# Nothing but tombs and towers? Results of the Al-Mudhaybi Regional Survey 2019

## STEPHANIE DÖPPER & CONRAD SCHMIDT

#### **Summary**

Sites with towers in eastern Arabia have been interpreted as regional centres of the Early Bronze Age. One of those sites is Al-Khashbah in central Oman. Until now, however, nothing was known about its hinterland that would support the idea of a regional centre. The Al-Mudhaybi Regional Survey was therefore initiated in order, for the first time, to provide comprehensive and detailed knowledge of this third-millennium BC landscape. This paper presents the results of the remote sensing and ground truthing of potential features in the 2019 field season. Nearly 4000 archaeological structures ranging from the Neolithic to the modern era have been positively identified. Interestingly, some periods such as the Hafit and Wadi Suq were abundantly present, while the Umm an-Nar and Late Bronze Age were almost totally missing. It is also important to note that, except for the possible Hafit-period tower at Al-Fath, no Bronze Age settlement sites were found. The reasons behind this pattern remain to be discovered.

Keywords: survey, remote sensing, settlement system, Sultanate of Oman, Bronze Age

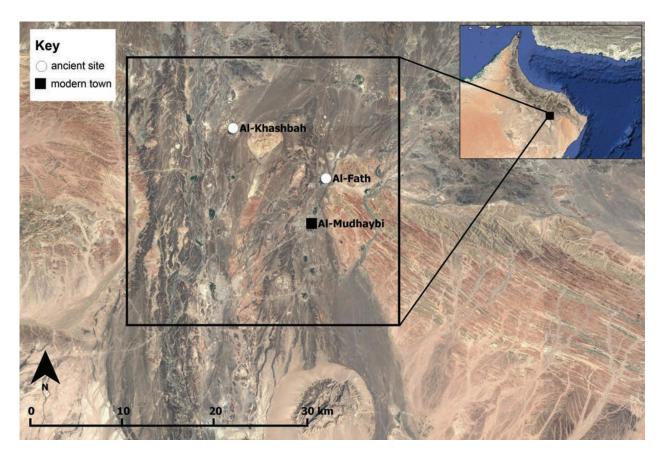
# Introduction

Among the first to classify the different types of Umm an-Nar period settlements were Hastings, Humphries and Meadow (1976: 12), who did so without placing them within a hierarchy. Carl Phillips (2007: 5-6) presented a three-tiered settlement system. On the top level he identified sites with tombs and substantial architectural remains. This includes towers but can also refer to rectangular domestic structures. His secondlevel sites are characterized by the presence of tombs and the indication of settlement activities in the form of sherd scatters or hearths, but without substantial architecture. On the third and lowest level are sites in which only sherd scatters and hearths were found, but which lack tombs, towers, and other permanent architecture. Another settlement system in which multi-towered sites such as Bat, Hili, Bisya, and Al-Khashbah are at the top of the settlement hierarchy, followed on a second level by smaller sites with only one or two towers, has been favoured by Nasser Al-Jahwari and Derek Kennet (2010: 208-211). The third level in this system would be occupied by small agricultural villages without towers. More or less the same structure was proposed by Alexander Kerr (2016: 189). What all of these ideas have in common is the proposal that sites with towers are interpreted as regional centres.

Centres in settlement hierarchies, however, need, by definition, a hinterland of which they can be the centre. This also applies for the Early Bronze Age site of Al-Khashbah, with its eleven towers situated 13 km north-west of the modern city of Al-Mudhaybi in the Al-Sharqiyah North Governorate of the Sultanate of Oman (Schmidt & Döpper 2017; 2019). The aim of the new Al-Mudhaybi Regional Survey, therefore, is to provide, for the first time, comprehensive and detailed knowledge of the third-millennium BC landscape of the region. Key questions include: what did the hinterland of Al-Khashbah look like in the third millennium BC? What kinds of sites are present and how are they distributed? And is Al-Khashbah really a regional centre on top of a settlement hierarchy? Although the survey focuses on the third millennium BC, remains of all periods are documented.

# Methodology

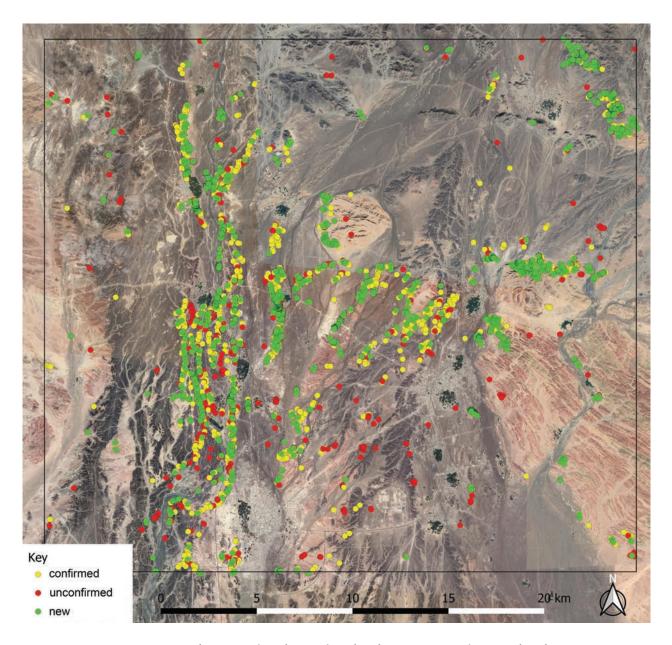
The first of three planned field seasons of the Al-Mudhaybi Regional Survey, in 2019, was based on the remote sensing of freely available satellite images



**FIGURE 1.** A map showing the survey area of the Al-Mudhaybi Regional Survey.

provided by Google and Bing Maps. The survey area of 930 km<sup>2</sup> ranges from Lizq in the north-east to the modern city of Sinaw in the south-west and includes, in addition to Al-Khashbah, the previously known Early Bronze Age tower of Al-Fath (Fig. 1). The area was divided into 1 km<sup>2</sup> quadrants, allowing systematic coverage by remote sensing moving steadily from east to west along this grid. All potential archaeological structures visible on the satellite images were marked in GIS with additional information on the possible type and date; in so doing, 2315 structures were identified. In a second stage, all of them were ground-truthed by site visits in the field during the 2019 field season with a team of nine students. In cases of positive identification, the structure was described, measured, photographed, and surface finds were recorded but not collected. The only exception to this were complete and valuable objects that were in danger of being stolen when left at the site. In total, 1781 structures were confirmed as archaeological and 534 were not (Fig. 2), equating to a success rate of 77%. Features that were mistakenly taken for archaeological structures by remote sensing often turned out to be bright patches of soil or heaps of modern construction debris. In addition to those confirmed, 2174 new structures were discovered by chance while in the field (Fig. 2). In general, they were either in a bad state of preservation, very small, or their building material was not distinct from the general surface, which meant they were not visible on the satellite images. Thus, the total number of confirmed archaeological structures in the region at the end of the 2019 field season amounts to 3955. This indicates that.

<sup>&</sup>lt;sup>1</sup> There are also 310 archaeological structures in the direct vicinity of Al-Khashbah. Those were deliberately excluded from the Al-Mudhaybi Regional Survey, as the area had already been documented in 2015 (Schmidt & Döpper 2017: 215–219).



**FIGURE 2.** A map showing confirmed, unconfirmed, and new structures after ground truthing and remote sensing in the survey area.

although the success rate for archaeological structures correctly identified on satellite images is quite high, this method misses far more than half of what is visible on the ground. An approximate 50% precision rate has also been reached with other remote sensing surveys in Oman (Deadman & Al-Jahwari 2016).

# Results of the 2019 field season

The greatest density of structures was encountered along Wādī Andam, the main wadi course running north to south in the eastern portion of the survey area. Other areas with high concentrations of archaeological structures are located around the modern city of



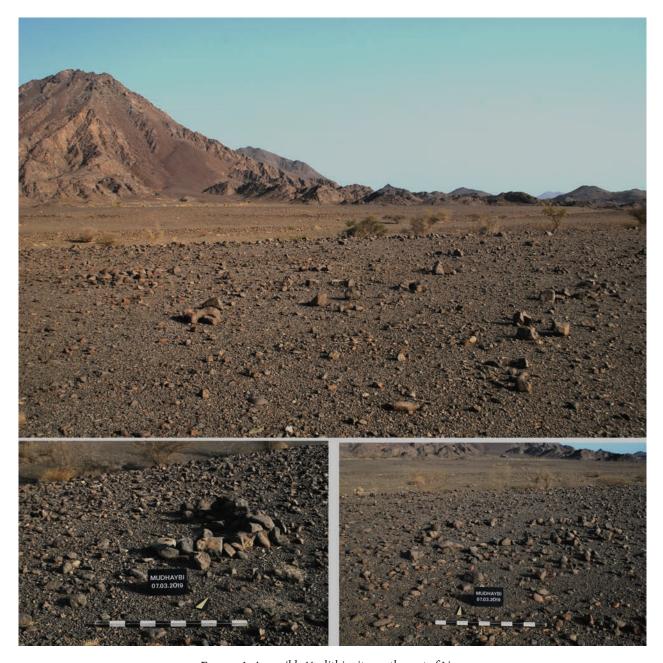
Figure 3. A heatmap of confirmed structures in the survey area.

Lizq, with its well-known Iron Age fortress, and in the northern foothills of the mountain north of Al-Fath and Al-Qabil (Fig. 3). By far the largest group of all confirmed structures is tombs. In the following, the remains of the different periods encountered in the 2019 field season of the Al-Mudhaybi Regional Survey are presented in chronological order, beginning with the Neolithic. No Palaeolithic finds were made, most likely because remote sensing is not a suitable method for detecting them.

#### The Neolithic

Neolithic finds were the oldest encountered during the survey. These were mainly chipped stone tools found in the vicinity of later tombs, including several arrowheads. Among them is a fusiform arrowhead that can be dated

to the fourth/third millennium BC. A possible Neolithic site was discovered in the north-east of the survey area, MDH-1333-MDH-1337, c.6 km north-west of Lizq. It features several semi-circular stone-wall installations built of pebbles that are up to three courses high and have diameter of up to 2.7 m, as well as smaller, circular structures that could be hearths (Fig. 4). The layout and distribution of the structures are reminiscent of the Neolithic sites of Jebel al-'Aluya near Ādam (Lemée et al. 2013) and Lizq 2, situated about 2.5 km south-east of Lizq (Weisgerber 1981: 252-258), dating to the fifth and fourth millennia BC respectively. However, at MDH-1333-MDH-1337, no chipped stone tools or other surface finds were discovered that enable dating, and a date in the Neolithic period therefore remains speculative. Small-scale excavations to resolve this question are planned for spring 2020.



**FIGURE 4.** A possible Neolithic site north-west of Lizq.

# The Hafit period

The Hafit period is by far the most numerously attested in the survey area, mostly due to its tombs. The conditions for attributing a tomb to the Hafit period in the field were as follows: circular shape; diameter of at least 4 m; no architectural elements that are normally linked with the Umm an-Nar period such as dressed stones or internal partition walls; and no Umm an-Nar-period finds on the surface. Following these preconditions, a total of 2834 structures have been declared as Hafitperiod tombs, i.e. 72% of all recorded structures. As these

criteria are not very specific, the attribution of some of these structures to the Hafit period might change after further detailed studies, but even then, Hafit period tombs are clearly by far the largest group of structures found during the survey. The high number of Hafitperiod tombs is something that could also be observed during the survey of the Ādam region in central Oman conducted by Jessica Giraud and Guillaume Gernez (Giraud et al. 2010) as well as in the Wādī Andam survey carried out by Nasser Al-Jahwari (2008). In the former, 50% of all cairns date to the Hafit period (Giraud et al. 2010: 177). The majority of the Hafit-period tombs found

during the Al-Mudhaybi Regional Survey can be found on both sites of Wādī Andam. Large clusters of tombs are also present on the hills north-east of Lizq and north-east of Fath. The state of preservation of those tombs varies considerably. Some tombs stand up to 3 m in height, with two ring-walls and a visible entrance (Fig. 5), while others are only low, circular protrusions where only the lowest course of the ring-wall has been partially preserved, if at all. These badly preserved tombs provide the greatest challenge for dating. Many different materials were employed in the construction of tombs, ranging from different-sized, light-coloured

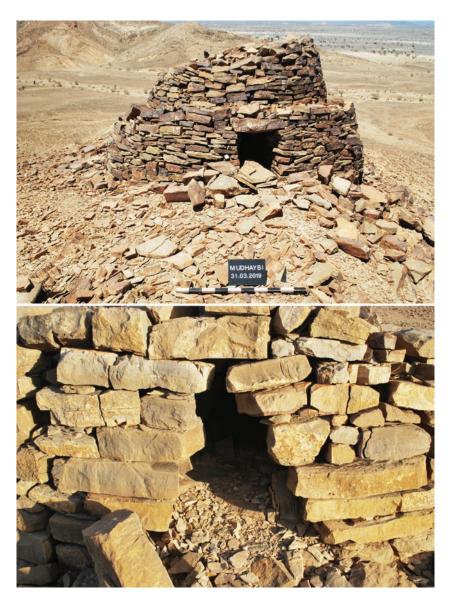


FIGURE 5. Hafit-period tombs with (top) rectangular and (bottom) triangular entrances.

limestone blocks to dark gabbro fieldstones. They all represent the locally available raw materials. At those tombs where the entrances were preserved (seventy-five in total), two types could be observed: rectangular ones with a large covering stone on top, and triangular ones, where the rectangular ones are far more common in the survey area (Fig. 5). Entrances of both types occur in the same area. The orientation of all entrances is east or south-east. This fits very well with William Deadman's observations for the tombs at Wādī Andam, including those at Al-Khashbah; he interprets the slight variation in the orientation as evidence of a seasonal occupation of the sites and thus of the Hafit-period people being nomadic or semi-nomadic pastoralists (Deadman 2014).

Another structure possibly dating to the Hafit period is the tower at Al-Fath. It was first reported by Gerd Weisgerber in 1981 (1981: 180) and is situated at the eastern foothills of a small mountain at the edge of Wādī Samad, 500 m north of the oasis of Al-Fath. It has a diameter of 22 m and is built of large, light-coloured limestone blocks. Stretches of the ring-wall are visible in the north and north-west. An intensive field-walking survey with a total collection of surface finds was conducted this season in an area measuring 45 x 50 m around the tower. Finds were generally rare, and all the diagnostic pottery sherds encountered during the fieldwalking survey date to the late Islamic or modern era. A date in the Umm an-Nar period is therefore unlikely. Other than the Hafit-period towers at Al-Khashbah, which are located 11 km north-east of the Al-Fath tower, no remains of copper processing or chipped stone tools were found at Al-Fath. In order to provide more reliable chronological information on this tower, small-scale excavations are planned for next season. During the Ādam and Wādī Andam surveys, no monumental Hafitperiod structures were discovered and no settlement remains, with the possible exception of some piled and paved stones that look like platforms in the vicinity of some Hafit-period tombs (Al-Jahwari 2008: 319). An explanation for the lack of domestic architecture in all conducted surveys in the wider region might be that the population at this time was nomadic (2008: 160).

## The Umm an-Nar period

Surprisingly, the Umm an-Nar period is one of the least identified in the survey. This stands in stark contrast to

its good representation at Al-Khashbah, with at least three towers and twenty-one tombs dating to this period (Schmidt & Döpper 2017: 216, fig. 211). During the Al-Mudhaybi Regional Survey, only six tombs yielded Umm an-Nar pottery on the surface. No tomb was attributed to this period due to architectural elements such as internal dividing walls or dressed stones. The tombs with Umm an-Nar pottery are mostly found directly north of the modern city of Sinaw. Although Umm an-Nar-period tombs included many more interments than their Hafitperiod counterparts, this does not explain the huge contrast in total numbers from 2834 Hafit-period tombs to six Umm an-Nar-period ones. In the Ādam survey, 22% of all discovered cairns belong to the Umm an-Nar period and could be clearly identified by their multiple chambers or diagnostic finds (Giraud et al. 2010: 177). The Umm an-Nar period was one of considerable increase in settlement activities witnessed in the Wādī Andam survey. While some errors in the chronological attribution of a tomb, especially for those in a bad state of preservation, cannot be excluded, given the abundance of grave-goods at Umm an-Nar-period tombs known from other regions in Oman, those that are not in a good state of preservation should show some diagnostic finds on their surface. Other explanations for the negligible quantity of Umm an-Nar period tombs in the Al-Mudhaybi region should therefore be sought. Interestingly, almost all Umm an-Nar-period sites concentrated on the northern part of the Wādī Andam survey area, while the south, which partially overlaps with the Al-Mudhaybi survey area, produced little evidence. According to Al-Jahwari, this could be due to environmental conditions or cultural economic reasons (Al-Jahwari 2008: 161). In this regard, it is also noteworthy that no Umm an-Nar-period towers or domestic architecture other than in Al-Khashbah were encountered during the survey. Furthermore, most of the evidence of Umm an-Nar occupation, mainly sherd scatters, comes from the modern villages (Al-Jahwari 2008: 168). Those were mainly left out in the first season of the Al-Mudhaybi Regional Survey as the presence of modern occupation and date-palm gardens did not allow for remote sensing.

#### The Wadi Suq period

Wadi Suq period remains were abundantly found in the survey area. The majority of them are tombs with an oval

or rectangular subterranean burial chamber and one or more above-ground stone ring-walls surrounding the top course of the cist wall. Those walls are packed with soil, small stones, and other material. They correspond to Righetti's type IS1b (Righetti 2015: 131-132) and Carter's type 2 (Carter 1997: 33-35) and were used for single interments. The large stones from the ring-walls at the top of the tomb were often removed, but their voids were still clearly visible (Fig. 6). Wadi Suq-period finds, such as pottery, including sherds with painted animal decorations, soft-stone vessel fragments, and arrowheads further secured the date of the structures. Five large Wadi Sug-period cemeteries have been documented to have a total of 711 tombs. These are the cemeteries near Mukhtru (today divided by modern buildings into two cemeteries, probably originally belonging to one and the same, 85/195 tombs), near Al-Wafi (49 tombs), near Al-Sudairah (113 tombs) and

near Buweiten (269 tombs). The larger of the Mukhtru cemeteries, the Al-Sudairah cemetery and the Buweiten cemetery, also incorporate Hafit-period tombs and larger, circular Wadi Suq tombs. The large number of Wadi Suq-period tombs is interesting when compared to the six that are known at Al-Khashbah. Those seem to belong to large, subterranean tombs comparable to that at Sharm (Schmidt & Döpper 2017: 216). Comparing these results with those of the Wādī Andam survey, there is agreement in so far as neither recorded any settlement remains of the Wadi Suq period. Again, Al-Jahwari's (2008: 173) explanation is that the population might have been nomadic or semi-nomadic. Furthermore, Al-Jahwari recorded only very few tombs and sherds of this period (2008: 170). This is contrary to the large number of Wadi Suq tombs attested during the Al-Mudhaybi Regional Survey. There is also agreement between the results of both surveys when it comes to the Late



**FIGURE 6.** A Wadi Suq-period tomb at Mukhtru cemetery.

Bronze Age. Only twenty-five sherds of this period were identified in the Wādī Andam survey (2008: 173), while no material culture that clearly dates to the Late Bronze Age was found during the Al-Mudhaybi Regional Survey.

# The Iron Age

Few types of tombs were newly introduced to the Oman peninsula in the Iron Age, including, according to Yule, free-standing hut tombs and agglutinating tombs (Yule 2014: 34). Rather, second-millennium BC tomb types continued to be in use or older tombs were reused. This was also the case in the survey area. No tombs could be attributed to the Iron Age by their architecture, but quite a number of them could be attributed according to surface finds. Those tombs were mainly circular in shape and are probably badly preserved Hafit-period tombs. Such reuse of Hafit-period tombs especially in the Iron Age has already been noted by other researchers in the region (Al-Jahwari 2008: 160). Tombs with Iron Age finds are especially abundant in three areas: 4.5 km east of Buweiten, east of Sudairah, and near Al-Mutaila. Finds include Iron Age II painted pottery sherds of carinated bowls and bridge-spouted vessels, soft-stone vessels with linear designs (Fig. 7), and incised bronze arrowheads. Two finds deserve special mention. The first is a massive bronze bracelet weighing nearly 140 g with incised decoration at both ends (Fig. 8). An almost identical piece comes from the Ibri/Selme hoard (Yule & Weisgerber 2001: fig. 12.BO15). The other one is a loafshaped soft-stone object, 30 mm long and 19.4 mm wide (Fig. 9). Its top is decorated with several straight lines, while the bottom features a groove which is worn very smooth from its use. On one of the small sides, there is the beginning of a perforation which was never finished. No direct comparisons have been found that would clarify its function or date, but Iron Age pendants from Tell Abraq (Potts 1991: 97, figs 138–141) feature similar decorations such as the top of the object from the Al-Mudhaybi Regional Survey. Interestingly, except for the



Figure 7. An Iron Age soft-stone box (MDH19E-00001) with lid (MDH19E-00002).

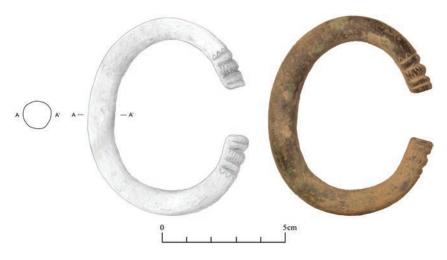


FIGURE 8. An Iron Age bracelet (MDH19T-00002).

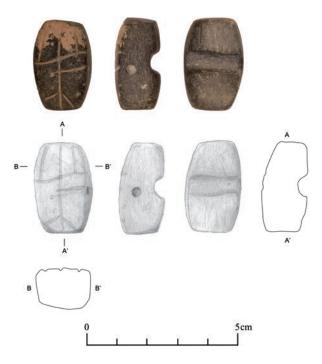


FIGURE 9. An incised soft-stone object (MDH19J-00001).

previously known Iron Age fort at Lizq, no settlement sites of the Iron Age were discovered. There is also no Iron Age occupation at Al-Khashbah (Schmidt & Döpper 2017). This stands in contrast to many other regions of Oman, where a substantial increase in settlement activities can be noted during the Iron Age, but fits Al-Jahwari's observations from the Wādī Andam survey. Here, too, very little evidence of settlement activities was found (Al-Jahwari 2008: 180).

# The Samad period

Samad period finds were rarely found during the 2019 survey and consist mainly of iron arrowheads and metal clamps. They originate from tombs that are otherwise characteristic of the Hafit period and were therefore most likely reused during the Samad period, a process which is rather common for this period. Samadperiod tombs are typically subterranean cists, and are therefore not expected to be detected by remote sensing. Thus, the actual number of Samad-period burials in the region should be much higher than that found during the survey. However, Samad-period tombs and settlement sites are known from the Al-Mudhaybi

Regional Survey almost exclusively from the area north of the Al-Mudhaybi Regional Survey (Al-Jahwari 2008: 182), where they are found quite abundantly.

# The Islamic period up to the modern era

The Islamic period was mainly represented by occasional pottery sherds encountered at various prehistoric structures. Early Islamic pottery included Turquoise Alkaline Glazed Ware, which can be dated to around the eighth to tenth century AD. This tallies with Al-Jahwari's findings of the Wādī Andam survey (2008: 190). Much more abundant were pottery sherds of the late Islamic and modern era. This includes Bahla Ware dating to around the fifteenth to twentieth century AD, a light-coloured, comb-decorated pottery that was produced up until the twenty-first century, again quite similar to that documented by Al-Jahwari during the Wādī Andam survey. He further noted the presence of Julfar Ware, Chinese Blue and White, enamelled Chinese porcelain, and some other types of late Islamic pottery (2008: 195). Those are not yet recorded in the material of the Al-Mudhaybi Regional Survey, but it should be noted that no systematic sampling of late Islamic sherd scatters has taken place as yet. Additionally, there are a number of abandoned mud-brick villages in the centres of the modern cities as well as mud-brick villages that are far removed from any modern-day settlement. Pottery from their surfaces is mainly of late Islamic or modern date. Remains of a less settled life of this period include campsites and open-air mosques. The former are characterized by oval or rectangular areas cleared of stones, sometimes with stone features such as small benches. The open-air mosques also consist of a mostly rectangular space cleared of stones (Fig. 10). Typically, they feature a qibla wall in which a mihrab (prayer niche) has been placed. Sometimes the niche has been replaced by large, upright standing stones.

## Discussion and outlook

The 2019 Al-Mudhaybi Regional Survey revealed an interesting occupation pattern of the area over time. While some periods such as Hafit and Wadi Suq are abundantly present, others such as the Umm an-Nar period and the Late Bronze Age are largely missing. Surprisingly, this does not correspond with their



FIGURE 10. An open-air mosque.

presence at Al-Khashbah, where both Hafit and Umm an-Nar remains are common, although almost nothing from the second millennium BC was found. Whether or not this fluctuation really represents changes in the number of people in the region, and the reasons behind those changes, cannot be answered at present. It is possible that there are also problems of correctly dating badly preserved remains without surface finds, but this should not interfere too much with the general pattern visible in the survey results. Furthermore, settlement sites of any period (other than the late Islamic) were not found outside Al-Khashbah, with the exception of the (presumably) Hafit-period tower at Al-Fath and the Iron Age fort at Lizq. This is especially surprising for the Iron Age, during which settlements dramatically increased in other regions of the Oman peninsula. To return to the original question of the role of Al-Khashbah as a

regional centre both in the Hafit and the Umm an-Nar periods, no hinterland has been found during the 2019 survey that would support such an interpretation. This leads to the question of methodology. Remote sensing, which was the basis for the 2019 survey, is only able to identify larger, visible structures such as tombs, and is less suited for identifying more ephemeral ones such as find scatters. It is also not suitable for surveying areas with modern occupation, as palm gardens, in particular, make structures invisible in satellite imagery. Consequently, it might simply not have been the right method to use to discover settlement sites. In order to compensate for this, in the next two seasons transects will be systematically surveyed on foot in order to find less visible archaeological remains. For now, however, the Al-Mudhaybi Regional Survey has revealed nothing except for tombs and towers of the third millennium BC.

# Acknowledgements

The authors are deeply obliged to the Ministry of Heritage and Culture of the Sultanate of Oman, in particular His Excellency the Undersecretary for National Heritage, Mr Salim Bin Mohammed al-Mahruqi, the Director General for Archaeology, Mr Sultan al-Bakri, and the Director for Explorations and Archaeological Studies, Mr Khamis Al-Asmi, for their continuous support and help with organizational issues. The archaeological programme of research was made possible by financial support provided by the German Research Foundation (DFG). Thanks also go to all participants of the 2019 season for their tireless work in the field.

# References

- Carter R.A. 1997. Defining the Late Bronze Age in southeast Arabia: Ceramic evolution and settlement during the second millennium BC. PhD thesis, University College London. [Unpublished.]
- Deadman W.M. 2014. Investigating the orientation of Hafit tomb entrances in Wādī ʿAndām, Oman. Proceedings of the Seminar for Arabian Studies 44: 139–152
- Deadman W.M. & Al-Jahwari N.S. 2016. Hafit tombs in Ash-Sharqiyah, Oman: Assessing the accuracy and precision of Google Earth remote-sensing survey and analysing their distribution in the landscape. *Arabian Archaeology and Epigraphy* 27: 19–30. doi:10.1111/aae.12061
- Giraud J., Al-Mahrooqi A.H.S., Gernez G., Righetti S., Sévin-Allouet É.P., Sévin-Allouet C. ... Cleuziou S. 2010. The first three campaigns (2007–2009) of the survey at Ādam (Sultanate of Oman) (poster). Proceedings of the Seminar for Arabian Studies 40: 175–183
- Hastings A., Humphries J.H. & Meadow R.H. 1976. Oman in the third millennium BCE. *Journal of Oman Studies* 1: 9–55.
- Al-Jahwari, N.S. 2008. Settlement patterns, development and cultural change in northern Oman Peninsula: A multi-tiered approach to the analysis of long-term settlement trends. PhD thesis, Durham University. http://etheses.dur.ac.uk/1357/

- Al-Jahwari N.S. & Kennet D. 2010. Umm an-Nar settlement in the Wādī Andam (Sultanate of Oman). Proceedings of the Seminar for Arabian Studies 40: 201–212.
- Kerr A.D.R. 2016. A house complex in Bronze Age Arabia:
  A study of 'Umm an-Nar' and 'Wadi Suq' domestic architecture at the settlement slope, Bat (Oman).
  MA thesis, Durham University. http://etheses.dur.ac.uk/11730/
- Lemée M., Gernez G., Giraud J., Beuzen-Waller T. & Fouache É. 2013. Jebel al-'Aluya: An inland Neolithic settlement of the late fifth millennium BC in the Ādam area, Sultanate of Oman. Proceedings of the Seminar for Arabian Studies 43: 197–212.
- Phillips C. 2007. The third-millennium tombs and settlement at Mowaihat in the Emirate of Ajman, U.A.E. Arabian Archaeology and Epigraphy 18: 1–7. doi:10.1111/j.1600-0471.2007.00252.x
- Potts D.T. 1991. Further excavations at Tell Abraq: The 1990 season. Copenhagen: Munksgaard.
- Righetti S. 2015. Les cultures du Wadi Suq et de Shimal dans la péninsule omanaise aux deuxième millénaire avant notre ère. Évolution des sociétés du Bronze moyen et du Bronze récent. PhD thesis, Université Paris 1, Panthéon Sorbonne. [Unpublished.]
- Schmidt C. & Döpper D. 2017. The development of complexity at third-millennium BC Al-Khashbah, Sultanate of Oman: Results of the first two seasons, 2015 and 2016. Proceedings of the Seminar for Arabian Studies 47: 215–226.
- Schmidt C. & Döpper D. 2019. The Hafit period at Al-Khashbah, Sultanate of Oman: Results of four years of excavations and material studies. *Proceedings of the Seminar for Arabian Studies* 49: 265–274.
- Weisgerber G. 1981. Mehr als Kupfer in Oman Ergebnisse der Expedition 1981. Der Anschnitt. Mitteilungsblatt der Vereinigung der Freunde von Kunst und Kultur im Bergbau 33: 174–263.
- Yule P. 2014. Cross-roads: Early and Late Iron Age southeastern Arabia. Wiesbaden: Harrassowitz.
- Yule P. & Weisgerber G. 2001. The metal hoard from 'Ibrī/ Selme, Sultanate of Oman. Stuttgart: Steiner.

## Authors' addresses

Stephanie Döpper, Institute for Archaeological Sciences, Department of Near Eastern and Classical Archaeology, Johann Wolfgang Goethe University Frankfurt am Main, Norbert-Wollheim-Platz 1, 60629 Frankfurt am Main, Germany.

e-mail doepper@em.uni-frankfurt.de

Conrad Schmidt, Institute for Ancient Near Eastern Studies (IANES), University of Tübingen, Schloss Hohentübingen, 72070 Tübingen, Germany.

e-mail conrad.schmidt@uni-tuebingen.de