

**ARCHAEOLOGICAL SURVEY AND EXCAVATION AT THE WĀDĪ AL-YUTUM
AND MAGAŞŞ AREA - AL-‘AQABA (ASEYM):
A PRELIMINARY REPORT ON THE SECOND SEASON IN 2000**

Lutfi Khalil and Ricardo Eichmann

Introduction

The second season of ASEYM¹ took place between 30 January and 2 March 2000. The two main goals of this project were to excavate Ḥujayrat al-Ghuzlān (حجيرة الغزلان) and to survey the region east and south of al-‘Aqaba (العقبة).

ASEYM is a joint Jordanian-German project, sponsored and funded by the Deanship of Research of the University of Jordan and the Orient-Abteilung of the Deutsches Archäologisches Institut, in cooperation with the Department of Antiquities of Jordan. The staff included archaeologists Dirk Hecht, Lothar Herling, Sa’ad Al-Tawasi, Adeeb Al-Salamen, and Mahir Tarboush. The project’s field technician was Darar Depolsky, the Department of Antiquities representative was Adnan Rafaieh, and the Jericho-man was Ayish Abu Hilal. In addition, several specialists participated on the project on a part-time basis, including Jochen Gorsorf (C14 dating), Reinder Neef (Palaeobotanist), Norbert Benecke (Palaeozoologist), Irmgard Wagner (Photographer), and Marco Hofmann and Christian Schafter (surveyors). The work was supervised and directed by the authors.

The four objectives of the excavation at Ḥujayrat al-Ghuzlān were to:

1. examine the stratigraphy of the undestroyed areas of the site and date them;
2. obtain clear stratified sections at the destroyed areas;
3. compare the chronology, stratigraphy, and any possible relations between Tall Magaşş (Tall al-Magaşş المنص) and Ḥujayrat al-Ghuzlān; and
4. enhance the appearance of the site by removing the destroyed debris.

The three objectives of the survey of region east and south of al-‘Aqaba were to:

1. locate and record the archaeological sites using

GPS and differential GPS;

2. collect surface materials and document visible archaeological features; and
3. prepare a topographical map that includes all the discovered sites and detailed maps for the various historical periods.

The ASEYM project also examined the palaeobotany and palaeozoology of Tall Magaşş, Ḥujayrat al-Ghuzlān, and the surrounding region.

Excavation at Ḥujayrat al-Ghuzlān

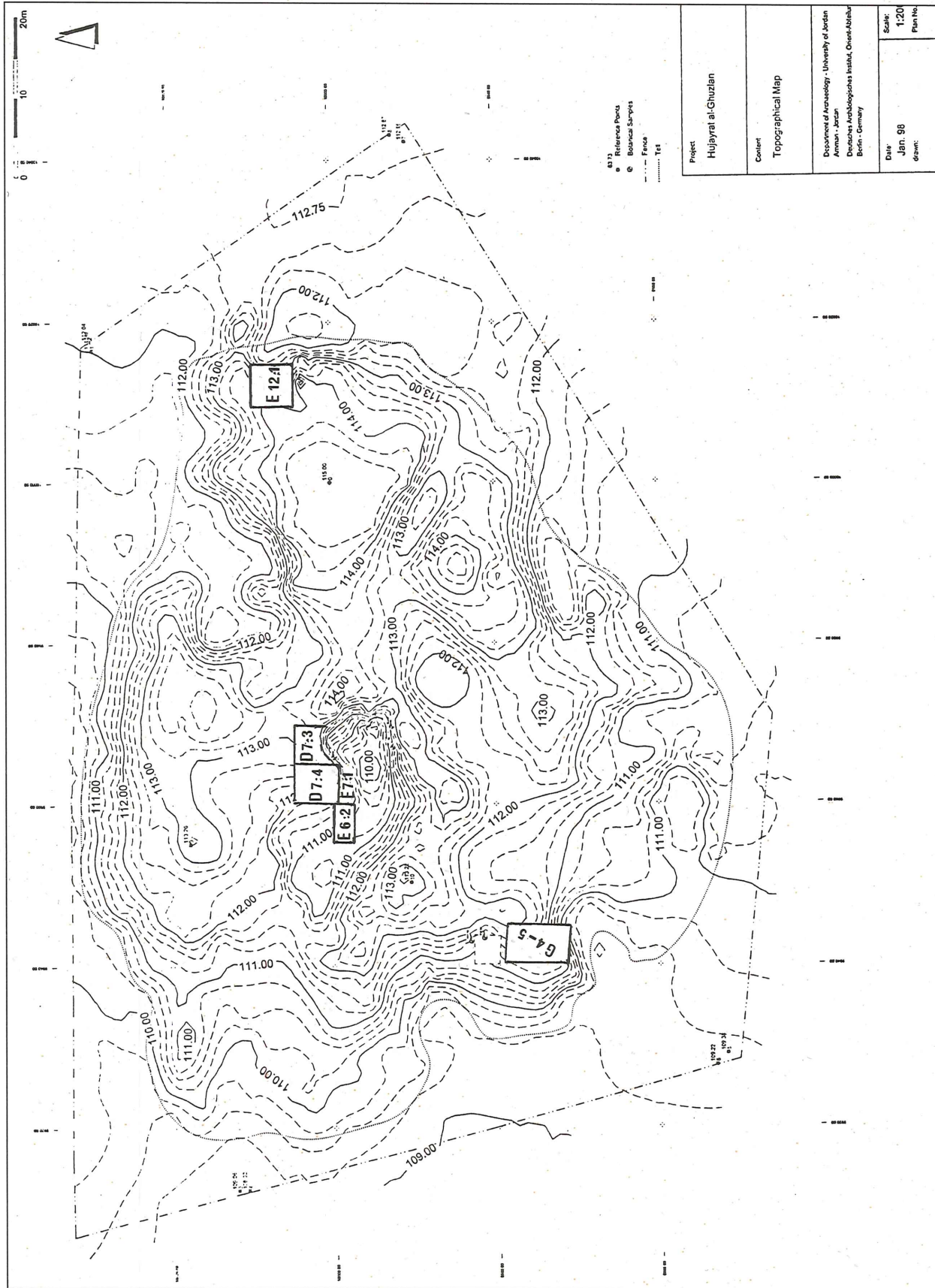
Ḥujayrat al-Ghuzlān is located approximately 3km north of al-‘Aqaba. The excavation of two small trenches (3 x 3m each) in 1990 revealed many artifacts, which are very similar to those found at Tall Magaşş. However, the stratigraphy of both trenches seems to have been disturbed (Khalil 1995: 73).

A systematic and intensive survey of the site was conducted during ASEYM’s first season in 1998. Many artifacts, including pottery, flints, shell, and bone, were collected. Archaeometallurgical remains, such as copper ore, slag, and crucible sherds, were also found (Khalil and Eichmann 1999: 507). In addition, surface finds and structures were recorded during the survey that covered an expanse of 500 x 700m to the east, southeast, and south of Ḥujayrat al-Ghuzlān. The structures were possibly used to catch runoff water, which flowed from Wādī al-Yutum (وادي اليتم) to the Gulf of Aqaba, for agricultural purposes.

In laying out squares E12:1 and G4-5, we considered the density of the distribution of the artifacts and the orientation and alignment of architectural remains. Trenches D7:3-4, D8:4, E6:1-2, and E7 were placed approximately in the middle of the site, which was badly destroyed, in order to obtain a clear stratification of the site (Fig. 1).

1. The preliminary results of the first season of ASEYM (1998), including the excavations at Tall Magaşş and Yutum B and the survey of Ḥujayrat al-Ghuzlān and the surrounding region, were published in *ADAJ* 43 (1999): 501-

520. Specialized reports on the flint, pottery, archaeometallurgy, palaeobotany, palaeozoology and Carbon 14 dating are in progress.



1. Contour map of Hujayrat al-Ghuzlan showing the excavated squares and trenches.

Square E12:1

Square E12:1 (5 x 5m) lies in the northeastern sector, at an incline to the east and near the edge of the site. The alignment of the remains of wall 1 was visible in the topsoil before digging. The removal of the sandy topsoil layer exposed more courses of the wall. In addition, a dump layer, ashy and dark grayish in color, was revealed at the western part of the square (loc. 4). This type of dump layer was found at various places in the square, such as inside pit 6 (loc. 6A); between wall 1 and the eastern balk (loc. 11); between wall 5 and the western balk (loc. 14); between walls 5 and 18 and the eastern wall of pit 6 (loc. 16). These loci were loose in texture and very rich in finds, including many pottery sherds, flints, animal bones, shells, copper archaeometallurgical remains, and large amounts of charcoal. These layers were similar in texture and content to what had been excavated during previous seasons at Tall Magaṣṣ (Khalil 1988: 81; 1995: 68; Khalil and Eichmann 1999: 506). It has been established that these layers represent the latest occupation phase at Tall Magaṣṣ.

The dump layer (loc. 4), was surrounded by a sandy brown layer (loc. 10) and a brown-yellowish compact layer of mud (loc. 20). Loci 11, 14, and 16 were fill layers between two walls (loci 1 and 13), and locus 6A filled pit 6.

Pit 6 is an erect structure made of clay and small stones. It has a rounded, but irregular shape, and its diameter at the opening measures approximately 1.9 x 1.8m. The architectural elements of the pit are composed of mud walls (loc. 5 and loc. 13) and the walls that connect them. The northern facade of the pit is not vertical, but leans to the south. Two layers, the above-mentioned

ashy layer (loc. 6A) and a soft layer of pale brown soil (loc. 6B) were excavated inside the pit.

Excavating loci 7 and 9, located north and south of pit 6, was very difficult. The clay texture of both loci was compact with shapeless lumps of dry clay. They contained white grits and large parts of a jar and a bowl (see Fig. 6:1).

Several walls were discovered within the square. Their construction materials can be classified into two main categories: 1) undressed alluvial and medium sized stones, built in irregular rough courses, bonded by clay; and 2) mud-bricks with average measurements of 50 x 30 x 10cm. A mixture of both types was also used to construct another wall (loc. 1), which is built of cobble stones in two rows. Its alignment is north-south, and it runs into the western and eastern balks. It is bonded, probably for support, with a mud-brick wall (loc. 13), which is part of pit 6. A small wall (loc. 3), built of the first type of construction material, has one row, is oriented southwest-northeast, and runs into the northern balk. Another wall (loc. 18) abuts the southern ends of walls 5 and 13 and the south side of pit 6 forming a rectangular installation structure that has a mud floor (loc. 21) (Fig. 2). The structure has no entrance and measures approximately 1.65 x 1.25m. This installation is similar in shape, size, and construction to a number of storage pits discovered in Area B of Tall Magaṣṣ (Khalil 1995: 73-74).

Trench G4-5

Trench G4-5 lies at the edge of the southwestern sector of the site and measures 7.00/6.70 x 4.10/4.05m. The measurements differ because of the way the trench was laid out. This trench was made to ex-



2. Walls and pit at square E 12:1.

cavate the area between sounding A2 from the 1990 season and the destroyed area located to the south.

The topsoil consisted of a loose layer of yellowish-brown soil that contained spots of ash and sand with various colors in different places. The layer varies in thickness from 10 to 50cm and inclines to the west.

A number of stratigraphic and architectural features were revealed beneath the topsoil such as the ashy dump layer (loc. 1) and two dark yellowish brown layers (loci 3 and 4). Within the latter locus, a number of cobblestones were found. They formed a rounded pit, with a diameter of approximately 50cm, that contained ash layers. A complete pottery jar was found in this pit. The jar (Fig. 6:3) is oval in shape, has two loop handles, and a flat base. It is similar in form and date to a jar that was found in a pit in square A6 during the 1998 season at Tall Magaṣṣ (Khalil and Eichmann 1999: 506). Another type of jar, almost cylindrical in shape like a pithos, was found in locus 4. The mouth of the jar measures 50cm in diameter and its height measures 52cm. The jar is handmade traditional ware, but not common to Tall Magaṣṣ.

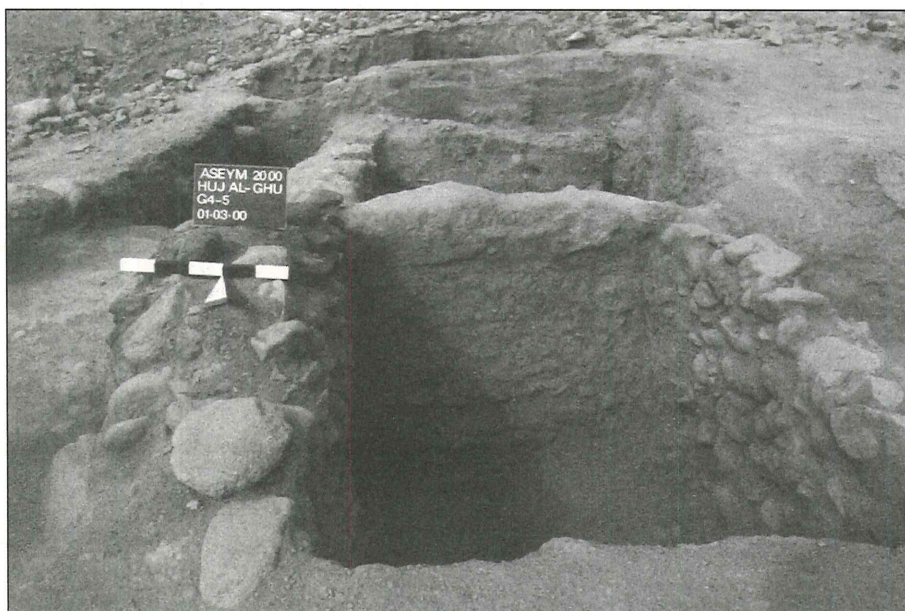
The building materials of the walls found in the trench are similar to those discussed in Square E 12:1. Three stone walls (loci 8, 10, and 20) and three mud walls (loci 11, 12, and 13) were revealed during the excavation of the topsoil and soil layers 3 and 4 (Fig. 3). Wall 11 is approximately 30cm thick and has a foundation made of cobblestones. However, the other two mud walls (loci 12 and 13), vary in thickness from 40 to 90cm. The three mud walls compose a structure that measures ap-

proximately 2.5m in width. It is within this structure that the above mentioned jars were retrieved. The length of the structure is not yet known. Walls 12 and 13 continue to the east, and the complete dimensions and function of the structure cannot be determined until further excavation is conducted.

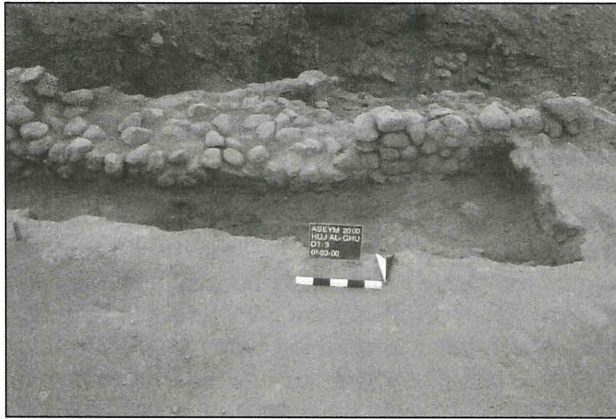
The stone walls (loci 8, 10, and 20) are parallel and run north-south. The distance between walls 8 and 10 is approximately 1.2m, and the distance between walls 8 and 20 has an average of 1.6m. Walls 8 and 20 extend under the southern balk to the destroyed area, where remains of stone walls can be traced in the same alignment. If those walls are related to each other, they would form a structure that measures approximately 2.5 x 1.6m. However, further excavation is needed to clarify this point and to determine the function and period of occupation.

Trenches E6:1-2, D7:3-4, and D8:4

As mentioned above, the site was destroyed at various locations. The area near the 1990 sounding trench A1, located at the middle of the site, was severely destroyed by a large bulldozer that cut a deep trench into the ground. This bulldozed trench revealed many stratigraphical and architectural features (Khalil and Eichmann 1999: fig 6). Trenches E6:1-2, D7:3-4, and D8:4 were strategically placed to approach the destroyed area from the north and west. These trenches were made to examine the stratigraphy at the middle of the site and to determine if the large stone wall, visible in the northern section of trench E7:1 (Fig. 4) extended further.



3. Stone and mud walls of Trench G4-5.



4. Walls and northern section of Trench E 7:1.

Trenches E6:1-2 are located west of the destroyed area. At a low level, the topsoil consists of a mixed layer of ash, sand, and alluvium, which had accumulated recently. While excavating the topsoil, a platform like structure (loc. 4) was revealed in trench E6:1. It is semi-circular in shape, built of cobbles, and has a diameter of approximately 1.9m. No finds were revealed while digging the mixed ash and sand layers, which are located between the stones of the platform.

Beneath the topsoil, a fire pit (loc. 7) and a hard burnt mud surface (loc. 5) were revealed at the southeastern corner of trench E6:2. Dump layers (loci 3, 10, and 11) were excavated at the northeastern corner of the same trench. These layers are a mixture of ash and sand, grayish brown in color, and contain many finds such as pottery, bones, remains of archaeometallurgical activities, and charcoal. Notable finds in locus 10 included fragments of pottery crucibles and a short handled spoon, that was made of well-fired pottery (Fig. 6:2). A parallel example to this spoon was found at Tulaylāt al-Ghasūl and described as “Peculiar to the Ghasulian” (Amiran 1969: 25). The excavation in trenches E6:1-2 revealed a mud wall (loc. 15), with a foundation built of cobbles (loc. 27), that is oriented north-south. Another mud wall (loc. 18) and its foundation wall (loc. 23) are similar in construction and orientation, but they are not related. It appears that walls 23 and 27 represent an early phase of occupation at the site.

A deep sounding (2 x 2m) was excavated at the northeastern corner of trenches D7:3-4 and D8:4, to the north of the destroyed area. These trenches have similar topsoil layers, which consist of mixed ash and sand, are light grayish brown in color, and are soft and easy to excavate. The layers incline to the west.

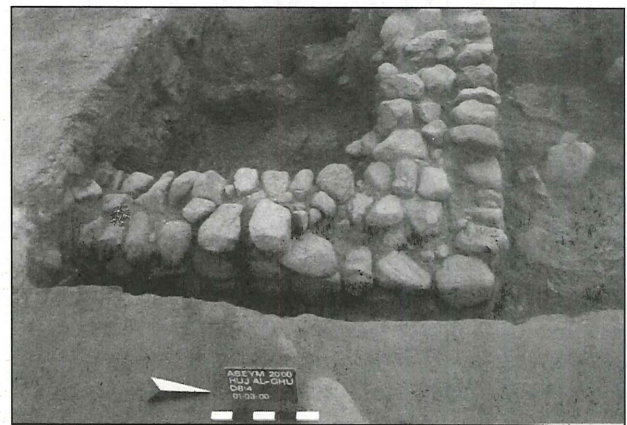
While excavating the topsoil layers, a number of stone walls were discovered within the three

trenches (loci 10 and 15 in D7:4; loci 10 and 11 in D7:3; loci 6 and 10 in D8:4). One wall (loc. 6) is constructed of boulder stones in two rows and filled with small to medium-sized cobbles. It is oriented north-south and has a width that varies between 70-80cm. On its northern side, it is joined with another wall (loc.10), which is built of similar materials and has a length of approximately 11m. The latter wall is oriented east-west, with a slight curve to the north. This wall consists of two rows in its eastern part and connects with another stone wall (loc. 11) at its western end in trenches D7:3-4. Wall 11 may be from a later period than wall 10. In addition, wall 10 is joined by another similar wall (loc. 15) at its western end.

The construction material and style of the three walls, which compose part of a larger structure, are similar. The other end of the structure can be estimated by two other walls (loci 6 and 10) to the south. If the stone wall, which appears in the northern section of trench E7:1, is part of the structure, then the structure measure 11 x 11m. Further excavation is needed in order to understand the function of this large building.

Inside this building, there is a circular mud installation (loc. 1) that was sealed by the topsoil layers in trenches D7:3 and D8:4. The installation has a diameter of approximately 3.5m, and the thickness of the rounded mud wall varies between 35 and 70cm. This installation was filled with the ashy dump layer (loc. 3) (Fig. 5) that had a light gray color, was easy to dig, and was rich in finds. Similar dump layers were excavated at both sites, Ḥujayrat al-Ghuzlān and Tall Magaṣṣ, and they represent the latest phase of occupation.

Two small mud-brick walls (loci 19 and 20) radiate from the circular mud installation in a north-western direction. The mud is stone-hard as a result of a strong fire, the cause of which is undetermined. The precise relationship between the



5. Mud installation and walls at Trenches D7:3 and D8:4.

walls and the installation is not yet clear.

The uppermost walls of a number of mud walls were revealed in trench D7:4 (loci 5, 17, 16, and 4). An L-shaped wall (loc. 5) is joined at its eastern end with a similar wall (loc. 17), and together, they form a narrow passage.

Juxtaposed to the western side of the stone wall (loc. 5) is a mud wall (loc. 16) that runs to the west. In addition, a mud wall (loc. 4) is joined with the stone wall (loc. 10) and is oriented northeast-southeast before it curves to the east. However, the relationship between the various walls and their functions needs to be clarified. It is difficult to suggest a detailed sequence and phase of the walls at this stage of the excavation.

In conclusion, the first season of excavation at *Ḥujayrat al-Ghuzlān* demonstrated that it is an important and promising site. The site contains different architectural and stratigraphical features and a plethora of finds, including pottery, flint, stones, shells, bones, and the remains of archaeometallurgical activities.

The latest phase (I) of occupation at the site is represented by dump pits and ashy layers; they are associated with various types of artifacts similar to those previously excavated at Tall Magaṣṣ. The pits of phase I were cut into occupation layers, and the ash layers were found inside the mud installation or deposited between walls. The occupation layers, pits, and walls represent phase II. The two phases are illustrated in all the excavated trenches.

A deep sounding (2 x 2m) was excavated at the northeastern corner of trench E6:1. It revealed two stone walls (loci. 23 and 27). These two walls represent the earliest stage of occupation at this site because their foundations are on the natural alluvial deposit of *Wādī al-Yutum* (virgin soil). Future campaigns, that extend the excavation horizontally, are recommended in order to expose more structures and to understand the functions of the different architectural features. The site should be excavated vertically as well so as to determine the sequence of the stratigraphy and architecture of the site.

Excavation at various squares and trenches revealed a large amount of handmade pottery that represent various techniques. Most of the pottery is similar in form, ware, and decoration to what was collected during the 1998 survey (Khalil and Eichmann 1999: 509-512, figs. 9 and 10). In addition, most of the pottery parallels pottery that was found at Tall Magaṣṣ (Khalil 1988: 82-83, figs. 7-10). Few new types were excavated at *Ḥujayrat al-*

Ghuzlān, i.e. the short handled spoon, moulds and the cylindrical jar. Therefore, the parallels to the pottery assemblage can be found in sites that date either to the Late Chalcolithic or Early Bronze Age periods (Fig. 6: 1-3).

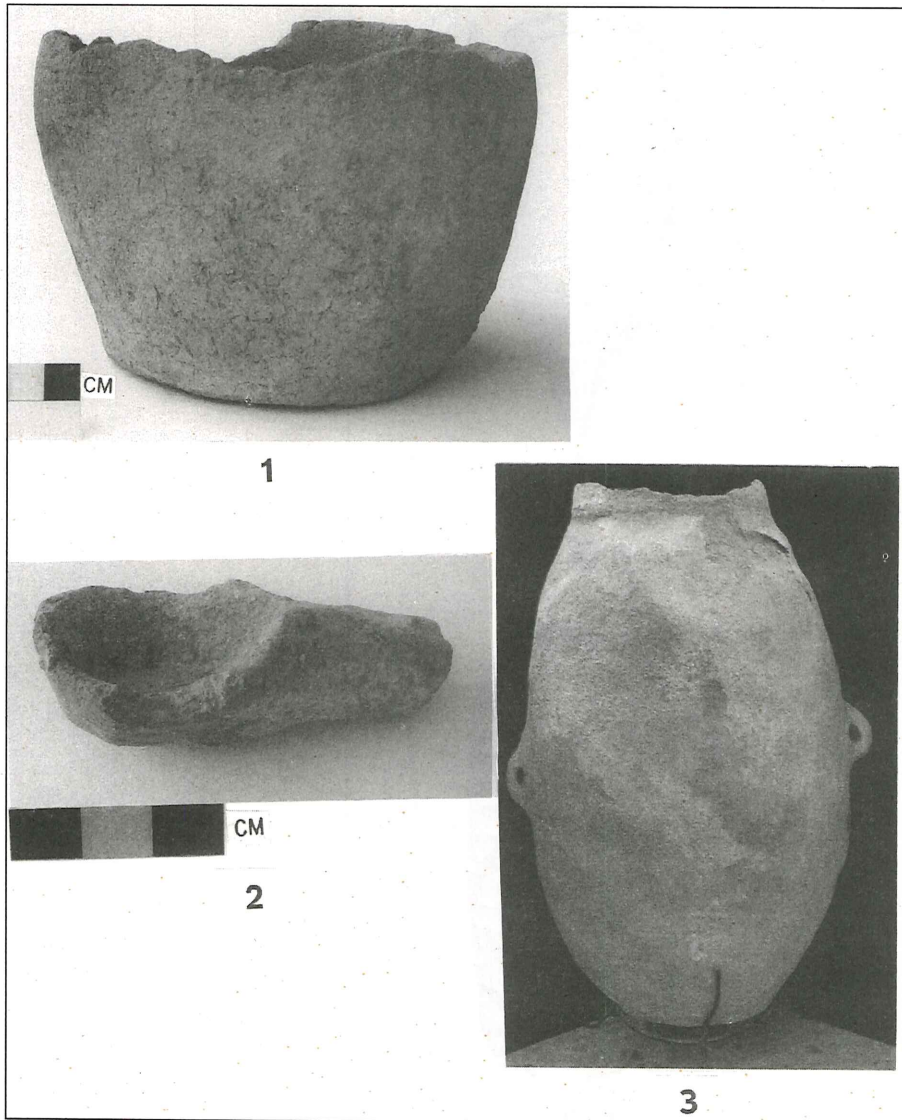
A considerable number of cortex tools were retrieved; they are made from flakes that have dorsal faces covered with cortex. These tools illustrate a variety of shapes and manufacturing techniques. Four complete flint artifacts are illustrated (Fig. 7: 1-4). No. 1 has a percussion bulb, but no striking platform, and has some short parallel incisions on the cortex. Its longitudinal section shows that the tools was struck from a more or less rounded nodule and not from tabular flint. No. 2 had been retouched; it has a top or tang of uncertain function at the basal end. Nos. 3 and 4 are almost oval in shape. The cortex on the basal end of No. 3 had been partly removed, as well as the striking point, which was caused by coarse retouches. No. 4, which still bears the striking platform of preparation and the bulbous, has retouches that are small and regular.²

A number of palaeobotanical and palaeozoological samples from Tall Magaṣṣ and *Ḥujayrat al-Ghuzlān* were studied by specialists. The carbonized plant remains, such as seeds, fruits, and charcoal, were analysed. It was determined that cereal crops, (two-row hulled barley and emmer wheat) were grown near both sites. It was surprising to discover that naked wheat and flax were cultivated near both sites because both crops do not thrive under the present climatic condition, not even in rainy years. This fact indicates that an early form of irrigation was used, especially since the results from the charcoal analysis revealed the presence of acacia, nitraria, and tamarisk wood, which indicates that there are no major differences in vegetation between the present and the past in the 'Aqaba region.

The various seasons of excavations at Tall Magaṣṣ and *Ḥujayrat al-Ghuzlān* revealed about 5,000 animal remains. The largest part of the fauna, almost 80%, derives from domestic animals with sheep and goat being the dominant species. The ratio between both species is nearly 3:2, which is contrary to recent conditions. Surprisingly besides sheep and goat domestic cattle could be identified on both sites. In addition, there was evidence of calves which indicates that this species was raised in the area.

The wild mammal fauna is represented at both sites by several species, including onager, dorcas

2. The flint tools were drawn and described by Mr. Lothar Herling.



6. Pottery bowl, spoon and jar.

gazelle, mountain gazelle, Arabian oryx, Nubian ibex, Persian fallow deer, and cape hare. In addition, shell remains of different marine mollusks were found at both sites.

The Survey East and South of al-‘Aqaba

An intensive archaeological and topographical survey was carried out to the east and south of al-‘Aqaba, which can be regarded as an unexplored region. The survey team reached the cliffs at the border between Jordan and Saudi Arabia in the south and the Wādī Umm Ḥarrāq وادي أم حراق south of ad-Dīsī الديسي in the east, thus covering an area of ca. 50 x 25km (Fig. 8).

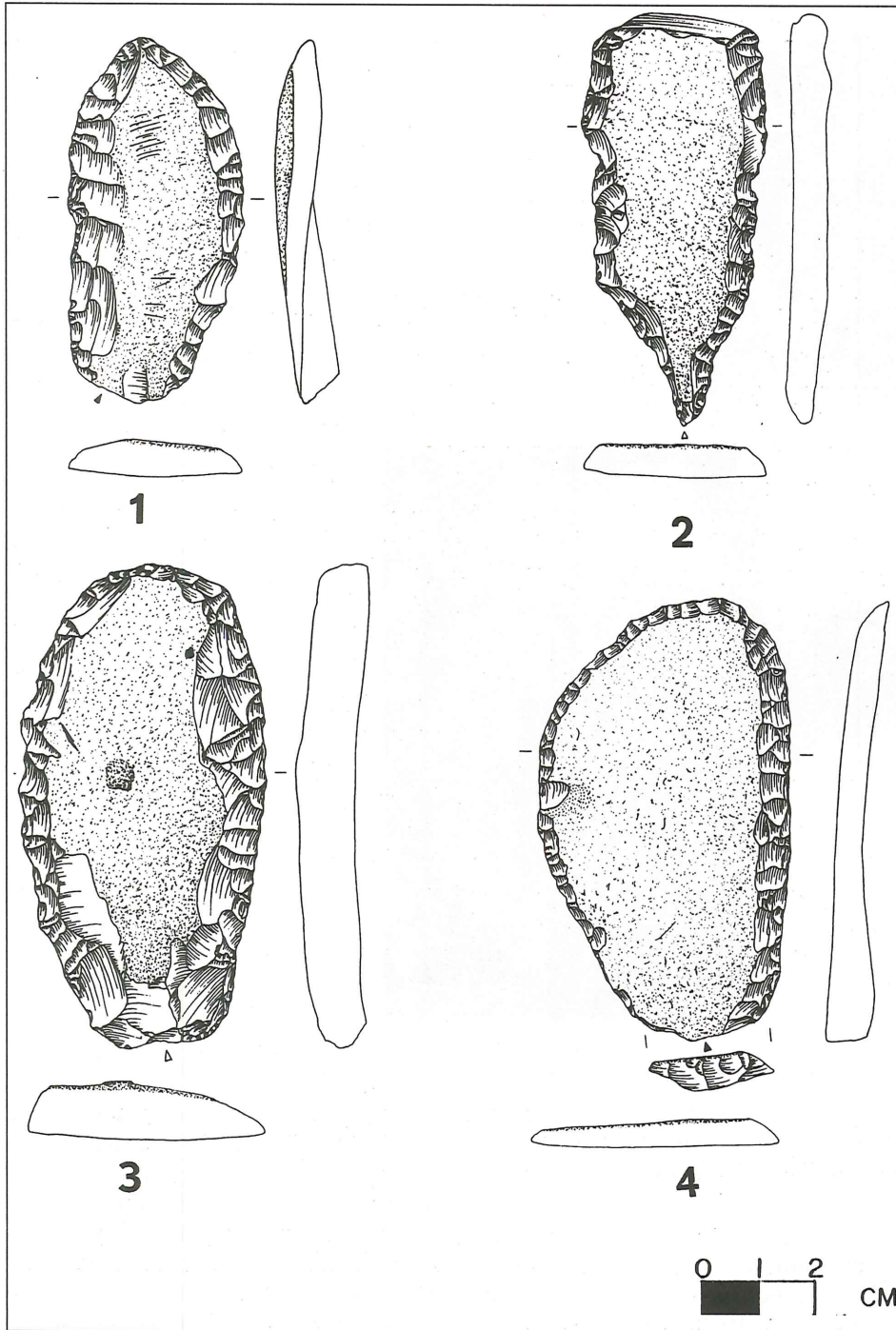
More than 75 archaeological sites were recorded with GPS and differential GPS. The sites represent various periods such as the Late Pa-

laeolithic, Epi-Palaeolithic, Neolithic, Chalcolithic, Early Bronze, Roman, Nabataean, Byzantine and Islamic.

Several Epi-Palaeolithic and Neolithic sites were recorded in Wādī Umm Ḥarrāq, south of ad-Dīsī and east of Wādī Ramm وادي رم. They are usually situated close to rockshelters, frequently looking south. At some of the sites, hundreds of lithic implements, such as blades, bladelets, backed bladelets, geometric microlithic, scrapers and arrowheads, were found on the surface.³

Pottery sherds of various periods were found on the surface of many sites; they were sometimes associated with architectural features or water installations. In addition, the survey revealed camp sites and tombs of uncertain ages and petroglyphs, which comprise writing in Thamudic, Nabataean

3. Mr. Lothar Herling is preparing a detailed report of the survey and analysis of the lithic material.



7. Flint cortex artifacts.

and Arabic. A large number of animal petroglyphs were found in Wādī Umm Ḥarrāq, Wādī Yutum al-‘Imrān وادي يتم العمران and near the ‘Aqaba back road. These petroglyphs depict capricorns, antelopes, camels, and other non-identified quadrupeds (Fig. 9), on which human figures are sometimes standing or sitting.

At Umm Nuṣaylah أم نصيلة, a site which is located east of al-‘Aqaba, remains of a settlement, including rounded and rectangular structures built of

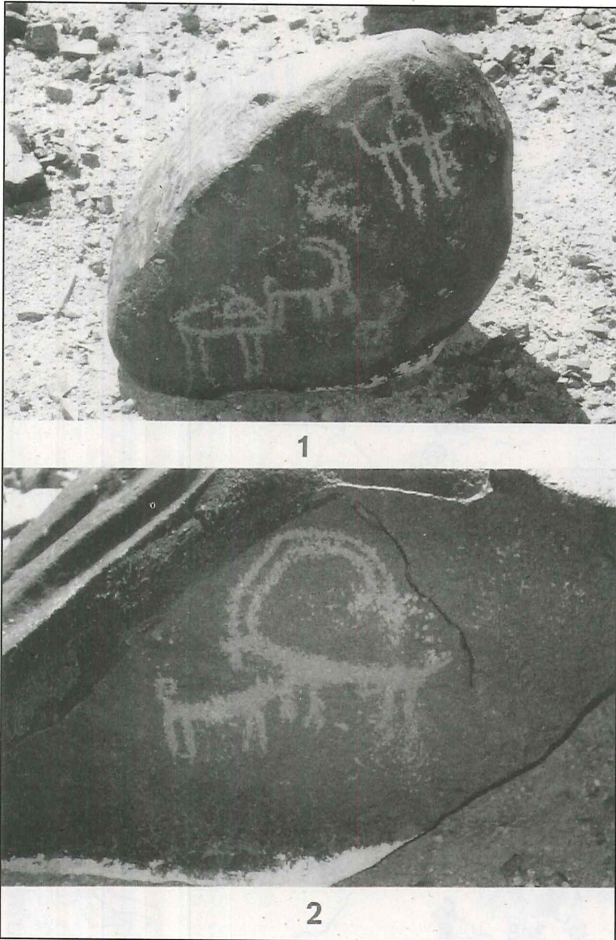
undressed stones were recorded. According to local people, these houses were used as shelters for the inhabitants of al-‘Aqaba during World War I, when the Turkish garrison located in the town was bombed by the British vessels.

Acknowledgments

We would like to thank Dr. Fawaz Al-Khraysheh, Director-General of the Department of Antiquities, for his cooperation. We also wish to



8. Map of surveyed area at Wādī Umm Harrāq with major sites.



9. Animal petroglyphs.

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L. Khalil
Department of Archaeology
University of Jordan
'Ammān - Jordan

R. Eichmann
Deutsches Archäologisches
Institut Orientabteilung
Podbeilskiallee 69-71
14195 Berlin - Germany

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