

## Excavations at the Early Bronze Age I-II Settlement at Umm Saisabān Near Petra

*Ulrich Hübner*<sup>1</sup>

### Abstract

Since 2011 University of Kiel (Germany) has been conducting excavations under the directorship of Ulrich Hübner at the Early Bronze Age Site Umm Saisabān in the Petra area in cooperation with the Natural History Society of Nuremberg. It seems likely that the remote place was chosen for defensive purpose, and numerous store jars in houses and buildings suggest that the main purpose of the site was storing goods from agriculture and pastoralism. Since the storage was empty, it seems the place was orderly deserted. Probably Umm Saisabān was destroyed after it had been evacuated.

**Keywords:** Petra area; Early Bronze Age I-II; hilltop settlement.

### Introduction

Umm Saisabān was discovered 1983 by Manfred Lindner (1918-2007) (Hübner and Wenning 2009). He surveyed the site and started the first excavations in the years 1998-1999 and 2001 (Lindner, Hübner, and Genz 2001; Lindner, Schreyer, and Gunsam 2005).

Since 2011 the University of Kiel (Germany) has been conducting excavations under the directorship of Ulrich Hübner on the eastern plateau of Umm Saisabān in southern Jordan in cooperation with the Naturhistorische Gesellschaft Nürnberg / Natural History Society of Nuremberg (Hübner 2013a; 2013b; 2015; 2018). Thanks are due to the Department of Antiquities of Jordan in Amman and Petra - esp. Dr. Munther M. Jamhawi and Aktham O. Abbadi (Amman) and Dr. Imad al-Hijazeen (Petra) - as well as to Elisabeth Schreyer, Hermann Knapp, Volker Wiederholt and Gabriele Prasser (Nuremberg) for their reliable support.<sup>2</sup> For many years the excavation team has been housed and supported by Bedūl at Umm Saihūn, most notably by Aude b. Dachlallah b. Qublan.

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<sup>1</sup> Corresponding author: email, [ulrichhuebner@t-online.de](mailto:ulrichhuebner@t-online.de), (Hübner, Ulrich). Orcid number: <https://orcid.org/0000-0002-4527-2494>, Professor Emeritus, University of Kiel, Germany.

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<sup>2</sup> Cooperation e.g. also with Pieter M. Grootes and Matthias Hüls (Leibniz-Labor für Altersbestimmung und Isotopenforschung / Leibniz-Laboratory for Radiometric Dating and Stable Isotope Research, University Kiel (Germany), with B. Lucke (Universität Erlangen-Nürnberg, Institute of Geography / Deutsche Forschungsgemeinschaft / German Research Foundation) (Lucke 2019) and with The Abegg-Foundation, Riggisberg (Switzerland).

## Topography

Umm Saisabān is situated to the north of Petra on three adjacent plateaus on the northern rim of the Jabal ad-Dair at an elevation of ca. 1100 m a.s.l. (N 30.34595; E 35.43178) (fig. 1). The site is bordered to the north by the Wādī Mirwān (Lindner, Hübner, and Genz 2001: 304-306), which leads into the Wādī Mūsā, and to the south by the massif of the Jabal ad-Dair and by the Jabal Umm Saisabān. From the latter, a wādī of the same name (Wādī Umm Saisabān) emerges. It certainly played an important role in providing the settlement with water and it separates the eastern plateau from the middle one (fig. 2) and from the anticline connecting Umm Saisabān with Petra via the Wādī Muaisra Gharbiyye. As the narrow track through the Wādī Muaisra Gharbiyye cannot be travelled with pack animals, in order to reach the Petra basin with donkeys one either had to make the detour around the Jabal ad-Dair to the west (fig. 3) or to the east through the Wādī Muaisra Sharqiyye. The range of sight to the north and east is excellent: Across the Ard al-Baidhā, Petra's northern granary (Alcock and Knodell 2012; Knodell and Alcock 2011), Shamase (Lindner and Gunsam 2002) and the region around Sēl Aqlāt are visible right up to the modern settlement of Amārīn, with the Jabal al-Qarn, which was populated in the Early Bronze Age (Vella et al. 2012), and the partly forested Shara mountains around Hishe rising up beyond that (fig. 4).

## The Early Bronze Settlement

The ancient (Canaanite) name of the settlement upon Umm Saisabān is unknown. The Arab name Umm Saisabān (Umm Sisibāne in dialect), “Mother of the Bladder-Senna“, is based on the bladder-senna (*colutea aborescens*) which can often be found around the region. The eastern plateau provides the largest settling space and therefore the settlement's core, i. e. the highest number of buildings and the largest ones, lay here. Since Umm Saisabān was only populated during the end of 4<sup>th</sup> / first half of the 3<sup>rd</sup> millenium BCE (Early Bronze Age I-II) based on pottery and radio carbon dates — with only a few terraces originating from the Nabatean period (and besides the Nabatean sanctuary beneath Umm Saisabān in the Wādī Mirwān) —, the settlement has never been built over. Despite the natural erosion and the occasional stone robbery, it is quite well preserved. The outline of most buildings is visible on the surface. Therefore, all known buildings have been documented in stone-by-stone drawings. It is one of the foremost aims of the excavations to compile an overall and possibly complete plan of the Early Bronze Age settlement.

The center of the eastern plateau is formed by a prominent ridge, around which several buildings and their courtyards are grouped (fig. 5). The broad-room House 20 of 5,50 x 7,05 m (fig. 6) had been excavated in 2011-2012, in which a cosmetic palette made by siltstone and imported from the pre-/early dynastic Egypt was discovered (Hübner 2013a; Sowada 2009: 226-232) (fig. 7). After the excavation of House 20 the work has been focusing on House 30 to its south (fig. 8). It was erected just to the south of the central ridge, has a length of about 9,20 m and is 4,60 m wide on the northern side (exterior dimensions). Its long axis runs roughly

in north-south directions. Originally, the walls were constructed as dry stone walls with clay applied to and spread over the gaps. It probably featured a courtyard on the western and southwestern side. Another building was added to the northeast. To the south, a lane separated House 30 from the neighboring buildings which are now partly buried beneath the debris from the slope of the Jabal Umm Saisabān. That lane is an extension of the path that led from the Wādī Muaisra Gharbiyye to Umm Saisabān via the aforementioned anticline. It split up in two just to the south of House 30: To the northwest it would reach House 20, to the northeast both entrances of House 30 and the other buildings to the east of the central ridge. Whereas the floor in House 20 consists of plain bedrock, House 30 featured a floor of beaten earth which would level out the bedrock's slight irregularities. It is a typical Early Bronze broad-room house which, however, stands out for a number of reasons:

1. The western outer wall does not run along a straight line but features an inset by which the northern half of the house (3,20 m in length, 4,60 m in width) is rendered both shorter and narrower in comparison to the southern part (6 x 6 m). There is no apparent topographic or architectural reason for this.

2. There are two entrances in the eastern outer wall. In both cases, the stone slab forming the threshold is placed just at the outside of the doorway, bordering the outer facade. From here, one would not only enter the building, but also step downwards into it. The southern doorway is the wider one and therefore probably was the main entrance. Here the stone forming the door socket is preserved in situ (fig. 9). Thus the doorway could once be closed off by a swivel door with one leaf as it is still frequently the case around the region with traditional houses from modern times (fig. 10).

3. A most striking feature of House 30 are the double stone benches: Along the inner wall, two parallel benches are constructed in a stepped manner. Both are about 25-40 cm deep and around 25 cm high, i. e. the upper bench is situated ca. 25 cm above the lower one. (Only on the short stretch of wall to the south of the southern entrance there is only a single bench.)

The house could be roofed in one stretch without the need for additional support on the inside. Such a construction can be found in similar houses (even slightly larger ones) at the region between Taiyibe and Shaubak from the late Ottoman and the early Emirate period resp.: Logs of endemic juniper and oak are laid across the room as roof beams from one long side to the other (fig. 11). Upon them, mats of reed are placed, since reed was and is found in abundance around the mountain springs of the region. The mats are then covered with packs of clay which in turn is caulked with water-repellent plastering. Since that way the beams do span quite a distance, it is unlikely that the roof was ever utilized or even stepped upon on a regular basis, i. e. it hardly served as a working- or sleeping-space. The uprightly erected ashlar in the interior are probably not the remains of roof-supporting constructions but rather working tables and trays: They are not situated at statically central points and no indications of extensions up to the roof were found.

Additionally, they were just scarcely founded into the earth, so they would have been far too unstable to serve as support for the roof.

In the southwestern corner stood a low working table, besides which two grinding stones (hand querns) were found that would have served for grinding grain (fig. 12), just as the parallel example at House 1 on the middle plateau (Lindner, Hübner and Genz, 2001: 287-310, fig. 15; 18). In the southeastern corner, a flat stone slab was sunk into the floor to serve as a hand mortar. To the right stood a rectangular monolith with a flattened top and to the east of that another monolith, tapering in a triangular shape and resembling a stele but with no practical function discernible. Perhaps it served as a cultic stele, and the rectangular monolith beside it could have been used as a domestic altar. No findings or single finds, however, present any further indications for cultic use. The ceramics consist mainly of store jars, just as in House 1, 2 and 20. The high number of store jars needs so much space that the house served more for storage than for living and sleeping. Again, some stone tools have been found (but all of them on the surface), e. g. a silex tool, typical of the Chalcolithic and the Early Bronze Age, with the dorsal surface covered by cortex and the ventral surface showing typical characteristics such as bulbs of applied force and Wallner-lines (fig. 13).

Another part of the domestic inventory was a fragment of a basalt vessel measuring 12,7 cm in height (fig. 14) (Amiran and Porat 1984). Two stone board games with 3 x 10 fields were found upon the upper bench on the western side, i.e. a complete (fig. 15) and a fragmentary 30-field board game (Hübner 1992: 67-74). Those are not the first ones found upon Umm Saisabān. The previously known examples, though, were surface finds, so they could not be dated to the Early Bronze Age with final certainty (Lindner, Hübner, and Genz, 2001: 287-310, fig. 9). Amongst the most unusual finds was a lid made of sandstone, 26 cm in diameter, which originally served as a plug to a store jar (fig. 16). On one side, the imprint of a textile net is preserved to the extent of max. 10 x 4 cm within a layer of cemented and compressed earth (fig. 17). Apparently, the lid was fastened on the jar by pulling a net over plug and mouth and then tightening it around the jar's neck, thereby fixating the lid on the jar's opening. Thus, the net would have been upon the lid's upper side. Now, when House 30 collapsed, so did the jar and fell head first upon the floor. Consequently, the resulting pressure of the overlying debris preserved part of the net indirectly as a partial imprint. Probably the net was made of linen. Regular Schorte, Anja Bayer and Renate Tschirren of the Abegg-Foundation in Riggisberg (Switzerland) kindly examined and commented on photographs of this find: The structure of the net, measuring ca. 1,5 cm between two intersections, is both rather loose and at the same time very regular (Emery 1980: 30-31. 52. 54. 217, fig. 7; 57; 63; 328). However, neither the nature of the filaments nor of their connections at the intersecting points is discernible in any detail, so there is nothing to be said for sure about its manufacturing process. Original textile material from the Chalcolithic and the Early Bronze Age are preserved in the arid regions of Palestine, occasionally imprints of textiles as well

(cf. e.g. Shamir 2014; Shamir and Rosen 2015; Doumani and Fachetti 2012).

At the southern border of the settlement a leopard or carnivore trap was excavated 2018 (fig. 18), similar to the traps in the Negev, the Dead Sea Region and Sinai (Avner et al., 2011): The trap comprise an elongated cell was built of two parallel rows of upright stones, with an opening at one narrow end. The cell is roofed by large, flat stone slabs (Hübner: forthcoming). Early Bronze sherds found immediately to the trap indicates that the trap was probably built and used in Early Bronze times.

### **Conclusions**

Umm Saisabān is one of the rare Early Bronze I-II Age sites in the Petra region (Lindner, Genz and Gebel 2000). It was constructed on a high, but relatively flat sandstone plateau north of Petra in the Jabal ad-Dair mountains, near an escarpment of the rift valley where a temporary waterfall drops down to the Wādī Araba during winter rains. It seems likely that the spectacular, but remote place was chosen for defensive purpose, and numerous store jars suggest that the main purpose of the site was storing goods from the mixed economy (agriculture and pastoralism). Since the store jars were empty, it seems the place was orderly deserted. Probably Umm Saisabān was destroyed after it had been evacuated.

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**Figure 3: Umm Saisabān, track to ad-Dair from southeast**



**Figure 4: Umm Saisabān and Ard al-Baidhā from southwest**



**Figure 5: Umm Saisabān, Eastern Plateau, Houses 20 and 30 from southwest**



**Figure 6: Umm Saisabān, House 20 from south**



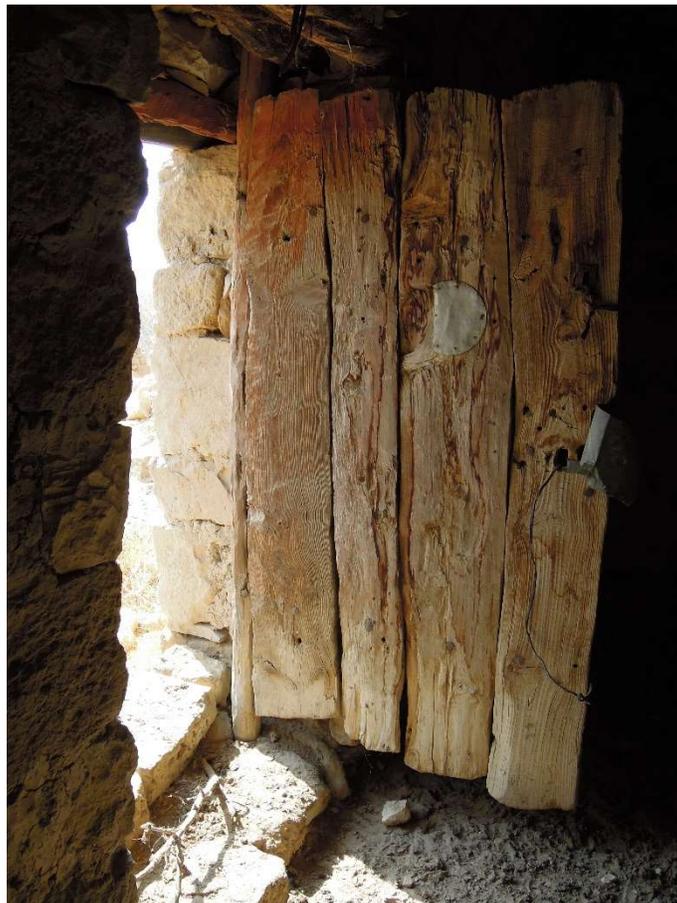
**Figure 7: Umm Saisabān, House 20, stone palette**



**Figure 8: Umm Saisabān, House 30 from north**



**Figure 9: Umm Saisabān, House 30, southern entrance with door socket**



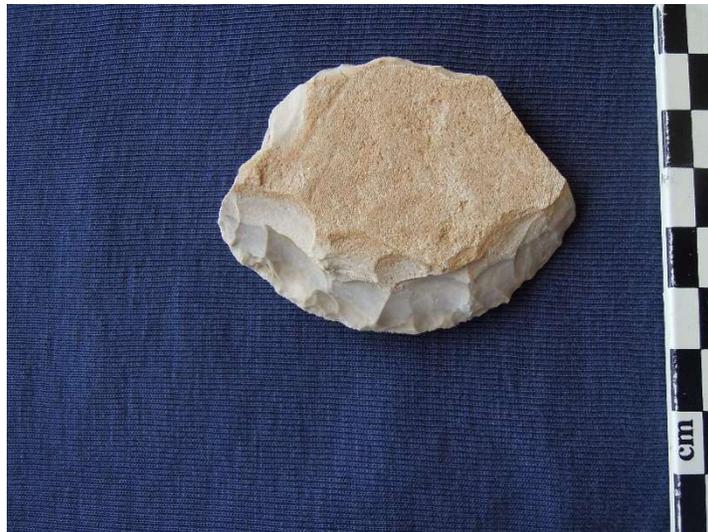
**Figure 10: Sammāh, wooden door in a Late Ottoman house**



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**Figure 12: Umm Saisabān, House 30, southern part from east**



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**Figure 16: Umm Saisabān, House 30, stone lid with textile impression**



**Figure 17: Umm Saisabān, House 30, stone lid with textile impression (detail)**



**Figure 18: Umm Saisabān, leopard trap from north**

## **Contributor**

### **Ulrich Hübner:**

Professor Emeritus of Old Testament Studies and Biblical Archaeology at the University of Kiel, Germany. His main publications are on archaeology, epigraphy, history and numismatics of Palestine, specially of Jordan. He has participated, since 1974, to fieldwork projects in Southern Levant and Syria. Since 1997-2000 he was working as Co-Director at archaeological surveys in the Petra-region in southern Jordan, since 2002 as Director, specially of the excavations at Umm Saisaban, an Early Bronze I-II village north of Petra, Southern Jordan.

## أعمال التنقيب في العصرين البرونزيين الأول والثاني في موقع أم سيسان بالقرب من البترا

أولريخ هوبنر

### ملخص

تُنْفَذُ جامعة كيل الألمانية منذ عام 2011 حفرياتٍ تحت إدارة أولريخ هوبنر في موقع أم سيسان في منطقة البترا، الذي يعود إلى العصر البرونزي المبكر، بالتعاون مع جمعية نورنبيرغ للتاريخ الطبيعي. ويبدو أنّ اختيار الموقع كان لأسباب دفاعية؛ حيث يشير وجود أعداد كبيرة من جزار التخزين في البيوت والمباني إلى أنّ وظيفة الموقع الأساسية كانت تخزين المواد من الزراعة والرعي. ولما كان مكان التخزين فارغاً، فيبدو أنّه هُجر بطريقة منظمة. ومن المحتمل أنّ أم سيسان دُمّر بعد إخلاء الموقع.

**الكلمات الدالة:** منطقة البترا، العصر البرونزي المبكر، المرحلتان الأولى والثانية، موقع رأس النل.

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