



UNIVERSITY
OF WARSAW | Polish Centre of
Mediterranean Archaeology



Title: Failaka Archaeological Research Project. Preliminary results after the first season of excavation at the KharaiB El-Desht site in 2013.

Author(s) : *Agnieszka Pieńkowska with appendices by Marta Mierzejewska and Magdalena Nowakowska*

Journal: *Polish Archaeology in the Mediterranean* 24/1 (Research)

Year: 2015

Pages: 560 - 589

ISSN 1234–5415 (Print), ISSN 2083–537X (Online)

Publisher: Polish Centre of Mediterranean Archaeology, University of Warsaw (PCMA UW),
Wydawnictwa Uniwersytetu Warszawskiego (WUW)

www.pcma.uw.edu.pl www.wuw.edu.pl

Abstract: The site of KharaiB el-Desht on Failaka Island, Kuwait, was explored by an archaeological Kuwaiti–Polish team for the first time in 2013. The project included a survey and underwater archaeological research. Preliminary results indicate a dating of the site to the late Islamic period. Pottery collected from the survey of the site and from the excavations has been studied in a separate appendix to this report. As for the underwater and waterfront archaeology project, the main objective was to locate and describe seashore archaeological sites, provide documentary evidence and manage proper preservation of the discoveries in order to further educational opportunities.

Keywords: Gulf archaeology, Kuwait, Failaka, late Islamic period

POLISH ARCHAEOLOGY IN THE MEDITERRANEAN (PAM)
Annual of the Polish Centre of Mediterranean Archaeology, University of Warsaw

Editorial Board

Piotr Bieliński
Krzysztof M. Ciałowicz
Wiktor Andrzej Daszewski
Michał Gawlikowski
Włodzimierz Godlewski
Karol Myśliwiec
Tomasz Waliszewski

International Advisory Board

Jean Charles Balty
Charles Bonnet
Giorgio Buccellati
Stan Hendrickx
Johanna Holaubek

Peer-reviewed by members of the *PAM* committee of independent reviewers.
<http://www.pcma.uw.edu.pl/en/pam-journal/pam-independent-reviewers/>

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

POLISH ARCHAEOLOGY
IN THE MEDITERRANEAN

XXIV/1

RESEARCH



ABBREVIATIONS

<i>AA</i>	<i>Archäologischer Anzeiger; Jahrbuch des Deutschen Archäologischen Instituts</i> (Berlin)
<i>ANM</i>	<i>Archéologie du Nil Moyen</i> (Lille)
<i>ASAE</i>	<i>Annales du Service des Antiquités de l'Égypte</i> (Cairo)
<i>AV</i>	<i>Archäologische Veröffentlichungen, Deutsches Archäologisches Institut, Abteilung Kairo</i> (Berlin–Mainz am Rhein)
<i>BAAL</i>	<i>Bulletin d'archéologie et d'architecture libanaises</i> (Beirut)
<i>BAH</i>	<i>Bibliothèque archéologique et historique</i> (Paris)
<i>BAR IS</i>	<i>British Archaeology Reports International Series</i> (Oxford)
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research</i> (Ann Arbor, MI)
<i>BCH</i>	<i>Bulletin de correspondance hellénique</i> (Paris)
<i>BdE</i>	<i>Bibliothèque d'étude</i> (Cairo)
<i>BIFAO</i>	<i>Bulletin de l'Institut français d'archéologie orientale</i> (Cairo)
<i>BSAA</i>	<i>Bulletin de la Société d'archéologie d'Alexandrie</i> (Cairo)
<i>BSFE</i>	<i>Bulletin de la Société française d'égyptologie</i> (Paris)
<i>CCE</i>	<i>Cahiers de la céramique égyptienne</i> (Cairo)
<i>EtTrav</i>	<i>Études et travaux. Travaux du Centre d'archéologie méditerranéenne de l'Académie des sciences polonaise</i> (Warsaw)
<i>FIFAO</i>	<i>Fouilles de l'Institut français d'archéologie orientale</i> (Cairo)
<i>GAMAR</i>	<i>Gdańsk Archaeological Museum African Reports</i> (Gdańsk)
<i>GM</i>	<i>Göttinger Miscellen</i> (Göttingen)
<i>IAMS</i>	<i>Institute of Archaeo-Metallurgical Studies</i> (London)
<i>JARCE</i>	<i>Journal of the American Research Center in Egypt</i> (Boston–Princeton–New York–Cairo)
<i>JEA</i>	<i>Journal of Egyptian Archaeology</i> (London)
<i>JGS</i>	<i>Journal of Glass Studies</i> (Corning, NY)
<i>JJP</i>	<i>Journal of Juristic Papyrology</i> (Warsaw)
<i>JRS</i>	<i>Journal of Roman Studies</i> (London)
<i>MDAIK</i>	<i>Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo</i> (Wiesbaden)
<i>OIP</i>	<i>Oriental Institute Publications</i> (Chicago)
<i>OLA</i>	<i>Orientalia lovaniensia analecta</i> (Louvain)
<i>PAM</i>	<i>Polish Archaeology in the Mediterranean</i> (Warsaw)
<i>PSAS</i>	<i>Proceedings of the Seminar for Arabian Studies</i> (London)
<i>SAAC</i>	<i>Studies in Ancient Art and Civilisation</i> (Kraków)
<i>SAK</i>	<i>Studien zur altägyptischen Kultur</i> (Hamburg)
<i>SAOC</i>	<i>Studies in Ancient Oriental Civilization</i> (Chicago)
<i>WVDOG</i>	<i>Wissenschaftliche Veröffentlichungen der deutschen Orient-Gesellschaft</i> (Berlin–Leipzig)

FAILAKA ARCHAEOLOGICAL RESEARCH PROJECT. PRELIMINARY RESULTS AFTER THE FIRST SEASON OF EXCAVATION AT THE KHARAIB EL-DESHT SITE IN 2013

Agnieszka Pieńkowska¹

with appendices by Marta Mierzejewska² and Magdalena Nowakowska³

^{1,2} Polish Centre of Mediterranean Archaeology, University of Warsaw,

³ Institute of Archaeology, University of Warsaw

Abstract: The site of Kharai b el-Desht on Failaka Island, Kuwait, was explored by an archaeological Kuwaiti–Polish team for the first time in 2013. The project included a survey and underwater archaeological research. Preliminary results indicate a dating of the site to the late Islamic period. Pottery collected from the survey of the site and from the excavations has been studied in a separate appendix to this report. As for the underwater and waterfront archaeology project, the main objective was to locate and describe seashore archaeological sites, provide documentary evidence and manage proper preservation of the discoveries in order to further educational opportunities.

Keywords: Gulf archaeology, Kuwait, Failaka, late Islamic period

The site of Kharai b el-Desht on the north-western coast of Failaka, the largest island of Kuwait, was identified as an Islamic-period settlement during a survey in 2012 (see Pawlicki 2015, in this volume) [*Fig. 1*]. Excavation started in 2013 as a subproject of the Kuwaiti–Polish Archaeological Mission directed by Prof. Piotr Bieliński from the Polish Centre of Mediterranean Archaeology, University of Warsaw.

Work this season included survey and excavation, as well as underwater archaeological investigations on the coast around Kharai b el-Desht, coordinated

by Magdalena Nowakowska (for a report on this work, see appendix below).

The Desht settlement was seldom mentioned in the written sources. Travellers and archaeologists visiting Failaka focused mainly on settlements in the vicinity of the site, namely Quraniya and Sa'aidah, as well as on the famous Al Khidr shrine (Benediková 2010: 15; Rajab 1999: 10–11), which was a pilgrimage destination even as late as the 1960s (Bibby 1969: 195–212). The information about Kharai b el-Desht is limited to one legend about the presence of the Portuguese, who were forced to abandon this

part of the island infested by rats sent by an *auliya* (saint). This legend was recounted by J.G. Lorimer (1908: 514–515) in the beginning of the 20th century, as well as somewhat later by H.R.P. Dickson (1968: 57) in the 1950s.

Remnants of the settlement were still visible in the 1960s. An aerial photograph from 1960 shows the eastern part of the site together with a cluster of houses, including a U-shaped and two rectangular structures [*Fig. 2*]. An Italian survey team registered the site in 1976 (Patitucci and Uggeri 1984). The publication of the results, however, contained little beyond a few photographs of the settlement and this part of the island. The information on Desht was limited to a laconic description: “The ruins of a deserted village were

discovered on the North coast of the island. They are recognizable from some small rise overlooking a small cove. The part on the coast was destroyed by later quarries. Traces of buildings are spread over a rather large area” (Patitucci and Uggeri 1984: 419). Photographs showed the site from the southwest (Patitucci and Uggeri 1984: Pl. XXXV:a). On one of the photographs [*Fig. 3*] two oval spots can be discerned, slightly elevated above the ground, and further to the south, there are remains of several houses. Moreover, as this photograph was taken during ebb tide, it also shows a stone structure reaching far into the sea.

The remnants of structures seen in the 1960 photographs and on images taken during the survey in the 1970s have

Team

Dates of work: 27 March–6 May 2013

General Project Director: Prof. Piotr Bieliński (PCMA UW)

Field directors: Dr. Agnieszka Pieńkowska, archaeologist (PCMA UW), Dr. Hamed Al-Mutairi (Excavation and Surveying Sector, Kuwaiti National Council for Culture, Arts and Letters)

Archaeologists and archaeological team support: Mustafa Al-Ansari, Talal Al-Saie (all Department of Antiquities and Museums of State of Kuwait), Joanna Ciesielska (Institute of Archaeology, University of Warsaw), Dr. Karol Juchniewicz (independent), Jakub Kaniszewski (independent); *underwater archeologists:* Magdalena Nowakowska, Szymon Lenarczyk (both Institute of Archaeology, University of Warsaw)

Topographer: Jolanta Juchniewicz, Antoni Mrozowski (both independent), Piotr Zakrzewski (Institute of Archaeology, University of Warsaw)

Archaeologist/ceramologist: Marta Mierzejewska (PCMA UW)

Photographer: Adam Oleksiak (freelance)

Student-trainees: Rafał Bienkowski, Jakub Brochocki, Katarzyna Cieślak, Karol Ochnio, Katarzyna Pawłowska (Institute of Archaeology, University of Warsaw)

Acknowledgments

We would like to express our gratitude to the Kuwaiti National Council for Culture, Arts and Letters, especially Mr. Shehab A.H. Shehab for his constant support. We are grateful to all the staff of the Department of Antiquities and Museums of the State of Kuwait, particularly Dr. Sultan Al-Duweish, Mr. Talal Al-Saie and Dr. Hamed Al-Mutairi, for their active participation.

All members of the Polish spring team greatly appreciate the constant support and friendly advice of the Director of the Kuwaiti–Polish Mission, Prof. Piotr Bieliński.

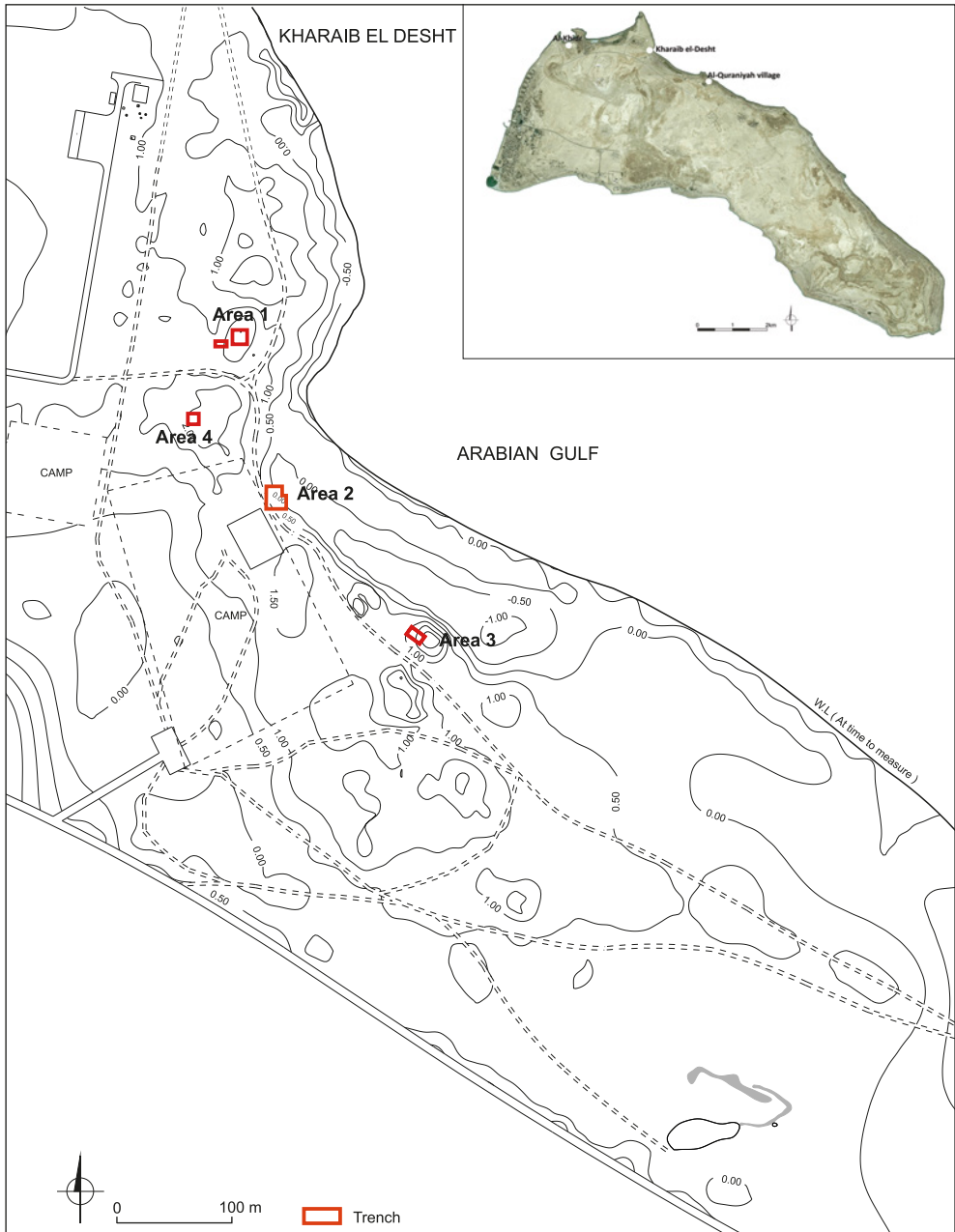
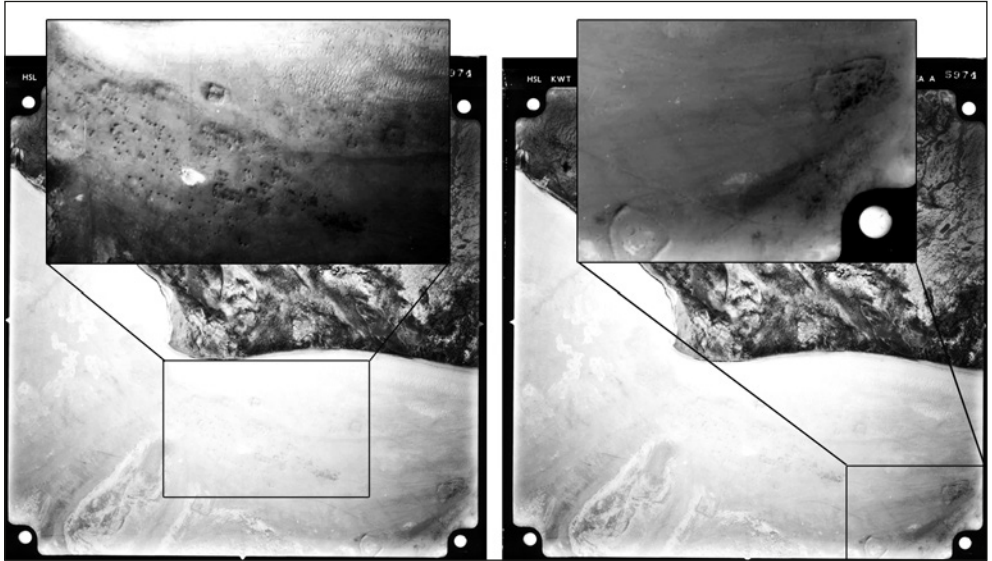


Fig. 1. Topographic map of KharaiB el-Desht; inset, map showing location of KharaiB el-Desht and nearby sites mentioned in the text (Drawing and digitizing R. Bienkowski, J. Juchniewicz, A. Mrozowski, P. Zakrzewski; map digitizing I. Nazaruk, M. Momot)



*Fig. 2. Aerial photos from 1960 showing remains of the Kharaiib el-Desht village
(Courtesy of Shehab A.H. Shehab)*



*Fig. 3. Kharaiib el-Desht, view from the west
(After Patitucci and Uggeri 1984: Pl. XXXV:a)*

since suffered considerable damage. First, a military camp operated on the site until the 1990s, and later the area was used as a landfill. Additional damages were caused by the presence of a few well-used modern roads crossing the site.

The presence of Islamic settlement at Kharaiib el-Desht was confirmed by a field survey conducted by KPAM in 2012 (Pawlicki 2012). However, the survey team only delineated the approximate limits of the site (see Pawlicki 2015: 556–558, and Fig. 1 on page 548 in this volume). Therefore, one of the first steps taken in the 2013 season was to conduct a thorough field walking survey and to prepare a detailed topographic map of the site, in order to determine the extent of the settlement. As a result, Areas 1–4 were distinguished and excavated.

The northwestern border of the site is constituted by two small elevations, visible in the photograph of 1976. The first of these, designated as Area 1, is an elevation measuring 40 m by 60 m. Several clay ovens filled with ashes could be seen here on the surface even before cleaning. The other elevation, designated as Area 4, featured a concentration of 14 small mounds. A strip of land, Area 2, stretching for about 150 m to the southeast of Area 1, contained surface remains of stone structures. Further to the east lies part of the settlement clear in the 1960 aerial photographs, now designated as Area 3. It features outlines of a few rectangular structures and a concentration of smaller ones. The spot best visible today (Area 3) is an elevation approximately 3.80 m high, with an outline of a structure seen in the photograph. Other structures in its immediate vicinity, located to the south, and evidenced on the 1960 aerial photographs, are now

preserved only as small, irregular mounds. The furthest located structure, observed both in the aerial photographs and now, is a triangular pen, located approximately 450 m to the southeast of the settlement. The pen could have been used by the villagers, but it was situated beyond the limits of the site [Fig. 1].

To recapitulate, the field survey located traces of settlement scattered along the coast of Kharaiib el-Desht, concentrated in a strip of land approximately 80–100 m wide and approximately 450 m long. Trenches were opened in each of the discerned occupational concentrations.

AREA 1

A trench (10 m by 10 m) was opened in the central part of the elevation in Area 1 and a test trench (10 m by 2.50 m), oriented east–west, was cut through the western part [Fig. 4]. In the northern part of Area 1 (sq. 21, 29), as well as its central (sq. 43) and southern (sq. 44) parts, the surface of the elevation was only cleaned. Both in the trench, as in neighboring squares (sq. 37, 44), a concentration of ovens and hearths was uncovered. The entire central part of the elevation was scattered with either common hearths, or with carefully executed clay ovens, driven into the ground approximately 0.40–0.53 m deep. Oven diameters were 0.30 m on average [Fig. 5].

Middle-sized stones formed regular alignments, approximately 0.15–0.20 m wide, in the central part of the elevation. A probe beside one such line in the southeastern corner of the trench (sq. 37) demonstrated that both the lines of stones and the entire exposed usage layer lay directly on bedrock. The limits of the bedrock were also well visible in squares 36 and 44–43.

Equally modest were the remains in the northern part of the mound. Cleaning of the surface revealed a corner of a structure, 7.50 m by 2.50 m, distinguished by a darker color even though only a trace of the wall was preserved. Given its width,

approximately 0.40 m, it is valid to assume that the remnants represented a more solid structure than the one visible in the central part of the elevation, consisting of nothing but narrow lines of stones.

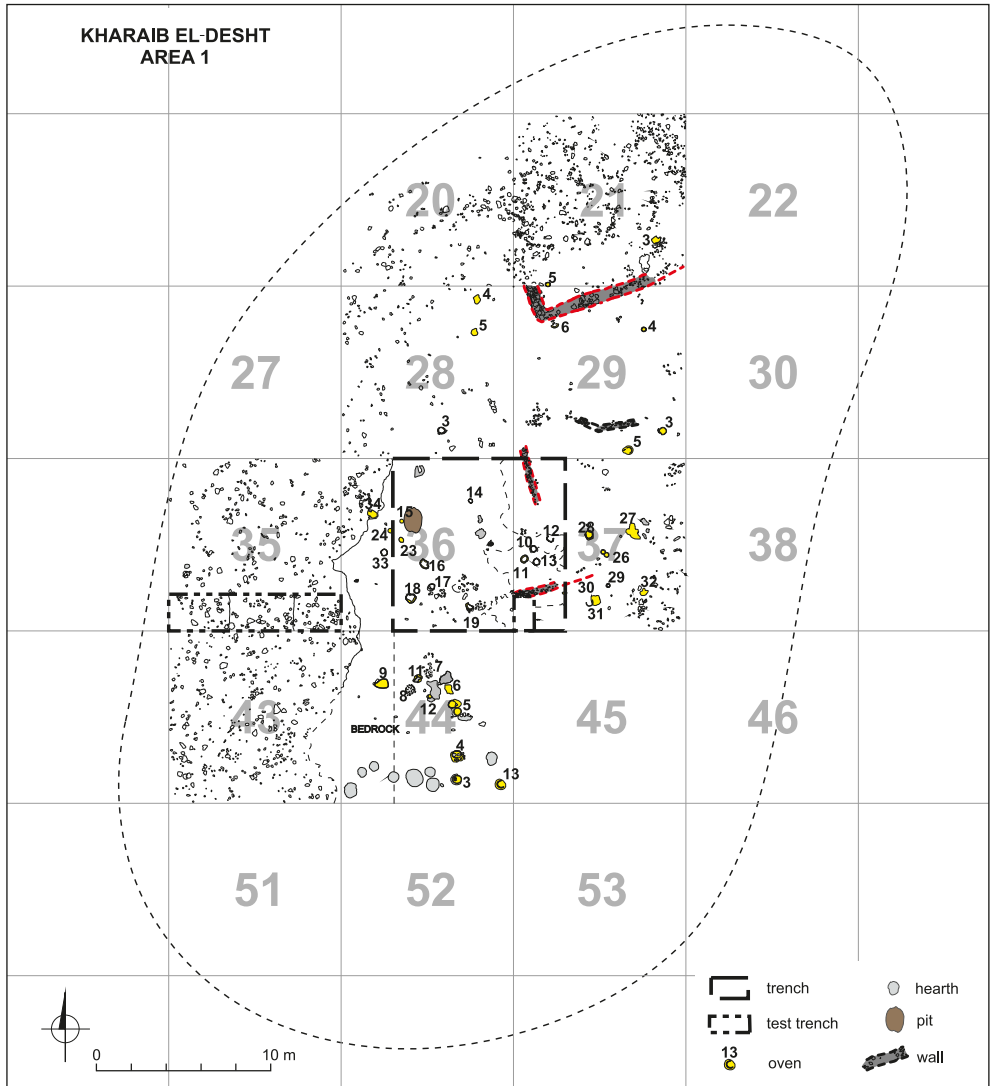


Fig. 4. Distribution of remains mapped in Area 1
(Drawing J. Ciesielska, K. Pawłowska; digitizing R. Bienkowski, J. Juchniewicz)

The traces of settlement in Area 1 were preserved in one usage layer, situated directly on bedrock. Judging by the presence of several dozens of hearths and stoves, the central part of the elevation

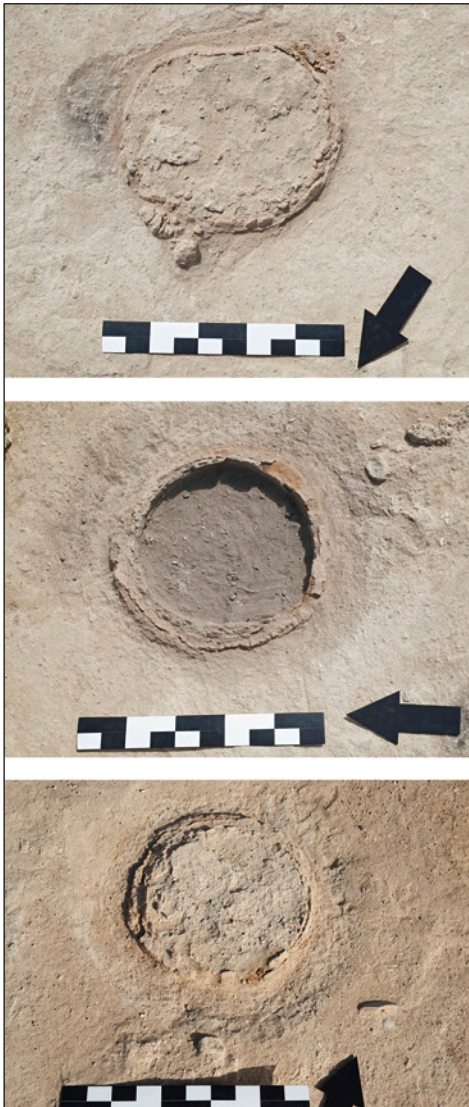


Fig. 5. Ovens from Area 1
(Photos A. Oleksiak)

served an economic function. Narrow lines of stones represented rather light structures, possibly some kind of a fence sheltering those using the hearths from the wind.

Larger structures of residential function, if at all present in this part of the site, could have been placed on the slope of the elevation. A trace of a building corner observed on the northern side (sq. 29, 21) could belong to a residential quarter. However, the remnants on the northern side were heavily eroded, possibly because of the specificity of the building material used for these structures or at least their foundations. The building material in question could be lime mortar, which in contact with water becomes very plastic. Layers of this kind of white material are visible in the trench wall section in square 35.

AREA 4

To the southwest of Area 1 and in its immediate vicinity was an elevated patch of land, measuring approximately 110 m by 80 m (for an image of the area in a 1976 aerial photograph, see Fig. 2). Fourteen

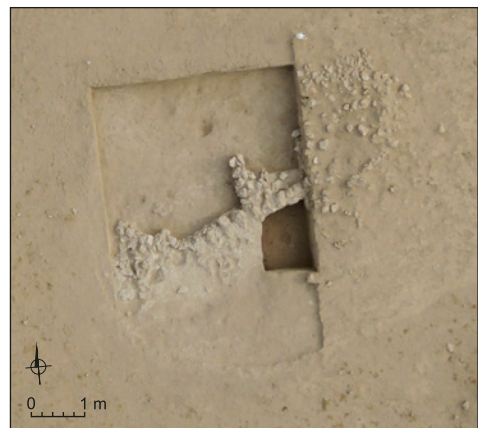


Fig. 6. Wall uncovered in Area 4
(Photo H. Al-Mutairi)

small stone mounds, measuring 3 m by 5 m, and 0.20–0.50 m high, were located there.

A wall approximately 3 m long and 0.25 m wide was uncovered in a trench cutting through one of these mounds [Fig. 6]. The wall was preserved to a height of 0.30 m and consisted of one row of bricks bonded in mortar. The remnants on the western side suggested the presence of one or two lateral walls. The structure was founded on a 10-cm-deep sand layer covering bedrock.

The state of preservation of the architecture, as well as absence of finds apart from a few undiagnostic potsherds, prevented any interpretation of function

of the excavated structure. However, both its size and the narrow width of its walls suggested that it was a light shelter structure, possibly roofed on one side.

AREA 2

Sections of at least two structures, spread over at least 150 m, were uncovered in Area 2, some 120 m to the southwest of Area 1. A fragment of a house was excavated, measuring 10 m in width and 9 m in preserved length [Fig. 7]. It was composed of two rooms: a smaller one, approximately 2.50 m by 6.50 m, and a larger one, measuring approximately 5.50 m in width and 6 m in preserved length. The walls of the structure were made of middle-sized,



Fig. 7. Remains of a house uncovered in Area 2
(Drawing and digitizing R. Bienkowski, J. Brochocki, K. Juchniewicz)

unworked stones, bonded in a lime and clay mortar. The walls were preserved up to 0.10–0.15 m high, that is, one or sometimes two rows of stones. Judging by the best preserved fragment, the walls were approximately 0.40 m wide. No finds were attested in the rooms. A large pit was explored, measuring 1.75 m in diameter and cutting 1.50 m deep into the floor of the larger room. The pit was filled with loose sand. On the southern side of the structure there was a small clay stove of the same type as those found in Area 1. Several stoves of this kind were also located on the surface of a modern road intersecting the site.

The state of preservation of this house did not allow an assessment of its original size. Traces of more rooms were evident on its southwestern side, but on the east it was impossible to tell due to erosion whether the stones just beside the wall represented more rooms or simply tumble.

Stone supports reinforcing wooden poles were uncovered in the larger room. They were driven into a layer of sand

covering the usage level connected with the uncovered walls of the structure. It is possible that when the house was abandoned and partly destroyed, the preserved remnants of the walls were used for a light seasonal structure, like a hovel.

AREA 3

Remains of a structure in this area could be seen both in aerial photographs taken in 1960 [see *Fig. 2*] and in kite images from the 2013 field survey [*Fig. 8*]. One can see the outline of a rectangular structure, measuring approximately 18 m by 22 m, with a distinctive 12-m-wide terrace on its northern side.

A test trench (12 m by 2.50 m) opened on the western slope of the elevation revealed the corner of a stone structure. A fragment of a wall with a buttress appeared in the eastern part of the probe [*Fig. 9*]. It proved to stand 1.48 m high and was 1.20 m wide, extending 0.70 m from the wall face. Built of rough flat stones, 20 cm to 60 cm long, and bonded



*Fig. 8. Rectangular structure in Area 3
(Photo H. Al-Mutairi)*

in clay mortar, it was the most solid and well executed fragment of the structure. The wall fragment formed a corner with a wall running across the trench, consisting of three rows of stones and measuring 1.10 m in width. Both walls were unearthened to the height of 0.60 m.

Two kinds of stones were used in these structures. The wall with buttress, as well

as the one forming a corner with it, were constructed of stone with a large amount of shell inclusions. This kind of stone is typical of structures on Failaka. Stone without shell inclusions was used for building the buttress, and a part of a structure from which the stones have fallen off, and which is now visible in the form of rubble in the northern profile.

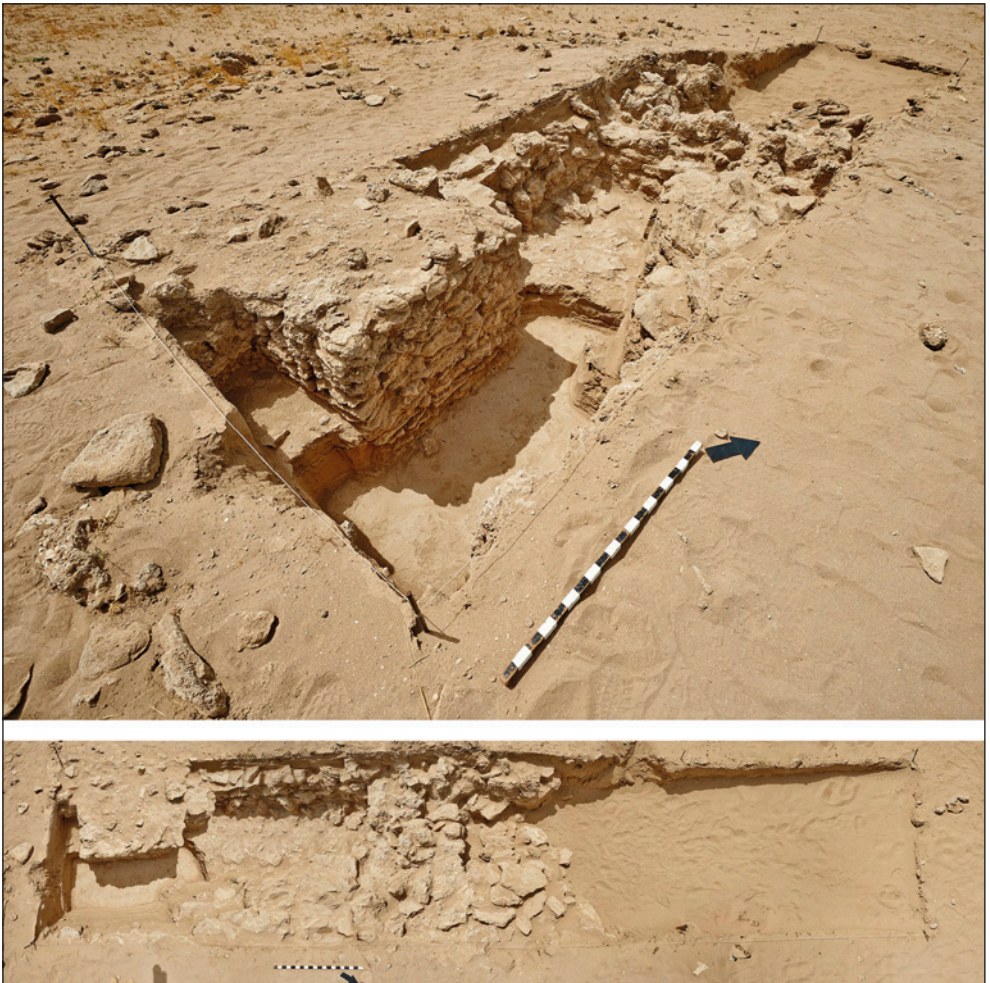


Fig. 9. Two different-angled bird's-eye views of the wall with buttress in Area 3 (Photos A. Oleksiak)

This small fragment of a structure does not support a broader interpretation. The width of the walls and the presence of the buttress indicate that the building had a special function. At the present stage, it is possible to assume that this structure was connected with the presence of the Portuguese on the island. It may have been either some kind of a small fort or a watchtower, but it is equally probable that it served a different function altogether. Both Lorimer (1908: 515) and Dickson (1968: 55–56) claimed that Failaka was renowned for its abundance of tombs and shrines, and they mentioned the presence of 60–70 graves of *auliyah* (saints), which enriched substantially the cultural heritage of the island. One such shrine was located at the nearby site of Al Khidr. Therefore, it is not unlikely that the structure from Kharaiib el-Desht fulfilled a similar or even the same function.

Fragmentarily preserved remains in the form of small, low mounds, with pottery scattered on their surfaces were found in the immediate vicinity of the stone structure, on its southern and western sides. In the 1960 aerial photographs, this fragment of the settlement was composed of a few noticeably larger structures and smaller, concentrically aligned residential buildings. The photographs also show some dots, arranged in regular lines, which most probably were stumps of palm trees growing in the village (Rajab 1999: 124).

The collected pottery provides only a broad temporal frame for the functioning of the site from the 17th to the end of the 18th/beginning of the 19th century (see below, appendix 1 by Marta Mierzejewska). It is presently impossible to say

whether the different structures excavated at the site in 2013 were occupied concurrently or in different periods.

As far as the relative chronology of the site is concerned, two viable observations can be made. On the one hand, based on the state of preservation of particular settlement remains seen in the aerial photographs of 1960 and on several photos from the 1976 survey, one may suggest that the structures in Areas 1 and 4, which were equally poorly preserved in 1976 as they are now, are of a slightly earlier date (or at least, were earlier abandoned) than the residential remnants in Area 2, which seem to have been in a much better condition in 1976. Given the fact that the structures in these three areas are of a similar or even the same building material and have been exposed to the same atmospheric conditions, it is highly unlikely that some of them would have eroded faster than others. On the other hand, the fact that the 1976 survey report fails to mention any larger structure suggests that the stone building partly uncovered by KPAM in Area 3 was not visible at the time of the survey, as otherwise it would not have escaped the attention of the Italian archaeologists. Therefore, it is possibly older than the remnants in the western part of the site.

At the present stage of research there also remains the unanswered question of the chronological relation between the site and the stone structures, the so-called fish traps, located along the coast (see below, appendix 2 by Magdalena Nowakowska). However, the location of the settlement, as well as many finds of net weights (mainly in Area 1) leave very little room for doubt that at least part of the village was engaged in fishery.

APPENDIX 1

KHARAIB EL-DESHT 2013: POTTERY. PRELIMINARY REPORT

Marta Mierzejewska

Polish Centre of Mediterranean Archaeology, University of Warsaw

During the first archaeological season at Kharai b el-Desht there were collected altogether 4920 sherds in four designated areas (Areas 1–4 and in a strip of land along a modern road between Area 2 and Area 3 [see above, *Fig. 1*]). The whole collected material was counted, described, and recorded in a data base. About 75% of the collected pottery, however, was found

on the surface, thus constituting a secondary, mixed deposit. Only a small number was found directly in the explored layers. Therefore, at this stage, it was impossible to establish clear stratigraphic and chronological sequences of the pottery on the site. Nonetheless, it was possible to distinguish the following pottery groups that indicate a preliminary time frame of the site.

GLAZED WARES

MANGANESE PURPLE UNDERGLAZED-PAINTED WARE MGPAINT.2 (Kennet 2004: 52)

Pottery characterized by a quite soft, porous and well-fired fabric of pale yellow or buff color, sometimes with white inclusions. The lead glaze is clear or with a tint of light greenish or yellowish, sometimes with patches of inglaze green or blue. In most cases the glaze is crude and degraded; below it there is a purple-black decoration. The most common decorative pattern at Kharai b el-Desht is a tangled looped floral motif or simple rosettes, situated centrally on the inner side of the vessel [*Fig. 10:1, 3, 6*]. Less often the vessels are decorated with wide vertical or horizontal lines [*Fig. 10:2*], located usually on the interior, although in some cases also on the exterior. There was also one example [*Fig. 10:4*] of a decorative grid filled with dots. The vessel forms were limited to open

bowls with ring bases and slightly flaring rims. There were also few examples of small bowls with nearly vertical walls [*Fig. 10:5*]. This pottery group was among the most commonly attested vessels at Kharai b el-Desht.

Manganese Purple Underglazed-Painted Ware has a long history of usage (11th–20th century), and its earliest examples (MGPAINT.1) were noted by Derek Kennet at Kush, in layers dated to the 11th–13th century (Kennet 2004: 52). Two variants of bowls with a centrally placed looped floral motif and with a grid motif, which are most common at Kharai b el-Desht, were also found at sites in Bahrain (Carter and Naranjo-Santana 2011: 54, *Fig. 46:8*; Carter, Morley, and Morse 2011: 91, *Fig. 39:2–3*) and the United Arab Emirates (Power and Sheehan 2012: 295, *Fig. 4*; Carter 2003: 62). Robert Carter dates their peak of popularity to the 18th

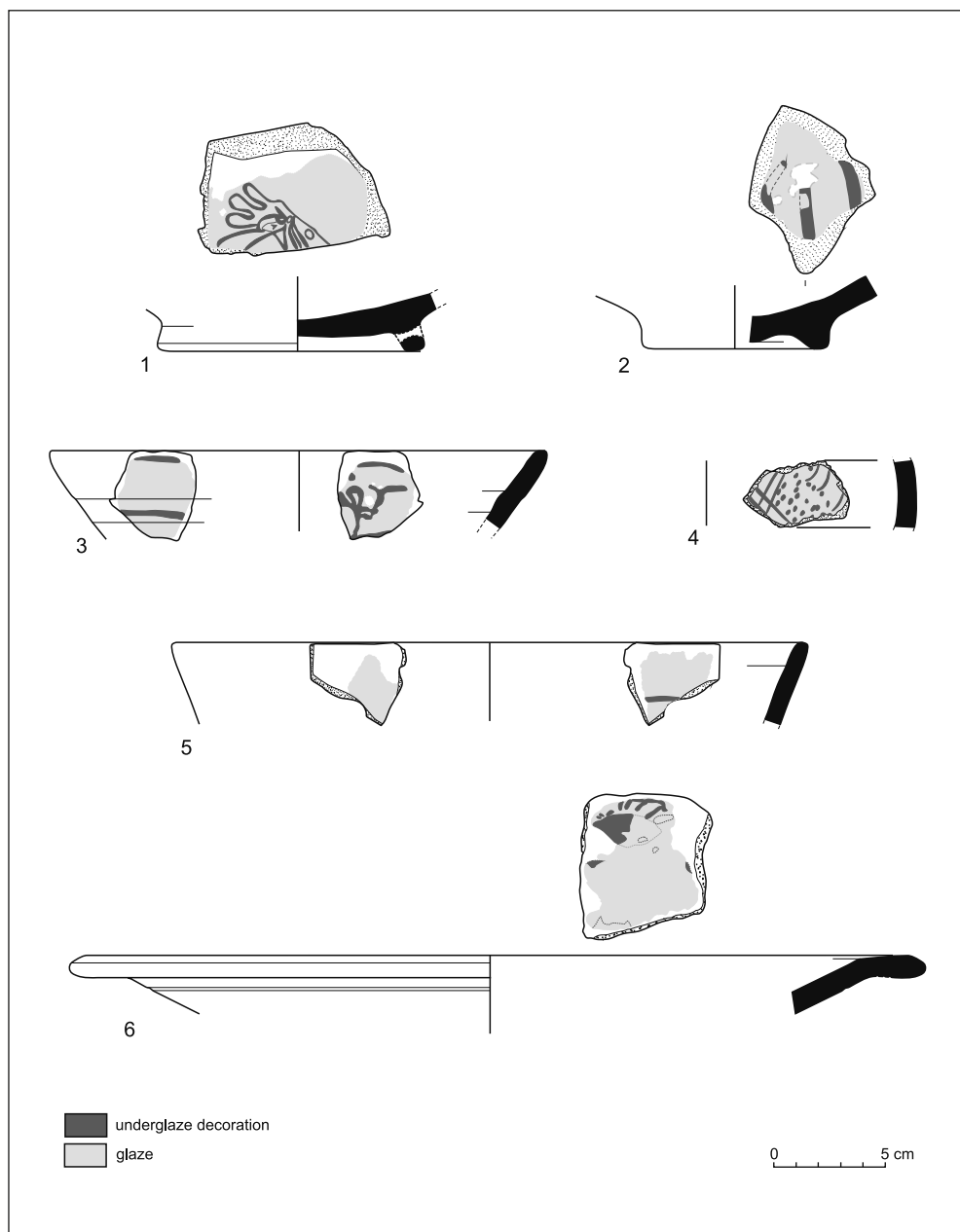


Fig. 10. Selection of glazed pottery from Kharaiib el-Desht: Manganese Purple Underglazed-Painted Ware (Drawing J. Ciesielska, K. Cieślak, M. Mierzejewska, K. Pawłowska; digitizing M. Mierzejewska)

and 19th centuries (Carter 2003: 62; 2011: 37), although he also notes their presence at the very beginning of the 20th century (Carter, Morley, and Morse 2011: 91). The variant of a bowl with almost vertical walls, dated to the 16th–18th century, was also attested at al-Ruwaydah (Petersen and Grey 2010: 47, Fig. 10/6).

BAHLA/KHUNJ WARE¹

KHUNJ (Kennet 2004: 54)

Bahla/Khunj Ware is characterized by a hard, well-levigated fabric in colors ranging from red-orange to dark grey (often the color changes on the vessel). The lead glaze is clear, often speckled with orange patches visible underneath. The color of the glaze ranges from yellowish-chocolate to olive green. Sometimes the glaze is weathered and flaky. A few fragments featured singular simple incisions. The typical form of this group comprises bowls with straight or flaring rims, always with ring bases [Fig. 11:1, 2]. Drilled holes used for vessel mending were observed in singular cases.

Parallel vessels were also attested at al-Ruwaydah (Qatar) (Petersen and Grey 2010: 48, Fig. 10:7,12,15), and in the al-^cAin oasis (UAE) (Power and Sheehan 2012: Fig. 4). Examples of incisions on pottery were attested at Bahla (Whitcomb 1975: Figs 12:o, 5:d, 11:g), while drilled holes were found on one bowl from al-Ruwaydah (Petersen and Grey 2010: Fig. 107).

There is a broad time frame for the presence of these vessels. At al-Mataf, the

earliest fragments were found in layers dated to the 15th–16th century (Kennet 2004: 54). Robert Carter and Donald Whitcomb demonstrated that singular vessels similar to Bahla/Khunj examples were present in Oman until the beginning of the 20th century (Whitcomb 1975: 129; Carter 2011: 37). However, the popularity of these vessels peaked undoubtedly in the 17th–19th century (Carter 2003: 60).

MONOCHROME GREEN GLAZE

GMONO.2 (Kennet 2004: 55–56)

This is a diversified group of vessels with glaze of various thickness and of different shades of green. The glaze typically covers the interior and the rim of the vessel; no other decoration is present. A characteristic feature is the soft fabric of light yellow or creamy color. Several bowls with ring bases and everted rims were found at Kharaiab el-Desht [Fig. 11:3, 4].

According to Kennet, examples of Monochrome Green Glaze found at al-Mataf date from the 16th century onwards (Kennet 2004: 56). Timothy Power notes a peak in the popularity of this pottery in the al-^cAin oasis in the Late Islamic 1a period (1500–1650) (Power and Sheehan 2012: 294, Fig. 3). In the Late Islamic 1b period (1650–1800) there is a noticeable decline in the number of sherds of this group in comparison to the previous period. It should also be noted that similar vessel types were found in 17th–18th century Palestine (Grey 2011: 354).

¹ The origin of these vessels has not been determined to this day, therefore in the literature on the subject there exist two equally valid terms derived from the names of two sites, Khunj (Iran) and Bahla (Oman), to which the location of the production center may be attributed. For a more detailed discussion of this issue, see Whitcomb 1975: 129; Kennet 2004: 54; Carter 2003: 60; 2011: 37.

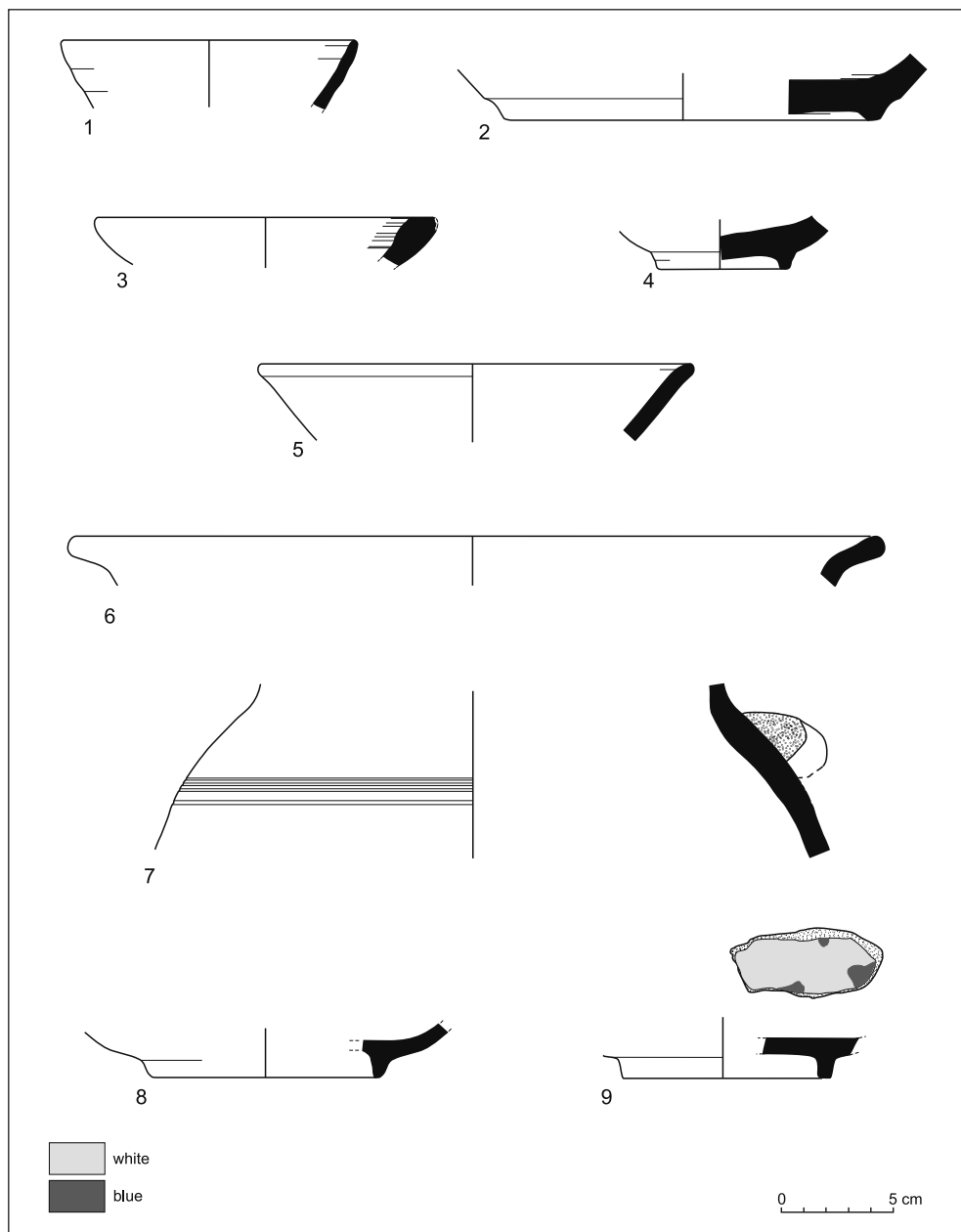


Fig. 11. Selection of glazed pottery from Kharaib el-Desht: 1-2 – Bahla/Khunj Ware; 3-4 – Monochrome Green Glaze; 5 – Red-Yellow Ware/Mustard Ware; 6-7 – Turquoise Glazed Ware; 8-9 – Chinese Blue-and-White Porcelain

RED-YELLOW WARE

REDYEL (Kennet 2004: 56)/Mustard Ware
(Carter, Morley, and Morse 2011: 91–92)

Eight open bowl fragments from Kharai b el-Desht were characterized by a creamy buff fabric and distinctive speckled glaze of light brownish-yellow color [Fig. 11:5].

Parallel examples, dated to the 18th–19th century, were noted by Robert Carter at Bu Maher Fort (Bahrain) and at al-Huwailah (Qatar); he called this pottery group Mustard Ware (Carter, Morley, and Morse 2011: 91). Vessels of similar fabric and glaze were classified by Kennet as Red–Yellow Ware (Kennet 2004: 56). However, these vessels have a characteristic, very thin, intermittent slip of maroon red color. Among the examples of Red–Yellow Ware found in al-ʿAin oasis, there were sherds with visible red slip, as well as sherds of bronze-yellow color without slip (Power and Sheehan 2012: Fig. 4). This group was dated by Timothy Power to the Late Islamic 1b period (1650–1800) (Power and Sheehan 2012: 301, Fig. 3). Due to the state of preservation and the fragmentariness of vessels from Kharai b el-Desht, it is impossible to state whether they were slipped originally.

OTHER GLAZED WARES

Sherds with a turquoise greenish/bluish glaze and a creamy or pale yellow fabric,

sporadically with fine-grained lime inclusions (**Turquoise Glazed Ware**) were also found. These were mostly bowls with everted rims [Fig. 11:6], although there was also one jar with a lug [Fig. 11:7]. Parallel examples were found during a field survey on Farasan Island (Saudi Arabia) and were broadly dated to the 8th–19th century (Cooper and Zazzaro 2014: 158, Fig. 8/h).

A few very small fragments of **Chinese Blue-and-White Porcelain** (CBW, Kennet 2004: 67; Petersen and Grey 2010: 45; Power and Sheehan 2012: 297) were found. They are characterized by a pure, glassy, white porcelain body with clear glaze and dark blue or cobalt-blue underglaze decoration [Fig. 11:8, 9]. The trade in Chinese Blue-and-White Porcelain wares in the Middle East began in the end of the 14th century; it became widespread in the mid- or late 15th century, and continued till the end of the 18th century (Kennet 2004: 67–68; Power and Sheehan 2012: 302; Priestman 2005: 314).

Finally, there were also three small fragments of a good-quality frit body with damaged glaze and cobalt decoration painted underneath the glaze. These sherds represent **Blue-and-White Frit** (FRIT. BW, Kennet 2004: 50–51; Priestman 2005: 277; Petersen and Grey 2010: 46).

UNGLAZED WARES

Unglazed wares constituted almost 81% of the collected material. These vessels display a varied quality of execution, color of the fabric, and the kind of mineral inclusions. Some examples have distinctive smoke stains, suggesting their kitchen use.

Sometimes the interior of these vessels was coated with bitumen.

BUFF WARE

A popular type of vessels at Kharai b el-Desht were water jugs with well-levigated

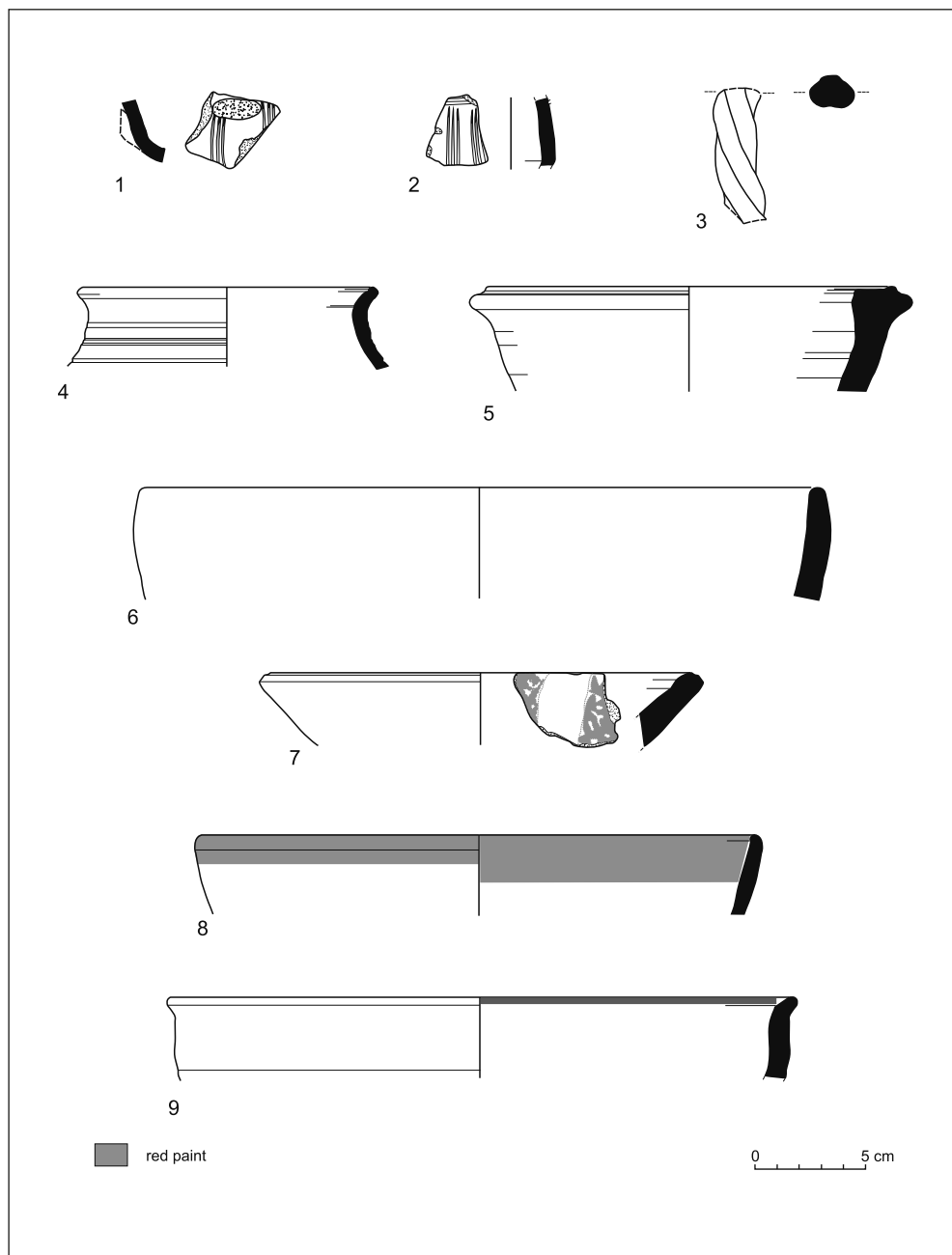


Fig. 12. Selection of unglazed pottery from Kharaib el-Desht: 1-3 – Buff Ware; 4-5 – Pale Gritty Ware; 6 – Chocolate Chip/Black Angular Inclusions; 7-9 – Julfar Ware

creamy fabric of sandy texture, and with a small amount of mineral inclusions. The jugs featured from one to three handles attached to a simple rim [Fig. 12:3]. Incised or combed decoration was placed below the rim and on the body, usually in the form of vertical or horizontal lines [Fig. 12:1, 2], less often sloppy grids or zigzags.

There is no consistent terminology for these wares. Similar vessels, very popular in the 18th–19th century at Muharraq in Bahrain (Carter, Morley, and Morse 2011: 84, Fig. 34; Naranjo-Santana and Carter 2010: 109, Fig. 80) and Jebel Dhanna in the UAE (Carter 2003: Figs 1:8–9, 2:9) are called ^cAli Ware.² Similar pottery from Ruwaydah (Qatar) was labelled by Tony Grey as Cream Sandy Ware; he links it with the group of ^cAli Ware, at the same time pointing to their similarity with Buff Ware as distinguished by David Kennet at al-Mataf in post-16th-century layers (Petersen and Grey 2010: 48, Fig. 10:8, 11,13; Kennet 2004: 81). Conversely, a group of water jars with creamy fabric and decoration of incised lines was denoted by Timothy Power as Incised Buff Wares (Power and Sheehan 2012: Figs 3–4), and dated to the 16th–20th century.

COARSE LIME WARE

A fairly numerous group was made up by storage jars of grey-brown, sometimes reddish, porous and coarse fabric with a large amount of white inclusions, probably lime, occasionally also with a small amount of quartz. They have a wide

in-turned rim, and small handles. They are paralleled by Lime Tempered Ware in Kennet's code (Kennet 2004: 79), dated from the 14th/15th to the 16th century. However, according to Robert Carter, the presence of such vessels at Muharraq indicates that Lime Ware remained in use until the 19th century (Carter, Morley, and Morse 2011: 90; Carter 2011: 36).

PALE GRITTY WARE

This group comprises basins and storage jars of pale brown or grey-brown fabric, characterized by a presence of dark grit, sporadic white inclusions, and grey or red-brown slip [Fig. 12:4, 5]. Vessels of this type were found at Muharraq (Carter, Morley, and Morse 2011: 86, Fig. 35; Carter and Naranjo-Santana 2011: 51–52, Fig. 43).

CHOCOLATE CHIP/BLACK ANGULAR INCLUSIONS

CHOC (Kennet 2004: 80–81)

These large, thick-walled storage jars and basins have a characteristic pale grey or grey fabric, with a large amount of angular inclusions, sporadically with a small amount of lime inclusions [Fig. 12:6]; they were often decorated with a finger-impressed cordon. Parallel vessels were found at al-Ruwaydah (Petersen and Grey 2012: 49, Fig. 10:10). As noted by Carter, the groups of Pale Gritty Ware and Chocolate Chip are very similar to each other and only future detailed analyses may reveal the connection between the two (Carter 2011: 36).

² This name was first introduced by A. Williamson in the 1970s when he analyzed the pottery from al-Huwailah, concluding that it was produced in Bahrain in the village of ^cAli (Carter 2011: 33).

JULFAR WARE

This is a large group of kitchen wares comprising cooking pots, bowls and jars, hand-made or shaped on a slow-turned wheel. They are characterized by a coarse, orange-brown-red or grey fabric of rough fracture, with grit and lime inclusions. These vessels were often decorated with a red-brown painted geometric pattern [Fig. 12:7–9]. In a few cases, the vessels were covered with white-wash or self-slip.

This group should be identified with Julfar Ware, popular in the area from the western coasts of the Indian Ocean, through Bahrain and the southern coast of Iran, to the UAE (Petersen and Grey 2010: Fig. 10:5; Carter and Naranjo-Santana 2011: 52, Fig. 44; Carter, Morley, and Morse 2011: 88, Fig. 36; Frifelt 2001: 93–95; Mitsuishi and Kennet 2013: 228; Priestman 2005: 226–229; Sedighian and Gholami 2011–2012; Power and Sheehan 2012: 295, Fig. 4). It was produced at Ras al-Khaimah (UAE) from about the 12th century to the mid-20th century (Kennet 2004: 71); some of the forms were evidenced by ethnoarchaeological research at al-Fara', Fujairah in the UAE (Ziolkowski and Al-Sharqi 2005: Fig. 52).

At Kharaiib el-Desht the following forms of cooking pots were attested, according to the typology of Gen Mitsuishi and Derek Kennet: TC18, a round pot with an out-curved rim, triangular in section, featuring a slight

trough for a lid; this type was decorated with a dark red pattern painted directly on a dark orange surface; TC15, a pot with an everted rim and purple decoration painted directly onto the grey surface; in Kennet's earlier typology, it was denoted as CP4.1 (Kennet 2004: 75); TC 13, a pot with an incurved rim, often with a triangular lug; these vessels were typically grey, though sometimes orange-brown, and they had no painted decoration; in Kennet's earlier typology, it was denoted as CP5.1 (Kennet 2004: 76); finally, TC10, a pot with an everted rim, featuring a slight trough for a lid, and with dark red decoration painted directly onto a dark orange body (Mitsuishi and Kennet 2013: Figs 3, 5). Apart from cooking pots, there were sporadic finds of bowls with vertical or flaring walls and everted rims (TO4 and TO5, Mitsuishi and Kennet 2013: Figs 3, 5) [Fig. 12:7].

Also attested at Kharaiib el-Desht were fragments of closed-form vessels, with brown-red fabric, a self-slip on the exterior, and simple geometric decoration. The state of preservation of these sherds precluded their identification with particular types of Julfar Ware.

There were also found several undiagnostic sherds of grey Julfar Ware with a characteristic horizontal clay cordon on the vessel body (D-2, Mitsuishi and Kennet 2013: Fig. 6).

CONCLUSIONS

In all investigated areas at Kharaiib el-Desht there co-occurred Bahla/Khunji Ware, Monochrome Green Ware, as well as a significant percentage of Manganese Purple Underglazed-Painted Ware. There

were also several sherds of Red-Yellow Glaze Ware/Mustard Ware. All the above glaze types are dated by Kennet to the post-1600s period. MGPAIN.T.2 ware is considered typical in al-^cAin oasis (UAE)

particularly in 1650–1800. Moreover, there is a significant absence of Willow Ware (WILLOW, Kennet 2004: 56), popular from the end of the 18th century, and of the Japanese/Chinese Coffee Cup (JCCC, Power and Sheehan 2012: Fig. 4) that emerged in the 19th/20th century. Conversely, the absence of Longquan Celadon Ware (LQC, Kennet 2004: 64), intensively exported to the Middle East in the 13th–15th century (it was attested, for instance, in the 14th–15th century layers at al-Mataf), is striking. On these grounds it is possible to date the settlement

at KharaiB el-Desht provisionally to the period between the 17th century and the end of the 18th or the beginning of the 19th century, although this dating may be subject to modification in the course of further analysis of the finds.

Although the range and the variety of vessels found at the site is limited, they attest to the trade exchange in the area of the Persian Gulf, as indicated by the presence of local wares from Bahrain, Qatar, the UAE, Oman or Persia, as well as by the finds of singular fragments of luxury table ware from Southeast Asia or China.

APPENDIX 2

SURVEY OF KHARAIB EL-DESHT BAY ON FAILAKA ISLAND: PRELIMINARY REPORT

Magdalena Nowakowska

Institute of Archaeology, University of Warsaw

The “Waterfront and underwater archaeology of the coastal zone around the Failaka Island” project was initiated in the spring of 2013 as part of the Polish–Kuwaiti Failaka Archaeological Mission directed in the field by Dr. Agnieszka Pieńkowska, operating within the framework of the Kuwaiti–Polish Archaeological Mission under an agreement between the Polish Centre of Mediterranean Archaeology of the University of Warsaw and the National Council for Culture, Arts and Letters of the State of Kuwait.

PROGRAM

The project aims to search out and describe extant archaeological sites on the seashore, as well as to provide documentary evidence

and ultimately manage proper preservation to further educational opportunities. The program of “waterfront archaeology” research for 2013 assumed an inventory of stone structures in the KharaiB el-Desht Bay [*Fig. 13*].

The first step was to trace groups of stones around the small bay to verify possible clusters and distinguish natural forms from intentionally arranged structures. The objective was to recognize and document groups of stone features interpreted as fishing farms installations (“fish traps”).

TIDES

Knowledge of the tidal process is essential for waterfront archaeological research in the Gulf. The amplitude in Kuwait

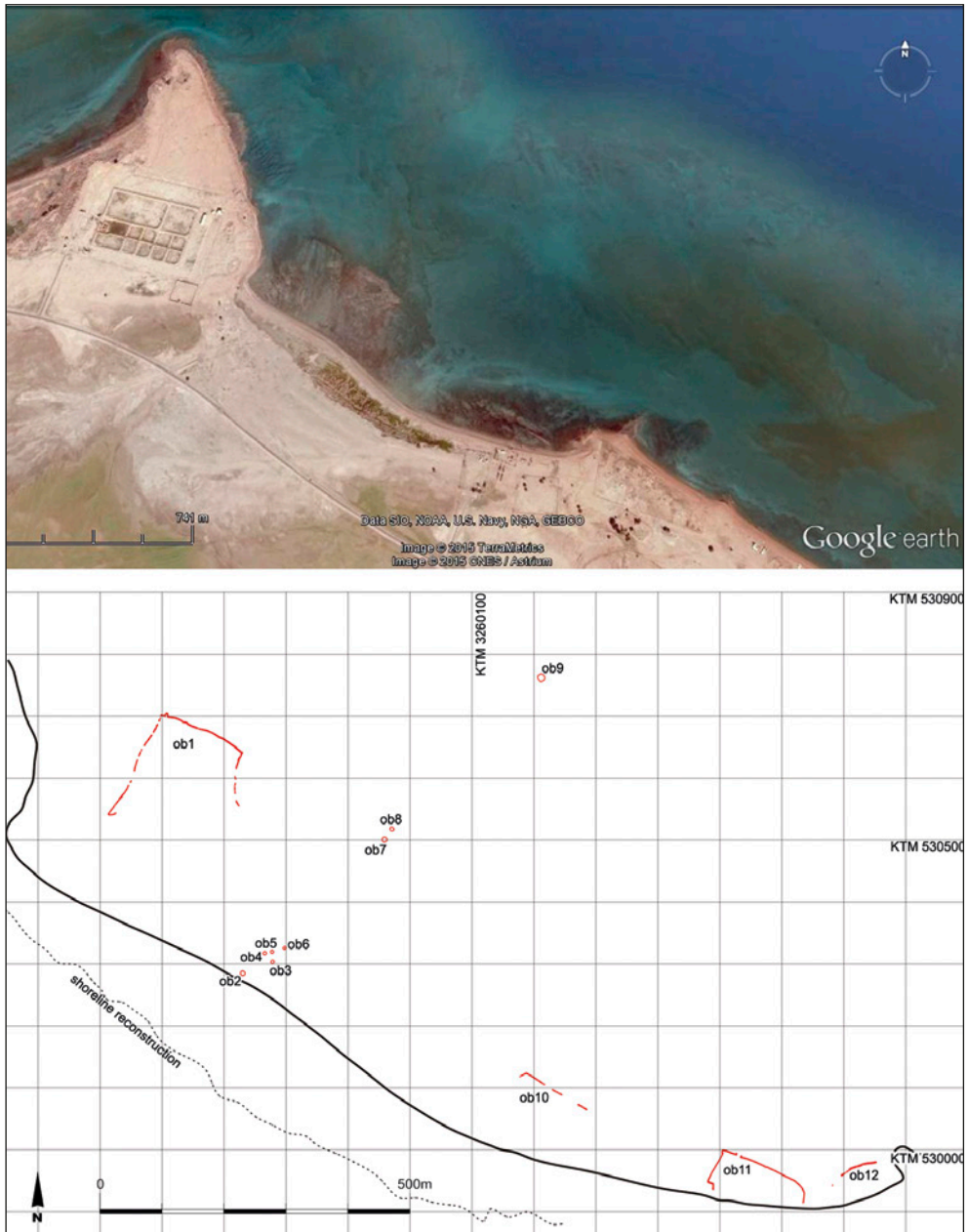


Fig. 13. Kharai el-Desht Bay on Failaka Island in Kuwait: top, satellite map of the area; bottom, stone structures surveyed in the area [ob = feature] (Photo Google Maps; drawing J. Kaniszewski, S. Lenarczyk)

Bay is about 2 m, but tides can vary from 3.50 m up to nearly 4 m, depending predominantly on the lunar-phase tide (Al-Yamani et al. 2004: 24–26).

Low water levels and daily light are essential for survey and documentation of the littoral structures. At KharaiB el-Desht we were completely dependent on the tidal cycle. Performing measurement and photographic documentation of stone structures was possible only for a few hours a day. High water often made investigations impossible. For our work we used the calendar of tides provided by the maritime office in Kuwait (www.tides.mobilegeographics.com/calendar/).

SURVEY IN KHARAIB EL-DESHT BAY

The survey investigated and documented 12 stone structures [Fig. 13 bottom]. They can be divided into three groups:

- big linear stone structures;
- small circular structures;
- linear stone structures other than the first group (Feature 12).

Eleven structures were situated no more than 400 m from the coastline and one of them (Feature 9) was about 800 m from the seashore.

GEODETIC MEASUREMENTS

A geodetic grid was set up to draw the plan of the bay and the bathymetric map. Total Station measurements were taken to produce the architectural documentation and geological strata measurements. The map and plans were based on the Universal Transverse Mercator (UTM) geographic coordinate system.

The survey was conducted on selected stone structures in the bay (Features 1–12). Geodetic documentation was pre-

pared with the aid of TS measurements. Completing the survey were photogrammetric documentation, 3D documentation and 3D animations of the tidal process.

BIG LINEAR STRUCTURES

Three big linear stone structures (Nos 1, 10, 11) and one smaller feature (No. 12) were located. Two of them (Nos 1 and 11) were assessed as being well preserved, one (No. 10) as destroyed, probably to a large extent. The smaller feature (No. 12) was different in structure from the others (see below). The considerable dimensions of the structures require aerial photos before a complete analysis will be possible.

Feature 1 [Fig. 14] is the biggest and is situated in the western part of the bay, in front of the KharaiB el-Desht settlement explored by the Polish team (see above). The building stones are arranged in the form of walls, reaching up to a height of about 0.60–0.70 m. The longest wall is composed of several sections, about 200 m long, in the northeast direction. It is composed of several sections, arranged with greater or lesser thoroughness. In some places gaps between sections exceeded 2 m. The structure runs straight for about 200 m. Then it turns at right angle for about 150 m and again, going back to the shore. This last section, about 30 m long and ending in irregular piles of stones, arches gently away to the southeast. The wall in its main outline is tidily constructed of collected stones. The north part of this object serves as a natural breakwater, separating the area of the “pool” from the sea.

Feature 10 [see Fig. 13] is a linear structure with one short arm, about 10 m long, made of collected stones, turned at about



*Fig. 14. Feature 1: top, view from the west; bottom, view from the south
(Photos M. Nowakowska)*

90 degrees in relation to the long line. This main line, oriented east–west, is about 120 m long and is divided into three sections composed of stone clusters. This feature seems to be strongly destroyed. The nearby Feature 11 to the east may have been built partly of stone salvaged from this structure.

Feature 11 [Fig. 15] is a so-called fish trap still in use today by fishermen from the coastal zone. The outline of the trap is more or less rectangular, similar to Feature 1. The length of the west side is about 60 m. In the corner near the shore, the structure turns in and then again at right angles to form a small cove. At the northern end of this section, the structure turns east and runs southeast for

about 110 m. There is one gap, “entrance”, situated 20 m from the northwestern corner of the feature. At the southeastern end, the structure is rounded, the last section of the wall going straight to the coastline. The whole structure is made tidily of big collected stones. Some of the stones could have been taken from Features 10 and 12, located to the west and east of Feature 11.

The function of the features cannot be easily interpreted today. This kind of linear structure is recognized as a “fish trap” and is well known in the Gulf. It is also used by local fishermen even now. At high tide the water goes in and they throw their nets within the “pool” formed by the walls and collect the fish at low tide.



Fig. 15. Feature 11, view from the southeast
(Photo M. Nowakowska)

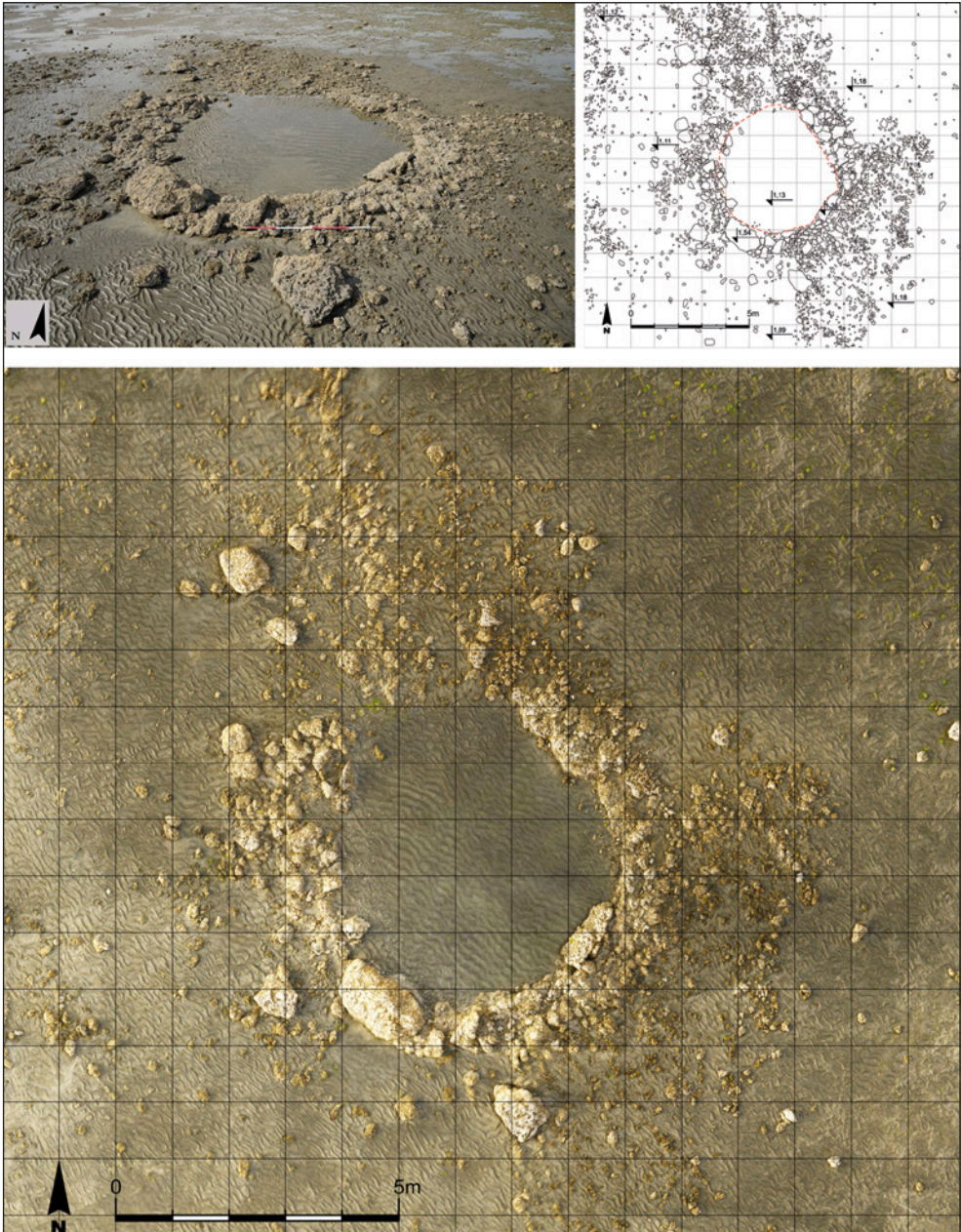


Fig. 16. Feature 5: top left, view from the south; top right, photogrammetric plan; bottom, CAD graphic documentation (CAD drawing S. Lenarczyk; photogrammetric plan J. Kaniszewski, S. Lenarczyk; photo M. Nowakowska)

CIRCULAR FEATURES

Two groups of circular stone features are of considerable interest.

The first group includes five features: Nos 2, 3, 4, 5, 6 [see *Fig. 13*]. It was registered in a relatively small area, close to the shoreline, situated about 100 m into the sea. Feature 2 was situated partly on the beach and covered by sand. Only part of the structure was visible.

The next group, comprising features 7 and 8, demonstrated a similar method of construction. The two were registered more than 200 m to the northeast of the first group.

Last is Feature 9 discovered far from the others, about 800 m north of the shoreline. It was located in line with features 7 and 8 from the second group and features 3 and 6 from the first one, following a northeast orientation. Other structures were situated only a few meters away.

All the features were built of stones of different sizes, arranged next to one another, forming a regular circular structure, like **Feature 5** [*Fig. 16*]. There are two gaps in the circumference in every structure or the small part of the ring is significantly lower there. These gaps (or lower parts) act as the "entrance", enabling free flow of water. The entrances of most structures are oriented northeast and southwest. The diameter of these features ranges from 4.50 m to 7.50 m.

This type of stone feature was probably made by cutting a hollow in bedrock and surrounding it with stones.

The farthest circular structure, **Feature 9**, is constructed of stones arranged in a circle, with a diameter of about 14 m. The depth inside this feature was measured at more than 1.50 m. This feature is very difficult for documentation, because it

is practically on the border of the tides. Muddy ground around the structure and short exposure time made it impossible to complete photogrammetric documentation.

NATURAL STONE CLUSTER

A range of natural stone clusters was located in the bay in addition to the man-made structures. Some of them formed a linear system and were located at a short distance from the edge of the "stone", that is, bedrock, which is covered by the sea bottom. Similar groups of stones are located in the coastal zone in other parts of the bay. Nothing proves that they were intentionally made by man. By contrast, it is possible to use natural forms of stone for many purposes, fishing included.

FEATURE 12

Feature 12 forms a smooth curve located in the eastern part of the bay. Its construction was completely different from those described above. It consisted of three sections, forming a solid stone structure [*Fig. 17*]. The total length of the structure was about 60 m: the first part about 14.50 m, the central section about 23.50 m, the third 21 m.

The western part (C) is heavily damaged, preserved only in outline. It is made of small stones arranged in a line, the width about 2 m. The central part (B) is built of stone blocks forming a regular wall with a height of about 1 m and a width of more than 2 m. In this part, the construction is very solid. It required adequate preparation of stone blocks. The third, eastern part (A) is destroyed, especially at its eastern end, but not as heavily as the western part C.

The face of the wall was formed in part of vertical stone slabs and stones collected between them. The total width of the foundation and the fact that the stone blocks were specially prepared indicates that it was intended as a strong and durable construction. Along the entire length of the wall, between the stones and surrounding structures, numerous fragments of pottery were recorded. Potsherds could have come from the neighboring settlement of Al-Qurayniyah transported

by erosional processes or they could have been used deliberately as a bedding layer to strengthen the base of the structure.

The function of this structure is interpreted differently from that of other structures registered in the bay. The solid structure suggests it might have served as a port for the Al-Qurayniyah settlement. The strong wall was both a pier and a breakwater. Similar structures are well known from photos of the harbor of historic Kuwait City (Hijji 2001: XI).

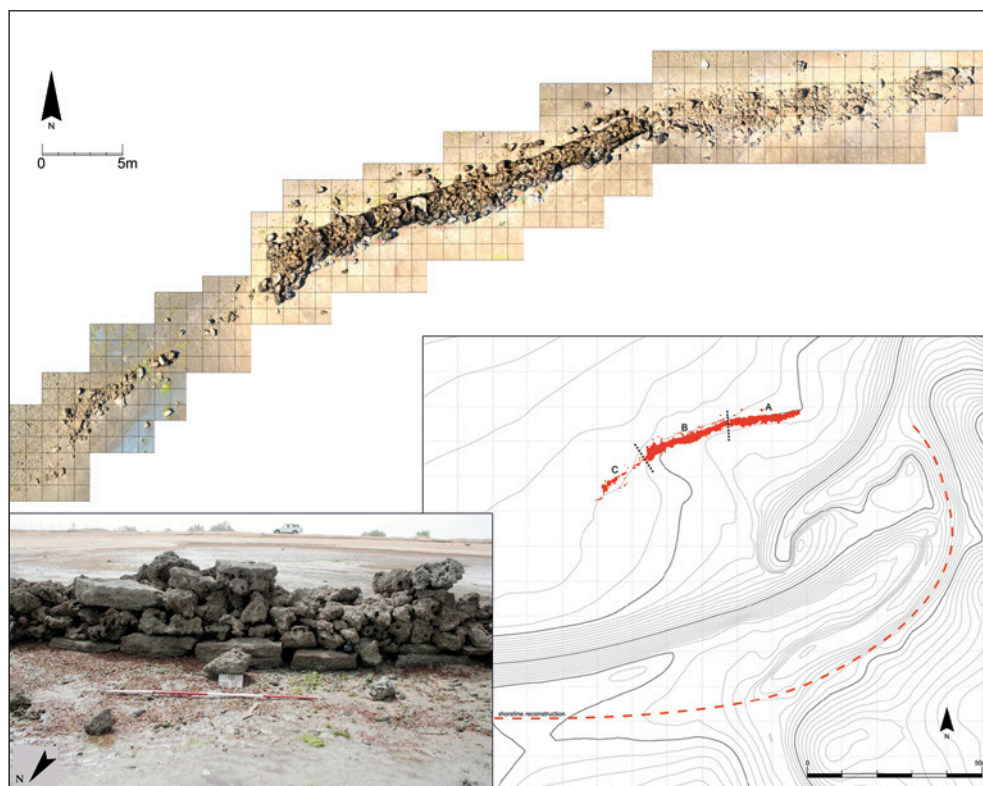


Fig. 17. Feature 12: photogrammetric plan; inset, left, central part of the wall (part B), view from the north; right, contour plan (Photogrammetric plan J. Kaniszewski, S. Lenarczyk; contour plan J. Kaniszewski; photo M. Nowakowska)

CONCLUSION

The three different groups of stone structures in the KharaiB el-Desht bay were all strongly connected with human activity in shallow waters in the tidal area.

It is difficult to interpret their function today, but there is considerable likelihood that most of them were used as fish traps. Similar structures are known from different parts of the Arabian Gulf (Beech

2004: 66–70, Figs 14, 15; Breeze, Cuttler, and Collins 2011: 15; Serjeant 1968). Feature 12 may have been the pier and breakwater of a harbor.

There is still no evidence for establishing the chronology of these stone structures. Further investigations may yet contribute to resolving the various issues that this preliminary report has brought to the surface.

Dr. Agnieszka Pieńkowska

Polish Centre of Mediterranean Archaeology, University of Warsaw
00-497 Warsaw, Poland, ul. Nowy Świat 4
a.pienkowska@uw.edu.pl

Marta Mierzejewska

Polish Centre of Mediterranean Archaeology, University of Warsaw
00-497 Warsaw, Poland, ul. Nowy Świat 4
mmierzejewska@uw.edu.pl

Magdalena Nowakowska

Institute of Archaeology, University of Warsaw
00-927 Warsaw, Poland, ul. Krakowskie Przedmieście 26/28
magdalena.nowakowska@uw.edu.pl

REFERENCES

- Al-Yamani, F. Y., Bishop, J., Ramadhan, E., Al-Husain, M., and Al-Ghadban, A. N. (2004). *Oceanographic atlas of Kuwait's waters program*. Kuwait: Kuwait Institute for Scientific Research.
- Beech, M. J. (2004). *In the land of the Ichthyophagi: Modelling fish exploitation in the Arabian Gulf and Gulf of Oman from the 5th millennium BC to the Late Islamic period* [=BAR IS 1217]. Oxford: Archaeopress.
- Benediková, L. (Ed.). (2010). *Al-Khidr, 2004–2009: Primary scientific report on the activities of the Kuwaiti-Slovak archaeological mission*. Kuwait City: National Council for Culture, Arts & Letters.
- Bibby, G. (1969). *Looking for Dilmun*. New York: Knopf.
- Breeze, P., Cuttler, R., and Collins, P. (2011). Archaeological landscape characterization in Qatar through satellite and aerial photographic analysis, 2009 to 2010. *PSAS*, 41, 13–26.
- Carter, R. A. (2003). The pottery of Jebel Dhanna. In G. R. D. King (Ed.), *Sulphur, camels and gunpowder: The sulphur mines at Jebel Dhanna, Abu Dhabi, United Arab Emirates. An archaeological site of the late Islamic period* (pp. 52–65). Abu Dhabi: Abu Dhabi Islands Archaeological Survey.

- Carter, R. A. (2011). *Ceramics of the Qatar National Museum*. Oxford Brookes University. Retrieved from http://www.academia.edu/700174/Ceramics_of_the_Qatar_National_Museum [accessed: December 2014].
- Carter, R., Morley, M., and Morse, C. (2011). *Bu Maher Fort, Muharraq. Report on excavations in 2010 for the Ministry of Culture and Information, Bahrain*. Oxford Brookes Archaeology and Heritage. Retrieved from http://www.academia.edu/942118/Bu_Maher_Fort_Muharraq_Report_on_Excavations_in_2010_for_the_Ministry_of_Culture_and_Information_Bahrain [accessed: December 2014].
- Carter, R., and Naranjo-Santana, J. (2011). *Muharraq excavations 2010*. Retrieved from http://www.academia.edu/628941/Muharraq_Excavations_2010 [accessed: December 2014].
- Cooper, J. P., and Zazzaro, C. (2014). The Farasan Islands, Saudi Arabia: Towards a chronology of settlement. *Arabian Archaeology and Epigraphy*, 25(2), 147–174.
- Dickson, H. R. P. (1968). *Kuwait and her neighbours*. London: George Allen & Unwin.
- Frifelt, K. (2001). *Islamic remains in Bahrain* [=Jutland Archaeological Society Publications 37]. Højbjerg: Jutland Archaeological Society.
- Grey, T. (2011). Late trade wares on Arabian shores: 18thc to 20th century imported fine ware ceramics from excavated sites on the southern Persian (Arabian) Gulf coast. *Post-Medieval Archaeology*, 45(2), 350–373.
- Hijji, Y. Y. (2001). *The art of dhow-building in Kuwait*. Al-Mansuriyyah: Center for Research and Studies on Kuwait.
- Kennet, D. (2004). *Sasanian and Islamic pottery from Ras al-Khaimah: Classification, chronology, and analysis of trade in the Western Indian Ocean* [=BAR IS 1248; Society for Arabian Studies Monographs 1]. Oxford: Archaeopress.
- Lorimer, J. G. (1908). *Gazetteer of the Persian Gulf, Oman and Central Arabia II*. Calcutta: Government Printer.
- Mitsubishi, G., and Kennet, D. (2013). Kiln sites of the fourteenth–twentieth century Julfar Ware pottery industry in Ras al-Khaimah, UAE. *PSAS*, 43, 225–238.
- Naranjo-Santana, J., and Carter, R. (2010). 'Amara excavations 2009. Retrieved from https://www.academia.edu/628937/Amara_Excavations_2009 [accessed: December 2014].
- Patitucci, S., and Uggeri, G. (1984). *Failakah: insediamenti medievali islamici. Ricerche e scavi nel Kuwait*. Rome: “L’Erma” di Bretschneider.
- Pawlicki, F. (2012). *Preliminary report on the archaeological survey of joint Kuwaiti-Polish Mission, Failaka*. Unpubl. report.
- Pawlicki, F. (2015). Preliminary report on the archaeological survey of the joint Kuwaiti–Polish mission, Failaka Island, 2012. *PAM*, 24/1, 547–559.
- Petersen, A., and Grey, T. (2010). Excavations and survey at al-Ruwaydah, a late Islamic site in northern Qatar. *PSAS*, 40, 41–53.
- Priestman, S. M. N. (2005). *Settlement and ceramics in Southern Iran: An analysis of the Sasanian & Islamic periods in the Williamson collection* (unpubl. MA thesis). University of Durham.
- Power, T., and Sheehan, P. (2012). The origin and development of the oasis landscape of al-’Ain (UAE). *PSAS*, 42, 291–308.
- Rajab, J. S. (1999). *Failaka Island: The Ikaros of the Arabian Gulf*. Kuwait: Tareq Rajab Museum.

- Sedighian, H., and Gholami, H. (2011–2012). Unglazed Islamic painted pottery (pseudo-prehistoric) of Iran. *Modares Archeological Research*, 3–4(6–7), 134–142 [in Persian with English summary].
- Serjeant, R. B. (1968). Fisher-folk and fish-traps in al-Bahrain. *Bulletin of the School of Oriental and African Studies*, 31(3), 486–514.
- Whitcomb, D. S. (1975). The archaeology of Oman: A preliminary discussion of the Islamic Periods. *Journal of Oman Studies*, 1, 123–157.
- Ziolkowski, M. C., and Al-Sharqi, A. S. (2005). Bayt Sheikh Suhail bin Hamdan al-Sharqi, al-Fara', Fujairah, United Arab Emirates: An ethnoarchaeological study (1). *Arabian Archaeology and Epigraphy*, 16(2), 183–255.

CONTENTS

CONTENTS

ACKNOWLEDGMENTS	10
ABBREVIATIONS.....	11

PAM REPORTS

PCMA FIELD MISSIONS AND PROJECTS IN 2012 AND 2013 (WITH MAP).....	17
---	----

EGYPT

ALEXANDRIA: KOM EL-DIKKA

ALEXANDRIA: EXCAVATIONS AND PRESERVATION WORK ON KOM EL-DIKKA,
SEASONS 2012 AND 2013

<i>Grzegorz Majcherek</i>	29
---------------------------------	----

ISLAMIC NECROPOLIS AT KOM EL-DIKKA IN ALEXANDRIA:
RESEARCH IN THE 2010–2013 SEASONS

<i>Emanuela Kulicka</i>	62
-------------------------------	----

ISLAMIC GLASS FROM AREA U (2012–2013)

<i>Renata Kucharczyk</i>	73
--------------------------------	----

MARINA EL-ALAMEIN

RESEARCH AND CONSERVATION IN MARINA EL-ALAMEIN IN THE 2012
AND 2013 SEASONS. THE POLISH–EGYPTIAN CONSERVATION MISSION

<i>Rafał Czerner, Grażyna Bąkowska-Czerner, Wiesław Grzegorek</i>	87
---	----

SELECTED CONSERVATION WORK IN MARINA EL-ALAMEIN IN THE 2012
AND 2013 SEASONS

<i>Marlena Koczorowska, Wojciech Osiak</i>	101
--	-----

RESEARCH AND CONSERVATION IN THE ROMAN BATHS OF MARINA EL-ALAMEIN
IN THE 2012 AND 2013 SEASONS (POLISH–EGYPTIAN CONSERVATION MISSION)

<i>Rafał Czerner, Grażyna Bąkowska-Czerner, Grzegorz Majcherek</i>	113
--	-----

TELL EL-RETABA

TELL EL-RETABA, SEASON 2012

<i>Sławomir Rzepka, Józef Hudec, Łukasz Jarmużek, Lucia Hulková, Veronika Dubcová</i>	139
---	-----

APPENDIX: TELL EL-RETABA 2012. PRELIMINARY REPORT ON ARCHAEOBOTANICAL
INVESTIGATIONS

<i>Claire Malleson</i>	156
------------------------------	-----

TELL EL-RETABA 2012: THE POTTERY

<i>Anna Wodzińska</i>	164
-----------------------------	-----

CONTENTS

TELL EL-FARKHA

- TELL EL-FARKHA. EXCAVATIONS, 2012–2013
Marek Chłodnicki, Krzysztof M. Ciałowicz 173

TELL EL-MURRA

- TELL EL-MURRA (NORTHEASTERN NILE DELTA SURVEY). SEASONS 2012–2013
Mariusz A. Jucha, Grzegorz Bąk-Pryc, Natalia Matecka-Drozd 199

SAQQARA

- SAQQARA: SEASONS 2012 AND 2013/2014
Karol Mysliwiec 215
APPENDIX: CONSERVATION WORK IN SAQQARA (2012 AND 2014)
Zbigniew Godziejewski, Urszula Dąbrowska 224
SAQQARA 2012: THE POTTERY
Teodozja I. Rzeuska 230

WEST THEBES (ASASIF, DEIR EL-BAHARI) AND VALLEY OF THE NILE

- THE TOMBS OF ASASIF: ARCHAEOLOGICAL EXPLORATION
IN THE 2013/2014 SEASON
Patryk Chudzik 239
TEXTILES FROM TOMB II IN DEIR EL-BAHARI: PRELIMINARY REPORT
FROM SEASON 2012/2013
Aleksandra Hallmann 247
DEIR EL-BAHARI. TEMPLE OF TUTHMOSIS III, CAMPAIGNS 2012–2013
Monika Dolińska 257
REPORT FROM FIELD RECONNAISSANCE AT GEBELEIN, KHOZAM AND EL-RIZEIQAT
Wojciech Ejsmond, Julia M. Chyla, Cezary Baka 265

DAKHLEH OASIS

- DAKHLEH OASIS PROJECT, PETROGLYPH UNIT: SEASONS 2012 AND 2013
Ewa Kuciewicz, Paweł Polkowski, Michał Kobusiewicz 275

BERENIKE

- BERENIKE PROJECT. HELLENISTIC FORT, ROMAN HARBOR, LATE ROMAN TEMPLE, AND
OTHER FIELDWORK: ARCHAEOLOGICAL WORK IN THE 2012 AND 2013 SEASONS
Steven E. Sidebotham, Iwona Zych, Joanna K. Rądkowska, Marek Woźniak 297

SUDAN

DONGOLA

- DONGOLA. SEASONS IN 2012–2013
Włodzimierz Godlewski 325
*APPENDIX: THE SKELETAL REMAINS FROM THE SANCTUARY OF ANNA
IN THE MONASTERY ON KOM H*
Robert Mahler 340

CONTENTS

WALL INSCRIPTIONS IN THE SOUTHWEST ANNEX TO THE MONASTERY ON KOM H AT DONGOLA: REPORT ON WORK IN THE 2013 SEASON <i>Adam Łajtar</i>	344
CRYPT 3 IN THE NORTHWEST ANNEX OF THE MONASTERY ON KOM H IN DONGOLA: REPORT ON THE EXPLORATION IN 2012 <i>Robert Mahler, Włodzimierz Godlewski, Katarzyna Danys-Lasek, Barbara Czaja</i>	352
BANGANARTI AND SELIB	
BANGANARTI AND SELIB IN 2011/2012 AND 2013 <i>Bogdan Żurawski</i>	369
EXCAVATIONS AT SELIB 2 IN 2012 <i>Roksana Hajduga, Katarzyna Solarska</i>	389
SELIB 1. PRELIMINARY REPORT FOR THE 2012 AND 2013 SEASONS <i>Aneta Cedro</i>	397
FAUNAL REMAINS FROM THE FORTIFIED SETTLEMENT AROUND THE CHURCH AT BANGANARTI IN SUDAN <i>Marta Osypińska</i>	411
EARLY MAKURIA (MTOM) PROJECT	
ANIMAL REMAINS FROM THE EARLY MAKURIAN CEMETERY IN EL-ZUMA (SEASON 2013) <i>Urszula Iwaszczuk</i>	425
GHAZALI	
GHAZALI 2012: PRELIMINARY REPORT <i>Artur Obłuski, Grzegorz Ochala, Miron Bogacki, Wiesław Malkowski, Szymon Maślak, Zaki ed-Din Mahmoud</i>	431
CYPRUS	
NEA PAPHOS	
NEA PAPHOS. SEASONS 2012 AND 2013 <i>Henryk Meyza</i>	443
LEBANON	
JIYEH	
PRELIMINARY REPORT ON THE 2012 AND 2013 EXCAVATION SEASONS AT JIYEH (PORPHYREON): WORK IN SECTOR D (RESIDENTIAL QUARTER) <i>Tomasz Waliszewski, Magdalena Antos, Piotr Jaworski, Piotr Makowski, Marcin Romaniuk, Rafał Solecki, Agnieszka Szymczak</i>	453
PRELIMINARY RESULTS OF A STRATIGRAPHIC ANALYSIS OF LATE ROMAN AND EARLY BYZANTINE ARCHITECTURE IN THE RESIDENTIAL QUARTER OF JIYEH <i>Michał Dzik</i>	475

CONTENTS

RESULTS OF A SURVEY CONDUCTED IN THE AREA OF THE JIYEH MARINA RESORT HOTEL COMPLEX IN THE 2012 SEASON <i>Zofia Kowarska, Szymon Lenarczyk</i>	491
---	-----

KUWAIT

AL-SUBIYAH AND FAILAKA ISLAND

TUMULUS BURIAL FIELD ON THE NORTH COAST OF KUWAIT BAY. PRELIMINARY EXCAVATION REPORT ON THE SPRING SEASON IN 2012 <i>Łukasz Rutkowski</i>	505
CHRISTIAN SETTLEMENT AT FAILAKA, QUSUR SITE (KUWAIT): EXCAVATIONS IN 2011 AND 2013 <i>Magdalena Żurek</i>	529
PRELIMINARY REPORT ON THE ARCHAEOLOGICAL SURVEY OF THE JOINT KUWAITI–POLISH MISSION, FAILAKA ISLAND, 2012 <i>Franciszek Pawlicki</i>	547
FAILAKA ARCHAEOLOGICAL RESEARCH PROJECT. PRELIMINARY RESULTS AFTER THE FIRST SEASON OF EXCAVATION AT THE KHARAIB EL-DESHT SITE IN 2013 <i>Agnieszka Pieńkowska</i>	560
APPENDIX 1: KHARAIB EL-DESHT 2013: POTTERY. PRELIMINARY REPORT <i>Marta Mierzejewska</i>	571
APPENDIX 2: SURVEY OF KHARAIB EL-DESHT BAY ON FAILAKA ISLAND: PRELIMINARY REPORT <i>Magdalena Nowakowska</i>	579

IRAQI KURDISTAN

NEWCOMERS AND AUTOCHTHONS. PRELIMINARY REPORT ON 2013 ACTIVITIES IN THE KURDISTAN AUTONOMOUS REGION, IRAQ <i>Dorota Ławecka</i>	591
---	-----

PAM STUDIES

LEVALLOIS TRADITION EPIGONES IN THE MIDDLE NILE VALLEY: SURVEY IN THE AFFAD BASIN <i>Marta Osypińska, Piotr Osypiński</i>	601
ZOOMORPHIC CLAY FIGURINES FROM TELL ARBID. PRELIMINARY REPORT <i>Maciej Makowski</i>	627
PLANT MACROFOSSILS FROM THE SITE OF TELL ARBID, NORTHEAST SYRIA (3RD–2ND MILLENNIUM BC). PRELIMINARY REPORT <i>Aldona Mueller-Bieniek, Krystyna Wasylkowa, Anna Smogorzewska</i>	657
THE ANIMAL ECONOMY OF PEOPLE LIVING IN THE SETTLEMENT OF TELL RAD SHAQRAH (SYRIA) <i>Joanna Piątkowska-Matecka, Rafał Koliński</i>	675

CONTENTS

THE SOLAR ALTAR IN THE TEMPLE OF HATSHEPSUT AT DEIR EL-BAHARI: ARCHITECTURE AND IDEOLOGY <i>Andrzej Ćwiek</i>	693
FAIENCE OBJECTS FROM THE TOMB MMA 1152 AT SHEIKH ABD EL-GURNA <i>Patryk Chudzik, Andrzej Ćwiek</i>	701
INDIAN STEEL: A FORGOTTEN COMMODITY OF THE GREAT TRADE ROUTES <i>Marek Woźniak</i>	709
MONETIZATION OF ROMAN EGYPT DURING THE FLAVIAN DYNASTY (AD 69–96): THE CASE OF ALEXANDRIA AND BERENIKE <i>Katarzyna Lach</i>	727
CROSS-CULTURAL BEAD ENCOUNTERS AT THE RED SEA PORT SITE OF BERENIKE, EGYPT. PRELIMINARY ASSESSMENT (SEASONS 2009–2012) <i>Joanna Then-Obluska</i>	735
A NEW LOOK ON SOME OLD GLASS FINDS FROM PALMYRA <i>Krzyszyna Gawlikowska</i>	779
NEW INSIGHTS INTO NUBIAN ARCHERY <i>Łukasz Zieliński</i>	791
INDEX OF SITES	803
GUIDELINES FOR AUTHORS	804
PCMA PUBLICATIONS	805

POLISH ARCHAEOLOGY IN THE MEDITERRANEAN (PAM)
Annual of the Polish Centre of Mediterranean Archaeology, University of Warsaw

PAM Editor-in-chief: Iwona Zych

Volume 24/1: Research

All texts peer-reviewed.

<http://www.pcma.uw.edu.pl/en/pam-journal/pam-independent-reviewers/>

Press-reviewing process: Urszula Wicenciak

Bibliographic editor: Aleksandra Zych

Language consultation: Iwona Zych

Technical editor: Iwona Zych

Digital processing: Ewa Czyżewska-Zalewska

Image processing and copyediting assistance: Ewa Czyżewska-Zalewska, Szymon Maślak, Marta Momot, Marek Puzkarski, Urszula Wicenciak

Original graphic design: Jerzy Kowalski, updated by Ewa Czyżewska-Zalewska for PCMA

DTP: Ewa Czyżewska-Zalewska, assisted by Agnieszka Dzwonek

Cover: Tumulus SB 100 from the Al-Subiyah region of Kuwait during exploration
(Photo M. Makowski)

ISSN 1234–5415 (Print), ISSN 2083–537X (Online)

© Polish Centre of Mediterranean Archaeology, University of Warsaw, Warszawa 2015

© Wydawnictwa Uniwersytetu Warszawskiego, Warszawa 2015

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the Polish Centre of Mediterranean Archaeology of the University of Warsaw.

Polish Centre of Mediterranean Archaeology, University of Warsaw

00-497 Warszawa, Poland, ul. Nowy Świat 4

e-mail: pam.pcma@uw.edu.pl

www.pcma.uw.edu.pl

Orders can be placed c/o Agnieszka Pieńkowska

a.pienkowska@uw.edu.pl

University of Warsaw Press

00-497 Warszawa, Poland, ul. Nowy Świat 4

www.wuw.pl; e-mail: wuw@uw.edu.pl

Internet Bookshop: www.wuw.pl/ksiegarnia

Printed in Poland

POLISH ARCHAEOLOGY IN THE MEDITERRANEAN

Published annually since 1990



PAM XXIV/1 Research

REPORTS

Fieldwork projects carried out by PCMA teams in the Ancient Near East and Africa

- scope: archaeological, geophysical, restoration and study work
- areas of interest: Egypt, Sudan, Cyprus, Syria, Lebanon, Kuwait, Iraq
- timespan: ten millennia from prehistory and protohistory through the medieval period

STUDIES

- archaeological, architectural and material research within the fields of study covered by PCMA fieldwork

PAM XXIV/2 Special Studies

Deir el-Bahari Studies

Editor Zbigniew E. Szafrński

Volume dedicated to research on specific egyptological and archaeological themes resulting from the ongoing work of the Polish conservation and restoration project in the Temple of Queen Hatshepsut in Deir el-Bahari (West Thebes, Luxor, Egypt). The 11 contributions included in this book concern mostly a later phase in the occupation of the complex, in the Third Intermediate Period (11th–8th century BC), when the abandoned temple was reused as a burial ground. A few of the articles refer to the original architectural form and decoration of the temple from the times of Hatshepsut (15th century BC). Also included is an article on tombs of three other queens of the Eighteenth Dynasty in the Valley of the Kings.

Available as full texts on-line at www.pcma.uw.edu.pl

PAM volumes 17 to the present available on-line from www.cecil.com

Information and orders:

www.pcma.uw.edu.pl

pcma@uw.edu.pl

pam.pcma@uw.edu.pl

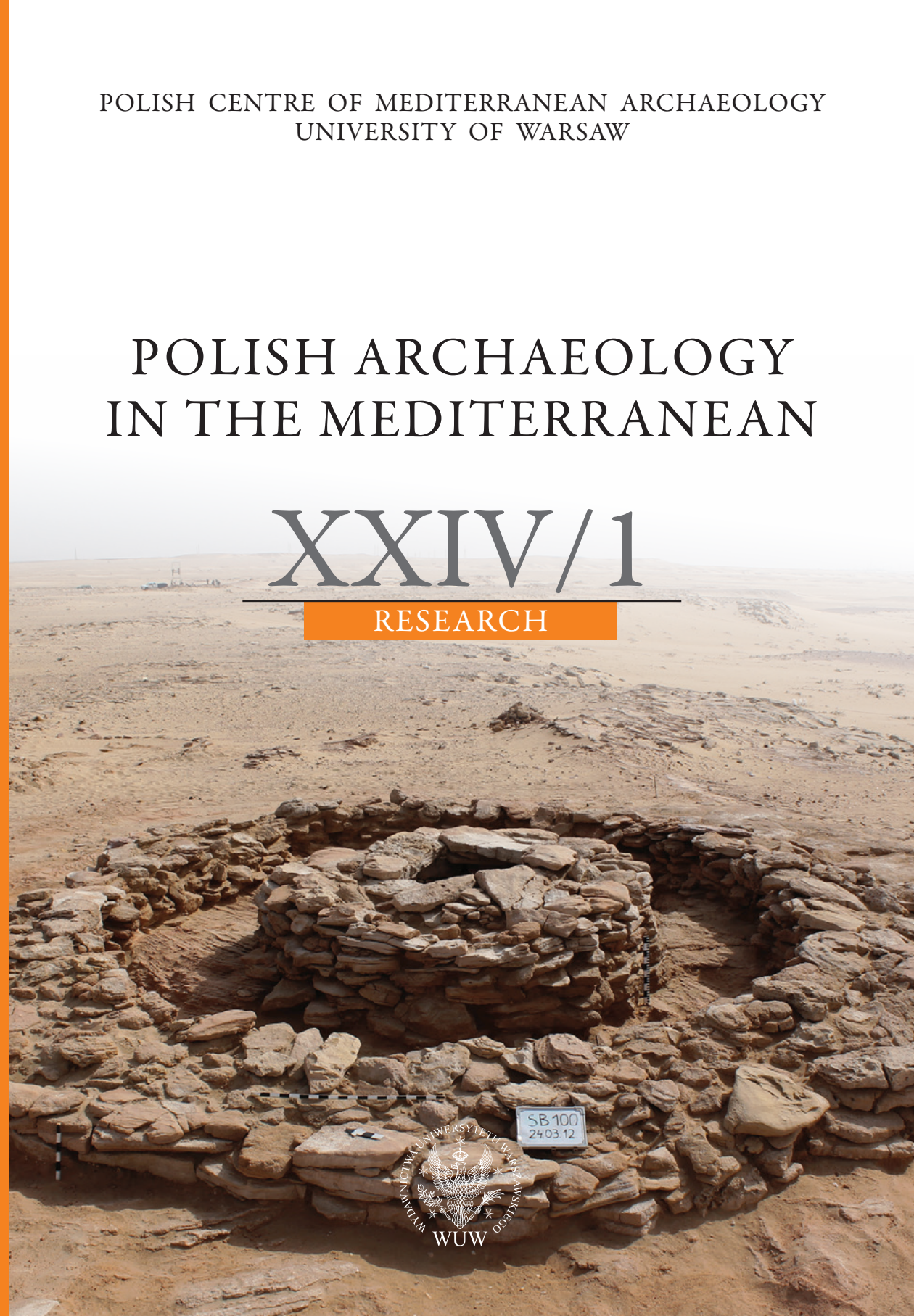
www.wuw.pl/ksiegarnia



RESEARCH

PAM XXIV/1

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW



POLISH ARCHAEOLOGY
IN THE MEDITERRANEAN

XXIV/1
RESEARCH