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From Ceramics to Social Theory: Reflections on Mamluk Archaeology Today

Nearly seventy publications by Carl Petry appear in the Chicago Online Bibliography of Mamluk Studies, covering themes as diverse as gender and economic reform.[1] Anyone with some anthropological or sociological training will immediately recognize and appreciate the degree to which a curiosity about all things "social" permeates his work. From *The Civilian Elite of Cairo in the Later Middle Ages* (Princeton, 1981) to his more recent studies on crime and punishment,[2] Petry has sought to describe the structure of Mamluk-era societies, and the functions of and relations among their components, by using a range of textual sources. It is in the spirit of his contributions to Mamluk social history that the following review article is presented. The value of archaeology today in Mamluk studies lies clearly in the realm of socio-economic history and social theory. Decade-long efforts at developing field methods and interpretive theory are resulting in a kind of archaeology that is meaningful to text-based historians and is fostering

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[1] For the former, note his "Class Solidarity versus Gender Gain: Women as Custodians of Property in Later Medieval Egypt," in *Women in Middle Eastern History,* ed. Nikki R. Keddie and Beth Baron (New Haven, 1991), 122–42, and "Conjugal Rights Versus Class Prerogatives: A Divorce Case in Mamluk Cairo," in *Women in the Medieval Islamic World: Power, Patronage, and Piety,* ed. Gavin R. G. Hambly (New York, 1998), 227–40. For the latter see "Fractionalized Estates in a Centralized Regime: The Holdings of al-Ashraf Qaytbay and Qansuh al-Ghawri According to their Waqf Deeds," *Journal of the Economic and Social History of the Orient* 41, no. 1 (1998): 96–117, and "Waqf as an Instrument of Investment in the Mamluk Sultanate: Security or Profit?" in *Slave Elites in the Middle East and Africa: A Comparative Study,* ed. Toru Miura and John Edwards Philips (New York, 2000), 99–115.

[2] For example, his "'Quis Custodiet Custodes?' Revisited: The Prosecution of Crime in the Late Mamluk Sultanate," *Mamlūk Studies Review* 3 (1999): 13–30; "Crime in Mamluk Historiography: A Fraud Case Depicted by Ibn Taghrībirdī," *Mamlūk Studies Review* 10, no. 2 (2006): 141–51; and "The Hoax of the Miraculous Speaking Wall: Criminal Investigation in Mamluk Cairo," in *Mamluks and Ottomans: Studies in Honour of Michael Winter,* ed. David J. Wasserstein and Ami Ayalon (New York, 2006), 86–95.

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dialogue between the two disciplines.

Islamic archaeology as a whole has undergone a process of self-critique and growth. Insoll's *The Archaeology of Islam,* published ten years ago, was appropriately critical of the narrow focus and theoretical weaknesses of the discipline at the time, too often producing technical reports that failed to engage the theoretical debates of the day and ceramic studies that rarely went beyond the technical issues of chronology and provenance.[3] Insoll was particularly concerned about the following, which in his mind threatened to marginalize Islamic archaeology within its own discipline and render it irrelevant to area studies and history:

> 1. the narrow, one-dimensional emphasis of contemporary research (p. 4);
>
> 2. its near obsession with monuments and elite art, which led it to neglect entire categories of data that did not service the study of art (p. 5);
>
> 3. the general lack of interest by the archaeologists themselves in the environment and land use (p. 5).

In order to address these problems, Insoll called for multi-disciplinary research projects (with deliberate attempts to incorporate the methods, models, and paradigms of anthropology, history, and sociology); development of an archaeologically sound social theory; expanding data sets to include such things as botanical and faunal remains and coarse wares relevant to analyses of climate, diet, and consumption; and expanding research agendas to include economic, demographic, landscape, and environmental studies. Moreover, Insoll expressed concern about "a perceived inferiority of archaeological evidence to the written word,"[4] referring to attitudes towards archaeological research among many text-based historians of the medieval periods. This latter point is an important one, as it reflected not only on the inability of archaeologists to articulate the relevance of their research but also on their circumvention of textual data. Their preference for cultural theory over textual analysis stems from differences in scholarly training between historians and archaeologists in the U.S., who usually receive their

[3] Timothy Insoll, *The Archaeology of Islam* (Oxford, 1999). For similar critiques, see Donald Whitcomb, "Mamluk Archaeological Studies: A Review," *Mamlūk Studies Review* 1 (1997): 97, 105, and Marcus Milwright, *An Introduction to Islamic Archaeology* (Edinburgh, 2010).

[4] Insoll, *The Archaeology of Islam,* 4, referring to Timothy Champion, "Medieval Archaeology and the Tyranny of the Historical Record," in *From the Baltic to the Black Sea: Studies in Medieval Archaeology,* ed. David Austin and Leslie Alcock (London, 1990), 79–95.

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training in anthropology and art history programs, rather than history, although this is changing.

Ten years later a different picture of the field is developing, one that is especially promising for new directions of research in Mamluk studies. Something that we may call a bona fide "Mamluk archaeology" has emerged: it more actively engages written sources; encourages cross-disciplinary and collaborative research; is genuinely concerned with issues related to the environment and resource management (reflecting the personal interest of many project directors in the contemporary issues of development and sustainability); is committed to developing theory; and is actively exploring the complex dynamics of local societies. In doing so, the archaeology of today is better equipped to make the written record more "human" by giving voice to the silent masses that are largely invisible in narrative and documentary sources. In combination with ethnographic analogy and anthropological theory, archaeological fieldwork can produce a more intimate picture of local (and particularly rural) society than ever before. Moreover, it has the potential of exploring, on a very human level, how poor the poor really were; what "luxury" meant to most people; what the common man ate and how he lived and died; what a drought could do to a settlement physically, economically, socially; and how people were impacted, in very tangible ways, by political turmoil. On the level of social theory, archaeology can document long-term developments (the *longue durée* of the Annalistes) in a way that written sources alone cannot. An archaeology of Mamluk society also delivers a spatial dimension for studying social structures and change. Most of the field projects described below are concerned not only with chronological depth but also spatial breadth, exploring the physical landscape of rural societies and their management of natural resources. Such issues as the degree to which the state invested in rural areas, the physical and functional relationships of centers of officialdom (forts, large mosques and shrines, aqueducts, roads, agricultural factories) with villages and towns, and what physically happened to settlements during periods of imperial collapse are best explored through landscape archaeology. As for economic history, new trends in Mamluk archaeology prioritize identifying producers and consumers and describing more clearly their complex relationships with one another, defining market structures and the local and regional networks that supported them, and highlighting ways in which local communities were economically dependent on the state and under what conditions they were most self-sufficient. Archaeology is, in essence, a history of "the social" that provides cumulative, deep-time, and spatial evidence, raising issues about the societies of the day that may not emerge from the written record. Ultimately, it has the potential to offer a very local perspective on the Mamluk state.

Some of the most innovative research along these lines is coming out of

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projects based in the southern Bilād al-Shām. This is especially true for Jordan, which offers a particularly interesting and valuable environment for exploring the Islamic eras. Since the Transjordan was never the political center of a medieval Islamic state, scholars working here have naturally gravitated towards the study of local society—indigenous culture, the history of local villages and families, provincial and "frontier" studies—that is, micro-history at its best. And certainly in this sense, the archaeology of Jordan can deepen our understanding of Mamluk societies by providing this uniquely local perspective on social and political change. In recent years a renewed appreciation for written sources has enabled projects operating throughout southern Syria to incorporate Arabic sources into their research in more meaningful and creative ways, transforming their fieldwork into historically sound anthropology. Crossing disciplinary boundaries is, in my mind, quite healthy, and I believe the best field projects have taken this discipline in exciting new directions by doing "good history."

The following is a critical review of today's Mamluk archaeology, and it builds on the efforts of Whitcomb in his initial "state of the art" article of 1999.[5] This is not meant to be comprehensive in any sense; rather, it highlights research themes that illustrate the trends towards social and economic history described above. All of the projects described here make use of medieval Arabic sources, though to different degrees and to different purpose. They are collaborative and cross-disciplinary and have contributed new information on the rural societies of the Mamluk Levant.[6] My focus on the southern Bilād al-Shām is deliberate: archaeologists working today in Jordan, Palestine, and Israel, precisely because of their location on the "Mamluk frontier," are largely concerned with rural settlements and the cultures of the non-elite. Their work represents recent

[5] Whitcomb, "Mamluk Archaeological Studies."

[6] Several recent conferences have fostered collaborations between archaeologists and historians, with a special emphasis on the "Middle Islamic" (or Ayyubid-Mamluk) period. Noteworthy among these are the 3-year "Exercising Power in the Age of the Sultanates" project, jointly sponsored by the French and American research centers in Cairo. The Amman conference of 2005 (http://www.caorc.org/highlights/acor/acor-2005-05-16b.htm) tied to this initiative has been recently published as Bethany J. Walker and Jean-François Salles, ed., *Le pouvoir à l'âge des sultanats dans le Bilâd al-Shâm*, as *Bulletin d'Études Orientales* 57 (2008), supplément. In a similar vein, volume 11, no. 1, of *Mamlūk Studies Review* (2007), the "Syria issue," highlighted cross-disciplinary work on Mamluk Syria. More recent international projects in this vein include the November, 2008, conference "La Transgiordania nei Secoli XII–XIII e le 'Frontiere' del Mediterraneo Medievale," sponsored by the University of Florence (http://www.frontierarchaeology.eu/); and the June–July, 2009 workshop on "Material Evidence and Narrative Sources: Interdisciplinary Studies of the History of Islamic Societies," under the sponsorship of Ben-Gurion University of the Negev.

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research; many of the field projects are ongoing, and their publications largely span the last decade.

On "Text and Tell": Methods and Theory (Fig. 1)

The archaeology of the Mamluk period, as practiced today, is a form of historical archaeology heavily informed by anthropological models. One methodological development of the last decade has been in the engagement with the written record. The combination of written and material sources is the greatest challenge of any archaeology of historical periods, particularly so with the Mamluk period, which produced a wealth of texts. Many excavation and survey reports now include an explanation, however brief, of how historical sources are used. There has been a very gradual shift from dependence on texts for interpreting archaeological data to creating a dialogue between the two in ways that inform project design. Because written sources and archaeological data answer different sets of questions about human behavior and can differ in chronological scale of inquiry, they can and should be used in tandem to write a multi-faceted history of Mamluk societies. In short, one data set can inform the other. The challenge is to decide which kinds of sources are most appropriate to the subject at hand and to write a coherent, analytical narrative that uses them in complement with one another.

Archaeologists of the Mamluk period ("Middle Islamic" period in archaeological terminology)[7] have generally relied on written sources that are geographically and chronologically useful and readily available in print form (and frequently translated into European languages): narrative sources (primarily chronicles and geographies) and administrative manuals that help identify sites and provide a historical framework for their physical development. When used responsibly, such sources, in combination with archaeological evidence, can produce a rich narrative of Mamluk history.[8] What has been largely missing is an engagement

[7] The terminology was first suggested by Whitcomb, who advocated an archaeological periodization over a political one in describing material culture (Donald Whitcomb, "Reassessing the Archaeology of Jordan of the Abbasid Period," *Studies in the History and Archaeology of Jordan* 4 (1992): 386–87).

[8] Some very readable surveys of the Mamluk period in this line for southern Syria include Jeremy Johns, "The *Longue Durée:* State and Settlement Strategies in Southern Transjordan across the Islamic Centuries," in *Village, Steppe and State: The Social Origins of Modern Jordan,* ed. Eugene Rogan and Tariq Tell (New York, 1994), 1–31; Myriam Rosen-Ayalon, "Between Cairo and Damascus: Rural Life and Urban Economics in the Holy Land During the Ayyubid, Mamluk, and Ottoman Periods," in *The Archaeology of Society in the Holy Land,* ed. Thomas Levy (New York, 1994), 512–23; Bethany J. Walker, "Militarization to Nomadization: The Middle and Late Islamic Periods," *Near Eastern Archaeology* 62, no. 4 (1999): 202–32; Alan Walmsley, "Fatimid, Ayyubid, and Mamluk Jordan and the Frankish Interlude," in *The Archaeology of Jordan,* ed. Burton MacDonald, Russell Adams, and Piotr

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with contemporary documentary sources. One notable exception is the early Ottoman tax registers (singular, *daftar-i mufassal*) of the ninth/sixteenth century.[9] During the first century of Ottoman rule in Syria, many elements of the Mamluks' administration in the region were retained, including the general administrative structure, some personnel, and many of the larger landed endowments *(awqāf)*.[10] The registers document anticipated income from taxable commodities, though not actual taxes collected, and describe in some detail the status of rural property, whether a settled village *(qaryah),* a village formerly settled but now abandoned *(kharāb),* a piece of cultivated land (such as a garden, *qiṭʿah*), or a tract of cultivated land not associated with a village *(mazraʿah)*. Tax-liable commodities (summer crops, winter crops, livestock, processed agricultural goods and animal by-products such as honey, endowments) are listed along with their estimated revenues. Specific references to land tenure and use, along with incidental information, such as how a plot of land was acquired and what its access was to water, are occasionally included. The registers, moreover, are organized according by tax districts, yielding important details on the administrative structure of the region. The registers of 940/1534, 945/1538–39, 958/1551–52, and 1005/1596–97 are preserved in manuscript form, and from these several segments have been published for Palestine and Jordan. The majority of the publications are in Turkish with Arabic summary and commentary;[11] the most widely cited one, though, is in

Bienkowski (Sheffield, 2001), 515–59; Jumʿa Mahmoud H. Kareem, *The Settlement Patterns in the Jordan Valley in the Mid- to Late Islamic Period* (Oxford, 2000), 11–17, 294–95; and Marcus Milwright, *The Fortress of the Raven: Karak in the Middle Islamic Period (1100–1650)* (Leiden, 2008), 42–48. Such surveys are convenient entrées into the archaeological literature and should be consulted by text-based historians for accessible archaeological narratives on Mamluk history.

[9] Among the earliest registers relevant to southern Syria is *daftar* #340 of ca. 930/1523 in Istanbul (Muḥammad ʿAdnān al-Bakhīt, *Nāḥiyat Banī Kinānah [Shamālī al-Urdunn] fī al-Qarn al-ʿĀshir al-Hijrī/al-Sādis ʿĀshir al-Mīlādī* [Amman, 1989], 6).

[10] It is possible that part of the tax structure was retained as well, but until written documentation of the late Mamluk tax system is identified, this cannot be verified. Certainly what were taxable commodities did not change from the end of the Mamluk to the beginning of Ottoman rule, so one can assume some degree of continuity in the kind of taxes collected and the method of collection.

[11] Those specific to Jordan (Liwa ʿAjlun) include Muḥammad ʿAdnān al-Bakhīt, *Tapu Defteri No. 275, Detailed Register of the Private-Khass of the Governor of the Province of Damascus 958 A.H./1551–2 A.D.* (Amman, 1989); Muḥammad ʿAdnān al-Bakhīt and Noufan Raja Hmoud, *The Detailed Defter of Liwaʾ ʿAjlun (The District of Ajlun) Tapu Defteri No. 970, Istanbul* (Amman, 1989); and idem, *The Detailed Defter of Liwaʾ ʿAjlun (The District of Ajlun) Tapu Defteri No. 185, Ankara 1005 A.H./1596 A.D.* (Amman, 1991). For the Hawran, see al-Bakhīt, *Nāḥiyat Banī Kinānah;* idem, "Nāḥiyat Banī al-ʿAṣr fī al-Qarn al-ʿĀshir al-Hijrī/al-Sādis ʿĀshir al-Mīlādī," *Al-ʿUlūm wa-al-Insānīyah* 15, no. 4 (1988): 149–266; and idem,

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English.[12]

Unfortunately, these sources have not been used as fully as they could be: the general trend has been to look up an individual site name and determine whether the place was inhabited and its land continued to be cultivated after Ottoman annexation. The registers, however, yield much more important place-specific data than this. The estimated number of households in each location is included and the *dhimmī*s liable for the *jizyah* are mentioned in each entry of a *qaryah*. Although the numbers are not reliable for population statistics,[13] they do reflect the religious composition of villages, a demographic characteristic that is not readily recognizable in the archaeological record. The registers note, though inconsistently, abandoned villages, the location of roads and waterways, and the existence of facilities such as mills. In spite of this, their potential for studying environmental and land use changes has not been realized. Furthermore, because the Ottomans taxed many landed *awqāf* at a rate of 10%, endowments made during Mamluk rule that were retained as such by the Ottoman state are also named in the registers. In many cases these are the only references we have to these local endowments of grain fields, orchards, and gardens, as they have not been thus far identified in Mamluk-era *waqfiyāt* or chronicles. They attest to the continued economic viability of agricultural land in the region and provide invaluable data on cropping patterns during the transition from Mamluk to Ottoman rule; the value of this data has been largely overlooked.[14] The archaeological use of these

"Nāḥiyat Banī Juhmah fī al-Qarn al-ʿĀshir al-Hijrī/al-Sādis ʿĀshir Mīlādī," in *Buḥūth wa-Dirāsāt Muhdāh ilá ʿAbd al-Karīm Maḥmūd Ghuraybah bi-Munāsabat Bulūghihi al-Khāmisah wa-al-Sittīn* (Damascus, 1989), 497–588. For those useful for Palestine, see Muḥammad ʿAdnān al-Bakhīt and Nūfān Rajā Ḥamūd, *Daftar Mufaṣṣal, Nāḥiyat Marj Banī ʿĀmir wa-Tawābiʿihā wa-Lawāḥiqihā allatī Kānat fī Taṣarruf al-Amīr Ṭurahbāy Sanat 945 A.H./1538 A.D.* (Amman, 1989).

[12] Wolf-Dieter Hütteroth and Kamal Abdulfattah, *Historical Geography of Palestine, Transjordan and Southern Syria in the Late 16th Century* (Erlangen, 1977).

[13] For critiques on calculating population size on the basis of Ottoman tax surveys, see Bekir Kemal Ataman, "Ottoman Demographic History (14th–17th Centuries): Some Considerations," *Journal of the Economic and Social History of the Orient* 35 (1992): 187–98, and Heath W. Lowry, "The Ottoman *Tahrir Defterleri* as a Source for Social and Economic History: Pitfalls and Limitations," in *Studies in Defterology: Ottoman Society in the Fifteenth and Sixteenth Centuries* (Istanbul, 1992), 3–18.

[14] I have pulled heavily from the registers' endowment data for my own fieldwork, which is described later in this article. Some key publications in this regard include Bethany J. Walker, "Mamluk Investment in Southern Bilad al-Sham in the Eighth/Fourteenth Century: The Case of Hisban," *Journal of Near Eastern Studies* 62, no. 4 (2003): 241–61; idem, "Mamluk Investment in Transjordan: A 'Boom and Bust' Economy," *Mamlūk Studies Review* 8, no. 2 (2004): 119–47; idem, "Sowing the Seeds of Rural Decline?: Agriculture as an Economic Barometer for Late Mamluk Jordan," *Mamlūk Studies Review* 11, no. 1 (2007):

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registers is challenged by two other trends: site-specific focus and overreliance on a single published register in English. Identifying the tax status of a single site is less meaningful for a regional study, where one would trace the development of the larger geographical region or compare sites. Johns appropriately warns against expecting the registers, which describe a fiscal landscape, to reproduce a physical landscape recognizable archaeologically.[15] They are nonetheless useful in reconstructing that very fiscal landscape on a regional level in a way that reflects the economic life of sixteenth-century rural Syria. In short, such financial data can help refine the interpretation of the archaeological record and make site-specific studies much more relevant for regional history. On a final note, dependence on the English translation of the register of 1005/1596–97[16] is an issue of accessibility: the 1977 edition is in English, its data conveniently transformed into charts and maps by historical geographers. Nonetheless, reliance on a single register robs one of the opportunity to trace the development of a place or region over time (a full century, to be precise, is covered by these registers), the *longue durée* perspective most valued by archaeologists. One should also note that the reliability of this register has been questioned for Transjordan, at least, as it was not under direct government control after mid-century and may have pulled much of its data from an earlier register.[17]

These critiques aside, archaeological scholarship today is looking to Mamluk-era texts to answer broader questions than ever before about contemporary societies. Rural settlement history, which considers when and under what conditions villages emerge and disappear, is a case in point. Survey data suggests cycles of growth and abatement in settlement in the Islamic period as a whole (seventh through early twentieth centuries C.E.), with pronounced "gaps" in the archaeological record when there is no (generally ceramic) evidence for occupation. The Mamluk period, in this sense, is largely characterized by a spike in the number and size of villages in the thirteenth and fourteenth centuries, followed by a marked demographic decline by the fifteenth. Contemporary texts do not fully support this scenario, and instead suggest continued agricultural productivity in some regions. Reconciling the textual and archaeological records on this point has been

173–99; and idem, "The Role of Agriculture in Mamluk-Jordanian Power Relations," in *Le pouvoir à l'âge des sultanats,* 77–96. For a non-archaeological study of the same data for Palestine, see Mehmed İpşirli and Muḥammad Dāwūd al-Tamīmī, *Awqāf wa-Amlāk al-Muslimīn fī Filasṭīn* (Istanbul, 1982).

[15] Jeremy Johns, "Islamic Settlement in Arḍ al-Karak," *Studies in the History and Archaeology of Jordan* 4 (1992): 366.

[16] Hütteroth and Abdulfattah, *Historical Geography*.

[17] Robert Schick, "The Archaeology of Palestine/Jordan in the Early Ottoman Period," *ARAM* 10 (1998): 563–75.

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a goal of many field projects in Jordan. In his review of survey data for the Kerak Plateau, Johns offers reinterpretations of the ceramic data on which this history is based that bring the archaeological record more in line with the picture painted by literary sources. What had been seen previously as "gaps" in the record of settlement after the Islamic conquest, at the end of the Mamluk period, and during the seventeenth–nineteenth centuries (when the region was nominally under Ottoman control) have been accounted for by: (1) inadequate knowledge of the ceramics of these periods (suggesting "gaps" in occupation where none exist), (2) a dispersal of population rather than merely demographic decline, and (3) different models of settlement that describe a range of options from sedentarism to nomadism (his "pre-settlement," "proto-settlement," and "full settlement"), respectively.[18] The result suggests agricultural productivity through the sixteenth century, and a generally prosperous rural economy, with episodes of disruption.[19] In this case, the literary sources are taken at face value, while the archaeological record is refined by anthropological models and new ceramic typologies.

Accounting for the marked and relatively rapid growth of villages in the Mamluk period is equally challenging. In her analysis of the settlement of southern Jordan in this period, Hamarneh draws on literary sources, pre-Islamic settlement data, and survey and excavation reports relevant to the Middle Islamic period to describe the settlement morphology of rural Mamluk Jordan and its transformation from Late Antiquity to the later medieval eras. [20] In her interpretation of both written and archaeological sources, she suggests that the Mamluks' settlement strategy in southern Jordan was initially economically motivated and primarily geared towards control of agricultural resources. She further analyses the use of legal terms in Arabic texts related to landed property to describe the function, administration, and tenure of rural land, with the ultimate goal of assessing to what degree the state adapted pre-existing land use structures and to what extent they introduced something new. Future research in this vein will address to what

[18] Johns, "Islamic Settlement." His work pulls on the work of many earlier archaeological projects in Jordan. The Mamluk sources that he consults directly include al-ʿUmarī *(Al-Taʿrīf bi-al-Muṣṭalaḥ al-Sharīf),* al-Ẓāhirī *(Zubdat Kashf al-Mamālik),* and Ibn Taghrībirdī (Popper's notes to *Al-Nujūm al-Zāhirah fī Mulūk Miṣr wa-al-Qāhirah*).

[19] This is an idea developed more fully in Johns' "The *Longue Durée."*

[20] Basema Hamarneh, "Rural Settlements in Southern Transjordan Prior and Throughout the Ayyubid-Mamluk Periods," unpublished conference paper, international conference on "La Transgiordania nei Secoli XII–XIII e la 'Frontiere' del Mediterraneo Medievale," Florence, Nov. 7, 2008. As the excavation of Nakhl near Kerak is a new project, the results have not yet been published. I am grateful to Dr. Hamarneh for sharing with me information regarding her project. (For a similar approach to urban development in Mamluk Palestine, with different results, see Andrew Petersen, *The Towns of Palestine under Muslim Rule, AD 600–1600* [Oxford, 2005], 379–89.)

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degree a combination of factors—state-imposed and uniquely local—was behind the rise in the number and size of villages in the Mamluk period.

The archaeological record can, alternatively, breathe new life into the texts themselves. In their study of the northern Jordan Valley, Walmsley and McPhillips considered the socio-cultural context of the administrative structure imposed by the Mamluks on this region.[21] The map of provinces and districts described by al-Dimashqī and al-Qalqashandī is explored from the perspective of Ṭabaqat Faḥl (Pella), one of the districts *(iqlīm)* of the Sawad in the Province of Syria (Mamlakat Dimashq). Excavations here revealed an important rural center with an extensive village, mosque, and cemetery and a material culture that reflected the town's position as the "gateway" between coastal Palestine and the Jordanian highlands. The excavations, in my mind, reveal an administrative structure that was founded on communal structures predating the Mamluk period; the districts and their centers of administration reflect local identities, localized social and economic networks, and their own distinctive cultures (reflected in architecture and ceramics) that cannot be reconstructed from the written record alone. Mamluk administration in the region did grow out of the Ayyubid one, but both systems reveal a deeper cultural cohesiveness that could serve state interests. For the function(s) of smaller centers such as Faḥl, one must go beyond the literary sources and study the site itself, its physical relationship to the landscape and other sites around it. Its hot climate and good soil, ample water supplies, and easy access to transport corridors connecting the Jordanian interior with Mediterranean ports, in addition to a long history of village and urban development rooted in Antiquity, suggest the multiple strategic and economic functions of this rural center for the Mamluk state. Much can be learned about the structure and function of the Mamluks' rural administration in this manner.

Ultimately, a dialectical relationship exists between textual and archaeological sources in this kind of social history, with a critical "reading" of one source frequently resulting in a "re-reading" of the other. This kind of give-and-take can allow us to explore new themes not readily accessible from one source used alone. The Northern Jordan Project (hereafter the NJP), based in the hill country between Irbid and the Syrian border, has demonstrated ways in which the dialogue between "text and tell" refines our understanding of Mamluk social history. In order to more fully explore the nature and long-term impact of Mamluk rule in Jordan, the NJP has adopted a methodology that is rather new to Mamluk archaeology: research on contemporary documents in archives, done simultaneously with

[21] Alan Walmsley, "Settled Life in Mamluk Jordan: Views of the Jordan Valley from Fahl (Pella)," *ARAM* 9 (1997): 129–43; Stephen McPhillips and Alan Walmsley, "Faḥl during the Early Mamluk Period: Archaeological Perspectives," *Mamlūk Studies Review* 11, no. 1 (2007): 119–56.

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archaeological fieldwork and environmental studies. In addition to the regular mix of narrative (chronologies, geographies, and travelers' accounts, along with biographical dictionaries and legal treatises) and administrative (secretaries' manuals) sources, research designs aim at identifying and analyzing documentary sources (Mamluk-era *waqfīyāt*[22] and court documents related to property exchange and inheritance, as well as Ottoman-era shariʿah court documents, tax registers, and land settlement registers) to address a range of questions related to land use and local society that emerge from a critical "reading" of both texts and archaeological remains.

One focal research problem of the project has been identifying factors behind the settlement shifts of the fifteenth century. Outside of political events, climatic change (identified by long episodes of drought) has frequently been cited in archaeological literature as a catalyst behind the abandonment of villages and fields in this period. Fieldwork has aimed, in part, at determining whether climatic changes coincided with any decline in settlement and agricultural productivity on the village and regional levels and whether land use changed with the collapse of the Mamluk state.[23] The preliminary results have presented a different settlement history for the late Mamluk period than that which pervades the archaeological

[22] Endowment documents for rural land can be rich sources on village and agricultural history, as they frequently describe the physical limits of the village, location of roads that serviced it, sources of water, crops grown, local industries and public buildings, and buildings and fields that have fallen into neglect. Identifying Jordanian locales in these *waqfīyāt* is extremely difficult, a veritable "finding a needle in the haystack" experience. These documents do exist, however, and are already yielding important data relevant to village, economic, and agricultural history in the region. For published studies, see my "Sowing the Seeds" (and references therein) and my forthcoming *Transformation of the Mamluk Frontier*.

[23] The archaeological reports can be found in: Bethany J. Walker, "The Northern Jordan Survey 2003–Agriculture in Late Islamic Malka and Hubras Villages: A Preliminary Report of the First Season," *Bulletin of the American Schools of Oriental Studies* 339 (2005): 67–111; Bethany J. Walker, Ellen Kenney, Laura Holzweg, Lynda Carroll, Stéphanie Boulogne, and Bernhard Lucke, "Village Life in Mamluk and Ottoman Hubras and Saham: Northern Jordan Project, Report on the 2006 Season," *Annual of the Department of Antiquities of Jordan* 51 (2007): 429–70. For the specifically textual studies, which include analyses of other Jordanian *waqfīyāt* in manuscript form, see Bethany Walker, "The Politics of Land Management in Medieval Islam: The Village of Malka in Northern Jordan," *Studies in the History and Archaeology of Jordan* 9 (2007): 253–61; idem, "Sowing the Seeds"; idem, "Boom and Bust"; and idem, "The Role of Agriculture." A project summary and list of project publications can also be found in my "Peasants, Pilgrims, and the Body Politic: The Northern Jordan Project and the Landscapes of the Islamic Periods," in *Crossing Jordan: North American Contributions to the Archaeology of Jordan*, ed. Thomas E. Levy, P. M. Michèle Daviau, Randall W. Younker, and May Shaer (London/Oakville, CT, 2007), 473–80.

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and historical literature. Rather than the disruption of settlement viewed in other parts of Jordan, the villages of the northern hill country continued to be occupied and generally productive. Climatic conditions did change in the late Mamluk period, with dryer conditions than before, and some fields were abandoned for cultivation. Nonetheless, local villages appear to have adjusted by transforming their agricultural regime, through diversification of crops and smaller scale of production. (This latter point will be examined below.) In short, the collapse of the Mamluk state may have disrupted village life in some districts, but it certainly did not lead to the widespread decline of rural society or general dispersal of population, as suggested by archaeological surveys elsewhere. There is, in fact, evidence for a change in climatic conditions less conducive to export-oriented agriculture, but local communities in some areas were able to adapt effectively.

What, then, are the implications of such results for the use of Mamluk-era texts in local studies? The chronicles weave beautiful, heart-rending narratives about the immediate impact of drought and war. However, they seldom describe the recovery. They describe abandonment of villages, for example, but more often than not do not explain that the residents returned to them when conditions returned to normal. Documents such as *waqfiyāt* and tax registers describe land use and productivity at a moment in time but cannot trace, on their own, change or continuity on the long term. They do not account for the "whys" of land use. The benefit of the archaeological narrative, in this case combined with historical environmental studies, is in its potential to contextualize events and document their long-term impact. Together the written and archaeological narratives suggest that no single history of settlement can be written for southern Bilād al-Shām as a whole; rather there were distinctly regional patterns of growth and decline, adaption and dispersal.

A research theme intimately tied to that of settlement is agricultural history. Agricultural studies have recently taken two approaches. The first is concerned with the spottiness of the settlement record indicated by archaeological surveys and its disconnect with the written record. The inability to recognize different kinds of food systems (pastoralism, for example)[24] and diverse agricultural regimes (outside of village-based agriculture) has created a settlement map for the Mamluk period with geographical and temporal voids. McQuitty's study of vernacular architecture in Mamluk and Ottoman Jordan is one attempt to identify architecturally the various econo-residential strategies adopted by rural peoples, addressing these "voids" in the process.[25] Her work highlights the ambiguity

[24] For more on food systems, see Øystein S. LaBianca, *Sedentarization and Nomadization: Food System Cycles at Hesban and Vicinity in Transjordan* (Berrien Springs, MI, 1990).

[25] See, for example, Alison McQuitty, "The Rural Landscape of Jordan in the Seventh–Nineteenth Centuries AD: the Kerak Plateau," *Antiquity* 69 (2005): 327–38.

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of medieval architecture in this region: not every stone building in the rural landscape is a farmhouse, and peasants do not always require a built environment. Agricultural communities in southern Syria have relied as much on caves, tents, and cisterns—which leave little trace on surveys—for residence and storage as stone buildings. Identifying cultivated fields is more problematic, as they leave an even fainter footprint in the landscape of the region. Nonetheless, documenting the more ephemeral remnants of settlement and farming will provide a more comprehensive picture of the rural landscape than is currently available from traditional archaeological surveys and most narrative sources.

In a second approach, the struggle for control over natural resources becomes an object of study in itself, as this struggle was a key factor in molding society and determined the destiny of settlements. Land was a mediator between village communities and the state, thus the study of land tenure and use sheds light on rural-imperial relations and Mamluk objectives in the region. It is an approach to agricultural history and settlement studies that necessitates the combination of texts and archaeological data. Political ecology—a research orientation that considers the political, social, and environmental factors in this struggle—provides one way of exploring the complexities of Jordanian-Mamluk relations. The NJP has adopted political ecology to frame several lines of inquiry related to the history of land use in northern Jordan, including such issues as evaluating the effectiveness of imperial administration and land use policies in the region;[26] assessing the local impact of *iqṭāʿāt* and *awqāf* and the extent of peasant prerogatives in land use;[27] and determining to what degree agricultural markets, and the financial incentives promised by them, impacted cropping and ultimately settlement in Mamluk Jordan.[28] For the latter, published studies on sustainable agriculture by NGOs in Jordan provided the intellectual and methodological framework for the project's focus on peasants' subsistence and marketing strategies during the Mamluk period. The preliminary results of this kind of research suggest that Jordanian peasants retained a large degree of autonomy in the management of their land throughout Mamluk rule (outside of the large "estates" in the Jordan Valley and *waqf* land), shifted to more traditional land use patterns with the collapse of the Mamluk state (diversified production for local markets; emergence of modest-sized privately held land, on the one hand, and the possible return to communally-held land, on the other), and were relatively self-sufficient in most periods. To what extent this

[26] Walker, "Sowing the Seeds."

[27] Walker, "The Role of Agriculture."

[28] Bethany J. Walker, "Regional Markets and their Impact on Agriculture in Mamluk and Ottoman Transjordan," in *On the Fringe of Society: Archaeological and Ethnoarchaeological Perspectives on Pastoral and Agricultural Societies,* ed. Benjamin Saidel and Evelyn van der Steen (Oxford, 2007), 117–25.

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is true for the rest of Bilād al-Shām has yet to be determined.

Exploring how the state controlled rural lands and peoples is another promising venue of archaeological research requiring careful use of texts. Excavations at Faḥl, described above, suggested ways in which fieldwork can give meaning to Mamluk administrative structures. Ongoing excavations at another rural administrative center, Tall Ḥisbān in central Jordan, have demonstrated ways in which "text and tell" can provide a history of place that makes imperial administration come alive. I cite a single example from a recent field season.[29] Ḥisbān was the capital of the Balqāʾ region of the southernmost district of Mamlakat Dimashq during the first half of the eighth/fourteenth century. In 757/1356 the governorship of the district passed to Amman, along with its courts and bureaucracy. What is not clear from the chroniclers' brief accounts is why Ḥisbān lost its special administrative status, though they hint at financial reasons. Excavations present another possible scenario. The summit of the tell is dominated by the remains of a fourteenth-century complex, which has been identified as the residence of the governor of the Balqāʾ *(wālī al-Balqāʾ)*. This complex was destroyed in what appears to have been a mid-century earthquake, the contents of its storeroom abandoned in the rubble. There was no attempt to rebuild it, although the village below continued to be occupied and many homes were subsequently repaired. The fluidity of the Mamluks' provincial administration, with borders of provinces and districts changing and their capitals frequently transferred to other places, may, in part, be explained by local circumstances such as these, not retrievable from the written record.

How did Ḥisbān function as a rural "county seat"? Again, the written sources are silent on the matter; while narrative sources describe the multiple functions of large castles like Kerak and ʿAjlūn, smaller centers do not capture the attention of the chroniclers. The medieval site of Ḥisbān consists of a village at the base of the tell and the citadel at its summit. The tell in the thirteenth–fourteenth centuries took the form of a fortified hilltop with four corner towers and two gates. Inside the walled compound were domestic quarters, storerooms, a bathhouse, kitchen, and a raised *īwān* that may have served as an official meeting room. The storeroom is of particular interest for its contents: everyday kitchen ware, monumental-

[29] For detailed textual and archaeological analyses of the Ḥisbān citadel, see my "Mamluk Administration of Transjordan: Recent Findings from Tall Hisban," *Al-ʿUṣūr al-Wusṭá* 13, no. 2 (2001): 29–33; "Mamluk Investment in Southern Bilad al-Sham," 249–51; and "The Tribal Dimension in Mamluk-Jordanian Relations," *Mamlūk Studies Review* 13, no. 1 (2009): 13–14, as well as Bethany J. Walker and Øystein S. LaBianca, "The Islamic *Quṣūr* of Tall Ḥisbān: Preliminary Report on the 1998 and 2001 Seasons," *Annual of the Department of Antiquities of Jordan* 47 (2004): 447–53. The conclusions that follow pull from these studies.

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sized bowls with militarized inscriptions and blazons, fragments of a bronze bowl with the fragmentary name of an amir, bits and pieces of spear points and ballistas, and dozens of sugar storage/transport jars. Structurally, the complex and its constituent storeroom combine the characteristics of a fortification and a public administrative building. It appears to have served as a garrison, tribal meeting place (in the fashion of the traditional Early Islamic *quṣūr* of the region), and distribution point for sugar and sugar by-products. The Ḥisbān citadel illustrates the multiple functions administrative centers played in the control and development of rural areas of Bilād al-Shām. Current scholarship on the function of "castles" in the medieval Mediterranean is coming to appreciate the role of such rural fortifications in the administration of the imperial frontier.[30]

Making Pottery Relevant: Potentials for Refining Social and Economic History

Research on settlement, administrative centers, and land use is not only served by critical use of texts. Ceramics analysis, while still occupied with the meat-and-potato concerns of typology, chronology, trade, and provenance, is today expanding to investigate topics of relevance to non-specialists, such as networks of production and exchange, site function, and standards of living and diet. Because pottery played such an important role in food preparation, domestic storage, and certain agricultural industries in the pre-modern Middle East, it is uniquely positioned to describe the distribution of settlements, the operation of households, the workings of village industries, and the rural economy in general.

Debates over one ware in particular are impacting the way we understand settlement history: the Handmade Geometric Painted Ware (referred to as HMGP in most ceramic reports) that has come to be associated with rural Mamluk Syria. Wheel-thrown pottery throughout Bilād al-Shām was largely supplanted in the twelfth century by handmade jars and bowls with painted basket-weave patterns. The production and distribution of this pottery peaked in the thirteenth and fourteenth centuries at a time of demographic and economic growth, a phenomenon likely tied to a thriving rural economy, safe roads, and expanding local and regional markets—all beneficiaries, in one way or another, of state initiative. On archaeological surveys, the ware is the most readily recognizable marker of Mamluk occupation, so that the distribution of HMGP ware has come to be more or less synonymous with Middle Islamic settlement. The growing prominence of this kind of pottery, which happened at a rapid pace during the Mamluk period, is considered by Johns to be "of potentially the greatest significance for the social

[30] The Florence conference on Transjordan and the Mediterranean frontier mentioned earlier addressed this theme. For published works on this topic see Roni Ellenblum, *Crusader Castles and Modern Histories* (Cambridge, 2007).

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and economic history of the region."[31] Debates over the reason(s) for its sudden and widespread popularity, the mechanisms by which it was distributed (through trade, imitation of a trade item in another medium, or itinerant potters), and its specific chronology (did it disappear, and when, or did it simply evolve into other handmade wares of the modern era, as Johns has argued) are relevant to furthering our understanding of village consumption, local and regional trade networks, and the factors behind settlement location and longevity.

As for its chronology, there is a general consensus today that HMGP ware (of the variety associated with the Mamluk period) likely continued to be produced into the sixteenth century, although stratigraphic evidence is largely lacking.[32] A notable exception, and one frequently cited in the archaeological literature, is the medieval village of Tiʿinnik, located 13 km west of Jenin. The excavations of Birzeit University in 1985–87 produced a stratified sequence of HMGP ware spanning the Mamluk and Ottoman periods and dated by smoking pipes (introduced into Palestine in the early seventeenth century) and thermoluminescence.[33] The pottery demonstrated continued occupation of the site from the fourteenth and fifteenth to the early twentieth centuries. Recent studies such as those on HMGP ware are relevant to Mamluk studies, as they suggest new avenues of inquiry on settlement history and the rural economy.

Moving from the scale of regional settlement to the individual village, a ceramic assemblage can illustrate site function and how it changed over time. Some of the most interesting work on Mamluk pottery in recent years has addressed this subject. A comparison of three sites in Syria, Jordan, and Israel and the pottery associated with them is informative in this regard. Recent French excavations inside the Damascus Citadel have identified stratified contexts for Ayyubid, Mamluk, and Ottoman ceramics.[34] François' analysis of the later Islamic wares is sophisticated, pulling from typological studies of the ceramic remains and a range of medieval Middle Eastern and European texts describing contemporary

[31] Jeremy Johns, "The Rise of Middle Islamic Hand-made Geometrically Painted Ware in *Bilad al-Sham* (11th–13th Centuries AD)," in *Colloque international d'archéologie islamique, IFAO, le Caire, 3–7 fevrier 1993,* ed. Roland-Pierre Gayraud (Cairo, 1998), 84.

[32] For very recent studies on Ottoman HMGP ware, see Bethany J. Walker, ed., *Reflections of Empire: Archaeological and Ethnographic Perspectives on the Pottery of the Ottoman Levant* (Boston, 2009).

[33] Ghada Ziadeh, "Ottoman Ceramics from Tiʿinnik, Palestine," *Levant* 27 (1995): 209–45.

[34] Preliminary reports can be found in Sophie Berthier and Edmond El-Ajji, ed., *Études et travaux à la citadelle de Damas 2000–2001: Un premier bilan*, as *Bulletin d'Études Orientales* 53–54 (2000), supplement. The final field reports on the French excavations in the Citadel, including analyses of the Mamluk pottery, are forthcoming.

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pottery to raise important questions about the nature of ceramic assemblages.[35] In a recent study on ceramic exchange in the Frankish through Ottoman periods, she attributes the appearance of Italian imports in the Citadel after the fifteenth century to political networks, but the presence of Chinese imports to cultural factors.[36] The presence of imports, thus, is more than the mere measure of wealth; it has political and cultural/aesthetic meaning. The same could be said of the much smaller provincial capital of Kerak. In his analysis of the unstratified pottery from the Citadel and the Kerak survey, Milwright suggests multiple functions of the town, indicated by the wares themselves. Taking ceramics as "indicators of levels of economic activity and social complexity," he categorizes the Kerak assemblage by those wares with local (within southern Jordan), inter-regional (in Palestine and Jordan), and international distribution.[37] These, in turn, reflect the different economic roles of Kerak during the Middle Islamic period: as an economic center for rural communities in southern Jordan, as one of many regional markets servicing Palestine and Jordan in raw materials and manufactured goods, and a minor node in the larger exchange networks of the eastern Mediterranean, respectively.

How do these compare to rural assemblages? One expects in villages fewer imports and less diversity in wares and forms. This appears to be the case at several village sites excavated by the Israeli Antiquities Authority. Stern's systematic study of assemblages combines quantitative (comparing percentages of different wares in the assemblages, based on rim counts) and petrographic analyses (to determine provenance and thereby trace exchange networks) in describing the socio-economic networks of individual villages and changes in diet and cooking customs with Mamluk annexation. Khirbat Dinʿila is considered a "typical" Galilean village of the fourteenth and fifteenth centuries.[38] The assemblage as a whole consisted largely of locally made pottery (both hand-made and wheel-thrown, the latter more expensive to produce), although many shapes of the latter were inspired by foreign wares. Imports are rare and limited to a few Syrian (underglaze-painted "frit") and Italian (miscellaneous glazed) wares. The locally produced tablewares, interestingly enough, came from different workshops. Stern

[35] Véronique François, "Réalités des échanges en Méditerranée orientale du XIIe au XVIIIe siècles: l'apport de la céramique," *Dumbarton Oaks Papers* 58 (2004): 241–49.

[36] The assemblage thus raises issues not apparent before that must be addressed by an analysis of the texts themselves. She suggests: "L'archéologue, à travers la présence ou l'absence de ces objets, pose alors des questions nouvelles aux historiens" (ibid., 249).

[37] Milwright, *Fortress of the Raven,* 20.

[38] The following pulls from Edna J. Stern, "Khirbat Dinʿila: The Crusader and Mamluk-Period Pottery," forthcoming in *ʿAtiqot* (2009). This is the first petrographic study of Mamluk pottery in the Galilee and one of only a handful of such studies for the southern Levant. I am grateful to Dr. Stern for sharing her manuscript with me.

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highlights in her study decentralized production, the scarcity of imports, and the preference for wheel-thrown jugs and jars (22% of the assemblage, apparently manufactured at inland sites in the region). In comparing the pottery of the later Mamluk period with that of the earlier Frankish-era occupation, she notes that Mamluk-era bowls got bigger, cooking pots were of a different fabric and form, and jugs were also of a different form. These indicate important changes in dining customs, namely communal meals that required larger bowls and spouted jugs (for "cleaner" group use). The rural Mamluk assemblage, then, suggests active local ceramic industry, the introduction of new foods, and communal dining.

She makes similar conclusions about the assemblage at Khirbat Burin, a slightly earlier village (thirteenth–fourteenth centuries) in the eastern Sharon.[39] Here pottery was largely of local production, with the few imports at the site of an earlier (thirteenth-century Cypriot, Aegean, Syrian, and Italian—typical Frankish wares) or later (fourteenth–fifteenth century Italian wares) period. 42.2% of the pottery was handmade, but wheel-thrown jars and jugs were an important component (24%). 22% of the assemblage consisted of locally made glazed wares. The greater presence of imports, however, indicates that Burin had access to larger exchange networks than the residents of Dinʿila did. A comparison of the assemblages of several Mamluk-era villages in Israel (sites discussed in more detail below) reflects different scales and kinds of exchanges. Stern ranks rural sites accordingly: (1) rural sites with international connections (Givʿat Yasaf, near the port of Acre), (2) more isolated rural sites (largely inland) without international connections (Givʿat Dani, near Lod), and (3) rural sites that are somewhere in between, with limited international and intra-regional connections (such as Khirbat Burin). The typological scheme parallels that projected for Kerak and is a useful way to conceptualize village networks in the region.

At rural sites that contain both fortifications and "civilian" neighborhoods, a comparison of the ceramic assemblages associated with each can be informative about the relationship between the two communities, Mamluk and indigenous, or site transformations from defensive to domestic. Yoqneʿam (Frankish "Caymont"), located in northern Israel at a roughly equal distance between Haifa and Tiʿinnik, illustrates the latter. The Frankish fort here was abandoned by the time of Mamluk annexation in 1268. Mamluk occupation of the site began with the reuse of the old Frankish fort in the thirteenth century (Stratum IIb) with subsequent new construction in the fourteenth century (Stratum IIa) and abandonment, once again, in the fifteenth century. The Mamluk-era constructions transformed the former military structures into a farmhouse with mangers, silos, and tabuns. Avissar's ceramic evidence supports this scenario: the HMGP ware bowls and jars,

[39] Raz Kletter and Edna J. Stern, "A Mamluk-Period Site at Khirbat Burin in the Eastern Sharon," *ʿAtiqot* 51 (2006): 173–214.

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Syrian fritwares, wheel-thrown and handmade cooking pots, and lamps are all appropriate to a domestic assemblage in a rural settlement within the Damascus exchange network.[40] Ḥisbān, on the other hand, presents a very different case. The pottery excavated in the Mamluk-era village below the tell and that recovered from the regional survey of the village's hinterland did not differ significantly from that in the Citadel storeroom, except in the relative percentages of glazed imports to locally produced wares. HMGP ware jars (normally associated with Syrian village life) were stored in the Citadel; small glazed relief ware bowls (considered "army issue") were identified in village homes. Only the most expensive luxury goods were restricted to the Citadel, such as pseudo-celadons and inscribed bowls of monumental size. Overall, the division between officialdom and the village is not so clear cut at Ḥisbān, the "military" and "civilian" assemblages suggesting participation in the same exchange networks and comparable consumption. From this observation, we might gather that the kind of relationship that existed in Ḥisbān between the local community and the state officials stationed in the Citadel was different than the community-state relationship at larger administrative centers, but at this preliminary stage of ceramic analysis such a notion remains conjectural.

Perhaps the greatest contribution of ceramics analysis is in the evidence it can provide for lifestyle on the household level. This is a relatively new area of inquiry in Mamluk ceramics research. Much can be learned in this regard from contemporary work on Ottoman pottery, where consumerism has been a focus of scholarship for many years.[41] Little is known about the diet and general standard of living of rural communities in the Mamluk Empire, so this is a promising direction of future research. In differentiating between Ottoman and Mamluk assemblages in Damascus, François notes the change in form and decoration in monochrome-glazed and underglazed-painted fritwares.[42] A change in form frequently indicates changes in diet, and the shift from deep bowls (a Mamluk form) to wider but shallower serving bowls (an Ottoman form) may reflect new dining/serving

[40] Miriam Avissar, *Tel Yoqneʿam: Excavations on the Acropolis* (Jerusalem, 2005).

[41] On diet and foodways in medieval and Ottoman Cyprus, see Ruth Smadar Gabrieli, "Under the Surface: Decoration and Shape in the Coarse Ware of Medieval and Post-Medieval Cyprus," *Mediterranean Archaeology* 17 (2004): 287–98, and idem, "Silent Witnesses: The Evidence of Domestic Wares of the 13th–19th Centuries in Paphos, Cyprus, for Local Economy and Social Organisation" (Ph.D. diss., University of Sydney, 2006). For consumption measured by the Ottoman pottery in Damascus, see Véronique François, "Production et consummation de vaisselle à Damas, à l'époque ottoman," *Bulletin d'Études Orientales* 54 (2002): 157–74.

[42] Véronique François, "*Tabak*, *ibriq*, *fincan* et autres pots d'époque ottoman au Bilâd al-Châm," *Turcica* 37 (2005): 292–93.

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customs or new foods (more soups, fewer stews).[43] Another way to approach the study of ceramics and consumerism is to comb literary sources for descriptions of vessels purchased in the markets and used in cooking and serving, as well as depictions of the same in illuminated manuscripts. Initial steps have been taken in this direction for Mamluk Egypt[44] and Syria.[45] The study of diet from non-ceramic sources, such as floral (pollen and microbotanical remains) and faunal (animal bones) evidence, combined with analysis of pottery from archaeological contexts, also holds promise, but this kind of data collection has been under-utilized to this point.[46]

Surveys and Settlement: Where Did All the People Go?

No narrative dominates the archaeological history of Mamluk Syria more than the decline of the countryside in the fifteenth century. There is a general consensus, based largely on contemporary chronicles and later tax registers (both selectively cited) and survey data (most of it generated by fieldwork done in central and southern Jordan),[47] that there was general demographic decline and abandonment of many (though not all) villages for full-time occupation, most pronounced in the

[43] My suggestion—and a tentative one at that.

[44] Bethany J. Walker, "Ceramic Evidence for Political Transformations in Early Mamluk Egypt," *Mamlūk Studies Review* 8, no. 1 (2004): 1–114. (This study pulls from my 1998 doctoral dissertation.)

[45] Marcus Milwright, "Pottery in the Written Sources of the Ayyubid-Mamluk Period (c. 567–923/1171–1517)," *Bulletin of the School of Oriental and African Studies* 62 (1999): 504–18.

[46] See LaBianca, *Sedentarization and Nomadization,* for one relevant study of diet based on the faunal data from Tall Ḥisbān.

[47] Robert D. Ibach, Jr., *Archaeological Survey of the Hesban Region: Catalogue of Sites and Characterization of Periods* (Berrien Springs, MI, 1987); J. Maxwell Miller, *Archaeological Survey of Central and Southern Moab* (Atlanta, 1981); idem, *Archaeological Survey of the Kerak Plateau* (Atlanta, 1991); Udo F. Worschech, *Northwest Ard el-Kerak 1983 and 1984* (Munich, 1985); Burton MacDonald, *The Wadi el-Hasa Archaeological Survey, 1979–1983, West-Central Jordan* (Waterloo, Ontario, 1988); idem, *The Southern Ghors and Northeast ʿArabah Archaeological Survey* (Sheffield, 1992); idem, *The Tafila-Busayra Archaeological Survey 1999–2001, West-Central Jordan* (Boston, 2004); and MacDonald et al., "The Ayl to Rās an-Naqab Archaeological Survey, Southern Jordan, Phase I (2005): Preliminary Report," *Annual of the Department of Antiquities of Jordan* 49 (2005): 277–98. Recent data from the Madaba Plains Project hinterland survey is available on the web at: http://www.casa.arizona.edu/MPP. For the Dhībān Plateau Regional Survey, see Chango-Ho Ji and Jong Keun Lee, "A Preliminary Report on the Dhībān Plateau Survey Project, 1999: The Versacare Expedition," *Annual of the Department of Antiquities of Jordan* 44 (2000): 493–506, and Chang-Ho Ji, "The ʿIraq al-Amir and Dhiban Plateau Regional Surveys," in *Crossing Jordan,* 137–42, and published field reports cited therein.

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Transjordan.[48] However, there has been little systematic study of the issue in order to determine to what degree population levels dropped from the fourteenth century and how many settlements "disappeared." We have no population estimates at all, in fact, for rural regions, and no site numbers from different periods to compare. Statistics on settlement are impossible to obtain without thorough surveys in other regions of Syria; in Jordan, at least, the projection of survey data from the south to other parts of the country presents a picture of demographic decline that simply cannot be sustained there by either the historical or archaeological records. Another challenge has been the chronology of the HMGP ware described above, which is the most important dating criteria on surveys; it is likely that some of this pottery, previously dated to the Mamluk period, may be early Ottoman in date, in which case villages once thought to have been abandoned from the fifteenth and sixteenth centuries would have continued to be occupied.

Much of the debate on this issue among archaeologists working in Jordan centers on how to characterize the reconfiguration of settlement indicated by surveys and what exactly the factors were behind it. Pulling on data from the Central Moab and Kerak Plateau surveys, Brown in her M.A. and doctoral theses argued for a dispersal of settlement, rather than disappearance of villages.[49] The surveys indicated that sites dating between 1400 and 1600 C.E. (dated on the basis of ceramics) fell into two categories: those continuously occupied from the early Mamluk period and new settlements, the latter largely distinguished by rudimentary architecture (or none at all) and fewer ceramic remains. She interpreted these patterns as evidence of population dispersal, or a move towards pastoralism, at the end of the Mamluk and beginning of the Ottoman eras.[50] She cites a concern for security as one reason for the marked shift in settlement in the fifteenth century from the central Kerak Plateau to its southwest rim, as this region was less vulnerable to attacks by Bedouin tribes.[51] Situating such a scenario in the larger history of the Mamluk state, one could argue today that with the breakdown of the state politically and militarily, and the withdrawal of important resources from the provinces, rural security and prosperity could not be maintained on the open plateaus and in large villages. Dispersal of larger

[48] There appears to have been less disruption of settlement in Palestine during this period. A systematic comparison of settlement on both sides of the Jordan River has yet to be done.

[49] Robin M. Brown, "Late Islamic Settlement Patterns on the Karak Plateau, Transjordan," (M.A. thesis, SUNY-Binghamton, 1984), and idem, "Late Islamic Ceramic Production and Distribution in the Southern Levant: a Socio-Economic and Political Interpretation," (Ph.D. dissertation, SUNY-Binghamton, 1992).

[50] See Johns' review in his "Islamic Settlement in Ard al-Karak," 365.

[51] Brown, "Late Islamic Ceramic Production," 440–41.

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villages, with migration to less favorable environmental zones, was one response of local peoples to imperial collapse.

Movement of peoples into such less desirable lands could, alternatively, reflect demographic growth, economic development, favorable climatic cycles, and security. Fieldwork by Israeli archaeologists is bringing to light possible evidence for the expansion of villages into environmentally peripheral zones during the Mamluk period. Mamluk occupation in the Negev, as limited as the material evidence is, seems to have been concentrated in the west, where there was a general hiatus of occupation between the Early and Middle Islamic periods.[52] Recent excavations at Horbat Maʿon have investigated Mamluk-era reoccupation of a Byzantine-era village, where the old water systems and one mudbrick farmhouse were reused and many new constructions erected in stone.[53] In a similar fashion, a Mamluk village at Tall Jammah, in the northwestern Negev Desert, recycled ruins of the preexisting village dated to the Byzantine period.[54] Other sites were reoccupied in this period: at Ein Gedi a Mamluk village was built over the Roman ruins[55] and at Mezad Zohar the Frankish fort was reused for domestic use.[56] This does not, however, appear to have been a concerted, state-led effort to resettle this region. The cities that once flourished here in the Byzantine and early Islamic periods appear to have been largely abandoned by the eleventh century. Outside of a single site south of Gaza,[57] there is no settlement yet identified large enough to be considered a "town" in the Negev in the Middle Islamic period. This has led Petersen, in his study of medieval Muslim towns of Palestine, to suggest that the Mamluk state may have discouraged permanent settlement here, using the Negev instead as a political buffer zone and channeling traffic along its margins.[58]

For the purposes of comparison, the neighboring northern Sinai experienced continuous but uneven occupation from the Islamic conquest through the Ottoman era. Surveys there have documented an intensification of settlement

[52] Personal communication, Dr. Tali Erickson-Gini, Institute of Archaeology, Hebrew University of Jerusalem (12/25/08).

[53] Gregory Seriy and Pirhiya Nahshoni, "Horbat Maʿon," *Hadashot Arkheologiyot* 116 (2004). (electronic report www.hadashot-esi.org.il/report_detail_eng.asp&id = 48&mag_id = 108).

[54] This was a Smithsonian Institution project of the 1970s: Jerry Schaefer, "Archaeological Remains from the Medieval Islamic Occupation of the Northwest Negev Desert," *Bulletin of the American Schools of Oriental Research* 274 (1989): 33–60.

[55] Personal communication, Dr. Edna Stern, Israeli Antiquities Authority (12/24/08).

[56] Tali Erickson-Gini, Dov Nahlieli, and Edna Stern, "Mezad Zohar: A Crusader Fort near the Dead Sea," *ʿAtiqot* (forthcoming).

[57] Sit3 81/83, at 5.6 hectares: Schaefer, "Archaeological Remains," 55, 60.

[58] Andrew Petersen, *The Towns of Palestine under Muslim Rule, AD 600–1600* (Oxford, 2005), 47.

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in the fourteenth and fifteenth centuries that, though not reaching the levels of the early Islamic period, may be related to the reorganization of the *barīd* route running parallel to the coast.[59] Characteristic of this region in the later Mamluk period was the dispersal of settlements from a handful of large centers to numerous smaller settlements, clustered together and many in the vicinity of *barīd* stops and contemporary fortresses. Qalʿat al-Tina represents the latter and was excavated by Ben Gurion University in 1974 and more recently by the Supreme Council of Antiquities in Egypt.[60] An expansion in settlement is further attested by the hundreds of constructed tombs from the Mamluk period identified near Tall al-Muḥammadīyah, on the western end of Lake Bardawil. As expected, the ceramic record for all of these sites suggests strong ties to Egypt, with the notable presence of pilgrims' flasks, semi-luxury wares (such as pseudo celadons), and emblazed sgraffito wares (normally associated with garrisons).[61] The distribution of settlements, the diversity of site types, and the Egyptian character of the material culture indicate a settlement history that contrasts with that of the Negev and suggests state initiative.

As many of the relevant projects are as yet unpublished and period-specific research in this region is relatively new, it is premature to deduce from the limited data at hand anything concrete about Mamluk settlement in the southernmost areas of Bilād al-Shām. If the data does, indeed, reflect a deliberate attempt by local peoples to (re)settle parts of the Negev and cultivate lands there once again, one determining factor may be sought in climate change. A recent study of climate and culture in the Levant has documented recurring patterns of agricultural expansion into the Negev, and other marginal farming zones, when several factors coincided: years of dependable rainfall, population growth, political stability, and security of travel and trade.[62] This happened in the Byzantine period and then again in the Mamluk. Rosen here looks beyond the very real challenges presented by limited rainfall to consider the benefits that imperial systems offer peasants seeking opportunities in new lands: new technologies of production

[59] The Northern Sinai Survey was conducted by Ben Gurion University in 1972–78; many project-related reports have only recently been published. For the study of the Islamic-era ceramics, see Katia Cytryn-Silverman, "The Settlement in Northern Sinai during the Islamic Period," in *Le Sinaï–de la conquête arabe à nos jours,* ed. J.-M. Mouton (Cairo, 2001), 3–36. My comments regarding the survey pull from this publication. The more complete ceramic study on which this article is based can be found in her "The Islamic Period in North Sinai: The Pottery Evidence," (M.A. thesis, Hebrew University, 1996).

[60] Reports related to both projects are being prepared for publication.

[61] For the latter, see Cytryn-Silverman, "Settlement in Northern Sinai," 30, Pl. 15 (far right).

[62] Arlene Miller Rosen, *Civilizing Climate: Social Responses to Climate Change in the Ancient Near East* (Lanham, MD, 2007).

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and transport, access to international markets, extensive trade networks, and an infrastructure that facilitates "the transfer of subsistence resources from areas with more abundant surpluses to regions suffering failed crops."[63] Shaefer, in his field report on Tell Jemmeh, echoes the same sentiment: "political and economic conditions, rather than specific ecological determinant, permit(ted) the growth of a settled population" in the Negev.[64] Climate studies have documented a general trend towards wetter conditions more favorable for intensive agriculture in the thirteenth and fourteenth centuries. This coincided with political and economic conditions that encouraged the expansion of settlement into formerly marginal zones.[65] The fifteenth century, on the other hand, is marked climatically by much drier conditions, punctuated by many years of drought (confirmed by written sources, as well).[66] The problems created by lack of rainfall were exacerbated by the political problems of the time. The emergence and disappearance of villages reflect these trends. Communities dissolve and individuals migrate for a variety of reasons. The settlement fluctuations of the Mamluk period were the result of many factors—political, socio-economic, climatic—that coincided in unpredictable ways.

Rural settlement, of course, was not limited to large villages occupied on a year-round basis. A range of residence strategies has been traditionally used by the populations of southern Syria, from seasonal campsites to residence in caves, permanently settled villages, and towns. Cemeteries, and most specifically those not found in association with village sites or any permanent structures, can act as windows on settlement in its various forms. Cemeteries were frequently used by tribes long after the local village was abandoned and may indicate not only that a settlement once existed nearby, but that the tribe maintained its associations with the locale, even if it had moved away or no longer cultivated the land.[67] The so-called Ottoman-era "Bedouin" graves fall into this category.[68] Recent

[63] Ibid., 101.

[64] Schaefer, "Archaeological Remains," 56.

[65] Future research on this interesting phenomenon should include a systematic comparison of the data from the Negev with that from ongoing surveys in the southern and eastern deserts of Jordan, along with careful study of narrative and documentary sources.

[66] For a summary of this topic on the basis of historical sources, see Yūsuf Ghawānimah, "Al-Ṭāʿūn wa-al-Jafāf wa-Atharuhumā ʿalá al-Bīʾah fī Junūb al-Shām (al-Urdunn wa-Filasṭīn) fī al-ʿAṣr al-Mamlūkī," *Studies in the History and Archaeology of Jordan* 2 (1995): 315–22.

[67] Schaefer, "Archaeological Remains," 55.

[68] On the difficulty of differentiating village cemeteries from those used seasonally by transhumant populations, see St. John Simpson, "Death and Burial in the Late Islamic Near East: Some Insights from Archaeology and Ethnography," in *The Archaeology of Death in the Ancient Near East,* ed. Stuart Campbell and Anthony Green (Oxford 1995), 240–51.

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excavations by the Israeli Antiquities Authority have identified several Mamluk-period cemeteries on and near the southern coast and in the interior that are not physically associated with village ruins. The burials, according to the published reports, belong to two types: simple, individual cist graves, many of which were covered by beehive vessels (discussed below),[69] and built tombs lined and covered with clay bricks.[70] (There are no burial goods in either case.) Cemeteries such as these not only provide information on burial practices of the period, but they also may indicate settlement in regions where archaeological surveys have not identified villages, farmsteads, or pastoral presence.

Contemporary Archaeology and Alternative Narratives of Mamluk Society

Fieldwork at Mamluk sites in Syria has advanced in fits and spurts, mainly because the Middle Islamic period has not traditionally been a focus of research in the region. A specifically Mamluk archaeology has largely, and only recently, grown out of an interest in the Frankish era among Israeli scholars and in Ottoman societies among Palestinian archaeologists. In this regard, Jordan differs significantly from Syria. Targeted archaeological investigations on the Mamluk period have a twenty-year history in Jordan, and those of us in the field today certainly benefit from the important and pioneering work of a previous generation. These differences aside, archaeologists throughout southern Syria are exploring many of the same issues; interest in village life, industry and technology, and the impact of traditional and state-imposed agricultural practices on the land have generated much fieldwork in the last few years. Out of this research have emerged alternative narratives of Mamluk social history that challenge our traditional understanding of the state and its Syrian populations. We briefly consider four of these in what follows, citing examples from Jordanian, Palestinian, and Israeli excavations.

Narrative One: There was a dialectical and fluid relationship between the Mamluk state and local communities.

Scholarship on the Mamluk administration of Syria, aided by descriptions in contemporary chronicles and secretarial manuals, has been extensive.[71]

[69] For the use of beehive vessels at Azor and Kafr ʿAna, both near Jaffa, see Itama Taxel, "Ceramic Evidence for Beekeeping in Palestine in the Mamluk and Ottoman Periods," *Levant* 38 (2006): 208. For an example without the ceramic vessels, and dated by a single *fals* of Sultan Barqūq, consult Amir Gorzalczany, "Qanat Bint el-Kafir," *Hadashot Arkheologiyot* 116 (2004). (electronic report: www.hadashot-esi.org.il/report_detail_eng.asp&id=794&mag_id=114).

[70] Eli Yannai, "Bet Dagan," *Hadashot Arkheologiyot* 110 (2008). (electronic report: www.hadashot-esi.orgwww.hadashot-esi.org.il/report_detail_eng.asp&id=867&mag_id=114).

[71] They include Maurice Gaudefroy-Demombynes, *La Syrie à l'époque des Mamelouks*

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Archaeologists continue to cite such work, situating their individual sites within the larger administrative structure of Bilād al-Shām. While it has long been recognized that this structure developed over time, it has not been fully appreciated just how fluid it was and what accounts for the relatively frequent (and unexpected) changes of provincial and district borders and capitals. Recently, however, attention has been drawn to the possible factors behind and rationale for such fluidity.[72] Imperial administration reflects both state objectives in a region, which were more often than not captive to the vagaries of the Mamluk political scene, and relations between the state and local communities that ebbed and flowed with the currents of imperial politics. Decisions made in Cairo and Damascus to promote relations with a particular tribe, to promote one administrative center in order to strengthen its garrison in times of trouble, and to punish a recalcitrant village may have driven changes in administrative structure as much as long-term economic and military objectives. To illustrate, the promotion of al-Salṭ, the capital of the Balqāʾ, from a *wilāyah* to a *niyābah* in 678/1288 would have resulted in the stationing of a higher-ranking commander in the local garrison at a time when military reinforcements were needed to block the northward movement of rebel forces.[73] The interest of Sultan al-Nāṣir Muḥammad in Ḥisbān, which was Wilāyat al-Balqāʾ during his third reign, is illustrated through his personal visits to the town and construction projects, for which there is some archaeological evidence, and is likely tied to his active patronage of local tribes loyal to him during his return to the throne.[74] Textual sources imply that the later transfer of the district capital from Ḥisbān to Amman, in 757/1356, was an economic move—to serve the financial interests there of Amir Ṣarghatmish.[75] As noted earlier, excavations suggest that earthquake destruction of the Ḥisbān citadel was another factor in this decision. On the provincial level, the collapsing of the administrations of the province of Kerak with that of the District of Jerusalem (Niyābat al-Quds) in 912/1506, then with the District of Ṣafad in 916/1510, and finally with the District of Ghazah in 918/1512—all during a period of political chaos in the region—resulted in stripping Kerak of its independent status and pulling its rebellious tribesmen under regional military control.[76] The ultimate

d'après les auteurs arabes (Paris, 1923); Nicola A. Ziadeh, *Urban Life in Syria under the Early Mamluks* (Westport, CT, 1970); Yūsuf Ghawānimah, *Al-Tārīkh al-Ḥaḍārī li-Sharqī al-Urdunn fī al-ʿAṣr al-Mamlūkī* (Amman, 1982); Ṭāhā Thaljī Ṭarāwinah, *The Province of Damascus during the Second Mamluk Period (784/1382–922/1516)* (Irbid, 1987), 17–26.

[72] Walker, "Mamluk Investment in Southern Bilad al-Sham."

[73] Ghawānimah, *Al-Tārīkh al-Ḥaḍārī*, 48.

[74] Ibid., 48–49.

[75] Walker, "Tribal Dimension in Mamluk-Jordanian Relations," 14 (note 54).

[76] Shawkat Ramaḍān Ḥujjah, *Al-Tārīkh al-Siyāsī li-Minṭaqat Sharqī al-Urdun min Junūb al-*

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objective of controlling a province that had been so troublesome to Cairo in the past was thus resolved through administrative fiat.

The relations between the state and local communities and their elites permeate Syrian chronicles, if not Egyptian ones, indicating how important clientage was in achieving the state's objectives in a region dominated by fiercely independent-minded tribesmen. Clientage did not guarantee automatic compliancy with imperial programs, however. The tribesmen of southern Syria—townsmen, peasants, pastoralists—were independent actors and could, on their own initiative, influence officials and mold policy, although the chroniclers tend to mask the autonomy of local societies.[77] The give-and-take that always existed between the state and local society may be perceived in the physical and functional relationships of administrative centers with nearby settlements. Kerak, a provincial capital, consisted of the fortified castle and the town, which exhibited some degree of interdependence. Historically the town housed the principle marketplace of southern Jordan and was transformed by the building of a large castle in the Frankish period.[78] With the eclipse of the Mamluk state and the eventual abandonment of the castle by both Mamluk and Ottoman authorities, the town itself returned to its original status—a regional market town. The ceramic record has documented the economic cycles of the town's development as the fortunes of the citadel waxed and waned. The same could be said of Ḥisbān, which grew from a village, with a modest agricultural market serving other villages in the Balqāʾ, to a town with urban institutions, such as a court and madrasah, when the regional capital was transferred there and the citadel expanded in the early fourteenth century.[79] With the abandonment of the citadel, a half century later, the town resumed its previous function as a village with a farmers' market. The presence of the citadel/administrative center appears to have made little impact on the village or its environs on the long term.

The Ḥisbān citadel is suggestive in other ways about imperial-rural relations.

Shām fī ʿAṣr Dawlat al-Mamālīk al-Thāniyah (Irbid, 2002), 33. Ḥujjah attributes this action to an effort to strengthen the defenses of southern Syria, although he goes on to describe the redistricting of southern Syria at the end of the fourteenth century as an effort to better control them.

[77] For more on this topic from a Jordanian perspective, see Walker, "Tribal Dimension in Mamluk-Jordanian Relations," and idem, "The Role of Agriculture."

[78] Milwright, *Fortress of the Raven,* 272.

[79] For a summary of the results of recent excavations at Ḥisbān and a bibliography of published reports, see Øystein S. LaBianca and Bethany J. Walker, "Tell Hesban: Palimpsest of Great and Little Traditions of Transjordan and the Ancient Near East," in *Crossing Jordan,* 111–20, as well as Walker and LaBianca, "Tall Hisban," in "Archaeology in Jordan, 2004 Season," ed. Stephen H. Savage, Kurt A. Zamora, and Donald R. Keller, *American Journal of Archaeology* 109 (2005): 536–39.

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The small, three-room bathhouse that sits at the center of the acropolis has attracted scholarly attention, as it is an anomaly for Mamluk citadels. Most garrisons used public baths in nearby towns, as they were not equipped with their own. The *ḥammām,* moreover, does not fit in the overall organization of the "governor's house" of which it is one component: it occupies the space of what should have been an *īwān* facing the central courtyard and, moreover, faces the opposite direction. It, thus, appears to have been the remnant of an older complex. Its three-room linear plan belongs more to the local Roman-early Islamic forms of hypocaust bathhouses than the more familiar, centrally planned forms of the Mamluk period.[80] Excavations in 2007 have provided tantalizing evidence for dating this bath to the late Umayyad or early Abbasid period.[81] Its reuse and incorporation into the Mamluk governor's complex may be related to availability and necessity (as no other public baths have been identified in the medieval town)[82] or to other purposes. The early Islamic "desert castles" of Jordan combined administration with entertainment in reaching out to tribal leaders; recent excavation reports have suggested such a "*qaṣr* model" for the Ḥisbān citadel, the Mamluk governor stationed there entertaining tribal leaders in his residence and consolidating relations between the Mamluk state and the local elite in the process.[83] Although there is no textual evidence for such practice, the frequent meetings between Mamluk officials (including sultans) and local tribal leaders in this period suggest special arrangements to this end. The similarities among ceramic assemblages in citadel, village, and hinterland provide further support for regular exchanges between the administrative/military establishment and the Ḥisbāni community.

As important as co-opting and controlling Syrian tribes were, political programs in the region did not always translate into material investment in local communities. While textual sources laud the construction and repair of mosques, bridges, and markets by Mamluk sultans and amirs, there is little architectural evidence of committed and dependable investment in the region outside the large towns and castles. In rural areas, construction work appears to have been done

[80] Walker and LaBianca, "The Islamic *Quṣūr* of Tall Ḥisbān," 463–64.

[81] A brief preliminary report on this season can be found in Bethany J. Walker and Øystein S. LaBianca, "Tall Hisban," in "Archaeology in Jordan, 2007 Season," ed. Stephen H. Savage, Donald R. Keller, and Christopher A. Tuttle, *American Journal of Archaeology* 112 (2008): 516–18.

[82] According to al-Muqaddasī (d. 375/985), there was once a public *ḥammām* in Ḥisbān (Ghawānimah, *Tārīkh al-Ḥaḍārī li-Sharq al-Urdunn fī al-ʿAṣr al-Mamlūkī* [Amman, 1982], 148). However, I have come across no references to it in Mamluk sources, and no trace has been found of it archaeologically.

[83] Walker, "Mamluk Investment in Southern Bilad al-Sham," 255.

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by local masons and at the lowest cost. We return again to the Ḥisbān citadel for evidence from fieldwork. Everything about the fortifications and buildings inside suggest haste, minimum effort, and minimum expense. The ruins on the summit of the acropolis—which include a Roman temple, Byzantine basilica, and quite ancient fortification walls and towers and gates—provided much of the building material for repairs to the castle walls and in constructing the "governor's complex." When the ruins failed to provide enough building material, the local limestone (which is rather soft and friable) was hewn into roughly cut blocks. (There is a striking contrast between the quality of the reused stones and the Mamluk-era blocks.) Ancient structures were reused as much as possible, as were cisterns and the bathhouse. Few new buildings were erected; when walls were newly built or repaired they were roughly faced and rubble-filled. Reinforcements to defensive structures appear, to our eyes, to have been half-hearted. The quality of construction in the Ḥisbān citadel is really no different from farmhouses of the period in other villages in central Jordan (Ḥisbān village, Khirbat Fāris, Dhibān—described below); there is little technologically to separate the buildings of officialdom from those of the Jordanian countryside. The same can be said of contemporary administrative centers in Palestine, such as Khirbat Birzeit.

Defensive works by the Mamluks at the Ḥisbān citadel betray the same standards. In an initial stage of reconstruction, dating to the mid-thirteenth century, the ancient enclosure wall was restored, the southwest tower extended to surround two stories of rooms (including the storeroom), and the south gateway (the main entrance to the citadel) developed by extending the old Roman-Byzantine staircase to a new vaulted passage inside the entrance and adding a plastered courtyard (perhaps a tethering station) outside (Fig. 2). The 2007 excavation season documented the physical development of the south gate and its defensive structures in the mid-fourteenth century, in a third phase of much poorer construction.[84] At this stage the inner corner of the massive southwest tower was enlarged even further with a small guard room and curtain wall, narrowing the south gate in the process, and the room was almost immediately thereafter filled in with rubble. The work does not seem to have served any effective defensive purpose except to give the visual appearance of a heavily fortified tower-gate. This phase of construction appears to have followed an earthquake and may have been part of the post-trauma repairs. This restoration work was of little value in the long run, as the citadel was abandoned soon afterwards. The summit of the tell was then used on and off domestically, as the former storeroom and guard rooms were converted to kitchens and refuse areas.

A similar history of construction has been recently noted at Safed, the center

[84] Walker and LaBianca, "Tall Hisban," (2008).

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of commercial activity in the region and the administrative center of the Galilee.[85] Initial defensive reconstruction, initiated by Sultan Baybars after 1266, was done in earnest: a massive tower-gate complex with access ramp and a circular tower were built of solid masonry, adapting pre-existing building arrangements from the Frankish phase. An earthquake at the turn of the fourteenth century necessitated reconstruction and consolidation of walls, towers, and ramps, but maintenance from this point on was gradually neglected. By the end of the Mamluk period, the towers and gates were converted to installations for craft activities and cooking. Even at the most important Mamluk centers in the region, there is evidence for neglect of official structures, as military function gave way to domestic need.

Narrative Two: There was a marked regionalism in Syrian rural culture and a distinct autonomy in village life.

Village life has its own rhythm, interrupted here and there with the pressures, problems, and possibilities offered by the outside world. While the names of most medieval villages cannot be retrieved from the written record, and remain anonymous as a result, their rhythm can be partially recreated archaeologically. It is not easy, however, to describe the "typical" Syrian village of the period, as each region is culturally distinctive. They do, however, share characteristics that mark them as unique products of the Mamluk era. New villages emerged and old ones grew quite quickly in the thirteenth and fourteenth centuries. While the mechanisms behind this demographic growth/settlement expansion are not fully understood, whether pushed by imperial policy or the local response to economic opportunity, it is an important marker of the period. The material culture, settlement configuration, building styles, and land use differ in significant ways from the Frankish and even Ayyubid periods that preceded it. Moreover, such an intensive use of land had not been experienced at these levels since the Byzantine era. (The reuse of Byzantine ruins, including water installations, might be seen in the context of the state's attempt to maximize agricultural production at minimum effort.) The success of this agricultural experiment is indicated by the continued occupation of many of these "new" villages well into the sixteenth century. As a result of targeted investigations of rural sites, the character of village life in the Middle Islamic period is coming into sharper focus.

Two projects in Jordan were designed from the start to investigate "ordinary" villages of the Middle Islamic period: Khirbat Fāris (excavated between 1988 and 1994) and Tall Dhibān (on-going since 2004). The ruins of Khirbat Fāris lie just

[85] Final reports on the Israeli excavations at the Safed castle are not yet complete, but a preliminary field report can be found online: Hervé Barbé and Emanual Damati, "Zefat," *Hadashot Arkheologiyot* 117 (2005) (www.hadashot-esi.org.il/report_detail_eng.asp&id=214&mag_id=110).

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west of the King's Highway, on the Kerak Plateau some 17 km north of Kerak.[86] A multi-period site, with occupation spanning over 4,000 years, it is the village of the twelfth–sixteenth centuries that concerns us here. At the west end of the site, the ruins of several stone buildings identified as the remains of the medieval village were uncovered. The single-room peasant homes were made entirely of stone, with earthen floors, and covered with barrel vaults. They were quite small (4x3 m on the sides and 2 m high), which led the excavators to conclude they were entirely residential and not used for storage. The side walls were substantial (a meter thick), wide enough to support the heavy vaults, and their construction rather simple, faced with fieldstones and filled with rubble and mud. The dwellings were clustered around shared courtyards, narrow alleys, and cisterns. McQuitty notes the continuity of this form and its wide distribution, suggesting it represents for Jordan and the Palestinian hill country a typical village construction from the thirteenth through mid-twentieth centuries, where it was used alternatively as peasant home, storage facility, oven house, and stable. It represents a change in rural house form from the preceding period, when village homes included storage space in the thickness of their walls. The reason for this change may have to do with changes in the control of agricultural surplus that resulted from developments in agricultural administration,[87] a hypothesis that, however, requires reference to administrative and economic texts.

Indeed, this vernacular house form can be readily identified at Mamluk sites throughout Jordan. At the modern village of Dhibān, on the Dhibān Plateau 70 km south of Amman, the remains of a late Mamluk/early Ottoman (Phase 2) village have been identified.[88] Occupation took the form of reoccupation of the ruins of an Early Islamic complex (on the tell's southeast corner) and construction of new buildings on the tell's east side and on its acropolis (Field L). Recent fieldwork is focusing on the architectural remains of Field L, consisting of adjacent barrel-vaulted rooms and a well-preserved doorway. Mamluk-era ruins in other fields of excavation are characterized by the same vaulted constructions, external courtyards, and cisterns as documented on the acropolis and at Khirbat

[86] The following summarizes the results reported in McQuitty, "Rural Landscape of Jordan"; idem, "Khirbat Faris: Vernacular Architecture on the Kerak Plateau, Jordan," *Mamlūk Studies Review* 11, no. 1 (2007): 157–72; and McQuitty et al., "Mamluk Khirbat Faris," *ARAM* 10 (1998): 181–226.

[87] McQuitty, "Vernacular Architecture on the Kerak Plateau," 164.

[88] The results of the Dhibān project can be found in Benjamin Porter et al., "Tall Dhiban 2004 Pilot Season: Prospection, Preservation, and Planning," *Annual of the Department of Antiquities of Jordan* 49 (2005): 201–16; Benjamin Porter, Bruce Routledge, Danielle Steen, and Firas al-Kawamlha, "The Power of Place: The Dhiban Community through the Ages," in *Crossing Jordan,* 315–22.

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Fāris. The excavators have identified three phases of occupation of the acropolis complex, the building used intermittently into the sixteenth century, suggesting a gradual abandonment of the site. The function of the acropolis is not entirely clear, although some indication of the status of the village in the thirteenth and fourteenth centuries is provided by textual sources: the lands of Dhibān constituted an *iqṭāʿ* bestowed by Sultan Baybars on the son of an Ayyubid prince in 1261,[89] and the village had a mosque beside which was built a shrine, the final resting place of two Mamluk amirs in the late fourteenth century.[90]

The Mamluk villages at Ḥisbān and Faḥl belong to the same tradition. Below the Ḥisbān citadel, on its western slopes and leading to the Wādī Majār (Field C), are the remains of the medieval village, occupied for the duration of the Mamluk period and perhaps through the sixteenth century. One structure, identified as a Byzantine farm house, was reoccupied in the Mamluk period. Other buildings, excavated in the 1970s, appear to have been fresh constructions of the thirteenth and fourteenth centuries. The stone houses are all barrel-vaulted (the vaults low-sprung and shallow, as on the summit) with thick walls (c. 1 m in diameter) and earthen floors, clustered around open courtyards and cisterns and divided by narrow alleys, indicating a settlement organized by extended families. In Field O, to the southwest, the same kinds of structures and spatial organization were associated with the nineteenth-century village, demonstrating longevity of this local settlement type. The Mamluk village at Faḥl (with cemetery) reveals similar patterns: courtyard houses (of stone and mudbrick) with beaten earth floors and enclosure walls and divided from one another by narrow streets.[91]

Mamluk village architecture in Jordan, as in Palestine and Israel, fell to two patterns: a distinctly regional style of vaulted stone farmhouse, and reuse of ancient structures. The reoccupation, and adaption, of Byzantine and early Islamic structures appears to have been particularly common, as they were frequently constructed of well-hewn blocks, their masonry ruins functional centuries later. At Shuqayrah al-Gharbīyah, 25 km southeast of Kerak, a fortified compound has been recently excavated, dated to the Umayyad and Abbasid periods.[92] After a

[89] Muḥyī al-Dīn Ibn ʿAbd al-Ẓāhir, *Al-Rawḍ al-Zāhir fī Sīrat al-Malik al-Ẓāhir* (Riyadh, 1976), 123. The recipient of the grant was al-ʿAzīz, the son of al-Mughīth, who was reinstated at Kerak that year.

[90] Ibn Qāḍī Shuhbah, *Tārīkh Ibn Qāḍī Shuhbah,* ed. ʿAdnān Darwīsh (Damascus, 1977), 1:390. The reference comes from an obituary of the year 793 A.H. for *amīr al-kabīr* Ibrāhīm ibn Manjak, the loyal officer of Sultan Barqūq, who chose to be buried with his brother (also a Mamluk officer) in a *turbah* beside the Dhibān mosque.

[91] McPhillips and Walmsley, "Fahl during the Early Mamluk Period."

[92] The following is based on a recent preliminary report: Younis M. Shdaifat and Zakariya N. Ben Badhann, "Shuqayra al-Gharbiyya: A New Early Islamic Compound in Central

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conflagration sometime in the ninth century, the compound was abandoned for several hundreds of years, to be reoccupied in the thirteenth. Following a pattern familiar in Jordan, the occupants settled in and on top of the ruins, without fully clearing out the earlier debris. Newly built walls were readily distinguished by the excavators from their early Islamic counterparts by their masonry ("clumsy walls" comprised of roughly hewn boulders). The original rooms were subdivided into smaller ones, transforming a complex that probably functioned like the so-called "desert castles" of the steppe into a typical farmhouse with stables. A similar phenomenon has been noted in the Ḥisbān citadel, where an early Islamic building inside the northern gate, destroyed by earthquake in the ninth century, was reused as a kitchen in the early Mamluk period. In the nineteenth century, it was adapted for a stable.[93]

There have been few studies of sacred architecture in rural Jordan, largely because few examples have been preserved, and archaeological investigations of them are logistically and legally challenging. Nonetheless, two published examples in Jordan hint at the potential of using sacred space to reconstruct vernacular life: the mosques at Faḥl and Ḥubrāṣ. The Faḥl mosque (30.2 x 20.5 m) follows a construction style and plan identified in other regions of Jordan in the Mamluk period: stone construction with reused columns, sunk into the ground and supporting arches, the interior space divided by three aisles, a projecting mihrab, earthen floor, and an exterior courtyard.[94] Ruins of the attendant settlement, described above, have been excavated. Architectural survey of the medieval mosques in Ḥubrāṣ (in 2003) and subsequent excavation (in 2006) aimed at tracing village history through the physical and functional development of the local mosque and its associated buildings.[95] The ruins consist of a small square sanctuary (12 x 15 m) with a black and white mosaic floor and sunken columns, originally an Umayyad construction, which doubled in size (to c. 12 x 30 m) in the thirteenth century, presumably to accommodate a growing population. The

Jordan," *Near Eastern Archaeology* 71, no. 3 (2008): 185–88. The site has been excavated since 2002 by Muʿtak University.

[93] For the "Field N house," see Walker and LaBianca "The Islamic *Quṣūr* of Tall Ḥisbān," 453–55, and Walker, "Countering the Urban Bias in Islamic Studies: Final Report on MPP 2001: Tall Hisban, Jordan," *Newsletter of the American Center of Oriental Research* 13, no. 1 (2001): 3–4.

[94] Walmsley, "Settled Life in Mamluk Jordan," 132–36.

[95] Field reports on the Ḥubrāṣ mosques can be found in Walker, "The Northern Jordan Survey 2003"; Walker et al., "The Northern Jordan Project 2006"; Walker and Kenney, "Rural Islamic in Late Medieval Jordan"; Walker, "Imperial Transitions and Peasant Society"; and idem, "Sahm and Hubras," in "Archaeology in Jordan, 2006 Season," ed. Stephen H. Savage and Donald R. Keller, *American Journal of Archaeology* 111 (2007): 532–35.

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Mamluk-era mosque received a minaret (that carried an inscription of dedication by Sultan Qalāwūn in 686/1287), a new floor, a cross-vaulted roof, and a second (and perhaps third) mihrab. It was built with a combination of semi-dressed block and blocks and columns reused from ruins nearby. It resembles, but does not mirror, the contemporary mosque at Faḥl. **The thirteenth-century mosque at Ḥubrāṣ appears to have remained in use for hundreds of years, belonging to a larger ritual complex (one room of which contained imported European porcelain) in the eighteenth and nineteenth centuries. In 1931 a smaller mosque was built in the interior of the medieval ruins, the construction and plan of which resembled the Mandate-era houses nearby, and the twentieth-century sanctuary remained in use until 1970, when the mosque was officially closed for prayers (Fig. 3). Although no trace of the medieval village has appeared, its presence, longevity, history of expansion and contraction, and material culture and economic potential are documented in the local mosque.

In the West Bank, excavations by Birzeit University at Tiʿinnik (1985–87) and Khirbat Birzeit (1996–99, and renewed in 2006) have offered a glimpse into village life in the Mamluk era. Although the final report from Tiʿinnik has yet to be published, an indication of the kind of village it was can be surmised from Ziadeh's 1995 ceramic report.[96] Located in the northern West Bank, 13 km west of Jenin, Mamluk and Ottoman Tiʿinnik was a reoccupation of the Byzantine ruins, with the densest settlement in the late fifteenth and sixteenth centuries (Stratum 6)—a period normally associated with demographic decline. Over 60% of the pottery from this period was handmade and locally produced, with a reduction in wheel-thrown wares by 40% from earlier periods. Local products also included green-glazed bowls and wheel-thrown jars—the kind of assemblage identified in contemporary sites throughout the region. Demographic growth and a reliance on local industries characterize late Mamluk occupation at this site.

Khirbat Birzeit, in the central West Bank on the outskirts of Ramallah, has a different history.[97] Excavations in the 1990s focused on a large, two-floor complex,

[96] Final publication is now underway by Drs. Nancy Lapp (Concordia Seminary) and Hamed Salem (Birzeit University) and is affiliated with the Committee of Archaeological Policy of the American Schools of Oriental Research. For the ceramic report, see Ziadeh, "Ottoman Ceramics."

[97] Preliminary reports from the first phase of excavations can be found in Khaled Nashef, "Abḥāth wa-Tanqībāt fī Khirbat Bīrzayt 1996," *Journal of Palestinian Archaeology* 1, no. 1 (January, 2000): 4–27 (of Arabic section); idem, "Khirbet Birzeit 1996, 1998–1999: Preliminary Results," *Journal of Palestinian Archaeology* 1, no. 1 (January, 2000): 25–27; Khaled Nashef and Omar Abd Rabu, "Khirbet Birzeit Research and Excavation Project 1998: Second Season Excavation," *Journal of Palestinian Archaeology* 1, no. 1 (January, 2000): 4–12; Khaled Nashef and Omar Abd Rabu, "Abḥāth wa-Tanqībāt fī Khirbat Bīrzayt 1999," *Journal of Palestinian Archaeology* 1, no. 2 (July, 2000): 4–12. Ceramics reports can

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dubbed the "Original Building" and tentatively identified during the first phase of excavation as the administrative center of a feudal lord (Fig. 4).[98] Built on top of and in the ruins of a Byzantine industrial complex (a wine press), the large stone building is Mamluk in date (Stratum III) and constructed of massive, well-dressed blocks forming 2-faced walls with a rubble and soil core, earthen floors, and vaulted superstructures. In the late Mamluk period (Stratum II) rooms were subdivided and floors replastered, as domestic or public spaces were converted to storerooms. Ottoman reuse of the building (Stratum I) consisted of the building of agricultural terraces in the upper floor, and the filling in of the ground floor. While the pottery included the same kind of assemblage described at Tiʿinnik and other rural sites in the region, the recovery of glazed relief bowls with formulaic inscriptions and glazed wares from Syria indicates wider exchange networks and perhaps a more formal function for the building. The "Original Building" is part of a larger settlement; more recent fieldwork (2006 and 2009 seasons) is investigating the physical and functional relationships between this building and the houses nearby, the results of which are forthcoming.[99]

Excavations by Israeli archaeologists have included such important sites as Safed (and the extra-mural settlement of al-Waṭṭah) and Jerusalem, where efforts have largely focused on fortifications and individual monuments. It is the research on village sites, however, that has described the character of local settlement, the longevity of occupation (not encountered in Jordan), and regional peculiarities that allow for comparison with other areas of southern Bilād al-Shām. Stern's categorization of rural sites on the basis of the exchange networks in which they participated is a useful one for describing settlement type. Givʿat Yasaf (Tall al-Raʾs) on the northern coast belongs to her first group: villages economically tied to coastal centers and international trade. The Mamluk village (Stratum 1) represents a reoccupation in the late thirteenth century of the Persian/Hellenistic site.[100] The settlement took the form of walled courtyards, a large central building (or complex of buildings), and numerous water channels (for irrigation, among other things). Wall construction appears quite similar to that noted throughout southern Syria: roughly hewn boulders of medium size. The central building yielded numerous imported glazed ceramics, to which it likely gained access by its proximity to Acre.

There were different types of villages in the southern Syrian landscape. However,

be found in the same volumes.

[98] Nashef, "Khirbet Birzeit 1996, 1998–1999: Preliminary Results," 27.

[99] Personal communication (2/2/09), Dr. Hamed Salem, Birzeit University and Project Director.

[100] Arieh Rochman-Halperin, "Excavations at Givʿat Yasaf (Tell er-Ras): 1984–1985," *ʿAtiqot* 37 (1999): 84–121 (Hebrew), 172*–73* (English summary).

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if one were to search for the "typical" village of the region, one might consider those with few international connections but that were nonetheless participants in regional socio-economic exchanges. Khirbat Burin, described earlier, falls into this category.[101] The late thirteenth- and fourteenth-century village appears to have consisted of clusters of well-built farmhouses surrounding shared outdoor courtyards and cisterns, a pattern repeated in villages in the region today. The houses were used for some time, with reduced occupation into the fifteenth century. The material culture associated with the structures betrayed regional (Greater Syrian), but no international, connections for the main period of occupation. The late Mamluk-era Galilean village of Khirbat Dinʿila, while small, reflected a common pattern: adaptation of Byzantine-era ruins (here the conversion of oil presses to housing, as at Khirbat Birzeit), continuous occupation (in this case well into the sixteenth century), and material culture characteristic of rural society (handmade cooking wares, wheel-thrown jars and jugs, and few, if any, imports). Stern's ceramic study demonstrated that households there acquired kitchen and table wares from different workshops throughout the Galilee and Golan.[102] On a final note, the site of Zuq al-Fauqani, in the Upper Galilee, contains the remains of a rural house occupied from the fourteenth through nineteenth centuries, transformed into a *khān* sometime in the seventeenth.[103] The architecture from the Mamluk levels is no longer extant—only the earthen floors remain—but the pottery as a whole reflects regional connections (reflected by pottery related to Rāshayyā al-Fukhkhār Ware of Lebanon, for example).

By comparison, the site of Givʿat Dani in central Israel, an agricultural settlement 7 km north of Lod, is more isolated economically and geographically. While the limited exposure of the excavations did not reveal architecture of the period, they did produce evidence of a "peripheral settlement" tied to a larger center: a meter and a half thick layer of refuse (Stratum 3—consisting of pottery, ash, and soil), was dated to the thirteenth–fourteenth centuries on the basis of the pottery and covered by a stone-paved floor in the Ottoman period.[104] The pottery revealed the typical range of glazed, handmade, and plain wheel-thrown vessels normally associated with a rural, landlocked site.

Archaeological investigations of Mamluk-era villages, as preliminary as they

[101] Kletter and Stern, "Mamluk-Period Site at Khirbat Burin."

[102] For the ceramic report, see Stern, "Khirbat Dinʿila." The excavation report is forthcoming in the same volume.

[103] Moshe Hartal, "Zuq al-Fauqani," *Hadashot Arkheologiyot* 120 (2008): (www.hadashot-esi.org.il/report_detail_eng.asp&id=858&mag_id=114). See also note #3 in Stern, "Khirbat Dinʿila."

[104] Dorit Lazar, "A Mamluk and Ottoman Settlement at Givʿat Dani in the Ayalon Valley," *ʿAtiqot* 38 (1999): 127*–136* (Hebrew), 231–32 (English summary).

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are, reveal patterns in rural culture and settlement that are worth revisiting on the basis of text-based research. These villages were by and large self-sufficient, relying more on local and limited regional exchange networks than on the kind of international ones maintained by the state. Most communities appear to have followed a mixed subsistence regime and, when not pushed by state initiatives, diversified their choice of crops. The widespread abandonment of and demographic decline in villages, which happened gradually in many (but not all) parts of Transjordan, are not repeated to the same degree in Cisjordan. The physical, and apparently functional, structures of villages were maintained through the Ottoman and Mandate eras. House construction was modest and followed distinctly regional methods and styles, using local building materials and likely erected quickly; if architectural ruins and abandoned installations could be reused, they usually were, instead of constructing anew. In terms of its geography and intensity, the expansion of Mamluk-era settlement largely mirrored that of the Byzantine period, when land (and water) was used intensively and extensively. If any broad theme can be extrapolated from these patterns, one could be that Syrian villages were poised to function in the absence of a strong, activist state, and demonstrated considerable resiliency in the process. Village life represents, in this manner, the *longue durée* of the Annalistes.

NARRATIVE THREE: INDUSTRIAL PRODUCTION, BOTH LARGE- AND SMALL-SCALE, LARGELY FELL TO TRADITIONAL PRACTICE AND SOCIAL RELATIONS.

The Mamluk state was rarely directly involved in the day-to-day running of agricultural industries, outside of large-scale commercial enterprises such as sugar. Even there, the role of officials was limited.[105] For this reason, these industries reveal much about local social structure, organization of labor and resources, and traditional technologies and markets that provide another perspective on rural societies. Three agricultural enterprises—growing and processing cane sugar, producing olive oil, and making honey—have left strong archaeological footprints and speak to the strength of local traditions.

The lucrative sugar industry under the Mamluks became a state enterprise, as sultans and amirs came to monopolize production and some of the most fertile lands were dedicated to sugarcane cultivation. The best lands for growing sugarcane in Syria—well watered, well drained (the result of a combination of slope and soil texture), with light-textured soil (capable of holding water), and located in areas of abundant sunshine and warm temperatures[106]—are generally

[105] On those occasions when officials attempted to interfere in the internal operations of the "estate"—diverting water and, in the process, disrupting traditional water sharing—peasants revolted (Walker, "The Role of Agriculture," 89).

[106] Effie Photos-Jones, Konstantinos D. Politis, Heather F. James, Alan J. Hall, Eichard E.

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located in the Jordan Valley and its catchment system. They were among the most valuable *iqṭāʿāt,* and by the end of the fourteenth century they were converted to sultanic estates and *awqāf*.[107] Because the industry, when operating on a large scale, was so dependent on the state to provide adequate labor supplies, safe roads for transport, and dependable markets, its ups and downs reflected in many ways the economic health of the state and the region. Sugar production in Syria peaked in the Crusader and early Mamluk periods, declining significantly by the fifteenth century; evidence for production into the Ottoman period is rather rare but has been documented to the end of the sixteenth century.[108] The industry left behind the mills used to crush sugarcane, the refineries to convert juice to molasses, and the aqueducts that powered them[109]—some 43 sites in Israel alone[110]—as well as the earthenware vessels used to collect the crystals (called alternatively sugar pots, molds, or cones in the archaeological literature) and collect and store the syrup (molasses or syrup jars). Most archaeological studies of sugar production have focused on these architectural and ceramic remains.[111]

Jones, and Jerry Hamer, "The Sugar Industry in the Southern Jordan Valley: An Interim Report on the Pilot Season of Excavations, Geophysical and Geological Surveys at Tawahin as-Sukkar and Khirbat ash-Shaykh ʿIsa, in Ghawr as-Safi," *Annual of the Department of Antiquities* 46 (2002): 611.

[107] For documentation of this process in Jordan, see my "Sowing the Seeds of Rural Decline."

[108] Edna J. Stern, "The Excavations at Lower Horbat Manot: A Medieval Sugar-Producing Site," *ʿAtiqot* 42 (2001): 277–308.

[109] The date and function of the medieval and post-medieval aqueducts that punctuate the southern Syrian countryside have remained problems for the archaeological study of sugar production. Usually their identification as components of sugar mills is made on the basis of associated sugar pots, though this practice is far from consistent. It is possible that many aqueducts originally attributed to Mamluk-era sugar mills may have been part of Ottoman-era flour mills. For some technological studies of mills in Jordan, see Muhammad S. Malkawi, "The Water Mills of Wadi Kufranjeh during the Period between Late Mamluk and Early Ottoman: A Technological Study" (M.A. thesis, Yarmouk University, 1994); Joseph A. Greene, "The Water Mills of the ʿAjlun-Kufranja Valley: The Relationship of Technology, Society and Settlement," *Studies in the History and Archaeology of Jordan* 5 (1995): 757–65; and Alison McQuitty, "Water-Mills in Jordan: Technology, Typology, Dating and Development," *Studies in the History and Archaeology of Jordan* 5 (1995): 745–51.

[110] Reference to Edna J. Stern's M.A. thesis, "The Sugar Industry in Palestine during the Crusader, Ayyubid and Mamluk Periods in Light of the Archaeological Finds" (Hebrew University, 1999, in Hebrew) in Katherine Strange Burke, "A Note on Archaeological Evidence for Sugar Production in the Middle Islamic Periods in Bilad al-Sham," *Mamlūk Studies Review* 8, no. 2 (2004): 111.

[111] For an excellent summary of archaeological research on the Syrian sugar industry and a bibliography of published studies, see Burke, "Archaeological Evidence for Sugar

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Five sugar mills have been excavated in southern Bilād al-Shām,[112] and several more have been architecturally and archaeologically surveyed in the wadis of Jordan.[113] The technology of these mills—how they operated and how sugar was physically processed—has been of focal interest in archaeological reports for many years. What is relatively new is the analysis of their industrial waste, which directly reflects technology, availability of natural resources, and exchange networks. It also can be a measure of the environmental impact of sugar refining, an issue not adequately investigated archaeologically. Excavation reports frequently mention the deposits of ash associated with sugar mills, but only recently has that ash been subjected to laboratory analysis. At Horbat Manot, a sugar production site north of Acre, palaeobotanical analysis of charred remains of wood and ash identified trees typical of Mediterranean zones (namely carob, evergreen oak, terebinth, and Cyprus oak—all local vegetation) as the fuel that fed the fireplace in the refinery.[114] Excavations at Tawāḥīn al-Sukkar, a contemporary sugar factory in Jordan southeast of the Dead Sea, included systematic analysis of the waste produced by sugar refining.[115] The purpose of the joint British-Greek project was to "place the sugar industry in the context of the landscape that generated and sustained it,"[116] producing some of the earliest comprehensive data on the technologies and resources that made sugar production possible in the Ayyubid and Mamluk periods. A large waste heap at the site (in Trench II) produced several layers of refuse, including charcoal and ash, sand and gravel, and a white powdery industrial waste. The latter was subjected to x-ray diffraction analysis, which

Production."

[112] In addition to those cited in Burke, we should add the recent fieldwork near Safi in southern Jordan (Photos-Jones et al., "Sugar Industry in the Southern Jordan Valley," 591–614) and the brief report on the Abu Sarbut mill in Margreet Steiner, "The Excavations at Tell Abu Sarbut, a Mamluk Village in the Jordan Valley," *ARAM* 10 (1998): 141–51.

[113] Ṣāliḥ Ḥamārnah, "Zirāʿat Qaṣab al-Sukkar wa-Ṣināʿatuhu ʿinda al-ʿArab al-Muslimīn," *Annual of the Department of Antiquities of Jordan* 22 (1977–78): 12–19; Rubá Abū Dalū, "Maʿāṣir al-Sukkar fī Ghawr al-Urdunn fī al-Qarnayn al-Thānī ʿAshar wa-al-Rābiʿ ʿAshar al-Mīlādiyīn fī Ḍawʾ al-Maṣādir al-Tārīkhīyah wa-al-Muktashafāt al-Atharīyah" (M.A. thesis, Yarmouk University, 1991), and idem, "Taqnīyah Maʿāṣir al-Sukkar fī Wādī al-Urdunn khilāl al-Fitrāt al-Islāmīyah," *Studies in the History and Archaeology of Jordan* 5 (1995): 37–48.

[114] Stern, "Lower Horbat Manot," 293; Uri Baruch, "Charred Wood Remains from Lower Horbat Manot, Western Galilee," *ʿAtiqot* 42 (2001): 309–10.

[115] 85–90% of the cane processed into crystallized sugar ends up as waste by-products (Photos-Jones et al., "Sugar Industry in the Southern Jordan Valley," 593). For the potential environmental impact of the sugar industry, see Walker, "The Role of Agriculture in Mamluk-Jordanian Power Relations."

[116] Photos-Jones et al., "Sugar Industry in the Southern Jordan Valley," 591.

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identified several fine-grained minerals used in sugar refining: gypsum (an anti-caking agent), calcite (for the clarification of sugar crystals), bassanite, anhydrite, aragonite, and quartz, all of which occur naturally in the local Lisan sediments.[117] The laboratory results are historically relevant on two accounts: they demonstrate the use of local resources in sugar production, and they suggest ways in which sediments and refuse can help identify sugar refining sites where the architectural remains have disappeared.

As for the transport and marketing of sugar in Mamluk Syria, we know surprisingly little. Archaeologists have focused on production but not the subsequent processes of distribution and consumption. One site that has been identified as a sugar redistribution point is the Ḥisbān citadel. The storeroom of the governor's complex contained dozens of intact molasses jars. They appear to have been stored on wooden shelves and on the floor and were made in at least two standardized sizes. The shape of the jars is generally piriform, like the molasses jars found in sugar mills, but with a visible "waist" in the middle. The hourglass shape produced is ideal for wrapping ropes around the middle of the jar, and it is in this way that we should imagine how many sugar products were transported from mill to market: donkeys carried a jar or two on each side, secured by ropes.[118] It appears at this stage in fieldwork that sugar was transported here from some distance, the Jordan Valley being 24 km to the west as the crow flies but 101 km today by car (via the Allenby Bridge).[119] While Mamluk citadels functioned as repositories for weapons and food, the relatively large quantity of jars (in relation to the limited size of the storeroom and the estimated size of the garrison—likely only a handful of soldiers were stationed there) led the excavators to believe that the sugar, or molasses, was more likely brought to the citadel for redistribution to local markets (the one in Ḥisbān village included) than stored here for the

[117] Ibid., 606, 611.

[118] On the basis of camel bones at Tell Abu Sarbut, the excavators suggest that sugar was transported overland by pack animals (Steiner, "Excavations at Tell Abu Sarbut," 148–49). This kind of transportation may also have been supplemented by Dead Sea shipping; boats carried agricultural products between Transjordan and Palestine in this fashion throughout the Middle Ages (Joseph Greene, "From Jericho to Karak by Way of Zughar: Seafaring on the Dead Sea, Bronze Age to Ottoman," *Studies in the History and Archaeology of Jordan* 10 [2009] [forthcoming]).

[119] Ongoing fieldwork in the medieval village and its hinterland is contradicting earlier assumptions that sugar was grown and processed nearby: the water mills closest to the tell (in the Wādī Ḥisbān), at least, are Ottoman and Mandate-era in date and were almost certainly used for grinding grain (project archives, 2004 survey). The ash deposits on the acropolis will be subjected to palaeobotanical analysis shortly to determine what kind of industrial activity on site produced them. These deposits are described in Walker and LaBianca, "The Islamic *Quṣūr* of Tall Ḥisbān," 464, Fig. 32.

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garrison or an *iqṭāʿ* holder.[120] Similar sugar jars were also found in the ruins of the village below the citadel. What were the contents of the storeroom worth?[121] A recent study, based on the holding capacity of the storeroom and that of the jars themselves, calculations of weight and density of processed cane sugar, and the price of Syrian sugar in fourteenth-century markets, estimated that the Ḥisbān stores, if full, potentially held 194 dinars worth of sugar at any one time. This alone would have contributed 10% of a cargo of sugar carried on a Venetian galley in this period.[122]

One important element in the success of the Mamluks' sugar production was securing an adequate work force in what was a very labor-intensive industry. The organization and size of the labor force cannot be determined on the basis of the mills/refineries alone. Burke appropriately highlighted the importance of studying sugar production in relation to supporting settlements, an area of inquiry that until very recently had not been systematically investigated.[123] Excavations at the sister sites of Tawāḥīn al-Sukkar (the sugar factory—hereafter TES) and Khirbat Shaykh ʿĪsá (its supporting village—hereafter KSI) in 1999–2002 were specifically designed to examine the relationship of sugar production to the villages and land that sustained it. A hybrid of landscape and industrial archaeology, the TES/KSI project demonstrated ways in which villages were pivotal to the maintenance and success of the industry. In addition to labor (and here the corvée labor of peasants is meant), villages supported the sugar mills by producing the sugar and molasses jars without which sugar crystal could not be generated from the syrup.[124]

Unlike the sugar industry, the production of olive oil was both a household industry and practiced commercially, as it is today. The processing of olive oil requires coordination of the efforts of cultivators, press owners, and merchants; study of the industry has real potential to reveal social patterns on the village level, if one can flesh this out in the archaeological record. The results of the 2003 season

[120] For reports on the storeroom in general, see Walker, "The Late Ottoman Cemetery in Field L, Tall Hisban," *Bulletin of the American Schools of Oriental Research* 322 (2001): 1–19, and idem, "Mamluk Investment in Southern Bilad al-Sham," 249–50.

[121] It is not certain what products were stored in these jars—the sugar crystals or the molasses—as no residue analysis has been done on the vessels to date. We cannot automatically assume that the same vessels used for processing were used for transport and storage, although this is possible.

[122] Walker, "Sowing the Seeds of Rural Decline," 191.

[123] Burke, "Archaeological Evidence for Sugar Production," 118. The sugar factory at Tell Abu Sarbut in the eastern Jordan Valley is a bit of an exception. Here excavators noted the transformation of the industrial site, after a period of abandonment, to a village engaged in a mixed agro-regime, with some continued cultivation of sugarcane, still in the Mamluk period (Steiner, "Excavations at Tell Abu Sarbut"). Research has focused more on the earlier factory, however, than the later settlement.

[124] Photos-Jones et al., "Sugar Industry in the Southern Jordan Valley," 610.

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of the NJP in Malkā village produced some evidence of the social and economic mechanisms behind olive oil production in the fourteenth century.[125] Malkā was, according to an unpublished *waqfīyah* of 796/1393, the private property of Sultan Barqūq, who subsequently endowed the entire village in support of his madrasah in Cairo. The document describes in some detail the agricultural production of the village, emphasizing its extensive olive groves (apparently organized into numerous small plots among vegetable gardens) and presses *(maʿāṣir),* which remain the defining characteristics of Malkā's landscape today. Survey of the village and its hinterland resulted in the discovery of an underground, industrial-scale olive press, housed in a cave and used in the Byzantine and Mamluk periods. This "factory" was capable of producing a considerable profit. A recent economic study of the cave-press, based on calculations made for production capacity of presses in the western Galilee and export prices of the commodity provided by Ibn Kathīr, estimated the factory's annual income at 440 dinars, after the needs of the village were met, which was equivalent to 1/3 of a shipment of Spanish olive oil to Alexandria in 1405.[126] If modern production can be used to gauge the workings of the medieval industry, considerable cooperation was required to coordinate the harvest of olives and processing of oil produced on what were essentially family-run plots.

Wheat, olive oil, and sweeteners were staples of the average man's diet in the medieval Levant. Honey replaced sugar for families of limited means as a sweetener and was also used for medicinal purposes. Today beekeeping, and the sale of honey, is a common "small business" in Syrian villages, frequently supplementing incomes derived from other sources. The same was likely true in the Middle Islamic period. While perhaps a less prestigious product than sugar or olive oil, honey had ready markets and was essentially a local industry with no overt relation to state enterprise. Beekeeping is documented in Mamluk and Ottoman texts and is now appearing in unexpected archaeological contexts: cemeteries in Israel, as discussed earlier. [127] Ceramic beehives, in complete form, have been identified in several cemeteries of Mamluk and Ottoman date to mark graves, to seal graves, and (quite possibly) to bury infants. Although this phenomenon is not fully understood, it presents an opportunity to explore the study of household industry and traditions and taboos related to death in village society.

Narrative Four: The physical environment, local resources, and climate helped to mold rural societies in the Mamluk period in important ways.

[125] The following relies on the field report found in Walker, "Northern Jordan Survey 2003."

[126] Walker, "Sowing the Seeds of Rural Decline," 192–93.

[127] Taxel, "Ceramic Evidence of Beekeeping."

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Limited and unpredictable rainfall is a reality in much of Syria, and this in a region that largely relies on rain-fed agriculture. In Jordan, even today the wheat crop fails once every five years for lack of rain.[128] Floods were equally a present and serious danger: Mamluk chronicles frequently describe the loss of life and property caused by heavy rains and flooding.[129] Climate changed in dramatic ways over the course of Mamluk rule: the wetter conditions of the thirteenth and fourteenth centuries conducive to intensive agriculture contrast with the high temperatures and drier conditions that led to frequent droughts throughout the fifteenth. This has been documented by multiple lines of environmental research, but its impact on contemporary societies is not understood.[130] Similarly, we do not know how growing sugarcane, and other cash crop industries, transformed soils in the short or long terms or to what degree, if at all, deforestation and soil erosion have contributed to the vagaries of settlement and the rural economy in the Middle (Ayyubid-Mamluk) and Late Islamic (Ottoman) periods. Although the impact of climate change on the scale and intensity of settlement has been a fixture of archaeological literature on the Mamluk period for many years, new interest in the ecological aspects of cultural change has forced us to reevaluate

[128] Carol Palmer, "'Following the Plow': the Agricultural Environment of Northern Jordan," *Levant* 30 (1998): 132.

[129] To cite some examples for Jordanian towns and villages: two months of rain in the winter of 761/1359 caused flooding so severe in Ḥubrāṣ that the local qadi drowned and prices skyrocketed (Ibn Qāḍī Shuhbah, *Tārīkh Ibn Qāḍī Shuhbah* [Damascus, 1994], 3:164); the great flood of 728/1328 destroyed much of the town of ʿAjlūn, taking away large sections of the marketplace (Yūsuf Ghawānimah, "Al-Tijārah al-Dawlīyah fī al-Urdun fī al-ʿAṣr al-Mamlūkī," *Studies in the History and Archaeology of Jordan* 3 [1987]: 328–29—citing al-Jazarī, Mufaḍḍal ibn Abī al-Faḍā'il, and al-Nuwayrī); and in 790/1388 heavy rains blocked roads near Ḥisbān, preventing travel for days (Ibn Ḥijjī, *Tārīkh Ibn Ḥijjī* [Beirut, 2003], 1:106–7). The chroniclers rarely mention the abandonment (however temporary) of a village as a result, but in their accounts of the washing away of entire neighborhoods and severe damage to crops, it was likely that residents relocated for a while until they had a chance to rebuild. (This topic is dealt with in more detail in ch. 2 of my forthcoming *Jordan in the Late Middle Age: Transformation of the Mamluk Frontier.*)

[130] Methods of data collection have included palynology, sedimentology, dendrochronology, and isotope analysis. For a list of published studies relevant to Mamluk Syria, see B. Lucke, Z. al-Saad, M. Schmidt, R. Bäumler, S. O. Lorenz, P. Udluft, K.-U. Heussner; and B. J. Walker, "Soils and Land Use in the Decapolis Region (Northern Jordan): Implications for Landscape Development and the Impact of Climate Change," *Zeitschrift der Deutschen Palaestina-Vereins* 124, no. 2 (2008) (forthcoming); Walker, "Sowing the Seeds of Rural Decline," 197, note 119; and idem, "The Role of Agriculture in Mamluk-Jordanian Power Relations," 90, note 38. More recently, two monographs on the topic of climate, land use, and landscape have been published with data sets taken from Jordan and Israel: Rosen, *Civilizing Climate,* and Carlos E. Cordova, *Millennial Landscape Change in Jordan: Geoarchaeology and Cultural Ecology* (Tucson, 2007).

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climate and natural resources as variables in the socio-political-economic history of the Mamluk state. The result has been the development of new methods of data collection and revised models for assessing the complicated relationships between climate, land use, and settlement.

It was, in part, to explore social adaptation to limited resources that the Dhibān Excavation and Development Project was launched in 2004.[131] Dhibān is a bit of an anomaly for medieval settlement history. In spite of the challenges presented by its geography (surrounded by canyons, and physically isolated as a result) and environment (poor soils, barely enough annual rainfall for dry farming, no natural springs), the site continued to be settled and resettled since Antiquity. In order to account for this local connection to place, and in a larger sense to understand the phenomenon of large-scale sedentarization in locales with poor environmental conditions, the project has embarked on a focused study of Dhibān in the Mamluk period, when the village was revived, settlement expanded, and land use intensified. The role of the state in reorganizing agriculture, and indirectly settlement, is considered in light of this rural renaissance and its subsequent, and quite gradual, decline. As this project is relatively new, and the excavation component has only recently begun, the results of the cultural ecology study are not yet available.[132] Nonetheless, it is a promising approach to the study of Mamluk villages, introducing new venues of research on the effects of imperial policies in marginal lands.

Originally interested in the roles of climate and land use in the abandonment of the Decapolis region, the Brandenburg Institute of Technology has expanded its field and lab work to include much larger regions of Syria through the medieval periods.[133] Methodologically the Brandenburg project uses soil genesis studies (documenting the factors behind the creation and transformation of soils) to measure the impact of climate change and land use (ranging from intensive agriculture to pastoralism) in the physical transformation of the landscape and in settlement fluctuations. This project, led by Dr. Bernhard Lucke, has collaborated with the NJP since 2005 in documenting the dialectical relations among land use, settlement, and climate. The political ecology approach to Mamluk studies adopted by the NJP, highlighting the competition between state and local society over natural resources, has necessitated a combination of methods in gathering climate proxy data: palynology, phytolith studies, textual analysis, and now

[131] See note 88 for project publications.

[132] We eagerly await the results of the 2009 field season.

[133] For an earlier report, see Bernhard Lucke, Michael Schmidt, Ziad al-Saad, Oliver Bens, and Reinhard Hüttl, "Abandonment of the Decapolis Region in Northern Jordan–Forced by Environmental Change," *Quaternary International* 135, no. 1 (2004): 65–82.

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soil analysis and dendrochronology.[134] Preliminary results of soil study in 2006 eliminated soil erosion and deforestation as problems for local farmers in the Middle Islamic period, documented continuity in land use from pre-Mamluk times, and highlighted the role of winter floods in the transformation of the landscape and destruction of villages in pre-modern times.[135] The results of the other climate proxy studies are forthcoming.

The environmental approach is quite new in Mamluk studies. What is emerging from this Jordan-based fieldwork is an appreciation for how complex and ambiguous the Mamluks' management of natural resources was in southern Syria. Furthermore, the impact of climate on rural societies is not clear-cut, and local variations in the agricultural regime, the relation with state officials and local peoples, and the particular structure of local administration all came into play in determining the ways in which local communities responded to the limitations and possibilities offered by climatic variation. Of the research themes adopted in Mamluk archaeology today, this is arguably the most cross-disciplinary and theoretical.

Concluding Thoughts

It is not the purpose of archaeology to rewrite history or deliberately compete with narratives presented by written sources. The very tentative remarks about Mamluk Syria presented above have emerged from recent fieldwork that has sought to explain social change and settlement fluctuations, to flesh out the rural history not fully described by texts, and to acquire a greater knowledge of village life under Mamluk rule. The challenge for future archaeological research is to go beyond what has been done to include studies, for example, that identify more clearly the pastoralists of the rural landscape, consider the phenomenon of migration and resettlement in discourse on settlement "decline," and explore identity in the context of the distinctive regionalism in southern Syrian culture. In the process, it will deepen our understanding of Mamluk societies in their rich diversity and ability to adapt and develop.

[134] For more on political ecology and Mamluk archaeology in Jordan, see Walker, "Peasants, Pilgrims, and the Body Politic."

[135] For Dr. Lucke's report, see Walker et al., "Village Life in Mamluk and Ottoman Hubras and Saham," 464–67.

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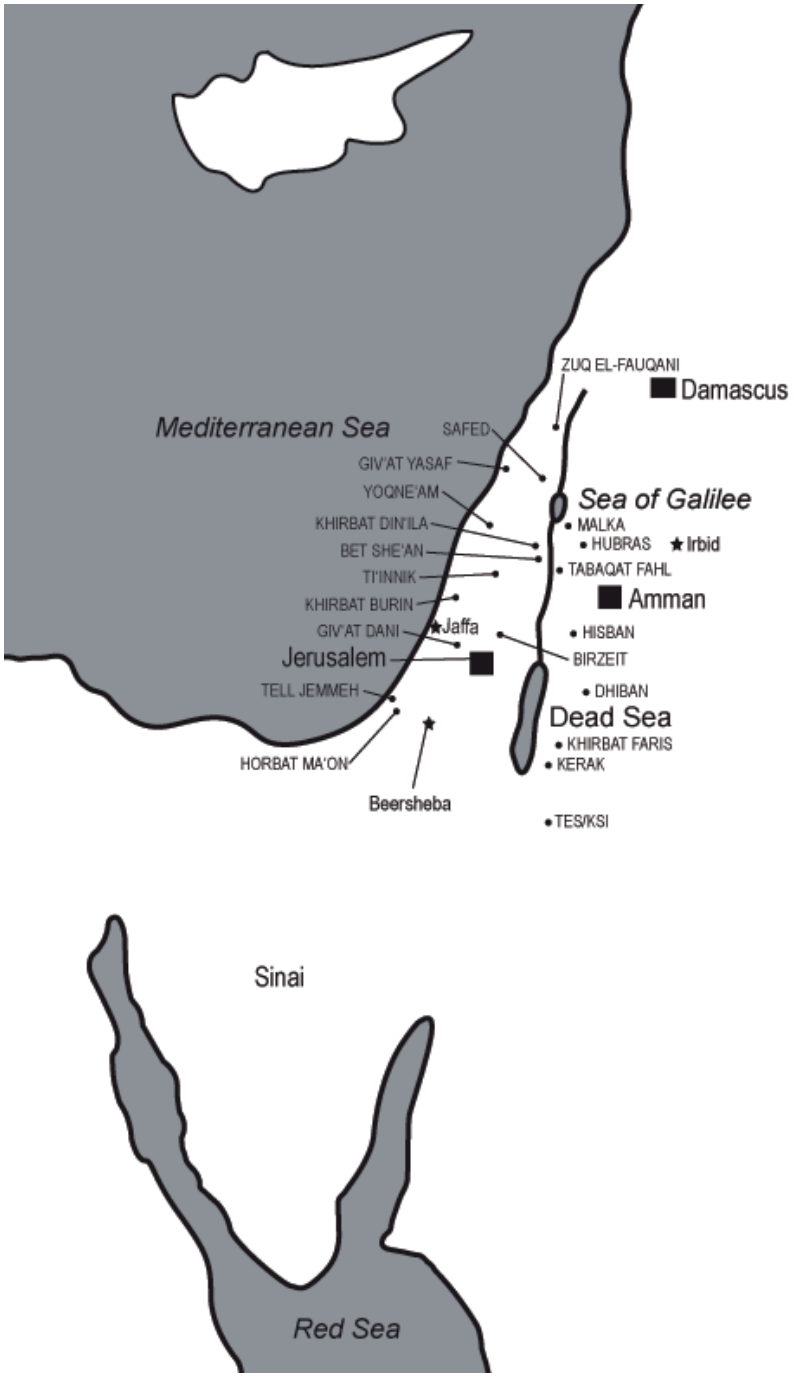

Fig. 1. Map of sites discussed in article.
(courtesy of Chris M. Cooper, Evolving Perspective, Springfield, MO)

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Fig. 2. Entrance to Ḥisbān citadel, with enlarged southwest tower to the left. (photo by author)

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Fig. 3. View of Old Ḥubrāṣ to southeast, mosques (background, center) are in middle of the early twentieth-century village and surrounded by olive groves. (photo by author)

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Fig. 4. “Original Building” at Khirbat Birzeit.
(courtesy of Dr. Hamed Salem, Institute of Archaeology, Birzeit University)

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