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Mamluk Archaeological Studies: A Review

This review seeks to address the relationship between archaeology and the field of Mamluk studies. To paraphrase a recent discussion by Marcus L. Rautman, Mamluk artifacts are more than mere historical illustration; their evidence may be considered necessary to overcome the intrinsic limitations of the written evidence. Yet, historians of the Mamluk period do not seem to be aware of this potential or able to assess the relevance of fieldwork to their research. Much of the fault for this separation in disciplinary comprehension lies with the archaeologist, and with what is currently practiced as archaeology.²

The role of archaeological evidence in historical research is often misunderstood due to the nature of its evidential base. While study of material culture deals, at least in part, with physical objects, their contribution to historical studies is no more "real" or direct than the historian's more traditional documents; archaeological evidence is cumulative and not specific. In other words, one should not expect new information about specific individuals or historic events. Though new documents may be discovered, archaeological research is more concerned with patterns, repeating contexts, and associations. Thus, one may seek patterns of land use (historical geography) and social organization (settlement systems), that is, broad questions of social and economic history. The following is a general exploration of some examples of excavations, artifacts, and the complexities of historical interpretation.³

QŪŞ, A FORGOTTEN CAPITAL

The archaeology of Qūṣ might qualify under the rubric of the re-discovery of a lost (or at least forgotten) provincial capital of Egypt. A history of life in this (provincial) city during Fatimid through Mamluk times was undertaken by Jean-Claude Garcin.⁴ This city may be taken as a symbol of the fate of Islamic sites which disappear (from the historic record) when their economic functions change. To paraphrase Garcin: Qūṣ might have



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¹Marcus L. Rautman, "Archaeology and Byzantine Studies," *Byzantinische Forschungen* 15 (1990): 137-165. Throughout this article "Islamic" may be substituted for "Byzantine" to produce an insightful picture of the history and state of this parallel discipline.

²This has been the subject of a dialogue in Donald S. Whitcomb, "Toward a 'Common Denominator': An Archaeological Response to M. Morony on Pottery and Urban Identities" (Los Angeles: Von Grunebaum Center for Near Eastern Studies, 1995).

³This paper makes no claim to a comprehensive listing of sites, excavations, and surveys. The casual mentions of Ayyubid-Mamluk evidence on archaeological sites in Palestine would be difficult to enumerate, let alone evaluate.

⁴Jean-Claude Garcin, *Un centre musulman de la haute-Égypte médiévale: Qū*ṣ (Cairo: Institut français d'archéologie orientale, 1976). It is instructive to compare J. H. Kramer's article published in 1927, "Ķūṣ," *The Encyclopaedia of Islām*, 1st ed., 2:1156-1157, with that of Garcin published in 1982, "Ķūṣ," *The Encyclopaedia of Islam*, 2nd ed., 5:514-515.

returned to the desert had it not been situated in a rich agricultural region. This is a new research problem for the historian; one is confronted not only by problems of archaeological remains resisting the erosion of water and sand but also by the continuing rural milieu surviving the urban organization imposed upon it.5

Garcin began his history by assembling the historical sources, including local accounts and biographies, travelers' descriptions of the city and its regional context, and documentation such as the Geniza records. He considered the inscriptions and architecture within the town, especially the mosque. He initiated a detailed topographic plan, rather in the manner of Sauvaget, mapping the "traces of the medieval past still extant beneath the surface of the soil."6 Reading the early reports of Aly Bahgat and others, he observed that, "One after another the extant koms have been attacked; and each time that a kom disappeared, without doubt some new objects went to enrich private collections, saved perhaps but also losing much of their significance, being separated from their context."7 He concluded that "archaeological investigation would furnish us with the most useful assistance." Then in 1966, "during the destruction of some new buildings at the kom" (next to the tomb of Sheikh Yousef), a hoard of dīnārs and a metal basin filled with twenty-six objects, mainly highly decorated metalwork, were discovered.8 Garcin attempted to begin excavations in 1967 and again in 1973, both years being unfortunate timing for fieldwork.

Subsequent excavations were conducted by the Egyptian Department of Antiquities in the 1980s. In anticipation of a published report, one may generally observe architectural remains of two periods: Fatimid residences exactly like those of al-Fustat; and, above that, Mamluk buildings like those found at Quseir al-Qadim. The excavations at Qūş hold a potential key to the Islamic archaeology of Egypt, tracing the development of one of many Coptic towns through the Fatimid period and its distinctive Islamic history with the prosperity of the Mamluk period.

QUSEIR, THE PORT OF QUS

The more recent architectural remains uncovered at Qus were strongly reminiscent of the excavations at Quseir al-Qadim. This site is complementary to the research situation of Qus; the port has minimal historical documentation but has remained completely abandoned since the fifteenth century and has thus provided a detailed view of life in a Red Sea port and the commerce which sustained it. The resettlement of this port is indicated by numismatic and other artifactual evidence to have occurred in the beginning of the twelfth century (Fatimid occupation is unlikely). The period of great prosperity was the Baḥrī

⁵ Garcin, Qūs, viii-ix.

⁶This methodology is seen to its best effect in Jean Sauvaget, Alep: Essai sur le développement d'une grande ville syrienne, des origines au milieu du XIXe siècle (Paris: Paul Geuthner, 1941). The method may be easier when there is a Seleucid/Roman base plan, see his "Le plan de Laodicée-sur-Mer," Bulletin d'études orientales 4 (1934): 81-114; idem, "Note complémentaire," BEO 6 (1936): 51-52.

⁷Garcin, Oūs, xii-xiv. Investigated by Aly Bahgat in 1918 and reported in the Bulletin du Comité du conservation des monuments de l'art arabe 32 (1922): 271-274, 610-611; see Garcin, Qūs, xiii.

⁸This hoard of objets d'art would seem to date from the late thirteenth century; it is described in detail by A. A. el-Emary, "Studies in Some Islamic Objects Newly Discovered at Qūş," Annales islamologiques 7 (1967): 121-138. He cites a preliminary report on Excavations at Kūs by A. M. Abdel Tawab.

⁹See Donald S. Whitcomb, "Quseir al-Qadim: Text and Context in the Indian Ocean Spice Trade," al-'Usur al-Wusta 7 (1995): 25-27. This article is critical of Garcin's presentation of the history of Quseir in EI^2 , 5:519.

Mamluk period, with traded artifacts from India, China, Syria, and even Takrūr (West Africa).

The thirteenth century occupation formed a crescent of residences around the silted-up Roman harbor. While totally lacking architectural embellishments, these well-constructed residences obviously refer to urban architecture of the Nile Valley. In the center was a natural prominence called "the Sheikh's house" during the excavations. The Eastern Area revealed a very different settlement, a complex of foundations (possibly multiple reconstructions) not unlike village constructions along the Red Sea littoral in recent times. Faunal analysis indicates a strong reliance on marine resources (fish, turtle, conch) and a marked preference for goat over sheep. There was a greater reliance on imported foodstuffs (e.g., sheep) in the thirteenth century occupation around the Sheikh's house.

The settlements of both periods present a paradox of "rich" artifactual contents in a "poor" architectural setting. The material culture inventory reveals Mamluk ceramics and glass from the Nile Valley, perhaps even from the capital. More importantly, there is a surprising range of imported luxury items; these include celadons and porcelains (blue and white wares) from the Far East, resist-dyed cloth associated with the India trade, majolica from North Africa, pilgrim flasks and enameled glass from Syria, and iron money from West Africa. These artifacts indicate that this small port functioned as a conduit for contacts over most of the known world of the fourteenth century.

The marvelous preservation of artifacts in Quseir al-Qadim includes potential for detailed internal documentation. The excavations have produced a corpus of documents written on paper similar to the Cairo Geniza. Like the Geniza, this is a random preservation rather than an archive; the Quseir letters were not gathered together for storage but found as a part of normal trash accumulation. These letters, about 200 of which are fairly complete, detail the daily life of the community, ranging from discussion of crops and trade to love letters. While several prominent specialists have taken these documents to hand, very little analysis has resulted.¹⁰ One expectable result of such analysis will be more detailed information on the commercial relations of the thirteenth and fourteenth century, and Quseir's participation in the spice trade.

While on the shores of the Red Sea, one may move north to the port of al-Ṭūr, near the southern tip of the Sinai peninsula. The historical note that the customs station for the northern Red Sea was changed from Quseir to al-Ṭūr in 1380 is fully borne out by the archaeological evidence. Almost no evidence exists in Quseir of the fifteenth century and, conversely, the Japanese excavations have virtually no artifacts from the thirteenth and early fourteenth century. At the old harbor, which had once supported two villages according to Niebuhr's account, late Mamluk and Ottoman artifacts including numerous Ming porcelains were found. The Mamluk occupation has extensive public structures possibly illustrating the change from *sāḥil* to *bandar* in the late fourteenth century, mentioned in historical documentation.

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¹⁰The author is happy to report that Dr. Li Guo has undertaken the study of the letters from the Sheikh's house and has discovered many interesting details, including the owner's name, al-Shaykh Ibrāhīm Abū Mufrih.

¹¹See Mutsuo Kawatoko, *A Port City Site on the Sinai Peninsula, al-Ṭūr* (Tokyo: The Middle Eastern Culture Center in Japan, 1995).

AL-FUSȚĀŢ, IN THE SHADOW OF AL-QĀHIRAH

The lower architectural phase at Qūṣ is strikingly similar to the houses at al-Fuṣṭāṭ, best exemplified in the early excavations of Bahgat and Gabriel in the 1920s. Al-Fuṣṭāṭ has received much more intensive and recent archaeological research at the hands of George Scanlon. It is not the intention here to critique these excavations but briefly to describe the nature of the Mamluk occupation and its relevance to Cairo in the Mamluk period. Al-Fuṣṭāṭ continued from the early Islamic period into the Ayyubid period, when it had become the habitat of "an easygoing middle class." 12

One reason for discussion of al-Fusṭāṭ is the important corpus of documentation generically known as the Cairo Geniza documents. While most of the dated documents belong to the Fatimid and Ayyubid periods, some indications of the social history in the Mamluk period should be reflected and relations to archaeological evidence should be invaluable. Goitein states a desire to coordinate these sources of information, yet his first consideration, that of topographic elements, explicitly leaves aside archaeological evidence. A separate study of Cairo by Staffa comes to the same conclusion, that social history does not need careful consideration of archaeological evidence. Both Goitein and Staffa were particularly impressed with the discovery and description of the sophisticated water supply and sewage networks revealed by the excavations.¹³

On the other hand, domestic architecture should have been a natural subject of archaeological research, yet Goitein states that "the results of the Fustat excavations are not as helpful for the interpretation and testing of the Geniza documents as one might expect." He goes on to explicate contributory factors of archaeological deposition which account for this situation. This does not dissuade him from observing the "blatant discrepancy between the findings of excavators and competent [medieval] observers" concerning multi-story dwellings. These are related to pre-Islamic Arabian tower structures as evidenced in Yemen and brought to al-Fustāt by Arab settlers; he later suggests these might have functioned as apartment buildings analogous to Classical *insulae*. 15

Goitein's volume on daily life contains extensive, detailed consideration of virtually every artifact used by these people. This wide-ranging scholarship contains virtually no reference to actual objects unearthed in the great piles of well-preserved trash in al-Fuṣtāt. This is not to criticize Goitein, the excavators have a responsibility to take the lead in interpreting the artifacts recovered. Yet the fragments of textiles, which would be of great value in explicating household furnishings and clothing, were not systematically collected until 1982 and the archaeological report appears innocent of acquaintance with the Geniza descriptions. ¹⁶ The accomplishment of Goitein was to construct a picture of medieval social

¹²See S. D. Goitein, *A Mediterranean Society*, vol. 4: *Daily Life* (Berkeley: University of California Press, 1983), 11.

¹³Ibid., 4:36; the reference is to George T. Scanlon, "Housing and Sanitation, Some Aspects of Medieval Islamic Public Service," *The Islamic City: A Colloquium*, ed. Albert H. Hourani and S. M. Stern (Oxford: Cassirer, 1970), 179-194. S. J. Staffa, *Conquest and Fusion: The Social Evolution of Cairo*, A.D. 642-1850 (Leiden: E. J. Brill, 1977).

¹⁴Goitein, A Mediterranean Society, 4:53.

¹⁵Ibid., 4:53-59. One might also suggest a relationship to the *uṭum* (pl. *āṭām*) of Yathrib/Medina. One may note that only a small portion of the early Islamic city has in fact been excavated and that portion excavated is mostly suburbs developed in the late eighth and ninth centuries.

¹⁶Louise W. Mackie, "Textiles," in *Fusṭāṭ Expedition Final Report*, vol. 2: *Fusṭāṭ-C*, by Władysław Kubiak and George T. Scanlon, ARCE Reports 11 (Winona Lake, Indiana: Eisenbrauns for the American

history from difficult fragments of written evidence; the archaeologist also has his multitude of fragments (sherds of many different materials) available for analysis and interpretation.

BILĀD AL-SHĀM, THE MIDDLE ISLAMIC LEVANT

Turning to Syro-Palestine, one may begin to understand the problems confronting Mamluk archaeology by noting the origins of archaeology in Biblical (and Classical) studies. Thus, Kenyon's popular account of excavating Jerusalem has about 200 pages, of which three deal with the Crusaders, and half a page with the Mamluks. Such Eurocentrism has lessened; still, a recent issue of '*Atiqot*, devoted to Islamic archaeology, contains nine articles on early Islamic (read Umayyad), one on Fatimid, and two on Crusader subjects.¹⁷

Study of the Middle Islamic period in the Levant thus turns around appreciation of the Crusader occupation. In her summary of the Ayyubid and Mamluk periods in Palestine, Rosen-Ayalon could make no more reliable reference than the excavations at Abu Ġôsh.¹⁸ This site centers on the Crusader church of St. Jeremias, which incorporated part of an Abbasid caravanserai. The archaeologists found the structures reverted to a *khān* in the Mamluk period, dated 1250-1500. The nearby site of al-Qubeibah produced the same two Islamic periods of occupation, this time framing Crusader occupation of a castle.¹⁹ The same pattern is found in Pringle's more recent excavations at al-Burj al-Aḥmar (the Red Tower).²⁰ Beginning with a survey of the Sharon Plain (between Caesarea and Apollonia), the discussion turns around its structure (settlements and roads) in the Crusader period. The contribution of archaeological evidence is seen to be a refinement of dating and thus any assessment of the settlement system for this and later medieval periods.

Description of the excavations naturally focuses on principal occupation of the castle (al-Burj al-Aḥmar, phases B, C). Subsequent phases are labeled Destruction (D, D1) and Later and post-Medieval (E, E1). Pringle cautions that "strata were too confused . . . to allow any more precise definition of the exact phases of occupation." When he turns to the ceramic evidence, these phases become more interesting. The evidence describes the characteristics of "an agricultural village settlement, to which for a period of 150 years . . . were added Frankish residents of the castle." 22

The Crusader castle was in fact one of many rural *burgi*, part of a process called "incastellamento" in the contemporary Mediterranean world. Such *maisons fortes* were analogous to manor houses as the core of agricultural reorganization. Ronnie Ellenblum has analyzed the locations of such "castles" and suggests extensive integration in settlement

Research Center in Egypt, 1989), 81-97.

¹⁷Kathleen Kenyon, *Jerusalem: Excavating 3000 Years of History* (London: Thames and Hudson, 1967); 'Atiqot 26 (1995).

¹⁸Myriam Rosen-Ayalon, "Between Cairo and Damascus: Rural Life and Urban Economics in the Holy Land during the Ayyubid, Mamluk and Ottoman Periods," *The Archaeology of Society in the Holy Land*, ed. Thomas E. Levy (London: Leicester University; New York: Facts on File, Inc., 1995), 512-523.

¹⁹R. de Vaux and A.-M. Steve, *Fouilles à Qaryet el-'Enab, Abu Ġôsh, Palestine* (Paris: J. Gabalda, 1950); and Bellarmino Bagatti, *I monumenti di Emmaus al-Qubeibeh e dei dinatorni*, Studium Biblicum Franciscanum, 4 (Jerusalem: Franciscan Press, 1947).

²⁰Denys Pringle, *The Red Tower (al-Burj al-Aḥmar): Settlement in the Plain of Sharon at the Time of the Crusaders and Mamluks*, *A.D. 1099-1516* (London: British School of Archaeology in Jerusalem, 1986). ²¹Ibid., 129-130.

²²Ibid., 136.

during the latter century of Crusader occupation (1187-1291).²³ This would indicate both change within the Crusader period and continuity into the succeeding Ayyubid and Mamluk periods, at least as far as archaeological indicators are concerned (one of the reasons the periodization of Middle Islamic 1 begins ca. 1200; see chart following text).

Other excavations in Islamic sites have focused on standing architectural monuments of the Umayyad period. In the process most of these sites have revealed Ayyubid/Mamluk occupation. One of the most prominent was the palatial complex outside of Jericho, Khirbat al-Mafjar, in which the latest phase (Phase 4) is Mamluk.²⁴ The extensive burnt material suggests that the building was still carrying a wooden roof at the end of occupation. The ceramics have the very distinctive geometric painted juglets and slip painted glazed wares, that is, a balance between hand-made and glazed wares, culminating in a limited number of finely decorated frit wares, typical of Mamluk occupation. A rather similar early Islamic complex with an Ayyubid/Mamluk reoccupation was Qasr al-Hayr East (Period II). Around the standing monuments, the large and small enclosures, was the mounding of an extensive mud-brick settlement; walls within and between the earlier structures also belong to this resettlement. Grabar described the site as a small bidonvillelike settlement, the "rather primitive small town" of 'Urd, beginning with Nūr al-Dīn's redevelopment of Raqqa.25 In a shift from this focus on standing monuments, the excavations at Khirbat al-Faris in southern Jordan have mapped and excavated a medieval and Ottoman village. Likewise, the excavations at Tell Ti'innik have advocated a "reverse chronology," working back from the Ottoman to Mamluk and earlier (see below).²⁶

ARTIFACTS AND SOCIAL HISTORY

The phenomenon of the twelfth through fourteenth centuries in northern Bilād al-Shām continues to be treated by archaeologists as a monolithic entity with fuzzy edges, usually labeled Ayyubid/Mamluk. The pattern was set with the publication of the Hama excavations by the Danish team in the 1930s. While the actual stratigraphic data has never appeared, the pottery was presented in great and influential detail.²⁷ Among the many types

²³Ronnie Ellenblum, "Settlement and Society Formation in Crusader Palestine," in *The Archaeology of Society in the Holy Land*, ed. Thomas E. Levy (London: Leicester University; New York: Facts on File, 1995), 502-511.

²⁴See Donald S. Whitcomb, "Khirbat al-Mafjar Reconsidered: The Ceramic Evidence," *Bulletin of the American Schools of Oriental Research* no. 271 (1988): 51-67. The dichotomy of identifications into Umayyad/Abbasid and Ayyubid/Mamluk is a problem in classification yet to be systematically addressed by Islamic archaeologists.

²⁵See Oleg Grabar et al., *City in the Desert: Qasr al-Hayr East*, 2 vols. (Cambridge: Harvard University Press, 1978), 160-161. Grabar states that this upper phase was excavated in "arbitrary levels of 50 to 100 cm." One section claimed more careful attention by Robert Adams, see p. 81. The evidence of Ayyubid/Mamluk occupations in the Euphrates region deserves separate consideration. One may note the potential of the Bālis excavations, for which the historical setting has recently appeared: A. Raymond and J.-L. Paillet, *Bālis II: Histoire de Bālis et des îlots I et II* (Damascus: Institut français de Damas, 1995).

²⁶Jeremy Johns and Alison McQuitty, "The Fāris Project: Preliminary Report upon the 1986 and 1988 Seasons," *Levant* 21 (1989): 63-95; idem, "The Fāris Project: Preliminary Report on the 1989, 1990, and 1991 Seasons," *Levant* 25 (1993): 37-61. Ghada Ziadeh, "Ottoman Ceramics from Ti'innik, Palestine," *Levant* 27 (1995): 209-245.

²⁷The main information on these excavations is in Harald Ingholt, *Rapport préliminaire sur sept campagnes des fouilles à Hama en Syrie* (1932-1938) (Copenhagen: Munksgaard, 1940). See also Poul Jørgen Riis and Vagn Poulsen, *Hama, fouilles et recherches* 1931-1938, vol. 4, pt. 2: *Les verreries et*

of ceramics in this site, one may examine two types as holding possible relevance as reflections of social organization: geometric painted pottery and slip-painted glazed ware.

Geometric painted pottery is also known as pseudo-prehistoric ware and, more formally and recently, as hand-made geometric painted ware (HMGPW). This ceramic features an often elaborate decorative scheme, sometimes with multiple colors, on a crude, ill-fired ceramic. The ware has often been associated with domestic production by women (as opposed to industrial wheel-made wares by men in urban settings). Following these assumptions, the ware is usually considered a devolution of an important Islamic craft, indicative of decline in the late Mamluk and Ottoman periods.²⁸

In Syria, the existence and dating was signaled at Hama, where the collection includes extremely rare vessels with animal and human figures.²⁹ An intensity and variety of production is revealed in its occurrence in surveys and rural sites suggesting a popular craft with an important meaning and/or function. When one plots temporal and regional distribution, one sees a surprising fit with the Crusader occupation in Bilād al-Shām. This is not Crusader ware but possibly a reaction to this occupation, a reaction which continued as a popular symbol through the Mamluk period.

The Hama excavation report also describes slip-painted glazed ware as a Syrian product.³⁰ Rogers, in a brief discussion of its occurrence at Apamea, calls it "gamma" ware and suggests a distribution in Syria.³¹ This ceramic is usually a red ware upon which a design in white slip is painted; the designs and distribution are strongly reminiscent of the geometric wares, a sort of up-scale domestic ware. The vessel is then covered with a yellowish clear lead glaze turning the decoration yellow and the remainder a glossy redbrown. The technique and elements of its style continue into the Ottoman period and extend into Spain and the New World, where descendants of slip-painted glazed ware were most popular in the Spanish and English colonies. Slip-painted glazed ware is a prominent product of Mamluk Egypt where it occurs as a specialized goblet form.³² The village of al-

poteries médiévales (Copenhagen: Nationalmuseet, 1957). A final presentation of the archaeology of the Islamic levels has been announced by P. Pentz.

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²⁸There is a roughly contemporary phenomenon in North Africa, Nubia, and Iran/Persian Gulf; such a wide-spread style would be labeled an archaeological "horizon," had it occurred in a prehistoric or early historic period. A similar type of ceramic has been linked with medieval transhumance in southern Iran; see Donald Whitcomb, "Pseudo-Prehistoric Ceramics from Southern Iran," *Golf-Archäologie: Mesopotamien, Iran, Bahrain, Vereinigte Arabische Emirate und Oman*, ed. K. Schippmann et al. (Buch am Erbach: Marie L. Leidorf, 1991), 95-112.

²⁹The type was labeled simply Geometric ceramic, type D XX, figs. 1000-1046, in Riis and Poulsen, *Hama*, vol. 4, pt. 2.

³⁰Ibid., type C XVI, figs. 821-832.

³¹The origin of this name remains a mystery; the presentation of the Apamaea ceramics remains an unstratified puzzle; see J. M. Rogers, "Apamaea, the Mediaeval Pottery: Preliminary Report," *Apamée de Syrie: Bilan des recherches archéologiques*, 1969-1971, ed. Janine and Jean C. Balty (Brussels: Centre belge de recherches archéologiques à Apamée de Syrie, 1972), 253-270; and idem, "Mediaeval Pottery at Apamaea in the 1976 and 1977 Seasons," *Apamée de Syrie, Bilan des recherches archéologiques*, 1973-1979, ed. Janine Balty (Brussels: Centre belge de recherches archéologiques à Apamée de Syrie, 1984), 261-285

³²See George T. Scanlon, "Some Mamluk Ceramic Shapes from Fustat: 'Sgraff' and 'Slip'," *Islamic Archaeological Studies* [Cairo] 2 (1980): 59-145; idem, "Mamluk Pottery: More Evidence from Fustat," *Muqarnas* 2 (1984): 115-126. Also, Donald S. Whitcomb, "Islamic Ceramics," *Quseir al-Qadim 1980*, ed. Donald S. Whitcomb and Janet H. Johnson (Malibu: American Research Center in Egypt 1982), 132-

Burj al-Aḥmar used quantities of both hand-made painted pottery and glazed slip-painted ware during the first century of Mamluk rule (1265-1390). Both the household ceramic and the finer glazed ware are described as local Palestinian products.³³

SPECIALIZED CERAMIC ARTIFACTS: GRENADES AND PIPES

There are two classes of ceramic artifacts which bear special consideration for Mamluk studies. The first are grenades, a specialized vessel firmly established in Mamluk and contemporary assemblages for which no persuasive utilization is known. The other is the ceramic pipe bowl, for which use is apparently agreed but association with Mamluk archaeology sadly misplaced.

The so-called grenade, or better, sphero-conical vessel, is a hard well-made ceramic (usually approaching a stoneware) with a very small opening at the rounded end. The surface usually has a glaze (often a firing by-product) and impressed or stamped decorative elements.³⁴ Traditional identifications of these sphero-conical vessels has been as fire-throwers, based on the superficial similarity to modern grenades. Other popular identifications are perfume or mercury containers, to which may be added postulated uses as hanging lamps, water pipes, or aeliopiles. Most recently, some currency has been granted the idea of beer or alcohol bottles; this last identification relies on unique and undocumented examples from Iran and the evidence solely poetic in form.³⁵ What is certain is a wide distribution from Khorasan to Egypt during the Mamluk period; one may suggest that a search of Turkic or even Mongol paraphernalia might yield a cultural usage.

By way of contrast, there is little doubt of the use of clay pipe bowls, moulded, decorated, and burnished. This is a common element of paraphernalia in depictions of the Ottoman period and indeed maintains a formal similarity with original (stone) pipe bowls of native American usage. Excavated examples from Tell Ti'innik in Palestine have been used to shift the hand-made geometric painted ware to the Ottoman period, a radical revision in dating.³⁶ When Pringle found pipes at al-Burj al-Aḥmar, he considered the testimony of Hama and Tell Qaimun (Tel Yoqne'am)³⁷ where pipes were dated to the Mamluk period; in the end he followed his own stratification to post-Mamluk occupation (phase E, 17-19th

^{192,} pl. 36; and Kawatoko, *al-Tūr*, pl. 21.7.

³³Pringle, *The Red Tower*, 135-36, 149-150.

³⁴There is an extensive literature treating grenades, beginning with Hama; Riis and Poulsen, *Hama*, vol. 4, pt. 2, type DXXI, figs. 1047-1058. Recently Peter Pentz has offered new archaeological evidence from Hama, claiming to strengthen the traditional identification as "grenades," in "A Medieval Workshop for Producing 'Greek Fire' Grenades," *Antiquity* 62 (1988): 89-93.

³⁵A. Ghouchani and C. Adle, "A Sphero-Conical Vessel as *fuqqā'ah*, or a Gourd for 'Beer'," *Muqarnas* 9 (1992): 72-92.

³⁶Ziadeh, "Ottoman Ceramics."

³⁷Pringle, *The Red Tower*, 142. The Tell Qaimun evidence is often cited but the extant reports do not offer details necessary for independent stratigraphic contribution. See Amnon Ben-Tor and Renate Rosenthal, "The First Season of Excavations at Tel Yoqne'am, 1977: Preliminary Report," *Israel Exploration Journal* 28 (1978): 57-82; and Amnon Ben-Tor, Yuval Portugali, and Miriam Avissar, "The Second Season of Excavations at Tel Yoqne'am, 1978: Preliminary Report," *IEJ* 29 (1979): 67-83. Another nearby site, this time with a Crusader castle, is 'Afula, with no better contexts or reportage; see M. Dothan, "The Excavations at 'Afula," 'Atiqot 1 (1955): 19-74; and more recently, Benjamin Z. Kedar and Denys Pringle, "La Fève: A Crusader Castle in the Jezreel Valley," *IEJ* 35 (1985): 164-179. Yet another site with published potential is Buṣrá (Bostra), see Sophie Berthier, "Sondage dans le secteur des thermes sud à Buṣrā (Syrie) 1985," *Berytus* 33 (1985): 5-45.

centuries).³⁸ Ever since Hama, pipes have been suggested to have fourteenth century associations, but St. John Simpson has carefully refuted this association as, in a large number of cases, the result of faulty stratigraphy.³⁹ This should raise a red flag for readers of archaeological reports: isolated artifacts (or special types) should fit with the remainder of the assemblage or, put another way, archaeological evidence comes in repeating patterns.⁴⁰

CONCLUSIONS

The preceding discussion of Mamluk archaeology has not touched on many places and monuments which are usually considered important for an understanding of Mamluk history; the architecture of Cairo or Jerusalem are two obvious beginning points. Study of such monuments falls into the realm of art history, which runs on parallel tracks but employs a very different methodology from archaeology. Archaeology is suited for inquiry into long-term change. One may seek in archaeological research patterns of land use (historical geography) and social organization (settlement systems), or rather ecology and economy in human development. Archaeology also provides information about the characteristics/functioning of particular places and periods, e.g., the dramatic change observed in the beginning of the Middle Islamic period induced by a new mix in the Middle East, the long-term affects of Crusaders and Mongols on early Islamic civilization.

Since an understanding of Mamluk culture must take into account the changed nature of social organization in its rural and urban settings, the primary evidence from the archaeological record must be integrated with that from the documents. One might well return to a description of the Egyptian scene:

Besides being a highly centralized country with an administration organized to maximize royal revenues, Egypt was and remained a traditional peasant society in which primary social relations, those of family and friend, of patron and client, remained of supreme importance. The focus of loyalty was the village. . . . ⁴²

This description, actually applied to Ptolemaic, not Mamluk, Egypt, is advanced here not for some vague romantic sense of continuities, but to draw a parallel between two societies in multi-cultural transitions, in which ethnic origin became less important than

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³⁸The Red Tower, 142.

³⁹The Hama references are: Riis and Poulsen, *Hama*, vol. 4, pt. 2, type D XXII, figs. 1069-1082. The refutation is found in St. John Simpson, "Ottoman Clay Pipes from Jerusalem and the Levant: A Critical Review of the Published Evidence," *Society for Clay Pipe Research, Newsletter* 27 (October, 1990): 6-16. An example of such stratigraphy with pipes is in G. J. Wightman, *The Damascus Gate, Jerusalem*, BAR 519 (Oxford: British Archaeological Reports International, 1989), pl. 63.

⁴⁰Likewise, the evidence of coin finds must be treated as only one element of a large pattern; like C14 samples, there is an unavoidable sampling error which requires rejection *unless* the interpretation fits all other lines of evidence.

⁴¹See Michael Meinecke, *Die Mamlukische Architektur in Ägypten und Syrien*, 2 vols. (Glückstadt: J. J. Augustin, 1992), and Michael H. Burgoyne and D. S. Richards, *Mamluk Jerusalem, an Architectural Study*, *with Additional Historical Research* (Jerusalem: British School of Archaeology, 1987).

⁴²Dorothy J. Crawford, "The Good Official of Ptolemaic Egypt," *Das Ptolemäische Ägypten*, ed. Herwig Maehler and Volker Michael Strocka (Mainz am Rhein: von Zabern, 1978), 199-201.

contemporary cultural sphere. Definition of such cultural spheres is more diffuse in the archaeological record than in some documentary evidence, but it is more readily discernible in the material record of daily lives as they gradually unfolded over time.

