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Mobile peoples - permanent places : the construction and use of stone-built architecture by nomadic communities in the Jebel Qurma region of the Black Desert (Jordan) between the Hellenistic and Early Islamic periods.

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5 The Mortuary Landscape of the Jebel Qurma Region

5.1. INTRODUCTION

In Chapter 3 it was argued that there are many sites in the Jebel Qurma region that can be classified as funerary sites, featuring potential funerary monuments such as burial cairns and pendants. Many burial cairns were associated, at least spatially, with Safaitic inscriptions, some of which even referred to burial cairns. The aim of this chapter is to define the funerary customs of the Classical and Late Antique period and its development through time, including potential precursors during the 1st millennium BC. It also seeks to shed further light on these funerary customs and their relation to the pre-Islamic carvings. This is done, firstly, by presenting and discussing the results of excavations carried out at a number of different funerary monuments that were tentatively defined as such during pedestrian surveys. The results of these excavations provide more detailed insights into the chronology and function of these features. Secondly, the distribution of these features across the variety of landscapes of the Jebel Qurma region is discussed, which provides an insight into the constitution of the mortuary landscape.

In Chapter 3 it was argued that funerary monuments in the Jebel Qurma was indicated by the presence of human skeletal remains observed in debris left by looters, potential burial chambers, and references to burial cairns in the Safaitic inscriptions. Furthermore, at least some of the burial cairns seemed to have particular features such as an external façade. For other cairns, it remained unclear whether they represent funerary structures at all, or something entirely different. In this chapter these preliminary observations are further studied by presenting the results of excavations, which provide a more detailed insight into the nature and chronology of funerary structures and burial customs. The excavations provided an opportunity to see whether these features actually contained any burials or remains thereof, as well as when and how these tombs were constructed and possibly reused. Furthermore, they were insightful in the proposed correlation between the pre-Islamic carvings and the cairns they often accompany.

Between 2014 and 2016 number of potential funerary monuments from various sites were excavated (Fig. 4.1), largely following the excavation methods described in Chapter 4. What follows is, firstly, a presentation of the excavation results, in which are included only the results from excavations that yielded datable material relevant for the study at hand. A discussion then follows on the most important observations from these results and their implications. Secondly, a number of analyses are presented that provide insights in the distribution of funerary monuments over the variety of landscapes of the Jebel Qurma region.

5.2. EXCAVATION RESULTS

Out of the large number of cairns, pendants, and other potential funerary structures documented through pedestrian surveys several were selected for excavation. On the basis of survey data a number of tomb types were already tentatively established. Some of the tombs featured a well-constructed façade on the outside; others appeared simply as dome-shaped constructions, although potential burial chambers were observed within. Through recent looting human skeletal remains had been exposed at a number of cairns, indeed suggestive of a funerary function. In terms of chronology, Safaitic inscriptions and petroglyphs sometimes clustered around cairns, suggesting a relationship between tombs and rock art. To further investigate these tentative observations different types of cairns were excavated to study their date of construction and use as well as their function.

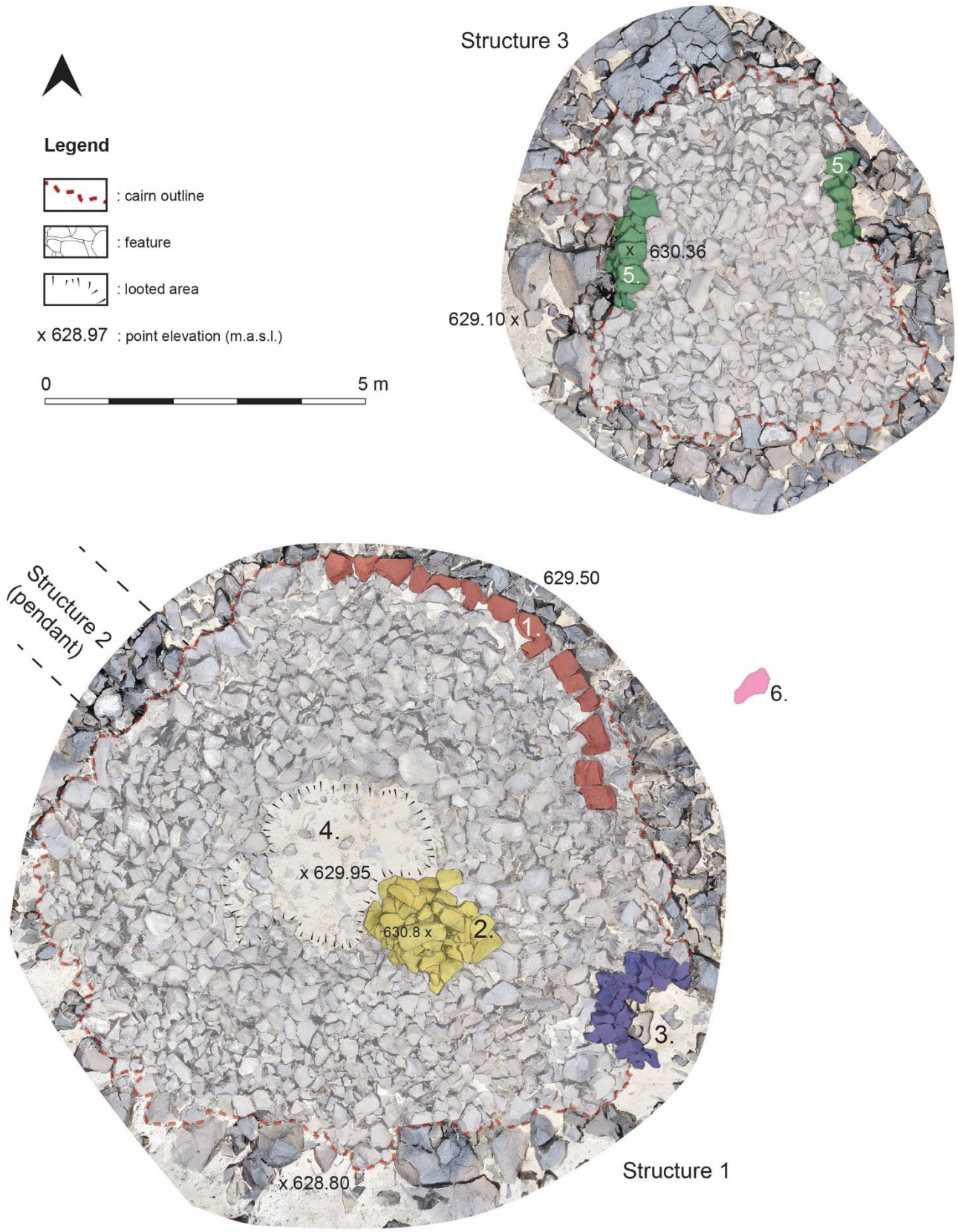

Figure 5.1: Plan of QUR-215 prior to excavation. 1) plinth G; 2) marker B; 3) shelter; 4) area disturbed by recent looting; 5) parts of a façade; 6) Safaitic inscription referring to a funerary structure. Base images: photogrammetric reconstructions.

5.2.1. QUR-215

The site of QUR-215 is situated on one of the highest points in the Jebel Qurma region, towering about 60 m above the surrounding plains, on top of the western part of the plateau. The site (Fig. 5.1) consists of a large cairn and pendant (Structures 1 and 2) and a second, smaller cairn next to it (Structure 3). Also present are 61 Safaitic inscriptions and 43 petroglyphs, distributed around the cairns. One of the Safaitic inscriptions is of special interest as it explicitly refers to a male individual buried in a tomb, presumably one of the two cairns the inscription was found next to.[1]

The two cairns and the pendant were excavated to further investigate which cairn the inscription may refer to, whether the remains of the mentioned individual could be retrieved, and what the general nature of these structures was.

Structure 1

This cairn was unfortunately partially looted before it could be excavated. The top of the cairn was thereby destroyed and much debris – mostly rocks – were cast on the sides of the cairn. The large size of the cairn – ca. 11m in diameter – can be partially attributed to this. Fortunately, however, the lower parts of the cairn did not appear to be affected by recent looting. Three features could be recognized prior to excavation. Firstly, a larger marker of 1.2 m tall and 73 cm wide (feature B) was standing on top of the cairn. Secondly, a small crescent-shaped feature of about 2.2 m wide and 88 cm high was built against the east slope of the cairn – this turned out to be a later addition. Thirdly, part of large circle, or plinth, which was assumed to represent the original outline of the cairn (feature G) was observed at the northern base of the cairn. A pendant (Str. 2, see below) diverged from the cairn in a NW trajectory.

The first step of the excavation procedure was to clear the cairn from obvious looting debris. Loose soil was present on the top of the cairn while stones that had obviously been moved by recent looting were lying around the top of the cairn and on its slopes. Marker B was also removed, as it was observed that it must have been a relatively recent addition given that stones containing modern tribal markings (*wusūm*) were incorporated in this features. It was removed before further lowering the cairn fill. When the cairn was cleared of modern disturbances layers of stone were removed and the soil in between was sieved in order to expose features and to collect artefacts and other finds. The areas around the already observed plinth (G) was also cleared of stones and soil to expose the outline of the cairn. At some point a section was made through the cairn, which involved lowering the northwest part of the cairn fill until virgin soil was reached.

<u>Architecture & burials</u> (Fig. 5.2)

The outline of the cairn was largely defined by a plinth (G) that consisted of a single row of large, neatly set unworked stones, forming a near complete circle around the base of the cairn with a diameter of about 6.7 m. In some cases rectangular blocks were chosen for the construction of this plinth. On the north and east side of the cairn these blocks were placed directly on virgin soil, while on the west side they stood on a foundation that raised the plinth some 36 cm, probably in an attempt to overcome the height differences of the natural surface. Only on the south side of the cairn the plinth was poorly defined. Here a number of large naturally occurring basalt blocks defined the cairn's outline, and the areas between these blocks were filled up with loosely piled stones. Here the base of the cairn is somewhat wider, i.e., about 8 m.

In the centre of the circle formed by the plinth a small oval chamber (A) was situated, measuring 74 by 53 cm. Its long axis was orientated N-S. This chamber had straight walls made of unworked stones stacked to a height of about 64 cm high and a floor of flat slabs (C), on which only a chipped-stone artefact

[1] The inscription referred to is QUR215.28.1 (see Della Puppa forthcoming).

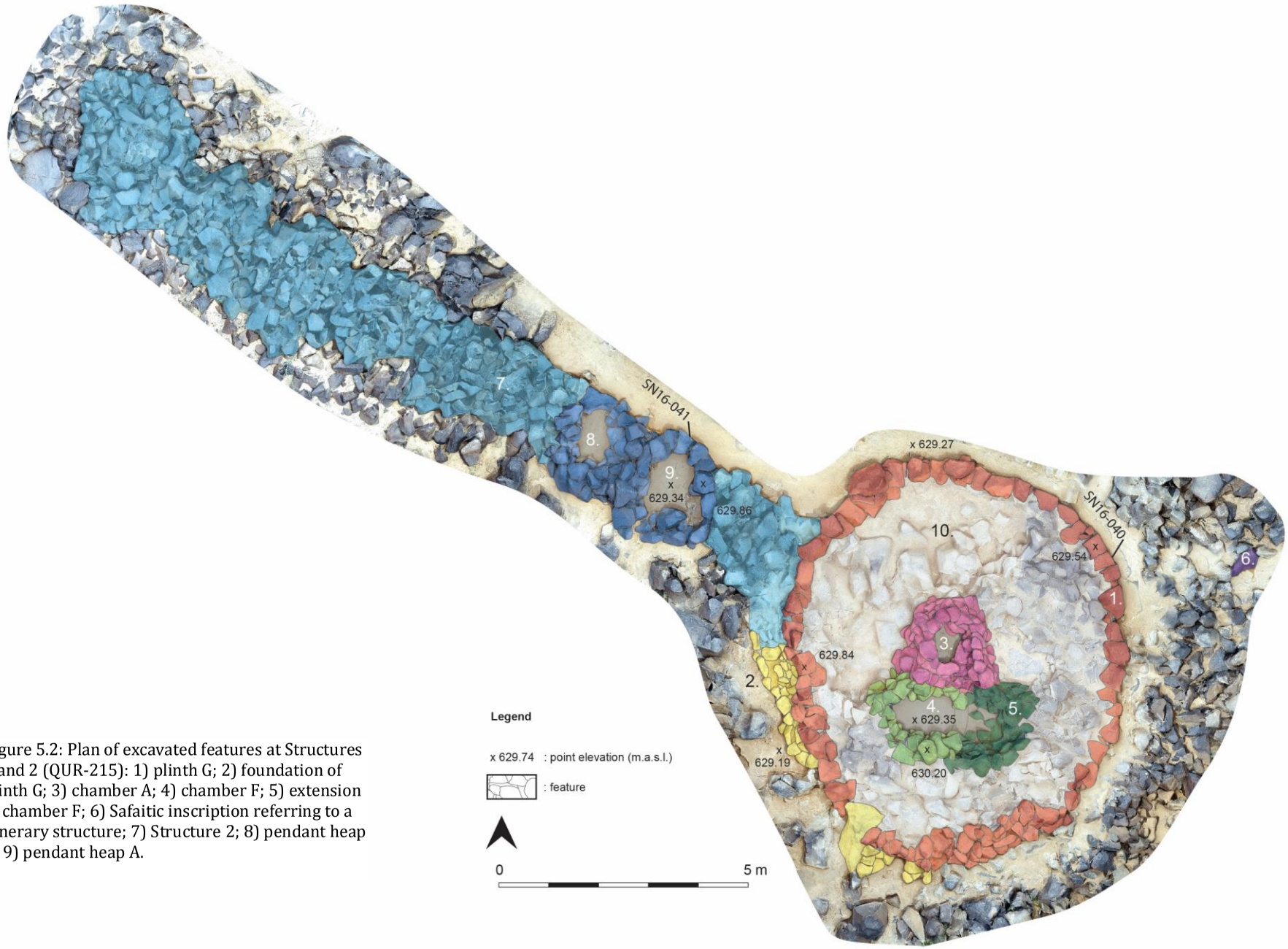

Figure 5.2: Plan of excavated features at Structures 1 and 2 (QUR-215): 1) plinth G; 2) foundation of plinth G; 3) chamber A; 4) chamber F; 5) extension of chamber F; 6) Safaitic inscription referring to a funerary structure; 7) Structure 2; 8) pendant heap B; 9) pendant heap A.

Figure 5.3: Islamic-type grave in chamber F of Structure 1 (QUR-215). Photo by author.

Figure 5.4: Chamber F in Structure 1 (QUR-215): the west part of the chamber (top) is much more neatly constructed than the east part (bottom).

was encountered. The chamber had been covered by slabs, one of which was found in its original position. The fill of this chamber consisted of many stones with soft windblown sediments in between. Modern animal remains were abundant, including mollusc shells, snake eggs, bones of small mammals or lizards, and beetles. A few pottery sherds (see below) were retrieved from the fill of the chamber as well as a few tiny bone fragments in a layer of about 25 cm thick covering floor C. It is uncertain whether these were human or animal bones.

To the south of chamber A was another chamber (F), this one larger and orientated roughly E-W. It measured 210 by 77 cm and was preserved to a height of 60 cm. On the bottom a complete human skeleton was found buried in an Islamic fashion, i.e., lying in an extended position on its right side, with the head to the west, facing Mecca (Fig. 5.3). It was placed between a number of large slabs (feature I) that secured the position of the body. These slabs, however, did not represent the original bottom of the chamber, which was located underneath these slabs. In addition to the complete Islamic skeleton, many more skeletal remains as well as artefacts were found in the fill of this chamber, as well as directly around it. These artefacts included beads, pendants, and fragments of bronze and iron artefacts (see below). These occurred from the top of the chamber right down to the bottom – also underneath feature I. The Islamic grave had apparently disturbed one or more older burials situated more or less in the same location, thereby scattering the earlier skeletal remains and artefacts throughout the chamber and around it.

Chamber F was probably not found in its original configuration, but seemed to have been altered over time. This is based on the fact that there is a difference in the way of construction between the west part and the east part of the chamber. The west part of the chamber has neatly set, slightly corbelled

walls, whereas the east part of the chamber is more like a pit than an actual chamber (Fig. 5.4). Also, in the centre of the chamber the corbelled west wall tends to curve inwards. It is therefore suggested that the west part of F represents an older burial chamber that was closed on the east side by a corbelled wall now lost. It would have been about 120 cm long. At some point this chamber gained a pit-like extension on the east side, through which the presumed east wall of the original chamber was destroyed. Since the lower extremities of the Islamic burial extended into this eastern compartment it is not unlikely that the reason for the extension of the original chamber was to accommodate the interment of the Islamic burial.

The fill surrounding chamber A and F consisted of a dense packing of basalt boulders with wind-blown sediments in between, that were apparently simply thrown in between the chambers and plinth G to create the cairn. A number of pottery sherds were retrieved from various elevations northwest of chamber A (see below). Apart from the skeletal remains and artefacts found around chamber F as described above, little else was found in this fill.

The disturbed skeletal remains from chamber F

The disturbed skeletal remains from the fill in and around chamber F were studied by Inskip (2015a; 2015b) who reports that it contained the poorly preserved human remains of two individuals – an adolescent and an adult. Teeth from one of the individuals were sent out for radiocarbon dates, but unfortunately it is not clear from which individuals these bones derived because the individuals were close in age. The teeth were dated between the 4th and 3rd century BC, although statistically a 3rd century BC date is most likely (SN15-202; Table 5.1). Remains from the second individual were not dated. In addition to the human remains fragments of camel bone were found as well, again in and directly around chamber F.

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN15-202	Human skeletal remains	Remains of disturbed burial in chamber F	GrA-67063	2215 ± 35	360-348 BC (6.8%) 317-270 BC (27.8%) 263-208 BC (33.6%)	380-198 BC (95.4%)

Table 5.1: Radiocarbon dates from Structure 1 at QUR-215.

The artefacts from chamber F

There were a large number of artefacts that could be associated with the disturbed human remains from chamber F. A total of 810 artefacts (excluding ceramics; see below) were found in or close to chamber F (Table 5.2). Most of these were beads made of stone, seashell and, possibly, ostrich eggshell (for a parallel, see Di Lernia & Tafuri 2013), presumably originating from one or more pieces of jewellery. To this jewellery may also have belonged the small number of pendants made of seashell. Hypothetical reconstructions of the jewellery are displayed in Figure 5.5. Also numerous were fragments of bronze. Several rim fragments indicate that the bronze probably originates from one or more bronze vessels. Other artefacts included a cowrie shell and an iron ring with bronze cladding (Fig. 5.6). A tiny glass fragment was also found, but this may be a modern intrusion as it showed no signs of weathering. Nearly all the artefacts (92%) came from the fill of chamber F, while the rest was mostly

Designation	N
Beads	580
Bronze fragments	218
Pendants	4
Cowrie shell	1
Ring	1
Glass fragment	1
Undefined	5
Total	**810**

Table 5.2: Artefacts from disturbed burial context in chamber F (QUR-215, Structure 1).

found directly around the top of the chamber. Few artefacts were found in the upper fill of chamber A. It therefore seems likely that all the artefacts were originally deposited in chamber F – presumably as grave goods with one or both of the disturbed burials – but were later scattered throughout and directly around the chamber by the construction of the Islamic tomb.

Figure 5.5: Conjectural reconstruction of jewellery from burial chamber F (QUR-215, Structure 1).

Other finds

In the fill of chamber A – at different elevations – and directly to the north of this chamber a number of pottery sherds were found that probably belonged to one small vessel. Its reconstructed shape strongly resembles prehistoric vessels retrieved from the late 3rd millennium tombs in the Jebel Qurma region (see Akkermans & Brüning 2017, Fig. 3). Remains from a second vessel were found in the cairn fill north of chamber A. It was made from a fine buff ware, and the shape of the vessel strongly resembles Late Byzantine to Early Islamic vessels reported at Pella and Tel Beth-She'an (Johnson 2006, Fig. 15.14:286; Fig 15.15:290; Smith & Day 1989, Pl. 52:9). The remains of both vessels are illustrated in Figure 5.7.

OSL date

In an attempt to further date the construction of the cairn a soil sample was taken from underneath one of the base stones of plinth G for OSL dating (Figs. 5.2 and 5.8). The stone had been purposefully placed onto natural soil for the construction of the plinth, thereby blocking the underlying soil from exposure to sunlight. The analysed sample (SN16-040) returned an OSL date of 2.15 ± 0.45 ka BP (Table 5.3), indicating that plinth G was constructed somewhere between the 6th century BC and the early 4th century AD.

Figure 5.6: Selected artefacts from burial chamber F (QUR-215, Structure 1): 1) shell pendant; 2) beads; 3) shell beads; 4) stone bead; 5) iron ring with bronze cladding; 6) rim fragment of a bronze vessel.

Discussion

A complex picture emerges from the excavations at this cairn. The small burial chamber in the centre of the cairn was possibly constructed already in the late 3rd millennium BC, given the remains of the Early Bronze Age IV pottery vessel in the tomb. However, the fact that the remains of this vessel were not found *in situ* makes it difficult to be certain on this point. If so, the cairn would have been considerably enlarged at a later stage by the construction of plinth G and burial chamber F, in which at least two individuals had been buried. The OSL date from plinth G and the radiocarbon date from skeletal remains chamber F together would suggest this occurred between the 6th and the 3rd centuries BC. The area between the plinth and the chamber was filled with loosely piled stones. The relation between the plinth and the chamber is inferred from the fact that the radiocarbon date from one of the individuals buried in the chamber falls within the range of the construction date of the plinth. The original outline of chamber F was rather small (ca. 120 cm long) while the interred individual was a late adolescent or adult, suggesting that this individual must have been interred

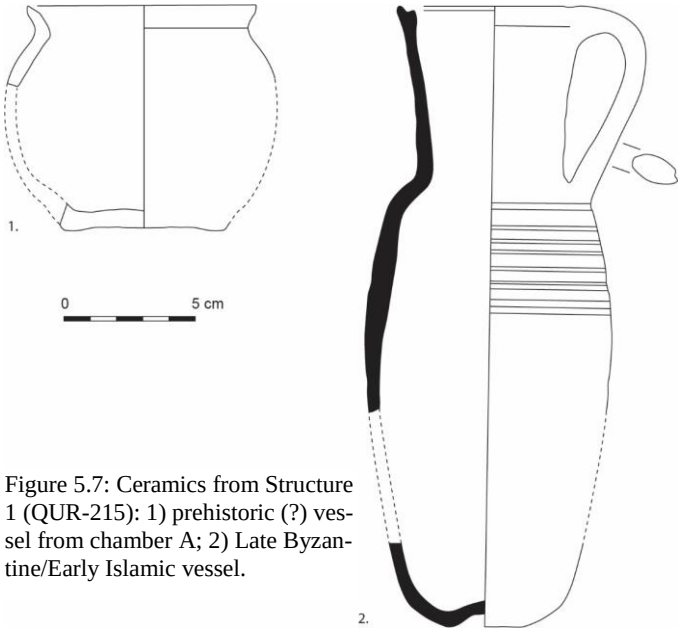

Figure 5.7: Ceramics from Structure 1 (QUR-215): 1) prehistoric (?) vessel from chamber A; 2) Late Byzantine/Early Islamic vessel.

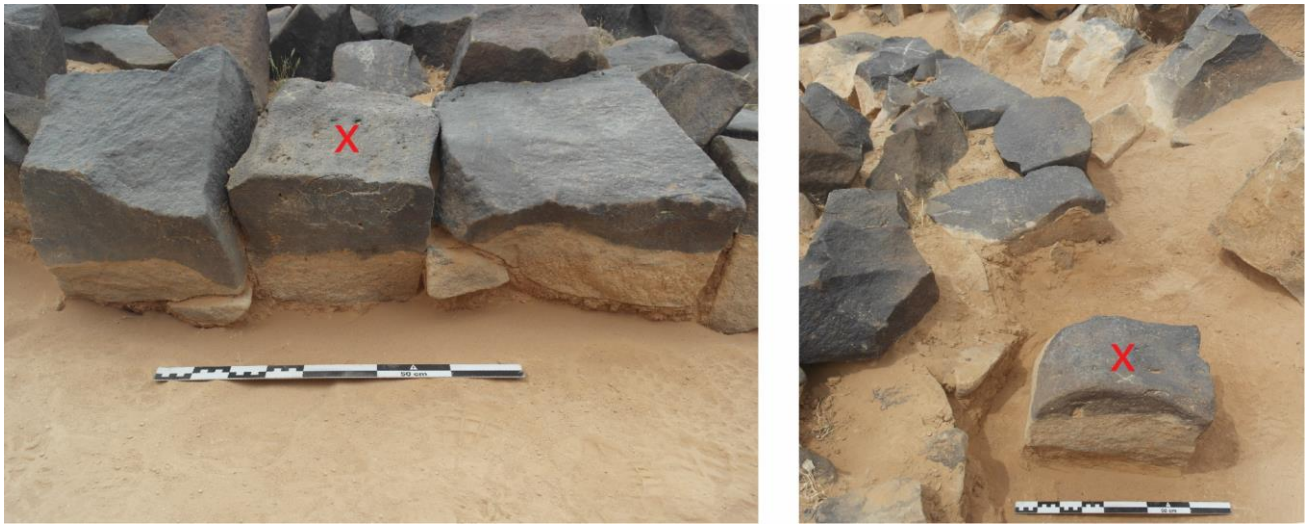

Figure 5.8: Context of OSL sample SN16-040: sediment from underneath a base stone (marked) of plinth G (Structure 1) was collected at night. Left: base stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

Sample no.	Structure no.	Context	Lab no.	Date BP
SN16-040	Structure 1	Sediment from underneath plinth G	NCL-8216141	2.15 ± 0.45 ka BP
SN16-041	Structure 2	Sediment from underneath feature A	NCL-8216142	2.5 ± 0.46 ka BP

Table 5.3: OSL dates from QUR-215.

in a contracted position. When the second individual was buried in chamber F is currently unknown. A third burial was added at a much later stage. Although not corroborated by radiocarbon dates, the well-preserved remains of the third individual and its typical Islamic burial position seems to suggest a relatively recent date.

Structure 2

Structure 2 is a pendant of about 16.5 m long, extending from Structure 1 in a NW trajectory (Fig. 5.2). Nine heaps were defined during the survey. Two individual heaps of the pendant – those who were situated closest to Structure 1 – were excavated (features A and B). First, their original outlines were established by removing debris around the features. The outlines could be clearly defined as they consisted of fairly large blocks forming crude circles. Next, the areas within these circles were lowered until virgin soil had been reached.

Architecture

Feature A consists of an oval ring of large stones, i.e. about 40 cm across on average. This ring, measuring 2.7 by 1.52 m, was constructed on virgin soil. The ring stood two to three stone courses high, or up to 83 cm. Its interior had been completely filled in with smaller stones, i.e. about 20cm across on average, with sediments in between. These sediments contained natural flint pieces, indicating that the soil is not Aeolian but was brought up intentionally. Virgin soil was reached at the bottom of this fill (Fig. 5.9). The fill of the feature yielded no artefacts or skeletal remains.

Feature B consists of another oval stone ring, this one measuring 2.12 by 0.67 m. It was two to three stone courses high, to a maximum of 86 cm, and constructed on virgin soil. Large stones of up to 70 cm in length were used for the construction of this ring (Fig. 5.9). Like feature A, its interior had been filled up with smaller stones and sediments containing natural flint. No finds whatsoever were retrieved from the fill.

Figure 5.9: Features A (left) and B (right) of Structure 2 (QUR-215) after excavation. Scale is 50 cm, photos by author.

OSL date

In order to determine the construction date of the pendant a single soil sample for OSL dating was collected from underneath one of the base stones of feature A (SN16-041). This stone has been deliberately placed on virgin soil as part of the construction of the outer circle forming the low wall of the feature (Fig. 5.10). The sample returned an OSL date of 2.5 ± 0.46 ka BP (Table 5.3), indicating that feature A had been constructed between the middle of the 10th century BC and the early 1st century AD.

Figure 5.10: Context of OSL sample SN16-041: sediment from underneath a base stone (marked) of feature A (Structure 2) was collected. Left: stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

Discussion

Although some effort was clearly put into the construction of the rings of features A and B these rings were subsequently completely filled up with stones and sediments. Any evidence for the presence of a human burial within these features was absent; the function of these features therefore remains elusive.

The OSL date obtained from feature A, establishing the date of construction of the feature in the first millennium BC or the beginning of the first millennium AD, may indicate that the pendant is broadly contemporaneous with the period during which the main cairn with its plinth G was constructed (see above). If we assume that the pendant was added to Structure 1 after it was enlarged through the construction of plinth G and the construction of chamber F, then the pendant cannot predate the 6th century BC, indicated by the OSL date from plinth G. The construction date of the pendant can thus be narrowed between the 6th century BC and the early 1st century AD.

Structure 3

Structure 3 is the smaller of two cairns and was encountered in a relatively good state of preservation during the survey. It measured 6.1 by 5.7 m in width and was preserved to a height of 1.26 m. The cairn appeared not to be looted and parts of an external façade were preserved on the east and west side of the cairn (Fig. 5.1). This façade had a relatively irregular face and was made of boulders rather than slabs. On the top of the cairn a small depression was observed, of which it was assumed that it represented a collapsed burial chamber.

The excavations initially focused on defining the outline of this presumed burial chamber. After that, the remainder of the cairn fill was also lowered in search for other potential features. The excavations revealed that this cairn had been completely surrounded by a somewhat crudely constructed façade that had a roughly rectangular plan, measuring 4.8 by 4 m. The interior of the cairn had been filled up completely with crudely piled stones. Despite the suspected presence of a burial chamber, no such feature or others were present within the cairn or underneath it. Although a few flimsy skeletal remains were retrieved from the fill of the cairn, these could not be safely attributed as human. They may equally represent remains of animals brought in through natural processes. The function of this cairn, therefore, must remain unknown.

Discussion

A complex situation has emerged from the excavations carried out at the different structures of QUR-215. Structure 1 was constructed during the late 1st millennium BC with the construction of plinth G and the chamber F, to which at least one human burial from this period is associated, which was radiocarbon

dated to, most likely, the 3rd century BC. This structure may have been an enlargement of a small prehistoric cairn, but this reconstruction is based only on the occurrence of a possible Early Bronze Age pottery vessel and therefore uncertain. Whatever the case, the pendant tail (Structure 2) was constructed at the same time as plinth G and chamber F, or in the subsequent centuries, i.e., between the 6th century BC and the 1st century AD. More burials were later added to chamber F of Structure 1, the last one in relatively recent times. The large amount of artefacts in chamber F, deriving from jewellery and a bronze vessel, belonged to one or both of the earlier burials in chamber F, and should therefore be ascribed a Hellenistic date. As for Structure 3, it is at this point completely unknown when it was constructed and whether it served as a burial cairn.

Due to the fact that the structures at QUR-215 were modified numerous times, with burials added disturbing older burial remains, and the fact that some of the features remain enigmatic – especially Structure 3 – associating the Safaitic inscriptions situated on and around the cairns with any of the burials or features is difficult. A direct relation between the inscription mentioning the construction of a cairn for a deceased person (see above) and one of the attested burials remains difficult to make. A likely candidate for a burial to which the inscription refers is the one attested in chamber F in Structure 1, which was dated to the 4th or 3rd century BC. It remains possible, however, that it relates to the second, undated burial within this chamber which may well be somewhat younger.

5.2.2. QUR-28, Structure 2

This site is situated on the southern ridge of the basalt plateau, and consists of a large circular platform on the edge of which a small burial cairn had been constructed (Fig. 5.11). 53 Safaitic inscriptions and 49 petroglyphs were present at the site, mostly clustering around the cairn. Diverging from the platform in a southeast trajectory was a pendant comprising 22 well-defined individual cairns. Some of the cairns

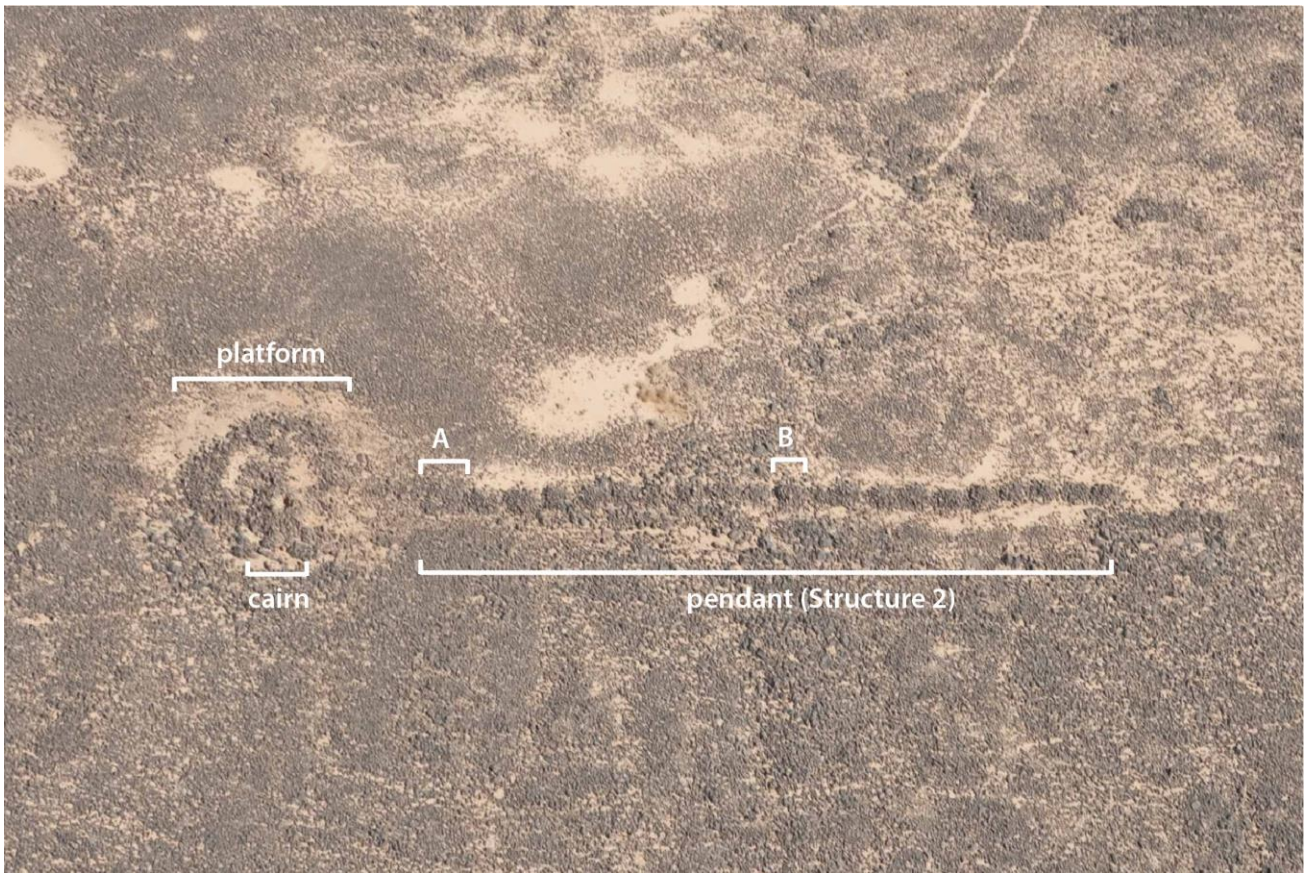

Figure 5.11: QUR-28 with its main features. Aerial photograph by Mike Neville (courtesy of APAAME).

were well preserved and stood up to 75 cm high while other cairns were preserved more poorly, and only featured the outline of the cairn's base. Most of the better preserved cairns were situated farthest away from the platform while the less well-preserved cairns were situated closest to the platform. Excavations at this site focused on the pendant. At a number of the pendant's individual cairns actual chambers rather than crude stone heaps were observed, possibly representing burial chambers. This hypothesis was tested by excavating two of these chambers.

Figure 5.12: Feature A at QUR-28 (Structure 2): the base of a pendant heap. Scale is 50 cm, photo by author.

Figure 5.13: Feature B at QUR-28 (Structure 2): a neatly constructed pendant heap. Scale is 50 cm, photo by author.

Of the first chamber, feature A, only the first course of stones was preserved. (Fig. 5.12). The exterior measurements of the chamber were 2.7 by 1.2 m. It was filled with small basalt cobbles and wind-blown soil. No artefacts or other finds were contained within this fill. Subsequent excavation of the soil underneath the chamber did not yield anything either. The second chamber, feature B, was preserved much better. Much of the well-constructed exterior façade of the chamber was preserved 4 to 6 courses high, or up to 75 cm. Within the chamber, which had an oval shape measuring 2.4 by 1.9 m, was a dense packing of stones with wind-blown soil in between (Fig. 5.13). This fill was excavated but contained no finds either. The structure was excavated down to natural soil.

It may be concluded, then, that although both excavated features appear to have been carefully made constructions, these were not chambers. Rather, as feature B showed best, they are carefully constructed cairns featuring a façade, but the interior of these cairns was completely filled up by stones. Although the function of these small cairns remains unknown, they do not seem to represent burial installations.

5.2.3. QUR-32, Structure 2

QUR-32 is situated ca. 500 m away from QUR-28, further east on the ridge of the basalt plateau (Fig. 5.14). Another pendant is located here (Structure 2) flanked on its extremities by a large platform-like structure on the northeast side and a burial cairn on the southwest side. 46 Safaitic inscriptions and 39 petroglyphs are present at the site, mostly around the cairn. The pendant is the largest in the study area, comprising

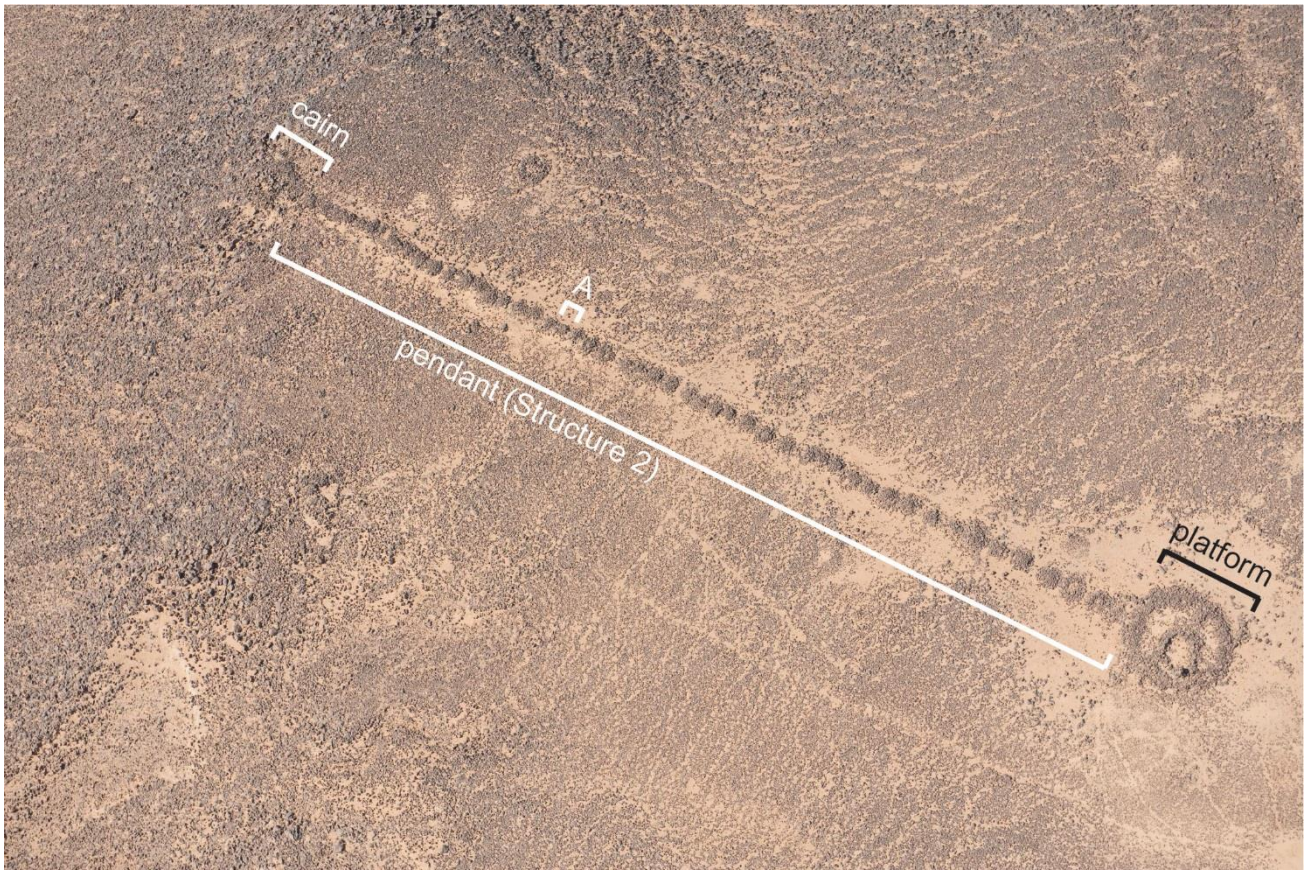

Figure 5.14: QUR-32 with its main features. Aerial photograph by David Kennedy (courtesy of APAAME).

58 individual cairns strung out over a length of nearly 135 m. Similar to QUR-28, several of these cairns appeared to consist of small chambers or, at least, a nicely constructed external façade. One of such cairns was excavated (feature A). Again it appeared to be simply a cairn with a nicely constructed façade rather than a chamber, as the interior had been completely filled up with small stones. This fill was excavated down to natural soil but did not yield any finds. Having defined the outline of the external façade of this small cairn (Fig. 5.15) it was decided to take a soil sample (SN16-075) from

Figure 5.15: Small cairn after cleaning its exterior that was part of the pendant (Structure 2) at QUR-32. Scale is 50 cm, photo by author.

underneath one of its base stones for OSL dating (Fig. 5.16). The returned OSL date was 2.39 ± 0.38 ka BP (Table 5.4). Therefore, this feature must have been constructed somewhere between the middle of the 8th century BC and the early 1st century AD.

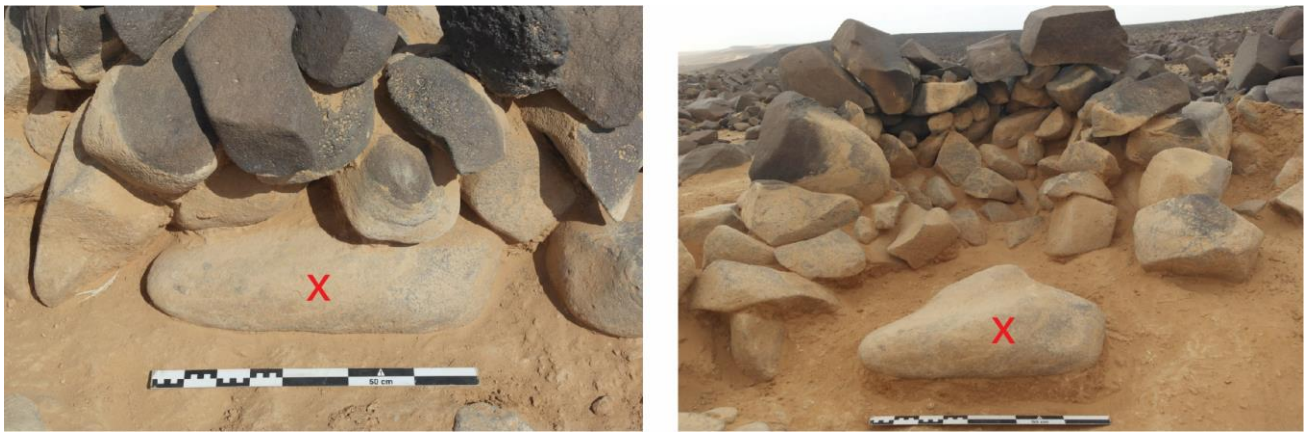

Figure 5.16: Context of OSL sample SN16-075: sediment from underneath a base stone (marked) of feature A (Structure 2) at QUR-32 was collected. Left: stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

Sample no.	Context	Lab no.	Date BP
SN16-075	Sediment form underneath feature A	NCL-8216143	2.39 ± 0.38 ka BP

Table 5.4: OSL date from QUR-32, Structure 2.

5.2.4. QUR-9, Structure 5

The site of QUR-9 (Fig. 5.17) is also situated on the southern ridge of the Qurma massif, where it is delineated by topographic depressions on all sides. The site extends over an elongated area of about 1 ha that has a roughly NW-SE trajectory. Part of the site has been covered by aeolian sand deposits, which also partially cover some of the features at the site. The site consists of a total of 6 cairns and 4 pendants, all except one of which are connected to a larger cairn. The site also comprises 19 Safaitic inscriptions and 8 petroglyphs. The rock art is mostly situated on and directly around the largest cairn at the site – Structure 3.

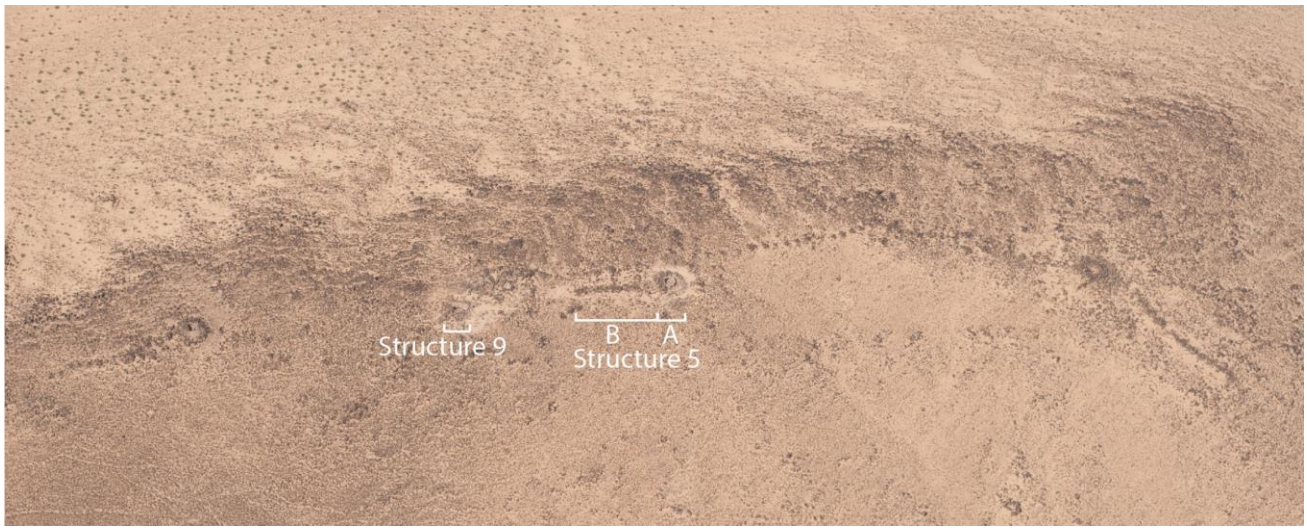

Figure 5.17: QUR-9 with features mentioned in the text. Aerial photograph by Rebecca Banks (courtesy of APAAME).

Structure 5 consists of two parts, a main cairn and a pendant (Fig. 5.18). The main cairn (Structure 5A) was encountered in an apparently good state of preservation – it seemed not be looted. It had a diameter of ca. 7 m and stood 1.2 m tall. Only on its NE edge two small depressions were visible, possibly representing limited looting activities. The pendant (Structure 5B) diverged from the cairn in a SE trajectory over a length of about. 19 m, and consisted of 13 small cairns. A space of ca. 2 m separated the main cairn from the pendant. There is no rock art directly associated with these structures.

Excavations at Structure 5 commenced in 2014 when three small cairns of the pendant, situated at its southeast end, were excavated. A fourth one was excavated in 2016 to obtain an OSL sample. The main cairn was excavated in 2016. A section was made through the cairn to investigate the construction.

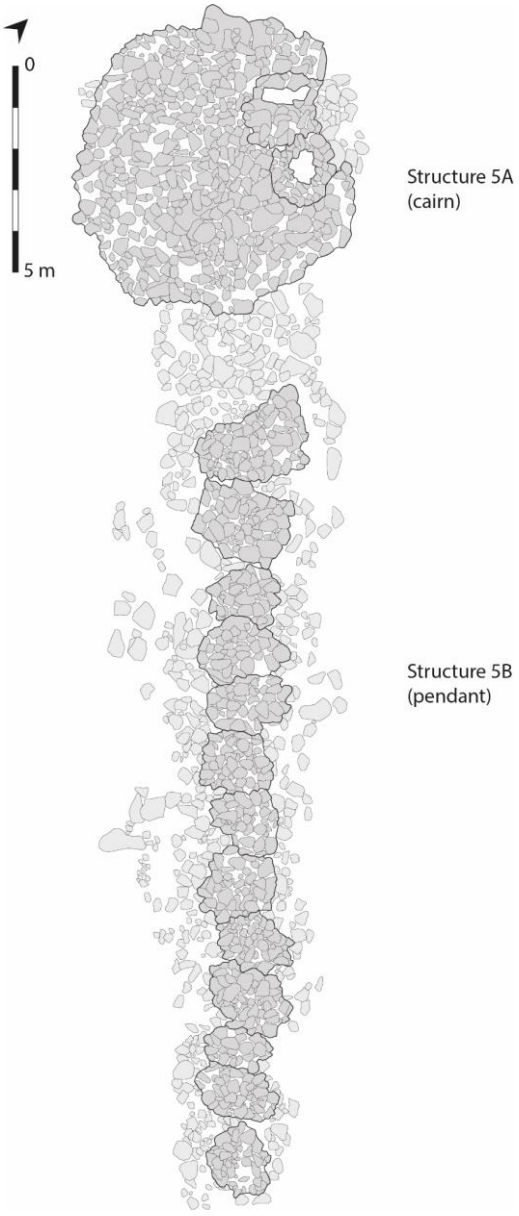

Figure 5.18: QUR-9, Structure 5 prior to excavation. Architecture drawn by A. Kaneda.

Structure 5A (cairn)

Architecture & burial

The excavations at Structure 5A revealed that the main cairn contained a circular wall with an exterior diameter of 2.9 m and an interior diameter of 2 m (Fig. 5.19). This ring featured a neatly constructed façade on the outside that was constructed from basalt slabs and boulders, up to a height of ca. 80 cm, or 3 to 4 stone courses. It was partially built on top of large naturally occurring boulders which gave the structure additional elevation. The ring wall had been obscured completely – on the sides and on top – by a cover of loosely piled boulders. The circular chamber does not seem to have been closed by covering slabs, as slabs large enough to span the distance were not present. Instead, the circular chamber was completely filled in with loosely piled stones, in which wind-blown deposits had subsequently accumulated. Within this fill and underneath it poorly preserved fragments of a human skeleton and a number of artefacts, probably representing grave goods (see below), were retrieved. Some of this material came from the bottom of the circular chamber; others were retrieved from its fill, suggesting that the burial had been considerably disturbed and scattered through the chamber by rodents, beetles, and other small animals. The presence of bones from a small mammal, possibly hare, is also indicative of such processes.

Skeletal remains

The human skeletal remains retrieved from within Structure 5A were in a very poor state of preservation. They probably derived from a single adult individual, but further observations were impossible to make (Inskip 2016). Furthermore, due to the limited amount of collagen preserved in the bone tissue the remains were not suitable for radiocarbon dating.

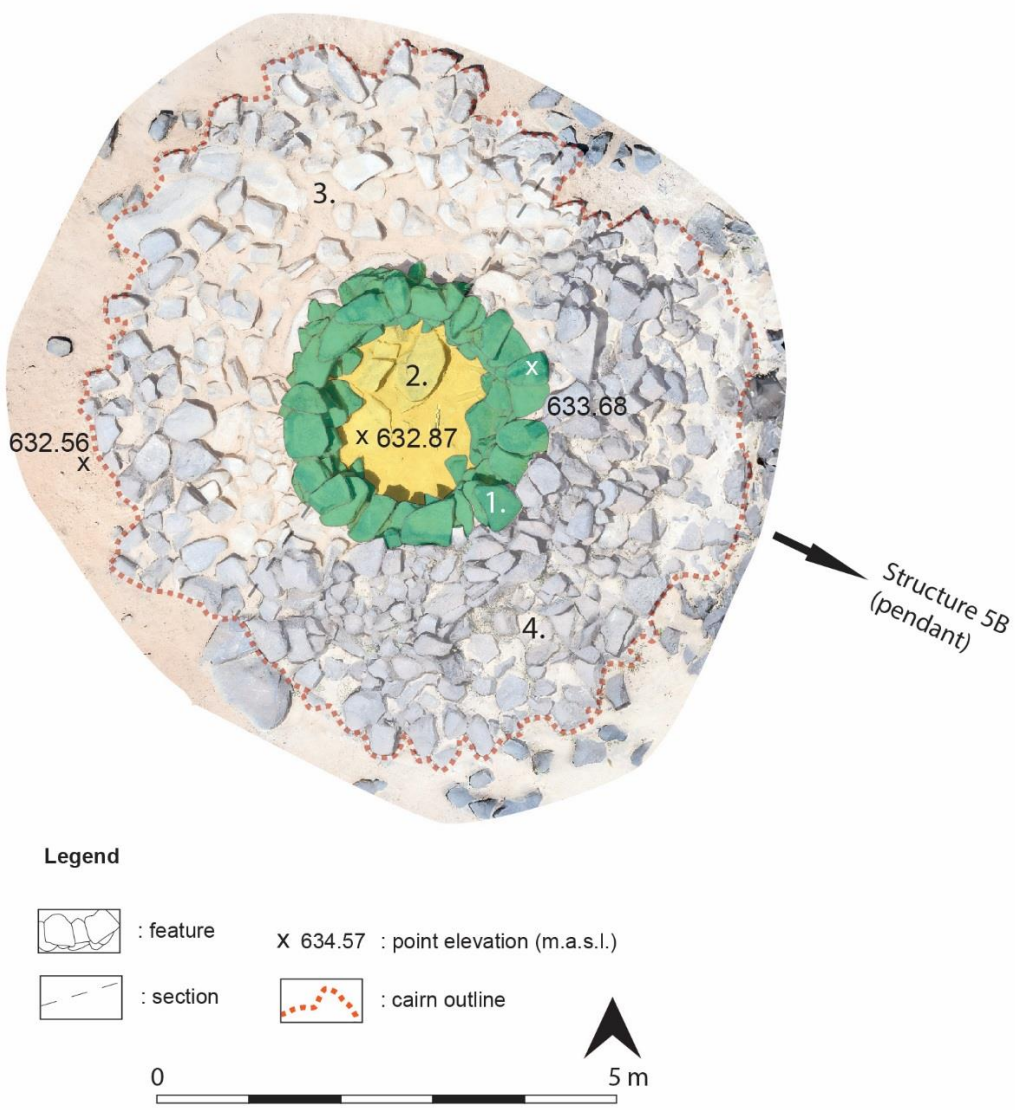

Figure 5.19: Features excavated at Structure 5A (QUR-9): 1) façade; 2) burial chamber; 3) excavated part of the cairn's cover; 4) unexcavated part of the cairn's cover. Base image: photogrammetric reconstruction.

Artefacts

In addition to the skeletal remains – and possibly associated with them – a total of 39 artefacts were found, nearly all of them in the fill of the central chamber. Most of these artefacts were beads of various materials, including red semi-translucent stone, glass or glass paste, and shell, and possibly tooth (Fig. 5.20). A few bronze fragments were also among the artefacts.

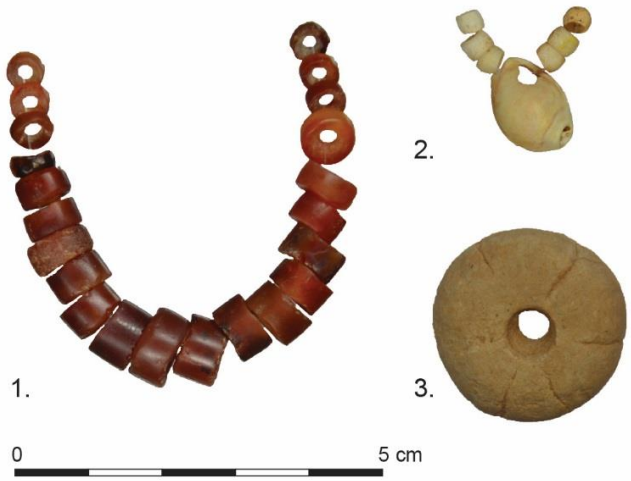

Figure 5.20: Artefacts from Structure 5A (QUR-9): 1) stone beads; 2) shell beads; 3) stone pendant.

Discussion

Based on the excavations the following sequence of construction and use is proposed. The circular wall or chamber was created initially, into which a human body was deposited adorned with a number of

object including jewellery made of beads and one or more objects made of bronze. The burial was subsequently covered by a dense packing of stones, filling up completely the chamber. Lastly a stone cover was applied obscuring the chamber, including the top, from view. Exactly when this all happened cannot be determined on the basis of these excavations alone, as no closely datable material was found.

Structure 5B (pendant)

Architecture & OSL date

The four small cairns of the pendant that were excavated seemed to consist solely of crudely piled boulders. The cairns had a roughly circular to oval shape. External façades, similar to the one observed at QUR-32 and QUR-28, were not observed here. Again, no artefacts or other finds were present within or underneath these cairns.

An OSL sample was collected from underneath one of the small cairns of Structure 5B (Fig. 5.21). The sample (SN16-155) returned an OSL-date of 2.77 ± 0.47 ka BP (Table 5.5), putting the construction date of this pendant, rather broadly, somewhere between the late 13th century and the early 3rd century BC.

Figure 5.21: Context of OSL sample SN16-155: sediment from underneath a base stone (marked) of a small individual pendant heap of Structure 5B (QUR-9) was collected. Left: stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

Sample no.	Context	Lab no.	Date BP
SN16-155	Sediment underneath pendant heap	NCL-8216146	2.77 ± 0.47 ka BP

Table 5.5: OSL date from QUR-9, Structure 5B.

Discussion

The relationship between the cairn and pendant is difficult to establish on the basis of these observations alone. The structures could be broadly contemporaneous but a phase difference is equally plausible, with the cairn being constructed prior to the pendant or vice versa. None of the structures is overlying the other, and only one of the structures was dated with some degree of accuracy. It is therefore impossible to make any further comments on their relative chronology at this point.

5.2.5. QUR-9, Structure 9

Structure 9 was encountered well-preserved as it was seemingly not subjected to recent looting (Fig. 5.22). The cairn had a roughly circular base of about 6.3 m in diameter, and it stood up to 1.3 m high. In

Figure 5.22: Side- and top view of Structure 9 at QUR-9 prior to excavation.

the centre of the cairn part of a wall outline was already visible, made of relatively large basalt boulders, that potentially was part of a burial chamber. There was no pre-Islamic rock art associated with this cairn.

After the cairn was recorded in the state in which it was encountered through photogrammetric modelling it was excavated. Excavations initially focussed on further defining the central potential burial chamber. A section was subsequently created through the cairn to further investigate the architecture.

Architecture & burials

Similar to Structure 5A this cairn appeared to contain a central circular wall (Fig. 5.23). This ring had an interior diameter of ca. 1.5 m and an exterior diameter of ca. 2.75 m. It stood up to 85 cm high and featured a neatly constructed façade on the exterior. This wall was constructed of both slabs and boulders, and partially stood on large naturally occurring rocks which gave the wall some additional elevation. The fill of the circular chamber consisted of basalt boulders and wind-blown sand deposits. Within these deposits several beads were contained as well as small fragments of human skeletal remains. More skeletal remains and jewellery was retrieved from the cover of basalt and wind-blown sand that was lying against the exterior of the circular chamber (Fig. 5.24).

The bottom of this chamber was reached without encountering any articulated human skeletal remains. The chamber did not have a paved floor. Rather, the floor consisted of natural virgin soil. Underneath this soil floor a pit was discovered that was dug partially underneath the ring wall and into the bedrock. This pit measured 120 by 60 cm and was about 60 cm deep. In this pit the fully articulated remains of a human skeleton were encountered (Fig. 5.25). For this burial (Burial 1) the body was interred in a fully contracted position on its right side, with the head towards the southeast, facing northeast. The arms were flexed in front of the chest. No grave gifts were encountered. The body had been covered by loose soil that was in turn covered by rocks that filled up the circular chamber. A bone sample from this burial (SN16-217) returned a radiocarbon date of AD 425-579 (Table 5.6).

Skeletal remains

Skeletal analyses showed that the articulated remains of Burial 1 were from a male that had died in his twenties. There were no indications about the cause of death. The highly fragmentary human skeletal remains from the fill of the chamber overlying Burial 1 and from the cover outside the burial chamber were from a second individual, also a young adult (Inskip 2016).

Artefacts

A total of 17 artefacts were found in the cairn (Fig. 5.26). Some of these came from the fill of the central chamber while others came from the cover on the exterior of the chamber. None of them were clearly associated with Burial 1. Instead, they most probably derive from another yet heavily disturbed burial that was identified within the fragmentary skeletal remains. 16 of the artefacts were beads, mostly made of red semi-translucent stone, but beads made of bone, shell, and possibly glass paste were also present. None of these artefacts are closely datable. Additionally

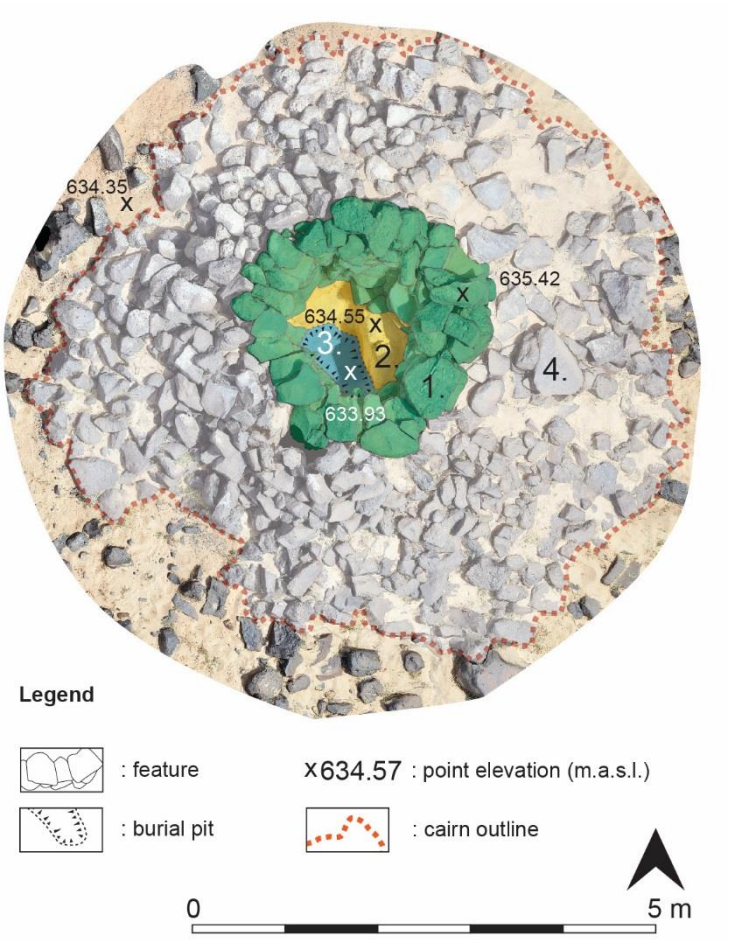

Figure 5.23: Features exposed through excavations at Structure 9 (QUR-9): 1) façade; 2) burial chamber; 3) burial pit 4) cover. Base image: photogrammetric reconstruction.

Figure 5.24: Section through Structure 9 (QUR-9): 1) façade; 2) burial chamber; 3) cover. Scale is 50 cm, photo by P. Akkermans.

a gold earring was found, featuring a simple hoop to which a granulated pendant was attached, possibly representing grapes, flanked by two larger spheres. No exact parallels for this object were found, but it resembles a number of gold earrings from Tawilan in Southern Jordan, which were dated to the 10th-9th centuries BC (Ogden 1995, Figs. 8.20-24).

Figure 5.25: Burial 1 was interred in a pit that was dug out underneath Structure 9 (QUR-9). Scale is 50 cm, photo by P. Akkermans.

Discussion

The results of the excavation are surprising in several ways. A remarkably well preserved Byzantine-period grave was encountered buried underneath the cairn rather than within its central chamber. The fact that the body was covered by soil and subsequently with rocks probably contributed to the good state of preservation in which it was encountered. This burial, however, does not seem to represent the original one. Firstly, the pit in which the body was interred was dug out partially underneath the wall of the circular chamber, which seems an unlikely procedure as this would partially undermine the structure. Secondly, remains of a second burial were found in the fill of the chamber and the surrounding cover. Among these remains was a gold earring possibly dating to the Iron Age. It seems likely that these represent the remains of an earlier, perhaps original burial within the cairn. This burial may have been interred on the original floor of the chamber. Later, during the 5th or 6th century AD, the central chamber was reopened for the interment of the inhumation grave, through which the older burial was disturbed and its remains were scattered over the chamber and its cover. This would also suggest that the rocks covering the exterior of the circular chamber were applied prior

Figure 5.26: Selected artefacts from fill and cover of Structure 9 (QUR-9): 1) stone beads; 2) bone bead; 3) shell bead; 4) stone bead; 5) gold earring. Note that these are not associated to Burial 1 but probably to an older, heavily disturbed burial.

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN16-217	Human skeletal remains	Burial 1	GrA-68304	1545 ± 30	430-492 AD (46.8%) 530-558 AD (21.4%)	425-579 AD (95.4%)

Table 5.6: Radiocarbon date from QUR-9, Structure 9.

to the interment of the Byzantine burial, although it seems unlikely that this was an original feature of the cairn. This assumption is based on the fact that the chamber wall itself was rather elaborately constructed, featuring a nicely set façade on the exterior, which was probably created to be visible from the outside. In fact, some of this façade was still visible when encountered during the survey.

5.2.6. QUR-970

The site of QUR-970 is situated on top of the northwest part of the basalt plateau. The site's main features are a large cairn (Structure 1) with a pendant attached (Structure 2) (Fig. 5.27a). Two Safaitic inscriptions are located within a few meters around the cairn while a third one was lying on the top of the cairn. The cairn and pendant were excavated to investigate the nature of the architecture and potential burials and their chronology.

Structure 1 (cairn)

The base of this cairn had a roughly oval outline measuring about 7.6 by 7.1 m. On the top of the cairn a potential burial chamber with an elongated shape was observed. The total height of the cairn, including this chamber, was about 1.6 m.

The cairn was excavated during the 2015 and 2016 campaigns. Photogrammetric modelling was used to make drawings of the cairn. The chamber observed on the top of the cairn was excavated first, after which the remainder of the structure was investigated.

Architecture & burials

The elongated chamber observed on the top of the cairn appeared to be a very recent addition to an older cairn. In this chamber the complete skeleton of a recently (20th century) deceased individual was encountered. Below this burial and chamber the original construction of the cairn was unearthed. Similar to the cairns at QUR-9 this cairn featured a circular wall in its centre which had served as a burial chamber (Fig. 5.27b). This wall was constructed of three to four courses of basalt boulders and had an interior diameter of about 1.8 m. Its exterior diameter measured ca. 3 m. Part of the chamber was poorly defined on its northwest side but other than that it was well preserved. The chamber did not feature a paved floor. Rather, its bottom consisted of an irregular layer of stone, perhaps representing the natural surface cover in this area. A depression within this floor layer was present in the southern half of the chamber, which possibly served as a burial cavity. The fill of this depression consisted of windblown deposits containing relatively few stones, while the rest of the chamber was filled up with a dense layer of rocks. Highly fragmentary human skeletal remains were found (see below) dispersed over various parts of the cairn, including the circular chamber and its exterior cover. Additionally, a number of artefacts (see below) were found, also in the circular chamber and its exterior cover.

Skeletal remains

Two individuals were recognized within the incomplete and highly fragmentary human skeletal remains from the cairn, in addition to the modern skeleton. These remains were from a young adult and an older male adult (Inskip 2015b; 2016). The material was unsuitable for radiocarbon dating due to a lack of sufficient collagen in the bones.

Artefacts

Although many artefacts were retrieved during the excavations most of these were associated with the modern burial. The only objects of a potentially more ancient origin were four greenstone objects, including three beads.

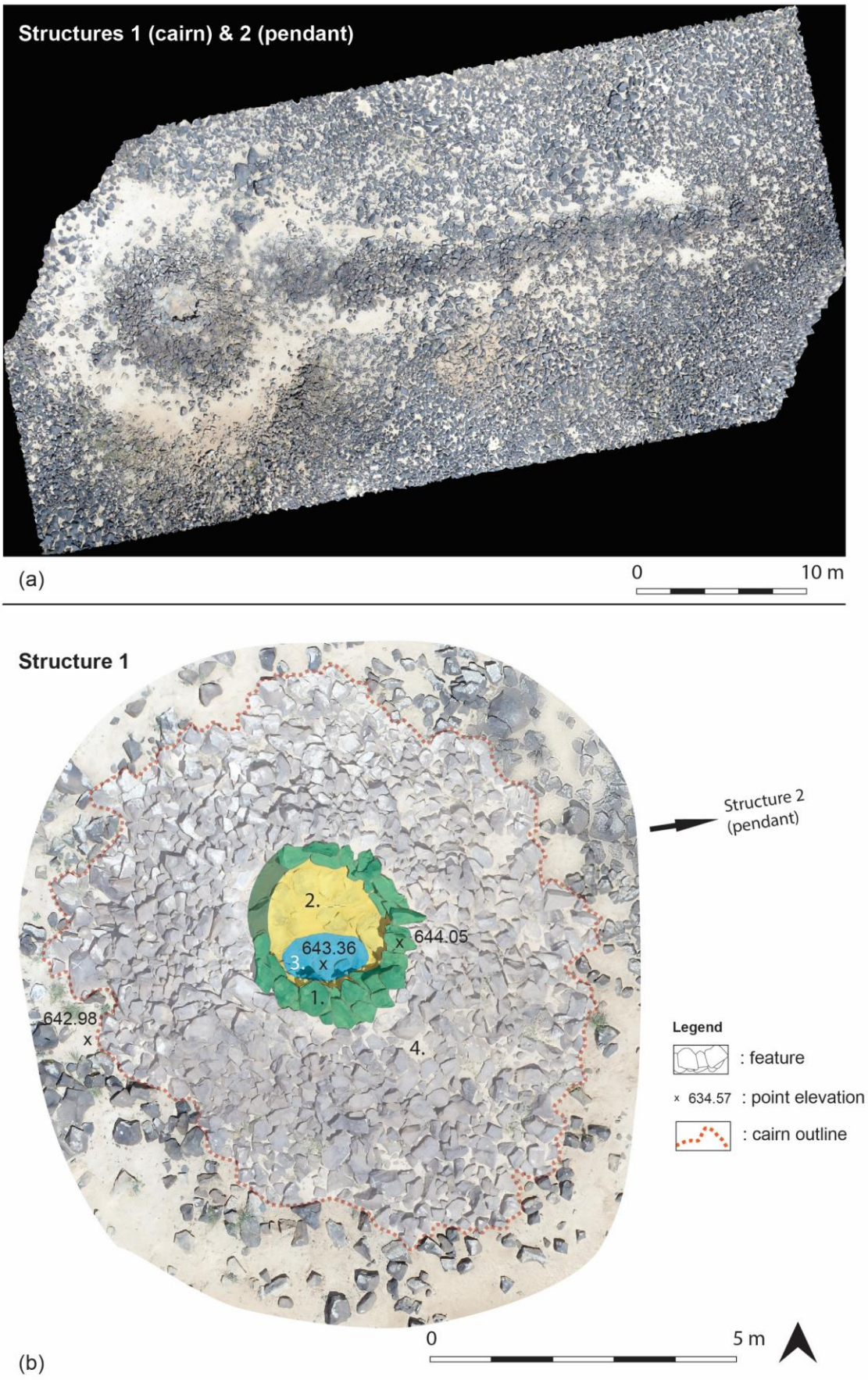

Figure 5.27: Excavated features at QUR-970: 1) façade (dark green shades are reconstructions); 2) burial chamber; 3) burial cavity; 4) cover. Base images: photogrammetric reconstructions based on drone- and handheld photographs.

Discussion

Although this cairn was clearly used as a tomb in antiquity it is difficult to reconstruct the origin and nature of the tomb in detail due to the poor state of preservation of the ancient burial contexts. A likely origin for the fragmentary skeletal remains was the oval depression within the circular chamber, but this cannot be said with certainty. Closely datable material was not encountered. It remains uncertain when this cairn was constructed and when burials were interred prior to its recent use.

Structure 2 (pendant)

This pendant consists of 13 clearly recognizable individual cairns, and diverges from the main cairn (Structure 1) over length of about 30 m in an eastern trajectory. Its individual cairns appeared as irregular, loosely piled stone heaps, and did not feature an external façade. Most of them were roughly oval in shape, between 1 to 3 m long and 40 to 60 cm tall. Four of these cairns were excavated.

Architecture & OSL date

All of the cairns indeed turned out to be simple heaps of stone that were loosely piled on top of virgin soil. A soil sample (SN16-153) was collected from underneath the second last cairn of the pendant for OSL dating (Fig. 5.28). It returned a date of 2.69 ± 0.46 ka BP (Table 5.7). This heap was therefore constructed between the late 12th century and the late 3rd century BC.

Figure 5.28: Context of OSL sample SN16-153: sediment from underneath a base stone (marked) of a small individual pendant heap of Structure 2 (QUR-970) was collected. Left: stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

Sample no.	Context	Lab no.	Date BP
SN16-153	Sediment underneath pendant heap	NCL-8216144	2.69 ± 0.46 ka BP

Table 5.7: OSL date from QUR-970, Structure 2.

Discussion

Although no direct chronological relationship between Structures 1 and 2 could be established, if we assume that the pendant was constructed during or after the construction of the main cairn this would suggest that the cairn must have been built prior to the 2nd century AD (but see below for a more elaborate discussion).

5.2.7. QUR-956, Structure 1

The site of QUR-956 is situated on the top of a basalt promontory on the east side of Wadi Rajil. Its main feature – Structure 1 – is a cairn that was already visible from Wadi Rajil below. It is accompanied by 118

Pre-Islamic inscriptions and 112 petroglyphs. Prior to excavation part of a façade was visible on the eastern exterior of the cairn, where also two protrusions formed a crescent-shaped attachment to the cairn. The rest of the cairn consisted of what seemed to be loosely piled stones. The cairn measured about 6.7 by 5.5 m. In the centre of the cairn a chamber – seemingly looted – was already clearly visible. To the north of the cairn, at about two meters distance, three small stone heaps formed a pendant tail of only 9.3 m long, diverging from the cairn in a northern trajectory.

The first step of the excavation procedure was to excavate the interior chamber that was already visible. This was done to see if the chamber contained any human burial remains and to further study the architectural elements of the chamber. Secondly, the external façade, already visible prior to excavations, was further uncovered by removing the cover of loose basalt stones that lay against it, in order to study the architecture and to look for additional features.

Architecture and burial (Fig. 5.29)

The façade could be traced around much of the exterior of the cairn, by removing the cover of small and loosely piled basalt stones that obscured much of it beforehand. The facade was constructed mostly of large basalt slabs – some of which over 1 m long – that were sometimes alternated by regular boulders. The façade was best preserved on the north and east side, where it stood over 1 m high, or up to 5 stone courses (Fig. 5.30). On the south side it was less well preserved but still clearly defined, whereas on the west side most of the façade had apparently crumbled. Here, some basalt slabs had dislocated and were lying next to the presumed original outline of the façade. The outline of the façade – partially reconstructed – has a diameter of about 3 m.

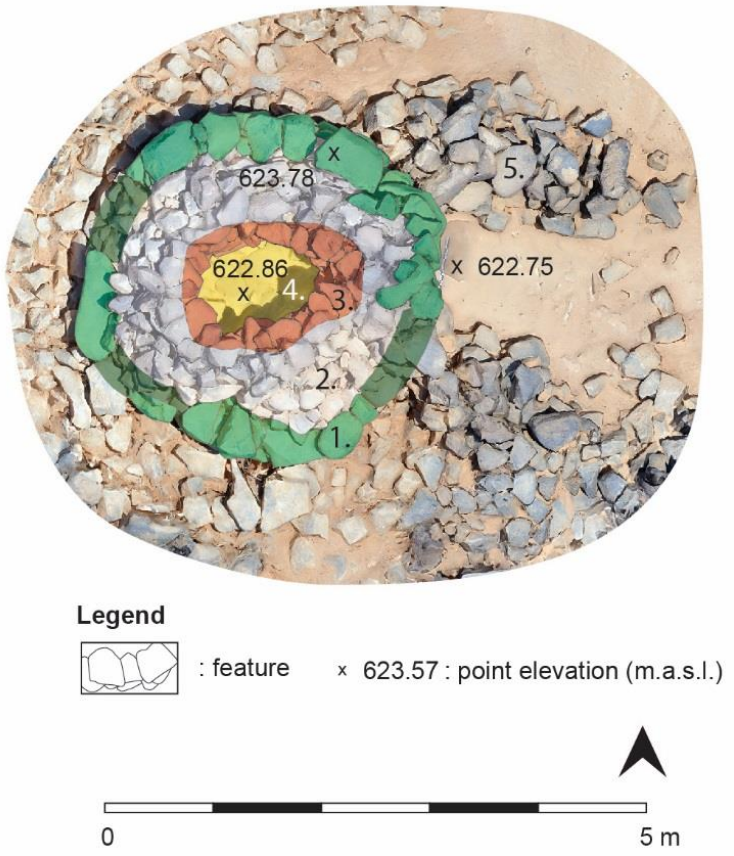

Figure 5.29: Features exposed through excavation at QUR-956 (Structure 1): 1) façade (dark green shades are reconstructions); 2) cover of burial chamber; 3) corbelled wall of burial chamber; 4) burial chamber; 5) protruding arms (not original).

The chamber in the centre of the cairn measured 140 by 71 cm and was about 90 cm deep. Its walls had a corbelled construction on all sides, but was best preserved on the west side of the chamber. These corbelled walls stood on top of a floor paved with basalt flagstones, which was in turn covered by a layer soil of a about 10cm thick that contained much natural flint pieces. On this flint-rich surface lay a layer of soil in which the poorly preserved remains of a human burial were found, which included highly fragmented human skeletal remains as well as a few artefacts that probably represent grave goods (see below). This layer of soil had been disturbed to some degree by recent looting activities. The uppermost 30cm of the chamber was completely empty. It was either emptied already by looters or had never been filled in by rocks or soil. The absence of looter's debris outside the chamber suggests the latter is more likely.

For the corbelled construction of the burial chamber the fill of loose and relatively small basalt stones that lay on top of the chamber walls acted as a counterweight to support the construction. Importantly, part of this fill was overlying the (partially) collapsed façade on the south and west side of the cairn. This would indicate that the burial chamber as visible today was constructed after the façade had collapsed, and thus after the original construction event of the cairn. At this point it is not entirely clear whether this phase of renewal entailed only repairs of the chamber or, alternatively, the complete refurbishing of the interior of the cairn. Whatever the case, it seems likely that the burial remains found in the chamber represent a phase of reuse – possibly associated with structural modifications – as these remains were not lying on the original floor of the chamber but on top of a soil layer containing much unworked flint. This unworked flint suggests that soil was brought into the chamber purposefully prior to the interment of a body.

Figure 5.30: Façade of Structure 1 at QUR-956 prior to excavation. Scale is 50 cm, photo by P. Akkermans.

Skeletal remains

The skeletal remains from the fill of the burial chamber originated from a single individual. Their poor state of preservation did not allow for an estimation of sex or age (Inskip 2015b). The obtained radiocarbon date (SN15-201; Table 5.8) suggests the individual was buried here between the late 1st and early 3rd century AD, although the 1 sigma range shows that chances for a date after the early 2nd century are small.

In addition to the human bones, part of the upper jaw of a sheep or goat were also found. It was in a fairly good state of preservation and is therefore probably a fairly modern intrusive find.

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN15-201	Human skeletal remains	Fill of burial chamber	GrA-67035	1890 ± 30	66-136 AD (68.2%)	56-217 AD (95.4%)

Table 5.8: Radiocarbon date from QUR-956, Structure 1.

Artefacts

The artefacts from the fill of the chamber above the flint-rich surface layer included three red semi-translucent beads, a shell bead, a bead made of blue glass and a few pieces of bronze, some of which may be the remnants of a pin or broche (Fig. 5.31). They are from the same contexts as the human bone fragment, and are likely to represent associated grave gifts.

OSL-dates

In order to establish the original construction date of the cairn a soil sample for OSL dating was collected from underneath one of the base stones of the external façade (Fig. 5.32). The sample (SN16-154) returned an OSL date of 5.58 ± 0.42 ka BP (Table 5.9), indicating that the façade was constructed during the 4th millennium BC, i.e. during the Late Chalcolithic period or Early Bronze Age. This date is much older than comparable structures and needs further explanation (see § 5.2.13.). There are no indications, however, that the sampling context or procedure is problematic.

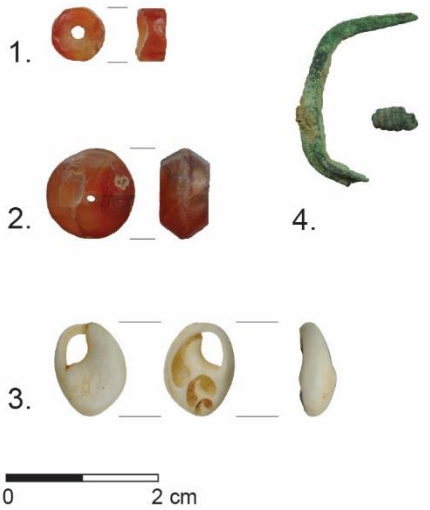

Figure 5.31: Selected artefacts from the burial chamber in structure 1 (QUR-956): 1 & 2) stone beads; 3) shell pendant; 4) fragments of bronze jewellery.

Discussion

The excavation of the cairn at QUR-956 provides evidence for the reuse of a late prehistoric tomb during the Late Hellenistic or Early Roman period. The original cairn, featuring a façade, was later transformed by applying a cover that also provided structural support to the corbelled burial chamber. Within this chamber a new floor of soil was applied, on top of which a human body was interred, accompanied by jewellery.

Whether this phase of reuse is directly related to the many pre-Islamic inscriptions and petroglyphs situated around the cairn is not certain. Some of the rocks of the cairn's cover carried inscriptions, but it is impossible to say whether these inscriptions were applied before or after the rocks were incorporated in the construction. Also, none of the inscriptions refers to a burial or burial cairn (Della Puppa forthcoming). The relation to the short pendant must remain unknown for now as well, since this pendant has not been dated. Although it is probably not prehistoric, as suggested by all the OSL dates from other pendants, whether it is contemporaneous with the dated skeletal remains is unknown.

Figure 5.32: Context of OSL sample SN16-154: sediment from underneath a base stone (marked) of the façade of Structure 1 (QUR-956) was collected. Left: stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

Sample no.	Context	Lab no.	Date BP
SN16-154	Sediment underneath façade	NCL-8216145	5.58 ± 0.42 ka BP

Table 5.9: OSL date from QUR-956, Structure 1.

5.2.8. QUR-2, Structure 13

Structure 13 is the largest of several burial cairns situated on the very top of Jebel Qurma, the prominent and isolated basalt-capped hill situated on the eastern edge of Wadi Rajil (Fig. 5.33). Prior to excavation it had a diameter of about 14 m. A total of 530 pre-Islamic inscriptions and 350 petroglyphs were attested at the site, including on and around Structure 13. The cairn had been looted extensively in recent times, leaving a large depression in the centre of the cairn, and large amounts of looting debris on the northern slopes of the cairn. Nonetheless, visible already prior to excavation were a number of features, including parts of a massive circular wall in the centre of the cairn. Incorporated in this wall were stones on which Safaitic inscriptions had been carved. These inscriptions were visible in the seams of the wall (Fig. 5.34), indicating that some of the stones at this site already bore inscriptions before they were used to construct this wall. Part of another feature was visible on the southeast slope of the cairn, where part of a façade also appeared to be present. Importantly, these potential features were present in areas of the cairns that had remained unaffected by recent looting. It was therefore decided to further investigate this cairn through excavations.

Figure 5.33: Structure 13 (QUR-2) atop Jebel Qurma prior to excavation. Scale is 50 cm, photo by P. Akkermans.

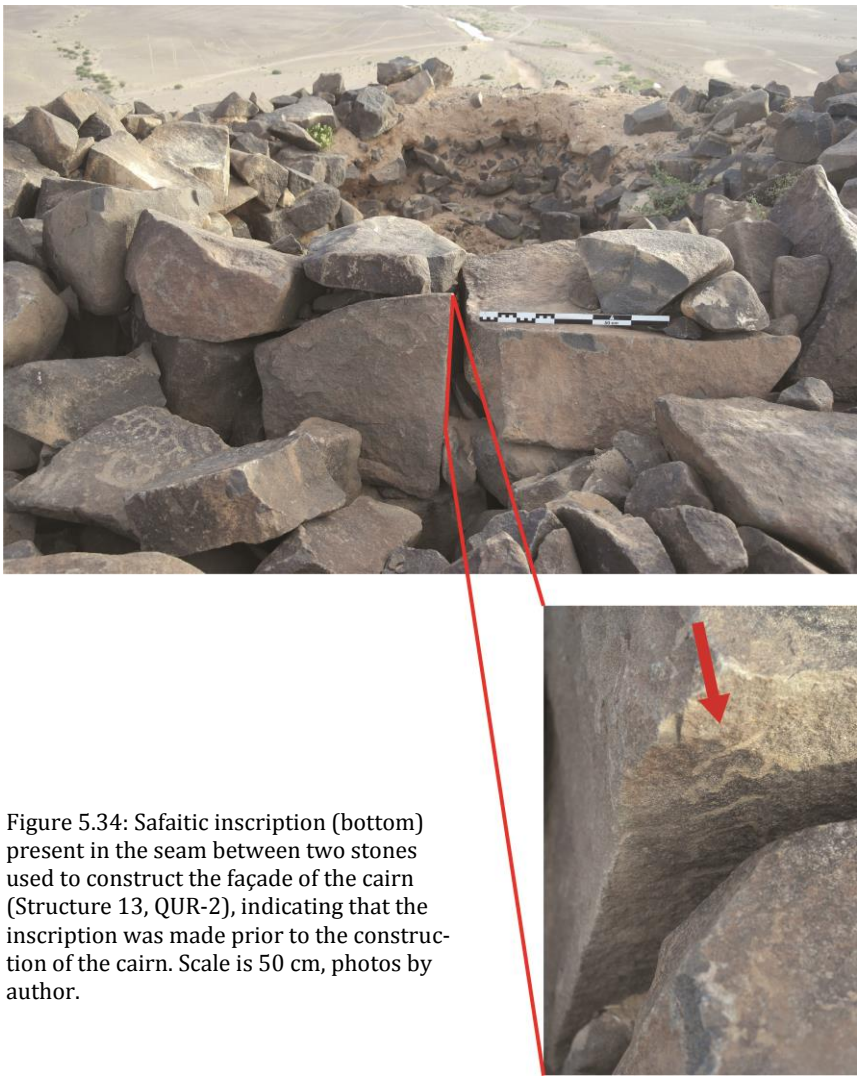

Figure 5.34: Safaitic inscription (bottom) present in the seam between two stones used to construct the façade of the cairn (Structure 13, QUR-2), indicating that the inscription was made prior to the construction of the cairn. Scale is 50 cm, photos by author.

The excavations largely focussed on the areas of the cairn that were situated outside the central circular wall observed prior to excavations. This 'cover' of loosely piled basalt stones was removed layer after layer, paying close attention to emerging architectural features. The sediments that were part of the cover were sieved. Less attention was paid to the areas that seemed to be most heavily disturbed

by looters, including the centre of the cairn and its northern slopes where most looting debris had been deposited.[1]

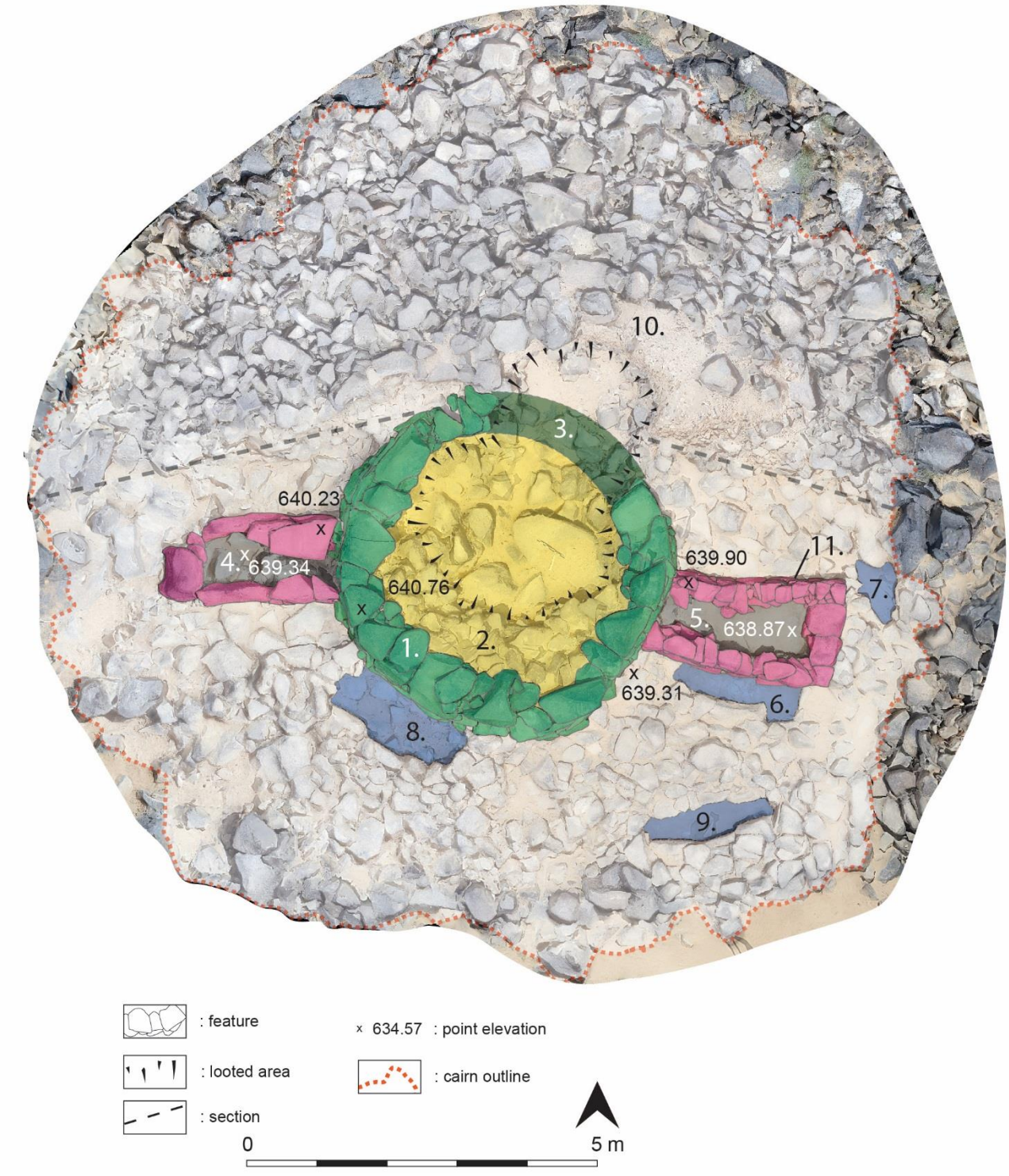

Figure 5.35: Features revealed through excavations at Structure 13 (QUR-2): 1) façade; 2) disturbed interior of the cairn; 3) reconstruction of the façade; 4) chamber A; 5) chamber D; 6) burial cavity E; 7) burial cavity F; 8) chamber B; 9) chamber C; 10) unexcavated looter's debris; 11) OSL sampling location.

[1] These areas were excavated in 2017, but not incorporated in this research.

Architecture & burials

The excavations uncovered large parts of what had once been a circular tower-like feature in the centre of the cairn (Fig. 5.35). It was well-preserved on most sides but demolished by looters on the northeast side. This tower had an exterior diameter of about 4.8 m at its base and stood up to 1.45 m high (Fig. 5.36). Its interior diameter was about 3.15 m. Up to four courses of often massive stone boulders and slabs were used for the construction of this tower. These blocks were neatly placed with their flat surfaces facing outside, thereby forming a fairly smooth and nearly straight façade. Some of the blocks used for this construction were very massive. Indeed, a roughly rectangular block situated on the very top of the tower measured 84 by 40 by 34 cm, and probably weighed over 400 kg.[2] Stones even larger than this one were incorporated in the structure. Due to extensive looting any potential remains of an interior chamber were destroyed. Within the debris of the looting activities, however, the skeletal remains of at least three individuals – two adults and a possible sub-adult – were recognised (Inskip 2016), indicating that the tower had been used as a tomb. Five bone samples from these individuals were sent out for radiocarbon dating. Two of them returned an Ottoman/mandate-period date while two others contained insufficient collagen for dating. The final sample (SN16-208) returned a late 1st century BC to early 2nd century AD date (Table 5.10).

Figure 5.36: Façade of Structure 13 (QUR-2). Scale is 50 cm, photo by P. Akkermans.

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN16-204	Human skeletal remains	Skeletal remains from chamber D	GrA-68302	1905 ± 30	68-128 AD (68.2%)	25-175 AD (92.4%) 191-211 AD (3.0%)
SN16-208	Human skeletal remains	Looting debris from main tower	GrA-68436	1970 ± 40	20-11 BC (5.8%) 2 BC – AD 72 (62.4%)	50 BC – AD 125 (95.4%)

Table 5.10: Radiocarbon dates from QUR-2, Structure 13.

Two rectilinear ante-chambers had been constructed against the façade, on the west (chamber A) and east side (chamber D). Chamber A was largely made of basalt slabs that were placed on their sides,

[2] A specific gravity of 3.7 grams per cm^3 is used here, following Rollefson (2013, 222).

enclosing a room measuring 2.00 by 0.86 m (Fig. 5.37). On the exterior of the basalt slab on the westernmost end two Safaitic inscriptions had been carved (QUR-2.283.1 & 2) mentioning personal names and pastoral activities (Della Puppa forthcoming). In the fill of this chamber only very flimsy and unidentifiable bone fragments were found. Chamber D, however, yielded more convincing evidence for the use of the chamber as a tomb. This chamber had more or less similar dimensions, measuring 2.30 by 0.55 m on the interior, but had a neatly constructed drystone wall of three to four courses high (Fig. 5.38). A Safaitic inscription (QUR-2.704.1) – probably a personal name (Della Puppa forthcoming) – had been carved on the exterior of this wall. The chamber contained the partially articulated human skeletal remains of two individuals – a woman and probably a man (Inskip 2016) – which were buried in a contracted position on top of each other in the eastern part of the chamber. The remains were not clearly separated, and therefore seem have been buried either together or shortly after each other. A bone sample (SN16-204) from one of the individuals was sent out for radiocarbon dating and returned a 1st to 2nd century AD date (Table 5.10). The second individual was not dated. A number of artefacts, probably grave gifts, were found in association with these skeletal remains (see below).

Against the southern wall of chamber D an elongated trench-like feature (E) was uncovered surrounded by a row of neatly placed slabs. In this cavity the remains of yet another human burial were exposed. These included the human skeletal remains of a single individual – probably a male (Inskip 2016) – which, due to poor preservation, could not be radiocarbon dated. Also found here were large amounts of beads and four bronze coins, one of which was identified as a late 2nd or early 1st century BC Seleucid coin (see below). This simple tomb was created against the façade of tomb D and was probably covered simply by stones piled on top of the grave. This would imply that the Seleucid coin had been circulating for one or more centuries before it ended up in the tomb, but this is not an implausible scenario (cf. Lockyear 2012, 197).

Figure 5.37: Exterior of chamber A, which was constructed against the façade of the main tower of Structure 13 (QUR-2). Scale is 50 cm, photo by P. Akkermans.

Figure 5.38: Exterior of chamber D, which was constructed against the façade of the main tower of Structure 13 (QUR-2). Scale is 50 cm, photo by P. Akkermans.

More human skeletal remains were encountered in another cavity (F), situated to the northeast of chamber D. This cavity measured only about 1.00 by 0.55 m and was unlined. The unarticulated remains of two individuals were encountered in it, which mostly included long bones and the skulls, and may therefore represent secondary burials. Their poor state of preservation prevented radiocarbon dating of the bone material. Also, no

clearly associated artefacts were present in this context.

Two more tombs were added to the structure at a much later date. From tomb B came the skeletal remains of a human individual that was radiocarbon dated to the Ottoman/mandate-period. This burial was much better preserved than the more ancient ones, and even included textile remains. Similarly, well-preserved skeletal remains and textile were encountered in tomb C – the construction of which was already partially visible prior to excavation. Although the bones could not be radiocarbon dated, the state of preservation of the skeleton and textiles and its orientation makes a relatively recent date likely.

In summary, although the remains from multiple individuals were encountered in various tombs in Structure 13, only three of these could be dated with certainty to the pre-Islamic period. These include one of the burials from the main tower, radiocarbon dated between the late 1st century BC and the early 2nd century AD; one of the burials from chamber D, radiocarbon dated to the 1st or 2nd century AD; and the burial from area E, which despite of the occurrence of a Seleucid coin is probably slightly younger. A number of skeletons may be of pre-Islamic origin as well but this could not be established with certainty. These include the second individual from chamber D, the two individuals from area F, and one or more individuals from the central tower. Evidence for relatively recent (Ottoman/mandate-period) reuse of the structure is also attested.

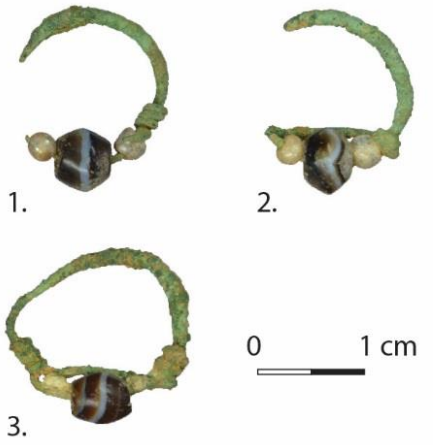

Figure 5.39: Three bronze earrings with pendants of pearl and stone from chamber D (QUR-2, Structure 13).

Artefacts

A large number of artefacts were found during the excavations of Structure 13, including in contexts most clearly associated with pre-Islamic burials, i.e. tombs D and E. From the fill of tomb D (Fig. 5.39)came a remarkable set of earrings made of bronze, featuring small pendants of pearl and gemstone. Three of these were well-preserved while the remains of perhaps three more earrings were found in more fragmentary state. The other finds from tomb D included few beads – two of red semi-translucent stone and one of glass past – and fragments of some kind of iron pin.

More jewellery was encountered in tomb E. Over a hundred beads were found here, perhaps all part of necklace (Fig. 5.40). Most of the beads (n=100) were made of glass paste, while the remainder was made of stone (n=8), shell and coral (n=8), bronze (n=1) and perhaps bone (n=1). Other artefacts probably representing jewellery included two iron rings and a bronze ring, two earrings, three fragments of a glass object and part of a chain

Figure 5.40: Conjectural reconstruction of a necklace, made from beads and pendants from chamber E (QUR-2, Structure 13).

made of three bronze links (Fig. 5.41). Finally, four bronze coins were found in tomb E, with diameters between 12 and 16 mm. They were heavily corroded, obscuring completely the imprints of two of the coins. On a third coin (Fig. 5.41 no. 1) a palm tree was visible which is typologically characteristic of Seleucid coins from the late 3rd to 1st centuries BC. The fourth coin (Fig. 5.41 no. 2) was more clearly identifiable. Its obverse side features the head of Athena with helmet while the reverse side shows a prow and a text referring to king *Antiochos Philopatros*. Based on Houghton et al. (2008, catalogue number SC 2378) the coin can therefore be assigned to the reign of the Seleucid king Antioch IX (114/3 – 95 BC).

OSL date

A single sample for OSL dating was collected from underneath one of the base stones of the northern wall of tomb D. This wall was built on natural soil, which was sampled to obtain the construction date of the tomb (Fig. 5.42). The sample (SN16-234) returned an OSL date of 2.19 ± 0.15 ka BP (Table 5.11), which puts the construction date of tomb D between about 325 and 25 BC.

Discussion

The excavations at Structure 13 revealed a complex sequence of use and reuse which, unfortunately, cannot be reconstructed in full detail due to circumstances of preservation. Nevertheless, what is clear is that the central tower was constructed after Safaitic inscriptions had been created at this site, given the fact that stones carrying inscriptions were reused in the construction of the tower. If we were to follow the traditional chronology of Safaitic the

Figure 5.41: Selected artefacts from chamber E (QUR-2, Structure 13): 1 & 2) Seleucid bronze coins; 3) bronze ring; 4) fragment of a bronze earring (?); 5) bronze chain.

Figure 5.42: Context of OSL sample SN16-234: sediment from underneath a base stone (marked) of the wall of chamber D (QUR-2, Structure 13) was collected. Left: stone in-situ. Right: isolated stone prior to sampling. Scale is 50 cm, photos by author.

tower post-dates the 2nd century BC. Given the OSL date obtained from underneath tomb D, however, the tower cannot be younger than the 1st century BC.

Originally the tower must have been free-standing, i.e., without the thick cover of stone and soil visible prior to the excavations. A number of observations are suggestive of this, including the fact that several ante-chambers were constructed against the façade of the tower at a later date. The last of these additions (chamber B) contained a post-16th century AD burial. Originally, therefore, the façade of the tower was meant to be visible instead of obscured.

Sample no.	Context	Lab no.	Date BP
SN16-234	Sediment underneath wall of chamber D	NCL-8216147	2.19 ± 0.15 ka BP

Table 5.11: OSL date from QUR-2, Structure 13.

Whether the two rectangular ante-chambers A and D were part of the original construction or added during a later event is impossible to say. The OSL and radiocarbon dates from chamber D at least suggest that this chamber was not created much later than the tower, but when chamber A was created is impossible to say at this point. Also added during roughly the same period was the burial in area E, where the Hellenistic coins came from. Where the skeletal remains from area F originate from, both in space and time, is difficult to say at this point as well.

The nature of the construction of the central tower is striking, not only in terms of its visual prominence but also given the large amount of basalt stones used for the construction. If the entire wall of the tower stood 1.45 m high originally, and was about 80 cm thick, as suggested by the measurements carried out, than the entire wall consisted of about 215 tonnes of stone.[3] Furthermore, some of the individual blocks may weigh over 400 kg, and such stones were not only placed at the base of the tower but placed at a height of one metre above the surface. Lifting these rocks to place them there must have been a undertaking requiring perhaps six people or more or, alternatively, a ramp or other kind of construction that would have facilitated this arduous task.

5.2.9. QUR-148, Structure 23

Structure 23 is cairn that is situated at the large, multi-period site or QUR-148 (Fig. 5.43). It was seemingly constructed on top of a large prehistoric Wheel structure. Prior to excavation the presumed diame ter of the cairn measured 9.1 m. A number of architectural features were already visible, including a burial chamber and part of a façade. The burial chamber was unfortunately disturbed by recent looting activities, although parts of the chamber appeared to be still intact (Fig. 5.44). Concentrations of looter's debris, from which during the survey already some human

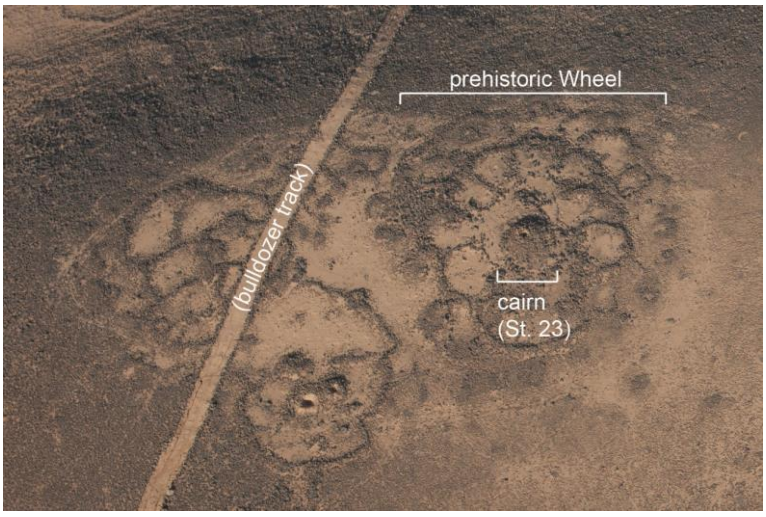

Figure 5.43: Aerial view of the site of QUR-148 indicating Structure 23 overlying a prehistoric wheel. Aerial photograph by David Kennedy (courtesy of APAAME).

[3] This number is based on the following equation: $3.7((\pi * 4.8^2 * 1.45)-(\pi * 3.20^2 * 1.45)) = 215.7$ (= the volume of the entire tower subtracted by the volume of the interior of the tower, multiplied by the specific gravity of basalt).

skeletal remains were salvaged, was lying on the slope of the cairn to the southwest of the chamber, suggesting that we were indeed dealing with a burial chamber. A large basalt slab, probably covering the chamber earlier, had fallen into the chamber.

On and around the cairn a total of 277 Safaitic inscriptions and 198 petroglyphs were found, distributed mainly around the eastern part of the cairn, rather than directly on it.

Initially, some time was spent on cleaning the looter's debris on the southwest side of the cairn, where some human bone material had already been observed. The excavations then focused on the central burial chamber, the anticipated facades, and the general cairn fill in between. Due to time constraints it was decided to excavate only about half of the cairn,[4] although the central burial chamber was excavated in its entirety.


Figure 5.44: Structure 23 at QUR-148 prior to excavation. The burial chamber of cairn had been partially looted. Scale is 50 cm, photos by P. Akkermans.

Architecture & burials (Fig. 5.45)

The excavations of the cairn exposed a façade (D) over a length of about 6 m, which originally formed the exterior of a circular tomb that was about 4 m in diameter. This façade was up to 80 cm high, or 5 stone courses (Fig. 5.46). It had been constructed of both basalt slabs and boulders that were neatly stacked on top of each other. Its base stood on top of a number of very large, naturally occurring blocks and on smaller stones in between. Although it is unclear whether this 'platform' is completely natural or partially man-made, it was used to give the tomb some 50 cm of additional elevation above the surface surrounding the cairn.

In the centre of the tomb was a chamber (A) of roughly oval shape, measuring 1.7 by 0.9 m. Its long axis had a NW-SE orientation. Some corbelling was observed in the construction of its walls, and the large slab that had fallen into the chamber possibly covered the chamber at some point, creating a chamber of about 60 cm deep. The floor of the chamber consisted of small flat tones that had been placed between larger stones that may have been naturally occurring (Fig. 5.47).

Chamber A was used on multiple occasions for the interment of a human body. In the looter's debris as well as in the unlooted parts of the chamber the skeletal remains of at least three human individuals were found. The remains of two individuals were radiocarbon-dated to the Mamluk and Ottoman/Mandate period (Table 5.12). For the interment of one of these later individuals the burial chamber slightly extended on the SE side. The third individual was an adult but could unfortunately not be dated since no collagen was preserved in the bone tissue. In addition to these skeletal remains a number of beads as well as a small fragment of iron were found in the chamber (see below). These may have been

[4] The other half was excavated in 2017, but these results are not incorporated in this study.

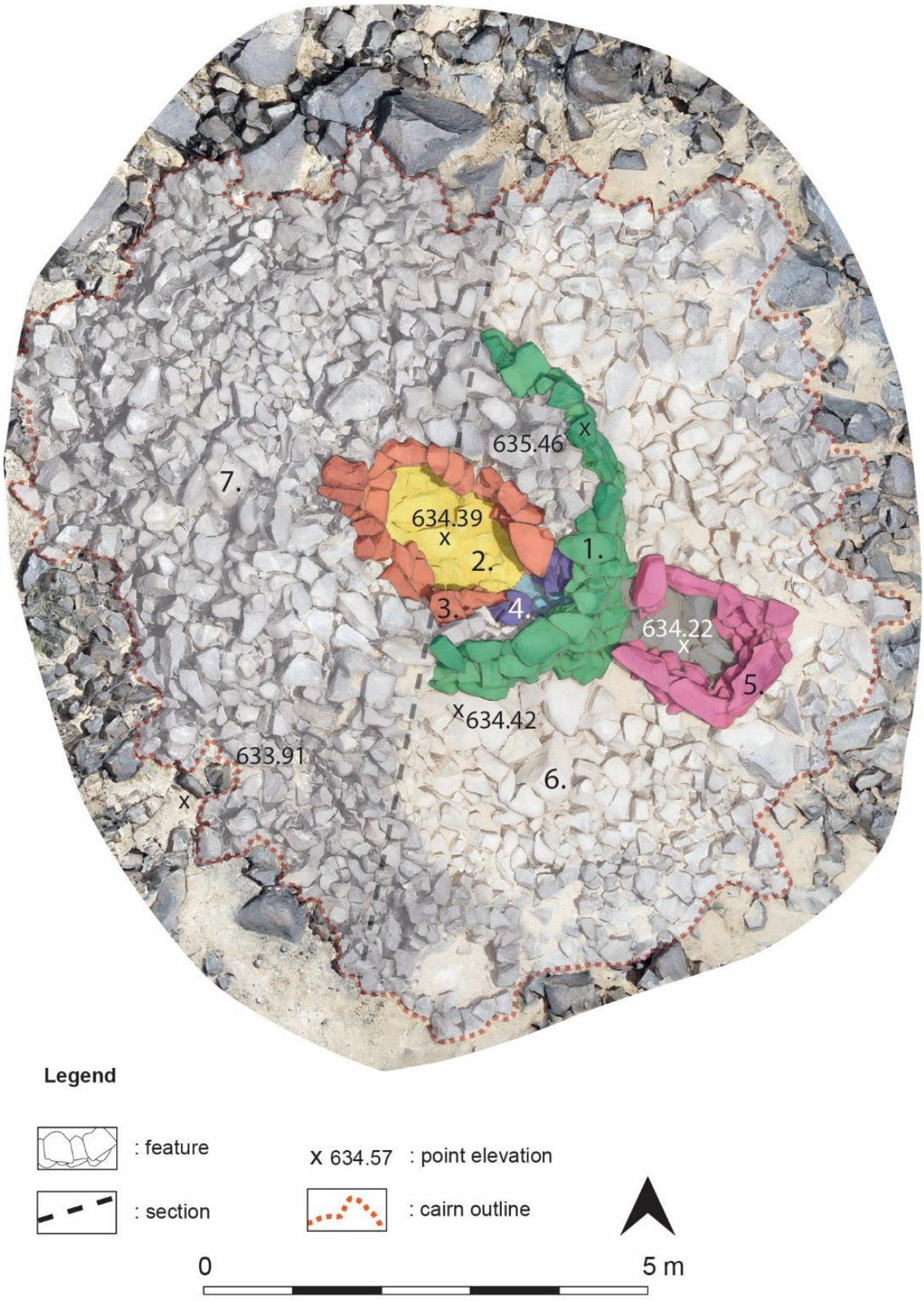

Figure 5.45: Features exposed through excavations at Structure 23 (QUR-148): 1) façade D; 2) chamber A; 3) wall of chamber A; 4) extension of chamber A; 5) chamber B; 6) excavated part of the cairn's cover; 7) unexcavated part of the cairn's cover. Base image: photogrammetric reconstruction.

part of a grave inventory, but to which burial they belonged is impossible to say because of the frequent reuse and partial looting of the chamber.

Another burial chamber had been constructed against the façade of the main tomb. This chamber (B) had a roughly rectangular shape and was mostly made of large slabs that were placed on their sides (Fig. 5.48). On one of these slabs was a Safaitic inscription. The interior of the chamber measured 1.4 by 1.05 m. The exterior façade was preserved to a height of 78 cm. The bottom of the chamber consisted of irregularly placed stones rather than of a neat floor. The fill of the chamber largely consisted of stones as well, with soft sand or silt in between. In this fill the skeletal remains of two individuals were situated. Although this chamber was not subjected to recent looting, these remains were found in a poor state of preservation and not in anatomical position (Fig. 5.49). Unfortunately no collagen was preserved in the bone tissue either, making them unsuitable for radiocarbon dating. In addition to the skeletal remains a large number of beads was found in the fill of this chamber (see below).

Both façade D and chamber B had been covered by basalt boulders, between which windblown sediments had accumulated. This cover was about 80cm thick and had obscured much of the tomb after its construction. How and when this cover was formed is not entirely clear. In the fill of this cover some skeletal remains were found. Much of these probably belonged to the individuals that were originally buried

Figure 5.46: Façade D of Structure 23 (QUR-148) as exposed through excavations. Scale is 50 cm, photo by author.

Figure 5.47: Floor of burial chamber A in Structure 23 (QUR-148). Scale is 50 cm, photo by author.

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN16-220	Human skeletal remains	Looter's debris from chamber A	GrA-68438	160 ± 35	1668-1694 AD (13.3%) 1727-1782 AD (31.1%) 1797-1812 AD (8.0%) 1918-1950 AD (15.6%)	1664-1708 AD (16.7%) 1718-1827 AD (45.8%) 1832-1887 AD (14.8%) 1912- ? AD (18.1%)
SN16-223	Human skeletal remains	Chamber A, Burial 3	GrA-67507	545 ± 30	1326-1342 AD (19.7%) 1394-1424 AD (48.5%)	1315-1357 AD (35.1%) 1388-1435 AD (60.3%)

Table 5.12: Radiocarbon dates from QUR-148, Structure 23.

in chamber A, but were thrown out of the chamber and onto the cover by looters. These also included the remains of a neonate.

Figure 5.48: Side view of burial chamber B (QUR-148, Structure 23). Scale is 50 cm, photo by author.

Skeletal remains

Two individuals – all from chamber A – were relatively recent, i.e. post-13th century AD (Table 5.12), while the skeletal remains from the remaining individuals could not be dated due to a lack of collagen. Although it seems reasonable to assume that these remains, given their poor state of preservation, predate the Mamluk period, there is at this point no way of telling how old they are exactly.

Artefacts

A total of 63 artefacts characterized as 'small finds' were found during the excavations. From chamber A came 13 beads, mostly made of glass and stone, and a piece of iron. As noted above, they could not be clearly related to a specific burial. A few of the larger glass beads from this context have circular inlays. These so-called eye beads are unfortunately not datable with any precision. From the cairn cover came another 12 beads, including one made from cowrie shell, possibly originating from looted chamber A. From chamber B came another 37 beads, mostly made of a glass paste (Fig. 5.50). They were most likely part of the grave inventory of one or both of the individuals interred in chamber B. Many of the glass beads showed alternating light and dark bands. They loosely resemble some of the pre-Islamic beads

found at QUR-2 (see Fig. 5.40), and may therefore have a similar date. Importantly, ceramics were nearly absent, apart from a fragment of an Ottoman pipe head that was found in the cairn's cover.

Figure 5.49: Limited and scattered human skeletal remains on the bottom of chamber B (QUR-148, Structure 23). Scale is 50 cm, photo by author.

Figure 5.50: Selected glass paste beads from chamber B (QUR-148, Structure 23).

Discussion

In terms of morphology the excavated cairn seems to be largely comparable to Structure 13 at QUR-2. The cairn featured a large and well-constructed façade against which a smaller burial chamber had been placed. Whether a similar ante-chamber is situated on the opposite side of the cairn remains unknown as this part was not excavated. A complete reconstruction of the chronology of this cairn is, however, more complex. The cairn was reused and modified multiple times, extensively looted, leaving the retrieved skeletal material in a poor state of preservation. Furthermore, the encountered artefacts were mostly undiagnostic.

The original construction date of the cairn could not be established independently. Unlike the cairns at, for example, QUR-2 and QUR-956, this cairn was not suitable for OSL dating as it was constructed on top of naturally occurring rocks rather than soil. Although the oldest radiocarbon dates retrieved from the skeletal material are from the Mamluk period, the cairn must be centuries older than that since a number of Safaitic inscriptions were situated underneath the cover of the cairn. Also, one Safaitic inscription was carved on one of the stones used to construct ante-chamber B. The cairn must therefore be pre-Islamic, but for a closer date we can only rely on inference. Because the cairn is very similar to Structure 13 at QUR-2, both in terms of configuration and in terms of the association with relatively large amounts of pre-Islamic rock art, it seems warranted to date this cairn broadly to the Hellenistic/Roman period.

It is difficult to make statements about the nature of any pre-Islamic burials, not only because none of the skeletal remains could be safely attributed to this period but also because none of the retrieved artefacts can be securely associated to any of the encountered burials. Although many different beads were found, none of them were clearly associated to any of the individual burials nor datable on typological grounds.

5.2.10. QUR-186, Structure 1

The site of QUR-186, surveyed during the 2015 campaign, is situated on the slopes and top of a ridge overlooking Wadi Rajil. Although the site mostly consists of prehistoric features, including a series of

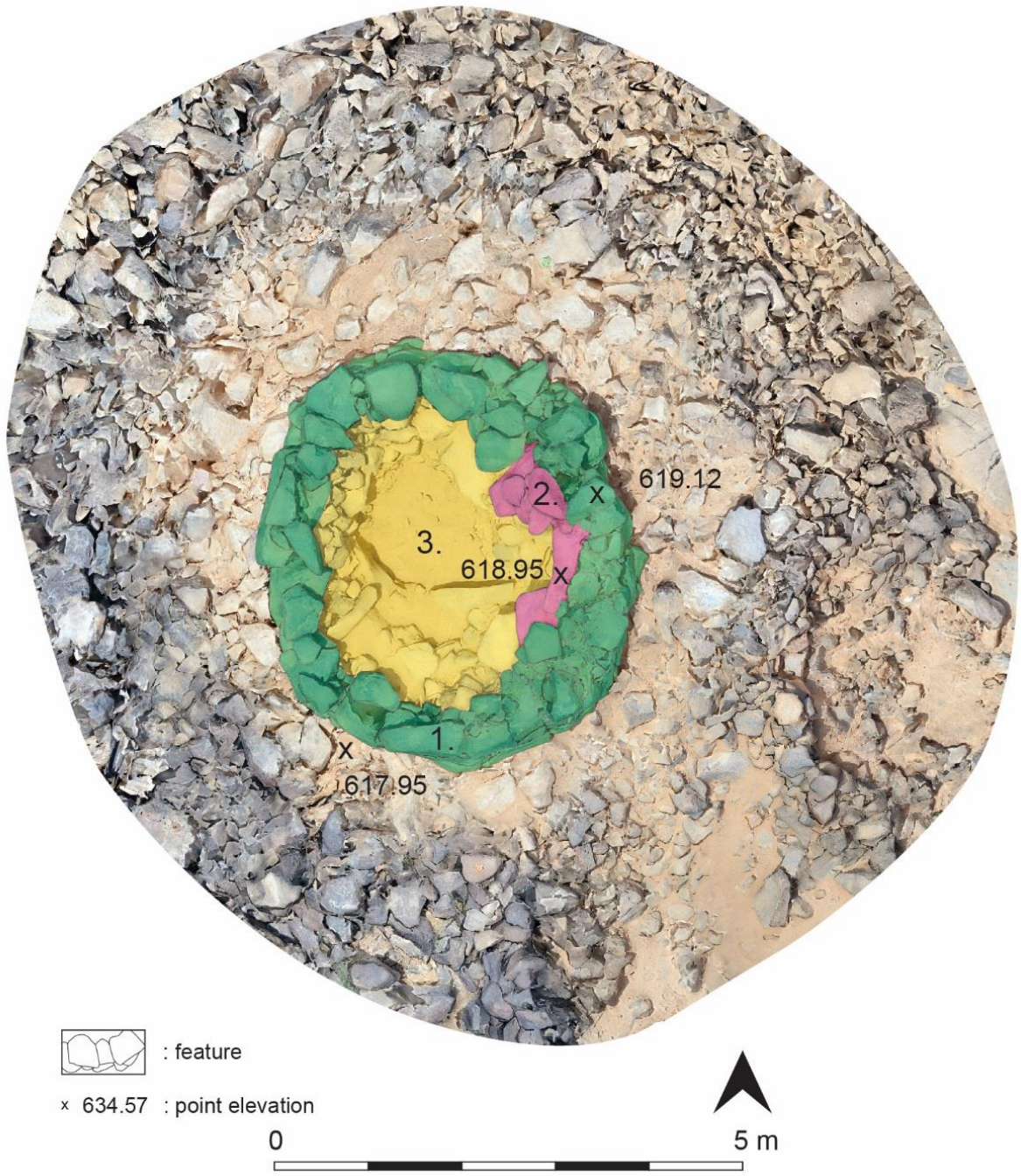

Figure 5.51: Features exposed through excavation at QUR-186, Structure 1: 1) façade; 2) remains of a corbelled wall of the burial chamber; 3) burial chamber heavily disturbed by looting.

enclosures – partly destroyed by bulldozing activities – and a cairn field dating to the Early Bronze Age (Akkermans & Huigens in press), the site also features a large cairn surrounded by hundreds of Safaitic inscriptions and petroglyphs. This cairn – Structure 1 – is situated on the end of a narrow ridge, and is clearly visible from the plains of Wadi Rajil below. Unfortunately the cairn had been extensively looted before it was documented, leaving a large pit of ca. 1.8 m deep in the centre of the cairn and much debris around it. It was tentatively observed that the cairn originally featured a façade that had been largely covered by looter's debris. It was decided to clean the interior and exterior of the cairn of looter's debris to investigate what was left of the architecture and to collect any skeletal remains and artefacts.

Because of the large amount of damage to cairn it was decided that little more could be done at this cairn than to clean it from looting debris, sieve the looted soil, and document the preserved architectural features of the cairn.

Architecture (Fig. 5.51)

The cairn's façade had been constructed of large and often flat basalt slabs that were neatly stacked on top each other with their long sides facing outwards. This façade was preserved up to 0.93 m or 4 stone courses high (Fig. 5.52). It formed a circular tower-like structure of about 4.30 m in diameter. Some of these slabs were over a meter long and 30 cm thick, and may weigh well over 200 kg. The slabs were not hewn, but retained their natural irregularity. As a result, many cavities existed in the seams between the larger slabs, which had sometimes been filled up with smaller rocks.

Figure 5.52: Façade of Structure 1 (QUR-186) exposed by clearing looter's debris. Scale is 50 cm, photo by P. Akkermans.

Although the interior of the tower had been largely destroyed by looters, part of a rounded corbelled construction was preserved in the east part of the tower, probably representing the wall and part of the cover of a burial chamber within the tower. The original shape, orientation and dimensions of the chamber could not be reconstructed. The tower had been constructed on top of a fairly irregular stone layer that gave the tower some 70cm of additional height. Whether this stone layer is of natural or anthropogenic origin is unknown.

Some of the stones of the façade contained Safaitic inscriptions and petroglyphs. Especially interesting is RA-95, which includes a carving of a camel, now rendered as if it were floating upside down (Fig. 5.53). The Safaitic inscription next to it (QUR-186.95.1) refers to the camel. Surely this panel is not in its original location. Rather, it must have already existed before it was moved and incorporated in the façade during the construction of the cairn.

Figure 5.53: Detail of the façade of Structure 1 (QUR-186). The position of the rock art on a base stone indicates this panel was carved elsewhere prior to the construction of the façade. Scale is 50 cm, photo by P. Akkermans.

Skeletal remains

The looter's debris in and around the tower contained very few and poorly preserved skeletal remains of a single human individual. The remains were too badly preserved to give an age or sex indication (Inskip 2015b). The single radiocarbon date (SN15-96; Table 5.13) that was obtained from these bones indicates the individual was buried here between the 2nd and the early 4th century AD.

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN15-96	Human skeletal remains	Looter's debris	GrA-67032	1795 ± 35	AD 142-155 (6.2%) AD 168-195 (15.1%) AD 209-256 (36.4%) AD 300-318 (10.5%)	AD 132-262 (74.2%) AD 277-328 (21.2%)

Table 5.13: Radiocarbon date from QUR-186, Structure 1.

Small finds

From the looter's debris in and around the cairn came a small number of artefacts (Fig. 5.54). These included a stone bead and a perforated shell, probably also representing a bead. Six small rod-like metal fragments of bronze and, possibly, iron were also found. The only pottery that was found was a fragment of a modern coffee cup.

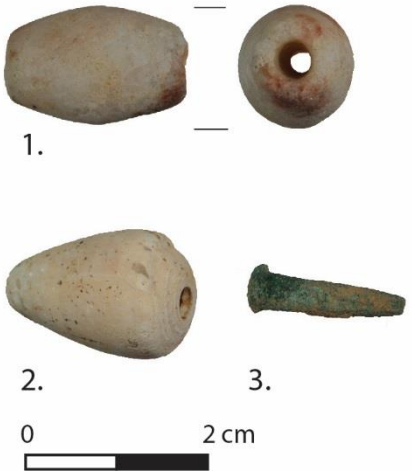

Figure 5.54: Selected artefacts from QUR-186 (Structure 1): 1) stone bead; 2) shell bead; 3) bronze pin/rod.

Discussion

Although prior to excavation this cairn was in a poor state of preservation due to recent looting a number of interesting observations can be made based on the cleaning activities. The human skeletal remains from the looter's debris suggest that the structure was used as a tomb. These remains were probably interred in a burial chamber that had been constructed within the cairn. Although there is no evidence for multiple individuals in the skeletal remains it cannot be ruled out that multiple individuals were buried in the tomb. In any case, the radiocarbon date from the bones suggest the structure must have been built prior to the early 4th century AD. Clearly, there was already rock art present prior to the construction of the tomb.

5.2.11. QUR-829

This site is situated on a low hillock in Wadi Rajil and is covered by natural flint gravel rather than basalt. The site covers an area of approximately 250 m². On top of the hillock and on its slopes 6 oval pits were observed during survey activities, which were apparently all the result of recent looting activities. All of the pits were broadly orientated east-west. On the bottom of these pits and in the looter's debris

Figure 5.55: Structure 1 at QUR-829: a small unlined pit containig the skeletal remains of a child. Scale is 50 cm, photo by P. Akkermans.

Figure 5.56: Selected artefacts from the child burial in Structure 1 (QUR-829): 1) shell bead; 2 & 3) glass paste beads; 4) beads; 5) bone pendant fragment (?); 6) bronze (ear)ring fragment.

Figure 5.57: Structure 5 at QUR-829: an unlined pit with the skeletal remains of a single individual. Scale is 50 cm, photo by P. Akkermans.

around them human skeletal remains were observed. Subsequent cleaning of these pits revealed more funerary remains, including artefacts, as well as some simple architectural remains of the tombs.

All of the looted areas appeared to have broadly followed the original contours of what appeared to be inhumation graves. Two of these graves appeared to be pre-Islamic, while three others were from the Middle to Late Islamic period. The first pre-Islamic grave was Structure 1, which was a small unlined pit measuring 113 by 67 cm in width about 90 cm in depth. It was situated on the westernmost slope of the hillock (Fig. 5.55). The human skeletal remains retrieved from within the pit were from a young child, around 4 years of age (Inskip 2015a). These skeletal remains were radiocarbon dated to 3rd or 4th century AD (SN14-152; Table 5.14). Additionally, numerous artefacts were associated with this burial, including 27 beads made of glass and shell (Fig. 5.56) and part of what may have been bone pendant, as well as fragmentary remains of iron and bronze objects.

Remains of a second pre-Islamic burial were found in Structure 5, which also appeared to have

been an unlined pit-grave. It was about 135 by 55 cm wide and about 50 cm deep (Fig. 5.57). Numerous human skeletal remains were retrieved from the disturbed fill of the pit and the looter's debris around it, probably from a

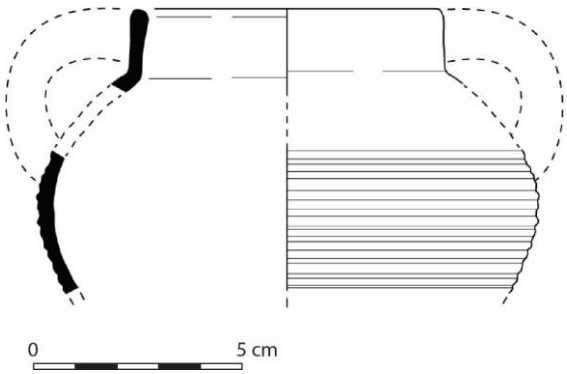

Figure 5.58: Pottery vessel fragment associated with the burial in Structure 5 (QUR-829). It was dated on typological grounds to the Late Roman or Byzantine period. Parallels: Alliata 1992, Fig. 9:19; Smith 1973, Pl. 43:1327. Drawn by A. Kaneda.

single individual.[5] Ceramics were also found in the disturbed fill of the pit, which appeared to originate from a single pottery vessel that was probably part of the grave inventory. It was dated on typological grounds to the Late Roman or Byzantine period (Fig. 5.58).

Sample no.	Material	Context	Lab no.	Date BP	Calibrated date BC/AD (1 σ)	Calibrated date BC/AD (2 σ)
SN14-152	Human skeletal remains	Looter's debris	GrA-67037	1740 ± 30	251-336 AD (68.2%)	236-386 AD (95.4%)

Table 5.14: Radiocarbon date from QUR-829, Structure 1.

5.2.12. Other excavations

In addition to the excavation results described above there were a number of cairns excavated that provided little information on funerary customs from the Classical and Late Antique period, but do merit a brief discussion as they provided insights into the variability within the total corpus of funerary monuments of the Jebel Qurma region.

More evidence for the presence of prehistoric burial cairns in the Jebel Qurma region was attested at the site of QUR-186, which was already briefly introduced above. Here, a cairn field comprising about 50 small cairns was present, and excavations carried out at these cairns showed that many – of not all – of these cairns should be dated to the Early Bronze Age, evidenced by the presence of distinctive pottery vessels within some of these cairns). Importantly, these cairns were relatively small – in any case much smaller than the more recent cairns described above. These were not larger than about 2.2 m in diameter and 1.2 m in height (Akkermans & Brüning 2017).

Furthermore, for some of the excavated cairn it is not certain that they ever served a funerary purpose, as these were devoid of any human skeletal remains and artefacts. Although it would be beyond the scope of this work to discuss the excavations results of these cairns in detail, suffice it to say that most of these cairns (77%) were of relatively restricted size, i.e. between 1.9 and 4 m across, and not higher than about 85 cm. More research is required to further establish the date of construction and use of these features and, indeed, their purpose.

5.2.13. Discussion

The excavations at a number of potential funerary monuments in the Jebel Qurma region were carried out in an attempt to investigate burial practices between the Hellenistic and Early Islamic periods. The results of these excavations are summarised here to provide thoughts on the development in construction and use of these features. In this respect, a typo-chronology of funerary monuments is provided based on the excavation results. The oldest funerary monuments in the Jebel Qurma region are small prehistoric burial cairns, which were attested most clearly at an extensive cairn field at the site of QUR-186. These prehistoric cairns are relatively small – up to 2.2 m in diameter – and consistently feature a corbelled burial chamber covered by loosely piled stones. Some of these also feature an exterior façade created rather crudely. In addition to these prehistoric cairns the excavations show the presence of different types of tombs that were constructed and used in more recent times.

[5] This is a tentative observation, as no detailed osteological information is available at present.

Ring Cairns

The earliest historical-era funerary monuments in the Jebel Qurma region – except for the prehistoric tombs – appear to be what are called Ring Cairns (Akkermans & Brüning 2017). This type of cairn is so far only attested at the site of QUR-215,[6] where it consists of a large circular outline of stone at the edge of the cairn measuring nearly 7 m in diameter. The construction of this cairn was dated to the 4th or 3rd century BC based on radiocarbon and OSL dates. This cairn was constructed on a high, prominent location in the *harra* landscape. Whether the Safaitic inscriptions situated around this cairn were already present or created by the time the cairn was erected is uncertain. Large amounts of artefacts were found in association with the burial(s) interred in this cairn, including remains of jewellery and a bronze vessel. Clear parallels for this type of cairn from areas beyond the Jebel Qurma region are currently lacking.

Tower Tombs

The second and probably somewhat younger type of funerary monuments are what are called Tower Tombs (Akkermans & Brüning 2017). This type of tomb was revealed at several sites: QUR-2, QUR-9, QUR-148, QUR-186, QUR-956, and QUR-970. Tower Tombs consist of a circular tower-like construction, measuring between 2.75 and 4.8 m in diameter, and between 0.8 and 1.45 m high. Many of the Tower Tombs, though not all of them, were associated with large numbers of pre-Islamic rock art. However, the fact that some of this rock art apparently was already created before the construction of some of these tombs – something that was attested at QUR-186 and QUR-2 – suggests that not all this rock art was necessarily functionally associated with the construction of the monument or the disposal of the dead.

Although many of the excavated Tower Tombs were seriously damaged by recent looting activities, at least some of these tombs must have originally featured a central corbelled burial chamber constructed within the tower. Evidence for such a chamber was encountered at two of the Tower Tombs. Additionally, rectangular ante-chambers were sometimes constructed against the façade of the tower, between 1.4 and 2.3 m long. These often contained the skeletal remains of multiple individuals, indicating that these chambers were used as tombs. They further indicate that the Tower Tombs were used for the interment of multiple individuals. It is not possible to say with certainty whether these individuals were buried here at the same time or one after the other, but if we assume that we are dealing here with ordinary mortality patterns the latter seems to be most likely.

Numerous artefacts were encountered in association with the pre-Islamic burials within and around the Tower Tombs. Again these included remains of jewellery, such as beads made of stone, glass of glass paste, shell and coral, and possibly bone or tooth. More extraordinary were the finds from the tombs at QUR-2, which included several pairs of bronze earrings with pendants made of semi-precious stone and pearl. Four bronze coins were also found here, some of which probably had been in circulation for one or more centuries. Also remarkable is the complete absence of pottery – pottery vessels were apparently not part of the grave inventory.

Some of the Tower Tombs yielded evidence for their date of construction or use. Radiocarbon and OSL dates were obtained from QUR-2, on the basis of which it was suggested that the Tower Tomb at this site was constructed prior to the 1st century AD. Furthermore, a single radiocarbon date from skeletal remains from QUR-186 gave a 2nd to early 4th century AD date, although whether these remains represent the original burial or a later one is not clear. Other dating evidence was somewhat more ambiguous, including the gold earring found in the cover of a Tower Tomb at QUR-9 (Structure 9), which possibly dates

[6] More cairns of this type have been documented through excavations carried out in 2017, but these results lie beyond the scope of this study.

to the early 1st millennium BC. A remarkable date was returned from an OSL sample obtained from underneath the façade of the Tower Tomb at QUR-956. This Late Chalcolithic/Early Bronze Age date is completely at odds with the other dates from Tower Tombs, i.e., those from the late 1st millennium BC and early 1st millennium AD. The anomalous date from QUR-956 is at this point difficult to explain. More research is required to corroborate such an early construction date of Tower Tombs. For the moment, it may be concluded that Tower Tombs were constructed probably at least between the late 4th and the late 1st century BC, and that their re-use possibly continued up until the early 4th century AD.

Parallels for Tower Tombs are present at the site of Wisad Pools, some 70 km to the east of the Jebel Qurma region. Here, three structures show a configuration more or less similar to the ones reported here. The Tower Tombs at Wisad Pools were not excavated but many architectural features were apparent. They were at least 4 meters in diameter and associated with relatively large numbers of Safaitic rock art, including pieces that were reused in the construction of the tombs. Massive blocks were incorporated in the construction of these tombs. Additionally, all of these tombs featured a rectilinear ante-chamber of about 2 m long (Rollefson 2013, 221-3).[7] The similarities between the Tower Tombs at Wisad Pools and the Jebel Qurma region are striking. It suggests that the construction of Tower Tombs was not a local phenomenon, but one that probably extended at least across the southern edge of the Jordanian *harra*.

Non-funerary cairns

From a number of excavated cairns, discussed in § 5.2.12., there came no evidence that they once served as tombs. These were usually fairly small cairns, i.e. up to 4 m in diameter and up to 85 cm high. In view of the absence of human skeletal remains or potential grave goods these structures can at this point not be classified as burial cairns with certainty. If these were tombs originally, then they were possibly disturbed – by looting, animal disturbances or weathering – to such an extent that any funerary remains were obliterated. Alternatively, these cairns may have had a completely different function, about which one can only speculate at this point.

Pendants

Pendants are typically found in association with burial cairns, which is evident for example at QUR-215, QUR-9, QUR-956 and QUR-970. However, the Pendants themselves are not tombs but simply small heaps of stone. This is even the case where Pendants do seem to consist of small chamber-like constructions. However, excavations revealed that even these features are devoid of skeletal remains or artefacts, both within them and underneath them. Also, these small cairn are not open chambers, but were filled in completely with loosely piled stones.

Similar observations were reported from various other regions, including Maitland's Mesa (Rowan et al. 2015, 180) and Wisad Pools (Rollefson 2013, 223-4) where some individual cairns of Pendants were found to be devoid of burial remains as well, despite their chamber-like appearance. Any attempts to date these Pendants was not carried out. Another place where Pendants were investigated, yet far removed from the Black Desert, was at the al-Makhdarah Necropolises in Yemen, where numerous Pendants are situated. Three radiocarbon dates – from the early, middle, and late 1st millennium BC – were obtained from the burial cairns to which these Pendants were attached (De Maigret 1999, 329-35).

Dating evidence for the Pendants themselves, in addition to the associated burial cairns, was collected in the Jebel Qurma region. OSL dates were obtained from four of the pendants, which provided

[7] The rectilinear side-chambers at the Tower Tombs of Wisad Pools were interpreted as 'entrance chambers' (Rollefson 2013, 222), but the excavations at QUR-2 and QUR-148 show that they are tombs, not only because of the presence of skeletal material but also because the tower's façade is not open at the back of the ante-chamber.

broad yet fairly consistent dates of construction for these features. The OSL dates indicate that the broadest possible date range for the construction of pendants is between the late 13th century BC and the early 1st century AD. The period between ca. the early 8th and the early 3rd centuries BC is covered by all obtained dates, which thus provide the narrowest potential date range for the construction of pendants at this point.

Remarkably, Pendants were associated with different types of tombs. The Ring Cairn at QUR-215 had a Pendant attached to it, but Pendants were also associated with Tower Tombs, such as at QUR-9, QUR-956, and QUR-970. It appears, therefore, that Pendants were probably associated with particular burials rather than with certain tomb types. Unfortunately, given the fact that multiple burials were often present in these cairns, and often in a poor state of preservation, it remains unclear with what kind of burials Pendants may be associated.

Inhumation graves

Within the funerary cairns stone-built burial chambers were typically encountered in which the deceased were laid to rest. These chambers were either roofed or filled in with rocks covering the corpse. Additionally, a number of proper inhumation graves were encountered as well, where a pit was dug into the soil in which a body was placed that was subsequently covered by soil. Such an inhumation grave was found underneath a Ring Cairn at QUR-9 (Structure 9) and in the cemetery of QUR-829. These inhumation graves were dated from the Late Roman to Byzantine period – significantly younger than the other, more typical cairn burials. It is also recalled here that a small cemetery of inhumation graves was encountered during the survey at HAZ-27, which was dated through associated ceramics to the early 4th century AD (see Chapter 3).

A chronology of burial customs

In summary of the data and observations presented above, a chronology of burial customs in the Jebel Qurma region may be proposed. The earliest radiocarbon dates from cairns are from the 4th/3rd century BC, i.e., from the Ring Cairn at QUR-215. Tower Tombs seem to occur somewhat later, i.e. between the 1st century BC and the early 4th century AD. In addition to the construction of burial cairns, several cairns were reused multiple times for the interment of the dead, such as in rectilinear ante-chambers constructed against the façade of Tower Tombs, but also within the cairns proper.

Although many of the skeletal remains encountered within the cairns were in a poor state of preservation, both men and women seem to have been buried in cairns in pre-Islamic times. Whether they also contained child burials remains uncertain. Skeletal remains of adolescents and younger children were encountered within some cairns – such as at QUR-215 and QUR-148 – but there is no reliable evidence to date these remains. Grave gifts often included jewellery such as necklaces/bracelets and earrings, which were at least partially fabricated from non-local materials such as metal, sea shells, coral, and pearl. The fragmentary remains of a bronze vessel at QUR-215 is the only piece of evidence that containers were sometimes among the grave inventory. Pottery vessels, however, do not seem to have been interred as grave gifts, at least not prior to the 3rd century AD.

There is at this point no evidence for the construction of cairns after the early 4th century. Instead, from perhaps the 3rd century onwards, but certainly by the 4th century, inhumation graves appear, although they are attested in limited numbers. Two of these inhumation burials had indications that pottery vessels were interred as grave gifts (QUR-829 and HAZ-47), although remains of these vessels came from heavily disturbed contexts, which makes it difficult to be certain on this point.

5.3. THE MORTUARY LANDSCAPE OF THE JEBEL QURMA REGION

5.3.1. Introduction

In the previous section a chronology of various types of funerary monuments was presented on the basis of detailed excavation data retrieved from a limited number of sites in the Jebel Qurma region. The aim of this section is to study the distribution of funerary monuments in the study area and to better understand the configuration of the funerary landscape. It seeks to answer questions related to the configuration of the mortuary landscape, such as: How are different types of funerary monuments distributed across the landscape? And how may we explain these spatial patterns?

This will be done by analysing the spatial distribution of funerary monuments across different landscape classifications, as defined in Chapter 2. Furthermore, included in these spatial analyses are not only the excavated funerary monuments but also other cairns identified through surveys.

5.3.2. Features included in the analyses

In the previous section a typo-chronology of funerary monuments was presented on the basis of the excavation results. Large burial cairns, including Tower Tombs and Ring Cairns, and the Pendants often associated with them, were shown to have been constructed in a relatively early period of inhabitation in the Jebel Qurma region, i.e., during the late 1st millennium BC and early 1st millennium AD. After the 3rd or 4th century AD the creation of burial cairns seems to have ceased, and was perhaps replaced by a different funerary custom that took the form of inhumation graves in pits. All of the cairns from this 'early' funerary tradition were shown to be relatively large, i.e., with a maximum diameter exceeding about 4 m. These large cairns can be placed in opposition to a number of excavated cairns that were much smaller. Some of these were shown to have been of prehistoric origin while others did not provide any evidence to say that they were burial cairns (see § 5.2.13.).

Based on these observations, a selection of cairns documented through pedestrian surveys (but not excavated) may be compiled. This selection is based, then, largely on size: cairns with a maximum diameter of more than 4 m were included. It was not possibly to include other morphological traits in the selection, as it was often difficult to differentiate between different cairn types on the basis of surface data alone. For example, the excavation results show that the outer façades of Tower Tombs were often had often become obscured by a cover of rocks. The same holds, in many cases, for distinctive features of the Ring Cairns. Only Pendants could be clearly identified on the basis of survey evidence alone. It is therefore proposed that cairns with a diameter exceeding 4 m in diameter represent either Tower Tombs or Ring Cairns of the 1st millennium BC and the early 1st millennium AD, without further typological or chronological differentiation. Finally, Pendants were also added to the selection as secondary features accompanying funerary monuments of broadly the same period. Following these criteria, a total of 170 cairns and 33 pendants were selected from the pedestrian survey database.

Examples of cemeteries featuring inhumation graves similar to the ones found at QUR-829 and HAZ-27 are difficult to identify on the basis of survey evidence alone. Although the survey database contains many potential cemeteries, many of the graves at these cemeteries are strongly reminiscent of Islamic graves of relatively recent times, and there is very little dating evidence indicating that they were used already in antiquity. These cemeteries are therefore excluded from the analyses presented below.

5.3.3. The constitution of the mortuary landscape

The funerary cairns and associated pendants of the 1st millennium BC and early 1st millennium AD follow a specific distribution (Fig. 5.59) that is entirely different from the distribution of campsites, presented in the previous chapter. These monuments are largely found on high, prominent places in the landscape,

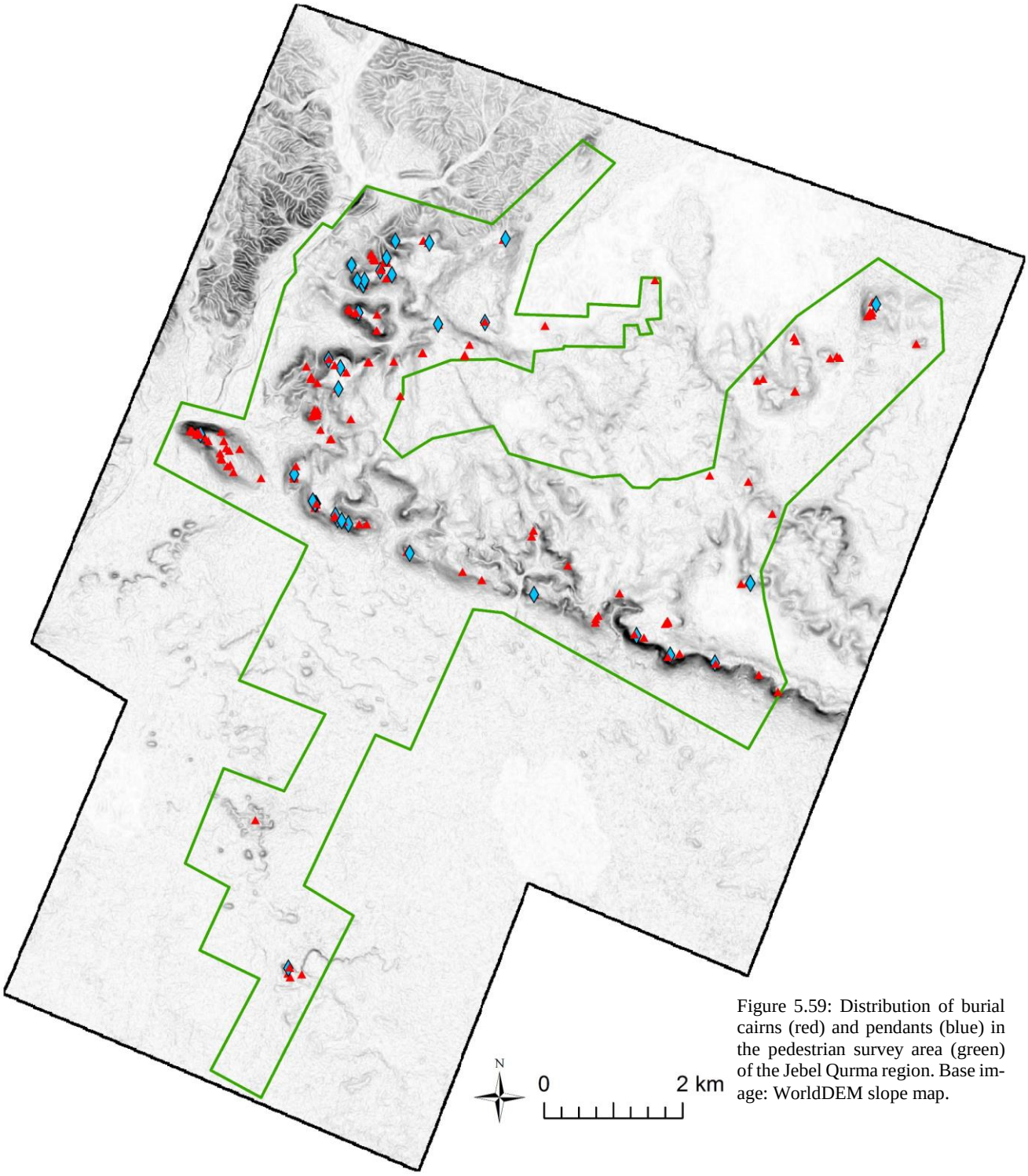

Figure 5.59: Distribution of burial cairns (red) and pendants (blue) in the pedestrian survey area (green) of the Jebel Qurma region. Base image: WorldDEM slope map.

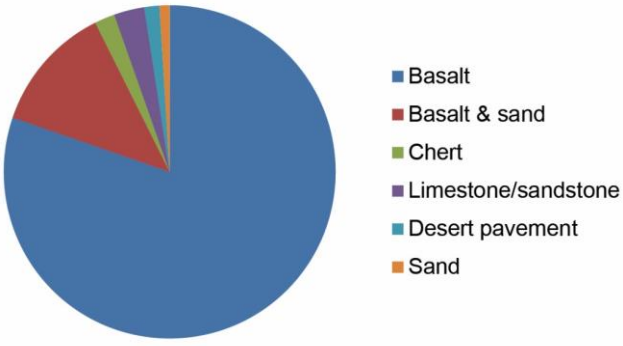

Figure 5.60: Proportion of funerary monuments per surface cover.

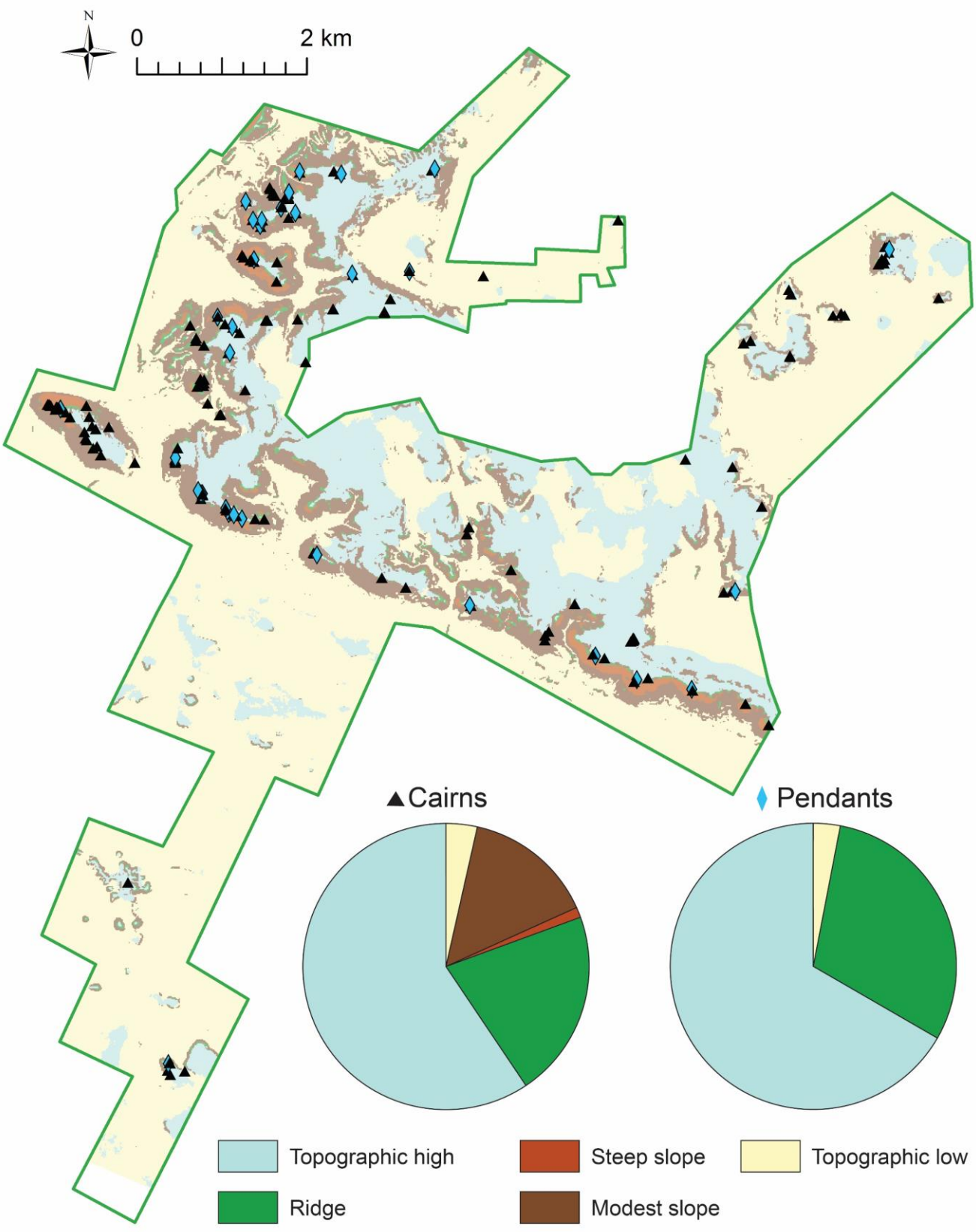

Figure 5.61: Distribution of cairns and pendants in the Jebel Qurma region and the proportion of these features per hillslope position. Base image: Hillslope Position Classification.

Figure 5.62: Remains of the Tower Tomb at QUR-186 as visible on the horizon from the valley below. Photo by P. Akkermans.

often cresting the horizon when viewed from below. This becomes clear from a number of spatial analyses, in which the distribution of funerary monuments over the various landscape classifications, as presented in Chapter 2, is studied.

The funerary monuments are largely confined to the *harra* surfaces of the Jebel Qurma region, as visible in Figure 5.60. 93% of the features was documented in the basalt landscapes of the study area. Both funerary cairns and pendants are present in the Hazimah plains as well, but in very limited numbers. In the *harra* landscape, most funerary monuments are situated at the edges of the basalt plateau rather than in its interior.

Furthermore, the distribution of funerary monuments over the Hillslope Position Classification (Fig. 5.61) shows that most of them are situated on relatively high places, i.e., topographic highs and ridges. This holds for 84% of the funerary cairns, and for the pendants this percentage is even higher (97%). Also, most of the funerary monuments would have been clearly visible from below as they were situated on skylines that dominated the horizon when viewed from below (Fig. 5.62). This is illustrated in Figure 5.63, showing the proportion of funerary monuments that are situated on a skyline. 65% of the funerary cairns is situated on a skyline, and the percentage of pendants situated on a skyline is even higher (91%).

There does not seem to be much correlation between the size of both funerary cairns and pendants and the degree of visual prominence. To test this correlation the size of cairns and the length of pendants was compared to the degree of visual prominence and the skyline values of the areas where the features were located. The coefficient of determination, or 'R-squared' values, between these variables is close to 0, illustrating that there is no clear relation between the variables. In other words, it is not possible to say that the largest cairns and pendants usually occur in the places that are visually the most prominent.

5.4. CONCLUDING REMARKS

The excavations carried out at a number of funerary monuments in the Jebel Qurma region have indicated the existence of various types of funerary customs during the late 1st millennium BC and the 1st millennium AD. It was proposed that these customs changed significantly over time. The next chapter is devoted

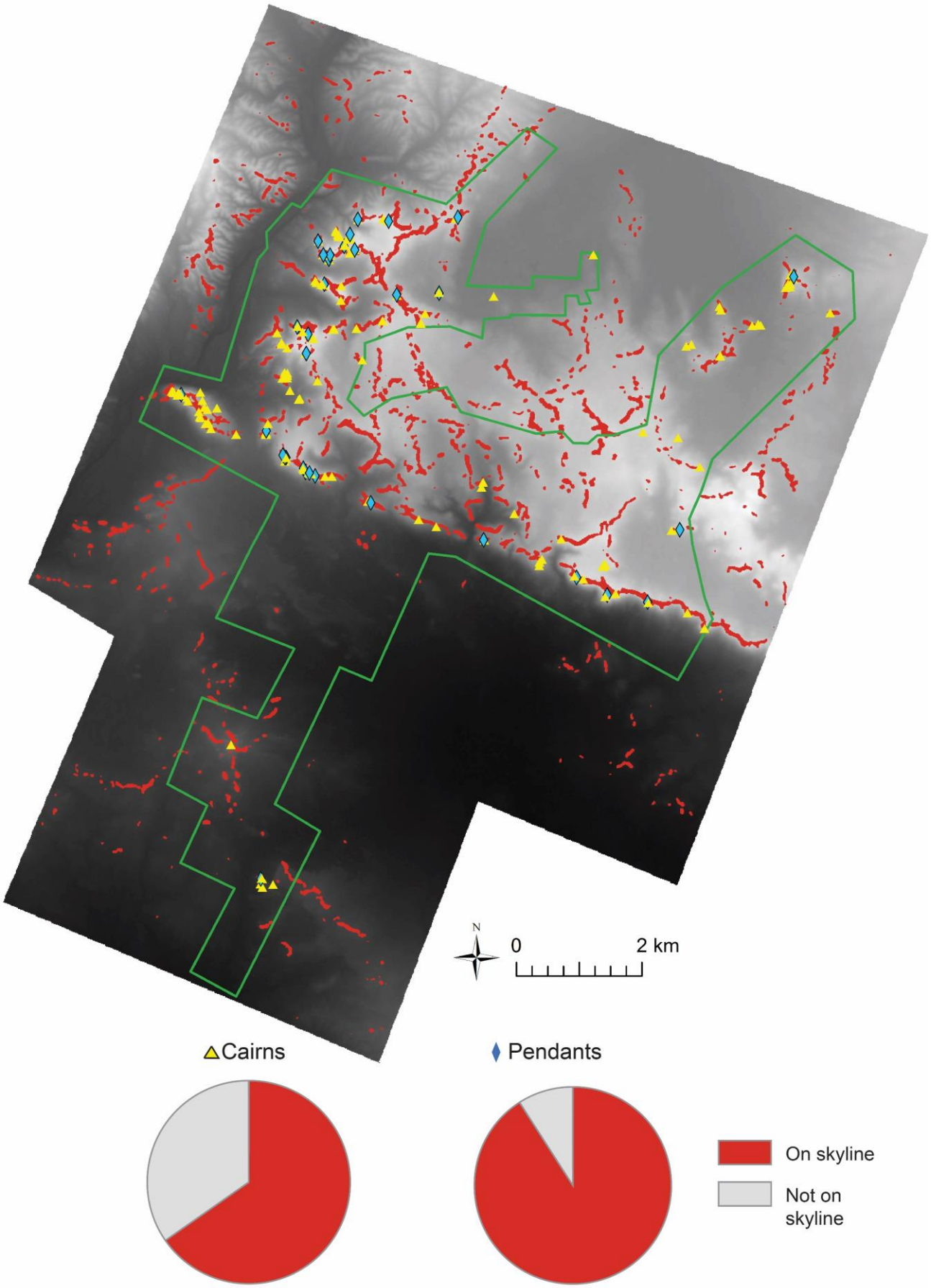

Figure 5.63: Distribution of cairns and pendants in the Jebel Qurma region and the proportion of these features present on dominant skylines. Base image: WorldDEM superimposed by dominant skylines (red) and survey area (green).

to further exploring possible reasons for these developments, among others. Another important issue resulting from the excavation results presented in this chapter is the fact that some of the periods attested through excavations is hardly attested – if at all – in the survey data. Indeed, the excavations provided strong indications for the presence of funerary practices dating to the Iron Age, while this period is currently absent in various other datasets, including the ceramics as well as radiocarbon dates from the excavated enclosures. These observations suggest that the chronology of inhabitation in the Jebel Qurma region – and presumably in other regions of the Black Desert –cannot be adequately reconstructed on the basis of survey material alone. Additional dating evidence is required to ascertain whether observations reflected in the survey material are correct. In the Jebel Qurma region the occupation during the 1st millennium BC may have been more significant and of longer duration than reflected in the survey material.