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A tumulus cemetery on the north coast of Kuwait Bay: results of survey and excavation in the al-Ṣabiyyah region

ŁUKASZ RUTKOWSKI

Summary

Since 2007, the Kuwaiti-Polish Archaeological Mission (KPAM) has been working in the coastal region of al-Ṣabiyyah (Subiyyah), a desert plateau extending along the north coast of Kuwait Bay.¹ It carried out an extensive survey and excavated selected stone structures, mainly burial mounds. More than 200 archaeological structures and sites, including around 130 tumuli and around 100 stone features of different types, were recorded. A selection of forty stone structures was excavated, of which twenty-seven were burial mounds. This paper summarizes the results of six seasons of investigations, from 2007 to 2012.

The survey, coupled with excavation of selected structures from the survey area, has provided extensive data for a preliminary analysis of the tumulus cemetery found in al-Ṣabiyyah. Based on this research, it is possible to present the following: a provable classification of tomb forms; distribution patterns of the burial mounds; specific burial practices in the region; and a tentative chronology of the sepulchral structures.

Keywords: Gulf archaeology, tumuli, typology, burial practices, Bronze Age

Introduction¹

A coastal desert plateau extending along the north coast of Kuwait Bay has yielded numerous stone structures, mainly circular burial mounds made of rough stones. Some of them have been explored by Kuwaiti and other archaeological expeditions invited by the Cooperation Council for the Arab States of the Gulf (GCC) from the end of the last century. From 2007 they have also been investigated by the Kuwaiti-Polish Archaeological Mission (KPAM), a joint project of the Polish Centre of Mediterranean Archaeology, University of Warsaw, and the National Council for Culture, Arts and Letters of the State of Kuwait. The project, which started as a small salvage excavation of a cluster of tumuli, has expanded over time to include investigations by means of survey and excavation in a study area covering a c.20 km stretch of land running parallel to the shoreline within the region of al-Ṣabiyyah.

al-Ṣabiyyah cemetery: location and burial mound distribution

Right from the beginning of the survey, it became clear that we were dealing with a fairly large tumulus burial

ground. The tumuli occupy a spacious burial field, c.20 km², sited on a crescent-shaped terraced plateau that stretches for c.12 km along an arc that follows the coast. The width of this field varies from several hundred metres to 3 km. Most of the burial mounds are evenly distributed along the edges of the terraces running roughly parallel to the Jāl al-Zawr escarpment and parallel to the coast, in the western and central part of the study area (Fig. 1). At present the cemetery is located a few kilometres inland from the coast, but palaeo-geomorphological evidence from the region indicates that in prehistoric times, burial mounds were located much closer to the shoreline than today (Lambeck 1996; Gunatilaka 2010). There is reason to believe that they overlooked a sea bay or lagoon in antiquity.

Two terraces are situated in the higher, northern part of the plateau, and demonstrate a high density of burial mounds (Fig. 2). Conversely, in the south, in the lower part of the plateau directly overlooking the coastal plain, tumuli are more sparsely distributed. Burial mounds often stand in pairs or appear to have been organized in groups of three or four burials, concentrated on small spurs of land located on the margins of the plateau. Occasionally they were situated on narrow ridges protruding from the main terrace. Presumably this pattern of distribution reflects family or clan groups, belonging perhaps to a single community or of roughly the same date.

¹ All the findings presented here are discussed in detail by Rutkowski et al. 2015.

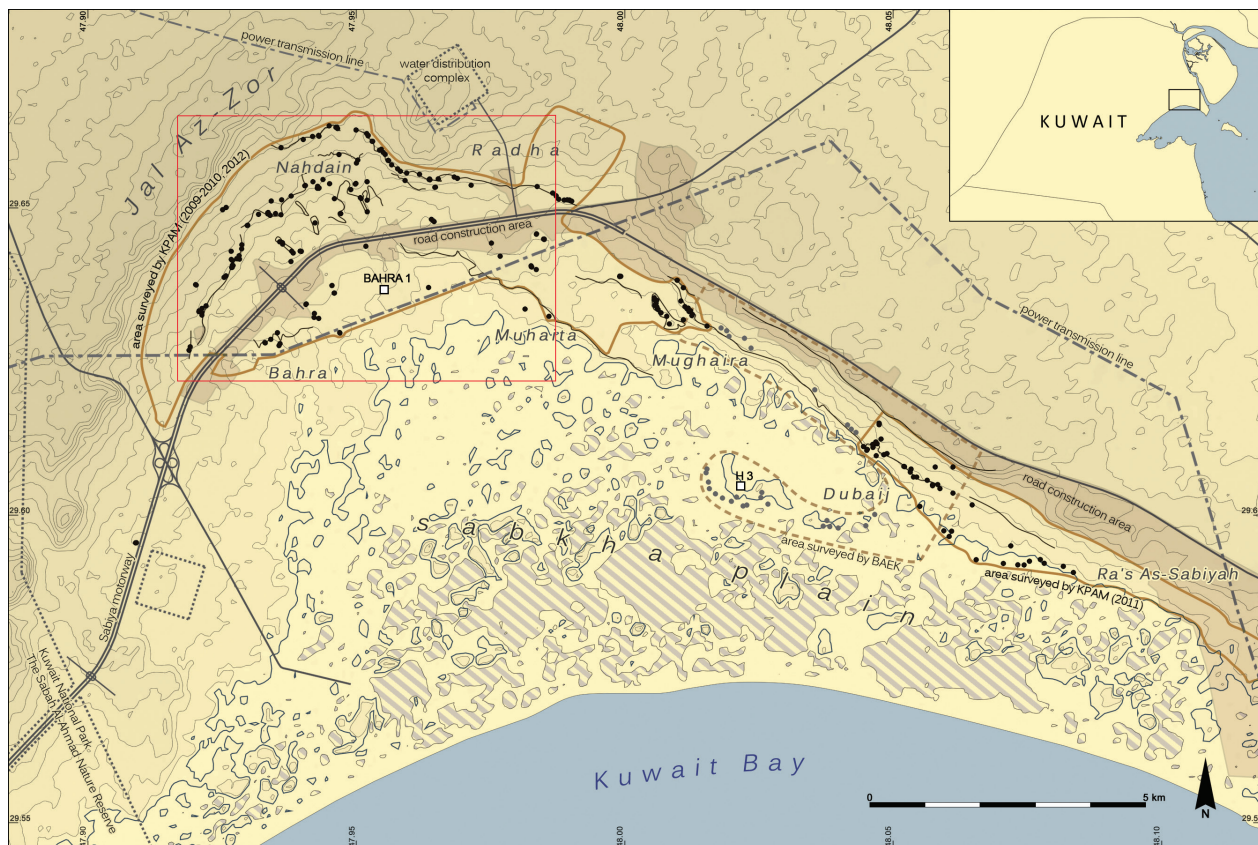


FIGURE 1. A map of the study area in the al-Şabiyyah region; the black dots mark the location of structures/sites surveyed by the Kuwaiti-Polish Archaeological Mission (KPAM) team in 2009–2012 (mapping J. Kaniszewski).

The terrace edge with its broken rock outcrops was evidently the preferred location because of easy access to stone building material. The limited number of rock outcrops in flat land presumably determines the sparser distribution of tumuli in those areas. The agreeable view from the high scarps and cliffs may also have played some role in the choice of burial location. It may represent some common tradition, perhaps a component of afterlife beliefs, giving the dead the opportunity to look out onto the sea. Such placement of stone burial mounds could also have been construed as the landmark positioning of a traditional burial ground.

Classification of structures and sites

The overall number of recorded structures and sites is 222. Most of the stone structures identified in the surveyed area were tumuli (130 in total, making up

59% of all the recorded structures; 66% in the core area of the cemetery). Two other distinct categories, most likely of a non-sepulchral nature, were distinguished: ‘elongated structures’, flat and narrow stone features, resembling a horizontal platform, often with rounded ends (twenty-one, 9%); and ‘bin’ structures, small and low circular features with a rectangular bin-like annexe (nine, 4%) (Fig. 3/a–b). Examples of these two categories regularly accompanied tumuli and must have played an auxiliary role. Eleven features (5%) were poorly preserved or of uncertain shape, but were often located near the main burial mound and were therefore considered to be ‘burial-related’. Three ‘long linear structures’ (1%), each stretching for nearly 50 m, and four structures (2%), difficult to classify, were included in the category ‘others’. Six ‘sprawling sites’ (3%) spread along the former shoreline in the easternmost part of the study area, where the plateau becomes progressively

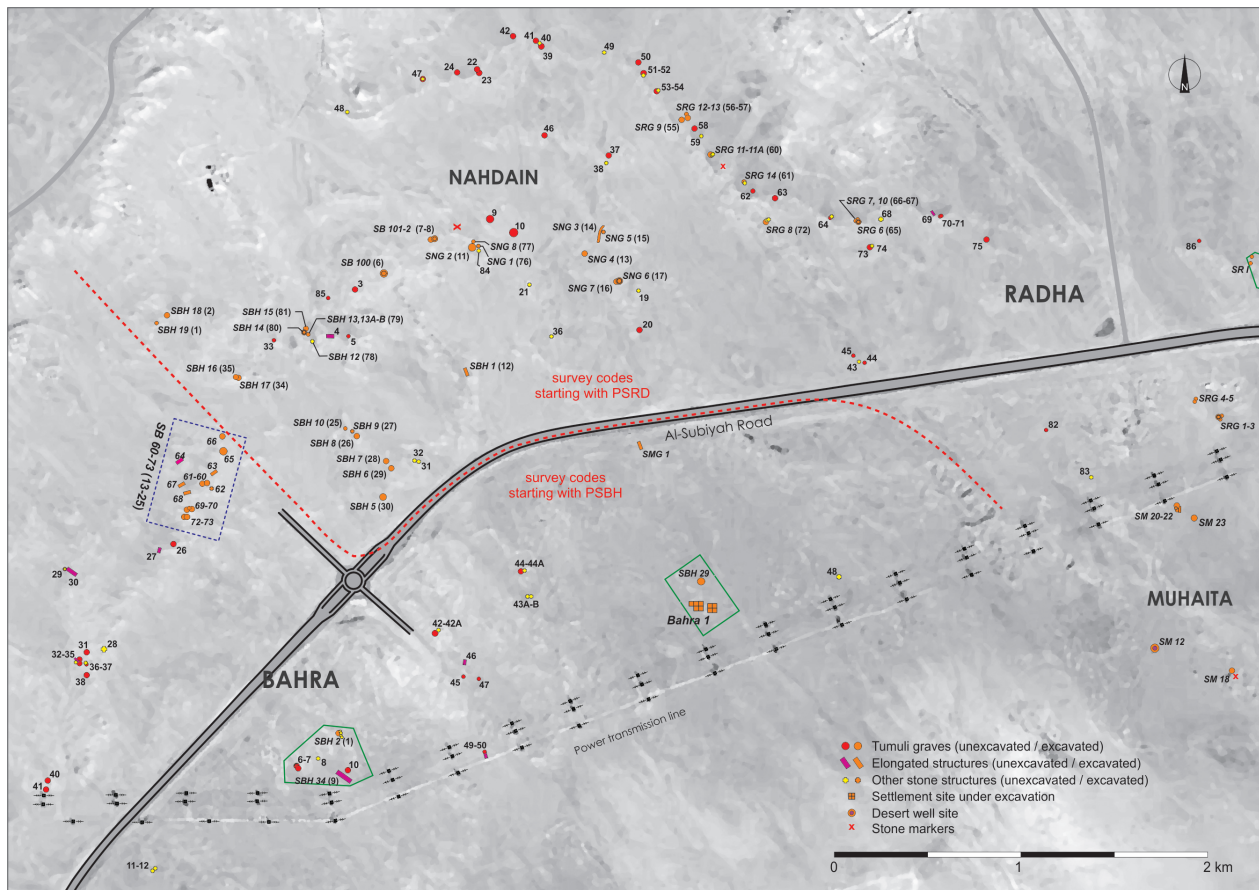


FIGURE 2. A plan showing the surveyed locations in the western part of the cemetery (mapping, based on Google Earth and GPS coordinates, Ł. Rutkowski).

lower and finally merges into the coastal plain. They are distinguished by the presence of potsherd scatters or/and shell middens, dated to the late Sasanian–early Islamic period on ceramic grounds. The remaining relics fall into a broad category of heterogeneous ‘small stone features’ (thirty-eight, 17%). This category includes a variety of structures of uncertain purpose, such as irregular stone piles, simple stone clusters, or vague alignments; some could be the remains of campsites, stone trail markers, Islamic grave markers, etc.

Tomb typology

The total number of structures excavated by the KPAM team in al-Šabiyyah is forty, including twenty-seven tumuli, seven ‘elongated structures’, one ‘bin’ structure, one ‘burial-related’ feature, and four small features. At least seven different architectural types were distinguished

among the tumuli excavated by the KPAM team. These were as follows:

Type 1: simple type, undistinguished by its external appearance

Six tombs: SMQ 30, SMQ 31, SMQ 32, SMQ 35A, SMQ 45, SM 18

A simple, ‘ordinary’ type of tumulus without any distinct edging around the mound and with a rough mantle giving the impression of a haphazard construction. Similarly, the opening to the chamber, usually circular, was not clearly defined on the surface. The six tombs making up this type were not uniform, but the details of construction in which they differed, sometimes substantially, were never visible on the surface of the mound (Fig. 4/a).

Type 2: orderly type built on flat rock, with well-defined chamber and an outer edge

SB 20, SB 70, SB 73, SB 101, SMQ 35B, SMQ 48

A fairly common type of tumulus in the region was a structure raised directly on a flat expanse of bedrock, chosen deliberately to serve as the bottom of the chamber. The tombs shared several other features, such as an orderly arranged structure, neatly finished chamber side walls and mantle, a well-defined chamber and outer edge of the mound, and a circular chamber opening at the top (Fig. 4/b).

Type 3: ‘miniature’ type of oval-shaped tumulus

SB 71, SMQ 38

This is a small group consisting of only two tumuli, but they are very similar structures. Both are small, flat, and irregularly ellipsoidal structures, almost ovoid in shape and slightly elongated on an east–west axis. Another peculiar feature is that the chamber, in this case resembling an encased box grave, also has an elongated form, indicating the deliberateness of the design (Fig. 3/c).

Type 4: type with chamber sunk partly in the bedrock and a reduced oval opening

SB 65, SB 72, SMQ 45

These were large tumuli, featuring a chamber partly hewn in solid bedrock, clearly widening toward the bottom and with a reduced oval opening noted in the flattened top of the mound. The three mounds assigned to this type were the largest tumuli explored in the study area (excluding those of Type 7). They were of a similar size and same general layout but there were several differences in their construction (Fig. 5/a).

Type 5: type with chamber raised above the ground and an outer vertical kerb

SB 61, SB 66, SM 20, SM 23, SMQ 33

Tombs with shallow chambers set on an artificial platform in the middle of the structure were classified as Type 5. Five structures formed this very coherent group. They were distinguished not only by the position and form of the chamber (circular, shallow, straight-sided chamber having a raised floor, i.e. evidently built above the ground), but

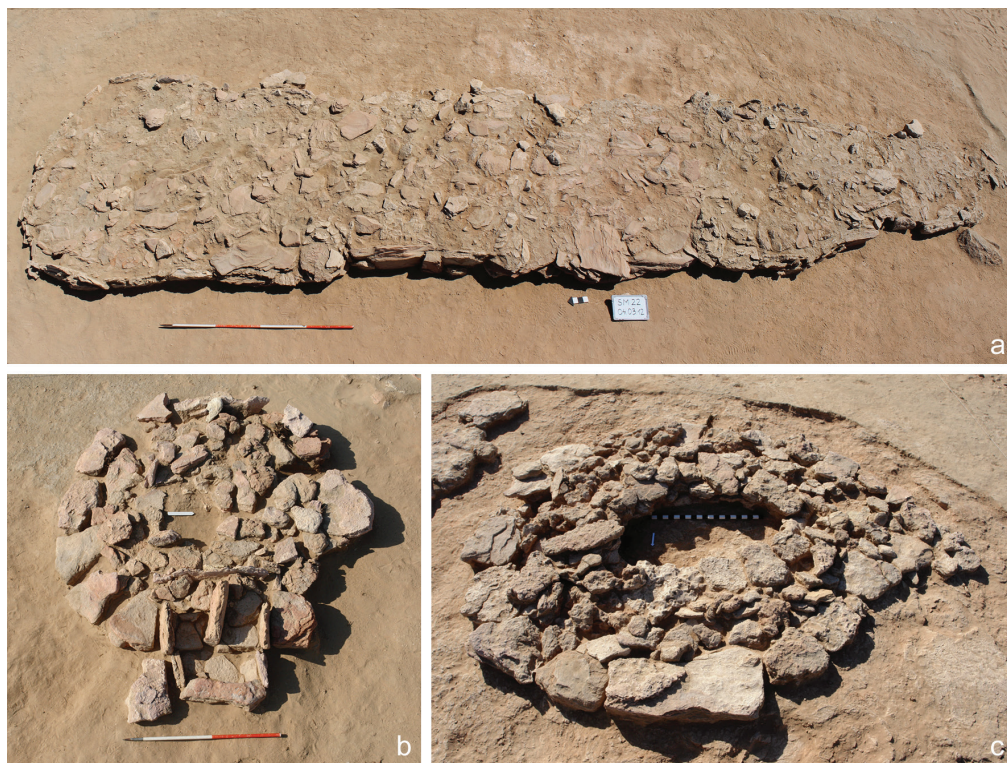


FIGURE 3.
Examples of
stone structures
in the study area:
a. ‘elongated
structure’ (SM
22); **b.** ‘bin’
structure (SMQ
44); **c.** tumulus of
Type 3 (SMQ 38)
(photographs Ł.
Rutkowski [a], M.
Makowski [b–c]).



FIGURE 4. Examples of tumulus types: **a.** Type 1 (SMQ 30); **b.** Type 2 (SB 70) (photographs A. Reiche [a], Ł. Rutkowski [b]).

also a specific form of finishing of the mound (defined by an outer kerb of upright slabs) (Fig. 5/b).

Type 6: type without a chamber (or virtually no chamber)

SB 42.1, SB 60, SB 69

Type 6 encompasses three mounds which differed from the standard tumulus design by not having a regular chamber inside the mantle. Objects that could be grave-goods found inside the structure or between the stones of the mantle, as well as human bones from SB 69 and a secondary interment in SB 60, leave no doubt, however, as to the sepulchral function of these mounds. The three

mounds assigned to this type differed from each other, but what they shared was a solid structure filled with stones and without any apparent opening.

Type 7: type with outer ring wall

SB 100, SB 102

Tombs of this type consisted of three basic structural elements: 1) the tomb proper, comprising the chamber; 2) the outer ring wall; and (3) the 'void ring', meaning the gap between the two. Unlike burial mounds where the chamber wall is to some extent structurally integrated with the mantle, in tombs of Type 7 the burial chamber was built separately. It was a fairly large, cylinder-shaped



FIGURE 5. *Examples of tumulus types: a. Type 4 (SMQ 49); b. Type 5 (SM 23) (photographs M. Makowski [a], Ł. Rutkowski [b]).*

stone structure with straight sides, standing detached in the centre of the whole complex. This central structure was usually smaller in size than a typical burial mound, but solidly built of large pieces of stone. The ‘void ring’ around the central structure was empty either in the literal sense (SB 102) or empty of masonry, but at least partly backfilled with sand and covered with a stone cladding (SB 100) (Fig. 6/a). This empty space was surrounded by an outer ring wall. In the case of SB 102, however,

the outer ring was a low-profile feature, more like a ring-shaped catwalk than a real wall (Fig. 6/b). Thus, we are dealing with two subtypes of the same type.

Five other examples of this kind of tumulus were identified in the study area. All were previously investigated by the Kuwaiti or GCC expeditions. It may be assumed that these large tombs, which must have been conspicuous and grander compared to the more prevalent ‘ordinary’ ones, belonged to members of the elite. Tumuli



FIGURE 6. Tumuli of Type 7 excavated by the KPAM mission: **a.** SB 100; **b.** SB 102 (photographs M. Makowski [a], Ł. Rutkowski [b]).

of this type were scattered throughout the cemetery, forming no distinct concentration.

Overview of burial rites and funerary practices

The explored graves were all plundered or at least heavily penetrated in the past, resulting in a complete disintegration of the bones in most cases and reducing

significantly the number of grave-goods. Nonetheless, it was possible to reconstruct some burial practices based on the excavation data. As far as a typical tumulus layout is concerned, two key elements may be distinguished: a single above-ground burial chamber situated in the middle of the mound (excluding tumuli of Type 6) and a rounded mantle encircling it. The tombs only contained inhumation burials which were placed inside the chamber, with the skeletons laid in three different positions: below,

above, and on the ground (as far as can be judged from the positioning of the chamber floor and depending on the specific type of tumulus). Different kinds of burials were recorded within the excavated sample: individual, double, and collective. Secondary burials, in the sense of reburied human remains, were occasionally encountered beside primary ones (SB 60, SMQ 49). It should be observed that a great deal of care was put into separating the deceased from the ground by constructing a platform (tumuli of Type 5) or using the bedrock as the floor of the burial chamber (chiefly tumuli of Type 2). Other stone structures are quite often encountered in the neighbourhood of the tumuli, indicating the presence of subsidiary or satellite burials and/or other structures of a non-sepulchral character, possibly connected with burial practices of an unknown nature ('elongated structures' and 'bin' structures mentioned above).

The tumuli that were sampled in the present fieldwork were in general furnished with grave-goods. The finds, mostly personal adornments (beads), were recovered from twenty-one graves. An interesting custom of strewing beads over a tumulus by the mourners, showing that at least some grave-goods were placed outside the burial chamber, was observed in a few cases (SMQ 30, SB 100, SB 72). Mollusc shells are the most frequent items among the grave-goods. It is worth mentioning that their presence in graves is of a multifarious nature, in other words, assemblages include whole shells adapted for stringing, processed shell ornaments, unfinished semi-products, and even waste and offerings of unworked shells (e.g. SB 70, SM 23, SMQ 30, SMQ 33). One tumulus (SB 101) contained a fragmentarily preserved cockle shell bearing traces of some dark substance on the inner surface. It may represent a cosmetic shell — a small receptacle for holding cosmetic pigments.

There were also animal offerings inside the graves. Remains of goat/sheep were recorded in six tumuli. In addition, a deposit of oyster shells (half of them burnt, half without traces of fire) to be interpreted as post-consumption waste was found at one of the burial-related structures (SM 21), which may indicate a practice associated with a funeral meal. The presence of a small stone mortar and pestle and other ground stone implements, apparently used for triturating substances, was attested in three tombs (SB 60, SM 23, SMQ 49). In some cases, the stone implements were found outside the chamber, among the stones of the mantle. An equid burial, possibly of an onager, was interred inside the chamber along with the humans in a collective tomb (SMQ 49). In addition, specific funerary customs practised by the oldest users of SMQ 49 were

observed as follows: placing a single stone slab under the head of the deceased (attested in three burials); placing unworked white and black pebbles in the clenched hand of the deceased (attested once).

Forms of burials

The generally poor condition of the human skeletal remains does not allow conclusions regarding body deposition, position, and orientation. Articulated skeletons *in situ* were only found in SMQ 49 (a unique collective grave housing over a dozen burials) and in SB 102 (which yielded a single partly preserved burial).

The primary burials of at least six individuals were identified in the earliest phase of funerary activity in SMQ 49 (Makowski 2013). Burials, including two double and two single, were deposited in the chamber successively, one directly above the other. The dead were usually buried in a flexed position lying on the side. There were no rules regarding the orientation of the body. The single skeleton in SB 102 was found lying on its right side, facing towards the south (seaward), with arms bent.

Collective burials were also present next to individual ones. In one case, at least, we are dealing with a double burial of adult individuals (SMQ 30). The above-mentioned double burials from SMQ 49 consist in both cases of a woman and child.² In contrast, the double burial from SB 60 is of a secondary nature. Four individuals were buried in SMQ 35A. The remaining tumuli (nine in all) do not appear to have contained more than one burial. It is worth stressing, however, that fourteen burial mounds had either no skeletal remains or the bones were so poorly preserved as to be unidentifiable.

Moving of the skeleton in a few cases indicated that the deceased had been buried elsewhere and was transported to the cemetery. The custom was attested in SMQ 49, in the second phase of the tomb's use, where the scattered bones of at least six individuals were found. At least part of this bone scatter was a secondary burial, moved from elsewhere, without retrieval of smaller skeletal elements from the primary context. Moreover, some of the long bones in these interments bore cut marks, which could be interpreted as evidence of the bones being shortened in preparation for easier transport (Sołtysiak 2012: 58).

² The two double burials from SMQ 49, comprising a woman and child in each were very similar. In each case the child (one 4–5 years old, the other 8–9) was laid with his/her back to the woman, on her outstretched arm, giving the impression that the woman was hugging the child.

A secondary deposit in SB 60, comprising two individuals, was located beside the tomb, outside the location of the potential chamber, which may imply reuse of an older structure.

Grave-goods

Plundering of the graves makes it impossible to be certain of the usual contents of funerary equipment. Excavation of a few graves, which yielded numerous

personal adornments, especially the simple shell types, left the impression of the prevalence of this category in the grave-goods. In the presumed wealthier burials, the grave-goods included beads made of semi-precious stones, pearls, metal artefacts, and pottery (Figs 7–8). But we cannot know what was the percentage share of these ‘wealthier’ tombs. Moreover, there is a surprising discrepancy between tombs with several dozen adornments (not counting the hundreds of microbeads) and grave chambers with nothing or just single items (see



FIGURE 7. A selection of finds from different tumuli: **a.** SMQ 49; **b.** SB 42.1; **c.** SB 60; **d.** SB 70; **e–f.** SB 65 (photographs A. Niemirka [a–d, f], I. Sztuka [e]).



FIGURE 8. *A selection of finds from different tumuli: a. SMQ 30 (selection); b. SB 100 (whole collection); c. SB 102 (pottery jar). Of special interest are the decorated pendant and the perforated pearls and lapis lazuli beads (a, centre) (photographs A. Reiche [a], M. Karolak [b–c]).*

Fig. 9). There is certainly no reason why graves could not have been plundered repeatedly and the chambers emptied of almost everything. The question arises, why were tombs like SMQ 30 and SB 100 not emptied of their content? It is possible that there had been much more valuable items in these graves and these had been robbed,

leaving behind the minor adornments. Another possibility is that the graves with abundant grave-goods were the exception to the rule and that in practice, grave-goods were minimal in number. There is yet another explanation for this, relating to the fact that these two graves display the same funerary practice, resulting in the dispersion

Structure code	Type	Human skeletal remains	Finds		Comments
			Quantity	Description	
SMQ 30	Tumulus (Type 1)	Two adults (one likely female)	600	Abundant and varied collection of adornments, made mostly from shell, but also stone (chiefly microbeads); includes shell pendant decorated with a dot-in-circle motif, two perforated pearls, lapis lazuli beads, a metal wire loop	Adornments strewn on grave; some suggesting an Early/Middle Bronze Age date
SB 100	Tumulus (Type 7)	Unidentifiable	393	Rich but not varied collection of adornments comprising only shell items and stone microbeads	Adornments strewn on grave; ¹⁴ C dates obtained for tusk shells indicate a mid-third millennium BC date
SMQ 49	Tumulus (Type 4)	No less than 17 individuals of varied age and sex	27 +21 waste	Fair and varied collection of artefacts, including adornments and tools, representing different kinds and materials; includes five beads (one of chrysoprase), three shell pendants; one bone plaque pendant and five bone tools; two lithic tools (one of which is an arrowhead); six ground stone implements	Equid buried in the grave; unique set of bone artefacts; flint arrowhead that can be dated to the Ubaid period
SB 72	Tumulus (Type 4)	Unidentifiable	25	23 shell items (beads and disks), bitumen bead, carnelian bead	Adornments strewn on grave (?)
SMQ 33	Tumulus (Type 5)	One adult (most likely female)	20 +shells	18 shell adornments, two spacer beads (one of stone, one of bitumen); a dozen unworked shells or fragments	Finds related to SMQ 30
SB 65	Tumulus (Type 4)	One adult (at least)	18 +shells	Six beads of different kinds and materials (three of agate, one of carnelian), 11 copper-alloy fragments (broken pieces of adornments or tools), one worked and two unworked shells	Metal finds and a few beads, including some of good quality semiprecious stones implying a Bronze Age date
SB 70	Tumulus (Type 2)	None	17	Nine evident adornments: six of shell, three of stone (two carnelian beads), and eight worked shells (semi-finished beads)	Structural similarity to SB 101
SMQ 45	Tumulus (Type 1)	One young adult	9	Adornments, all but one made from shell	Finds related to SMQ 30
SB 60	Tumulus (Type 6)	Two adults (one possibly female)	7	Poor but varied collection of artefacts, including three shell adornments, two stone objects (ground stone implement, large bead or weight of quartz), and two metal objects (bronze arrowhead, miniature trilobed object made of white metal, most likely part of adornment)	Secondary burial indicating reuse of the tumulus (primary burial not found); bronze arrowhead (1500–600 BC)

Structure code	Type	Human skeletal remains	Finds		Comments
			Quantity	Description	
SB 42.1	Tumulus (Type 6)	None	4	Perforated recut pottery disk and three shell rings	Re-cut pierced pottery disc with parallels in Ubaid material
SB 69	Tumulus (Type 6)	Unidentifiable	3	Adornments made from shell	
SB 73	Tumulus (Type 2)	Unidentifiable	3	Two carnelian beads and one worked shell	Carnelian beads relating to SMQ 35A
SB 102	Tumulus (Type 7)	One adult (not examined)	3	Adornments: carnelian bead and bitumen bead; pottery vessel	Pottery vessel dated to the early 2nd millennium BC
SM 23	Tumulus (Type 5)	Unidentifiable	3	Two shells (one worked and one unworked) and one ground stone implement	Stone implement relating to SMQ 49, SB 60
SMQ 35A	Tumulus (Type 1)	No less than four individuals (three adults, including two females and one male; one adolescent)	3	Two stone beads (one of carnelian and one probably of quartz); fragmented copper/bronze object (earring or bracelet?)	Metal object and carnelian bead of good quality implying a Bronze Age date
SMQ 38	Tumulus (Type 3)	One adolescent or adult	3	Three shell adornments and one shell waste	
SB 101	Tumulus (Type 2)	Concentration of bones and a skull found separately (not examined)	2	Shell artefacts: one perforated pendant and one fragment of shell with traces of black substance (cosmetic container)	Proximity to SB 102 may imply that these tumuli are contemporaneous
SM 20	Tumulus (Type 5)	None	1	Cowry shell (adornment?)	Structural similarity to SM 23
SMQ 31	Tumulus (Type 1)	None	1	Worked shell fragment	
SMQ 32	Tumulus (Type 1)	None	1	Shell with malleable metal, lead/tin or silver inside: part of composite adornment, handle of a tanged metal implement, fish-net sinker(?)	
SMQ 35B	Tumulus (Type 2)	One adult	Shells	Five unworked shells or fragments	Contiguosness with SMQ 35A implying contemporaneity
SB 20	Tumulus (Type 2)	None	None		
SB 61	Tumulus (Type 5)	None	None		Proximity to SB 60 implying contemporaneity
SB 66	Tumulus (Type 5)	One probable adult	None		Similar in general appearance also to SB 42.1
SB 71	Tumulus (Type 3)	None	None		
SM 18	Tumulus (Type 1)	One individual based on teeth (not examined)	None		
SMQ 48	Tumulus (Type 2)	None	None		

Structure code	Type	Human skeletal remains	Finds		Comments
			Quantity	Description	
SM 21	Burial-related feature	None	Shells	Intentional deposit of oyster shells or their fragments: 2–3 dozens of shells (weight 750g); apparently consumption waste	
SMQ 44	‘Bin’ structure	None	None		
SB 42.2	Small feature	None	Shells	Concentration of <i>Strombus/Conus</i> shells or their fragments (shell midden) tentatively considered as a temporary workshop in the vicinity of SB 42.1	
PSD 4	Small feature	None	None		
SB 62	Small feature	None	None		
SM 20A	Small feature	None	None		
SB 43	Elongated structure	None	None		
SB 63	Elongated structure	None	None		
SB 67	Elongated structure	None	None		
SB 68	Elongated structure	None	None		
SM 22	Elongated structure	None	None		
SMQ 36	Elongated structure	None	None		
SMQ 37	Elongated structure	None	None		

FIGURE 9. Excavated structures and their contents (human skeletal material and finds), including main chronological indicators.

of adornments outside the burial chamber as well, thus making them beyond the looters’ reach.

Practice of strewing beads on a grave

Evidence for the rare practice of strewing beads over a grave can be counted among the most important observations made by the team. It concerns three tumuli: SMQ 30, SB 100, and SB 72 (11% of the mounds excavated by the KPAM) and for the first two at least, the distribution of adornments is unquestioned and on a mass scale, making it reasonable to assume that the pattern was not accidental.

In SMQ 30, adornments were found scattered both in the sandy fill of the burial chamber, including the

robbers’ pit (260 items), and outside it, in the drifted sand interspersed between the stones of the mantle, right down to the bottom of the structure (340 items). Some concentrations of beads were found in ‘pockets’ between the stones of the outer face of the burial chamber wall (Reiche 2013: 532). Similarly, in SB 100 more beads were found outside the burial chamber than inside (223 and 170 pieces respectively). Most of these were scattered at different levels of the fill throughout the ‘void ring’ (Rutkowski 2015: 519). The context leaves no doubt that they were not accidentally lost there (for instance, as a result of plundering the burial), but were introduced intentionally, when sand filled the spaces between the stones of the mantle. Moreover, the spatial distribution of beads within the ‘void ring’ proved to be very uneven and

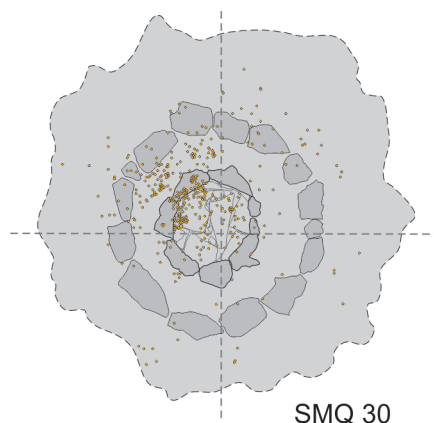
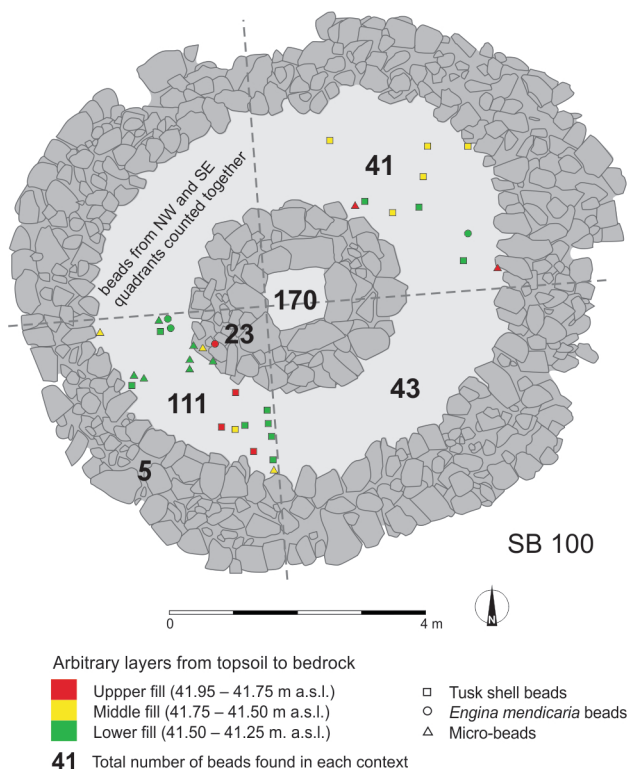


FIGURE 10. *Distribution of beads in tumulus SB 100: plan with location of beads in different parts of the tumulus; coloured shapes stand for specimens found in situ (left); distribution of adornments in tumulus SMQ 30 (right) (data collecting: M. Makowski, A. Reiche; editing: M. Momot, Ł. Rutkowski).*

depended on the position within the fill and the quadrant from which they were recovered. The same was observed for SMQ 30. This quantitative disproportion between the quadrants could reflect a ritual performed during the burial ceremony with beads being strewn over the grave structure by mourners standing on one particular side of the tomb facing it. As a result, the largest number of beads landed in the quadrant situated just in front of the 'sowers'. In the case of SMQ 30, the bead strewing must have been done from the north-west, in SB 100 from the south-west (Fig. 10).

The third tomb with beads found outside the chamber (but on a much smaller scale) was tumulus SB 72. Of the twenty-five adornments found in this tumulus, eleven were found outside the chamber, largely among the stones in the upper part of the mantle; their displacement there could have been the effect of careless plundering of the grave, hence the evidence for burial practices is not conclusive despite being promising. It is worth adding that during the excavation only two diagonally opposite quadrants were dismantled from SB 72, while the two above-mentioned tombs were excavated in their totality.

The practice itself has not been attested archaeologically, although it recalls funerary rituals

known from the ancient Greek and Roman world and still performed in some form by mourners today, such as strewing flowers over the graves of the departed or sprinkling a little soil over the coffin, common in the Christian tradition.

The practice under discussion has important implications for the chronology of the cemetery. What is significant is that from a structural point of view these three tombs represent three different types in three different areas of the cemetery (SB 100 and SMQ 30 are over 7.50 km apart), indicating that the practice was not restricted to any specific type or micro-region. The practice may therefore be an element of the funerary ritual taking place throughout the cemetery, presumably within the frame of a single community, or at least, of a common tradition. Assuming it was not a practice with currency over thousands of years, it could be taken as indirect proof of the close chronologies of the three tombs and consequently, the radiocarbon dates obtained for SB 100 would confirm the attribution of SMQ 30 (and perhaps SB 72) to the Bronze Age, more specifically, the third millennium BC (see below). Yielding four categories of adornments identical with those from SMQ 30, and displaying similar funerary practices, SB 100

provides a reliable chronological point of reference in the relative dating of the former and related tumuli. It follows too, that different types of tombs were coexistent in the cemetery in a similar period.

Chronology

Apart from a few testimonies associating tumuli with the Ubaid period, such as shell adornments made from *Spondylus*, *Strombus/Conus*, *Pteriidae* spp., along with perforated pearls from SMQ 30, which can also be found on prehistoric settlement sites in the vicinity (H3 and Bahrā³ 1), or the recut pottery disc from SB 42.1 and unique finds from SMQ 49.³ There are strong indications that point to a date that is later than the Neolithic, more specifically, the **Bronze Age**.

There is a series of graves that, apart from the shell adornments, yielded semi-precious stone beads. These beads are commonly made of carnelian (agate, SB 65; lapis lazuli, SMQ 30) and are dated rather broadly, but with a tendency towards the Bronze Age as the peak popularity period. The popularity in circulation of these goods may have even intensified during the second half of the third millennium BC in Mesopotamia. Beads were popular in the Royal tombs at Ur, whereas the exchange

trade with the land of Meluhha (Malūhā), believed to be the source of carnelian during the Akkadian and Ur III periods as well as in Old Babylonian times, is well attested in texts (Leemans 1960: 8; Potts 1997: 266). Similarly, circulation of lapis lazuli also peaked in the third millennium BC (Casanova 1999: 197). With reference to shell ornaments, another important observation is that the tusk shells common in tumuli and the slightly less frequent *Engina mendicaria* shells, are either absent or sporadic from the Ubaid settlements in al-Šabiyyah.

Metal finds, which should also be linked to the Bronze Age, were found in five of the graves (SMQ 30, SMQ 32, SMQ 35A, SB 60, SB 65); parallels for the bronze arrowhead from SB 60 are even later in date (Late Bronze or Early Iron Age) (Rutkowski 2013: 500). Finally, the two tumuli of Type 7, which have been dated fairly securely, SB 100 by radiocarbon dating and SB 102 by parallels with a pot, point to horizons in the mid-third millennium BC and early second millennium BC.

SB 100 is the only tomb from which samples were taken for ¹⁴C analysis. Samples were taken from three different tusk shells, all of which came from a secure context, a sealed deposit in the south-western quadrant of the ‘void ring’. The dates produced by the Poznań Radiocarbon Laboratory were calibrated using OxCal v4.1.7 Bronk Ramsey (2010) software⁵ and r:5, using the atmospheric model from Reimer et al. (2009). One sample (Tag 3) gave an earlier date (late fourth millennium BC); the other two, however, corroborated a date in the mid-third millennium BC (see Fig. 11). The difference can be explained by a time lag between the expiry of the mollusc

³ For this tumulus we observed evidence dating back to as early as the Ubaid period: a lithic barbed and tanged arrowhead belonging to the Arabian Bifacial Tradition which is typical of the fifth and fourth millennia BC (Potts 1997: 52) and probably also a set of animal bone artefacts, some of which find parallels in assemblages of worked bones from H3 (Carter & Crawford 2010: 80).

Sample	R_Date	68.2% probability	95.4% probability
SB 100-Tag 3	5115 ± 35 BP	3343BC (68.2%) 3125BC	3462BC (95.4%) 3016BC
SB 100-Tag 7	4540 ± 35 BP	2598BC (68.2%) 2384BC	2728BC (95.4%) 2268BC
SB 100-Tag 8	4610 ± 35 BP	2683BC (68.2%) 2465BC	2834BC (95.4%) 2399BC

OxCal v4.1.7 Bronk Ramsey (2010); r:5 Marine data from Reimer et al (2009);

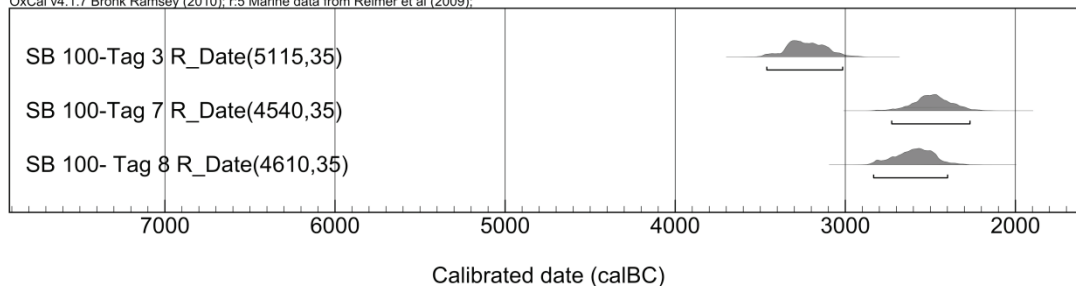


FIGURE 11. Calibrated ¹⁴C dates for samples from SB 100 (Poznań Radiocarbon Laboratory).

and the exploitation of its shell. It is worth mentioning that a series of samples taken from the settlement site Bahrā³ 1 produced a calibrated ¹⁴C date in the second half of the sixth millennium BC.

Without pottery finds the dating of the tombs was considerably restricted. Thus, the jar from SB 102 should be considered an important chronological criterion despite the limitations deriving from its plainness, incomplete character and lack of comparative ceramic material in the region. The vessel (Fig. 8/c) appears to find parallels in Bahrain in the Early Dilmun period, for example, with ‘portable jars’ of Type S10 at Sār (Carter 2005: 243), a jar from Tumulus D1 (Porter & Boutin 2012: 43–44, figs 7–8); and in Lower Mesopotamia, from Tell Yelkhi, where similar vessels were found in layers dated to the Isin-Larsa period (Gabutti 2002–2003: pl. 90/5–6). All the above-mentioned parallels indicate that the pot tends to be dated to the early second millennium BC (2000–1800 BC).⁴

Moreover, regarding tumuli of Type 7, it is interesting to note that burial mounds with an outer ring wall are also known from Bahrain. Bahraini ‘ring mounds’, dated to the Early Dilmun period (2200–1750 BC), are considered as tombs for elite members of society. They are traditionally divided into ‘Early Type’ and ‘Late Type’ (Højlund et al. 2008: 144–152; Laursen 2008: 156–157). Tombs with an outer ring from al-Šabiyyah, although different in many details, appear to show more structural similarities with the Bahraini ‘Early Type’ mounds (c.2200–2050 BC).

In conclusion, save for singular evidence of an Ubaid date (SMQ 49, SB 42.1) the argument is strongly in favour of an Early and Middle Bronze date for the tumuli. And as the case of SB 60 shows, some of the documented tombs may have been later — or at least reused later.⁵

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⁴ According to Flemming Højlund (personal communication), however, the jar may be of a much later date. He proposes parallels in Qal’at al-Bahrayn period IVb, i.e. c.800 BC.

⁵ Sporadic finds of Hellenistic date made by the Kuwaiti team excavating tumulus SR C allow one to assume that the cemetery may have still been functioning, even if in limited form, into the pre-Islamic period (al-Duweish 2009: 63–64).

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