Planned Villages and Rural Resilience on the Mamluk Frontier: A Preliminary Report on the 2013 Excavation Season at Tall Hisban

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A Preliminary Report on the 2013 Excavation Season at Tall Hisban

by Bethany J. Walker (Bonn)

About the author

Bethany Walker is Research Professor of Mamluk Studies at the Annemarie Schimmel Kolleg of the University of Bonn. She received her Ph.D. in Middle Eastern Studies from the University of Toronto in 1998 and previously held professorships at Oklahoma State University, Grand Valley State University, and Missouri State University in the U.S. before coming to Bonn.

A historically trained archaeologist, Walker directs two long-term field projects in Jordan and actively consults on Crusader and Islamic ceramics at eastern Mediterranean sites. She is founding editor of the newly launched Journal of Islamic Archaeology and serves on numerous American and French editorial boards, including Mamluk Studies Review. She is a Board member of the American Center of Oriental Research in Amman and former Board member of the American Schools of Oriental Research.

Walker’s current research centers on rural society and migration in the Mamluk period, environmental and agricultural history, and frontier and resilience studies.

Among her recent publications are:

- Jordan in the Late Middle Ages: Transformation of the Mamluk Frontier, Chicago: Middle East Documentation Center, University of Chicago, Chicago Studies on the Middle East Monograph Series, 2011.
- Reflections of Empire: Archaeological and Ethnographic Studies on the Pottery of the Ottoman Levant, Boston: ASOR, Annual of the American School of Oriental Research, #64, 2009. (an edited work)
Abstract

I. Introduction

II. Tall Ḥisbān (the archeological site)

III. History of the Archeological Project

IV. Result of the 2013 Excavation season
   The town and village
   Filed M – Figs. 7 and 8
   Field C – Figs. 9-11
   Field O – Figs. 12-13
   Field B – Figs. 14 and 15
   Field R
   Spolia project
   Agriculture, water management, and the environment

V. Conclusions

Literature
Abstract

There is a considerable body of literature today on urban space in Mamluk studies. This is in large part due to the nature and survival of the textual sources, which reflect an urban bias and are preserved in city archives. Architectural studies of Mamluk cities also abound, as many monuments and even entire neighborhoods of the period have been preserved in the urban fabric of modern Cairo, Damascus, Aleppo, and Jerusalem. The same cannot be said, however, about the rural lands under Mamluk rule - namely settlements of village and sub-village size – about which we know precious little. While textual sources, and particularly documentary ones, can produce some information about rural life, if they are carefully mined, it is the archaeological record that offers us the greatest promise for reconstructing the physical structure of rural settlements, their function(s) and development over time, and details of the lives of the people who lived there. The focus of the 2013 excavation season at Tall Hisban, co-sponsored by the Annemarie Schimmel Kolleg of the University of Bonn, was to investigate the settlement associated with the Mamluk citadel and to explore the many factors that may have contribute to its growth, decline, and transformation over time.

The following essay is a preliminary, non-technical assessment of that fieldwork, highlighting the most important results relevant to a study of Mamluk-era rural life and raising important questions about changing relations between state and village in the seventh/ fourteenth century.
I. Introduction

The study of “place” is relatively underdeveloped in Mamluk studies.¹ The existing literature privileges urban contexts, focusing on public monuments and urban planning (made possible by the preservation of buildings, and the waqfiyyāt that describe them) and the intellectual and professional networks of those urban centers (one result of the traditional Mamlukist obsession with biographical dictionaries). We know comparatively less about the rural places of the Mamluks’ realms. Notable exceptions are the frontier and castle towns (Qus and Karak) and ports (Quseir al-Qadim), research on which has tended to pull on both narrative sources and archaeological fieldwork.² As quasi-urban sites, however, they reveal little about the pulse of traditional rural life. Some inroads into what could be properly described as “rural Mamluk studies” have been made by Arab historians interested in local history. Noteworthy in this regard is the work of Yusuf Ghanwanmah on Transjordan and ‘Athāminah for Palestine.³

While targeted study of villages and village life has languished among Mamluk historians, there are emerging areas of research that could potentially facilitate the study of rural societies. Scholarship on land tenure - the natural outgrowth of iqṭā ‘ and waqf studies - offers an important window on the ways socio-political and economic relations changed in the countryside over the course of Mamluk rule.⁴ If future scholarship on this topic goes beyond the state perspective and turns, instead, to the impact of the waqfization of the countryside on local communities, for example, this could be a real area of growth in the field. The “environmental turn”, which has found a place in nearly every discipline of the social sciences and humanities, is impacting Mamluk studies in an oblique way, namely through recent publications on water conflicts (albeit urban ones), water management, and land management and agro-business (with a special focus on the sugar industry).⁵ Within urban studies, a new focus on the household –

¹ I can think of only work to date that has dealt with a medieval Islamic “discourse of place” is Antrim, Routes and Realms, for the early Islamic centuries. This kind of work has yet to be done for the Mamluk period.
² Garçin’s Un centre musulmane remains a milestone in the study of rural society, even though the archaeological work planned for Qus did not take place. For Karak, one notes Milwright’s recent Fortress of the Raven, which examines the changing roles of this castle town through its ceramic record. For complementary textual and archaeological studies of Quseir al-Qadim, the port of Qus, see Guo, Commerce, Culture, and Community and Strange Burke, Archaeological Texts and Contexts.
³ For Ghawanmah, take special note of his Tarīkh Sharqi al-Urdunn and “al-Qarya fī Junūb al-Shām”. A review of his work and list of his publications can be found in Walker, Jordan in the Late Middle Ages, 16 and 306-307. For ‘Athāminah, see his Filisṭīn fī al-‘Ahdāyn al-Ayyūbī wa al-Mamlūkī. Every year new M.A. theses and doctoral dissertations are produced by Palestinian and Jordanian students on a range of topics related to local history, including tribal and village history. Relevant to the topic at hand are two recent M.A. theses at Yarmouk University, both written under the supervision of Prof. Ghawanmah: Maqablah “al-Qarya fī Bilād al-Shām” and Mukahalah, “al-Zirā’ ah fī Bilād al-Shām”.
⁵ Shoshan, “Mini-Dramas by the Water”; Frenkel, Management of Water (many thanks to the author sharing this paper with me); Levanoni, “Water Supply in Medieval Middle Eastern Cities”; Borsch, “Environment and Population”; Sato, State and Rural Society; Ouerfelli; Le sucre.
women in Mamluk society, family, marriage, health and hunger, food and cooking – offers, as well, promising venues of inquiry applicable to the study of the rural sphere.6

What is missing at this point in the developing scholarship on rural society under Mamluk rule, however, is an engagement with rural communities – as living entities on their own and not merely extensions of urban society – and the spaces they inhabited. Archaeological methods are ideally suited to spatial analysis and the study of rural landscapes and non-urban communities, as the archaeological record preserves the kinds of data relevant to rural life that are not readily retrievable from the written record available to Mamluk historians.7 Archaeological research on Mamluk-era rural society has, to date, followed two trajectories: cross-disciplinary study of settlement distribution8, landscapes, and travel9; and excavations of rural centers of industry (sugar being prominent)10 and villages (seldom preserved). Large-scale excavations of villages of the Mamluk period are generally concentrated in today’s Jordan (Fig. 1). There are many reasons why this is so, not the least of which is the special history of settlement in the region, in which many towns and villages were abandoned at the end of the Mamluk period and never reoccupied on any long-term basis. The architectural ruins left behind in this manner, and free of major building activity in later periods, present a moment in time – a unique record of village history from which to reconstruct the lives of rural communities under Mamluk rule. The most important, long-term excavations of Mamluk-era villages in Jordan include Khirbat Fāris, on the Karak Plateau11; Dhibān, on the Dhibān Plateau12; and Hisbān, on

6 Rapoport, Marriage, Money and Divorce; Sabra, Poverty and Charity; Levanoni, “Food and Cooking during the Mamluk Era”; Lewicka, Food and Foodways of Medieval Cairenes. Also ongoing work by Syrinx von Hees’ on old age and images of growing old in Mamluk literature is an important contribution to this kind of scholarship.
7 Mamluk archaeology is a relatively recent area of specialization within Islamic archaeology. For reviews of the state of the field, see Whitcomb, “Mamluk Archaeological Studies”; Walker, “From Ceramics to Social Theory”; ibid, “What Can Archaeology Contribute to the New Mamlukology?”; and ibid, “On Archives and Archaeology”.
8 Archaeological study of rural societies of the Islamic period in general has relied primarily on survey, rather than excavation. The reason is the poor preservation, and relative ephemeral nature, of non-urban sites of the period. For a review of the state-of-the-field of survey work in Jordan related to Mamluk archaeology, see Walker, Jordan in the Late Middle Ages, 211-232.
9 Particularly fruitful has been scholarship related to historical cartography, the institutions and infrastructure of rural travel, and the mechanisms of movement and migration, as studied through textual sources, architecture and roads, travelers’ inscriptions, and archaeological survey. Recent contributions to this kind of work include Franz, “Ayyubid and Mamluk Reevaluation”; ibid, Atlas der Beduinen unter dem Sultanat; Cytyn Silverman, The Road Inns; and Abu Mustafa, Trade Routes in Palestine. The rapidly expanding literature on travelers’ inscriptions is documenting the movements of non-Bedouin populations – merchants, pilgrims, the politically displaced, and economic migrants. For Jordan, these include Baramki, “al-Nuqūsh al-ʿarabīyyah”; al-Jbour, Étude des inscriptions; ibid, “Bayyān as-ār al-ḥiṣṭah”; al-Salameen and al-Falahat,“Jabal Haroun during the Islamic Period”; al-Salameen et al, “New Arabic-Christian Inscriptions”. Such reports result from archaeological epigraphic surveys, and the most promising for Mamluk studies are those being conducted by Yarmouk University and its affiliates in the eastern desert of Jordan (the bādiyyah). My on-going work on human migration in the late Mamluk period (Walker, “Mobility and Migration”, for example) also belongs to this body of scholarship.
10 For archaeological studies of sugar production in Mamluk Jordan, see Kareem, Settlement Patterns in the Jordan Valley; Strange Burke, “Archaeological Evidence for Sugar Production”; and Politis’ forthcoming Archaeological Landscapes of Zoara. For mining and the possible relationship between copper and sugar production, see Jones et al, “Khirbat Nuqayb al-Asaymir”.
11 McQuitty, “Khirbat Faris”. See also article bibliography for a larger list of project publications, including technical reports.
the Madaba Plains. All three sites occupied prominent positions on rich, grain-producing highland plateaus; all were first settled deep in antiquity, with particular occupational peaks in the 14th century CE; each was eventually (and gradually, it seems) abandoned by the 15th century. Only Ḥisbān, however, grew to the status of a town (madīnah) in the Mamluk period, according to contemporary Arabic sources, and held the administrative status of a district capital.

Fig. 1 – Map of Mamluk Jordan, courtesy of Michael Brandt, Springfield, MO

12 Porter, “Locating Middle Islamic Dhiban”. The project website (www.dhiban.org) also lists full excavation reports and forthcoming publications.

13 A list of project publications, past and present, can be found at the project website: http://www.madabaplains.org/Ḥisbān/. For archaeological reports most relevant to Mamluk-era occupation, see Walker and LaBianca, “Urban Bias”; ibid, “The Islamic Qusur”; ibid, “Tall Ḥisbān, 2004”; ibid, “Tall Ḥisbān, 2004 – An Investigation”; ibid, “Tall Ḥisbān, 2007”; ibid, “Tall Ḥisbān, 2010. For ceramics, see Walker, “The Islamic Age”, 547-587.
What follows is a Mamlukist’s interpretation of the results of recent excavations at Tall Ḥisbān, one of the most important rural sites of the Middle Islamic period in Bilād al-Shām (Fig. 2). Sections of the text are pulled, and adapted, from the stratigraphic report submitted by the author to the Jordanian Department of Antiquities at the conclusion of the 2013 field season. The text presented here concerns only data relevant to Mamluk studies and represents the excavation director’s initial impressions of the field season. The three-week excavation that produced that report was designed, in part, to explore one phenomenon in settlement suggested by contemporary sources, namely that the Mamluk state occasionally, and haphazardly, intervened in village life, when needed, to create and dissolve village communities. Potential factors behind the cycles of expansion and abatement of settlement documented archaeologically at Ḥisbān are evaluated in this light.

Comparison of Historical and Archaeological Periodizations (Fig. 2)

<table>
<thead>
<tr>
<th>Political</th>
<th>Cultural</th>
<th>Christian calendar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ottoman</td>
<td>Late Islamic II</td>
<td>Early 16th c. to Early 20th c. A.D.</td>
</tr>
<tr>
<td>Mamluk</td>
<td>Middle Islamic II-Late Islamic I</td>
<td>Mid 13th c. to Early 16th c. A.D.</td>
</tr>
<tr>
<td>Ayyubid</td>
<td>Middle Islamic I</td>
<td>Late 12th c. to Late 13th c. A.D.</td>
</tr>
<tr>
<td>Crusader</td>
<td>Middle Islamic I</td>
<td>Late 11th c. to Late 13th c. A.D.</td>
</tr>
<tr>
<td>Fatimid</td>
<td>Early Islamic II-Middle Islamic I</td>
<td>Mid 10th c. to Late 12th c. A.D.</td>
</tr>
<tr>
<td>Abbasid</td>
<td>Early Islamic I-II</td>
<td>Mid 8th c. to Mid 10th c. A.D.</td>
</tr>
<tr>
<td>Umayyad</td>
<td>Early Islamic I</td>
<td>Mid 7th c. to Mid 8th c. A.D.</td>
</tr>
<tr>
<td>Byzantine</td>
<td></td>
<td>Early 4th c. to Mid 7th c. A.D.</td>
</tr>
<tr>
<td>Late Roman</td>
<td></td>
<td>Early 2nd c. to Early 4th c. A.D.</td>
</tr>
<tr>
<td>Early Roman</td>
<td></td>
<td>Mid 1st c. B.C. to Early 2nd c. A.D.</td>
</tr>
<tr>
<td>Hellenistic</td>
<td></td>
<td>Late 4th c. to Mid 1st c. B.C.</td>
</tr>
<tr>
<td>Persian</td>
<td></td>
<td>Late 6th c. to Late 4th c. B.C.</td>
</tr>
<tr>
<td>Iron Age</td>
<td></td>
<td>Late 13th c. to Late 6th c. B.C.</td>
</tr>
<tr>
<td>Late Bronze Age</td>
<td></td>
<td>Mid 16th c. to Late 13th c. B.C.</td>
</tr>
<tr>
<td>Middle Bronze</td>
<td></td>
<td>20th c. to Mid 16th c. B.C.</td>
</tr>
<tr>
<td>Early Bronze</td>
<td></td>
<td>Ca. 3200-2000 B.C.</td>
</tr>
<tr>
<td>Chalcolithic</td>
<td></td>
<td>Ca. 4500-3200 B.C.</td>
</tr>
<tr>
<td>Neolithic</td>
<td></td>
<td>Ca. 8000-4500 B.C.</td>
</tr>
<tr>
<td>Paleolithic</td>
<td></td>
<td>Before Ca. 8000 B.C.</td>
</tr>
</tbody>
</table>

14 The political and calendar chronologies adopted by historians are generally rejected by archaeologists, as material culture does not necessarily change with political transitions. Archaeologists working on the Islamic periods in southern Bilād al-Shām generally adopt a cultural chronology reflecting very broad cultural transitions. The centuries of the Mamluk Sultanate correspond, accordingly, to the later Middle Islamic and early Late Islamic periods.

15 The Field and Square Supervisors and Specialists all contributed to the stratigraphic report. I want to acknowledge in this regard the special efforts of Prof. Bob Bates, Jeff Hudon, andDoneva Walker (Andrews University); Prof. Terje Stordalen (University of Oslo); Aren and Ivan LaBianca; Tarina Greer, Nikki Panelli, and Rachel Polston (Missouri State University); Dr. Daniel Redlinger, Sarah Dusend, and Johann Spillner (University of Bonn); Dr. Chiara Corbino (zoarchaeologist); Sofia Laparidou (University of Texas-Austin – phytolith analyst); and Annette Hansen (University of Groningen, archaebotanist). Other members of the University of Bonn team included Aris Legowski and Felicitas Weber (Photographers), Nur Özüdilmac (Assistant Registrar and ethnographer), Anna Kollatz (ethnographer); Dr. Gül Şen and Martha Schulz (cave survey); and Mirl Redmann (community outreach). The text that appears here summarizes much of their work, but the interpretations and conclusions are, for better or worse, ultimately mine.

16 The actions taken by the Mamluk state that most impacted settlement included population transfers, administrative restructuring, and selective investment in local industries and infrastructure. For a fuller discussion of these tactics in Jordan, see Walker, *Jordan in the Late Middle Ages*, 77-78, 108-115, 210 and ibid, “Boom and Bust”.

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5
Fig. 2 – Chronological chart of periods of occupation at Tall Ḫisbān, comparison of archaeological and historical periodizations

II. Tall Ḫisbān (the archaeological site)

Tall Ḫisbān is a multi-period, fortified hilltop on the Madaba Plains of central Jordan, some 25 kilometers south of Amman (Fig. 3).17 At roughly 800 meters above sea level the hill commands a view of what were extensive, rain-fed grain fields in Antiquity. There is evidence at the site for over 4,000 years of occupation, spanning the Iron Age through modern periods. Lithic remains, furthermore, suggest a longer history of occupation, perhaps going as far back as the Paleolithic period. The architectural remains on the summit include the remnants of an ancient acropolis wall (of Hellenistic or older date), a Roman monumental building, and a Byzantine basilica (Fig. 4). The Roman site, “Esbus”, was an administrative center and small city of some importance, located astride two strategic transportation routes; the physical site in this period includes a possible temple, large plaza, evidence for extensive settlement, and tombs (arcosoleia in modified caves across the Wadi Majar, which flanks the tell on the west). The town of “Hesban” in the Byzantine era constituted a bishopric and hosted at least three churches, two in addition to the basilica located on the summit. The churches continued to be used as late as the ninth century CE, and there is evidence of the existence of a Christian community at the site as late as the fourteenth.18

Fig. 3 – Panorama of Tall Ḫisbān and the Madaba Plains, courtesy of Prof. Dave Sherwin, Andrews University

Medieval Islamic “Ḩisbān” was a fortified administrative center that was transformed physically and functionally from the Umayyad period on. What now appears to be an Abbasid-

17 The archaeological site consists of the tell and the saddle below, occupying a space of some eight hectares. The site belongs to the Jordanian Department of Antiquities, which accounts for its relatively undisturbed state of preservation today.

18 Although there are no textual references to the fact, a series of burials in the North Church, excavated in 1978, suggest that the church, which went out of use as a place of Christian liturgy, was reused as a cemetery of Orthodox rite in the 14th century. The placement of ceramic bowls with the deceased was a common practice in Cyprus in this period, and the bowls placed in the Ḫisbān burials were 14th-century imports from Syria and Cyprus (Walker, “Islamization of central Jordan”, 15-17). The burials raise important questions about the religious composition of the town at Ḫisbān in this period, which was otherwise Muslim (and produced generations of Muslim scholars), and about the process of islamization in the Transjordan as a whole.
era bathhouse may have constituted part of a much larger complex that included a building located along the northern sally gate to the summit. These may be the remains of the fortified Umayyad outpost that was the scene of a revolt against the Abbasid family, according to medieval Arab sources. Subsequently, a large storage/military/residential complex was constructed on the summit in the 14th century (Mamluk period) to house a small garrison and the local Governor, when the town served as the capital of the Balqā District (of Damascus Province) and had its own market, mosque, madrasah (built in the Ayyubid period), and legal court. At this point it controlled some 300 villages and the extensive grain fields and orchards of the Balqā. Recent excavations have identified a greatly reduced but permanent occupation of Ḥisbān in the Late Ottoman period, when it was reduced to a small village and temporary station for migrating Adwān and Ajarmah tribes. Land was registered during the British Mandate period in the 20th century, as the modern village emerged.

The majority of the standing structures on the summit of the tell, however, belong to a 14th-century C.E. complex that included a military garrison; ḥammām; and multi-room domestic structure, identified by the excavators as the residence of the Governor of the Balqā. The summit over the millennia was thus transformed from a cultic to a military site, culminating with the town’s function as an important military, administrative, and economic center on the Mamluk frontier. The slopes below the summit of the tell were densely settled - particularly in the Roman, Byzantine, and Mamluk periods - as is evidenced by the many wall lines and standing architecture on and surrounding the tell and the undulating surface of the land (a topography created by collapsed barrel vaults – Fig. 5). An extensive and elaborate system of cisterns, caves, and rock-cut features were components of a large water harvesting system, built in Antiquity and reused and adapted for a variety of uses (quarrying for building material, water storage and distribution, domestic use, stabling of livestock, storage of farming equipment, trash disposal) over the centuries.

Because the summit of the tell experienced no permanent reoccupation and only limited seasonal and sporadic occupation in the Ottoman period and after, the architectural remains there are relatively well preserved. Reoccupation and rebuilding of the summit in Antiquity, however, has resulted in a complicated stratigraphy and history of architectural reuse that make for

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19 Grabar, “A Small Episode”; Whitcomb, “Hesban, Amman, and Abbasid Archaeology”.
20 Ḥisbān was named the administrative capital of the Balqā District (wilāyat al-Balqā) in the southernmost section of the Province of Damascus sometime during the third reign of Sultan al-Nāṣir Muḥammad. At that point a garrison was stationed at the summit of the tell and fortifications there reinforced. According to Ibn Qāḍī Šuhba, the district capital (along with garrison, court, marketplace, and part of the population) was moved to Amman in 757/1356 for financial reasons. According to the archaeological record, an earthquake was the cause: rather than rebuild the fortifications, the Citadel was abandoned and the garrison moved to a nearby town.
21 Narratives concerning the role of Ḥisbān in the Mamluk state that appear in this essay have developed over fifteen years through a combination of excavation and archival research by the author. In addition to the technical publications listed above, they have been cultivated in a series of articles and a monograph written over several years and include “Mamluk Administration of Transjordan”; “Mamluk Investment”; “The Tribal Dimension”; “Imperial Conceptions of Authority and Space”; “The Phenomenon of the Small Rural Citadel”; and Jordan in the Late Middle Ages. A review of the textual sources is beyond the scope of this archaeological essay, and the reader is directed to these publications for a full list of them and for textual analysis.
generally poor stratigraphy, with a few exceptions. The lower slopes of the tell have excellent architectural preservation, with walls standing to as many as ten or more courses, like the corner towers of the summit.

Fig. 5 – Barrel vaults flanking entrance to the Mamluk Citadel at Tall Ḥisbān, courtesy of Institute of Archaeology, Andrews University, Heshbon Expedition archives.
III. History of the Archaeological Project

Excavations by Andrews University began at Tall Ḥisbān in 1968, a season delayed by a year because of the Six Day War. The five seasons of fieldwork of “Phase I” (1968, 1971, 1973, 1974, and 1976) – formally called the “Heshbon Expedition” - focused on the summit of the tell (Field A) and included trenches and squares designed for stratigraphic clarification along the southern (Fields B and D) and western (Field C) slopes. Preliminary results of these seasons were published in a timely manner in Andrews University Seminary Studies. The venue for the final reports, of which several volumes have been completed, is the series Hesban Final Publication Series (Andrews University Press). Phase I excavations, which were initially driven by an interest in Biblical history, identified three Byzantine basilicas (one on the summit and two below), a monumental Roman building tentatively identified as a temple, the remains of a Mamluk-era complex (with an Islamic bathhouse, the construction date of which had not at that time been confirmed), Roman-era tombs (in Field G), an Iron Age reservoir, and a series of fortifications that had been dated at the time to the Hellenistic period.

Phase II excavations resumed in 1996, with a consciously anthropological (food systems theory and “Great and Little Traditions”) and historical (the model of political ecology) orientation, with two goals in mind: 1. to present the site to the public and do limited restoration, and 2. to more fully explore the Islamic periods at the site and answer historical and stratigraphic questions about this period not addressed by earlier excavations. Since then there have been five seasons of Phase II excavations and surveys (1998, 2001, 2004, 2007, and 2010). Excavations during these years focused primarily on the Mamluk complex on the western half of the summit of the tell (Fields L, N, and Q) and on the western and southwestern slopes, where remains of the medieval (Field C) and Early Modern (Field O) village have been identified. Excavations in Field M in the northeastern corner of the site and the upper northeastern slopes were strategically designed to investigate the classical (Roman and Byzantine) and ancient (Iron and Bronze Age) fortifications; they uncovered, instead, the extensive remains of the Mamluk-era settlement associated with the Citadel. Since 1998 archaeological fieldwork has been done concurrently with archival research on medieval Arabic manuscripts, a bit of a novelty for Islamic archaeology. This kind of hybrid historical-archaeological research, done in tandem with one another and heavily coordinated, has become a hallmark of the project. This phase of fieldwork came to an end in 2010. Both the Phase I and Phase II projects are now in final publication.  

The 2013 excavation season launched the Phase III excavations, which no longer focus on the summit of the tell (the focal point of imperial officialdom), but on the slopes of the tell and the saddles and flatlands below. This physical shift in focus parallels a new, systematic investigation of rural society (namely the medieval village) and the lands and water system that

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22 Among the forthcoming final reports relevant to the study of the Mamluk site, are Walker, Hesban 9 and LaBianca and Walker, Hesban 14.
23 The current excavations are directed by the author and constitute one component of the larger “Ḥisbān Cultural Heritage Project” – a multi-component project involving archaeological research, restoration and site presentation, and community development and outreach - which is coordinated by Øystein LaBianca of Andrews University. The 2013 field season received the logistical support of the Jordanian Department of Antiquities and the American Center of Oriental Research (ACOR) in Amman.
helped to support it. To these efforts this season the project has integrated a broad-based environmental study with pollen, phytolith, faunal, and soil specialists.

IV. Results of the 2013 Excavation Season – Fig. 6

The Tall Ḣisbān Project returned to the field 19 May – 7 June, 2013 for a three-week field season. The international team consisted of 51 students and staff (including a full complement of environmental scientists), the majority from three American and two European universities, and 30 workmen from Ḣisbān. The 2013 season was designed to address very specific questions related to the history and development of the Mamluk-era settlement and the site’s water systems. Fieldwork resumed in areas in which excavation had begun in previous seasons:

1. Fields B and G – the Iron Age reservoir and the caves and cisterns connected to it. This season the reservoir, which was excavated in the 1970s, was cleaned in order to clarify and reinvestigate water channels and map their functional relationships to one another and to the adjacent caves. Different phases of water harvesting and use were revealed as a result, suggesting that at different times the reservoir was used as a quarry and then a reservoir, part of larger complex system of irrigating terraces, fields, and gardens. In order to locate one corner of the reservoir, a single excavation unit was opened above it in 2011. Continued excavation in that square revealed the walls of a Byzantine house with three pits, used for disposal of refuse in the Late Byzantine and Late Mamluk - Early Ottoman periods. An incense stand was reused in the construction of one of the walls of the structure.

2. Fields M and R – the upper slopes of the tell below the northeast corner tower of the Citadel and the fortification wall. In order to make visible the fortification (acropolis) wall and to better understand its history of construction, sections of the wall exterior were excavated in 2012 and in various years between 1998 and 2010. Continued excavation in these fields revealed a system of boulder-constructed towers built on bedrock (which may have been part of the original fortification system), a series of possible terrace walls of similar construction (which continued down much of the slopes), and rows of barrel-vaulted structures of Mamluk date used at different times as storehouses and stables.

3. Field O – the southwestern slopes of the tell and the saddle below it. Excavation of barrel-vaulted buildings continued from the 2007 season and revealed two adjacent Mamluk-era farmhouses with well plastered floors and walls. They seem to be part of the larger village settlement, with houses of the same size and structure facing cisterns and many sharing common walls.

In support of these excavations, the project piloted this season new technologies to better handle the rapidly increasing volume of data in different forms (and of interest to different specialists) and to facilitate interpretation of them: paperless data recording in the field on I-pads,

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24 The academic institutions represented included Andrews University, Missouri State University, University of Bonn, the University of Oslo, and the University of Jordan, as well as specialists and volunteers from the University of Texas-Austin, the University of Florence, and the University of Groningen.
development of a Filemaker database (to coordinate different data in different media), and the use of drones (a hectocopter and miniature, remote-control airplane) for low-flying photography.

![Fig. 6 – Areas of excavation at Tall Ḥisbān, 2013 season, courtesy of Qutaiba Dasouqi, Jordanian Department of Antiquities](image)

The town and village – see Fig. 6 for fields of excavation

The remains of the medieval village lay just below the surface. The extant wall lines and collapsed barrel vaults create an undulating topography that is readily visible (Fig. 4). Most of the standing architectural remains date to the Mamluk period, although these make use of building ruins (many still standing at the time) of the Early Islamic (Umayyad/Abbasid) and Byzantine periods. In some cases, these earlier buildings were demolished and new houses were constructed in the 13th and 14th centuries CE directly on bedrock. Because of this complicated history of reuse, adaptation, and demolition, the architectural stratigraphy of the site, while quite good, is also terribly complicated. Excavation is also made difficult by the massive rock tumble created by centuries of erosion and architectural collapse following repeated earthquakes. The site below the summit of the tell is, in essence, a massive rock pile of masonry overburden covering a well preserved medieval settlement.

Excavations in the 1970s began to uncover the remains of these structures on the western slope of the tell (Field C), where a long trench was opened to explore the stratigraphy of the extra-muros site and its relationship with the walled summit. Excavation on the slopes of the tell
began again with the Phase II project, which had as its goals the exploration of the medieval (and
namely Mamluk) settlement (in Fields C and O) and identification of the foundation trench for
the Citadel wall in order to date its original construction (Fields M and R). The results of this
work have revealed a densely settled occupation of the northern and western slopes of the tell, as
well as the flatlands below. The houses are packed closely together, in many cases sharing walls
and courtyards; with further excavation it may be possible to identify extended family groups on
the basis of these architectural clusters. They appear to have incorporated an ancient terracing
system, following the lines of these terrace walls in the layout and orientation of the housing
complexes. The Mamluk-era structures also make use of much older water systems: cisterns
and feeding channels built through the Roman, Byzantine, and Early Islamic periods. Many of
the houses open onto these cisterns. The structure, then, of the Mamluk settlement is partially
patterned by pre-existing terraces and water facilities.

The eastern slope and southern flatlands have become a focus of investigation only
recently and have revealed a different history of occupation and use, which are described below.
The slopes of the tell and the saddles to the wadi were likely the focus of settlement in the
Mamluk period. How far the settlement extended beyond this, however, is not yet clear.

Fig. 4 - Aerial view of Tall Ḥisbān, courtesy of Prof. David Kennedy, University of Western
Australia, APAAME

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These terraces may have created the contours of the current tell.
Field M – Figs. 7 and 8

Field M is located on the north slope of the tell and incorporates the northeast tower of the Citadel. There have been excavations in this area since 1998, with the original intention of dating the original acropolis wall and documenting the architectural development of that tower. The wall, originally dated to the Hellenistic period, may be of greater antiquity, and its founding courses are constructed with monumental-sized boulders.

While the foundation trenches have never been reached, a dense occupation of the slope was revealed. The use of the upper slope (adjacent to the Citadel wall) is unclear, as excavation was limited to one season (1998); future fieldwork will return to this part of the slope. The mid-slope region, however, seems to have been the focus of increased building activity in the 14th century. It is covered with parallel rows of narrow rooms (c. 2-3 meters wide, c. 5 m long – see Fig. 7), each room covered by a shallow barrel vault, supported by heavy walls that are built against one another, and with beaten earth floors. The rooms follow the slope, being oriented north-south (down-slope), with doors opening to the north towards a series of shared cisterns at the bottom of the hill. The chambers may sit on top of ancient terraces, with water channels following older ones that led to the cisterns below. One of these rooms/chambers was built on top of a cobblestone-paved kitchen of the Byzantine period (Fig. 8). Excavations in 2013 revealed two more identical chambers adjacent to this one to the east. There seem to be two phases of use of these rooms, both Mamluk. The first (earlier) phase is associated with a typical domestic assemblage of glazed and unglazed tablewares and much glass. The second phase has later pottery and much metal ware (horse accoutrements, nails, chain link, etc.) The narrow size of the rooms, the shallow vaulting system (producing a low ceiling), the lack of hearths and other such evidence of domestic activity, and the large quantities of metal fragments from equestrian gear and possibly agricultural tools, suggest that these rooms were not used as living space but as storage space and, subsequently, as stables. The use of the rooms came to an end by the late Mamluk period, and this part of the tell was not used again. The impression one gains of the entire mid-slope on the north side is that the space was organized and building planned (for a particular use) and that use of the space in this manner was short-lived.
Fig. 7 – Standing wall lines of Mamluk storeroom in M.8, boom shot overlaid by surveyed floor plan, courtesy of Qutaiba Dasouqi, Jordanian Department of Antiquities
**Fig. 8** – Architectural remains of Mamluk storeroom in M.4, courtesy of Aris Legowski and Felicitas Weber, Universities of Bonn and Swansea. Note the doorway of the room built into the Early Islamic wall, as well as remnants of barrel vault in background. Cistern at foreground.

**Field C** – Figs. 9-11

While not excavated in 2013, Field C (the western slope of the tell) was the first part of the site to have produced remains of the Mamluk village, and thus makes for us an important reference point for building construction and spatial organization. This field, which faces the Wadi Majar, was a target of excavations in the 1970s. Those excavations reached bedrock (identifying several foundation trenches for walls, and thus dating original construction, in the process), but without broad exposures that would allow for reconstruction of complete building or street plans. Nonetheless, portions of at least three significant building complexes of the Mamluk period were uncovered during this fieldwork. They seem to be part of a larger area of settlement that covered the entire slope, up to the Citadel wall itself, and were built against one another, with shared or abutting walls (some preserved to a height of 9-10 courses), and shared courtyards. These farmhouses of the 13 and 14th centuries are of the same construction as the series of vaulted chambers on the north slope and the Governor’s residential complex in the Citadel: barrel-vaulted structures supported on walls one meter wide or more and constructed with faces of roughly cut or reused limestone blocks and rubble fill. The houses are oriented roughly northwest-southeast, crossing the slope. Because the buildings were not excavated in their entirety, it is not always clear where the doors were, however those that were uncovered took the form of high arched doorways and apparently faced cisterns. All of the houses on the upper and mid-slope were abandoned by the end of the 14th century.

Two of these structures could be traced with some detail. They are large houses, with both plastered and beaten earth floors, hearths, and numerous pits (for garbage disposal) and make use of water channels, cisterns, and sumps built constructed in an earlier period (mostly Byzantine). The structures produced rich deposits of pottery, glass, and metal objects (of the same nature as those excavated in Field M), but the rooms in this field are undoubtedly domestic. The “North Building” in squares 4 and 6, located mid-slope, was particularly well preserved. It had two doors (one blocked in a second phase of use), the window sills and thresholds were still in place, and it preserved a plastered bench in one corner of a room. Plastered into this bench was a 13th-century lamp with a cache of 66 silver dirhams dated to the reign of Sultan Baybars (Fig. 10). It was a single-room structure, more than eight meters long (its width is unknown).

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26 The last preliminary report on this work was Parker, “Area C”, where one can also find citations to the earlier published reports by Andrews University.
27 The earlier excavations in this field were meant to produce a trench that would be a stratigraphic guide for the whole site (vertical coverage), not to document floor plans (horizontal exposure), which is a primary goal for current fieldwork. The goals for the two phases excavations are quite different but complement one another. While the earlier excavations provided a deep history of occupation, the current ones give a more detailed picture of a single period of occupation.
Fig. 9 – Wall lines of Mamluk buildings in Field C, excavated in 1976. North Building in center. Courtesy of Aris Legowski and Felicitas Weber, Universities of Bonn and Swansea

Fig. 10 – Coin horde from North Building, courtesy of Institute of Archaeology, Andrews University, Heshbon Expedition archives
The second structure – a large building more than 8.5x7 meters in size - was located on the upper slope in squares 9 and 10, not far from the outer face of the Citadel wall. It had at least three rooms, the largest of which was some seven meters wide and the one to the south of it c. 2-3 meters on each side. There were multiple doors, some to external courtyards and cisterns.

To the north of these structures three other buildings of the Mamluk period were uncovered during the 2004 and 2007 field seasons. The best preserved of all the Mamluk-era village buildings was the farmhouse located in squares 101-103 (Fig. 11). It reused the structure of a Byzantine-period house and followed the same construction as the North Building: high arched doorway, high walls, barrel vaults, plastered floors (and possibly walls), a single room (c. 7 meters wide). Like the North Building, it was also altered and rebuilt later in the 14th century, as the central room was divided into two by a wall, and an extension was added to the west. The building is laid out east-west, on an outcrop at the bottom of the tell overlooking the Wadi Majar, and opens onto an open courtyard with cistern to the south. From the house was recovered a rich assemblage of imported ceramics, local cooking wares (recovered from the hearth in which they were used), glass, and metal. The building was abandoned sometime in the late 14th century, and was reused as a farmhouse sometime in the later Ottoman era.

Two other smaller buildings were excavated in 2007 from the northern end of the upper western slope. They are oriented north-south, their walls are preserved for multiple courses, and they resemble the structures on the north slope: narrow, low-slung barrel vaults, no evidence of habitation. They may have been used as storerooms, as from them were retrieved a variety of storage vessels (including sugar molasses jars). There was evidence of a conflagration in one of the rooms, with fragments of spear points and crossbow bolts melted onto broken jars.

Fig. 11 – Mamluk farmhouse in Field O, 2004 field season, author’s photo
Field O – Figs. 12-13

The southwestern slopes of the tell and the flatlands below were designated in 2004 “Field O”. Excavations that season uncovered a large (c. 8x6 meter), single-room farmhouse of the same construction and layout as those described above. It was oriented east-west, with its door facing animal pens to the south. In a later phase of occupation, the room was divided into two by a wall and a qiwarah (grain storage bin) built into that wall in a corner of the room. The walls were preserved to a height of as many as ten courses; the doorway, lintel, and threshold were still in place; and remnants of floor plaster remained. The courtyard outside was divided into two halves, which, according to ethnographic accounts, may have been a way to separate two kinds of livestock from one another (sheep and goats from donkeys, for example). Foundation trenches were not reached, so it is not clear when the building was originally constructed. It could be Mamluk in construction, with reuse in the Late Ottoman period (19th century).

Fig. 12 – Mamluk farmhouse in O.9/10, 2013 field season. Note remnant of heavily plastered floor in upper left corner. Photo and floor plan courtesy of Qutaiba Dasouqi, Jordanian Department of Antiquities

In 2007 excavation of this field continued to the northeast, where the earth surface suggested the presence of numerous walls, vaults, and cisterns. The short field season that year identified the presence of two adjacent houses of the same construction as described here. Excavation of those structures resumed in 2013 and confirmed important characteristics of the Mamluk-era occupation. The houses were oriented north-south, on a saddle below the tell, and they shared walls (they were built against one another, without connecting doorways). On the west side was a courtyard, and to the north and east appear to be cisterns. The living space of these single-room complexes is approximately 5x8 meters. The floors and walls were heavily plastered (and replastered many times – Fig. 12). Each of the houses produced large quantities of pottery, glass, metal, and lithics. While the foundation trenches of the walls have not yet been
reached, occupation of the houses can be securely dated to the 14th century. There is, as well, evidence for continued occupation beyond that. The structures, like the one excavated in 2004, may have been reoccupied in the 19th century, as objects from this period (including storage jars and chubouk/tobacco pipe bowls) were recovered from later strata. These buildings, unlike others excavated in previous years, were not as well preserved (Fig. 13).

Fig. 13 – Mamluk farmhouse in O.5/7, 2013 field season. Courtesy of Aris Legowski and Felicitas Weber, Universities of Bonn and Swansea

Field B – Fig. 14 and 15

Occupation on the south slope of the tell is less known for this period. The Heshbon Expedition spent considerable efforts clearing the Iron Age reservoir in the 1970s and documenting the complicated stratigraphy of the access route to the summit of the tell from the south (Field D). Little of anything “Middle Islamic” in date was identified on the south slope, outside of evidence for terracing: after the abandonment of the Citadel in the later 14th century, the southern gateway and its staircase were covered with soil and transformed into a garden or orchard.
In 2011 excavation resumed at this part of the site, initially to continue excavation of the reservoir and clarify its connecting water systems. Fieldwork that year exposed three plastered floors of the Mamluk period, located above and on the southern end of the reservoir (Field B, square 4). Excavation in the area continued in 2013, moving to the south, and revealed a Byzantine-era house. At the end of the Mamluk period (late 15th or 16th century CE), this room was used as a garbage pit. (The contents of that pit are now in labs for analysis.)

The southern slope has a very different history of use from that of the north and west, which may be related to its location to the road system and the continued use of this space as an access corridor to the summit of the tell. It is possible that the southern slopes were never occupied in the Mamluk period, as this was the ceremonial entrance to the Citadel, and that only with the abandonment of the Citadel was the area converted to agricultural and refuse use, as was the case on the summit of the tell. However, the architectural remains on the southern slope are right below topsoil, and it is possible that there has been extensive removal of standing walls for building material in the modern village, as attested during ethnographic interviews.

![Fig. 14 – Pits in floor of Byzantine building in B.4., 2013 season. Stone-lined pit in lower left corner is Late Mamluk in date. Courtesy of Aris Legowski and Felicitas Weber, Universities of Bonn and Swansea](image-url)
Field R

Field R lies on the eastern slope of the tell, an area that served as the Heshbon Expedition’s sifting station (and excavation dump) during the 1960s and 1970s. Because of the heavy, contemporary overburden that this produced, this part of the site was not the subject of serious archaeological investigation until recent years. The study of the southeast and north east corner towers of the Citadel were the primary reason for turning attention to the east slope. In 2012 excavation began on the upper slope, adjacent to the mid-section of the Citadel wall, in a renewed effort to locate a foundation trench for the acropolis wall. Efforts continued this season, resulting in the identification of a series of walls close to the outer face of the Citadel wall, dating to the Mamluk period. Their function is not clear at this point. No floor was reached in the southern end of the squares excavated this season, however the northern end, excavated to bedrock, revealed that the bedrock had been shaped to form some kind of foundation for the acropolis wall. There were also many Mamluk pottery sherds found on the bedrock, suggesting that the bedrock had been visible during this period. The entire Citadel wall, down to foundation level, may have been visible, at least in sections, on this side of the tell, and this accessibility may be connected to the use of the cavernous chambers lying under the southeast corner tower.28 The appearance and use of the eastern slope during the Mamluk period is only now beginning to be investigated and nothing more conclusive can be offered at this point in the fieldwork.

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28 These chambers were explored in 2010. On passage leads directly from a cave below the northeast tower of the Citadel, underground to the surface, some 100 feet outside the Citadel to the southeast. On the basis of ceramic collection done from the interior of the passageway, the last phase of use was the Mamluk period. Although excavation inside that tower has not yet reached its foundations, it is possible that access to the passage was from the tower itself, and that this may have served as an exit route from the Citadel during the 14th century CE.
Spolia project

A spolia project was reinstituted this season, primarily in order to identify and map architectural elements from the Citadel dating from the Mamluk period, which were reused in the building of the modern village. While spolia documentation was included in earlier seasons of the Phase II project, those efforts were restricted to the tell itself and were intended to locate columns, capitals, and bases from the Roman temple and Byzantine church reused in other constructions, for the purposes of reconstruction and site presentation. This season the documentation was extended for the first time to the modern village of Hisbān and the caves located within it. The Mamluk Citadel, as it stands today, has no identifiable inscriptive or emblazoned plaques or registers, or any kind of architectural decorative devices. In order to determine whether this stark form of military architecture was typical of rural outposts, a search for spolia was put into place this season. The documentation, a long-term project, will ultimately serve three purposes: 1. To locate architectural remains of the Mamluk Citadel removed from the summit, 2; to study the changing contours of the village over time; and 3. to study of “making of memory” – to learn how the Mamluk period is remembered by residents of the modern village and to what degree historical narratives associated with it have been incorporated into their communal identity or ties to “place”. (This latter objective would be accomplished in conjunction with ethnographic study). The survey this season did not locate recognizable Mamluk spolia, although it did identify 47 architectural members of classical and Late Antique date. A protocol for documentation and GIS mapping was developed this season which will allow integration into the larger excavation’s Filemaker database system.

Agriculture, water management, and the environment

It was a priority this season to implement a comprehensive plan of environmental research to investigate the changes in land use, water systems, and climate that may have triggered the fluctuations in settlement intensity documented in the archaeological record. To this end, a zooarchaeologist (animal bone specialist), phytolith specialist (analyst of calcified plant remains), and archaeobotanist (seed specialist) worked closely together in sampling and interpretation. This coming year soil samples will also be sent to a palynologist (pollen specialist) and geomorphologist (specialist on soil formation and erosion) as part of the larger study on climate change. This was a particularly propitious year for this kind of analysis, as excavation throughout the site produced Mamluk-era floors (primary use - living space and locus

29 Regional surveys in the Hisbān hinterland conducted in the 1970s, and more recently, have produced no evidence of Mamluk spolia, though they have produced extensive evidence of Mamluk-era settlement and land use for miles beyond the tell (Ibach, Archaeological Survey of the Hesban Region; Christopherson, “Random Survey and Settlement Patterns”). These surveys, however, did not cover the modern village.

30 The spolia survey was conducted this season by Dr. Daniel Redlinger of the University of Bonn, who submitted a preliminary report on which the data for this summary is based. Plans are in place to expand it next season, in collaboration with the cave laser mapping project.

31 The labs are in Texas (phytolith), Nebraska (pollen), Gronigen (seeds), and Erlangen (soil genesis - geomorphology).
of food preparation) and pits (secondary use - trash disposal) – the ideal contexts for the study of agricultural systems, animal husbandry, and general food preparation and diet.

The analysis of animal bones this season began with the contents of the storeroom of the Mamluk Governor’s residence (excavated in previous seasons), and next year will be extended to the contents of the houses excavated this season.32 The fill above the floors of two rooms of the storeroom were rich in zooarchaeological remains and yielded important preliminary results. The quality of the meat consumed in the garrison was of great quantity and of the highest quality: the best cuts of meat (the hind quarters and axial skeletons of sheep and goats, for example) and was quite varied. The garrison consumed not only domestic sheep, goat, chicken, geese, and horse, but also wild game: gazelle – of at least three species, boar, rabbit, and exotic fish (parrotfish from the Red Sea).33 All meat was brought to the Citadel in processed form and was freshly cut (the meat was quite fresh when consumed): butchery was done elsewhere and by professional butchers (as indicated by the quality of execution of the cut marks). The storeroom, at least in its last phase of use (mid-14th century), was clearly used as a midden, for the disposal of dining scraps, and not cleaned out. Next year, when the remains of the houses excavated in 2013 have been analyzed, we will be able to compare the diets of the garrison and the village and possibly describe patterns of meat acquisition, sharing, and distribution within the village.

Phytolith analysis was incorporated into the excavations in 2010 and continued this season. As the calcified remains of plants, phytoliths (which have an excellent record for recovery in Jordan) preserve information on the kinds of plants cultivated for both human consumption and animal fodder. They also provide indirect evidence of historical climatic conditions. Laboratory analysis by the phytolith specialist in previous seasons indicated that wheat and barley production during the medieval Islamic periods at Ḥisbān peaked under the Mamluks. Moreover, on-going analysis has identified irrigation signals in the phytoliths extracted from soils on the Citadel storeroom floor (from the same context as the bones studied this season).34 This evidence suggests that grain production, which was normally rain-fed in this part of Bilād al-Shām, was, for a brief period of time in the 14th century, irrigated – an action that requires coordinated labor and an influx of funds and was meant to guarantee dependable revenues in a region known for irregular yields (the result of heavy fluctuations in rainfall).35

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32 Published reports on the zooarchaeological remains (Mamluk contexts) from the Hesban Expedition can be found in von den Driesch and Boessneck, “Final Report on the Zooarchaeological Investigation” and Brown, “Middle Islamic Faunal Distributions”.

33 There was only one sample of wild boar. It is not clear at this point whether it was merely hunted or actually consumed, as there were no cut marks on the bone. The horse remains (including a humerus of an animal over the age of 18 months) were probably eaten, as they did bear butchers marks. Notably, the remains of wild game (ostrich, gazelle) were also recovered from houses of the Mamluk-era village, excavated in the 1970s (Parker, “Area C”). Either hunting game was not necessarily a Mamluk privilege (or it was not enforced), or wild game was distributed as a meat product throughout the village.

34 Laparidou, “Identifying changing agricultural economies”.

35 In a country like Jordan, which is today the fifth most water-starved country in the world, water capture, storage, distribution, and use are the key to agricultural productivity and the survival of many communities located in areas of lowest rainfall. In recent times, the wheat harvest has failed one out of every five years (Palmer, “Following the Plow”, 132). The Madaba Plains lies on the 300 mm isohyet, which is sufficient for rain-fed agriculture. The annual
short, it may indicate direct state investment in grain production for the period that the Citadel housed the garrison. While state involvement in irrigation was commonplace in Mamluk Egypt, it was essentially unheard of for the rain-fed grain fields of Syria. Irrigation in Syria, we have come to believe, was limited to gardens and orchards, both urban and rural.

Unfortunately, in over forty years of excavation and survey at Tall Ḥisbān, no purely archaeological evidence for irrigation has been identified: no irrigation canals or aqueducts for the transportation of water to fields. The site does have, however, a massive reservoir – a large moat-shaped cut at the base of the tell on its south side that was used for some kind of water use in the Iron Age (Fig. 16). The Citadel also sits on top of a complex of interconnected caves and their passages, as do the slopes and flatlands where the historical village was located. While cave systems are characteristic of Jordan as a whole, they are particularly extensive at Ḥisbān. The changing functions of the vast system of subterranean chambers – natural openings in the soft limestone modified by human hands for various purposes over the millennia – are not fully understood. In an effort to more systematically explore the potential relationship between the reservoir and the cave system under and surrounding the tell, excavations this year included carefully cleaning and photo documentation of the reservoir, sampling of the plaster covering its surfaces and feeding channels (to date last phase of use), and preliminary mapping and drawing of the cave system adjacent to the reservoir, dubbed the “Abu Nur” cave by the excavation team.

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36 Such investment would also coincide with the use of the Citadel as a redistribution point for sugar molasses, another agricultural activity at Ḥisbān that seems to have been under state control. Dozens of cane sugar molasses jars were covered from the Citadel storerooms in 1998 and 2001. It was the highest concentration of such storage jars from any excavated context in Syria to date, indicating a large storage capacity, with high potential revenues (Walker, “Sowing the Seeds”, 190-191 – revenues here, however, based on raw cane sugar). All the more remarkable, was that surveys in the region around Ḥisbān have revealed no sugar mills; the nearest sugar plantations of the period were located in the Jordan Valley.

37 The reservoir below the tell appears to have been first used as a quarry, as have been many of the caves around the tell, for the acquisition of building material. In the Iron II period it was refashioned as a reservoir, according to the original excavators, plastered, and fed by winter rain waters. With an estimated holding capacity of over two million liters, it is impossible that the reservoir was ever filled by seasonal rains. More likely is that it was filled by an aqueduct, fed in turn by local springs. There is, however, no evidence anywhere in the region for an aqueduct, of any period. The reservoir went out of use in the Persian period and filled with rubble removed from the summit of the tell. It is unclear what function it had, if any, in the Mamluk period.
The function of the Abu Nur cave has changed many times over the centuries. Used originally as a quarry and then monumental cistern (constructed in the Hellenistic period), it continued to function for water storage under Byzantine rule, only gradually going out of use as a multi-chamber cistern and possibly used domestically during the Early Islamic period. In the 19th century CE it was transformed for stabling for animals (sheep and goats). Preliminary investigation of the Abu Nur cave in 2010 and 2013 suggest that much of this subterranean system was used as a large midden (town dump) in the Mamluk period, parts of the water system having gone out of use by then. However, at least one chamber, with connecting passages, was retained for water storage (as large water jars were retrieved from the bottom of one cistern – Fig. 17). Soil samples taken for geomorphological analysis in 2010 indicated that, at one point in its history, water channeled through the interconnecting passageways in this cave system at some speed, possibly suggesting that the system functioned as a *qanat* (a kind of underground aqueduct).\(^{38}\) The confirmation this season of a direct passage from the Abu Nur cave to the tell’s

\(^{38}\) We thank Prof. Bernhard Lucke, University of Erlangen, for this very preliminary suggestion. *Qanats* have been identified elsewhere in Jordan, but they are most clustered in the Decapolis region of the North and date to the Roman period. Such systems are known to have been reused in the Byzantine and Umayyad eras in southern Syria (Lightfoot, "Qanats in the Levant").
reservoir would seem to strengthen such an argument. Further investigation of this and other water systems in the environs will be a priority in the next field season.

Fig. 17 – Southernmost cistern in Abu Nur cave, in use in Mamluk period. Courtesy Prof. David Byers Utah State University.

V. Conclusions

How do we make sense of the statement by Ibn Qāḍī Šuhba that “it [Amman] was settled (sukinat), and he [Amir al-ʿAuš al-Ǧunkandārī, Governor of Amman] transferred here the qāḍī and people of the market of Ḥisbān (ahl sūq Ḥisbān) and a group of them (wa-ḡamāʿa minhum) from the area. And it became the heart of the region (umm al-balad), as it was formerly”?39 Forced population transfers, a tactic well known for the Ottomans, may have been used by the Mamluks, as well, but for different purpose. In the Transjordan, it was used to rebuild the town

of Ajlun, after the destruction wrought by flooding in 728/1328. If what Ibn Qāḍī Šuhba is describing is indeed population transfer, it would seem that it was employed for similar economic purpose in Amman, as well. Is there evidence “on the ground” for an emptying out of the town of Ḫisbān in 757/1356, the date of this entry in Ibn Qāḍī Šuhba’s narrative? What do such actions look like archaeologically?

It is too early to say with confidence whether the town at Ḫisbān was likewise “planned”, created through imperial fiat and through direct investment and population transfer, or that it suffered sudden population decline as a result of the same state actions. However, its rapid growth from a village (which was textually invisible for several centuries) to a densely settled town would not have happened organically, likewise its large-scale abandonment in the 15th century. The results of the excavations to date suggest some level of spatial planning along the north slope and on the upper west slope, with dense occupation and judicious use of space for storage. The upper slopes, those nearest to and adjacent to the Citadel walls, were abandoned – suddenly and completely – by the end of the 14th century. The architecture, pottery, and coin evidence confirm this. Settlement, however, seems to have continued further downslope and away from the Citadel, in stand-alone farmhouses, which had their own animal pens, cisterns, and storage facilities. These, too, were eventually abandoned (at least for year-round occupation), but they were reoccupied and rebuilt as farmhouses later in the Ottoman period. In short, there may have been two “Ḫisbāns” – the one a state creation (and in service of the Citadel), the other indigenous, self-sufficient, and resilient.

The history of water use at the site may be key to understanding the cycles of intensification and abatement in settlement. Changes in land management (such as the shift from irrigation to dry-farming, and from export market crops to a diversified, more sustainable, and less intensive, regime), which is implied by documentary sources (waqfiyyāt and tax registers), may have been a critical component in the history of “mega-villages” such as Ḫisbān that grew and collapsed suddenly over the course of Mamluk rule. The struggle for control of land and water would have been a focal point in the relations between state and rural society in this period, and it is one factor that merits more attention from Mamlukists.

On the issue of the reason for settlement abandonment, the archaeological record is suggestive, though ambiguous. On other matters, archaeological data seems to be absent – or we have been unable to identify it. We do not know, for example, the full physical extent of the town/village in the Mamluk period and can make no estimates, yet, of population size. We do not know where the residents of Hisban in this period were buried. Most importantly, we cannot

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40 On the rebuilding of Ajlun following this disaster, see Walker, Jordan in the Late Middle Ages, 144, 210, 230.
41 On these changes in agriculture in the Transjordan during the transition to Ottoman rule, see Walker, “Regional Market and their Impact on Agriculture”, and ibid, Jordan in the Late Middle Ages, 233-271.
42 The cemetery excavated in the Citadel storeroom in 2001 was Ottoman in date (Walker, “Late Ottoman Cemetery”), and this author suspects that the many references in the 1970s excavation reports to Mamluk-era cist graves (for individual burials) found in cistern mouths, and similar installations, may be contemporary to this. As for the location of the Roman and Byzantine cemeteries, these were located in rock-cut installations (many in caves) across the Wadi Majar (Waterhouse, Necropolis of Hesban). On-going ethnographic work has suggested that the modern village sits atop an ancient cemetery.
say how typical Ḥīsbān was as a village (and then town). Although textual and epigraphic data suggest that as an administrative center (or a low-level district capital, wilāyah), it may be representative of the frontier regions, how the settlement itself compared to others in Syria and Egypt can only be determined through systematic comparison with other excavated settlements.\textsuperscript{43}

Future field season at Tall Ḥīsbān will certainly aim to address these questions. The most pressing issues are, however, the structure of the village, the character and extent of its water systems, and the nature of indigenous agriculture during the Mamluk period. This will require an expansive study of the standing architecture, excavating as wide an area as possible to document village layout, organization of streets and access to shared facilities (such as cisterns, threshing floors, and storage facilities), and excavating to the depth of wall foundation trenches (to date original construction and document building development). This will be done in close collaboration with other excavations of Mamluk-era villages, such as Tall Jalul (Madaba Plains, Jordan)\textsuperscript{44}, Dhibān (southern, central Jordan), Khirbat Birzeit (Palestine)\textsuperscript{45}, and Bayit Vegan (Israel)\textsuperscript{46}. Tall Ḥīsbān offers Mamlukists a rare opportunity to physically examine extant water systems and to study modes of local agriculture. To this end, a full documentation of the exposed water systems (water channels, cisterns, sumps) will begin in 2014. Given the strong possibility that the cave systems were always the heart of water storage, and possibly irrigation, at this site, we plan laser mapping of the caves and passages in the immediate vicinity of the tell, along with sampling of soils from these systems as part of a larger geomorphological study. The extensive retrieval of metal and stone agricultural implements from the excavated farmhouses and storage buildings presents a rich opportunity to study indigenous technologies of agriculture. Analysis of the organization and technology of Mamluk agriculture must rely on a combined analysis of these tools and the soils and the plant remains they preserve, along with the further development of low-flying aerial photography (to identify ancient fields and terraces and water canals) and systematic study of Mamluk-era agricultural manuals (in progress by the author).

It is possible now, for perhaps the first time, to write a history of Mamluk-era rural societies. This can be accomplished only through a real partnership between “text and tell”, and through well-integrated multidisciplinary investigation of individual settlements. The archaeological record offers tangible possibilities for the study of the family and gender. Through the study of physical houses, their relationship with one another, their contents and spatial patterning, the Mamluk-era household can be reconstructed. This is, in essence, a microhistory approach to Mamluk studies. Village life (and family life) under the Mamluks will not be invisible for much longer, nor the villager mute.

\textsuperscript{43} The status of low-ranking district capitals and their possible relationship with outlying settlements may be assessed through a combined reading of administrative manuals and inscriptions from garrison buildings. For an example of this approach, using inscribed table wares from the Ḥīsbān Citadel storerooms, see Walker, “The Phenomenon of the Small Rural Citadel”.

\textsuperscript{44} al-Shqour, “Islamic Village at Tall Jalul”. The excavations are on-going.

\textsuperscript{45} These excavations have been under the direction of Prof. Hamed Salem, Birzeit University.

\textsuperscript{46} This began as a salvage project in 2012 by the Israel Archaeological Authority and under the direction of Dr. Benjamin Dolinka. Published reports are forthcoming.
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