

THE BĪR MADHKŪR PROJECT: A PRELIMINARY REPORT ON THE 2008 SEASON

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Introduction

This preliminary report summarizes key results of the 2008 season of the Bir Madhkur Project, conducted from 16 June to 20 July. The project is sponsored by the George Washington University and is affiliated with the American Schools of Oriental Research (ASOR) through its Committee on Archaeological Policy. Financial support for the project was provided by the Royal Geographical Society of Great Britain, an ASOR Harris Grant and Dowling College. The project operates under a permit granted by the Department of Antiquities, and the author wishes to thank Dr Fawwaz al-Khraysheh for his generous support.

During the 2008 season, the field team included Andrew M. Smith II as director and photographer, five field supervisors, 20 students and up to 13 local workmen. The Department of Antiquities representative was Mohammed Zahran of the Safi office. Field supervisors included Miranda Angus as assistant to the surveyor, Robert Darby, Ben Dolinka (pottery consultant), Brooklynne Fothergill (faunal analyst), Elizabeth Osinga and Jennifer Ramsay (archaeobotanist). Student staff included Melissa Bailey, Nikki Bose, William Caccese, Janise Dupuis, Jennie Erikson, Jessie George, Emily Grace, Marita Johnson, Eric Kingsbury, Tu Phuong Le, Bevan Lee, Lisa Mak, Isaiah Moose, Greg Oke, Janet Stewart, Petra Vaiglova, Lindsay Vine, Jeremy Withers and Maggie Woo.

Overview of the Project

The Bir Madhkur Project is a multi-disciplinary field project in southern Jordan designed to showcase the ancient site of Bir Madhkur as a central component in a broader examination of the historical geography of Wādī ‘Arabah

through archaeological and ethnographic research. Wādī ‘Arabah is part of the Great Rift Valley that extends *ca* 160 kilometers north from the Gulf of ‘Aqaba to the Dead Sea. Bir Madhkur lies in the foothills of Wādī ‘Arabah (Fig. 1) and was one of the first major way-stations along the ancient Incense Road that crossed the Araba valley west of Petra. Prominent archaeological remains at Bir Madhkur include a Roman / Byzantine fort or *castellum*, which measures just over 30 × 30m, a (presumed) bath building,



1. Map of the region showing location of Bir Madhkur.

a civilian settlement west of the fort, cemeteries, and numerous other structures in outlying areas, especially on the ridge that separates the fort from the local spring (Fig. 2). Bīr Madhkūr was occupied primarily in the Nabataean, Roman and Byzantine periods.

While Bīr Madhkūr would have served as a prominent way-station on an important east-west route across Wādī ‘Arabah throughout its history, the regional significance of the site increased under the Romans, when it served as a regional, administrative hub where soldiers watched over and monitored the movements of a mixed population of farmers, pastoralists and transient merchants. One key goal of this project is to pursue a deeper understanding of how these human communities (indigenous and otherwise) defined themselves in relation to their environment and to one another. Another key goal, more generally, is to illuminate the long

settlement history of Bīr Madhkūr and of the central Wādī ‘Arabah, inclusive of the activities of present day bedouin.

Historical Sources

Two sources are important for identifying Bīr Madhkūr in Antiquity. One is the Beersheba Edict (Alt 1921), a fragmentary inscription that records the taxes imposed on various communities in Wādī ‘Arabah and the surrounding areas in the Byzantine period. The other is the *Notitia Dignitatum* (*Not. Dign. Or.*), an Early Byzantine military register that records troop deployments throughout the Roman Empire (Seeck 1876). It is most likely, as Albrecht Alt (1935) first suggested, that Bīr Madhkūr should be identified with the ancient site of Mōa, a place-name that also appears in the mosaic map discovered in Mādabā (Avi-Yonah 1954; Donner 1992). According to the Beersheba Edict, Mōa had a tax



2. Satellite view of Bīr Madhkūr showing main features and excavation areas. The main features at the Roman fort (Area A), the bath (Area B) and the domestic complex (Area C) were targeted for excavation, as were Area D, a structure south of the fort, and Area H, a regional farmhouse.

burden of at least 15 gold coins, so the ancient settlement must have been of some regional importance. On the other hand, others have proposed identifying Bir Madhkūr with *Calamona* of the *Notitia*, the base of a mounted cavalry unit (*cohors prima equitata: Not. Dign. Or.* 34.43; Rothenberg 1971: 217), which is not improbable given that the Roman / Byzantine fort at the site is a *quadriburgium*, a fort-type which most likely housed a mounted cavalry unit. In the end, unfortunately, the evidence is inconclusive, and certainty will be attained only when an inscription is found that specifically identifies the ancient site.

Previous Research

The history of exploration at Bir Madhkūr and its regional landscape is brief. There seem to be no accounts of visits to the site among those explorers who journeyed through Wādī ‘Arabah before the 20th century (Smith 2005a). The earliest accounts are those of Fritz Frank (1934) and Nelson Glueck (1935), who conducted sweeping archaeological explorations of the ‘Arabah in the 1930s. Both Frank and Glueck remained at Bir Madhkūr overnight, and their observations and descriptions of the ruins are fundamental to our understanding of the site prior to the development of the 1970s. Later explorations of Bir Madhkūr were purposive and brief (e.g. King *et al.* 1987). These include a short visit to the site by the author in 1994 (Smith *et al.* 1997), conducted as part of the Southeast Araba Archaeological Survey, the regional survey component of the Roman Aqaba Project (Parker 2003).

In 1997, the author directed the Bir Madhkūr Excavation and Survey Project, which focused on: (1) sampling some burials at Bir Madhkūr in order to assess the site’s feasibility for bio-archaeological research (Perry 2007), and (2) conducting a purposive reconnaissance survey of unexplored regions of the central ‘Arabah with the settlement at Bir Madhkūr as a focal point. The results of this survey, which continued in 2003, validated the need to continue fieldwork at the site and in the territory around the site (Smith 2005a). In addition to important new evidence of agricultural activity, two new caravanserais were discovered and documentation began of an extensive network of pathways

and roadways that interconnected an array of archaeological sites demonstrative of pastoral and agricultural activity in the region (Smith 2005b). For a region often described as desolate, these results indicated that a more comprehensive investigation of Bir Madhkūr and the central Wādī ‘Arabah would be fruitful, which in turn prompted the design and implementation of the Bir Madhkūr Project.

Principal Research Questions

As noted, the Bir Madhkūr Project is a multidisciplinary field project in Jordan that examines the historical geography of Wādī ‘Arabah through archaeological and ethnographic research. The principal research questions that guide the project are as follows:

1. What were the relationships between and among native and non-native inhabitants of Wādī ‘Arabah in the Classical periods, in particular relations between pastoralists, agriculturalists, soldiers and merchants, and how were these relationships structured and maintained?
2. What was the role of Bir Madhkūr as a hub of local administration and a nexus for regional and international trade networks? In other words, what was the nature and extent of local and long-distance trade that passed through the site and region, how was this trade organized and monitored, and what were the main routes that connected Bir Madhkūr to local, regional and international networks of communication and exchange?
3. From Antiquity to the present, what impact did human settlement activity have on the environment and, conversely, what impact did the environment have in shaping the history of human settlement at the site?

Research Design

The project research design, structured so as to answer these questions, consists of three components: (1) a regional, archaeological and environmental survey of the central Wādī ‘Arabah with Bir Madhkūr as a focal point, (2) excavation of areas within Bir Madhkūr and of associated sites near the ancient settlement (e.g. farmhouses and campsites) that will provide artifactual material for analysis, and (3) an ethnographic study of the bedouin population of the

central Wādi ‘Arabah.

During the 2008 season, the focus was mainly on the second component of the project, with excavations at Bīr Madhkūr focusing on the Roman fort, the bath / caravanserai complex, an ancillary structure just south of the fort, and a farmhouse in the immediate vicinity. The project also began intensively mapping the site of Bīr Madhkūr itself, as well as conducting some limited survey, where the focus was on documenting and mapping the agricultural field systems west of the site in the area of the farmhouse under investigation. What follows is a preliminary review of the salient results of this fieldwork.

The Excavations

The ancient site of Bīr Madhkūr extends over an area of less than 3 hectares (less than 7.5 acres). Because the site is relatively small, and because the architectural remains, for the most part, are visible on the surface, excavation areas (A - H) were easily defined (**Fig. 2**). As noted above, Area A denotes the Roman fort, Area B the apparent bath and Area C the domestic complex. Areas D - H define ancillary structures or areas of prominent remains around the main features of the site. In 2008, Areas A, B, D and H (farmhouse) were targeted for excavation.

Area A

The fort at Bīr Madhkūr (Area A), which measures just over 30 x 30m, is a late Roman *quadriburgium*, with four corner towers and an open courtyard surrounded by rooms adjacent to the curtain wall. Nearby parallels include the forts at ‘En Hazeva and Yotvata in the western ‘Arabah, and Gharandal to the south (Davies and Magness 2006, 2007 and 2008; Cohen 1994 and 1996; Smith 1997). The extant remains of the fort at Bīr Madhkūr are heavily disturbed, probably due to severe earthquakes in Antiquity. In most areas, mounded areas of stone debris are the only indication of extant remains, although some sections of the curtain wall are visible. It appears that all of the walls of the fort were constructed of worked limestone blocks set two courses wide. Modern activities have also damaged the fort, as the large well installed along the north wall clearly indicates. In fact, most of the north wall is in an exceedingly ruined state,

due to the installation of the well (perhaps in the Ottoman period) as well as more recent robber activity. Heaps of stone debris and soil that rise more than 2 m above the floor level of the inner courtyard of the fort characterize the north-east sector of the monument. The east wall and north-east corner tower are also poorly preserved. The south wall and the southern corner towers, however, are better preserved. The west wall of the fort is severely damaged due to clandestine excavations along its outer face.

The excavations in Area A were designed (1) to provide some dating evidence for the construction of the fort, and (2) to determine the plan of the fort, in particular the location of the gateway. While the ruined fort, as it exists today, is a Late Roman / Early Byzantine construction, the project set out to determine whether the existing fort overlies an earlier Nabataean structure. Accordingly, and based on the assumption that the actual gate into the fort was probably along the damaged portion of the north wall (only the intact, undamaged south wall was ruled out), the excavation strategy in Area A was to open two trenches along the north wall of the fort in order to reveal the presumed gateway, as well as to expose the foundation level of the curtain wall.

Trench A.1 (5 x 5m) was laid out at the edge of the tumble pile that demarcated the apparent exterior of the north wall. The eastern extent terminated a few meters west of the well. The remainder of the trench encompassed at least part of one of the interior rooms (or perhaps part of the gatehouse). The excavation of Trench A.1 focused on the northernmost section of the trench. This uncovered the curtain wall, the outer face of which was built of large rectangular limestone boulders that were, for the most part, semi-hewn, but occasionally roughly hewn, and arranged in a pattern of irregular headers and stretchers with chinking stones. The inner face was apparently much narrower and comprised of smaller boulders, but excavation on the interior was limited and further work is required to elucidate more fully the inner face of the curtain wall. Between the inner and outer rows of architectural elements, there was a fill of cobbles of varying size mixed with mortar. Interestingly, there is evidence from Trench A.1 to suggest that the fort was white-plastered on its exterior (**Fig. 3**). Pottery from Trench A.1 ranged in date



3. Trench A.1 showing the north wall of the fort and the wall foundation.

from Nabataean to Byzantine.

Trench A.2 (5 x 5m) was laid out immediately adjacent to Trench A.1 to the east, once it became clear that the gateway would not be revealed in Trench A.1. Only a 2 x 5m probe area located in the western sector of Trench A.2 was excavated, because of the proximity of the well inside the fort. Excavation of Trench A.2 uncovered a small portal gate 0.79 m wide (Fig. 4). Similar portal gates have been revealed at Yotvata (Davies and Magness 2006, 2007, 2008) and Qaşr Bshir (Clark 1989), both of which are contemporary to the fort at Bir Madhkūr. Of interest is the fact that the portal gate at Bir Madhkūr opens directly onto the well outside the structure, which may be ancient but is still in use.

Ceramics uncovered from the excavations in Area A provide a tentative and relative dating for the occupation of the fort, although it should be stressed that most of the evidence is all extramural. The latest pottery recovered from Trench A.1 above the foundations dates from the ear-



4. Trench A.2. showing portal gate along north wall of the fort.

ly fifth century AD, while the majority of the sherds recovered date to the Early Byzantine period. A probe in Trench A.1 (Fig. 3) underneath the foundation level along the exterior curtain wall revealed all early (i.e. Nabataean and Early Roman) material; no coins were recovered. It would appear, then, at least from the limited exposure that was achieved, that the fort was built upon a fresh foundation, perhaps after any pre-existing Nabataean structure had been leveled and cleared away.

Area B

Several trenches were opened in Area B, the large (presumed) bath complex that is ca.50m south-east of the fort, in order to provide evidence that the complex is indeed a Roman bath, as suggested by the presence of a substantial ash deposit south of the structure and numerous hypocaust bricks littering the surface of the area. The key objective was to locate identifiable features related to the bath suites, as well as to clarify the architectural relationship between the proposed bath and the attached structure to the north, which may be a caravanserai. The most readily identifiable rooms of the bath, presumably, would be those of the heated sections of the structure: the *praefurnium*, *caldarium* and *tepidarium*. It was hypothesized that the location of the *praefurnium*, or that of the *caldarium*, would be to the south of the complex, based on the presence of the ash deposit and the hypocaust brick fragments that litter the surface. Trench B.1 (5 x 5m) was thus opened in the south-west corner of the complex, and B.2 (5 x 5m) and B.3 (5 x 5m) were subsequently opened in adjacent areas.

Trench B.1 uncovered two rooms along the primary western wall of the complex, the south-west corner room and the north room (Fig. 5), which were separated by an east-west cross-wall. Excavation within the south-west corner room produced no identifiable architectural features related to the bath-suites. For example, no direct evidence for the hypocaust system or *praefurnium* was found, other than secondary deposits of various hypocaust tiles and *tubuli*. Rather, the archaeological evidence gathered from this room suggests successive phases of occupation / use that would be expected from a living quarter. Unfortunately, the function of the



5. Overview of Trench B.1.

south-west corner room with respect to the overall complex remains unclear. The north room uncovered in Trench B.1, on the other hand, revealed significant architectural features that can plausibly be associated with a bath complex. A small plastered stone wall, for example, was found running parallel to the large, exterior walls of the room from which it was separated by a channel, which would suggest some sort of hydraulic function for the room (Fig. 6). The floor of the room, built directly atop a sterile layer of alluvial fill, was also plastered. It may be that this room functioned as a latrine, although this interpretation is tentative. There is a possible parallel at 'En Hazeva across Wādī 'Arabah to the north-west (see Hoss 2005, Cat. #59). Pottery from Trench B.1 was mostly Roman and Byzantine.

Trench B.2 was partially excavated to find some relation between the features of the presumed bath complex with the larger, attached structure to the north: the possible caravanserai. A doorway was uncovered that opens to the west. How this area and corridor relates to the



6. Trench B.1 showing the apparent latrine installation.

areas excavated to the south-west remain to be determined, as does any relationship with the structure to the north. Most of the pottery from this trench dates to the Roman and Byzantine periods, most of which is African Red Slip ware (Hayes form 67).

Trench B.3 was opened immediately to the north of Trench B.1, and excavations focused on a 2.5 x 2.5 m probe along the east edge of the trench. The probe revealed the remains of either another room or perhaps a corridor extending to the east in the area of Trench B.2. Material from the probe included a one coin and a significant amount of ceramic material, the latest of which dates to the Late Roman / Early Byzantine period; this included Egyptian Nile mud ware and African Red Slip wares. At the bottom of the probe was a poorly preserved remnant of a stone floor surface that seems once to have extended across the entire 2.5 x 2.5m excavation area. Pottery from beneath suggests a late third to early fourth century AD date for its installation.

Based on a preliminary analysis of the data from the area excavated, it appears that the structure does indeed represent a bath complex. Although none of the bath suites themselves were uncovered, the discovery of numerous hypocaust brick fragments and *tubuli*, as well as water pipe fragments, during the course of excavation provides indirect evidence for the presence of a bath. Also, the discovery of a possible latrine, a typical feature of Roman baths, provides further support for a bath being located nearby. Moreover, the construction of the bath complex appears contemporary with that of the fort, because there was no evidence for any earlier, underlying structures. The earlier materials in and around the complex are therefore probably residual and the earlier settlement awaits discovery.

Area D

Area D demarcates the large rectangular structure just south of the fort (Area A) and west of the bath complex (Area B). On the basis of remains visible on the surface, the building appears to be divided into four or six large rooms and measures 18 x 10m. There is a two course wide, north-south, central wall, constructed of roughly cut stone 0.80 m thick, as well as what

appears to be smaller dividing walls aligned east-west. There is no obvious entrance to the structure, although it may be along the west wall.

Four 5 x 5m trenches (D.1 - 4) were opened in Area D in order to ascertain the date and function of the structure in relation to the main features of the site. The excavation focused on uncovering the rooms along the south side. Two distinct rooms were identified, referred to here as the south-west and south-east rooms.

Finds from the south-west room included two intact pottery vessels, a cooking pot and a small bowl with a string-cut base, which were unearthed in Trench D.2. These have been dated to the Early Byzantine period. Trench D.2 itself was excavated down to a beaten earth floor; the soil layers removed included a significant number of ash deposits. Finds from the south-east room included an intact Byzantine lamp, numerous lamp fragments, and pottery and amphora fragments; the latter included Egyptian Nile mud ware and African Red Slip wares. Accordingly, the material culture recovered from the trenches (D.1 - 4) that spanned the south-east and south-west rooms of the structure, though not abundant, is sufficient to suggest that the structure may have served some function related to trade and communication. Also, it seems that the structure is contemporary with the occupation of the fort.

Area H

Two 5 x 5 m trenches (H.1 - 2) were opened in Area H, a farmhouse (9.70 m N - S x 4.70 m E - W) in the agricultural area west of Bir Madhkūr (**Fig. 7**). The goal of the excavation



7. Overview of the farmhouse (Area H) with Trench H.1 in the foreground.

was to recover material evidence to determine the function of the structure (that is, to ascertain for certain that this structure was indeed a farmhouse), as well as to uncover evidence that might permit a better understanding of agricultural activities in the area.

Before opening Trench H.1, an interior wall dividing the room was clearly visible, so the excavation was targeted to illuminate the function of the interior rooms in relation to the entire structure. Most of the fill inside the room from Trench H.1 consisted of stone tumble and accumulated sediments, and probably represents a single phase of abandonment and alluvial deposition. Also, there was very little material culture recovered in any of the soil layers. After thorough sifting, small quantities of pottery, including some amphora fragments, and few metal fragments were uncovered. Several of the soil layers, however, did produce ash and charcoal, in addition to plaster flecks. Of particular interest is the door blockage that was revealed in east wall, where a re-used Nabataean block was found in the northern wall of the door (**Fig. 8**). There were also small indications of plaster flecks in the soil of the door blockage. Based on the evidence from Trench H.1, it remains unclear exactly what the function of the room was, although the finds seem to suggest that the room served perhaps as a storage area.

Because the material culture from Trench H.1 was inconclusive with respect to confirming the function of the structure as a farmhouse, Trench H.2 was opened in the room to the north with a 3.5 x 1.5m probe along the east wall. The soil matrix from the probe in Trench H.2 was similar to that of Trench H.1 to the south. From



8. Entrance into the south room of the farmhouse — note the re-used Nabataean block on the left side of the entrance.

the probe, two intact pottery vessels, a mortar fragment and a pestle were recovered in a soil locus overlying the remnants of a plaster floor (Fig. 9). This evidence, in addition to ephemeral traces of a threshing floor discovered to the north-east of Area H, provides strong support for the function of the structure in Area H as a farmhouse. The earliest phase of occupation of the farmhouse most likely dates to the Late Roman or Byzantine period, based on the dates of the intact vessels that were found just above the floor level in Trench H.2.

Khirbat Umm Qanṭara

Khirbat Umm Qanṭara is a caravanserai along an ancient route that crossed Wādī ‘Arabah (Smith 2005a). The main structure measures 22m NW x 30m SE. Its walls are two courses wide (0.52 m), with rubble fill. One inner room, 4 m wide, is set along the north-west side of the structure. The gate into the structure is located along the south-east wall. Its entrance is 3 m wide and there are small rooms on either side of the entrance. Just to the south is a large ash mound, which may be evidence of a dump, and east of the caravanserai is a small well or cistern (ca. 5 x 5m) fed by a water channel constructed of cut, limestone blocks. Pottery from the site dates primarily to the Early Roman / Nabataean period, with some Late Roman period sherds.

A 2.5 x 2m probe was opened at Khirbat Umm Qanṭara to examine the ancient cistern (Fig. 10). The main goal was expose the floor of the cistern in order to ascertain its depth, which in turn would allow the volume to be calculated. The probe was opened in the south-east corner of the cistern, where a water channel approaches the cistern from the north-east and connects to



9. Trench H.2 showing two intact vessels discovered in situ.

what appear to be steps. The probe also touched upon a robber pit that had been excavated into the cistern to a depth of 0.67 m; backfill from this pit formed a mound in the north-west corner of the probe. Unfortunately, although work within the cistern progressed for two days, the excavation was cut short by the Jordanian military. This happened at the end of the second day of full excavation, although we had secured all of the necessary permissions to work there. In the end, we were unable to reach the floor of the cistern, although some of the architecture was exposed on the surface. We can, therefore, calculate a minimum capacity for the cistern. Because we excavated down to a depth of 1.59 meters, we can conclude that the water capacity of the cistern was at least forty cubic meters.

Khirbat Sufaysif

Khirbat Sufaysif is a caravanserai just east of Jabal aṭ-Ṭayyiba (Smith 2005a). The main structure measures 21m NS x 26m EW. Several robber pits have been excavated sporadically around the site, and its eastern side has eroded into a shallow *wadi* (in fact, several meters of the alluvial fan have been removed). The walls of the structure are constructed of cut limestone blocks, set two courses (0.46 m) wide with rubble fill. There are inner rooms surrounding an open courtyard. Beyond the north wall there is a thick ash mound. Also, there are other outlying structures visible in the area beyond the fort. Pottery collected at Khirbat Sufaysif is predominantly Nabataean and Early Roman, with some Late Roman pottery as well. The site was clearly significant as a way-station in the region.

No trenches were opened at Khirbat Sufaysif, but the site was revisited in order to as-



10. Buried reservoir at Khirbat Umm Qanṭara.

sess the damage caused by the ongoing erosion and to monitor robber activity, which has increased. The project began mapping the site, which should provide an important benchmark for assessing how the site's condition evolves. In future seasons, the project hopes to return to Khirbat Sufaysif to begin excavation and conservation of the damaged areas of the site.

The Central 'Arabah Archaeological Survey

The focus of the 2008 season was on the excavations at Bir Madhkūr, so no intensive survey was conducted of the central 'Arabah with the intent of documenting new sites; this will be the focus of the 2009 field season. The survey, however, did begin intensive mapping of the agricultural systems to the west of Bir Madhkūr in the vicinity of Area H. This involved detailed mapping of the terraces, field walls and other agricultural installations.

Conclusions

Much analysis remains to be done of the finds from the 2008 season of the project, but some preliminary observations can be made about the history of Bir Madhkūr in light of the current evidence. First of all, there is substantial evidence of regional activity in the Nabataean and Early Roman periods, for the most part relating to trade and communication. Khirbat Sufaysif and Khirbat Umm Qanṭara, for example, both lay on an important route across the Wādī 'Arabah, most likely the famed Incense Road itself. There is also substantial evidence (mainly pottery) from the Nabataean and Early Roman periods at Bir Madhkūr, but the early settlement itself was not revealed in any of the excavation trenches.

The Late Roman period is one of increased activity at Bir Madhkūr, as the importation in the third century of some African Red Slip wares and amphorae would seem to attest. Regionally, most of the agricultural activity appears to be Late Roman in date, with evidence of continuity into the Early Byzantine period. This includes the occupation of the farmhouse (Area H). Further investigation of the agricultural systems in the area, however, in addition to examining other regional farmhouses, is necessary to learn about how these systems were utilized and what sort of crops were being cultivated. It will also

be important to compare this activity with evidence from the Negev, where the date for intensive agricultural activity has been set much later (Avni 1996; Rubin 1996). It would also be important to investigate further the extent to which these agricultural systems, particularly the water harvesting techniques, compare with Nabataean practices as recorded elsewhere (Oleson 1995, 2001, 2003).

The fourth century clearly marks change in the nature of occupation at Bir Madhkūr, with the construction of the fort and the billeting there of what was probably a mounted cavalry unit (*cohors prima equitata*). What this represented was a rise in the regional significance of Bir Madhkūr as an administrative center, no doubt overseeing (perhaps even expanding upon) the vast agricultural systems in the central 'Arabah. In this same period, the bath complex itself was apparently constructed. Also, trade through the site did not stop, as the continued importation of African Red Slip wares attest, although traffic may have diminished somewhat. Of interest in this context is the apparent decline in activity at some of the regional caravanserais such as Khirbat Sufaysif and Khirbat Umm Qanṭara.

There is little evidence from the Late Byzantine or Islamic periods. Some Mamluk pottery was found on the surface near Area H, but it was clearly not associated with the farmhouse. Also, a small quantity of Late Byzantine pottery was recovered in each of the excavation areas (A, B and D) at the main site. Further investigation is needed to understand more fully the later stages of occupation at Bir Madhkūr.

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