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## Umm an-Nar settlement in the Wādī Andam (Sultanate of Oman)

NASSER AL-JAHWARI & DEREK KENNET

### Summary

This paper describes a number of archaeological sites of different sizes dating to the Umm an-Nar period (2500–2000 BC), which were discovered or investigated during the course of a systematic archaeological survey of the Wādī Andam in the al-Sharqīyah region of northern Oman. The first, al-Khashbah, is a very large site with a number of round towers and other structures. The second is a smaller but very well preserved site, al-Ghoryeen (al-Gharīyān), with a single round tower, a tomb field, and traces of domestic structures. A number of much smaller sites are also described that have no structural remains. The existence of these sites was detected by the employment of systematic, large-scale pottery collection in small wadi villages, a technique that has not previously been widely employed by archaeological projects in the region. These sites therefore represent an aspect of Umm an-Nar rural settlement that has not received due scholarly consideration. Having described the various sites, the paper discusses the possibility that they represent three different tiers of an Umm an-Nar settlement hierarchy.

**Keywords:** Oman, eastern Arabia, Umm an-Nar, Bronze Age, settlement

This paper describes two significant sites of the Umm an-Nar period that are located in the al-Sharqīyah region of northern Oman, and attempts to place them within their period and regional contexts.

One of the sites, al-Khashbah, is a very large site that has been mentioned briefly a number of times in the literature but has never been fully described, and its importance and size are not generally appreciated by the academic community. The other, al-Ghoryeen, is a smaller site that has never been mentioned in the literature; it represents a very well preserved, middle-sized Umm an-Nar site that throws useful light on the nature of Umm an-Nar settlement more generally.

The area within which these two sites are located is known as the Wādī Andam region in al-Mudhaybi (Fig. 1). It is located to the east of Izkī and south of Samā'il. It formed the basis of the doctoral dissertation of one of the present authors (al-Jahwari 2008), who carried out a survey during the course of two field seasons from December 2004 to April 2005, and from November 2005 to February 2006.

The main focus of the survey was to use a field survey technique specifically adapted for local conditions. This involves the large-scale collection of surface scatter pottery from across modern occupation areas, which

allows the recording of occupation that has left no trace other than low numbers of redeposited pottery mixed with large quantities of more recent material (al-Jahwari 2008: 108–114; al-Jahwari & Kennet 2008). This technique was applied to a range of locations including a sample of six small “wadi villages” — by which is meant locations on wadi banks suitable for agriculture and the areas surrounding them — plus a number of randomly located control surveys and a variety of other sites and collection areas. By employing this technique, it was possible to produce quantified evidence on settlement history as well as to locate tombs, structures, and other archaeological finds in the normal way.

Among the larger sites recorded during this survey were al-Khashbah and al-Ghoryeen. These two sites were also revisited and more fully documented and studied during the period from January to March 2009, at which time all visible structures and related features were recorded and mapped.

A number of Umm an-Nar sites of various types and sizes are already known from this area. These include the sites recorded by the Harvard Archaeological Expedition at Wādī Šamad, such as the settlements of Wādī Šamad 4 and 5, Samad 50 (Maysar 1), and Wādī Andam sites 1, 16, 19, and 28 (Meadow, Humphries & Hastings 1976:

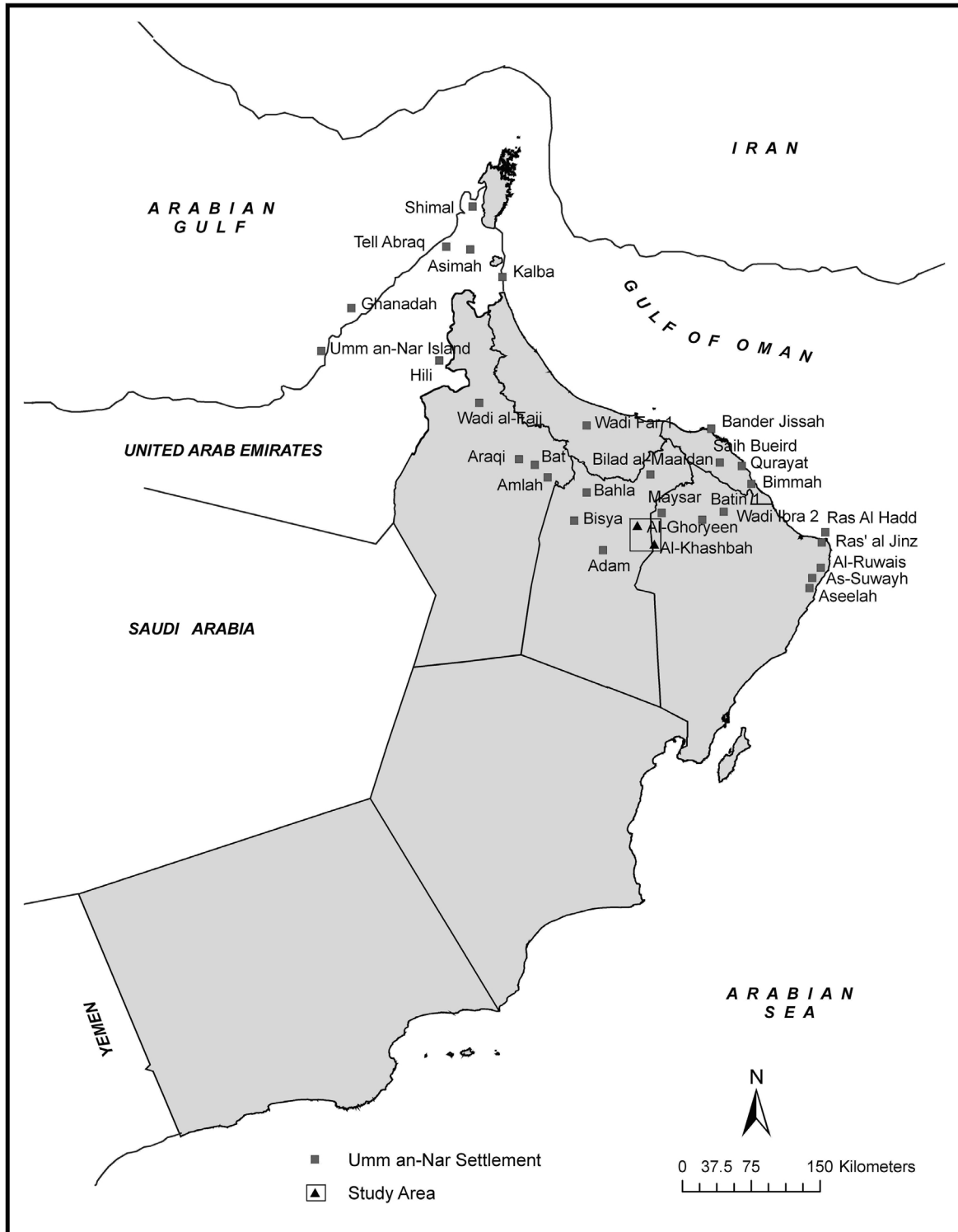
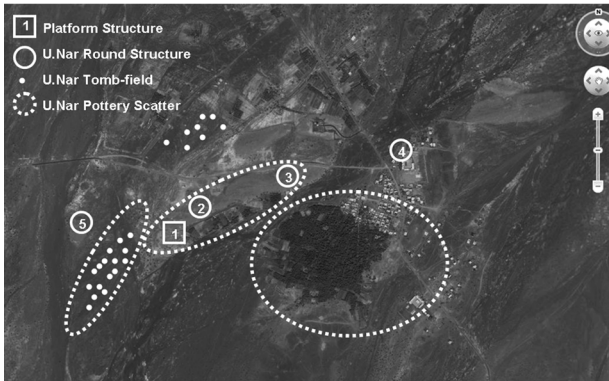


FIGURE 1. A map of Oman showing the sites mentioned in the text. The small square shows the extent of the present study area.



**FIGURE 2.** A plan of al-Khashbah showing the towers, tomb fields, and Umm an-Nar pottery scatters.

112–114). There are also the sites recorded by the British Archaeological Mission, including al-Wāṣil, Sharīʿah (Khuḍar), and Samad 15 (de Cardi, Collier & Doe 1976: 156; de Cardi 1977: 61). Finally, there are other Umm an-Nar sites found by the German Archaeological Mission. Among these are Maysar M25 (round Umm an-Nar tower surrounded by traces of domestic structures), M2, M6, M7, M16, M29, M31, and M49; and Mullaq and al-Hind (al-Khashbah) (Weisgerber 1978: 27; 1981: 174–263).

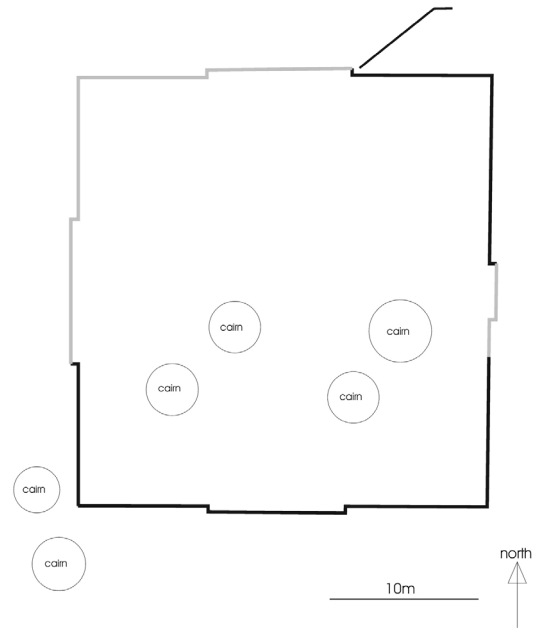
### Al-Khashbah

Al-Khashbah is located halfway between the village of Khaḍrāʾ Banī Dafaʿa and the town of Sinaw, along the main road connecting Izkī with Sinaw (Fig. 1) (GPS coordinates: Oman WGS 1984: 0606930/2506528). It is a widely dispersed site spread over an area of about 912.5 ha (Fig. 2).

The core of the site is an area of modern date-palm groves measuring around 1.5×1.5 km located close to the Wādī Ṣamad channel. The area surrounding the date palms on both sides of the wadi contains a considerable amount of evidence of multi-period settlement located on the gravel plain and on the tops of small rocky outcrops.

As stated above, the site has already been mentioned in the literature a number of times (Weisgerber 1980: 99–100; Cleuziou 1984: 380; Potts 1990, i: 102; Yule 1993: 143–144, fig. 2/a, b; 2001: 384, pl. 511, 590; Orchard & Stanger 1994: 145–146, fig. 1; 1999: 90–91, fig. 1; Cleuziou & Tosi 2007: 243–244, fig. 262), although it has never been fully described and its size and significance are not generally recognized.

Figure 2 shows the later third-millennium (Umm an-Nar) components of the site; they consist of the remains



**FIGURE 3.** A plan of Structure 1 at al-Khashbah. The black lines indicate where the wall is visible on the ground, the grey lines indicate where the wall is covered by rubble, and its location has been estimated based on the parts that are visible.

of four or five structures — three or four round towers and one which is better described as a platform — two tomb fields, and a number of areas of Umm an-Nar pottery scatter. It can be seen that the site is widely dispersed and the monuments and pottery scatters are separated by wide areas that contain no evidence and were apparently empty of occupation. Rather than being a single, unified complex it appears to be a conglomeration of different elements scattered quite widely around a core agricultural area.

#### Structure 1 (0605803/2506363)

This remarkable structure is a large, square stone-built platform, which is located on a small rocky outcrop to the north-west of the site (Figs 3–6). Brief descriptions of this structure have already been given by Weisgerber (1980: 100, fig. 66), Yule (1993: 143–144, fig. 2/a, b; 2001: 384, pl. 511) and Orchard & Stanger (1994: 82), who repeat some of Weisgerber’s observations.<sup>1</sup>

The structure is constructed with a retaining wall of large, roughly-dressed stone blocks that measure up to

<sup>1</sup> Yule (2001: 384) and Weisgerber (1980: 100) refer to Structure 1 or its vicinity as “Hind” or “al-Hind”.

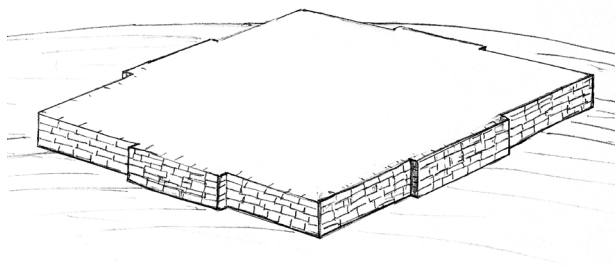


FIGURE 4. A sketch reconstruction of Structure 1 at al-Khashbah from the south-west.



FIGURE 5. Structure 1 at al-Khashbah from the east.

2.7 m in length, up to 90 cm in width and are on average about 45 cm in height (Fig. 6). Up to six visible courses are preserved in some places, the lowest of which is mostly buried in the ground, giving the presently standing wall a maximum height of 2.3 m. There is no evidence of any mortar, but in some places thin stones have been inserted between the courses, apparently to stabilize them. It is, of course, possible that mud mortar was originally used, but if so it has entirely eroded away. The outer face of the wall is clearly visible in many places as a regular line of dressed stones, but a regular inner face was not seen anywhere. It therefore seems likely that the wall was constructed as a retaining wall and never had an exposed inner face.

The structure is square, measuring between 27.5 and 28.9 m along each side and is oriented towards magnetic north (Fig. 3). It is only possible to measure the length of the east and south walls precisely because the outer face of the north-west corner is covered by rubble. In the middle of each side the walls are offset outwards by 40 to 50 cm for a distance of about 9.5 m (shorter on the east face), effectively dividing the walls into three roughly equal sections (Figs 3, 6). At least one end of an offset is visible on all four walls but only on the south wall are both ends of the central offset visible. Here the length of each section of the wall is roughly the same; actually the western third is about 70 cm shorter than the other two. The offsets that are visible indicate that the south, north,



FIGURE 6. The offset in the east wall of Structure 1 at al-Khashbah.

and west walls were laid out in roughly the same way but, as mentioned, the offset on the east wall is considerably shorter. Here, assuming that the wall is symmetrical, the length of the central offset is just under 4 m (compared to 9.44 m on the south side). This means that the building was only symmetrical about the east–west axis and that the east wall was deliberately constructed differently from the other three.<sup>2</sup>

The interior of the structure appears to have been a raised platform, standing at least 2 m above the level of the surrounding hilltop. A sketch reconstruction of what the structure may have looked like is shown in Figure 4. No internal surfaces, walls or other features such as wells are now visible on the ground, although they may, of course, be revealed upon excavation. However, what appear to be six small burial cairns are associated with the structure, four on the interior and two just outside the south-west corner (Fig. 3). These are thought to post-date the original use of the structure. Weisgerber (1980: 100) notes that a stone block, with a worn hole resulting from its use as a door-hinge, was found in the vicinity of this structure.

The date of the structure is suggested by the dense

<sup>2</sup> A sketch-plan of this structure has previously been published (Yule 1993: 143–144, fig. 2/a, b; 2001: pl. 511) but it has the following errors, which have been corrected in the present plan: the orientation is shown as *c.*45° from the magnetic north; the walls are shown as having a defined inner face; no offset is shown on the north wall; the offset on the east wall is shown as being the same size as those on other walls. In addition, a series of internal walls and rooms are shown which were not observed on the ground in 2009 and have either been destroyed after 1993 or are mis-interpretations.



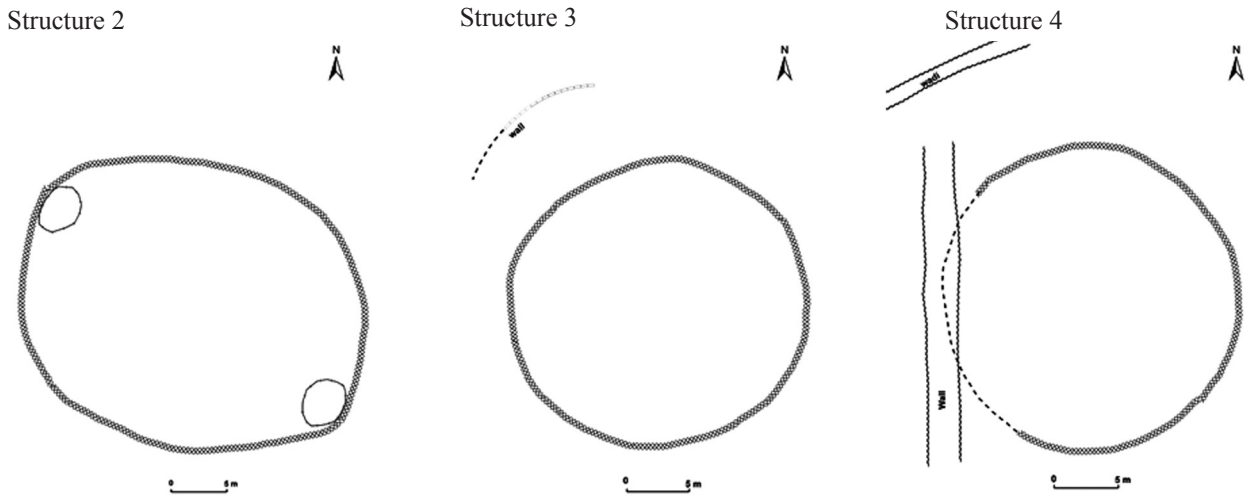


FIGURE 7. Sketch plans of Structures 2, 3, and 4 at al-Khashbah.

scatter of Umm an-Nar pottery that lies outside and below it. A number of petroglyphs can be seen on the outer face of the north-east corner of the structure showing what appear to be camels and horses with riders. These may have been cut after the abandonment of the building or during its original period of use.

The function of the structure is unknown and there is little evidence to provide any indications of its role. It may have had a ritual, defensive, domestic, or social function, although the fact that the east wall is marked out by a shorter offset might be taken to suggest that a ritual function of some sort is the most probable. The structure is much more deliberately square than any known Umm an-Nar tower and this makes it unique in the Umm an-Nar architectural repertoire. In terms of function it might perhaps be most usefully compared with the hilltop monuments that are referred to by the Orchards as “tiered structures” at Jabal Sulayman ‘Alī and Qarn Qanṭarat Nizwā at Bisya (Bisyah) (Orchard & Stanger 1994: figs 2, 7; Orchard 2000: 170–174; Orchard & Orchard 2002: 229–232). Even if one does not agree with the Orchards’ interpretation of the date and context of these monuments, there do appear to be similarities in so far as the structures are all located on low hilltops, have similar masonry, and appear likely to be predominantly ritual (although there is no evidence of terraced walls around the lower slopes of the hill at al-Khashbah as there appear to be around the structures at Bisya). These points appear to distinguish these monuments from the majority of Umm an-Nar round (or sub-round) towers that are well known from sites such as Bāt, Ḥili, and Maysar.

#### Structure 2 (0605822/2506570)

Structure 2 is a badly preserved, circular structure with a diameter of *c.*30 m (Fig. 7). It is situated on the flat plain below the mound where Structure 1 is located. Structure 2 consists of a circular wall of large and medium-sized, crudely dressed stone blocks, measuring up to 2 m surrounding a low earth and gravel mound. Although the structure is badly preserved, the circular stone wall can be distinguished standing up to three courses high in some places, particularly on the northern side. No internal walls or structures are presently visible. During the survey, Umm an-Nar pottery sherds were found and collected from the surface in and around the structure. This must be the circular structure mentioned by Yule (2001: 384) as lying roughly 100 m north-north-east of Structure 1 (Fig. 7) although, curiously, Weisgerber (1980) appears not to have noted it.

#### Structure 3 (0606698/2506686)

All that remains of this circular structure are parts of a circular wall consisting of one course of large, crudely dressed stones, around 40 cm high and up to 2 m long (Fig. 7). The diameter of the structure is *c.*25 m. It is situated on a low rise close to the channel of the Wādī Ṣamad. A few Umm an-Nar sherds were picked up within the structure, but there is very little material. This and Structure 4 (below) appear to be the “zwei weiterer Ruinen” (two further ruins) mentioned by Yule (2001: 384) and is probably the southernmost of the two circular structures described by Weisgerber (1980: 99–100) where only the foundations were preserved.

#### **Structure 4 (0607221/2506844)**

A third probable Umm an-Nar circular structure is found in the north-eastern part of al-Khashbah on the opposite bank of the Wādī Ṣamad channel to Structure 3 (Fig. 7). The 23 m-diameter structure is built of large and medium stone blocks, up to 2 m long. Only one or two courses of stones are still preserved, although Weisgerber notes that the structure stood up to 1.8 m high some thirty years ago (1980: 99–100). The structure appears to have been recently damaged by the deliberate removal of stone blocks so that they can be piled up along the wadi bank to prevent erosion. In addition, the western part of the structure has been damaged by the construction of a modern wall. No Umm an-Nar pottery sherds were found associated with this structure, but a few Early Iron Age sherds were collected.<sup>3</sup>

#### **Structure 5 (0605085/2506327)**

A further possible Umm an-Nar circular structure was found during a last visit to the area in March 2009. Due to its very bad state of preservation, it is difficult to define its original boundaries. In general, as in the other structures, this construction was built using medium and large stone blocks that were cut from the same low rocky hill of which the structure is part. The dimensions of the structure are not clear.

#### **Tomb fields**

Although it was previously believed that no Umm an-Nar tombs existed at this site (e.g. Orchard & Stanger 1999: 90), systematic survey has revealed that two large Umm an-Nar tomb fields are in fact present, one to the north of the site and one to the west (Fig. 2).

#### ***Northern Tomb field (0606181/2507367)***

A number of circular Umm an-Nar tombs were located in a tomb field just c.800 m north of al-Khashbah village (Fig. 2). The tomb field area has now been converted into small date-palm gardens around which the tombs are now distributed. The tombs are built of flat, dressed limestone blocks with an average size of c.35 cm. Two or more

concentric walls can clearly be distinguished on a number of the tombs with a thickness of c.30 cm for each wall. There are also typical walls sub-dividing the inside of the tombs to form several burial chambers. The diameters of the tombs vary between 4 and 8 m, while the highest of the best-preserved mound is almost 2 m. The survey yielded only a few surface finds, including human bone fragments, one bead, and three pottery sherds of possible Islamic date.

#### ***Western tomb field (0605251/2506155)***

Another Umm an-Nar tomb field was located in the western part of the village, extending over an area of c.32.5 ha (Fig. 2). The shape and size of the tombs are similar to those found in the north-western tomb field described above. They are circular and consist of two, perhaps more, concentric walls c.50 cm thick with possible internal walls dividing the tomb into several chambers. The tombs measure between 4 and 8 m in diameter. Some of the tombs are preserved to only one course of stone wall (c.30 cm high), while others are preserved as mounds with a height of between 1 and 2 m. As many of the tombs have been heavily disturbed, large amounts of surface Umm an-Nar sherds and fragmentary human bones were encountered.

#### ***Ḥafīt tomb fields***

It is also worth mentioning that there are other tomb fields located in different areas surrounding the village. Briefly, they consist of a large number of Ḥafīt and beehive tombs similar in shape and characteristics to those found in other parts of the Oman peninsula. They are found on rocky and gravel hills as well as flat gravel terraces. Some of these tombs were located in close proximity to the Umm an-Nar structures described above, particularly on the low rocky hill between Structures 1, 2, and 3. However, the majority are located away from the centre of the modern village area. The occurrence of tombs of this period suggests that the area within and around al-Khashbah has been attractive to settlement for some time, perhaps from as early as the late fourth millennium BC.

#### **Pottery scatters and settlement areas**

Possible traces of Umm an-Nar occupation in the form of surface pottery scatters were recovered from the area around the modern village and date-palm groves (Fig. 2). The surface pottery collection analysis showed that these

<sup>3</sup> Yule (2001: 384) notes that the largest of the three round structures is known locally as “Tauer Ḥantheḷ”, without making clear which structure is meant, while Wiesgerber (1980: 99–100) must refer to Structure 4 when he notes that the northernmost of the two structures on either side of the wadi is known locally as “Tamer Hansel”.



areas yielded 405 sherds of Umm an-Nar pottery unrelated to surviving tomb or other structures (al-Jahwari 2008: 115–118). These sherds are thought to be the remains of buried occupation that has since been disturbed and brought to the surface by agricultural activities (al-Jahwari & Kennet 2008). Interestingly, this evidence also demonstrates that there is more Umm an-Nar pottery in this area than any other pre-Islamic period giving, perhaps, some indication of the comparative level of intensity of occupation of this area through time. Relatively high levels of Umm an-Nar activity are also suggested by the recovery of Umm an-Nar remains within the village, such as in low mounds and cut sections where large numbers of pottery sherds are exposed. Additionally, Umm an-Nar sherds were also found scattered within an Islamic cemetery. As stated above, quite dense scatters of pottery were also observed on the low hill between Structures 1, 2 and 3. Surface collection in these areas yielded a total of 424 Umm an-Nar sherds.

### **al-Ghoryeen (0604445/2532515)**

Al-Ghoryeen is a much smaller settlement than al-Khashbah. It extends over an area of about 15 ha on the western bank of the Wādī Maḥram, at the point where that wadi meets the Wādī Andam, close to the modern village of al-Ghoryeen south of the village of Mahleya (Fig. 1).

The site consists of a small mound thought to be the remains of an Umm an-Nar round tower, a cemetery of forty-nine tombs and, most importantly, an almost completely preserved domestic occupation area, which is visible on the surface as stone alignments marking the location and layout of walls and buildings (Fig. 8). The north-eastern and north-western parts of the site are occupied by Late Iron Age/Samad period tombs that seem to overlie earlier Umm an-Nar remains.

The site can be roughly divided into four parts, of which the round tower is the focal point being at the centre of the site. The tower mound has a diameter of between 25 and 30 m, and its height is about 5 m. Its walls are constructed of flat limestone blocks of medium size. There is no evidence on the surface of internal structures but on top of the tower there is a pile of stones, which is perhaps a later burial cairn. The south-western part of the site is where domestic occupation was located, as is suggested by the remains of more than fifty structures distributed over an area of around 200×150 m. Although it has not yet been possible to map these in detail, it is clear that they represent the remains of buildings of a variety

of different sizes and plans (Fig. 9). A large number of Umm an-Nar sherds were found scattered within and around these structures. The south-eastern part of the site along the wadi bank includes a tomb field with forty-nine Umm an-Nar round tombs that appear to be quite badly preserved. Their diameters range between 4 and 12 m. They are built of local stone with deliberately selected orange rock from the other side of the wadi used as facing stones. By contrast, the north-eastern and north-western parts of the site consist of a large number of Late Iron Age/Samad period tombs. Around 200 such tombs were counted. They appear to be built on top of earlier Umm an-Nar structures.

### **Small village sites**

In a recent paper, we described a method of field survey that is based on large-scale pottery collection and allows the systematic detection of settlement evidence in the small wadi villages that are typical of this area as well as many other parts of the Oman peninsula (al-Jahwari & Kennet 2008). Crucially, this method uses an understanding of the dynamics of more recent wadi agriculture to allow the detection of occupation evidence at sites where architectural remains such as tombs and round towers are no longer present, and where ancient surface pottery scatters are mixed with much greater densities of more recent pottery.

The technique was applied to a sample of six wadi villages in the Wādī Andam study area during two seasons from December 2004 to April 2004, and November 2005 to February 2006 (Fig. 10). There were no traces of Umm an-Nar round towers or tombs visible on the surface in any of these six villages nor were any reported in the literature. Despite this, the surface pottery provides clear evidence that there was significant occupation at five out of the six sites during the Umm an-Nar period (Figs 11, 12).

Obviously, the actual nature of this occupation is unknown, as is its precise extent and density. More information could be extracted by more precise surface survey or by excavation. It is not known whether Umm an-Nar round towers were originally present and have since been destroyed, or whether the Umm an-Nar occupation at some or all of these sites never included a round tower. It would be very difficult to determine this archaeologically at any one site but if a large enough number of such sites were to be located without evidence of a tower, it might be possible to suggest that there were Umm an-Nar settlements of this scale that did not normally include a round tower.

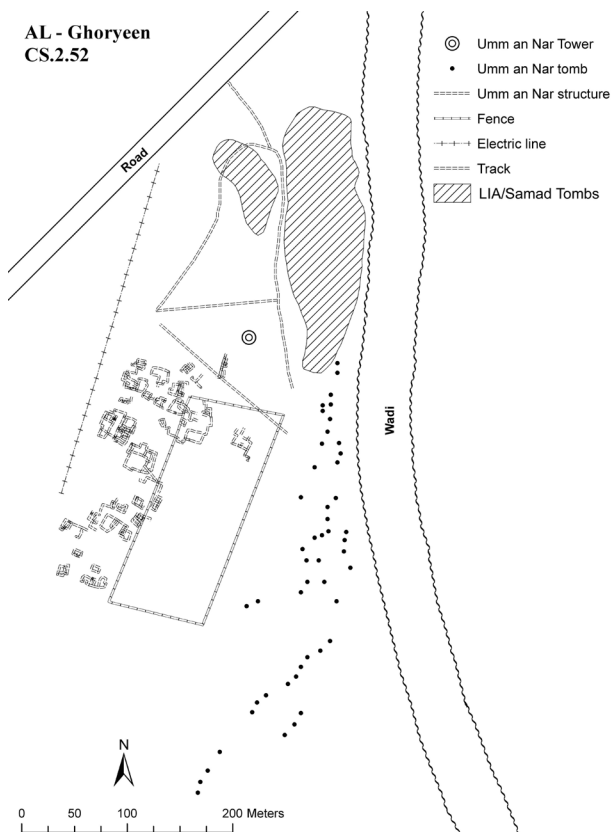


FIGURE 8. A plan of al-Ghoryeen.

### Discussion: three tiers of Umm an-Nar settlement?

This paper has described a number of aspects of Umm an-Nar settlement in the Wādī Andam region of Oman that were previously either unknown or only partially known. Together they provide an insight into the complexity of Umm an-Nar settlement in this area. Obviously, the considerable difference in the size and nature of these sites might suggest that they represent different tiers of settlement and it is this idea that will be explored below.

The site of al-Khashbah is clearly important. First, the square platform (Structure 1) is, as Yule has observed (2001: 384), one of the largest known Umm an-Nar structures. It is certainly one of the most impressive and is unique in its monumentality, concept, and layout.<sup>4</sup>

<sup>4</sup> It is difficult to be certain which is actually the largest Umm an-Nar building as they are of different shapes. Basing the comparison on area would therefore seem to be the most sensible. Most round towers have reported diameters between 20 and 25 m but would need to have a diameter of about 32 m in order to exceed the area of Structure 1 at

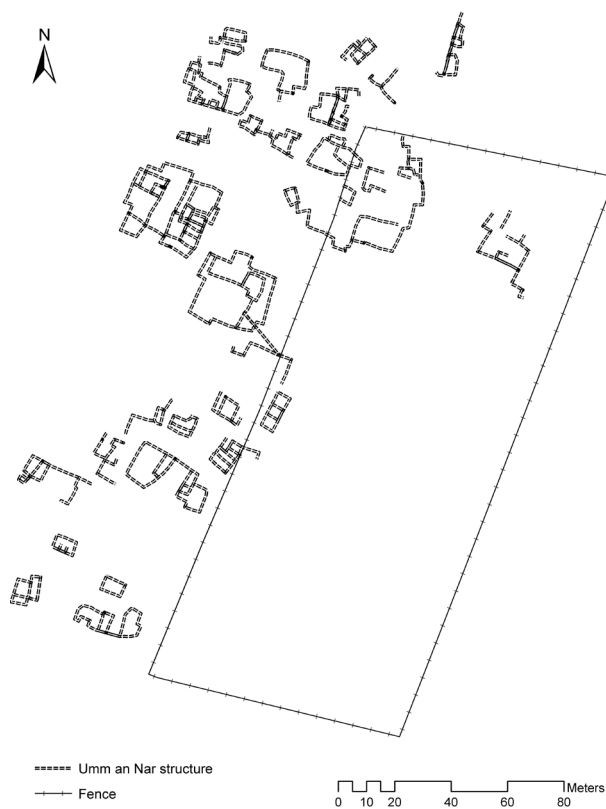
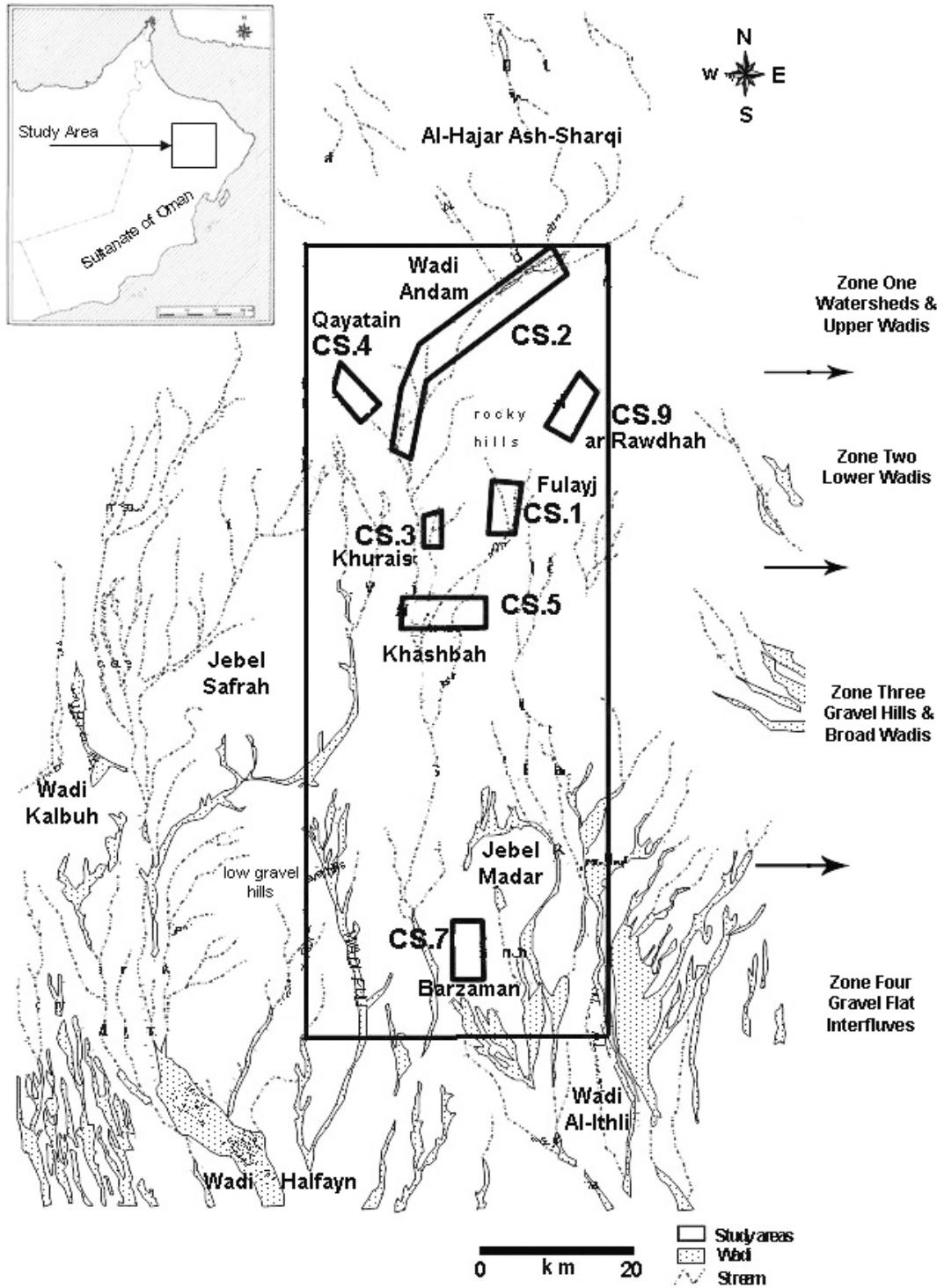


FIGURE 9. An interpretive sketch plan of the domestic settlement area at al-Ghoryeen.

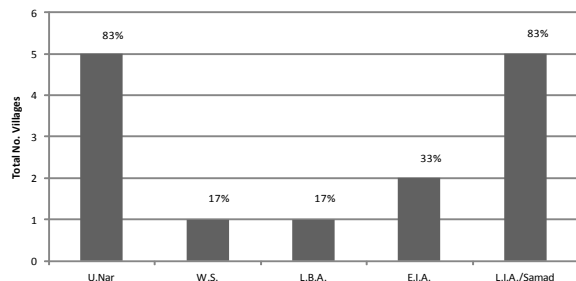
Secondly, in terms of its size and the number of preserved monuments which are located there, al-Khashbah is among the largest Umm an-Nar sites known from anywhere in the peninsula and is, alongside Ḥilī, Bāt, Bisyā (and perhaps Firq), one of only a few sites where four or more Umm an-Nar towers have been reported. Although the apparently low density of occupation at these large, multi-towered sites (along with the limited range of activities that are known to have taken place at them) would argue against considering them properly urban (*contra* Orchard & Stanger 1994), it seems quite likely that they represent significant regional centres of power and cultural focus.

A number of smaller multi-towered sites are known in the peninsula, such as al-Safri, al-Dreez (al-Darīz) (Frifelt 1985: 91–92), Firq (Sites 24 & 25) (de Cardi, Collier al-Khashbah. The round tower at Tell Abraq is estimated to have a diameter of 40 m (Potts 1991: 22), which, if correct, would give it an internal area of over 1200 m<sup>2</sup> (compared to the 784 m<sup>2</sup> of Structure 1 at al-Khashbah) and would make it the largest known Umm an-Nar structure by a considerable margin.



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FIGURE 10. A map of the study area showing the location of the six wadi villages where pottery collection was undertaken.



**FIGURE 11.** A graph showing a ubiquity analysis of pottery from different periods in the six wadi villages.

& Doe 1976: 159–160, 184, fig. 33, pl. 19; Orchard & Stanger 1999: 91–93, fig. 3; Orchard & Orchard 2002: 228–229), Rawḍah (Sites 28 & 29) (de Cardi, Collier & Doe 1976: 160–161, fig. 34) and Bidyah (al-Tikriti 1989: 107–109, pls 78, 83, 90), where only two or three Umm an-Nar towers have been reported.<sup>5</sup> Of course, it is possible that some of these sites might originally have had more towers and that they have since been destroyed, but in either case it seems quite likely that they represent similar, or perhaps slightly smaller, regional centres as the larger sites noted above. At the present time no site of this size is known from the Wādī Andam area.

Further sites are known where only one Umm an-Nar round tower has been reported; examples of such sites are Tell Abraq (Potts 1991: 21–25), Maysar (Weisgerber 1981: 198–200, Abbs. 24–27, 29), Amlah Site 2 (de Cardi, Collier & Doe 1976: 111–112, fig. 10), Kalba (Carter 1997: 91–94), and about six others. Al-Ghoryeen makes a useful contribution to this list as it is, along with Maysar, probably the best preserved of these sites. As has been noted above, many of the remains at the site are easily visible on the surface allowing a clear understanding of the size, layout, and organization of the site without excavation. This presents an excellent archaeological opportunity to explore the spatial organization of such a site in some detail.

It is tempting to consider the single-towered sites as a second, lower level in the settlement hierarchy of the Umm an-Nar period. The size and layout of al-Ghoryeen seems to argue for this as it is clearly a site of limited dimensions — much smaller than al-Khashbah — with only one cemetery, and one, or perhaps two, occupation

<sup>5</sup> Four towers are reported at Firq by Orchard and Orchard (2002: 228–229), but there appears to be some doubt over the identification of one or two of these.

Period	Number of wadi villages yielding pottery (Total 6)	Number of survey areas yielding pottery (Total 69)
U.Nar	5 (83%)	14 (20%)
W.S.	1 (17%)	3 (4%)
W.S.?	0 (0%)	3 (4%)
L.B.A.	1 (17%)	0 (0%)
E.I.A.	2 (33%)	13 (19%)
L.I.A./Samad	5 (83%)	23 (33%)

**FIGURE 12.** A table of the ubiquity analysis of pottery from villages and survey collection areas showing the number of villages and survey areas where pottery of different periods was retrieved.

areas of relatively limited extent. Arguing against such an interpretation would be the fact that, at present, there appear to be fewer single-towered sites than there are multi-towered sites. The reason for this is not clear and might relate to the nature of archaeological preservation and discovery, but it might also argue against a hierarchical relationship between single and multi-towered sites.

Five of the six wadi villages explored in the course of the Wādī Andam survey by al-Jahwari (2008: 111–124) present significant questions about the nature of Umm an-Nar settlement. These sites appear to suggest that there were large numbers of small Umm an-Nar agricultural villages scattered across the landscape that did not have an Umm an-Nar round tower at all. Clearly, this is a difficult, if not impossible, issue to resolve with certainty. This is because it is possible that many round towers might have been completely destroyed by later activity such as agriculture and stone robbing. Nonetheless, the level of preservation of monuments and surface remains at the five wadi villages visited by the survey suggests that there has not been undue destruction and robbing and there is therefore a good chance that many, if not all, of these sites never possessed a round tower.

If this is the case, what does it tell us? Does it perhaps suggest that Umm an-Nar round towers were themselves relatively rare symbols of local or regional power that extended some distance from the sites where the towers were actually located and incorporated possibly quite large numbers of smaller village sites? This is certainly the interpretation that seems, at present, most likely based on the data collected by the Wādī Andam survey. It must also be remembered that very few small sites have been visited and investigated so far. As further work progresses, the density, distribution, and nature of these smaller sites should become clearer.

In summary, the evidence from the Wādī Andam survey, when considered in its regional context, might be interpreted as pointing towards a three-tier hierarchical Umm an-Nar settlement structure, with perhaps relatively few, large multi-towered sites at the apex above a second tier of smaller sites with one tower, which were themselves situated above a third and lowest tier of small agricultural villages with no round towers.

Of course there are many sites that cannot be fitted into this simple schema, most obviously the site of Umm an-Nar island itself, the site of Ra's al-Jinz being another. These coastal sites may have had a specific function or range of functions — perhaps related to their coastal locations — that set them outside the normal hierarchy of rural settlement.

This model is clearly very simplistic and tentative. It is presented here simply as a working hypothesis, intended to focus debate on a number of issues related to the full range of Umm an-Nar settlement that has not, thus far, been widely considered. It is important that further investigation continues into all levels of Umm an-Nar settlement, including the lowest, if our understanding of the structure and nature of settlement in this period is to advance.

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