



# DigIt

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# DigIt

# Editorial

What an exciting and transformative 6 months for *Dig It!* Our Journal simultaneously became peer-reviewed, international, and larger – including more pages and including more people into the editorial process.

It has been an ever rewarding experience, and I look forward to holding in my hands the printed Journal with 7 research papers from authors in 5 countries; 2 field reports; 2 conference and website reviews; 1 interview with a veteran of archaeology; and a friendly 'hello' from a fellow archaeology student journal from Buffalo, US.

I would like to extend the warmest 'thank you' to my three congenial fellow editors Jordan Ralph, Antoinette Hennessey and Matthew Ebbs for their drive, motivation, ingenious ideas and hard work. To the authors for trusting us with their papers and spending days and nights improving them. To the permanent review panel consisting of Rhiannon Agutter, Amy Batchelor, Robert DeWet-Jones, Anna Foroozani, Simon Munt, Dianne Riley, Zoe Robinson, Fiona Shanahan, Rhiannon Stammers, Isabel Wheeler for their gentle language editing. To the anonymous reviewers for their insightful feedback. To ArchSoc for their financial, organisational and emotional support.

*Dig It* intends to provide opportunities for professional development to young researchers who wish to familiarise themselves with the different roles in the publishing process, from writing over editing and layouting through to reviewing. As it turns out, the greatest learning experience was probably had by us editors, after all – and we would like to thank everybody else involved in the Journal for allowing us to transform an idea sketched in December 2013, through trial and error and hard work, into something to be proud of. With the mouse still dizzy from the final layouting work, we are looking forward to the next challenge that will be *Dig It* Volume 2, Issue 2.

Jana Rogasch

Editor, *Dig It*: The Journal of the Flinders Archaeological Society  
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# President's Address

I would firstly like to say welcome to our new and continuing members for 2014. We look forward to delivering an outstanding service of both professional development and social networking to our Society's members. I would like to thank the 2013 committee for their efforts in providing a great network for both students and professionals. ArchSoc continues to be the largest and most active student archaeological society in Australia, a feat that has been recognised by other institutions around the country.

A number of ArchSoc and Departmental events have kept our Society busy throughout the start of the year. These events include the Digger's Shield cricket match against the Paleontology Society, the National Archaeology Student Conference (NASC) hosted at Flinders University, the Ruth and Vincent Megaw Annual Lecture in Archaeology and Art, presented by Professor Emeritus Brian Fagan, and recently, the maritime-themed annual pub crawl. We are hoping to run a field exercise later in the year, details to be advised. ArchSoc activities are displayed on the notice board outside HUMN 112 and details are sent out via our mailing list <archsoc@flinders.edu.au> so keep an eye out for future events.

As some of our returning members may notice, *Dig It* has now become a peer-reviewed journal. As our membership has grown this year, we are also gaining a number of international readers and contributors. The editorial team welcomes your contributions for future issues of *Dig It*. I would encourage our members to publish here where many of your fellow peers can read up on what other members are conducting research on.

Now in our 22<sup>nd</sup> year of existence, the Flinders Archaeological Society will continue to flourish, bringing out the best in our members for the industry of tomorrow. Get involved when you can! We are always looking for volunteers to lend a hand, generate new ideas, help run social events and professional development opportunities, or simply come along and show some support. I hope to see all of you around some time on campus or at one of our many events. Don't forget to follow us on Twitter (@FlindersArchSoc), like our Facebook page, and follow our blog (<http://flindersarchsoc.org>).

Bradley Guadagnin

President, Flinders Archaeological Society 2014

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Adelaide city at dusk. Photograph: Andrew Wilkinson, 2014

# The Dilmun Burial Mounds of Bahrain:

## An introduction to the site and the importance of awareness raising towards successful preservation

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### Abstract

*This article aims to provide an introduction to the history and development of the extensive Bronze Age burial mound cemeteries of Bahrain. In addition, the paper discusses the aftermath of centennial excavations executed without community involvement and how awareness raising measures could be applied to counteract the resultant negative effects.*

*Although the amount of the four millennia old Dilmun Burial Mounds has diminished considerably over the last decades due to modern development, the number and density of the remaining burial mounds as well as their construction technique is still unrivalled in the world. It is therefore intended that these Dilmun Burial Mounds be nominated as a United Nations Scientific, Educational and Cultural Organisation (henceforth UNESCO) World Heritage Site. Such a nomination, however, requires a high level of commitment by all stakeholders involved, and therefore, awareness-raising measures should be introduced among the local community to increase knowledge and appreciation of it, as this is a prerequisite for the successful preservation of their outstanding heritage.*

### Introduction

The 4000-year old Dilmun Burial Mounds of Bahrain are unique in the world. Albeit burial mounds occur globally, no burial mound construction technique is alike to the one presented by the Dilmun mounds. Although only 15,000 tumuli remain from a number that once exceeded 75,000, their number and density is outstanding and cannot be found elsewhere. Yet, the still existing burial mounds are extraordinary and therefore foreseen to be nominated as UNESCO World Heritage Site.

The 'vast see of sepulchral mounds' (Bent, quoted in Rice 1983:80) attracted the attention of passers-by ever since their construction. In antiquity it was mainly grave robbers who targeted them. Later, at least since the 19th century, the mounds shifted more and more into the focus of European travellers and archaeologists.

The first recorded research is from the year 1878 when the young British Officer Captain E. L. Durand came to Bahrain and could not resist his curiosity. He conducted the very first excavations of the Dilmun mounds (Rice 1983:112). Since then, several archaeological expeditions landed in Bahrain all with the same objective – to reveal the mounds' secrets. Almost 140 years of research brought to light astonishing new insights and an extensive stock of information that until today serves researchers to reconstruct the history of the Early Dilmun civilization.

Besides many other prerequisites, a nomination for a World Heritage Site requires a high level of commitment by all the stakeholders involved. However, the extensive destruction



Figure 1: Hamad Town 2 Burial Mound Field (near Karzakkan), looking south-west (photograph by author, 12th October 2013)

throughout the last decades shows the low level of appreciation and awareness of the mounds' exceptional value among the local community. The reason for that seems to be mainly rooted in a lack of knowledge. Dozens of researchers bear part of the responsibility, as they omitted to properly involve and inform the local community in the past. However, a first change in mind-set can be recognised. Yet, more efforts need to be exerted to boost people's awareness of the need for preservation of their unique heritage.

This paper aims to provide an overview of the unique history of the Dilmun Burial Mounds and the interaction between the people and their heritage. At the same time it intends to highlight some awareness raising measures and their capacity to improve the preservation process.

### The rise of Dilmun

The Dilmun Burial Mounds were constructed during the Early Dilmun period, a period of approximately 450 years that lasted from 2200 till 1750 BCE. During that time Bahrain became the political centre of a unified region encompassing Failaka Island, Bahrain and the east coast of the Arabian Peninsula. Dilmun grew in prosperity, as its capital became an important trade hub in the Arabian Gulf. Its strategic location in the centre of the Gulf contributed to Dilmun's importance in the international maritime trade that took place mainly between Dilmun, Mesopotamia, the Indus Valley, and the Land of Magan which is today's Oman. The traded goods associated with Dilmun included copper, both as raw material as well as diverse finished forms, pearls, beads of carnelian, lapis lazuli, coral, turtle shells, ivory, antimony, and timber. Whereas pearls and turtles are native to Bahrain, the other goods needed to be imported (Larsen 1983:40-41).

The remarkable affluence of the island is also reflected in extensive settlement activities (Roaf 2003:25). Besides the sepulchral remains, the island possesses few settlement and worship sites that are related to the Early Dilmun civilization.

The Outstanding Universal Value of the site of Qal'at al-Bahrain: Ancient Capital and Harbour of Dilmun was already recognized by the global community when it was inscribed on the UNESCO World Heritage List in 2005 (UNESCO 2014b). Further sites are Barbar Temples, consisting of three temples succeeding each other with architectural features that resemble Sumerian temples (Rice 1994:156), Diraz Temple (Roaf 2003:25), Ain Umm as-Sujur, once the largest fresh water spring in Bahrain (Rice 1994:172), and Saar, a heritage complex that consists of temple, settlement, and cemetery (Killick 2003:13).

Non-sepulchral sites related to the Early Dilmun Period are scarce and the one site that possesses the highest amount of information, Qal'at al-Bahrain, hides the Dilmun time remains under several meters of younger settlement layers. The Dilmun Burial Mounds are hence the best accessible and most obvious Early Dilmun remains. They tell us about the Early Dilmun people's life style, their age, and their diseases. The mounds represent tens of thousands of private tragedies and life stories.

### The Dilmun burial mounds

A total of 75,000 Dilmun burial mounds once covered an area of circa 26 km<sup>2</sup>. That is a remarkable expanse taking into account the rather small size of the island of Bahrain extending over an area of 765.3 km<sup>2</sup> (Kingdom of Bahrain, Central Informatics Organisation 2012). The location for constructing the tumuli was carefully chosen and followed an elaborate land use concept. Therefore it is important to understand the geological condition of Bahrain.

Geologically, Bahrain has certain interesting characteristics. 'Barren limestone slopes rise gently inland away from the coastal plains until they reach the rim rocks of the central depression. Cultivable soils are found both within the central depression and on the surrounding coastal plains' (Larsen 1983:6-7).

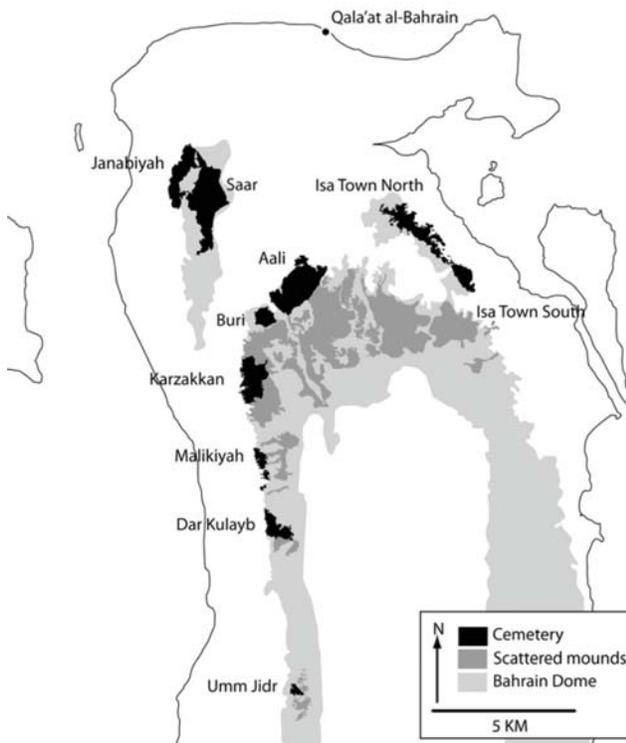


Figure 2: The original distribution of the Dilmun Burial Mounds (Laursen 2010:116)

Bahrain's fertility, one of the key factors for its wealth in the past, derives from yet another geological peculiarity. For millions of years powerful fossil aquifers evolved from precipitation that was absorbed from massive limestone layers. Thanks to Bahrain's anticlinal structure above a basement with faults, fresh water resurfaces in the form of artesian springs. These wells occur on land as well as underwater, but are limited to the northern part of the island. They assured abundant irrigation and drinking water supply. Today the fresh water springs are mostly dried out despite a small number still remaining and reminiscent of the past's richness (Dalongeville 2000:28-32).

As a result of the limited fresh water supply, agriculture was narrowed to the northern and western portions of Bahrain. Naturally, settlement activities are associated to fertile areas. And, as burial sites are related to settlements, the burial mound cemeteries occur solely in the northern and western parts of the island. It must have been important to the ancient inhabitants of Bahrain to bury their deceased at a reachable distance, yet without wasting the scarce fertile land. As a matter of fact 'bedrock lies just below the surface. Thus, areas with burial mounds were not 'wasted' space because these zones were in fact of no use for gardening' (Daems et al. 2001:175).

The evolution of the Early Dilmun civilization is best reflected in changing burial practices and the design of the burial mounds. The different types of tumuli illustrate the increasing wealth and importance of the ancient inhabitants of Bahrain. They also reflect upon the rising complexity of the Early Dilmun society. There are two main types: the Early Type burial mounds (2200-2050 BCE), and the Late Type burial mounds (2050-1750 BCE).

Cornwall (quoted in Rice 1983:200), one of the earliest excavators, describes the Early Type burial mounds as 'small and compact rock tumuli'. Their average diameter is noted as 2.5 meters. Their average height does not exceed 1.5 meters, although larger mounds occasionally occur (Laursen 2008:157). Laursen (2008:157-158) identifies a variety of burial chamber layouts; the one of the smaller mounds normally being oval, while larger mounds show 'chambers with several recesses or alcoves that give the chambers a distinctive L-, T-, or H-shape, or an even more complex shape'. The Early Type burial mounds are primarily situated on the slopes of the limestone formation in central Bahrain. They normally appear scattered rather than clustered, and follow the splintered topography of the wadi banks. There is also a geographical connection to the Late Type mounds. Of approximately 17,000 Early Type burial mounds that once covered the island (Laursen 2008:159), merely 2,000 remain.

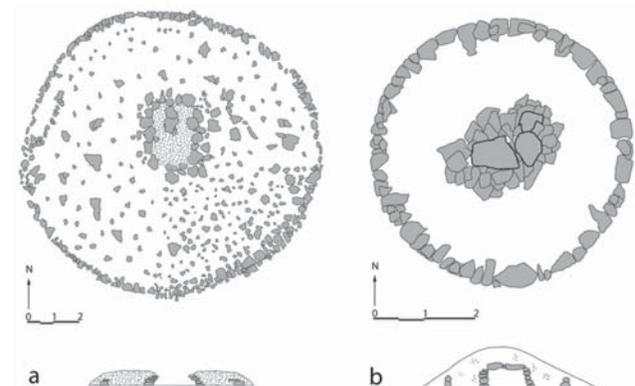


Figure 3: Examples of the Early Type burial mound (a) and the Late Type burial mound (b) (Laursen 2010:116)

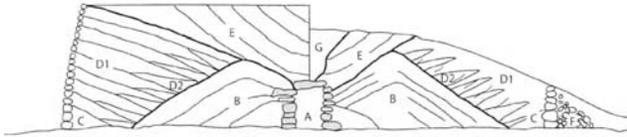


Figure 4: Section through a burial mound, right side in its present condition, left side reconstructed (Højlund 2007:35)

The Late Type burial mounds are generally larger and appear in a higher density compared to the Early Type mounds. Another distinctive feature is the immense conical layer of soil that covers the grave chamber. The average burial mounds are about 2-3 meters in height and 6-11 meters in diameter. However, there are formidable larger exceptions (Laursen 2008:159). These variations suggest a more diversified and hierarchical society. Consequently, a group of extraordinary large mounds are referred to as Royal Mounds. They are up to 12 meters in height and 50 meters in diameter (Højlund 2007:26). The Late Type tumuli consist of regular stone-built grave chambers with capstone slabs. Similar to the Early Type mounds the shapes of the chambers vary between L-, T-, and H-shape. More complex shapes also occur (Laursen 2008:159). The Royal Mounds usually demonstrate two-storey burial chambers as well as four or six niches with plastered walls. In contrast to the ordinary mounds, the Royal Mounds are accessible either through a shaft or a passage (Højlund 2007:29). The tumuli normally appear in crowded cemeteries along the western side of Bahrain's limestone dome (Laursen 2008:159). Rice (1994:198-199) even argues that the Late Type tumuli cemeteries have been built on an industrial basis. He reasoned that the tumuli are laid out in 'funerary estates' (Rice 1994:199) rather than in scattered zones. The industrialized construction could also explain why several mounds have been found without human remains; they were built speculatively and remained untenanted. Some 58,000 Late Type mounds were recorded by the Danish-Bahraini mapping project (Laursen 2008:159). About 13,000 of them still exist.

Although the burial mounds are referred to as mounds owed to their today's appearance, they were in fact not constructed as such. Archaeological evidence shows that they were built as cylindrical stone towers (Højlund 1992, 2007; Velde 1994). The most crucial indicator for the latter is the presence of the stone wall surrounding the grave chamber. As a result of limited space, the ring walls of a few of the mounds were constructed right next to each other, which provided mutual support and, at the same time, hindered them from decay. Over the course of time several examples of standing 'double-walls' have been found, clearly testifying to the idea of towers (Velde 1994:64-66). Where neighbouring mounds did not stabilize the ring-wall, it was exposed to natural erosion and, as a result, collapsed. Drifting soil and sand then covered the subsided stones forming the mound as we see it today (Højlund 2007:33). The Royal Mounds possess an additional smaller ring wall situated higher in the mound. Højlund (2007:33) consequently suggests that these mounds "had the shape of a terraced building, or ziggurat". This terraced design is widely known from Mesopotamia but also from the local Barbar Temples (Højlund 2007:33).

Even though burials were heavily looted during antiquity, human remains mainly persist untouched, at times however the skeletal remains are found disordered or clustered in one



Figure 5: Partially excavated burial mound in Janabiyah cemetery that displays lower and upper ring wall, looking north (photograph by author, 2nd February 2014)

corner. Deceased usually lay in a foetal position on the right side, occasionally left, facing north or south respectively. The hands are placed before the face (Soweileh 1995:197). There is no archaeological evidence of any coffin-like container, nor the body being covered with soil. Men, women and children seem to have been treated equitably, as no differentiation in burial costume can be observed (Breuil 2000:51).

Unfortunately most of the graves are not found in their original archaeological context, since the intrusion of grave robbers in antiquity (Rice 1994:178). However, the elaborate architectural quality of the burial mounds might indicate that likewise rich grave furniture was deposited with the dead (Breuil 2000:51). It can also be assumed that grave robbers stole the most valuable objects such as bronze items, jewellery or high quality pottery, while smaller, less visible items as well as less valuable pottery were neglected. In any case, all the items found in the burial mounds correspond to the findings made in Qal'at al-Bahrain, the ancient harbour and capital of Dilmun (Larsen 1983:34). Among the excavated grave furniture is a great variety of pottery, both of local and foreign origin, various copper and bronze items such as daggers, jewellery and dress ornaments, a few number of seals, diverse ivory objects, beads made of carnelian, agate and paste; and various objects of shells including beads, pendants, discs, ear studs, and stamp seals (Mughal 1983:68-69; Rice 1994:179, 196). Remains of ovicaprids and fish are also occasionally found in the burials. Since the uncovered animal remains are limited to eatable species, they may be regarded as part of a funeral meal (Breuil 2000:51).

## The centennial research history of the burial mounds

It can be assumed that the massive burial mound fields, "perhaps the most interesting feature of Bahrain" (Mackay, quoted in Rice 1983:133), have attracted the attention of many explorers and travellers who visited Bahrain throughout the last centuries. The sheer density of the tumuli fields paired with their inaccessibility must have awoken the urge to uncover the mounds' mysterious interior in numerous of its beholders. A few inquisitive explorers might have opened one or more mounds out of curiosity, yet without sharing the finds with the rest of the world. Subsequently,

there is no record of these early investigations that most likely have taken place. First available records date to the late 18th century.

British Officer Captain E. L. Durand, based in Bahrain, was the first person to not only conduct excavations at the burial mounds, but to record his finds. In the late 1880s he started by opening two mounds in the village of Aali. Even though one can attest him best intentions, the excavation methods he used cannot be acknowledged as professional in today's society. First, he tested his skills at a smaller tumulus. Consequently he started to work on one of the largest Royal Mounds, where he encountered considerable difficulties due to his lack of archaeological skills. As a result, the roof of the main chamber had fallen inside and destroyed any significant finding contexts (Rice 1983:112). Though Durand's excavations were not of professional standards, he provided the world a first idea of the mounds' interior.

In 1889 Mr. and Mrs. J. Theodore Bent opened yet another Royal Mound in Aali. They found a two-storey tomb with rich grave furniture including ivory, circular boxes, fragments of various statues, pottery, ostrich shells, and pieces of oxidised metal. The Bents started excavating one further mound but did not remove the debris that had filled up the tomb. Consequently, they could not gain more information about burial rite and grave furniture (Rice 1983:114).

Only four years later, in 1903, M. A. Jouannin obtained the permission to conduct further investigations. He selected a comparatively small tumulus. He tunnelled into the interior of the mound, where he found only a few bones and some pottery. The results did not appeal to him, so he stopped further examination (Rice 1983:115).

Colonel F. B. Prideaux, who travelled to Bahrain under the auspices of the Archaeological Department of the Government of India, was the first person to conduct what can be called scientific excavations in Bahrain. Like others, Prideaux reproduced observations from Durand, but he also added



Figure 6: Grave chamber and blocked entrance of one of the Royal Mounds in Aali (photograph by author, 2nd February 2014)

valuable information that he published later on (Rice 1983:103-104). In 1906, when Prideaux started his fieldwork, his major aim was to answer the question of the origin of the burial mounds. He not only examined a formidable number of 67 tumuli but also was the first person to document the pottery in and around the mounds (Prideaux, quoted in Rice 1983:105).

Ernest Mackay, a young archaeologist sent to Bahrain by Sir Flinders Petri in 1925, was the first person to analyse the different construction techniques of the mounds. He opened a total of 34 mounds, of which 21 comprised human remains and various artefacts. Among the most sensational findings are a fragmented ivory figurine of a girl, and various bronze objects (Mackay, quoted in Rice 1983:130). The technical report of his findings is outstanding, comprising valuable maps and sketches. His observations however led him to draw the wrong conclusion that Bahrain is not Dilmun and that the island could not have hosted a population as large as the number of burial mounds would imply. The latter was disproved by several studies (Rice 1994:176.). Yet another contradicting factor to Mackay's theory is the absence of any evidence which would allow the assumption that deceased were brought to the island for burial (Rice 1994:176).

In 1940-41, another young scholar, Peter Bruce Cornwall, visited the island of Bahrain and conducted extensive fieldwork on the island in addition to some minor investigations on the eastern coast of the Arabian Peninsula. Beside various other archaeological sites he excavated 30 burial mounds in Bahrain (Cornwall, quoted in Rice 1983:192-194). Cornwall was the first to distinguish between two types of burial mounds – 'small and compact rock tumuli' and 'mounds that are gravel-covered and contain at least one well-made tomb chamber' (Cornwall, quoted in Rice 1983:200).

Since the early 1950s the Danish Archaeological Expedition has been committed to drawing a holistic picture of the ancient civilization of Dilmun. With the discovery of Qal'at al-Bahrain, the ancient capital and harbour of Dilmun, and the Barbar Temples the Danish were able to provide valuable information on the life of the mound builders. During the last years the Danish Mission dedicated their research to the burial mounds. The Moesgaard Museum in co-operation with the Bahrain Directorate of Culture & National Heritage launched the Bahrain Burial Mound Project that intends to digitally map the burial mounds from aerial photos in a Geographical Information System, in order to provide an efficient tool for future research.



Figure 7: Excavated Late Type burial mound in Hamad Town 2 Burial Mound Field (near Karzakkkan), looking west (photograph by author, 12th February 2014)

Besides that, the Danish are conducting excavations at the Royal Mounds in Aali where they have discovered several new details that shed light on the architectural finesse of these impressive mounds (Bibby 1970; Højlund 2007; Laursen 2008).

In the 1980s numerous other international teams were engaged in the exploration of the Dilmun Burial Mounds. Among them were the Australian expedition led by Lowe (Lowe 1986), an Indian team (Srivastava 1991), a British team (Roaf 2003), and the French Archaeological Mission (Cleuziou 1981).

A great amount of mounds were excavated by the Bahrain National Museum, especially since 1960s, when the progressing urban development enforced the need for rescue excavations. Despite few exceptions (Ibrahim 1982; Mughal 1983), most of the findings are not published.

### Current challenges and the need for preservation

For more than a century, researchers have been collecting a huge amount of information about the Dilmun Burial Mounds. The scientific community highly benefited from numerous archaeological reports that not only draw a picture about the Early Dilmun sepulchral traditions but provide insights in the structure, hierarchy and life of the Dilmun society. Since Bahrain was part of a great maritime trading network, the island was not only influenced by other civilizations but also had a great impact on its neighbours. The discoveries in Bahrain are hence internationally important. The Dilmun Burial Mounds are significant not only because they are directly related to other ancient regions and archaeological disciplines, but especially because their amount, density, and construction technique is unique in the world.

Although the burial mounds receive appreciation from the international archaeological community, locally they are widely neglected. This is also reflected in the long research history. Travel reports of former researchers tell about interactions with the elite but very little about interactions with the remaining population (Durand, quoted in Rice 1983:18; Bent, quoted in Rice 1983:73, 75; Bibby 1970:8, 39, 95). Of course, good relations with decision makers ensure the continuation of excavations and in older times archaeologists also had little conscience of the need for preservation. In the rare cases of researchers interacting with locals, the main intention was to acquire information and hints to advance the success of archaeological surveys and excavations (Durand, quoted in Rice 1983). Consequently, very little about the burial mounds' value and uniqueness has been shared with the local community. In fact, most of the people living in Bahrain have very little or no knowledge about the mounds. They might be aware that the mounds are ancient structures, but details about their history and importance has never been communicated



Figure 8: New houses next to Hamad Town 1 Burial Mound Field near Buri (photograph by author, 12th October 2013)

to them. Resultant, the burial mounds are widely depreciated, which is mainly expressed in their destruction and removal. Urban development is the major reason for such interference.

Bahrain, an archipelago of over thirty islands and islets, has limited space to offer to its increasing population. With 1,701 inhabitants per km<sup>2</sup> it is the fifth most densely populated nation in the world (World Bank 2014). The growth of population is remarkable; its number of inhabitants increased from ca. 360,000 in 1980 to almost 1.3 million in 2010 (UN 2011). The necessity for additional infrastructure and housing has always been the thriving factor for the removal and destruction of the ancient sepulchral structures. However, thousands of mounds have been removed without developing the empty space afterwards. Although this is an exception, it exemplifies unjustified destruction.

Approximately 80% of the ancient tumuli have been removed since the 1960s. Yet an outstanding number of about 15,000 Dilmun burial mounds keep on existing and are now protected by the National Heritage Law. However, development pressure does not only remain a serious threat but seems to be supported by parts of the local community. The area councillor of Hamad Town for instance stated 'we are not saying remove them all, but hundreds could go' (Gulf Daily News 2013). Hamad Town, a town that was developed from scratch in the 1980s, embeds the remains of three major burial mound cemeteries that together comprise almost 6,500 ancient tumuli to date.

The most recurring argument is that the needs of the living should be given priority over those of the dead. This reasoning best reflects the lack of awareness by the people. Experience shows that people change their point of view whenever they are provided with more information. In almost all the cases locals started to appreciate their heritage once they learned about the extraordinariness of the burial mounds. They begin to become proud of it (Atalay 2012).

Besides the very important factor of forming identity, heritage sites also become an increasingly valuable economic driver throughout the Gulf countries. Currently, the number of tourists visiting the ancient tumuli amounts close to zero, although the burial mounds are listed among the Top Ten Must-Do's presented on the Ministry of Culture's website (Kingdom of Bahrain, Ministry of Culture 2014). At TripAdvisor, for instance, one of the biggest international travel websites where people comment and review worldwide attractions, the burial mounds received only one single review (TripAdvisor 2014b). In comparison, more than 200 people commented on the Bahrain National



Figure 9: Potter preparing clay in a workshop in Aali (photograph by author, 2nd February 2014)

Museum (TripAdvisor 2014a). The differential numbers reflect to what extent the national and international community neglect the Dilmun tumuli.

The burial mound fields are mainly located in villages, of which some are fairly new and purely residential areas and others originate in traditional settlements with a long history. Especially the village of Aali could financially benefit from increasing visitor numbers, as it is one of Bahrain's main handicraft centres. Throughout the region Aali is famous for its pottery products. Since a long time local artisans have passed on their knowledge from generation to generation. The potters established their workshops in between the huge Royal Mounds of Aali and transformed some of the ancient grave chambers into kilns. It can be assumed that already in ancient times Aali was the place of pottery production due to the village's close vicinity to natural clay sources.

It is not only people who would benefit from an increase in tourism. Provided, of course, that a tourism strategy is carried out in a cautious way, also the archaeological remains would benefit. At the moment very little is done in terms of conservation, protection, or maintenance. A wider attention would also require an increased level of presentation and interpretation, crucial transmitters to convey information and to raise awareness. In addition, presentation includes the maintenance of the heritage site that does not only include a proper fencing and clearing out of litter, but also proper conservation and consolidation of the archaeological remains. Occasional heavy rainfalls and strong storms accelerate erosion processes. Especially excavated mounds suffer from fragile excavation slopes and sliding material. As a result, awareness raising and sustainable tourism strategies benefit the heritage asset as well as the local community itself.

### The power of awareness raising in the preservation process

The government already made a first big move when it recognised the burial mounds' importance and listed them on the UNESCO Tentative List (UNESCO 2014a). This is the first step for a future inscription on the UNESCO World Heritage List that guarantees not only the international recognition of the site's Outstanding Universal Value but also the auspices of its protection and adequate conservation.

However, in order to successfully list a site certain requirements must be fulfilled. Besides legal protection, effective administrative structures, facilitation of research, adequate conservation, and the presentation and interpretation of the site, awareness raising is one of the crucial factors. Enhancing public awareness of the significance of the Dilmun Burial Mounds and their inherent historical value aims to foster the appreciation of the site as well as the willingness to contribute to its preservation. In the following paragraphs some methods are presented that may contribute to awareness raising and could be easily implemented by the respective responsible. As a general rule, the local community should never be neglected or underestimated, neither during excavations nor later when it comes to the presentation of the site.

The involvement of local people should always start when excavations begin (Atalay 2012). For many years the maximum level of local participation was the people's temporary employment as labourers in order to assist the foreign archaeological teams in accomplishing their research objectives. Such behaviour



Figure 10: Royal Mound embedded in the urban fabric of Aali village (photograph by author, 2nd February 2014)

provoked feelings of exclusion and might have fostered the idea of foreign intruders. Today, a change in mind-set can be observed and the question of heritage preservation and presentation gains more and more attention in the archaeological community. As stated earlier, community involvement and awareness raising are significant components of heritage preservation.

Archaeologists have the ability to provide locals with first hand information. In the rarest of cases, especially in countries like Bahrain where privacy is of highest value, will locals approach researchers by themselves. Open days, for instance, would provide an ideal platform to convey the site's value to the people. The possibility to visit the site should however be communicated adequately, either orally or through other mediums. Another great possibility that has been implemented by the Danish Archaeological Mission in 2013 is to invite volunteers to do hands-on excavation work. Therefore, the team collaborated with a local school and invited pupils and other interested persons every Saturday to the excavation site.

Schools possess a power that goes far beyond the occasional involvement of the local community. It is an institution with greatest potential to leave a long-term impression. It is highly recommended to enforce lessons of ancient history in the school curricula, so children gain a holistic picture of the history of the country they are living in. This, of course, can only be achieved through the effort of local stakeholders. However, international and local archaeologists can work hand in hand to develop educational resource material for teachers and students. Lecture series in schools and universities are yet another method to spread information about the burial mounds and their need for protection. In addition, regular school visits to the sites should be encouraged. Excursions however only make sense if a knowledgeable person guides them when, like it is the case for the Dilmun Burial Mounds, on-site interpretation facilities are yet to be implemented.

There are other approaches that help boost awareness such as events or exhibitions that target the asset. A public photo competition, for example, would have three positive effects. Firstly, people are encouraged to discover the heritage site and, by doing so, learn about it. Secondly, the contributions could become valuable resources for the site's administrative body as well as for researchers. And finally, selected photos could be assembled for a small travelling exhibition that could be presented in public institutions, community centres, or schools. By doing so, huge numbers of different people could be reached.

## Conclusion

The Dilmun Burial Mounds of Bahrain are unique in the world and should therefore be treated with an appropriate level of attention. The mound cemeteries have been harmed and have diminished in number in the past five decades, yet they still constitute an outstanding heritage asset that is targeted to be nominated as UNESCO World Heritage Site in the near future.

Although the burial mounds and their inherent historic value find wide recognition in the scientific community, local people show little appreciation for their own heritage which seems to be mainly rooted in a lack of knowledge. Considering the latter, it is not surprising that mounds are demolished and vandalised. Awareness raising campaigns have the power to counteract ignorance and neglect, and should be promptly implemented to avoid further disturbances.

Spreading information and knowledge of the burial mounds' importance and singularity is the main tool to boost awareness and, as a result, increase appreciation of the asset. Only if the local community values its heritage it will treat it with appropriate care and will be willing to support its long-term preservation.

The Dilmun Burial Mounds are not only among the earliest traces of the island's long history, future generations will also benefit from their successful preservation. Besides having the potential to attract tourists interested in history and to boost cultural tourism, the burial mounds still possess secrets to uncover. Future researchers may contribute to provide a more complete picture of Bahrain and the wider Gulf region during the Bronze Age.

## References

- Atalay, S. 2012 *Community-based Archaeology: Research With, By, and for Indigenous and Local Communities*. Berkeley and Los Angeles: University of California Press.
- Bibby, G. 1970 *Looking for Dilmun*. London: Stacey International.
- Breuil, J.-Y. 2000 The World's Largest Prehistoric Cemetery. In H. Crawford and M. Rice (eds), *Traces of Paradise: The Archaeology of Bahrain 2500BD-300AD*, pp. 49-55. London: The Dilmun Committee.
- Cleuziou, S. 1981 *Fouilles à Umm Jidr*. Paris: Editions A.D.P.F.
- Daems, A., and E. Haerincq 2001 Excavations in Shakhoura (Bahrain). *Arabian Archaeology and Epigraphy* 12:90-95.
- Dalongeville, R. 2000 Bahrain, the Gulf's Natural Exception. In H. Crawford and M. Rice (eds), *Traces of Paradise: The Archaeology of Bahrain 2500BD-300AD*, pp. 28-32. London: The Dilmun Committee.
- Gulf Daily News 2013 Councillors back homes plan. Retrieved 7 March 2014 from <<http://m.gulf-daily-news.com/NewsDetails.aspx?newsid=368507>>.
- Højlund, F. 1992 Holy Architecture in Bronze Age Bahrain. *Dilmun* 15:73-80.
- Højlund, F. 2007 *The Burial Mounds of Bahrain. Social complexity in Early Dilmun*. Højbjerg: Jutland Archaeological Society.
- Ibrahim, M. 1982 *Excavations of the Arab Expedition at Sar el-Jisr Bahrain*. Manama: State of Bahrain, Ministry of Information.
- Killick, R. 2003 Living at Saar: Dilmun at the start of the second millennium BC. In H. Crawford (ed.), *The Archaeology of Bahrain: The British contribution. Proceedings of a seminar held on Monday 24th July 2000 to mark the exhibition "Traces of Paradise" at the Brunei Gallery, SOAS, London*, pp.13-24. Oxford: Archaeopress.
- Kingdom of Bahrain, Central Informatics Organisation 2012 Area of Bahrain expands to 765.3 square kilometres. Retrieved 9

- January 2014 from <[http://www.cio.gov.bh/cio\\_eng/SubDetailed.aspx?subcatid=541](http://www.cio.gov.bh/cio_eng/SubDetailed.aspx?subcatid=541)>.
- Kingdom of Bahrain, Ministry of Culture 2014 Bahrain's Top 10 Must-Do's. Retrieved 8 March 2014 from <<http://www.moc.gov.bh/en/visitingbahrain/BahrainsTop10Must-dos/Name,10132,en.html#UxxpjSvfb6l>>.
- Larsen, C. E. 1983 *Life and Land Use on the Bahrain Island*. Chicago and London: University of Chicago Press.
- Laursen, S. T. 2008 Early Dilmun and its rulers: new evidence of the burial mounds of the elite and the development of social complexity, c. 2200-1750 BC. *Arabian Archaeology and Epigraphy* 19:155-166.
- Laursen, S. T. 2010 The emergence of mound cemeteries in Early Dilmun: new evidence of a proto-cemetery and its genesis c. 2050-2000 BC. In L. Weeks (ed.), *Death and Burial in Arabia and Beyond*, pp. 115-139. Oxford: Archaeopress.
- Lowe, A. 1986 Bronze Age Burial Mounds on Bahrain. *Iraq* 48:73-84.
- Mughal, M. R. 1983 *The Dilmun Burial Complex at Sar. The 1980-82 Excavations in Bahrain*. Manama: Ministry of Information.
- Rice, M. 1983 Dilmun Discovered. *The early years of archaeology in Bahrain*. Manama: Department of Antiquities and Museums, State of Bahrain.
- Rice, M. 1994 *The Archaeology of the Arabian Gulf c. 5000-323 BC*. London and New York: Routledge.
- Roaf, M. 2003 Excavations at Diraz East and A'ali East. In H. Crawford, (ed.), *The Archaeology of Bahrain: The British contribution. Proceedings of a seminar held on Monday 24th July 2000 to mark the exhibition "Traces of Paradise" at the Brunei Gallery, SOAS, London*, pp.25-34. Oxford: Archaeopress.
- Soweileh, A. 1995 A Typology of Dilmun Burial Mounds, In S. Campbell and A. Green (eds), *The Archaeology of Death in the Ancient Near East*, pp.196-198. Oxford: Oxbow Books.
- Srivastastava, K. M. 1991 *Madinat Hamad: Burial Mounds - 1984-85*. Manama: Ministry of Information.
- TripAdvisor 2014a Bahrain National Museum. Retrieved 5 March 2014 from <[http://www.tripadvisor.com/Attraction\\_Review-g293997-d321350-Reviews-Bahrain\\_National\\_Museum-Manama.html](http://www.tripadvisor.com/Attraction_Review-g293997-d321350-Reviews-Bahrain_National_Museum-Manama.html)>.
- TripAdvisor 2014b Dilmun Burial Mounds. Retrieved 8 March 2014 from <[http://www.tripadvisor.com/Attraction\\_Review-g1509087-d3683072-Reviews-Dilmun\\_Burial\\_Mounds-Riffa.html](http://www.tripadvisor.com/Attraction_Review-g1509087-d3683072-Reviews-Dilmun_Burial_Mounds-Riffa.html)>.
- UN, United Nations 2011 The Demographic Profile of Bahrain. Retrieved 3 March 2014 from <<http://www.escwa.un.org/popin/members/bahrain.pdf>>.
- UNESCO, United Nations Educational, Scientific and Cultural Organization 2014a Tentative List. Burial Ensembles of Dilmun and Tylos. Retrieved 3 March 2014 from <<http://whc.unesco.org/en/tentativelists/5369/>>.
- UNESCO, United Nations Educational, Scientific and Cultural Organization 2014b World Heritage List. Qal' at al-Bahrain. Retrieved 2 March 2014 from <<http://whc.unesco.org/en/list/1192>>.
- Velde, C. 1994 Die steinernen Türme. Gedanken zum Aussehen der bronzezeitlichen Gräber und zur Struktur der Friedhöfe auf Bahrain. *Iranica Antiqua* 24:63-82.
- World Bank 2014 Population density (people per sq. km of land area). Retrieved 7 March 2014 from <<http://data.worldbank.org/indicator/EN.POP.DNST>>.

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