

Between rocks and a hard place: prehistoric funerary practices at Wādī Ḍebay‘ān, northern Qatar

Archaeological survey by the Qatar National Historic Environment Record Project (QNHER) in 2009, led to the discovery of a Neolithic flint scatter, a settlement and an ancient, raised shoreline associated with higher, mid-Holocene sea levels at Wādī Ḍebay‘ān, north-western Qatar (Al-Naimi *et al.* 2010, 2011; Cuttler, Tetlow & Al-Naimi 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 Ḍebay‘ān revealed a burial of a typology previously unknown in Qatar, the unmarked graves (Cuttler, Al-Naimi & Tetlow 2013).

Keywords: Arabia, ‘Ubaid, pre-Islamic, Qatar, burial archaeology

Áurea Izquierdo Zamora¹,
Richard Thorburn H. Cuttler¹,
Faisal Abdulla Al-Naimi²,
Lawrence S. Owens³

¹Qatar National Historic Environment Record Project, Department of Classics, Ancient History and Archaeology, The University of Birmingham, Edgbaston, Birmingham, B15 2TT

²Department of Antiquities, Qatar Museums, Doha P.O. Box 2777, Qatar

³Department of History, Classics & Archaeology, Birkbeck College, University of London, 27-28, Russell Square, London WC1B 5DQ

e-mails: aureaizquierdo@gmail.com;

r.cuttler@bham.ac.uk;

richardcuttler@gmail.com;

falnaimi@qm.org.qa;

Lawrence_owens@yahoo.co.uk

Introduction

The discovery of an ancient raised shoreline and intertidal, lagoonal area within Wādī Ḍebay‘ān (Fig. 1) (Cuttler, Tetlow & Al-Naimi 2011) prompted a programme of systematic test pitting in an attempt to find features associated with the raised shoreline. This programme of test pitting unexpectedly discovered a previously unknown prehistoric inhumation and led to further open-area excavation within the immediate surroundings. This revealed a further five inhumations located within a 10 x 10 m 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 of surface markers such as a stone cairn.

The burial was that of a very tall and physically robust adult female placed in the foetal position. She was buried at the base of a small, oval pit, and covered with sand, rocks and cobbles. While no finds were discovered that might be conclusively associated with the original interment, fragments of ‘Ubaid-type ceramics were found within the fill of the grave, providing a *terminus post quem* for the burial in the fifth millennium BC.

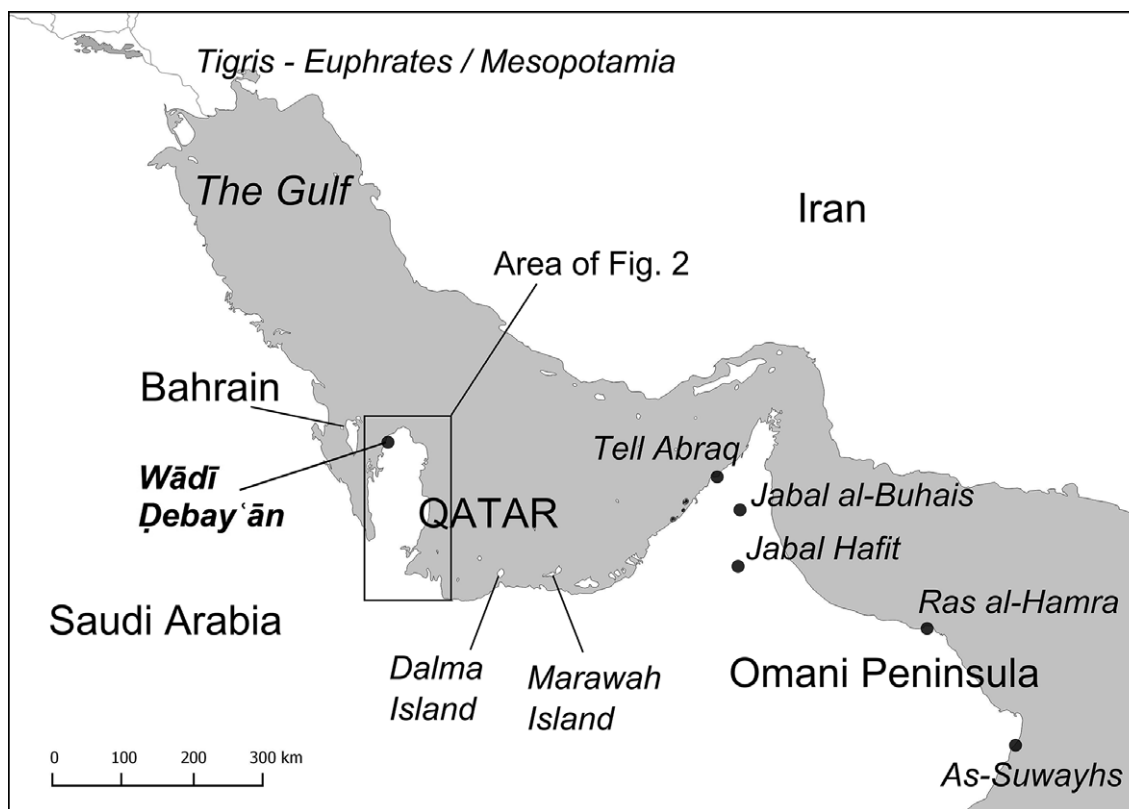


Fig. 1.
Location map and sites mentioned in the text.

Samples of the bone were sent to Beta Analytic for radiocarbon dating, but 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 second millennium BC and providing a *terminus ante quem* for the burial. This second-millennium BC date was further confirmed by fragments of burnt, Dilmun-period pottery recovered from the hearths. This suggests an archaeological sequence comprising 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 tumulus has been a major focus for 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; Tixier 1980; Midant-Reynes 1985; Konishi, Gotoh & Akashi

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) (Cutler, Al-Naimi & Tetlow 2013). The chronology and typology of these cairns, however, 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.* 350 BC and *c.* AD 300). 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 artefacts 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



Fig. 2. Burial cairns and cairn clusters in Qatar (after Cuttler, Al-Naimi & Tetlow 2013).

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 have 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 Qatar peninsula. Archaeological research suggests a higher density of these monuments in the north of Qatar, although the north-west 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, but

it is hoped that future survey work across Qatar will shed more light on the distribution of these monuments.

Thanks to the efforts of the previous foreign missions it was possible to establish a chronological basis for burials in Qatar, although at present only two main chronological periods have been recorded. Firstly, the oldest cairns correspond to the fifth millennium BC or to the late 'Ubaid period (Inizan 1979; Tixier 1980; Midant-Reynes 1985; Al-Naimi & Arrock 2010). This period is characterised by sites primarily associated with either semi-nomadic or temporary occupation, which contain 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 sixth millennium and throughout the fifth millennium BC (Cuttler 2013). Secondly, a significant number of cairns have been dated, on the basis of the associated material culture, from the Seleucid (*c.* 300 BC) to the Sasanian (*c.* AD 300) periods, when the Qatar peninsula was influenced by empires in Persia (de Cardi 1978; Konishi, Gotoh & Akashi 1988, 1994; Schreiber *et al.* 2009).

Cultures associated with the 'Ubaid appear to come to an abrupt end in eastern Arabia in *c.* 3800 BC. This leaves an archaeological 'vacuum' during the fourth and third millennia BC, a phenomenon also evident within other areas of the Arabian Peninsula and often termed the 'Dark Millennium' (Uerpmann M. 2003). This date coincides with a period of declining lake levels, dune reactivation and desertification, favouring a semi-nomadic rather than a sedentary lifestyle. The 'vacuum' theory is based on the absence of finds and is particularly relevant to funerary archaeology. Work at Wādī Debayʿān, however, may suggest this 'vacuum' may also relate to a change in funerary practices resulting in an absence of 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 fourth and second millennia BC, two hypotheses have been proposed to explain the large number of burial cairns attributed to the Iron Age in Qatar (Cuttler, Al-Naimi & Tetlow 2013):

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

niques or because of assumptions that similar cairn morphologies represent similar periods.

Neolithic burials in Qatar

Of the burials associated with the fifth 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 (Al-Naimi & Arrock 2010).

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. Radiocarbon dates from charred material from two mounds in Area C, however, returned dates of 5790 ± 40 ^{14}C BP (Beta 281262 Cal BC 4780 to 4560 [Cal BP 6730 to 6500]) and 5690 ± 40 ^{14}C BP (Beta 281263 Cal BC 4690 to 4460 [Cal BP 6640 to 6410]), placing these burials firmly in the fifth 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, Al-Naimi & Tetlow 2013).

Two other groups of cairns associated with the Neolithic period are present within the two major wadi systems of northern Qatar, at Wādī al-Jalta and Wādī Ḍebayʿān. Wādī al-Jalta is situated in north-eastern Qatar close to the town of Al Khawr (Fig. 2). Located centrally within the discharge channel of the wadi approximately 1.5 km from the sea, is a jabal where the cairns occupy a prominent position within the landscape. The cairns are thought to date to the late fifth and early fourth millennia BC (Midant-Reynes 1985). During this period sea levels would have been approximately 2 m higher (Cuttler, Tetlow & Al-Naimi 2011), and it is likely that the jabal 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 1980; Midant-Reynes 1985). The tumuli were found to vary substantially between 0.80 and 4 m in diameter. Circular pits below the mounds averaged *c.* 0.65 m in diameter, while oval pits generally measured 1.10 x 0.75 m. The maximum depth of burial pits was 0.80 m, with no evidence for a superstructure associated with any of the mounds. Several contained human remains, in very poor condition, placed in the foetal 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, Anato-

lia and the Middle East is traditionally thought to have declined from the fifth millennium BC. This would tentatively place the site in the fifth millennium BC (Midant-Reynes 1985).

A total of twenty-six burial cairns were excavated around the fringes of Wādī Ḍebayʿān and to the west at Ra's 'Ushayriq (Fig. 2), a small peninsula located west of the wadi, by a team from QNHER during the 2010 to 2011 season. Most of these monuments were approximately 2 m in diameter with a maximum height of 0.4 m. None contained burial pits, although some used small, natural depressions within the underlying lithosol. Of all the cairns excavated, only one in Wādī Ḍebayʿān and one in Ra's 'Ushayriq contained visible human remains. A large number of finds (shell and bone beads, perforated bivalves, a stone pendant and various flakes of flint), however, 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-Mā' (north-western Qatar) (Fig. 2) during the 1950s (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, Gotoh & Akashi 1988, 1994); and the excavations of Jürgen Schreiber in the past decade, focusing also on the excavation of another burial in nearby Līshā (Schreiber *et al.* 2009) (Fig. 2). A total of thirty-three burial cairns have been excavated in Umm al-Mā'. The majority contained burial pits with funerary 'chambers' built over the burial pit. The human remains were in a 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 Līshā and the enigmatic triangular 'bethel' stones found about 3–4 m west of many of the mounds (Cuttler, Al-Naimi & Tetlow 2013). A bowl carved in stone, agate beads, bronze and silver jewellery and especially fragments of glazed ceramics provide a relative date between 300 BC and AD 300 (Schreiber *et al.* 2009).

At Ra's 'Abrūq, western Qatar (Fig. 2), 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 and de Cardi at Mazru'a, eastern Qatar (Fig. 2) were found to contain flexed skeletons, bronze objects, an iron sword and a few

iron arrowheads. In addition, two burials also contained the articulated skeletal remains of a camel and an intact glass ascribed to the Sasanian period (de Cardi 1978: 193).

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

Typology of pre-Islamic burials in Qatar

Prior to the excavation of the Neolithic cemetery in Wādī Ḍebay'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, Al-Naimi & Tetlow 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);

constructed in a similar manner to Type 3, but without capstones in this case, just the tumuli on top (Type 4, not illustrated).

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 over a burial pit, with capstones (Type 8);

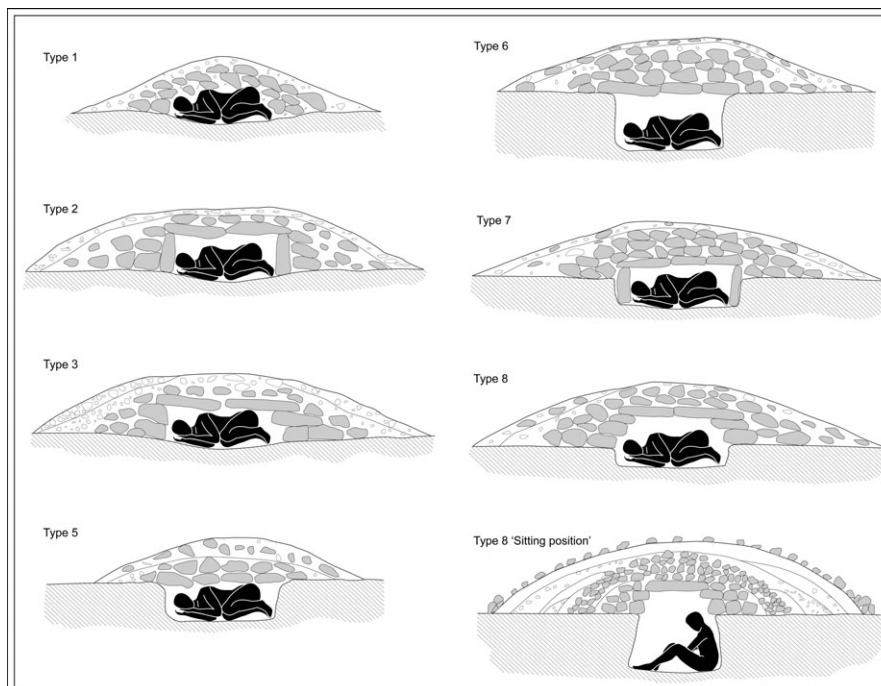


Fig. 3. Types of burial cairn in Qatar (after Cuttler, Al-Naimi & Tetlow 2013).

in addition, smaller or circular burial pits may relate to burial in a ‘sitting’ position (Type 8b, after Konishi, Gotoh & Akashi 1994).

The discovery of a Neolithic inhumation cemetery at Wādī Ḍebay‘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 Ḍebay‘ān.

The inhumation cemetery at Wādī Ḍebay‘ān: site background

Wādī Ḍebay‘ān is located on the north-west coast of Qatar approximately 4 km to the south of Al Zubara. As one of

the largest wadis in north-west Qatar, Wādī Ḍebay‘ān comprises a shallow depression extending 5 km from the interior on a south-east–north-west 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 of flora and related fauna within the wadi c.7000–5000 BP, indicative of higher sea levels, intertidal environments and the development of mangroves. Wādī Ḍebay‘ān was subject to ingress from sea-level rise from approximately the late sixth millennium BC and coincides with the earliest dated anthropogenic activity (Cuttler, Tetlow & Al-Naimi 2011). Environmental work within the wadi also suggests slow marine transgression, with periods of stillstand from the fifth millennium BC onwards (Cuttler, Tetlow & Al-Naimi 2011).

Early activity is located on a plateau and comprises pits, hearths and post-holes, radiocarbon dated between the mid-sixth and early fourth 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 far north as Qatar (Cuttler, Al-Naimi & Tetlow 2013). Later activity within the wadi focuses on a substantial, tidally reworked palaeo-shoreline dated between the early fourth and mid-third

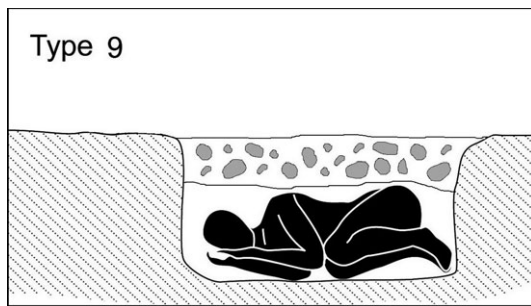


Fig. 4. A new burial typology discovered in Qatar—Type 9.

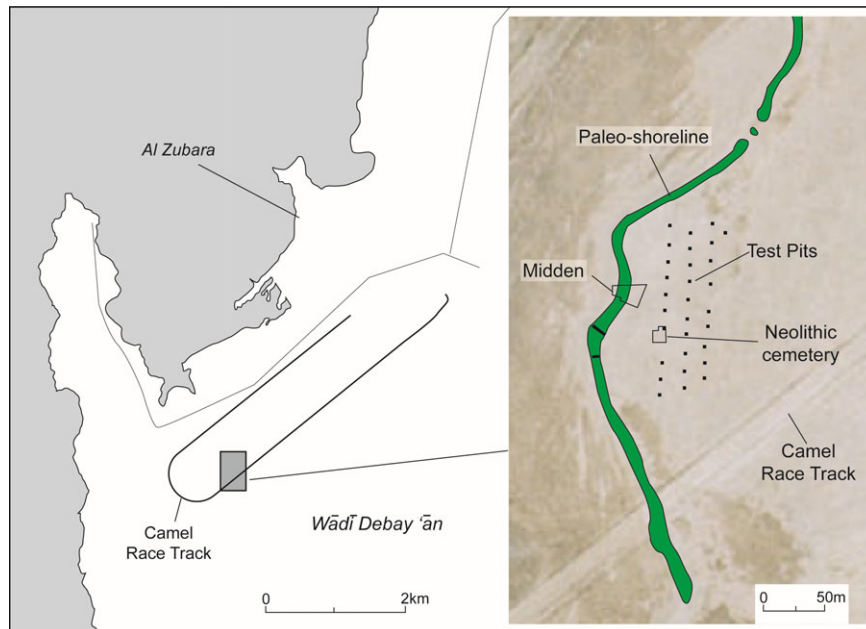


Fig. 5. The location of the Neolithic cemetery and Dilmun-period site within Wādī Ḍebay‘ān.

millennium BC, and comprised a midden, post-holes and hearths, rich in fishbone and dugong, turtle and shellfish, but was largely aceramic.

Methodology

The discovery of a substantial midden in 2011 prompted a programme 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 only occasionally hearths, but during the last week of the excavation season 2011–2012 a grave cut ([5004]), fragments of long bone and a single, intermediate phalange from a human hand were discovered in Test pit 27 (Cuttler, Al-Naimi & Tetlow 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]) was then excavated to reveal the skeleton (Figs. 6 and 7), which was excavated and recorded using methodology described according to Brickley and McKinley (2004) and Mays, Brickley & Dodwell (2004). Prior to lifting the remains were stabilised using a <5% paraloid/acetone mixture.

The stratigraphy and human remains

The grave was a cut ([5004]) orientated north-west–south-east measuring approximately 1.65 x 1.10 m, cut through natural deposits of sand and gypsum and through bedrock ([5000]). There was no evidence for any associated stone lining to the base or walls. The body was placed with the head to the north/north-west, and the face towards the west. It was lying on its right side, rolling onto the back. The right arm was flexed at the elbow with the hand pulled

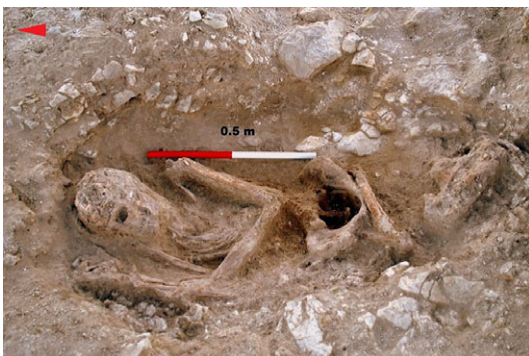


Fig. 6. The skeleton (5011) *in situ*.

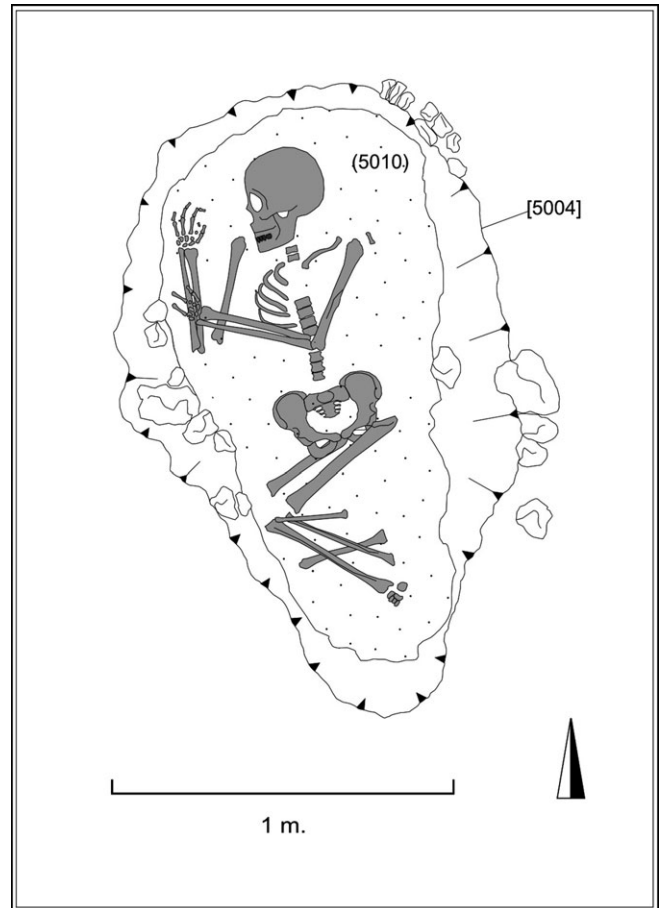


Fig. 7. A plan of the skeletal remains.

in towards the face; the left arm crossed the body, grasping the right forearm just above the elbow.

The skeleton would appear to be in a ‘forced’ foetal position whereby the ribcage and pelvis remained in a supine position but the head and the legs were rotated westwards. The ‘unforced’ foetal position would have the ribcage and pelvis resting on their right side. When considered together with the small dimensions of the burial pit, this may indicate either: 1) that the body of the deceased was possibly crouched in a very forced position so as to be buried in a small space; or 2) that 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.

Possible animal disturbances affected the tibias and ulnas. 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 outline was mostly defined by the action of gypsum crystals 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 were 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

Due to the poor preservation of the remains assessment was initially undertaken *in situ*. The sex was defined using the cranium and the post-cranial skeleton according to criteria outlined by Buikstra and Ubelaker (1994) and White and Folkens (2005). In general terms the remains were very robust and evidently from a tall individual. The cranial anatomy (supraorbital tori, mastoid process, zygomatic morphology and nuchal crest) was ambiguous with regard to gender. The pelvis was unambiguously female, however, as evidenced in particular, by the greater sciatic notch and the remains of the pubis. Femoral stature formulae could not be applied owing to the bones' poor preservation. The left humerus and radius were estimated at 315 mm and 270 mm in length respectively, allowing stature estimation between 179 and 182 cm, using Trotter and Gleser formulae (1958). This height is above average for females from any regional prehistoric group. The bones were extremely robust and powerfully marked with muscle attachments, especially the upper limbs, implying a highly active lifestyle.

The remains were clearly adult, as all epiphyses, including the medial clavicle, were fused, with no signs of fusion lines, thus indicating an age in the mid- to late 20s at least. This was confirmed by the considerable occlusal wear and flattening of the teeth, consistent with an age range between 35 and 45 years (Miles 2001). The auricular surfaces and pubic symphysis were too badly preserved to provide an age assessment. The remains require further cleaning and conservation to seek evidence of trauma, palaeopathology, population biology (biological origin and affinities), individual origin (using stable isotopes) and other indicators of lifestyle and behaviour.

The chronological evidence

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 on artefacts recovered from within the grave fill ([5003]) and radiocarbon dates from stratigraphy overlying this (Fig. 8). Artefacts from within the grave fill

included three greenish-grey sherds, with a fine-grained fabric typical of 'Ubaid pottery type 3 or 4 (Fig. 9). The sherds vary in thickness between 0.5 and 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, personal communication, 2013). This provides a *terminus post quem* in the fifth millennium BC.

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, c.0.5–1 m in diameter, and varying between 0.1 and 0.25 m in depth. Their excavation produced fragments of burnt, Dilmun-period pottery (R. Carter, personal communication, 2013) and fishbone. The pottery assemblage comprised reddish brown body sherds with a medium- to coarse-grained fabric. The sur-

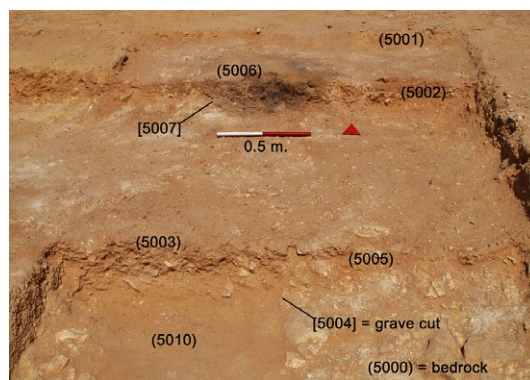


Fig. 8. Stratigraphic relationships of the burial and overlying layers.



Fig. 9. 'Ubaid-type pottery found within the burial.

faces show dark colouration, probably as a result of carbonised organic residue (Fig. 10). Whether this relates to domestic activity or burning after discard may be determined by future residue analysis.

Dilmun pottery and second-millennium BC hearths, often rectangular or with stone linings, have been recorded from Bahrain to Tell Abraq (UAE) and on the island of Ben Ghanim, Al Khawr (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 second millennium BC. Hearth ([5007]) cut into the layer (5002) immediately above the grave, provided a date of 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 Ḍebay‘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 female measuring 178–180 cm in stature, well above average height, even for a modern female. She also possessed an extremely powerful physique; the muscle attachments and the robusticity of the bones, notably her upper limb and extremities,

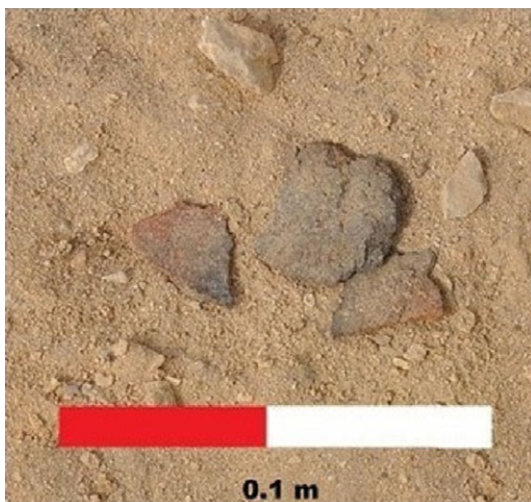


Fig. 10.
Dilmun-type pottery found within the fire pits.

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 stable carbon isotope ratios $^{13}\text{C}/^{12}\text{C}$ 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 (i.e. grave marker or mound) is previously unrecorded in Qatar. It is possible that any former marker has been erased in antiquity, but 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 from other Neolithic groups in Qatar (such as at Al Khawr and Simaisma); or do such practices indicate a different ‘social status’ within the same group?

While the ‘Ubaid pottery found within the fill of the grave provides a *terminus post quem* in the fifth millennium BC, it is considered residual, which suggests the burial could date to any period between the early fifth and late third millennia BC, a period of over 3000 years. The presence of a well-defined layer ([5002]) sealing the grave fill ([5003]) might indicate an earlier date within this period. The absolute dating of this cemetery is not certain, however, 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 by humans 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 whether they were 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 4 km of the present-day coastline. In other parts of the Arabian Peninsula, Neolithic burials are often associated with inland sites such as Jabal al-Buhais (Uerpmann, Uerpmann & Jassim 2006) and Jabal Hafit (Potts 2012), and with the Omani shore as at Ras al-Hamra (Munoz, Scaruffi

& Cavulli 2010) and As-Suwaysh (Charpentier & Méry 2010). The burial at Wādī Ḍebay‘ān 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 between the Arabian Peninsula and Mesopotamia (southern Iraq). Future excavation and analysis, plus comparative research within the rest of the Gulf, might also solve questions regarding the longevity of groups in Qatar. Taking into account the similarities of these recently discovered graves in Qatar with those located either inland or on the coast of the Oman peninsula, questions are raised about the possible extent of influence of different groups.

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, about two thirds have been robbed in antiquity (Cutler, Al-Naimi & Tetlow 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 archaeology in Qatar. This does, however, raise a more serious consideration. Given that survey and the presence of sites with a surface expression have guided the teams to locations excavated over the past sixty 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 on ‘Ubaid-related cultures in the

region between the fifth and fourth millennia BC, suggesting the possibility of the circulation of either material culture or population, both with capital inputs for research into ‘Ubaid elements in the Gulf. Given that occupation within Wādī Ḍebay‘ān is extensive and stretches 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.

Furthermore, the absolute dates for the second millennium BC in Wādī Ḍebay‘ān from fire pits next to the shoreline, with a high presence of fishbone within their fills, may support the already existing theories of temporary encampments or ‘way-stations’ associated with Dilmun maritime trade across the Gulf, as was described for similar remains at Ra’s ‘Abrūq (de Cardi 1978) and Al Khawr (Carter 2003).

Acknowledgements

We would like to thank H.E Shaykha al-Mayassa bint Hamad bin Khalifa Āl-Thāni (Chairperson of the Board of Trustees for the Qatar Museums) and H.E. Shaykh Hasan bin Mohammed Āl-Thāni (Vice-Chairman of the Board of Trustees for the Qatar Museums) without whose support the Qatar Remote Sensing and National Historic Environment Record Project would not have been possible. We would also like to express our gratitude to Mansoor bin Ebrahim Al Mahmoud (Chief Executive Officer, Qatar Museums) and Sultan Muhsen (Archaeological Consultant, Qatar Museums).

Our thanks also to Saif Al Naimi, Fatima Qassim Merekhan, Noora Khalaf Al-Hemadi, Ibrahim Al-Mansouri and Abdul-Aziz Al Mararfi (Qatar Museums Authority); and Claire Delahunty, Liam Delaney, Lesley-Ann Mather, Javier Naranjo-Santana, Peter Spencer and Emma Tetlow, for their contributions during excavation and post-excavation.

References

- Al-Naimi, F.A. & Arroch, H. 2010. Report of the first season of rescue excavations at Aerospace city, North Simaisma. Doha: Qatar Museums Authority. [Unpublished].
- Al-Naimi, F.A., Cutler, R., Arroch, H. & Roberts, H.M. 2010. An Upper Palaeolithic and Early Holocene flint scatter at Ra’s ‘Ushayriq, Western Qatar. *Proceedings of the Seminar for Arabian Studies* 40: 35–40.
- Al-Naimi, F.A., Price, K.M., Cutler, R. & Arroch, H. 2011. Re-assessing Wadi Ḍebay‘an: An important early Holocene Neolithic multi-occupational site in Western Qatar. *Proceedings of the Seminar for Arabian Studies* 41: 239–244.
- Bain, K. & Tetlow, T. 2012. Excavations South of Wakra. Pages 89–124 in Cutler, R. (ed.), *Mesaieed New Port: Marine Archaeological Assessment, Terrestrial Survey and Terrestrial Excavation 2011–2012*. Doha: Qatar Museums Authority/ University of Birmingham.

PREHISTORIC FUNERARY PRACTICES IN NORTHERN QATAR

- Beech, M., Cuttler, R., Moscrop, D., Kallweit, H. & Martin, J. 2005. New evidence for the Neolithic settlement of Marawah Island, Abu Dhabi, United Arab Emirates. *Proceedings of the Seminar for Arabian Studies* 35: 37–56.
- Bibby, T.G. 1965. Arabian Gulf Archaeology. *Kuml*: 86–111.
- Brickley, M. & McKinley, J.I. (eds.) 2004. *Guidelines to the Standards for Recording Human Remains*. (IFA paper no. 7). Southampton: BABAO/Reading: IFA.
- Buikstra, J. & Ubelaker, D. 1994. *Standards for Data Collection from Human Skeletal Remains. Proceedings of a Seminar at the Field Museum of Natural History*. (Arkansas Archeological Report Research Series 44). Fayetteville: Arkansas Archaeological Survey Print.
- Carter, R. 2003. Tracing Bronze Age Trade in the Arabian Gulf: Evidence for Way-stations of the Merchants of Dilmun between Bahrain and the Northern Emirates. Pages 123–131 in Potts, D.T., Al Naboodah, H. & Hellyer, P. (eds.), *Archaeology of the United Arab Emirates. Proceedings of the 1st International Conference on the Archaeology of the U.A.E.* London: Trident Press.
- Charpentier, V. & Méry, S. 2010. On Neolithic funerary practices: were there ‘necrophobic’ manipulations in 5th–4th millennium BC Arabia? Pages 17–24 in Weeks, L. (ed.), *Death and Burial in Arabia and beyond. Multidisciplinary perspectives*. (Society for Arabian Studies Monographs 10). Oxford: Archaeopress.
- Cuttler, R. 2013. Considering Marine Transgression as a Mechanism for Enforced Migration and the Coastal Gulf ‘Ubaid Phenomenon. The Neolithic of Arabia: New Paradigms and Future Perspectives. *Arabian Archaeology and Epigraphy* 24: 37–43.
- Cuttler, R., Al-Naimi, F.A. & Tetlow, E. 2013. Typological and chronological variation of burial in Qatar: ‘Ubaid to late pre-Islamic. *Proceedings of the Seminar for Arabian Studies* 43: 1–12.
- Cuttler, R., Tetlow, E. & Al-Naimi, F.A. 2011. Assessing the value of palaeoenvironmental data and geomorphological processes for understanding late Quaternary population dynamics in Qatar. *Proceedings of the Seminar for Arabian Studies* 41: 1–14.
- de Cardi, B. (ed.) 1978. *Qatar Archaeological Report: Excavations 1973*. Qatar: The Qatar National Museum/Oxford: Oxford University Press.
- Delaney, L., Al Naimi, F.A., Sheharyar, A., Cuttler, R.T.H. & Bouhali, O. 2014. *Re-Presenting Qatari History: 3D Digitizing Human Remains of Neolithic Age from Wadi Debay’an*. (Poster). *44th Seminar for Arabian Studies, 25th to 27th of June*. London: British Museum.
- Glob, P.V. 1957. Oldtidfund i Qatar. *Kuml*: 167–174.
- Glob, P.V. 1959. Arkæologiske undersøgelser i fire arabiske stater. *Kuml*: 233–236 & 238–240.
- Inizan, M-L. 1979. Troisième mission archéologique française à Qatar. *Paléorient* 5: 477–480.
- Kallweit, H. 2008. Systematic Investigation of Potential Paleolithic sites in Qatar Caves, Sink Holes and other Karst Forms. Doha: Qatar Museums Authority. [Unpublished].
- Kapel, H. 1967. *Atlas of the Stone-Age Cultures of Qatar. Reports of the Danish Archaeological Expedition to the Arabian Gulf*. Aarhus: Aarhus University Press.
- Konishi, M.A., Gotoh, T. & Akashi, Y. 1988. Archaeological Researches in the Gulf: A Preliminary Report of the Excavations in Bahrain and Qatar, 1987/8 Season. *Paléorient* 24: 18–46.
- Konishi, M.A., Gotoh, T. & Akashi, Y. 1994. *Excavations at Umm al-Ma’ Burial Field, Qatar 1990/91. Occasional papers 4. Centre for Asian Studies*. Tokyo: Rikkyo University Press.
- Mays, S., Brickley, M. & Dodwell, N. 2004. *Human bones from archaeological sites. Guidelines for producing assessment documents and analytical reports. Centre for Archaeology Guidelines*. Swindon: English Heritage.
- Midant-Reynes, B. 1985. Un ensemble de sépultures en fosses sous cairn à Khor (Qatar): étude des rites funéraires. *Paléorient* 11/1: 129–144.
- Miles, A.E.W. 2001. The Miles method of assessing age from tooth wear revisited. *Journal of Archeological Science* 28: 973–982.
- Munoz, O., Scaruffi, S. & Cavulli, F. 2010. The burials of the middle Holocene settlement of KHB-1 (Ra’s al-Khabbah, Sultanate of Oman). Pages 25–32 in Weeks, L. (ed.), *Death and Burial in Arabia and beyond. Multidisciplinary perspectives*. (Society for Arabian Studies Monographs 10). Oxford: Archaeopress.
- Parker, A.G., Eckersley, L., Smith, M.M. & Goudie, A.S. et al. 2004. Holocene vegetation dynamics in the northeastern Rub’ al-Khali desert, Arabian Peninsula: a phytolith, pollen and carbon isotope study. *Journal of Quaternary Science* 19/7: 665–676.
- Potts, D.T. 2012. *In the Land of the Emirates. The Archaeology and History of the U.A.E.* Abu Dhabi/London: Trident Press.
- Schreiber, J., Daroczi, T.T., Muhle, B. & Ewersen, J. 2009. Excavations at Umm al-Ma’, Qatar: Preliminary Report on the Second Season 2008/2009. Doha: Qatar Museums Authority. [Unpublished].
- Tixier, J. (ed.) 1980. *Mission archéologique française à Qatar: 1976–1977, 1977–1978. Recherches anthropologiques au Proche et Moyen Orient*. Paris: CNRS.
- Trotter, M. & Gleser, G.C. 1958. A re-evaluation of estimation of stature based on measurements of stature taken during life and of long bones after death. *American Journal of Physical Anthropology* 16/1: 79–123.
- Uerpmann, M. 2003. The Dark Millennium – Remarks on the Final Stone Age in the Emirates and Oman. Pages 73–84 in D.T. Potts, H. Al Naboodah & P. Hellyer (eds.), *Archaeology of the United Arab Emirates. Proceedings of the 1st International Conference on the Archaeology of the U.A.E.* London: Trident Press.
- Uerpmann, H-P., Uerpmann, M. & Jasim, S.A. (eds.) 2006. *The Archaeology of Jebel al-Buhais, Volume I — Funeral Monuments and Human Remains from Jebel al-Buhais*. Sharjah/Tübingen: Kerns Verlag.
- White, T. & Folkens, P. 2005. *The Human Bone Manual*. Waltham, MA: Academic Press.