

# BETWEEN ROCKS AND A HARD PLACE: PREHISTORIC FUNERARY PRACTICES AT WĀDĪ ĐEBAY'ĀN, NORTHERN QATAR

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## ABSTRACT

*Archaeological survey by the Qatar National Historic Environment Record Project (QNHER) in 2009, led to the discovery of a Neolithic flint scatter, settlement and an ancient, raised shoreline associated with higher, mid-Holocene sea levels at Wādī Đebay'ān, northwestern Qatar (Al Naimi et al. 2010, 2011, Cuttler et al. 2011). The QNHER project is a collaboration between Qatar Museums and the University of Birmingham, which over the past five years has developed a national geospatial database for the recording of archaeological sites and historic monuments in Qatar. A significant aspect of the project involved archaeological survey and excavation in advance of major construction projects. Between 2012 and 2014 excavations at Wādī Đebay'ān revealed a burial of a typology previously unknown in Qatar (Cuttler et al. 2013).*

**Keywords:** Arabia, 'Ubaid, Funerary, Qatar, Burial Archaeology

## INTRODUCTION

The discovery of an ancient raised-shoreline and intertidal, lagoonal area within *Wādī Đebay'ān* (Fig. 1) (Cuttler et al. 2011) prompted a program of systematic test pitting in an attempt to find features associated with the raised shoreline. This program of test pitting unexpectedly discovered a previously unknown prehistoric inhumation and led to further open area excavation within the immediate area. This revealed a further five inhumations located within a 10x10m area in what appears to be a small Neolithic cemetery. This cemetery has no surface expression, such as a cairn or mound, as is normally the case with prehistoric burials in Qatar. The spatial morphology of the cemetery indicates the presence of a previously unrecorded funerary typology in Qatar, comprising burials with no evidence for surface markers such as a stone cairn.

The burial was that of an adult female placed in the foetal position, and of a particularly robust stature. She was buried at the base of a small, oval pit, covered with sand, rocks and cobbles. While no finds were discovered that might be conclusively associated with the original internment, fragments of 'Ubaid-type ceramics were found within the fill of the grave, providing a terminus post quem for the burial in the 5th millennium BC.

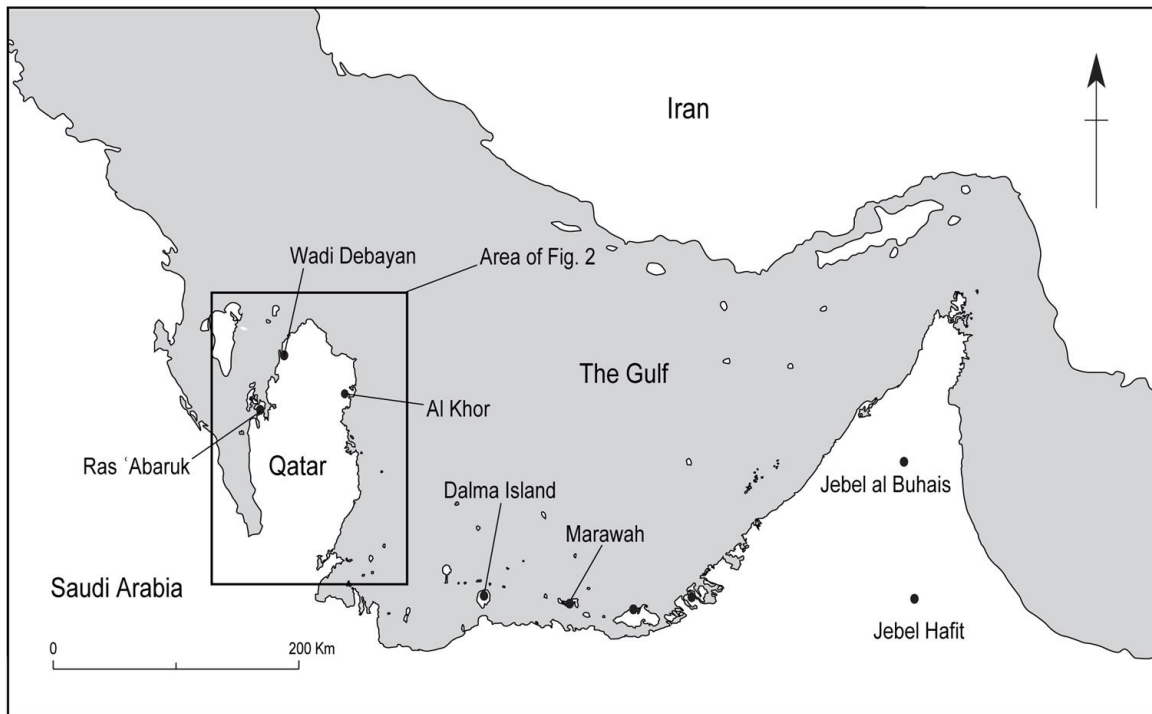


Figure 1: Location map and sites mentioned in the text

Samples of the bone were sent to Beta Analytic for radiocarbon dating, however, this was unsuccessful due to an absence of surviving collagen. The upper stratigraphy of the burials had been truncated by hearths that produced two radiocarbon determinations, placing the pits in the 2<sup>nd</sup> millennium BC and provide a *terminus anti quem* for the burial. This 2<sup>nd</sup> millennium BC date was further confirmed by fragments of burnt, Dilmun-period pottery recovered from the hearths. This suggests an archaeological sequence comprising of late Neolithic burials overlain by Bronze Age temporary occupation, possibly associated with coastal trade.

### PRE-ISLAMIC BURIAL PRACTICES IN QATAR

Due essentially to its 'visibility', the stone-built burial cairn or 'tumuli' has been a major focus investigations into the prehistory of Qatar by archaeological researchers since the mid-twentieth century. Foreign missions and local researchers documented significant numbers of cairns (Glob 1957, 1959, Kapel 1967, de Cardi 1978, Midant-Reynes 1985, Konishi 1988; 1994, Schreiber *et al.* 2009), with more recent surveys suggesting that the number of this kind of funerary monument may be in the region of several tens of thousands (Fig. 2) (Cuttler *et al.* 2013). However, the chronology and typology of these cairns has been poorly understood, and until recently it was assumed that the level of construction of these monuments increased significantly around the Seleucid period, with most prehistoric burials dating between c.350BC and c.300AD). From the results of excavations to date, three essential characteristics can be determined:

- Most pre-Islamic burials have primarily been dated by their association with artifacts found either within the burial chamber, under the burial mound or within the environs of the site.
- All the previously documented burials have a surface demarcation that allows their visual identification. This surface expression consists of a mound or accumulation of stones, commonly termed a cairn.
- A significant number (possibly more than two thirds) of the burial cairns excavated were found to have been plundered in antiquity. Of the undisturbed cairns most were found to have been heavily affected by the geochemical processes of the Qatari soil, which led to the partial or total disintegration of the human remains. The diagenetic effects on the bone after burial has often altered the proportions of organic collagen and inorganic components to such an extent that radiocarbon dating is normally not possible.

Burial cairns and markers occur throughout the whole Qatar Peninsula. Archaeological research suggests a higher density of these monuments in the north of Qatar, although the northwest of Qatar has been subject to more extensive survey than the rest of the country. Furthermore, large sand dunes in the south present a significant hindrance to extensive archaeological survey and excavation.

Survey data available from the QNHER geospatial database would suggest that such conclusions are correct, however, it is hoped that future survey work across Qatar will shed more light on the distribution of these monuments.

The chronological and typological basis for burials in Qatar can, at present, be split into two main chronological periods:

- Firstly, the oldest cairns correspond to the 5<sup>th</sup> millennium BC or to the late 'Ubaid period. This period is characterized by sites primarily associated with either semi-nomadic or temporary occupation, with ceramics of imported 'Ubaid pottery and a local ware of unknown origin known as Arabian Coarse Ware (ACW). Such sites are evident along the western Gulf coast from the early 6<sup>th</sup> millennium and throughout the 5<sup>th</sup> millennium BC (Cuttler 2013).
- Secondly, a significant number of cairns have been dated from the Seleucid (c. 300 BC) to the Sassanian (c. 300 AD) periods, when the peninsula of Qatar was influenced by empires in Persia.

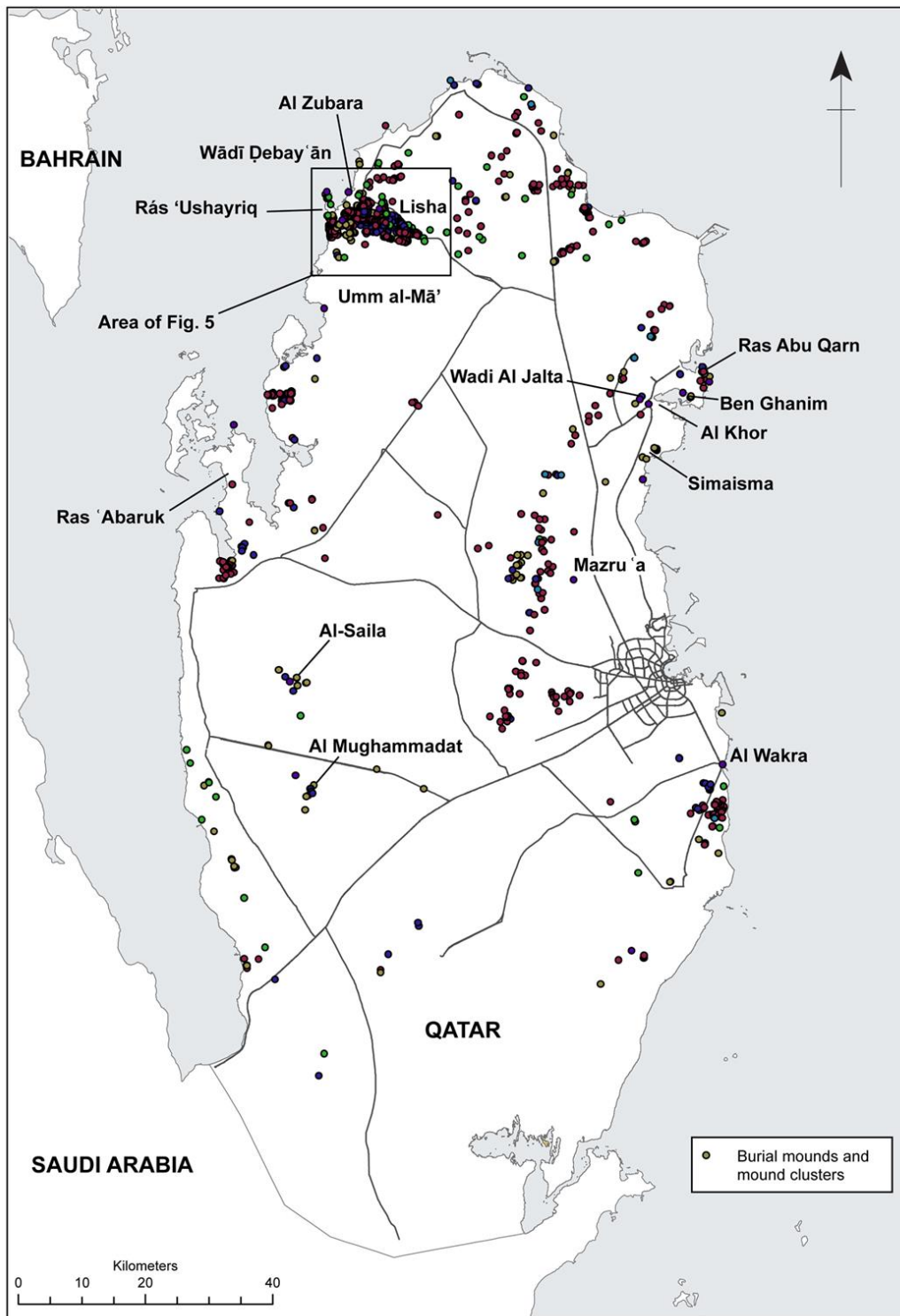


Figure 2: Burial Cairns and Cairn Clusters in Qatar

Cultures associated with the 'Ubaid appear to come to an abrupt end in eastern Arabia in around 3800 BC. This leaves an archaeological 'vacuum' during the 4<sup>th</sup> and 3<sup>rd</sup> millennia BC, a phenomenon also evident within other areas of the Arabian Peninsula and often termed the 'Dark Millennium' (Uerpmann 2003).

This date coincides with a period of declining lake levels, dunes reactivation and

desertification, favoring a semi-nomadic rather than a sedentary lifestyle. This 'vacuum theory' is based on the absence of finds and is particularly relevant to funerary archaeology. However, work at *Wādī Ḍebay'ān* may suggest this 'vacuum' may also relate to a change in funerary practices, resulting in an absence of a surface expression and the 'invisibility' of sites within the modern landscape. Given the relatively low numbers of burials dated to the Neolithic period, and the absence of burials between the 4<sup>th</sup> and 2<sup>nd</sup> millennia, two hypotheses have been proposed to explain the large number of burial cairns attributed to the Iron Age in Qatar (Cuttler *et al.* 2013).

1. The cairns represent an increase in population during the late Iron Age due to favorable weather conditions or technological innovations.
2. The cairns date to a much wider time span and therefore represent a relatively consistent demographic; however, chronological markers are not being detected or are incorrectly attributed either because of the absence of absolute dating techniques or due to assumptions that similar cairn morphologies represent similar periods.

## 1.

### NEOLITHIC BURIALS IN QATAR

Of the burials associated with the 5<sup>th</sup> millennium BC in Qatar only one group of cairns on the east coast of Qatar at *Simaisma* (Fig. 2), have so far produced absolute dates.

A total of fourteen burial cairns were excavated, with several found to contain human remains in poor states of preservation. Most of the cairns within Area A were dated to the late Iron Age on the basis of radiocarbon determinations. However radiocarbon dates from charred material from two mounds in Area C returned dates of  $5790 \pm 40$  <sup>14</sup>C BP (Beta 281262 Cal BC 4780 to 4560 [Cal BP 6730 to 6500]) and  $5690 \pm 40$  <sup>14</sup>C BP (Beta 281263 Cal BC 4690 to 4460 [Cal BP 6640 to 6410]), placing these burials firmly in the 5<sup>th</sup> millennium BC. Among the finds from the burials in Area C were fragments of plaster (gypsum) vessels similar to those found in deposits from *Dalma* Island (Fig. 1) and *Marawah* Island (Beech *et al.* 2005), and are consistent with a Neolithic date (Al-Naimi & Arrock 2010; Cuttler *et al.* 2013).

Two other groups of cairns associated with Neolithic funerary practices are found within the two major wadi systems of northern Qatar, at *Wādī al Jalta* and *Wādī Ḍebay'ān*. The *Wādī al Jalta* is situated in northeastern Qatar close to the town of *Al Khor* (Fig. 2). Located centrally within the discharge channel of the wadi, approximately 1.5km from the sea, is a jebel where the cairns occupy a prominent position within the landscape. The cairns are thought to date to the late 5<sup>th</sup> and early 4<sup>th</sup> millennia BC. During this period sea levels would have been approximately 2m higher, and it is likely that the jebel was an island.

From a group of eighteen burial cairns, five were subject to excavation by a mission lead by

Jacques Tixier (Inizan 1979, Tixier *et al.* 1980; Midant-Reynes 1985). The 'tumuli' were found to vary substantially between 0.80 and 4m in diameter. Circular pits below the mounds averaged ~0.65m in diameter; while oval pits generally measured 1.10 x 0.75m. The maximum depth of burial pits was 0.80m, with no evidence for a super structure associated with any of the mounds. Several contained human remains, in very poor condition, placed in the fetal position and with differing orientations. Large amounts of finds within the burials (mainly beads made of shell, greenstone, bone and fish teeth) were found along with obsidian flakes. The obsidian trade between Africa, Anatolia and the Middle East is traditionally thought to decline from the 5<sup>th</sup> millennium BC. This would tentatively place the site in the 5<sup>th</sup> millennium BC (Midant-Reynes 1985).

A total of twenty-six burial cairns were excavated around the fringes of *Wādī Ḍebay'ān* and to the west at *Ras Ushayriq*, a small peninsula that is located western of the wadi, by a team from the QNHER during the 2010 to 2011 season. Most of these monuments were approximately 2 m. diameter with a maximum height of 0.4 m. None contained burial pits, although some were used small, natural depressions within the underlying lithosol. Of all the cairns excavated, only one in *Wādī Ḍebay'ān* and one in *Ras 'Ushayriq* contained visible human remains. However, a large number of finds (shell and bone beads, perforated bivalves, a stone pendant and various flakes of flint) tentatively date these cairns to the Neolithic period.

## THE LATE IRON AGE

The earliest systematic research and excavation of burial cairns in Qatar was undertaken by G. Bibby and P. V. Glob in *Umm al-Maa'* (northwestern Qatar) during the 1950's (Glob 1957, 1959). Since then, several foreign missions have returned to this site to continue excavation: during the 1980s the Japanese mission headed by Masatoshi A. Konishi (Konishi *et al.* 1988, 1994); and the excavations of Jürgen Schreiber in the past decade, focusing also on the excavation of another burial in the nearby *Lisha* (Schreiber *et al.* 2009). A total of thirty-three burial cairns have been excavated in *Umm al-Maa'* (Fig. 2). The majority contained burial pits with funerary 'chambers' built over the burial pit. The human remains were in crouched position, most of them resting on their right side, and facing various orientations. Among the most important finds were an iron sword found with a skeleton at *Lisha* and the enigmatic triangular 'bethel' stones found about 3 - 4 m. west of many of the mounds (Cuttler *et al.* 2013). A bowl carved in stone, agate beads, bronze and silver jewelry and especially fragments of glazed ceramics provide a relative date between 300 BC and AD 300 (Schreiber *et al.* 2009).

At *Ras 'Abaruk*, western Qatar G. Bibby excavated ten cairns all with burial pits. The finds included twenty-six beads in the same grave and a fragment of pottery dated to the Seleucid period (Bibby 1965).

Four further mounds excavated by Bibby at *Mazru'a*, east Qatar, were found to contain flexed skeletons, bronze objects, an iron sword and iron arrowheads. In addition, two burials also contained the articulated skeletal remains of a camel and an intact glass ascribed to the Sassanian period (de Cardi 1978: 193).

Seven cairns excavated from a group of eighty-four in *Ras 'Abaruk* (de Cardi 1978) are undated, while a single burial cairn in *Al Mughammadat*, west of Qatar, included a complete, flexed skeleton (Kallweit 2008). At *Al-Saila* particularly large burial cairns have been noted, measuring up to 10 m. in length and up to 2 m. high (Cuttler *et al.* 2013), and the fourteen mounds excavated south of *Al-Wakra* showed evidence for burial pits but contained no human remains or goods (Bain & Tetlow 2012).

## **TPOLOGY**

Prior to the excavation of the Neolithic cemetery in *Wādī Debay'ān* a typology was established for all types of pre-Islamic burials found in Qatar (Fig. 3), which includes eight types according to their morphology (Cuttler *et al.* 2013):

Types 1-4: the deceased is placed on the ground and covered with a tumulus of pebbles and sand. In all cases there is no burial pit. The differentiation of type is indicated by the presence or absence of different types of above-ground burial chambers:

No chamber, just tumulus (Type 1);

Burial chamber constructed from upright slabs, with capstones (Type 2);

Burial chamber constructed from a low, dry-stone wall, with capstones (Type 3) or without capstones (Type 4).

Types 5-8: the deceased is placed inside a subterranean burial pit dug into the ground and covered with a tumulus of pebbles and sand, in all cases. The differentiation of type is determined by the presence and morphology of the burial chamber:

No burial chamber (Type 5),

No burial chamber but with capstones (Type 6);

Burial chamber constructed from upright slabs placed vertically into the burial pit (Type 7);

Burial chamber constructed using a low, dry-stone wall of over burial pit, with capstones (Type 8). In addition, smaller or circular burial pits may relate to burial in a "sitting" position (Type 8b, after Konishi *et al.* 1994).

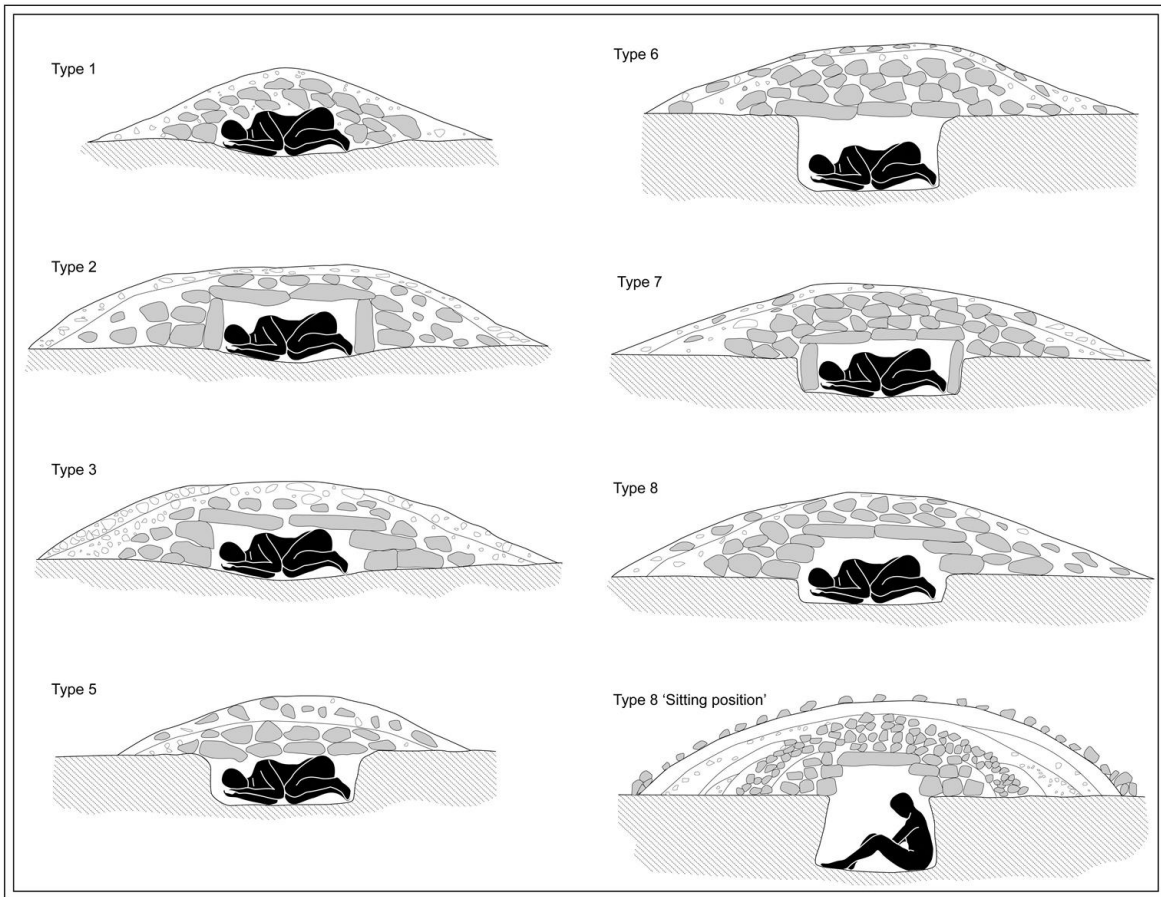


Figure 3: Types of burial cairn in Qatar (after Cuttler et al. 2013)

The discovery of a Neolithic inhumation cemetery at *Wādī Ʀebay'ān* is not described within the above burial types and a further 'Type 9' is proposed (Fig. 4). For Type 9 the deceased is placed inside a burial pit, which has no demarcation or surface expression, residual material or visible traces. These would appear to be traits common to all the burials within the cemetery at *Wādī Ʀebay'ān*.



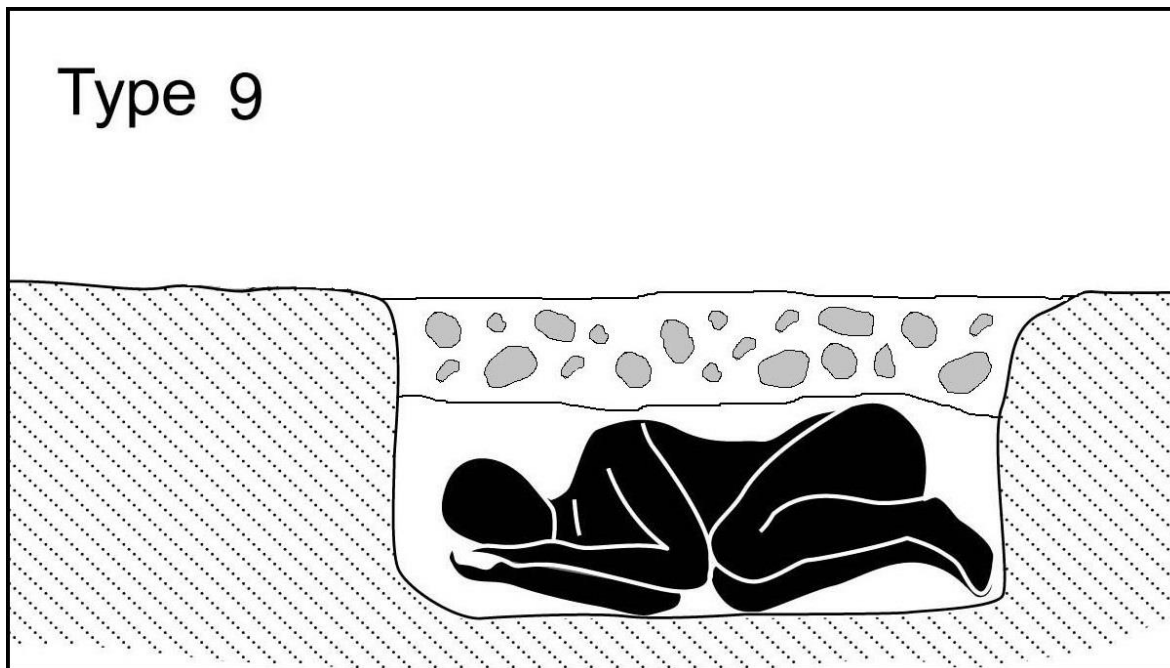


Figure 4: A new burial typology discovered in Qatar – Type 9

#### THE INHUMATION CEMETERY AT WĀDĪ ǪEBAY'ĀN: SITE BACKGROUND

*Wādī Ǫebay'ān* is located on the northwest coast of Qatar approximately 4 km. to the south of *Al Zubara*. As one of the largest wadis in northwest Qatar, *Wādī Ǫebay'ān* comprises a shallow depression extending 5km. from the interior on a southeast-northwest alignment towards the current coastline (Fig. 5). Former areas of marshland and palaeo-coastlines define the ancient profile of the wadi. An environmental test pit excavated within the wadi has provided evidence for flora and related fauna within the wadi ~7000-5000 BP, indicative of higher sea levels, intertidal environments and the development of mangroves. *Wādī Ǫebay'ān* was subject to ingress from sea level rise from the approximately the late 6<sup>th</sup> millennium BC and coincides with the earliest dated anthropogenic activity (Cuttler *et al.* 2011). Environmental work within the wadi also suggests slow marine transgression, with periods of still-stand from the 5<sup>th</sup> millennium BC onwards (Cuttler *et al.* 2011).

Early activity is located on a plateau and comprises of pits, hearths and postholes radiocarbon dated between the mid-6<sup>th</sup> and early-4<sup>th</sup> millennia BC, and would probably have been part of a peninsula due to sea level rise. While this is associated with a period of climatic amelioration within the southern extent of the Arabian Peninsula (Parker *et al.* 2004), there is little environmental evidence that this amelioration affected areas as north as Qatar (Cuttler 2013). Later activity within the wadi focuses on substantial, tidally reworked palaeo-shoreline dated between the early-4<sup>th</sup> to mid-3<sup>rd</sup> millennia BC, and comprised of a midden, post holes and hearths, rich in fishbone and dugong, turtle and shellfish, but is largely aceramic.

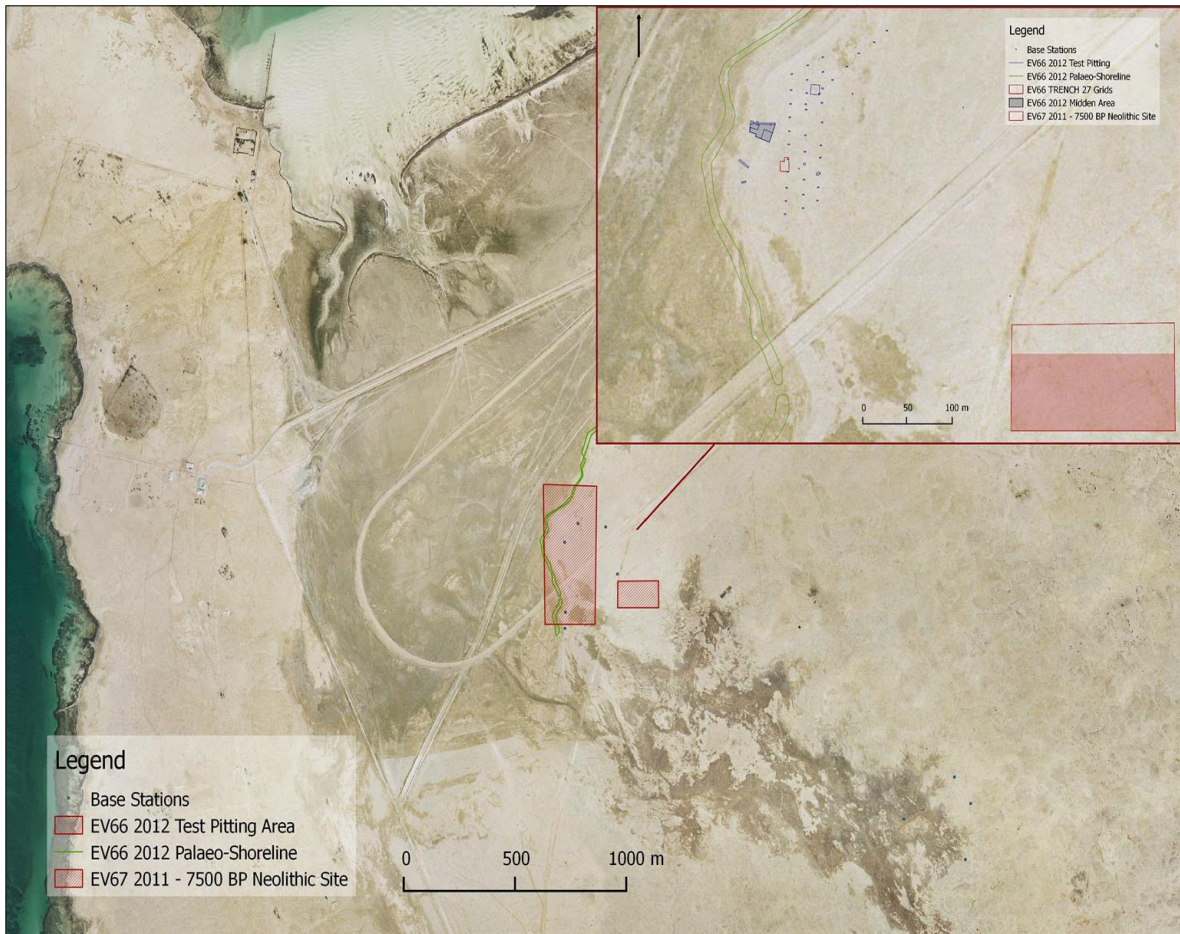


Figure 5: Location of Neolithic cemetery and Dilmun period site within Wādī ʿĀyān

## Methodology

The discovery of a substantial midden in 2011 prompted a program of test pitting on the shoreward side of the palaeo-shoreline to search for associated activity. In 2012 a total of forty-two 2 x 1 m. test pits were excavated at 20 m. intervals across the site. Most of the test pits contained no archaeology or occasional hearths, however during the last week of the excavation season 2011-2012 a grave cut [5004] and fragments of long bone and a single, intermediate phalange from a human hand were discovered in Test pit 27 (Cutler *et al.* 2013). During the following season the test pit was expanded to a 15 x 10 m. excavation area.

The overburden [5001] and [5002] was removed in 5 cm. spits to the level of the grave cut. The grave fill [5003] and [5010] were then excavated to reveal the skeleton (Figs. 6 and 7), which was excavated and recorded using methodology described according to Brickley & McKinley (2004) and English Heritage (2004). Prior to lifting the remains were stabilized using a 5% paraloid / acetone mixture applied with an eye dropper.



*Figure 6: The skeleton (5011) in situ*

### **The stratigraphy and human remains**

The grave was a cut [5004] orientated northwest-southeast measuring approximately 1.65 x 1.10m., and was cut through natural deposits of sand and gypsum and bedrock [5000]. There was no evidence for any associated stone lining to the base or walls. The body was placed ~northwest-southeast with the head to the north, facing west. The right arm was bent towards its left shoulder with the right hand facing the face, and the left arm was placed across the ribcage and resting the left hand on the right elbow.

The skeleton would appear to be in a "forced" fetal position whereby the ribcage and pelvis remained in a supine position but the head and the legs were rotated westwards. The "unforced" fetal position would have the ribcage and pelvis resting on their right side. When considered with the small dimensions of the burial pit, this may indicate that:

1) the body of the deceased was possibly crouched in a very forced position with the aim of being buried in a small space.

2) the deceased was placed in a supine position with the legs bent. During the decomposition of the body the legs then collapsed to the west.

While the human remains were in a poor state of preservation, it was possible to document about 65% of the skeleton. During excavation the skull was mostly defined by the action of gypsum on the dissolved bone mass.

The left half of the lower jaw contained teeth and a molar and the ribcage retained most of the ribs and vertebrae, although all in advanced process of decomposition and assimilation with the gypsum. The left clavicle was still intact although there were no remains of the scapula.

## **OSTEOLOGICAL ANALYSIS OF THE SKELETON**

The sex was defined using cranium and the post-cranial skeleton according to criteria outlined by Brothwell (1981) and Singh & Potturi (1978) respectively. Due to the poor preservation of the remains assessment was initially undertaken *in situ*. The left humerus and radius measured 315mm and 270mm in length respectively, allowing a stature estimation between 179 - 182 cm, using Trotter & Gleser formulae (1958). This height is above average for females from any regional prehistoric group, nonetheless, the skull demonstrated feminine characteristics. The nuchal crest, mastoid process and zygomatic arch were not visible, the supraorbital ridge was absent and traits displayed by the mandible were extremely gracile. Whilst the cranium only provides an indication of sex, the sciatic notch was very broad and unambiguously female.

The age of the skeleton was initially determined from the epiphyseal fusion of the left clavicle. The proximal end of this bone is the last bone in the body to fuse, between 19 and 30 years of age (Brothwell 1981). As the clavicle was well fused with no evidence for cartilaginous material, the individual was older than 30 years of age. After lifting and cleaning, the extent of tooth wear was assessed, indicating an age range between ~35-45 years (Miles 2001). These remains require further cleaning and conservation as evidence of trauma, paleopathology, origin of the individual and diet, or possible cause of death, are still to be determined.

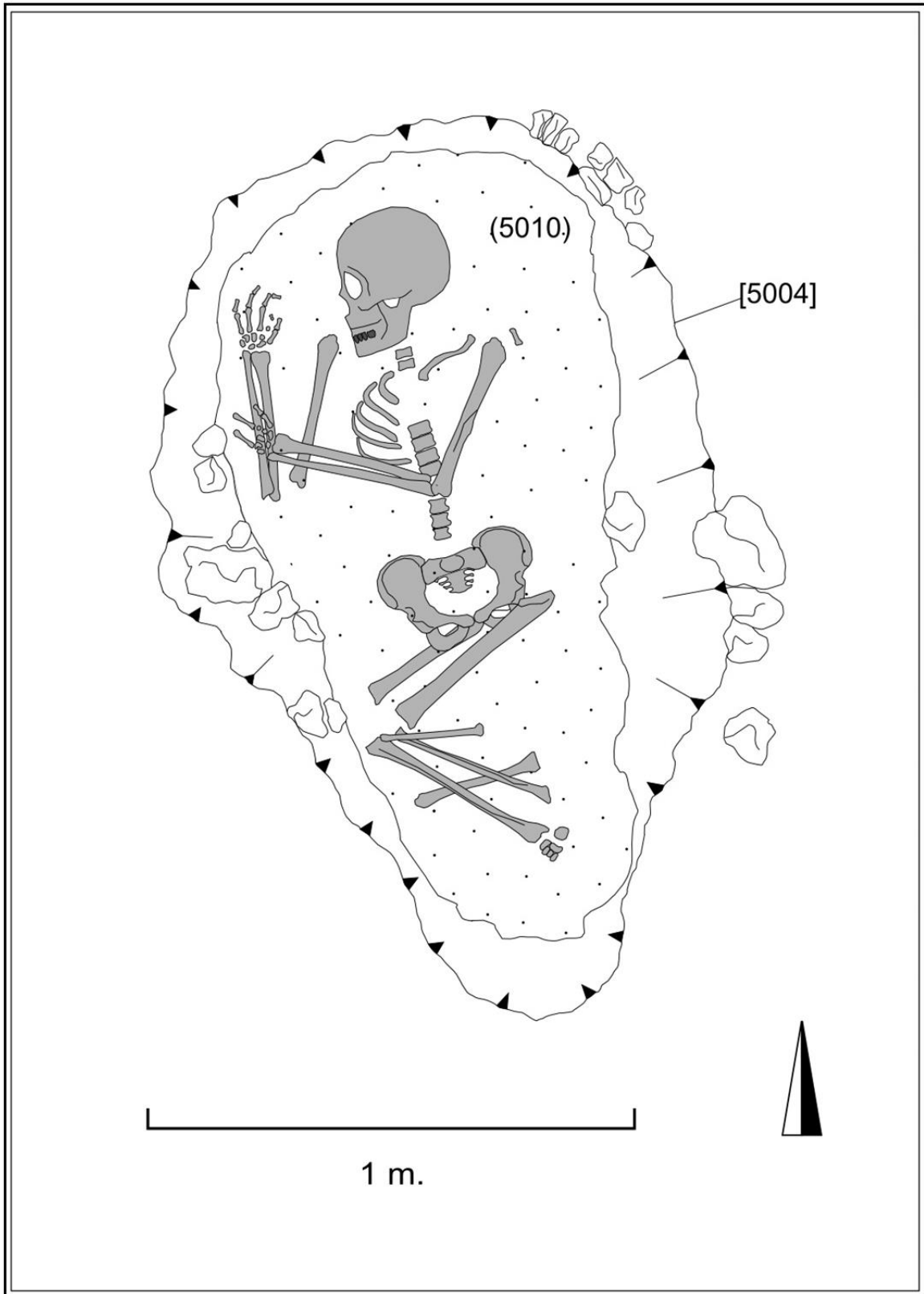
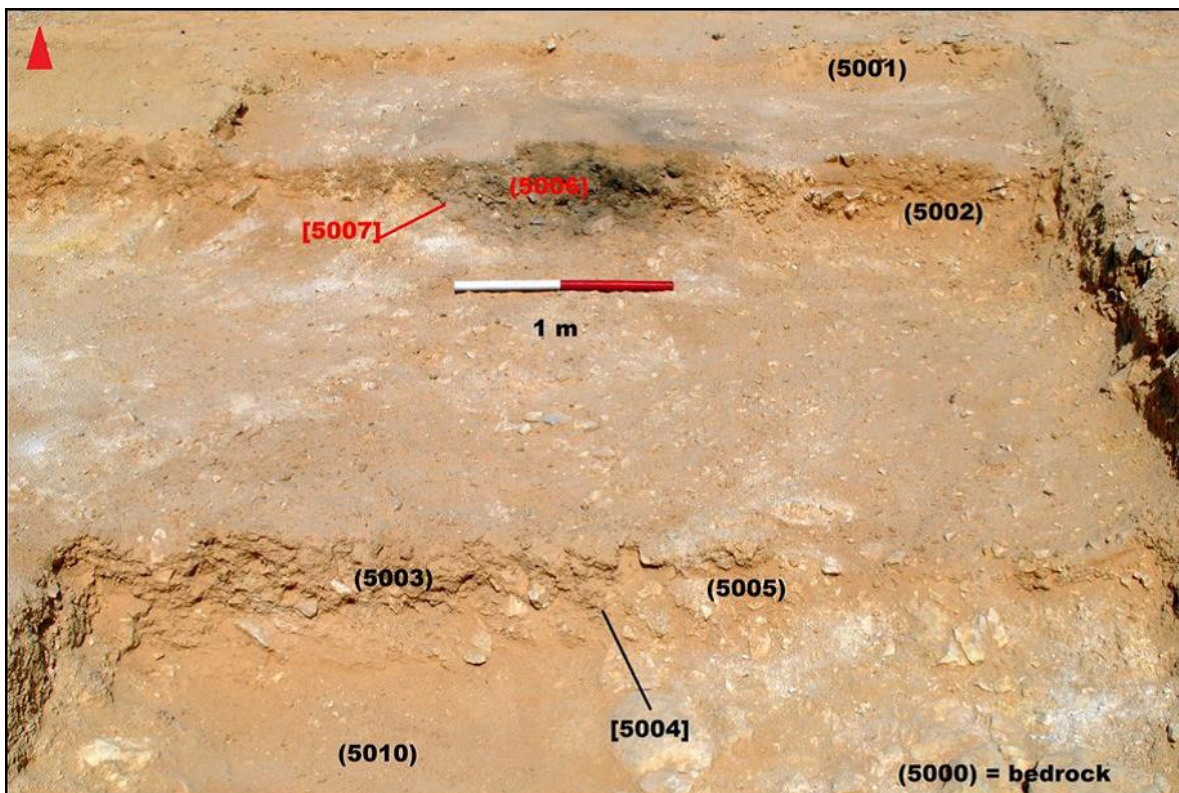


Figure 7: Plan of the skeletal remains

## Neolithic

A sample from the left humerus submitted to Beta Analytic Inc., for AMS dating did not yield any collagen and could not be dated. Therefore the dating of the burial is currently based upon artifacts recovered from within the grave fill [5003] and radiocarbon dates from stratigraphy overlying this (Fig. 8). Artifacts from within the grave fill included three greenish-gray sherds, with a fine grained fabric typical of 'Ubaid pottery type 3 or 4. The sherds vary in thickness between 0.5 - 0.8 cm, and the exterior has the remains of a black or dark brown slip, suggesting vague geometric patterns. The shape is indicative of a 'tortoise jar' or similar vessel (R. Carter pers. comm. 2013). This provides a *terminus post*



quem in the 5<sup>th</sup> millennium BC.

Figure 8: Stratigraphic relationships of the burial and overlying layers

## Dilmun period

A group of eight hearths and small pits were cut into contiguous layers that overlay the grave fill. These hearths were curvilinear in shape, ~0.5 to 1m in diameter, and varying between 0.1 to 0.25m in depth. Their excavation produced fragments of burnt, Dilmun-period pottery (R. Carter pers. comm. 2013) and fishbone. The pottery assemblage comprised of reddish brown body sherds with a medium to coarse grained fabric. The surfaces show dark coloration, probably as a result of carbonized organic residue. Whether this relates to domestic activity or burning after discard may be determined by future residue analysis.

Dilmun pottery and 2<sup>nd</sup> millennium BC hearth, often rectangular or with stone linings have been recorded from Bahrain to *Tell Abraq* (UAE) and on the island of *Ben Ghanim, Al Khor* (Fig. 2). As these are often found close to the coast they have been interpreted as temporary occupation by Dilmun traders operating around the western Gulf coast (Carter 2003). Charcoal samples from two of the hearths [5007] and [5029] provided AMS dates in the early and the late 2<sup>nd</sup> millennium BC. Hearth [5007] cut into the layer (5002) immediately above the grave, provided a date: Cal BC 2020 to 1990 (Cal BP 3970 to 3940) / Cal BC 1980 to 1880 (Cal BP 3930 to 3830); while Hearth [5029] cut into the upper stratigraphic unit (5001) provided a date of: Cal BC 1110 to 1100 (Cal BP 3060 to 3050) / Cal BC 1080 to 1060 (Cal BP 3030 to 3010) / Cal BC 1060 to 920 (Cal BP 3000 to 2870).

## DISCUSSION

The burial at *Wādī Debay'ān* is intriguing, not only because it represents a previously unrecorded prehistoric funerary practice in Qatar, but also because of the size of the individual. This is the burial of a lady 178-180cm in stature, well above average height, even for a modern female. This lady had an extremely muscular, athletic physique; the muscle attachments and the robustness of the bones, such as her metacarpals and phalanges, indicate a very active lifestyle. While radiocarbon dating on the bone has been unsuccessful, future analysis of DNA and 87/86S, which is absorbed into the bone and tooth enamel by digenesis, may reveal more information about her origin. Successful analysis of  $^{13}\text{C}/^{12}\text{C}$  may also provide dietary information. Also standard medical X-Ray/MRI/CT scanning (Delaney *et al.* 2014) has the potential to provide important information on bone density, trauma and other pathologies.

The absence of any surface expression is previously unrecorded in Qatar. It is possible that any former marker has been erased in antiquity; however, given that there are five other inhumations in this cemetery, it seems more likely that the absence of burial markers, such as a cairn, was deliberate. As more burials are excavated in the future, it may be possible to consider if such an absence reflects cultural differences with other Neolithic groups in Qatar (such as at *Al Khor* and *Simaisma*), or do such practices indicate different a "social status" within the same group.

While the 'Ubaid pottery found within the fill of the grave provides a *terminus post quem* in the 5<sup>th</sup> millennium BC, it is considered residual, which suggests the burial could date to any period between the early-5<sup>th</sup> and late-3<sup>rd</sup> millennia BC, a period of over 3 thousand years. The presence of a well-defined layer [5002] sealing the grave fill [5003] might indicate an earlier date within this period, however, the absolute dating of this cemetery is not certain, and should remain a future research priority. In the absence of carbon, OSL dating has proved successful on other internments in Qatar (Bain & Tetlow 2012), and remains an option should the cemetery be subject to excavation in the future.

As there is no evidence that the burial was disturbed during later periods it seems likely that the absence of grave goods was deliberate, something not entirely unusual for prehistoric burials in Qatar. While the presence of organic grave goods (that would have deteriorated) cannot be ruled out, this raises questions regarding how burial practices reflect different attitudes to death and an afterlife, or if this was influenced by other cultural or economic factors.

Only a few burials of Neolithic date have been excavated in Qatar, all of which have been located within 3 or 4km of the present day coastline. In other parts of the Arabian Peninsula Neolithic burials are more usually associated with inland sites such as *Jebel al-Buhais* (Uerpmann *et al.* 2003) and *Jebel Hafit* (Potts 2012), and the burial at *Wādī Ḍebayʿān* adds to the growing corpus of Neolithic burials which have the future potential to provide a research framework for interactions and dispersals between different regional Neolithic groups. Such burials also have the potential to provide information about early settlement patterns and trade routes from between the Arabian Peninsula and Mesopotamia (Southern Iraq). Future excavation and analysis might also solve questions regarding the longevity of groups in Qatar, and what was the extent of influence of different groups? How did regional dispersal and contact alter the cultural identity of Neolithic groups or were they subject to new populations?

## CONCLUSIONS

The burial and other internments within the cemetery display the characteristics of a previously unrecorded type of prehistoric burial in Qatar: a burial pit with complete absence of surface demarcation, tumulus or burial chamber (Type 9). Of the prehistoric burials excavated to date in Qatar, ~two thirds have been robbed in antiquity (Cuttler *et al.* 2013). While graves with an absence of a surface marker may be more difficult to locate, they are also less likely to have been robbed in antiquity and so have greater potential for analysis and the development of anthropological and palaeo-forensic archeology in Qatar. This does, however, pose a more serious consideration. Given that survey and the presence of sites with a surface expression have guided where teams have excavated over the past 60 years, it is possible that this class of monument is being completely overlooked by current research. This also raises issues regarding how such monuments are identified in the future, particularly given the threats posed to archaeology by extensive regional development.

This cemetery makes an important contribution to the growing corpus of data about 'Ubaid-related cultures in the region between the 5<sup>th</sup> and 4<sup>th</sup> millennia BC. Given that occupation within *Wādī Ḍebayʿān* is extensive, and extends beyond the Neolithic period into the 'Dark Millennium', further research at the site may reveal important information about the 'Ubaid presence in eastern Arabia and the abrupt changes that this culture underwent.



By the 2<sup>nd</sup> millennium BC *Wādī Ḍebay‘ān* is clearly being occupied, most likely as a result of temporary encampments associated with Dilmun maritime trade, as at *Ras Abaruk* (Cardi 1978) and *Al Khor* (Carter 2003).

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