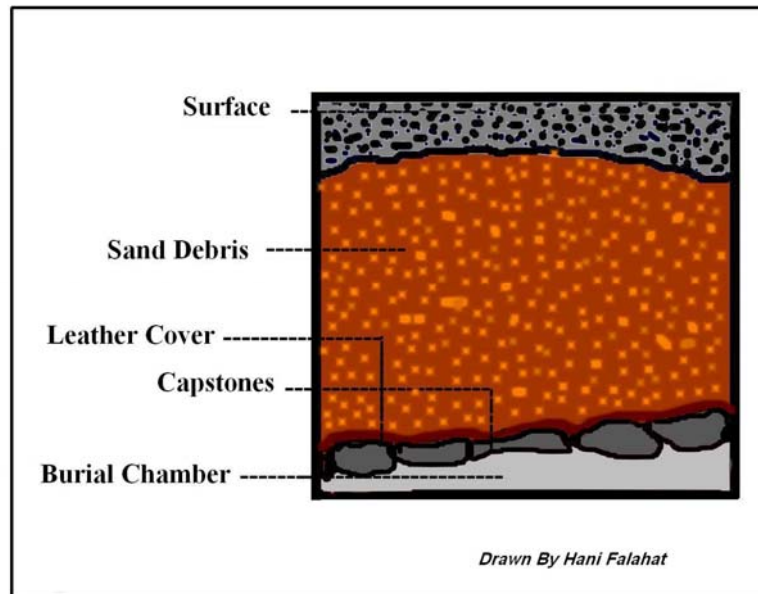


Plate 9: Drawing showing the form of the burial structure

2. At the bottom of the ovoid hole, the loose layer guided them to a hard and well compacted layer where they dug the burial chamber. They used the limited space around to carry the capstones and to carry the dead taking him or her to his final resting place. This was to keep the interment far away from the surface and from the loose sand and this prevents water leakage resulting from rainfall and floods and therefore, protects the interment and preserves it.

3. Before the moment of burial, the corpse was treated as follows:- after his or her death the corpse was wrapped in wool and linen textiles and then placed in "shrouds". The type of textile and linen used indicates advanced weaving technology (**Plate 12**) (The textiles are currently being studied by Hero Granger-Taylor). After placing the corpse in the grave, capstones were

placed to cover it and these were normally covered by treated animal skins (**Plate 10**). This practice was to protect the corpse and to block decomposing bacteria and other organisms from accessing the corpse. Additionally, this might reflect further clues on the belief in the afterlife. Excavations around the burial chambers demonstrated some ritual and cultic burning practices as remains of hearths and ash layers have been observed near most of the discovered chambers (**Plate 11**), and near one of them two fragments of frankincense have been uncovered (**Plate 14**). Similar examples have been discovered in Petra. At the al-Khazna courtyard excavation large hearths have been uncovered in front of the tomb entrances and these have been found full of ash as well as a quantity of burnt incense and myrrh. (Farajat and Nawafleh 2005: 375)



Plate 10: Remnants of leather covering capstones



Plate 11: Remains of a hearth



Plate 12: One of the discovered linen

The corpses discovered were naturally mummified and no material was used to treat the corpse before burying^{ix}. The burial techniques practiced in Wadi Mudayfa'at and Wadi Abu Khasharif cemeteries were practiced also by the Nabataeans as appears from two similar discoveries in Nabataea, which mostly parallel our discoveries in Wadi Mudayfa'at and Wadi Abu Khasharif cemeteries. Fragments of textiles have been discovered at Kh. edh-Dharih in southern Jordan. These small fragments are primarily of linen woven in three different qualities and are thought to be portions of garments (al-Shdaifat 1994: 41-3).

Rescue excavations have been conducted in Khirbet Qazone near the Dead Sea and revealed a cemetery dated to the first and second centuries

AD. The corpses are well preserved due to the dry climate there. Among the finds are tunics, mantles and scarves of wool (Politis 1998: 611-14; Granger-Taylor 2000: 149-161). Granger-Taylor describes these textiles as belonging to the period after AD 106 (2000: 150). Most of the Kh. Qazone textiles are undyed and originally were have been off-white or cream-coloured (Granger-Taylor 2000: 156). Burial goods uncovered here included earrings and bracelets of iron, copper, silver and gold as well as beads (Politis 1998: 611-14).

Archaeological fieldworks at Hegra in northern Arabia uncovered, for example, a corpse wrapped in cloth, laid with out-stretched arms and legs and the Carbon 14 provided a dating of AD 123-313 (al-Talhi 2000: 130).

Doughty's^x visit to Northern Arabia during the 1870s provided further details about the Nabataean tombs at Hegra, the second important Nabataean city. In certain tombs he recorded that he smelt "mummy odour" and "drugs of the embalmers" (1936:212-213). He says:

"In what manner were the dead laid in the grave at el-Hejr [=Madain Saleh]? We have found frankincense or spice-matter, the shreds of winding-cloths, and lappets, as of leathern shrouds, in certain monuments: in the most floors lies only deep sand-drift, the bones are not seen in all; and the chamber floor in a few of them is but plain and bare rock. It is no unlikely that they buried the dead nearly as did the Jews about these times, with odours, and the corpse was swathed in one of several kinds of linen (I find three, finer and grosser webbed, brown-stained and smelling of the drugs of the embalmers) and sewed in some inner leather painted red, and an outer hide, which for the thickness may be goat or else camel-leather, whose welts are seamed with leathern thongs and smeared with asphalt. I saw no mummy flesh, nor hair" (Doughty 1936: 212-213)

It is worth mentioning that the Bedouins used special techniques to tan animal skin for different uses. Nomads used tanning to produce hides and may have used some similar treatment for human bodies after death. We were notified of a tanning smell after the capstone removal. This might correspond with Ammianus' account which refers to the Saracens using "dyed cloaks" (Ammianus 14.4.2). To sum up, these materials were probably used, and are still used nowadays in the southern part of

Jordan by Bedouins, mostly to maintain leather's survival and sustainability^{xi}

BURIAL GOODS

The inclusion of grave goods was widely practiced in the ancient world. This is related to the beliefs that the dead might use these goods in his/her afterlife. It has been argued by some scholars that different grave goods were used to represent specific social persona (Binford 1971)

The discovered cemeteries yielded some funeral gifts, which were limited in quality and quantity and of no great intrinsic value - beads and jewelry. Most of the dead buried in these cemeteries were buried without accompanying artifacts in graves. Two graves only, in Wadi Abu Khasharif and Wadi Mudayfa'at, contained grave goods and those objects that accompany the dead are standardized: beads and simple jewelry of bone and metal and they were all worn by the dead. It seems that animal bone-based artifacts are an intentional component in the discovered burials' assemblage, which are neither rich nor varied. These two graves with grave goods were probably for females; no goods were included in any of the graves for males discovered so far.

The discovered personal jewelry includes two types of beads, small and large which form parts of necklaces and others are anklets, decorated bone bracelets, one metal bracelet (**Plate 13**) as well as a probable frankincense piece (**Plate 14**). The types of the discovered grave goods parallel those uncovered in Nabataean tombs and buildings (Negev 1986: 94; Parr 1960: 134).



Plate 13: Showing jewelry discovered in one of the graves



Plate 14: Frankincense pieces

CONCLUSIONS

The aforementioned discussion gives rise to several general conclusions:

There is no evidence for human occupation in Wadi Mudayfa'at and Wadi Abu Khasharif contemporary with the period that the cemeteries were in use (second through fourth centuries or

even later), which demonstrates that these cemeteries belonged to movable and seasonal nomads. These burials were primary inhumations and are mostly well preserved. Demographically, the discovered burials show men, women and even children. All the discovered burials seem to be those of or-

dinary citizens, and no social distinctions can be made in terms of their types and contents.

Methods of burial were affected by the local environment which was and is still very poor in materials. The use of stones was very limited and restricted to capstones only. It indicates also that the people who lived in this area had experience of complex burial techniques. Use of leather and the location of the burials suggests that they were pastoral nomads, and the use of textiles demonstrates there were trade contacts and activities, and the Nabataeans were so. Additionally, the materials used to construct the graves were taken from the surrounding vicinities. Capstones were taken from the nearby valley which runs beside the cemetery. The environment inside the grave and the treatment of the corpse helped to keep the corpses well preserved in some cases.

The discovered corpses were buried wrapped in stitched and decorated leather and corpses had naturally mummified tissues. Evidence for mummified corpses has been found in

many places in Jordan such as corpses uncovered in Khirbet Qazone near the Dead Sea (Politis 1998) and those burials typically resemble those discovered in Wadi Mudayfa'at and Wadi Abu Khasharif. After placing the corpses in the graves, they are covered by capstones, which prevent the corpse from damage under the weight of earth. This practice is to protect the body even after the departure of the soul and probably to allow it to return to the earth naturally in due course.

Personal objects, such as pieces of non-precious jewelry of the deceased were included with the body, especially with the females. The inclusion of personal effects of the dead may indicate religious, cultural and social aspects and reflect spiritual and material culture.

Burials were mostly placed in the following positions: arms were folded upon the chest, legs were bent and folded up to the chest and the head was pointed toward the west. The burials were mostly made east-west, with the head at the western end of the grave.

RECOMMENDATION

As the archaeological work is still at an early stage, it is recommended that the archaeological fieldworks be expanded in order to reveal more hidden information. This will help to better understanding of the whole cemeteries and other relevant structures. It might be worth defining the location in which these cemeteries were found and searching similar positions.

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FOOTNOTES

- ⁱ Interestingly, Nabataean epigraphy provides some terminology associated with cavalry and horse riding in Nabataea and mentioned names of many persons who are identified as horse-riders and these graffiti are scattered at different places in Nabataea including Northern Arabia, Sinai and Hisma; some of the texts are accompanied with drawings of horses and riders (Graf 1994: 283; Starcky 1971: 158). *Rb frshy'* and *hprk'* are professions attested in Nabataean epigraphy referring to "the head of cavalry" (Cantineau 1978: 216; Starcky 1971: 151-159). Excavations conducted in Nabataea have uncovered horse terracotta figurines and their use is attributed to their capabilities and strength both in transport and war (El-Khoury 2002:15 ff). Finally, there are sculpted figurines depicted on the al-Khasnah façade representing horses which might reflect some aspect of the soul's journey from land to heaven.
- ⁱⁱ Some Islamic resources refer to the custom of worshiping horses in Pre-Islamic Arabia, especially in Bahrain (for more details see Ben Seray 2005:110-112).
- ⁱⁱⁱ *Via Nova Traiana* largely follows the route of the ancient Kings Highway. The *Via Nova* linked Syria with Aqaba on the Red Sea and it was constructed by the Roman Emperor Trajan between AD 112-114.

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- iv An Ottoman fort located on the Pilgrim Route which connects the al-Hasa fort with Ma'an fort. The Hejaz Railway passed via Unayza where a railway station was constructed. It is still known as Unayza Railway Station.
 - v Stephanus of Byzantium wrote an important geographical dictionary entitled *Ethnica*.
 - vi Eusebius of Caesarea (c 263 – 339) became the bishop of Caesarea in Palaestina in AD 314 and he is known as the father of Church history because of his books on the early Christian church.
 - vii Epiphanius (ca. 310–320 – 403) was a Church Father born at Besanduk in Judea.
 - viii Ammianus Marcellinus (c. 330-after 391) is a well-known Roman historian. He was born of a Greek family and he served in the army of Constantius II and fought against the Persians under Julian.
 - ix In antiquity, bitumen was used with other materials to mummify the dead. Nabataean exploitation of bitumen from the Dead Sea, for example, served commercial purposes, meeting demands for mummification in the Egyptian markets.
 - x Charles Doughty came to northern Arabia with a pilgrimage caravan from Syria in 1876 visited many archaeological sites, copied several inscriptions and wrote many notes about northern Arabia.
 - xi Bir al-Dabaghat is an area that is located about 10 km from Petra. Its name is derived from the Arabic word *dabaga* which means "to convert animal hide into leather" as this area was famous for this industry during the Ottoman period and probably before. This industry was based on a material that is normally extracted from oak trees which are widespread there.