

VILLAGE LIFE IN MAMLUK AND OTTOMAN ḤUBRĀŞ AND SAḤAM: NORTHERN JORDAN PROJECT, REPORT ON THE 2006 SEASON

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Introduction¹

A reduction in the size and number of villages in Jordan following the collapse of the Mamluk order and during the period of Ottoman hegemony is a phenomenon that is often suggested by surveys in Jordan but not adequately explained. The general rural decline cited in earlier literature, characterized by abandonment of villages and resulting from a combination of political and climatic events, has in recent years been questioned, in favor of more nuanced explanations that posit economic reorientation and dispersion of larger towns to smaller villages and hamlets (Johns 1998). The results of archaeological surveys in the plains of central and southern Jordan may indicate such a shift of settlement; however, it is far from clear that this is the pattern for the hill country of the north, where historical sources suggest greater continuity of settlement (Walker 2004).

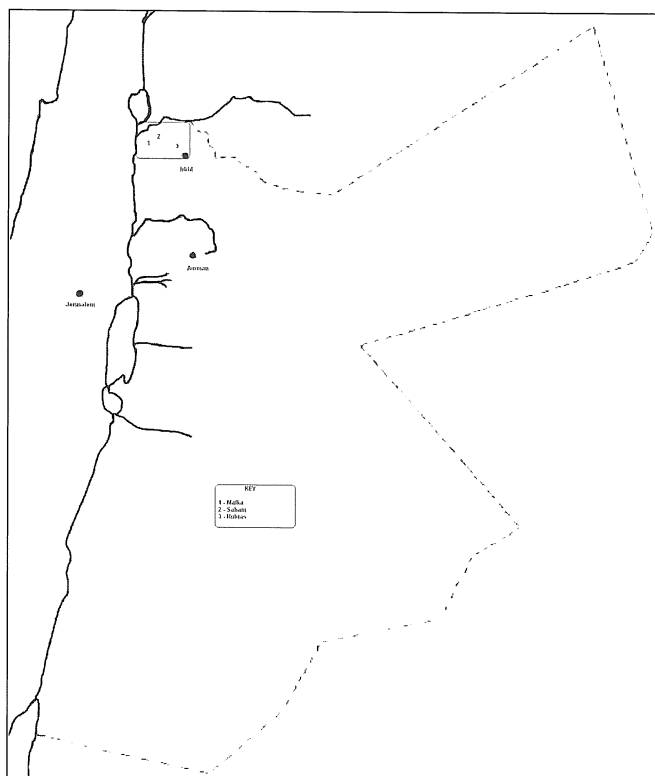
In an effort to document and better understand such demographic cycles, through comparison

with the settlement history of northern Jordan to the central and southern plains, and to shed light on the structure and character of traditional Jordanian society from the late medieval period until today, we launched the Northern Jordan Project (NJP) in 2003 (**Fig. 1**). The Northern Jordan Project is a multidisciplinary exploration of the history of rural society, agriculture, and the physical environment of northern Jordan from Irbid to the Yarmouk River, with a focus on the Mamluk and Ottoman periods. This region was selected for several reasons: there have been fewer surveys here than in central and southern Jordan, and practically no excavations (notable exceptions are for Irbid: Lenzen *et al.* 1985; Lenzen and McQuitty 1988 and for Umm Qays: Tawalbeh 2005), devoted to these time periods; the region is richly documented historically; and the combination of local soil composition and climatic conditions make the region ideal for paleobotanical study, as there is greater chance for recovery of ancient pollens from soils here than

1. The NJP is directed by Dr. Bethany Walker. The staff for the 2006 season included Architectural Historian Dr. Ellen Kenney, Architectural Conservator Maria Elena Ronza (University of Jordan), surveyor Mr. Qutaiba Dasouqi (DoA), Field Supervisors Lynda Carroll (SUNY-Binghamton) and Laura Holzweg (University of Chicago), glass specialist Dr. Stéphanie Boulogne (CNRS), and our DoA Representative Mrs. Asma al-Zubda and was supported by sixteen students from Grand Valley State University (GVSU), Calvin College, and Yarmouk University. Our project collaborates, as well, with Yarmouk University (Dr. Ziad al-Saad) and Brandenburg University of Technology in Cottbus, Germany (Dr. Bernhard Lucke). Funding for the 2006 season came from GVSU; post-season analysis is funded, in part, by the Global Moments in the Levant project through a grant from the Research Council of Norway. C14 analysis of wall plaster was done at the labs of Beta Analytic, Inc. in Miami, Florida, and soil analysis at Brandenburg Technical University. We wish to also recognize Sarah Gosline and Cara Camp, students at GVSU, for assist-

ing the Director in drawing the pottery profiles and to Kevin Lignell (Digital Studio, GVSU) for producing the pottery plates.

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1. Map of Study Area.

in most other parts of the country. The first field season in the fall of 2003 consisted of intensive archaeological and environmental surveys of the village of Malkā (JADIS site #2223.016) and an architectural survey of Ḥubrāṣ (Walker 2005).²

The following is a report on the second season of fieldwork, conducted from 14 June through 8 July 2006 in the villages of Saḥam (a two-week survey of the village and wadi system) and Ḥubrāṣ (a two-week excavation in two fields: A- the two embedded, historical mosques and B- an early 20th century farmhouse). These villages were elected because they were prominent villages with agricultural markets during the Mamluk and Ottoman sultanates and preserve today much standing architecture from these periods. Our goals this season were four-fold: 1. to assess the role of environmental change in the settlement fluctuations of the medieval and early modern periods; 2. to evaluate transitions in and out of market-based agriculture on the social, economic, and political levels; 3. to develop a

preliminary typology of late Ottoman and Mandate-period pottery for this region of Jordan; and 4. to develop a typology of vernacular architecture for the Mamluk, Ottoman, and Mandate periods in northern Jordan, both domestic and sacred. An emphasis this season was placed on the historical mosques of both villages.

Methodology and Sources

In order to address the widest range of possible factors behind the growth and decline of rural settlements, the NJP has adopted a multi-disciplinary approach based on the model of political ecology that pulls on the sources and methods of traditional history, field archaeology, art history, anthropology, and environmental studies, with a staffing reflecting specialization in each of these fields (Walker 2005: 2). Because the project aims at describing and explaining as fully as possible the physical and functional development of Jordanian villages in the Middle and Late Islamic periods, the unit of study is the village and its agricultural and pastoral hinterlands. As expected from the written sources, these villages have a long history of settlement and continue to be occupied today, in our case necessitating fieldwork in the frequently abandoned sections of “living” villages. That these neighborhoods remained vital parts of the village in living memory is indicated by the nomenclature used to refer them locally: “Old Saḥam”, “Old Ḥubrāṣ”, “Khirbat Malkā”. While doing fieldwork in densely occupied villages does present logistical and operational challenges, it is rewarding for the wealth of data it provides and the degree of community engagement it produces.

Fieldwork on the NJP is preceded each season by intensive historical research by the project Director, largely archival. While making use of the chronicles and travelers’ accounts that are common to archaeological projects of historical periods, we further engage economic and legal documents that are largely located in the medieval archives of Cairo (unpublished) as well as government offices in ‘Amman and Irbid.³ This

2. Previous publications on the work of the NJP, and ceramic, historical, and geological studies related to it can be found in Walker 2004, 2005, 2007a, 2007b, 2007c, 2007d, 2008, and n.d. (a) and (b); Walker and Kenney 2006; and Lucke *et al.* (n.d.).

3. The principle archives used are located in Cairo (Wizārat al-Awqāf and Dar al-Wathā’iq) and ‘Amman (the

Documents and Microfilm Archive of the University of ‘Amman Library). In addition, this project regularly consults government documents of the late Ottoman and Mandate periods in the Department of Land Surveys in ‘Amman and Irbid, as well as the archives of the Wizārat al-Awqāf in Irbid and ‘Amman.

historical research is done independently of the archaeological fieldwork but informs the archaeology as appropriate.

The archaeological fieldwork combines survey and excavation and has during the last two seasons been divided between two villages for purposes of comparison and to build a larger database. The surveys are purposive, walking surveys, targeting standing architecture, field lines, and visible agricultural installations, aided by the use of historical maps and village blueprints and guided by the place names and topographical descriptions of late Ottoman and Mandate-era land registers. Pottery was collected from the surface at 100%, as well as selected lithics, from physically accessible sites; faunal remains (bone) were read at camp but not retained for further study. For the purposes of the survey, the parameters of the historical village are defined as the village center and a hinterland of a roughly 2.5 kilometer radius from that center (Walker 2005: 4) “Sites”, defined as agricultural or pastoral complexes, are comprised of “features” (farmhouses, cisterns, canals, field markers, caves, animal pens, etc.). While we aimed at as comprehensive coverage as possible of the village sites, the difficult terrain of this part of Jordan, with high hills cut by deep and often treacherous wadis, made this impossible. The survey coverage for both villages is described below. As for excavation, we adopted the locus system of the Madaba Plains Project, as well as its system of recording for both excavation and survey and sift 100% of all dirt excavated.

Conducted concurrent to survey and excavation is an intensive architectural study of standing structures from the period, with an emphasis on domestic and religious spaces. These studies are accomplished with a combination of exhaustive architectural analysis (by Kenney), interviews with local residents (by Carroll), and research on written records related to the ruins (by Walker). Among our objectives in 2006 was to make chronologically relevant observations that would assist in dating similar ruins and associated pottery in the future and to document archaeologically the development of villages in our area, expanding on previous scholarship on vernacular architecture (for sources see Walker 2005: 4) as well as current trends in Jordanian historiography for the Ottoman and Mandate

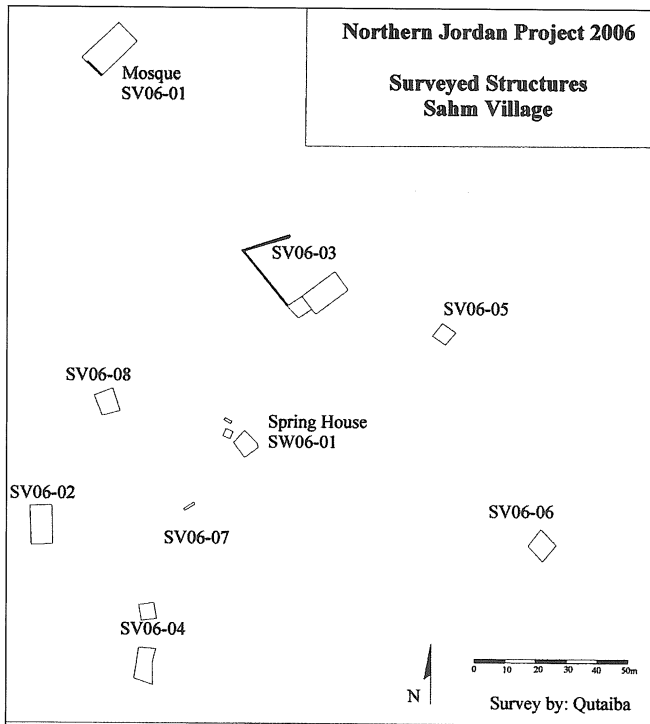
periods (Rogan 1999; Fischbach 2000; Mundy and Smith 2007). The project has from the beginning been committed to preservation and restoration of mosques in the study most threatened with collapse.

In support of the archaeological and architectural projects is an ethnographic effort, which includes informal interviews with the most elderly members of the local community, who are most likely to remember how buildings and land were once used. Such oral history is invaluable for documenting those elements of village history that cannot be reconstructed archaeologically or about which no written sources exist.

A final component of NJP fieldwork consists of environmental analysis, the dual purpose of which is to determine how human land use has transformed the local landscape and to what degree environmental (including climate) change contributed to the settlement cycles with which our project is most concerned. Brandenburg Technical University collaborates in this effort through soil genesis analysis. In addition, palynology and phytolith analyses based on soils collected from stratified contexts (both dry and wet) are combined to define both the climate and agricultural regime of a period to discover ways that climate and planting regimes have impacted settlement history (see Walker 2005: 29-34 for initial pollen study). The lithics and paleobotanical analyses from the 2006 season had not been completed at the time of writing this report and will be published separately.

SAḤAM (Fig. 2)

The modern village of Saḥam is located 22 kilometers northwest of Irbid on a branch of the road leading to Umm Qays. Situated approximately 365 meters above sea level on a promontory high above the Wādī Saḥam, where the village’s irrigated gardens and orchards are located, the village has visual and physical proximity to the Syrian border. The steep wadi divides the village into two parts, known traditionally by the residents as Ḥuṣun and Masarra. The village was founded on the basis of market agriculture and is blessed with plentiful sources of water (at least four springs) and a broad planting base of a variety of summer and winter crops. Basalt ruins and small finds through the village and its hinterland attest to its occupation during



2. *Saham – sites surveyed.*

the Roman and Byzantine eras. Today the village is home to 8,000 residents, many of whom still practice some form of agriculture, as well as transhumant farming.

While not attested in medieval sources, to our knowledge, the village of Saḥam does become visible historically in Tanzimat-period tax registers of the Ottoman Empire. It is among the earliest in modern Jordan to have registered its lands, and it grew quickly during the late nineteenth and early twentieth centuries. The heart of the village in this period stood at the hill overlooking the Wādī Saḥam and along slopes to its approach. Land here was first registered with the Ottoman state in 1880 by local farmers and sold two months later to the new governor of ‘Ajlūn, who had recently arrived from Damascus (Mundy and Smith 2007: 93). Schumacher, in his eyewitness account of this period, describes a rather impoverished village of 400 residents with a built springhouse and, he suggests, a mosque (Schumacher 1897: 179-180).⁴

While the region around Saḥam was surveyed 100 years ago by Schumacher, the village itself seems to have not been the target of a system-

atic archaeological study (Schumacher 1890). Students from Yarmouk University, under the supervision and direction of Prof. Yusuf Ghawanmeh, did an architectural study of the oldest mosque in the village in the early 1980s, publishing several photos and a floor plan but not documenting its formal physical transitions and phases of restoration (Ghawanmeh 1986a: 65-75). The founding of this mosque, as well as the early history of the modern village, has not been previously studied and published. In addition to the mosque, we were interested in examining the many well preserved farmhouses located along the upper slopes of the promontory above Wādī Saḥam in order to determine a typology of late Ottoman and Mandate period architecture for this region.

I. THE VILLAGE (Kenney – architecture, Carroll – survey/ethnography, Walker – history)

Mosque (Site SV06.01) — Fig. 3 *Historical Development*

The old mosque at the approach to the Wādī Saḥam was the heart of the Ottoman village. Local families pooled their resources to build this mosque, as well as that of the public fountain (*sabīl*), for which masons from Safad were hired. The mosque (16.5 x 9 meters) is a single-roomed, irregularly vaulted sanctuary (barrel-profile on west end and pointed on east) with a groin vault in the center, thick walls (2 meters on the north and south, 1 meter on the east and west), two doorways (on the north and east), two windows (one on the west and one filled in with rubble above the *miḥrāb*), and a single interior *miḥrāb*. Prayers were held indoors during the rainy winter months and in the courtyard outside, which was equipped with its own *miḥrāb*, during the rest of the year. As at Ḥubrās, this mosque was part of a larger ritual complex that included the *imām*’s house (which also served as the village school for many years), as well as a cemetery centered on the *maqām*, no longer standing, of one ‘Izz ad-Din Tahir Beg Bard al-Khan, a holy man from Turkey, according to local sources. Although the cemetery went out of

4. According to his account, Saḥam had no mayor but only a *khaṭīb*, who was one of the few literate members of the village. Although a mosque is not described or men-

tioned specifically, the presence of a preacher suggests that there was, indeed, one in this period.



Old Saḥam mosque



Old Saḥam sabīl

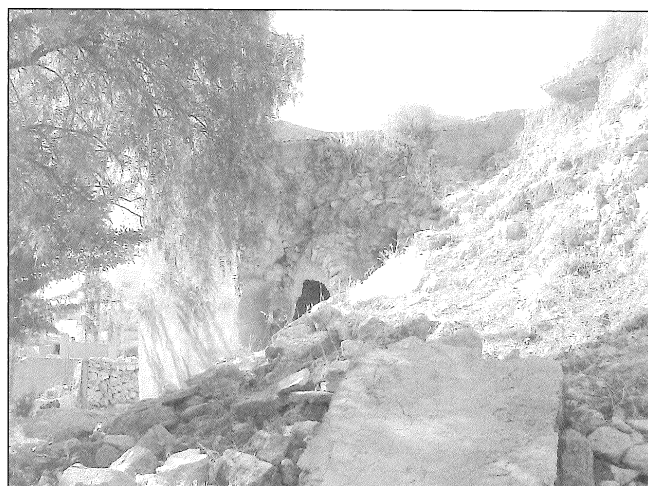
3. Bull's eye windows of Saḥam mosque and sabīl compared.

use as early as the 1940s, the mosque was used for Qur'anic instruction well into the 1960s, and the mosque remained in use until 1976. The subsequent history of this mosque is a beautiful example of local initiative in building and retaining religious spaces.

Likely built in the 1880s, it served the village until 1976, when the building was no longer structurally sound and the local *Awqāf* office decided to close it. A road was constructed that destroyed the complex to the west of the mosque; three new mosques were eventually built to replace the old one. The village protested at the closing of the old mosque and asked repeatedly for monies for its reconstruction.⁵ In 1984 the Ministry replastered the interior, and then closed the mosque for good, citing structural weaknesses. Heavy winter rains in 2005 caused the collapse of the northwestern corner of the structure (Fig. 4).

Architectural Study (Fig. 5)

Although there is no documentation related to the construction of this mosque, nor are there dated inscriptions anywhere on the structure, the Saḥam mosque falls into a style of sanctuaries built in northern Jordan, with architectural parallels in contemporary Palestine, of the late Ottoman period (early 19th century — turn of 20th century AD). In terms of floor plan, this mosque belongs to a class of elongated, single-chamber mosques of tri-partite plan (a term that applies

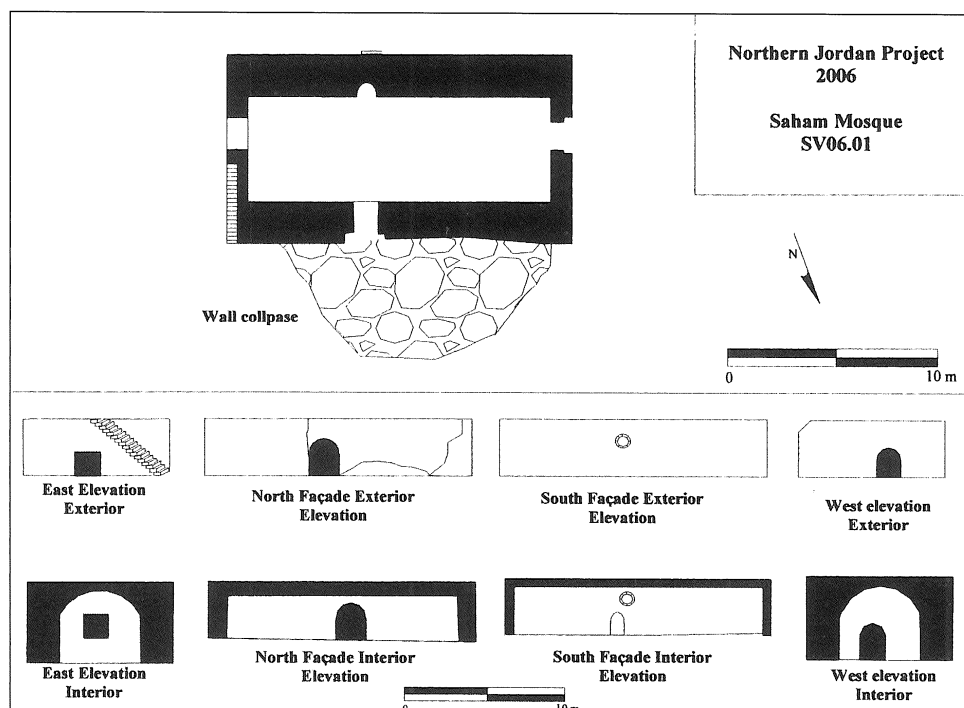


4. Saḥam mosque — collapse of northern façade.

to the three-part superstructure: a central vaulted zone flanked by two vaulted wings), characteristic of late medieval/early modern architecture in Palestine, and found somewhat less commonly in Jordan, where its use is mostly concentrated in the north of the country (McQuitty 2004: 259). Comparable plans are reconstructed for the remains of mosques in both 'Ayn Shams and Khirbat al-Safar in Palestine (Petersen 2001: 103 and 268). This tripartite plan belongs to a broader category of architecture in which elongated spaces are covered with a series of vaults, often with varied profiles. Functionally, this form is not limited to mosque architecture, but can be found in a variety of building types, including residential buildings. A nearby variant of this kind of space can be seen in a residential

5. Several letters exchanged between representatives of Saḥam village and *Wizārat al-Awqāf*, Kafr Sūm office,

from 1966.



5. Floor plan of Saḥam mosque.

complex in the Ottoman village at Umm Qays.

The masonry construction of the Saḥam mosque is typical of late Ottoman architecture in the region, in which the combination of thick and thin walls is frequently encountered. The reason for these relative wall thicknesses is to accommodate the lateral pressure exerted by the vaults, and is not indicative of separate building phases. The thick wall is the weight-bearing zone, absorbing the thrust from the vault of the roof, whereas the thin wall is essentially a curtain wall, and does not support the superstructure. The apparent “off-center” position of the *miḥrāb* on the *qibla* wall may not reflect the original disposition. It is possible that at some point after the initial construction of the building, the east wing was truncated.

The bull’s-eye window is another feature quite characteristic of late Ottoman buildings in the area (Fig. 3). Comparanda can be found at Umm Qays and in late nineteenth-century domestic architecture, the so-called “throne villages”, of Palestine (Amiry 2000: 46, fig. 1 — the house of Abu Qutaysh). In some cases, such windows are open and in others they are “blind”. At Saḥam, the question remains whether the bull’s-eye window was ever open to illuminate the interior. As the floor-plan drawing demonstrates (Fig. 5), its placement aligns only approximately with that of the *miḥrāb* on the interior, but this does not rule out the possibility that it served as

a sort of lunette since such minor irregularity is by no means uncommon in village architecture. More problematic is the height/elevation of the window relative to the interior vaulting: it appears that the window, if it were open, would have pierced the vaulting at an unusually high point. However, this arrangement would not be without parallels: For example, at the shrine of Shaykh Sandahawi (in the central coastal plain in Palestine, near Caesarea), a lunette — in this case undecorated, pierces the vaulting arch exactly at its apex (Petersen 2001: 284, Pl. 314).

Local studies on traditional mosque forms in northern Jordan give historical evidence for a late Ottoman chronology. Two of the mosques studied in detail in al-‘Awdat’s recent M.A. thesis (2005 — see also Shaqirat’s thesis, published in 1988), are dated by inscriptions to this period: the Ottoman mosque in Umm Qays (built in 1320AH/1902 AD) and Kafranja (renovated in same year). The mosques in his study share several characteristics that are common, as well, to the mosque at Saḥam and, to a lesser degree, the Mandate-period mosque at Ḥubrās: the superstructure appears flat from the outside but is supported by cross-vaults on engaged piers; roofs slant to one side to lead rain water to the ground; the call to prayer is done from the roof (so there is an external staircase instead of a minaret); the floors are often made of pebbles set into plaster; *minbar*(s) were movable; as

the congregation grew, a *riwāq* was added to the north side of the mosque and frequently included an external *miḥrāb*; aisles (if present) run parallel to the *qibla* wall; they share the same *miḥrāb* size (ca. 2 meters high, 1 meter wide, and half a meter deep) and shape (carved out of the *qibla* wall but not visible from outside) and wall construction (two-faced with a rubble core, chink and boulder style, one-meter thick, of local limestone with occasional basalt finishes). They all tend to be small (12-18 meters length, less than 10 meters width if rectangular), simple (single-roomed) buildings, located in the heart of the original villages of the late Ottoman period.

As mentioned above, the north door is now in a ruined state, but photographs published in the 1980s (Ghawanmeh 1986a: 72-73, figs. 44-46) reveal that this door was set within a pointed-arched recess and was flanked by quarter-round masonry benches. The door itself was covered with a segmental arch and framed in its entirety by a continuous molding. The profile of this molding is a little difficult to make out from the photographs, but appears to be composed of a series (perhaps three?) of half-round volutes. This detail is rather unusual. One possible parallel is to be found on a Nablus residence, framing a door set within a recessed entrance vault (Kana'an 1993: 60-61; Pl. 43 and 45). Kana'an contends that the Nablus molding is not the result of re-used material, but rather an example of the "eclectic" historicism characteristic of stoneworkers in the region during the late Ottoman period. Interestingly, the profile of the Nablus doorway's arch is very similar to that at the Saḥam mosque as well.

The building appears to have been constructed in two phases. The initial construction probably took place in the late Ottoman period, likely the late 19th century, when the modern village was founded. After its construction, the building may have suffered damage or deterioration that caused the loss of the east end of the building, resulting in the truncation of the structure. The reconstruction of the east wall incorporated a staircase running up the exterior of the wall to the roof, which would have been used for the prayer call in the absence of a minaret (Fig. 6). This arrangement is found at the simplest of the three Tubna mosques (Khammash 1986: 59). It

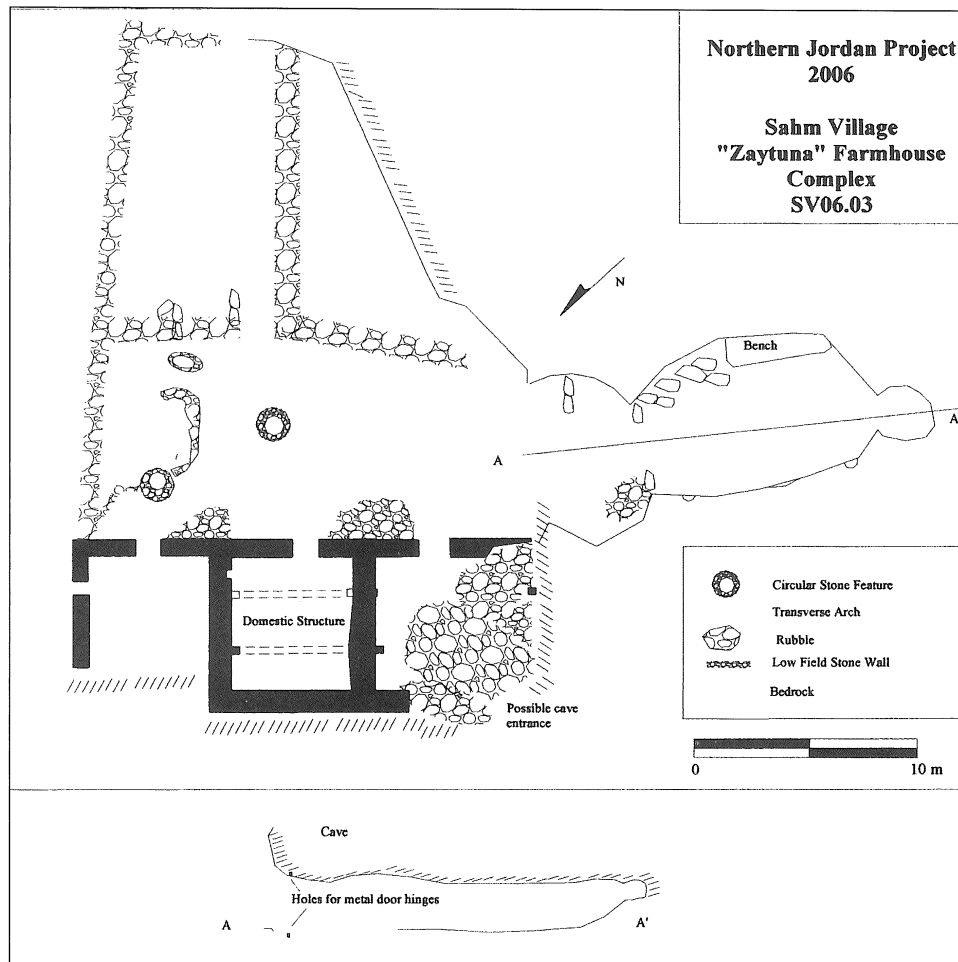


6. Saḥam mosque staircase.

was probably at this time that the west window and the walls around and above it were rebuilt. This reconstruction phase probably dates to the mid-twentieth century.

Farmhouses (Fig. 7)

In an effort to document the transformation of the village over the course of the past 150 years, in terms of its use of space, architecture, and landscape, we identified, dated, and recorded a sample of old farmhouses and associated complexes that surrounded the village mosque. For each farmhouse in that sample, the village survey team made surface collections of ceramics and lithics, recorded and drew floor plans of the farmstead complexes, and conducting informal interviews with landowners, and residents in Saḥam. A diverse variety of farmhouses in Saḥam were selected, in order to represent some of the variation in domestic spaces in the village. In total, seven farmhouse complexes were studied and recorded in detail (sites SV06.02-08). This represents only a small sample of the remaining stone masonry buildings in the village. For want of space in this report, we summarize



7. General plan of SV06.03 –
"Zaytūna's farmhouse".
N. of Saḥam mosque.

the documentation related to one of those complexes: "Zaytūna's farmhouse" – Site SV06.03.⁶ It was arguably the oldest complex surveyed; comprising most of the components identified in other farmhouses in Saḥam, it can be taken to be representative of the village as a whole from the late Ottoman to the early Hashemite periods.

The Zaytūna complex is situated below the mosque, built into the hill that descends into the wadi on its west side, and covers an area of some 30 x 35 meters. To the south, it abuts the bedrock of the hill. To its west and east, stretches the continuation of the narrow outcropping/terrace upon which the house is built. To its north, the hill slopes down steeply to another level of caves, farmhouses, stonewalls and terracing. The site consists of a rectangular, three-roomed house (unoccupied and in ruins - SV06.03.01), incorporating a cave (SV06.03.03). A tall, stone wall (SV06.03.04) extends eastward and then southward, to enclose a roughly rectan-

gular yard (SV06.03.02) on the east side of the building. Two circular features in the courtyard (SV06.03.06), 1 and 2 meters in diameter, respectively, originally enclosed trees to retain water (see discussion below), according to one local informant.

The masonry of the house consists of even courses of irregularly cut stones alternating with thin courses of chink stones. Remnants of the exterior plaster that once coated this masonry still adhere to the walls; this plaster is held together with straw. The double-chambered building consists of two transverse-arched, single-spaced units (referred to by various terms in different sources, such as the "arch-and grain-bin type" — McQuitty 2004, 2005, 2007). This type of housing unit was common in Jordan and Syria until the last quarter of the nineteenth century, after which point it was still used but with the gradual introduction of regional features (such as domed or vaulted roofs rather than flat ones, a

6. In compliance with the Human Subjects Review Board requirements of SUNY-Binghamton, we have altered

the names of informants and property owners in this report to protect their privacy.

style derived from Palestinian vernacular architecture) and imported material (such as I-beams and reinforced concrete). The northern chamber is the better preserved of the three rooms, its transverse arches still standing and revealing the finely dressed masonry of their construction. Cavities high in the spandrel zone of the arches demarcating the central bay may have been intended to receive beams that supported a loft-type storage space. Another storage niche can be seen at the north end of the entrance (east) bay.

The roofing has completely collapsed, but appears to have conformed to the cane-and-mud type encountered elsewhere. The doors of the two units are surmounted by a pair of slender rectangular windows, and the paired windows over the north door are crowned by a small, circular “bull’s eye” lunette (the monolithic sills, jambs, and lintels of these paired windows appear to be re-used stones; the lunette is likewise a carved out monolith, also probably in re-use — unlike that at the village mosque, which is assembled from several carved stone elements to create a frame (Fig. 8). From the interior, the paired windows and lunette correspond to two superimposed rectangular niches. There are parallels to this window form on the façades of several houses in the Ottoman ruins of Umm Qays.

The site produced a relatively high density of ceramics, including highly datable sherds. Collections from the courtyard produced 19 modern body sherds; two “Gaza ware” (or a local derivative) sherds; a late Ottoman to Mandate period sherd (with chaff and grog temper); one Ottoman period basin rim with a punctuate design; two Ottoman period large basin or jar

sherds with thick slips; a mid-Ottoman period (17th-18th? century) casserole rim; four Mamluk period body sherds and three Mamluk period rims, (including slipped glazed, mottled glazed, monochrome glazed, and HMGP wares); a fragment of a Late Umayyad self slipping incised basin; two Late Byzantine or Early Islamic sherds, Mandate-period body sherds from a water jar with white paint and gray slip (an import — Rashayya al-Fukhar Ware); and 29 unidentified sherds (with one rim). Collections from inside the farmhouse produced two modern water jar body sherds; a Mamluk HMGP burnished jar neck and a Mamluk period HMGP body sherd; a Middle Islamic burnished rim; and two unidentified sherds.

The cave produced a higher density of sherds, including 76 modern sherds that included 69 body sherds from water jars, two cook pots (including one base), an *ibriq* neck, and three handles; two possible “Gaza ware” body sherds and a strap handle for a large jar (19th-early 20th century); one Ottoman period casserole body sherd and one rim; and two Ottoman period HMGP jar handles. Although there was a small percentage (13%) of sherds dating to time periods before the Late Ottoman period, the vast majority of the datable sherds were datable to the late 19th and early 20th centuries.

Informal conversations with the owner of this house revealed some corroborating evidence about its construction and use. According to the landowner, the structure was built in the 1880s. It was the largest farmhouse and farmhouse complex in the village. The house and the property were slowly abandoned in the second half of the 20th century, although it is still part of the family’s landholdings. In addition, another informant (not a member of the family) shared with the survey team that he and his family used the cave up until the 1980s on a seasonal basis. He confirmed that a door closed off the entrance to the cave when in use.

II. THE WADI (Holzweg – survey) Fig. 2

The purpose of the walking survey of Wādi Saḥam was to document contemporary land and water use and to look for evidence of past land and water use systems, specifically from the Mamluk, Ottoman and Mandate periods. Three sites of agricultural significance were fully ex-



8. Façade of Zaytūna's farmhouse.

plored by foot for a distance of 2.5 kilometers and documented: ‘Ayn Saḥam, with its spring house; a cave and water harvesting system; and the wadi floor, today dedicated to citrus and olive groves. Soil and water samples taken during the survey will be analyzed in labs to determine what crops were planted in historical periods and how the physical environment was altered from the 13th century AD. Those results will be forthcoming.

Water

The wadi appeared to be divided into three sections, each used for a different purpose. Roughly the first kilometer of the wadi was divided into small gardens for subsistence farming; the next kilometer was devoted to larger plots cultivated largely with trees and other crops for regional market; and the last walkable half kilometer to the end of the wadi, where the slopes become steep and the basin narrow, was given over to pastoralism.

Each section was watered through a complex system of check dams and canals (closed by rocks and pieces of cloth), which fed water from three springs (‘Uyūn Saḥam, Misbaghaniyya, and Mas‘al) to three kinds of plots, allowing for water sharing among residents of the village. The first plot organization, devoted to subsistence farming of largely vegetables, was comprised of stepped terraces, canals, and gravel basins. The other two systems are primarily for orchards, and represent the heaviest use of water. In the first, pipes directly feed individual trees framed by low brush or stone walls. In the other, high rock walls channel water into a semi-circular channel that ringed a larger plot of mixed trees.

Planting

Survey of both ends of the wadi basin and interviews with locals also revealed the types of crops currently and seasonally grown. In the garden plots, which are generally for subsistence agriculture, corn, beans, peppers, grapes, lemons and pomegranates were prevalent. In the larger plots lemons, carobs, pomegranates, holly, figs and apple trees were grown, but on a larger scale. Whole fields were devoted to one or two of these types of trees, rather than a plot with mixed horticulture. According to our infor-

nants the villagers also grow a variety of grains: lentils, wheat and barley. These are farmed further away from the village towards the Yarmouk river valley, as they were at the turn of the twentieth century. The orchards were planted for sale in nearby markets: olives and olive oil for sale in Amman, and lemons and pomegranates in Saḥam and Irbid (and less commonly ‘Amman, as well). The oldest olive trees were located on the slopes and hilltops, indicating that location of some fields may have shifted to the wadi basin in the last century.

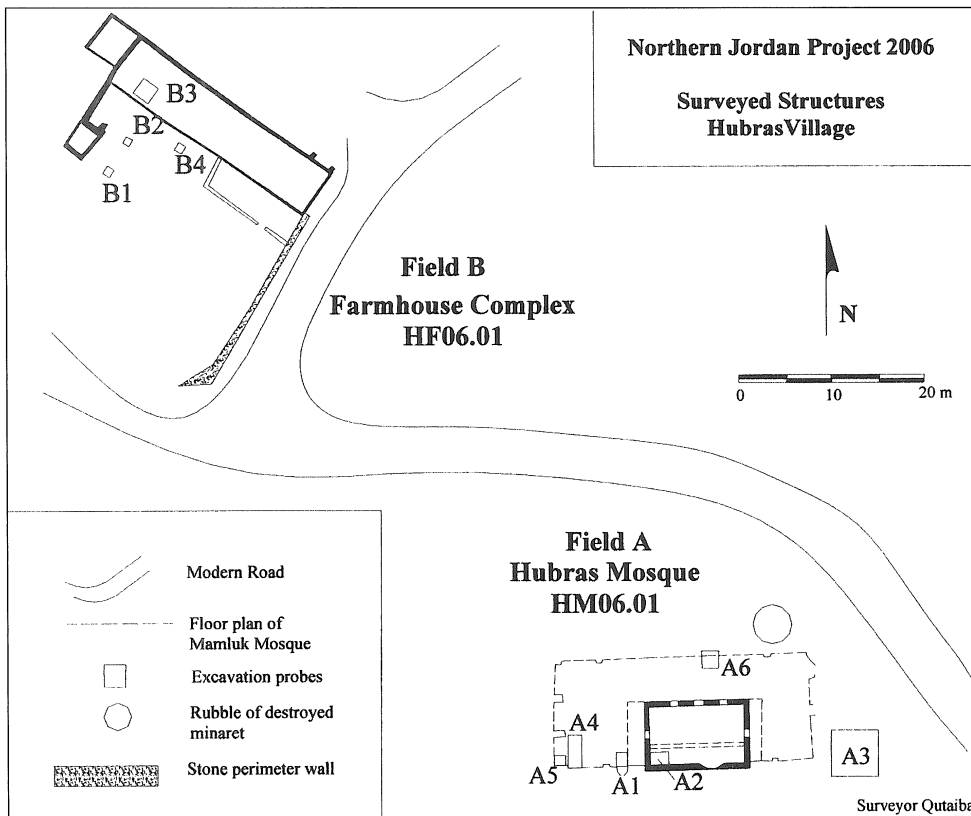
Chronology

Sherding in a wadi system presents many challenges, not the least of which is that pottery is mostly from erosional contexts and is heavily worn. Nonetheless, initial reading of the sherds suggests that the heaviest use of the basin and slopes took place during the Byzantine-early Islamic, Mamluk, late Ottoman, and Mandate periods, with a noticeable shift to the wadi basin in the last century. The system of land use and water harvesting recorded during this survey likely has some antiquity and can be used to illustrate how water sharing and market farming may have operated during historical periods.

ḤUBRĀS (Fig. 9) (JADIS site #2223.007)

The modern village of Ḥubrās lies 16 kilometers north of Irbid and approximately 6 south of Saḥam at an elevation of 470 meters above sea level. The “old village” consists of several stone farmhouses of the Mandate period across a modern road (built in the early 1970s) from two embedded mosques (one Mandate-period, built in the courtyard of a much larger medieval mosque), which formed the core of the original village. This part of Ḥubrās sits at the approach to Wādi Ḥubrās and is largely abandoned.

Ḥubrās is an old village widely attested in historical sources since the fourteenth century AD. It appears in Mamluk-period chronicles and biographical dictionaries as a large village with its own market and a place from which many of the intellectual elite of Damascus originated (Walker 2004). As other villages in Jordan, it suffered some level of depopulation in the late Mamluk/early Ottoman period, only to be rejuvenated by Ottoman investment in the second half of the sixteenth century (see Bakhit, Bakhit and



9. Ḥubrāṣ – fields of excavation.

Hmoud; Hütteroth and Abdulfattah, as above; also Bakhit 1989a), when it had two mosques and controlled three shrines (*zawiyya*(s)). Its fortunes changed over the course of the nineteenth century. Burckhardt, who visited the village in 1812, described Ḥubrāṣ as one of the largest in al-Kafarāt (Burckhardt 1822: 269). By the time Schumacher arrived in 1889, however he found a relatively impoverished village with twenty to thirty “huts” incorporating caves, the residents of sharecroppers (Steuernagel 1926: 155);⁷ less than ten years later, on a second visit, he reported a village of forty huts and some 150 residents (Schumacher 1897: 182-183), a situation that had little changed during Steuernagel’s survey of 1914 (Steuernagel 1926: 155).⁸ It reappears in written sources in 1300AH/1883AD, when families in the village began to register their land for tax purposes with the Ottoman government.⁹ The village experienced its real growth during the Mandate period, when stone farmhouses were built further to the south. Remains

of that village still stand today, surrounding two historical mosques, one built in the prayer hall of the other (Fig. 10 — see Walker 2005: 11, fig. 5 for floor plan).



10. Embedded mosques of Ḥubrāṣ, facing southeast “The western wall of the Mandate-period mosque is visible to the left of the original mihrāb of the Early Islamic sanctuary. The Mamluk pavement is visible in the foreground.”

7. The village land, largely planted in olives, as today, was first registered with Ottoman authorities in December, 1876, one of the first villages to be registered in Jordan during the Tanthimat. The owners were from the village of al-Rafid (Mundy and Smith 2007: 79).

8. The largely Christian population that Burckhardt met

here had apparently moved away by the 1880s and new families moved in, rebuilding the village.

9. Daftar Asasi, Raḡam al-Musalsal 5/2/1, pt. 3, Qadā’ ‘Ajlūn, folia 327-331, entries #19-85 (archives of the Bureau of Land Surveys, ‘Amman).

Previous investigations have included archaeological and architectural surveys, but no excavation. As noted above, the village was visited by Schumacher (1890) and systematically investigated by Steuernagel (1924) and Mittmann (1960), who noted its stone houses and the remains of a mosque and *maqām*. In the mid-1980s Prof. Yusuf Ghawanmeh of Yarmouk University and his students did an architectural survey of the mosques, cleaning them for drawing. They produced a combined plan of the two prayer halls and made suggestions for phasing, but there was no excavation or formal archaeological study (Ghawanmeh 1986a: 49-64). In 1996 a local historian and engineer with the Municipality published a modern history of the village, with reference to Ghawanmeh's survey of 1985 ('Obeidat 1996). During its 2003 season, the NJP team visited the village as part of an intensive, but brief, two-day survey of standing architecture, and drew a floor plan (in Walker 2005: 77, fig. 5). It was then decided to plan an excavation for a future season to better understand the history of these mosques and the villages that they served, as well as to contribute to the small body of scholarly literature on local religious architecture, both Mamluk and Ottoman (Shaqirat and al-'Awdat, as above; Ghawanmeh 1986b; MacKenzie 2002 — archaeological survey).

1. Field A – The mosque (Holzweg – excavation, Kenney – architecture, and Walker – history)

In order to investigate the architectural history of these two mosques, five small probes of varying dimensions and one large (5x5 meter) square (A.3) were placed strategically inside the courtyards (A.1) and bisecting the north door (A.6), the *qibla* wall (A.3 and 5) and western (A.2 and 4) wall of both mosques. The immediate challenges to determining an exact floor plan and phasing of both complexes were the extensive damage and overburden resulting from two different bulldozing operations (in 1970 and more recently in 2005), to build and then widen the village road from the Saḥam turnoff, as well as the beautiful paved courtyard of the mosque interiors, which we were not allowed to remove in areas where the paving stones were still in place. In addition, repeated cleaning of

the mosque floor when in use, as well as during study by Yarmouk University (1980s), Oklahoma State University (2003 — see Walker 2005), and the Municipality (in preparation for excavation in 2006), made it impossible to base the history of construction and use of the structure on excavated material from fill above the paved floor. Nonetheless, selective and limited excavation through probes, combined with an intensive investigation of construction methods and materials, archival research in *Awqāf* files related to the later mosque, and interviews with local residents, have together allowed us to begin to reconstruct the physical and functional history of the two mosques.

A. Excavation Report

The goals for this season's excavation were to establish stratigraphy and chronology for the structure, to attempt to locate the south east corner of the building or the possible third *miḥrāb*, and to assess strategies of preservation. The strategy of excavation was to lay test trenches within and without the mosque that might yield data on structural foundation and construction. Four of the six squares excavated (A.1, A.2, A.4, and A.5) were placed in the interior of the mosque, where flagstones were missing or destroyed, and are small probes of limited exposure and very shallow deposits. For this reason, their stratigraphic reports appear below as summaries.

Squares A1 and A2 – mosque courtyards (summary)

These two squares were probes strategically placed in the interiors of the medieval (A.1 – immediately in front of the original *miḥrāb*) and Mandate-period (A.2 – southwest corner) mosques, where flagging stones were missing, in order to investigate the stratigraphy below the pavement and to determine whether foundation trenches for the mosques' walls existed. Deposits were shallow in both: A.1 produced no sherds or small finds, and A2 yielded a few Mandate-period sherds. The sequence of loci in A.1 was brief: topsoil (Loc.1), plaster with embedded charcoal immediately below the pavement (2/3), and bedrock. A sample of this plaster was sent to a lab for C14 dating of the embedded charcoal, producing a Mamluk date

(calibrated 1220-1300AD). The sequence in A.2 was slightly more complicated, owing to the possible reuse of (and repairs to) the medieval flagstone floor in the Mandate period and reconstruction of the Mamluk extension to the *qibla* wall. Loci in this square included: topsoil (Loc. 1); abandonment fill (3); beaten earth and plaster (with no charcoal), with a heavy concentration of pebbles and tesserae (5/6); the flagstone pavement (2/4/7), and bedrock. The pavement appears to have been laid directly on top of bedrock (Fig. 11), although there is evidence that a mosaic had in been in place there previously and destroyed in the process. In addition, the Mamluk-era pavement had been damaged in many places, indicating that a stone roof had collapsed and crushed segments of floor. Large basalt blocks had been stacked around the walls of the Mandate-period mosque, by the time of Yarmouk University's architectural survey in the 1980s, suggesting that the superstructure of the mosque at one point had a stone, vaulted, roof. The function of loci 5/6 is problematic. They either represent Mandate-period repairs to the Mamluk-era flagstone pavement or a new pavement covering it, made of pebbles (and reused tesserae), set in plaster, as was common in turn-of-the-century mosques in northern Jordan (see above). All walls of both mosques were built directly on bedrock, with no apparent foundation trenched.



11. Square A1 – final morning photo “The Mamluk pavement, damaged by collapse, is laid directly on bedrock, its surface possibly pocked to receive a mosaic bedding”.

Square A3 (Loci start with Number 1) – the “eastern building” – Fig. 12

Description

The goal for this large square (approx. 5 x 4m), was to locate the east corner of the thirteenth century mosque and to explore the possibility of a third *mihrāb* identified in written sources. It was located on what we hoped to be that corner, but as excavation continued, it became clear that the southeast corner was within the southwest balk of the square.

Phasing

1. Bulldozer (Loci 1 – 5A, 1- 2B, 1 – 6C, 1 – 5 D)

The first 50 centimeters to meter of earth in this square is bulldozer debris. Much of this debris is from road construction in the 1970's and proposed expansion in 2005. This loci was rich in the way of material, producing 201 pieces of pottery ranging in date from the Early Islamic through the Modern Period, tesserae, glass and metal fragments, plaster with charcoal (removed from 4C), and a number of glass bracelets, debris from abandoned houses removed by the bulldozer 30 years ago. The lower 5 – 10cm of loci 5A and 6C contained debris from wall collapse.

2. Wall Collapse (Loci 6 – 7A, 7 – 8C)

On the western half of the square, the next twenty – thirty cm of earth was packed around fall from wall collapse. Within the southern half of the collapse (probe A) the rocks were both layered and random, but on the northern half (probe C) the rocks appeared to have collapsed



12. Square A3 – end-of-season photo “View west of the ‘eastern building’ adjacent to the medieval mosque”.

randomly. Within the lower portion of these loci a flagstone pavement began to emerge. Among the material recovered were 41 sherds ranging from Early Islamic through Modern Period (included UD), and within probe A charcoal, glass, tesserae, and an Ottoman pipe bowl (see ceramic study below).

3. Flagstone Floor (Loci 9A, 6B, 10C and 8D)

About two-thirds of the square is covered in what appears to be a flagstone floor surface. It is not level and visibly slopes down hill from west to east, though this may have resulted from repeated bulldozing for road construction. The flagstones which range in size, are mostly of limestone and not all of them appear to have been cut originally as flagstone, but appear here to be used as such. Two in particular may have once abutted a column as they are rounded on one side each (Fig. 13). This piece could have been used in the mosque floor at one point in time. Another interesting piece of flooring is the single basalt flagstone. No material was collected from these loci, and for much of the square this is where recording ends. Even though this pavement was not inside the mosque, these flagstones could not be removed according to our agreement with the Department of Antiquities and the *Awqāf* Ministry. This pavement is a meter higher in elevation than that inside the mosque.

4. All other Loci

There are a number of other loci that did not fit so easily into the above sequence. Loci 10A and 3B constitute what appears to be a field wall (visible to the left in Fig. 12). Locus 10A, the



13. Detail of reused flagstones in A03.9A. "Note the two flagstones with rounded profiles, above the North Arrow".

western portion of the wall visible in this square, abuts locus 9A, and almost appears to be part of that structure. As the wall continues east, into locus 3B, the wall line becomes clearer and its form as a field wall more defined. Though it appears to be part of the structure visible in Loci 9A, 6B, 10C and 8D, it is not clear whether or not this wall is original to this structure or if the wall predated the structure and the structure was attached to it. Locus 7B is another field wall, oriented north-south, abutting 9A and sealed against 3B. The wall stones are 100% limestone. It was 100% dry-laid, unfaced, and rubble-filled. This wall might separate two rooms.

Locus 5B is the earth layer on the north side of wall 3B. It appears to be contiguous with locus 7D, the earth layer that is contiguous to locus 8D - flagstones. Neither square contained wall collapse, but both ended deeper than the loci described above. Locus 5B contained large chunks of plaster, possibly from a wall, and 27 sherds (13 Mandate/Modern, 6 possible Ottoman, and 8 unknown). Two pieces of tesserae were also collected from this locus. Material was also recovered from locus 7D, including tesserae and plaster, 3 Mandate/Modern body sherds, and 1 Middle Islamic/Late Islamic green glazed sherd. It should be noted that flagging stones were absent in loci 5B and 7D. A deep deposit of plaster mixed with charcoal (Loc. 10B) was discovered in the space of a displaced flagstone of pavement 6B in the southwest corner of the square. It produced material ranging in date, but predominantly late Ottoman. This seems to have been collapse debris from a fallen wall, originally plastered.

Analysis

This square is telling of the destruction that took place around the Mamluk-era mosque, and is the physical record of the recent history of the structure. The construction of the modern asphalt road in 1970 required extensive bulldozing of ruins, clearing away some historical farmhouses and other structures in the process. Much of this debris was pushed towards the mosque walls without destroying the mosque itself. However, as the phasing demonstrates, a structure and a number of walls once stood adjacent to the outer mosque. Because of the extensive bulldozing however, it is unclear what

the original configuration of this structure was, and what its original spatial relationship to the mosque may have been.

It was not possible this season to date the upper strata before 1970. The structure (the “eastern building”) was likely destroyed in two phases of bulldozing — first in the 1970s and again in 2005 when the village administration decided to expand the road. We also see in the profile of the wall collapse, which likely occurred during bulldozing, that only one wall of the “eastern building” fell across the floor of the structure — the north wall. If the south wall was in place at the time of bulldozing, it likely fell outside the boundaries of the square. It is also possible that the west wall was not in place at the time of bulldozing and may have been removed to build the field wall running parallel to the building. The eastern building appears to post-date the 13th-century use of the medieval mosque, and on the basis of the dominance of 19th-century sherds in loci below bulldozer levels, we may suggest a late Ottoman date of use.

Squares A4 and 5 (Test Trenches) – Medieval Mosque Courtyard

Description

Both of these squares started as large (about 2 x 4m) squares but were quickly reduced to only around 2 x 1m, as it became clear that the majority of the surface material was debris from clean-up earlier in the spring. The main excavation of each square was probes in the sizable gap (9-10cm) between the end of the pavement stones and the inner face wall of the *qibla* wall of the medieval mosque in the southwest corner, bisecting the southwest pier. Of the three probes dug (one in square A4, two in square A5), none revealed a foundation trench, confirming what was observed in squares A1 and 2. Like A1 and 2, the pavement (and pier) was laid directly on bedrock.

Square A6 (Loci start with 1) north doorway of above – Fig. 14

Description

This final square in the field began as a 1.8-2m x 1.75-2m square and was later expanded to the north (2 x 3m) to capture the area north of the outer mosque’s north wall (Loc. 1). The square was positioned to locate the entrance to



14. Square A6 doorway, end-of-season photo “Threshold and interior and exterior pavements are visible”.

the Mamluk mosque and determine whether a paved courtyard existed outside the sanctuary.

Strata of the Square:

1. South of Wall A6.1 (inside mosque door)

Five loci were recorded inside the doorway. Among these were two limestone (Loc. 2 – the interior pavement and 5 – the threshold) and three earth (Loci 3 – topsoil, 4 – fill, and 6 – plaster) loci. Loci 3 and 4 produced sherds ranging in date from Mamluk to modern, as well as fragments of glass, metal, and mosaic tesserae.

2. North of Wall A6.1 (outside mosque door)

Much like A3, Square A6, on the outside of the 13th century mosque on its north side, had three major strata: 1. Bulldozer fill (loc. 3 and 4), 2. fill with wall collapse (loci 12-14), and 3. flagstone pavement (loc. 15). The bulldozer fill made up the first 45cm of earth and contained sherds of all Islamic periods, with Mandate and Modern dominant. The plaster in these loci first appeared in locus 9 and continued to the flagstone floor surface (Loc. 15) and threshold 15, increasing in frequency with increasing depth. Pottery was mixed (Mamluk – Late Ottoman), with largely 13th century sherds immediately above the threshold (see ceramic report below). This suggests the door and exterior courtyard were used and open at the turn of the 20th century.

3. Wall and other Installations

Earth locus 16, the locus within the doorway, was of the same matrix and color as the bulldozer fill north of the wall. This supports the idea that the doorway of the 13th century mosque was open when bulldozer clearance took place.

The wall (L 1) is in the boulder and chink style, with two-row, rubble-filled construction, and is composed of limestone and basalt cobbles and boulders, with a plaster mortar. The majority of the basalt blocks are on the outer facing. The remains of the wall stand between 61cm and 1.25m high.

Adjacent to the wall was the doorjamb. The doorjamb (54cm long and 15cm high), like the adjacent pavement and wall stones, is of limestone. The grooves along the base of this high jamb indicate that the door closed against it from the inside. Outside the mosque, more pavement stones were identified. These, along with pavement stones on the inside of the door were identified as locus 15 and are an extension of the interior pavement stones of Loc. A6.5.

Analysis

The phasing of this square repeats that of the entire field. Outside the north doorway is the same bulldozer destruction encountered in square A3, and on the south side of the wall, is the same floor sequence encountered in squares A1, 2, 4 and 5.

Conclusion – Field A

The shallow stratigraphy of the mosque interior (the result of construction of walls directly on bedrock and repeated cleaning of the courtyard), combined with the destruction of potential stratigraphic relationships by bulldozer action (Phase I) to the north, east, and west (an olive grove lies on the south side), made constructing a meaningful history of construction and use prior to 1970 AD. difficult, on the basis of excavation alone. Nonetheless, key loci were identified,¹⁰ suggesting an Umayyad construction for the original mosque (Phase 5), thirteenth-century use and expansion to the east

(Phase 4), the construction of a building to the east sometime in the late 19th or early 20th century (Phase 3), and the construction and use of a smaller mosque inside contemporary with or subsequent to this (Phase 2). Refining this history required extra-archaeological analysis of the structure (see below).

B. Architectural Study

The original structure was a small, simple square building (12x15m) of ashlar construction, with a roof support by columns, a simple but beautiful black and white mosaic pavement, and a single *mihrāb* (1.66 meters high, 1.18 meters wide, and 42cm deep — visible in Fig. 10) partially carved out of the underlying bedrock. The form of the superstructure is at this point unknown. The southeast corner of the building is in the best condition (Fig. 15). This corner is carved out of bedrock, against which courses of masonry have been added to form a continuous face. The masonry in the southwest walls of the building (Type 1) is distinctly different from that farther toward the east (Type 2).

Basalt architectural elements and reliefs and evidence of a mosaic floor used in this structure initially led us to believe the mosque made use of an earlier Byzantine church on the site. Closer review of the pottery from Field A,¹¹ the composition of the mosaic floor,¹² and the form of the basalt columns and capitals¹³ suggest that this was an original Umayyad construction. There was, moreover, no evidence that the structure was ever a church, in the building orientation, presence of an apse, or appearance of crosses, Greek inscriptions, or any Christian images. On the other hand, the floor plan is comparable to other early Islamic mosques in Jordan (Almagro 1992). All evidence indicates it was an Umayyad-period mosque from the start, built directly

10. Mamluk pavement (A1.2/4/7=A6.5) and plaster from Mamluk mosque wall and in front of older *mihrāb* (A1.2); post-Mamluk pavement in “eastern building” (A3.9A/6B/10C/7-8D).

11. Umayyad (red-on-white painted bowls and jars) and Abbasid (red-on-red painted) sherds were identified in small quantities, while Byzantine pottery was rare.

12. The large size of some of the tesserae (as large as 2cm on each side) has parallels in Umayyad-period mosaics from domestic settings (Tisserand 2005: 49). 8th century. repairs to the mosaic floor of the West Acropolis Building at Mādabā and Umayyad-period mosaics at one of the Abila churches were also quite

large (personal communication, Drs. Debra Foran and David Chapman). Characteristics of mosaics of this period include the use of basalt (in addition to limestone), large tesserae, and geometric designs.

13. We are grateful to Maria Ronza (NJP) and Dr. David Chapman (Abila Church Project) for suggesting Umayyad dates for our basalt columns and Ionic-inspired capitals. Only the relief panels (with wreaths and garlands), reused in the now collapsed eastern mosque wall (with the sculptured face hidden), were Byzantine, likely removed from a sarcophagus from a nearby tomb.



15. Remnants of Umayyad mosque at Ḥubrāṣ, view to southwest “Note the bedrock in the corner. The piers and flagstone are later, Mamluk additions”.

on bedrock.

By the thirteenth century the village had outgrown this small sanctuary and extended it to the east by some 15 meters, added at least one more *miḥrāb*, a stone paved floor, and a system of columns and piers to support a cross-vault. The Type 2-construction style (smaller blocks of more roughly cut masonry of both limestone and basalt, with rubble and earth fill) east of the original door, blocked in a later phase of use (Fig. 16), illustrate this expansion. The piers are built against and cut into the ashlar walls of the original mosque, directly on the flagstone (the pavement was built around them). These walls were covered, previous to the addition of the piers, in a lime plaster mixed with wood ash.¹⁴ We promptly sent two plaster samples for C14 analysis, one mentioned earlier. The second sample was removed from extant plaster on the



16. Original doorway to Early Islamic mosque, north wall.

14. This kind of wall plaster is also known from the

wall in the southeast corner of the sanctuary (calibrated 1240-1300AD). They confirmed a 13-century date.

An architectural inscription further supports this Mamluk date: according to an inscription on the minaret (now gone but transcribed by Schumacher in the 1880s and a Yarmouk University team in the 1980s), the Mamluk sultan Qalawun had a minaret added to this mosque in 686/1287 (Schumacher 1897: 183; Ghawanmeh 1986a: 59; ‘Obeidat 1996: 22; Meinecke 1992: 65, entry 43). It is not clear whether the minaret was contemporary with or slightly later than the enlarged mosque, however. In plan and construction, the Mamluk mosque belongs to a *koīne* of medieval mosques in Irbid and ‘Ajlūn regions (Walker 2005: 76). We have found no evidence of the second mosque mentioned in the sixteenth-century tax registers.

There is some evidence that the medieval mosque remained in use through the nineteenth century, a practice also identified in ‘Ajlūn and Salt (Rogan 1999: 36-37). Schumacher (1897: 183; Steuernagel 1926: 156) briefly describes a mosque, information about which was given by the village’s *khaṭīb* upon his visit to the site; whether the preacher was serving this particular mosque is not clear. However, in the early twentieth century Steuernagel describes it as a “beautiful old mosque” now “unfortunately decayed” but with its free-standing minaret retaining a height of twelve meters and capped with the characteristic Ottoman pointed turret (Steuernagel 1926: 155-156). According to village memory, the mosque belonged in the late nineteenth century to a larger religious complex, which included the burial place (*maqām*) of one Shaykh Abdulrahman al-Hubراس. Our initial interpretation of the “eastern building” adjacent to the mosque was that it formed part of a late Ottoman complex that contained a public fountain/*sabīl*, given the large numbers of jar stoppers excavated there and information gleaned from interviews with local residents, but this is far from certain. The flagging stones appear to have been removed from another setting.

In 1931 the medieval ruins were no longer usable, so the village financed the building of a new mosque inside the ruins of the medieval

Umayyad period (Almagro 1995).

sanctuary (see Fig. 10 for floor plan). It was a small, nearly square, closed mosque (6x10m), with a single *mihrāb* (1.5 meters deep, 1.85 meters high, and 1.5 meters wide — Fig. 17) and covered by a dirt, cane, and thatch roof. Its walls were built on top of the medieval flagstone pavement. The structure of the interior supporting arches (running parallel to the *qibla* wall) and the exterior staircase (Fig. 18), built into the repaired *qibla* wall, are part of an architectural tradition that is common to the Mandate period in northern Jordan. The remaining space of the medieval sanctuary was put to use as a *kut-tāb* until 1965, when a new village school was built. The smaller sanctuary was used for Friday prayer until 1969, when the minaret collapsed and made the building unsafe. At that point the village asked, through official channels, that a committee be formed to raise money for its res-



17. Interior of Mandate-period mosque at Ḥubrāṣ in 2003, view to southwest.



18. Staircase of Mandate-period mosque at Ḥubrāṣ, built into the outer face of the *qibla* wall, rebuilt in 1931 "Prayers were done from the roof."

toration; the Endowments Ministry suggested that, given the poor condition of the structure (the roof had caved in a while ago, and the minaret had collapsed) that a new mosque be built directly in front of the old one, with official support.¹⁵ The village decided to build a new one in the "new" neighborhood to the northwest. Only at this point was the mosque finally abandoned, the last call to prayer being heard in 1970. Later that year a paved road was built in Old Ḥubrāṣ, and the minaret and remains of the exterior courtyards, as well as many of the farmhouses surrounding it, were removed in the process. Thus, these three sanctuaries, occupying the same space and making use of many elements of the previous one, together arguably represent the oldest, continuously used Muslim sanctuary in Jordan, documenting a history of congregational worship for over 1300 years. The consolidation and partial restoration of the Ḥubrāṣ mosque will commence as soon as sufficient funds have been raised.

II. Field B – The farmhouse (Carroll – excavation/ethnography)

As one of the oldest and most complete original farmhouses in the old village, and given its proximity to the medieval and Mandate-period mosques, the team chose the "Obeidat farmhouse" as the focus of an intensive architectural, archaeological, and ethnographic study in order to accomplish one project goal of developing a typology of rural vernacular architecture. Before the modern road was laid in the early 1970s, this farmhouse would have been intimately tied to the historical mosques spatially and functionally. Parts of the farmhouse stood from the 1940s until today (and were built earlier than that) and served at different times as family housing, stables, and the village school. Its history is a microcosm of the history of the village in the twentieth century.

This structure contained an olive grove, out-buildings, and a four-room main structure. The first two rooms constructed had cane roofs supported by double transverse arches. The western room was, in its last phase of occupation, used as an animal stable. The other room was used as a

15. Letter from Ḥubrāṣ village to Wizārat al-Awqāf, now in the Ministry's Kafr Sūm office, registry #8-63-594,

dated November 11, 1969.

kitchen and food storage area. An additional two last rooms, constructed in 1939AD, were used for sleeping, housing and entertaining guests, and for a school. These two rooms contained no arches. A concrete patio was located directly in front of the two door openings. The farmhouse complex, which contained a chicken coop, cave, and olive grove, was approximately 45 x 40m and surrounded by a wall and gate.

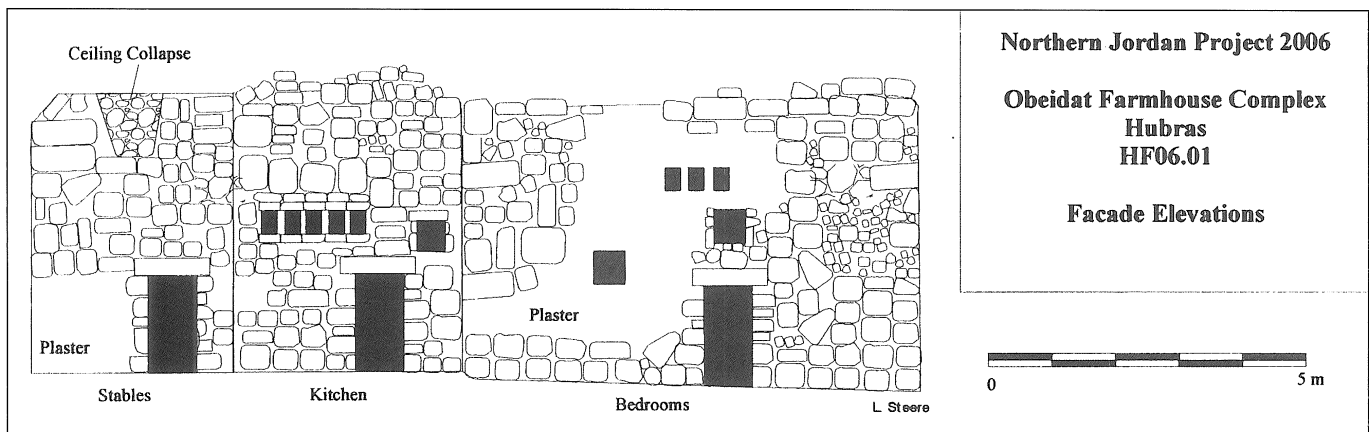
Four excavation units were opened during the 2006 season: B1, B2, B3, and B4 (see Fig. 9). The current landowner indicated that in living history, a stone wall divided the courtyard area from the chicken coop to the main gateway. The first two squares, B1 and B2, each measured 1x1m. These squares were test probes in front of the chicken coop, aimed at trying to locate the remains of this wall, and to examine the refuse disposal patterns on the inside of the courtyard. Square B3 was located inside the farmhouse building, in what appears to have been used in its last occupational phase, as a stable area. This square, measuring 2 x 2m, was designed to help determine the building phases of this room. The final square, B4, was another probe, located just outside the kitchen door. This probe was opened to determine refuse disposal patterns, and examine kitchen cleaning patterns. B1, B2, and B4 were excavated to a depth of some 60 centimeters (at which depth the material culture thinned out); their mixed deposits were typical of courtyard, refuse deposits.

The excavation square located inside the farmhouse (B3) included the remains of a collapsed roof and ceiling, which covered an intact animal trough, animal feeding installation, a plaster floor/possible living surface, and a line

of stones which may be the remains of a wall associated with the earliest construction of the building. The line of stone is directly in line with a break in the wall architecture, which appears to indicate that the original wall of the building, which originally could have been smaller, was expanded in order to accommodate the two transverse arches. This presence of a plaster floor (B3.14) provides a sealed context for examining the earliest construction and use of this area of the complex; there were, unfortunately, no legible sherds from this locus. In addition, a corner of a wall was uncovered underneath the trough installation, and either represents the remains of an earlier unassociated building, (perhaps of a medieval village building?) or represents a part of the first phase of building for this structure, as evidenced by the break in the wall architecture. Square B3 contains a similar assemblage to the outside probes, and includes Middle and Late Islamic ceramics, faunal remains, lithics and personal items.

Architecture of the 'Obeidat farmhouse – (Kenney) – Fig. 19

The core of the rectangular residential building is the central room, which clearly predates the spaces that flank it. A classic example of a single-spaced, transverse-arched village housing unit (Fig. 20), this room was roofed over with cane and mud plaster, remnants of which remain *in situ*. The walls are constructed of irregular courses of unevenly formed blocks and chink fill. Access to the room is through a single door, rectangular in profile from the exterior (with a monolithic lintel) and arched in profile from the interior (with a low, segmental arch),



19. Elevation of 'Obeidat farmhouse, *Ḥubrās*.



20. Interior of 'Obeidat farmhouse, illustrating transverse arch forms of construction.

above which is one small rectangular window. Inside, much of the plaster that coated the walls is preserved. There is a great deal of debris accumulated on the floor, and this obscures any features at the west end of the entrance bay, but at the west end of the central bay the remains of a clay storage unit can be seen dividing the space between the wall piers. In the north bay, another unit is built in between the wall pier and the north wall, and the summit of an arched opening can be seen. The north wall is pierced by a small rectangular window high in the wall, and a row of small holes suggest that a series of pegs were inserted there. In the east end of the north bay, there appears to have been another built-in bench-like feature and in the central bay at this end is a small rectangular niche. This room originally functioned as the kitchen, the spaces between the piers used for grain storage, the arched compartments to store dishes and cooking utensils, and the pegs on the back wall for hanging animal-skin bags filled with wheat. The small niche on the east wall used to be open into the room to its east, and things could

be passed through. To the west of this central space is a second unit, built of the same transverse arch type in plan. When the current owner resided here, the west room (HF01.03) was used to stable animals.

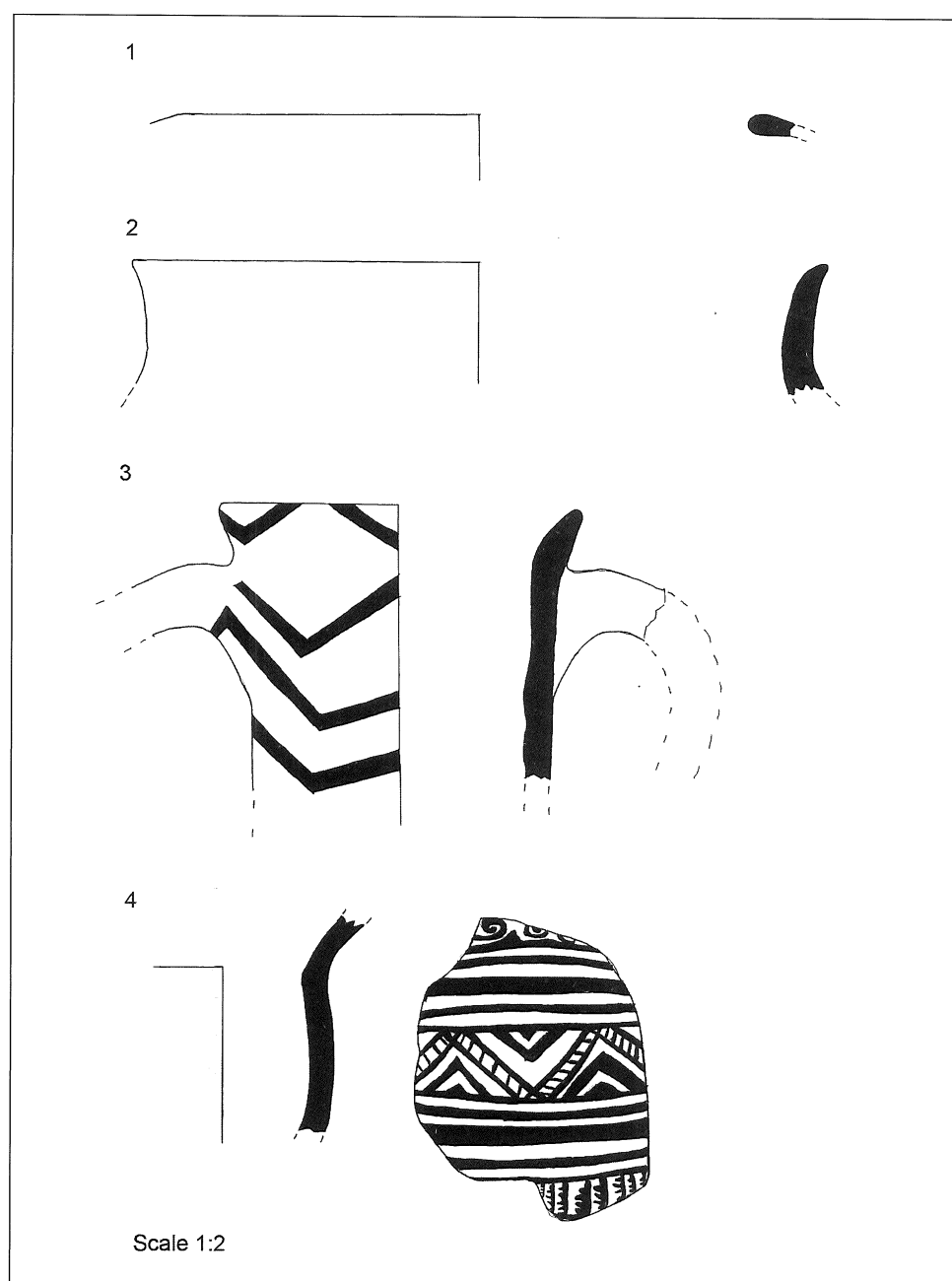
To the east of the central unit is a two-roomed addition (HF01.1A and B), dated by an inscription on its south façade to 1358AH/1939 AD. In this section, modern building materials and techniques are introduced: while the walls are still constructed of stone masonry coated inside with plaster (inside the blue paint over this plaster can still be seen), the masonry of the façade is far more regular than that of the earlier building to its west, and interstices between the blocks are pointed with a thick cement plaster. The two rooms are roofed over with I-beams and reinforced concrete slabs, parts of which have fallen in both rooms. In front of this unit, facing the farmyard, is a raised platform, enclosed by a low wall. The west room of the new wing was used for living and sleeping, while the east room was a reception room. The “patio” was also used for reception, as well as for outdoor sleeping. The patch of white-wash on the exterior of the north wall, outside the east room, marks the place where a commercial stall was once set up.

The 'Obeidat house illustrates the evolution of a village residence occupied over time (from the late Ottoman period to the mid-twentieth century), during which its occupants evidently flourished financially and were able to expand and modernize their home through a series of additions. What began as a multi-purpose, single-room residential space, evolved into a multiple-room complex, with many of the spaces becoming more function-specific (as described in Fuchs 1998a: 160).

Specialists' Reports

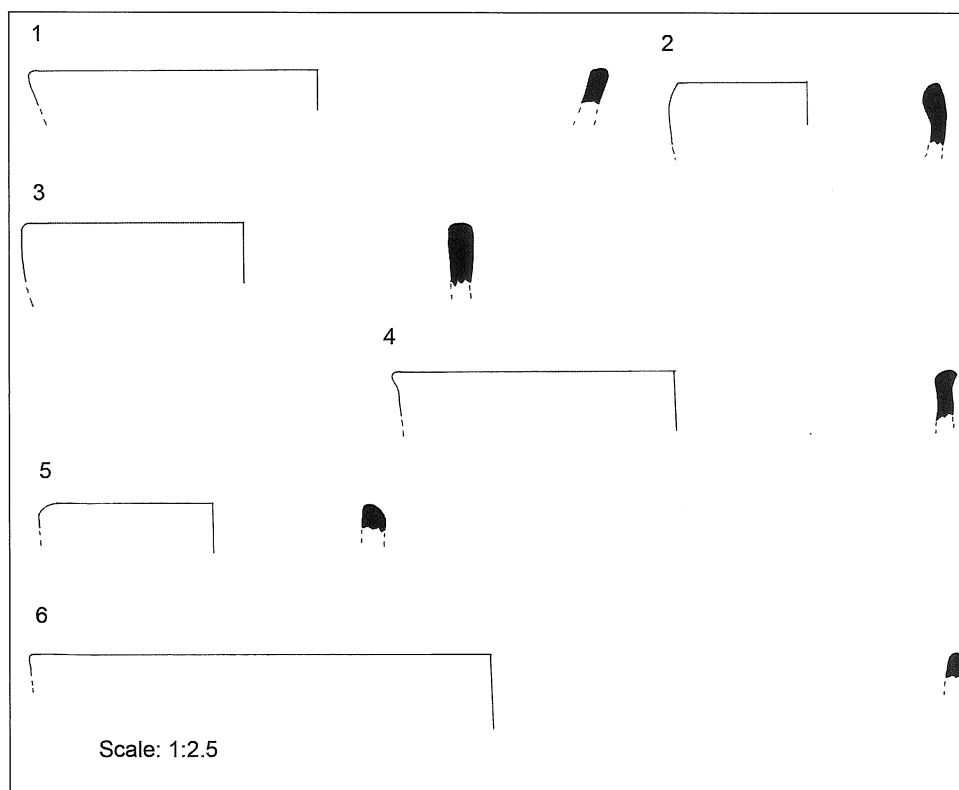
Ceramics (Walker) – summary (Figs. 21-29)

Building on the initial publication of Mamluk and Ottoman wares from the Malkā survey in 2003 (in Walker 2005), the following is a preliminary report on the ceramics collected from the Saḥam survey and Ḥubrāṣ excavations. The complete analysis of Late Islamic ceramics will appear in a forthcoming monograph on Ottoman wares (Walker, n.d.[b]). Thousands of sherds were collected this season and 670 sherds registered, 533 from the Ḥubrāṣ fields of exca-



21. Pottery from Saḥam.

No.	Registration	Ware	Form	Fabric	Published parallels
1	SW06.01.01.P66	Gaza ware	holemouth jar; wheel-made	Core - 10YR6/6 (light red); surfaces – 10YR6/2 (pale red); fine, hard fabric with small quartz and black incls.	
2	SW06.01.01.P53	Plain ware	jar; wheel-made	10YR8/3 (very pale brown); fine, lightweight fabric with small black incls.	
3	SV06.03.03.P19	HMGP	water jar; hand-made	2.5YR5/4 (reddish brown); extremely friable, coarse fabric, dense with med.-large quartz incls. and grog; surface pocked with quartz voids; ext. and rim int. smoothed and covered in a white slip with repeated red zigzag design (paint) on neck	Form – Mamluk (Avisar and Stern 2005: 114, Fig. 47.4-5); design – Ottoman (Brown 1989: 241, Fig. 14.47)
4	SV06.03.01.P15	HMGP	jar; hand-made	2.5YR5/6 (red); coarse, sandy fabric full of medium-sized quartz; ext. brown paint over white slip; int. neck covered in thick white slip (consistency of paste) and body in red slip (partially burnished)	NOTE: possible 19 th c.: house built in 1880s Form Mamluk (Avisar and Stern 2005: 133-4; Fig. 46.2); 14 th c. (Walker and LaBianca 2003: 451, Fig. 11) – but fabric is Ottoman

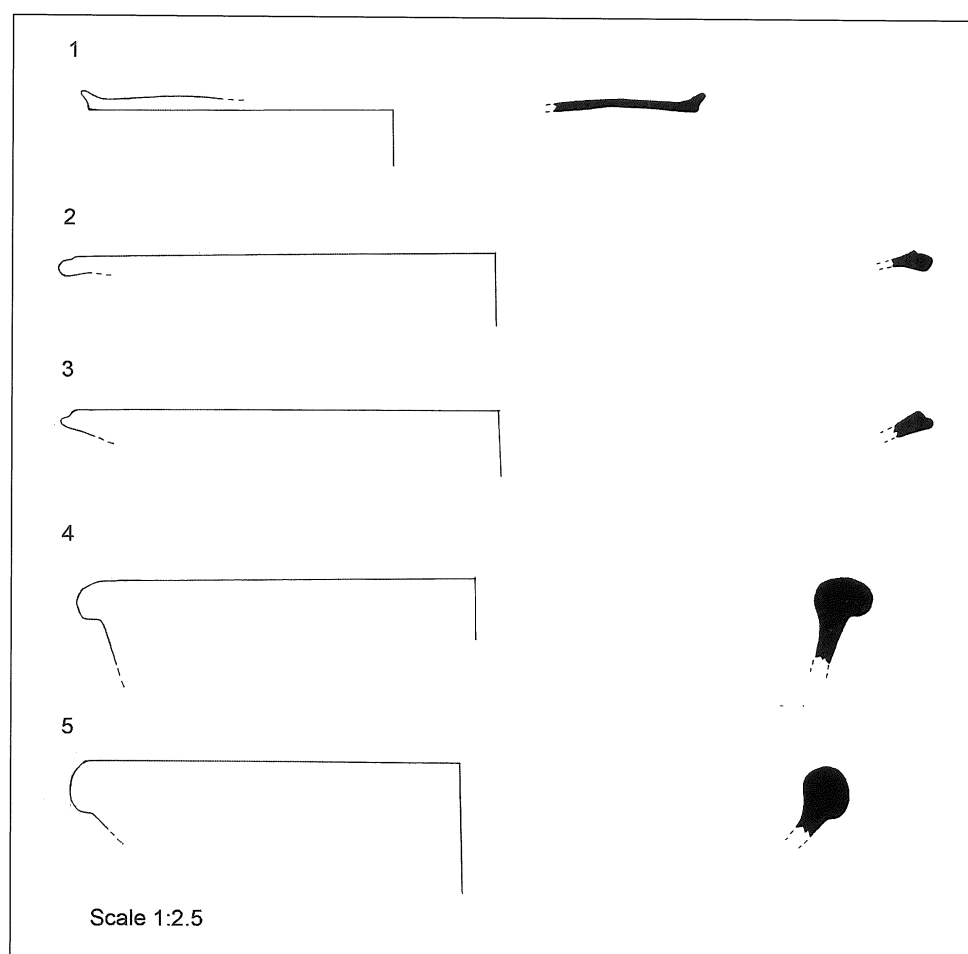


22. Pottery from Wādī Saḥam.

No.	Registration	Ware	Form	Fabric	Published parallels
1	SW06.01.01.P56	Monochrome-glazed	bowl; wheel-made	2.5YR8/3 (pink); fine, hard fabric full of small limestone and black incls.; int. and ext. rim covered in white slip and pale yellow-green glaze	late Mamluk, early Ottoman
2	SW06.01.6.5.4.P73	Monochrome-glazed	bowl; wheel-made	5YR6/8 (reddish yellow); fine fabric with small black incls.; int. and ext. covered in white slip and green glaze	Mamluk – 14/15 th cs. (Avissar and Stern 2005: 14-15, Fig. 5.3-4); Mamluk (Walker 2005: 26, Fig. 16.3)
3	SW06.01.6.5.4.P74	Monochrome-glazed	bowl; wheel-made	2.5YR6/8 (light red); fine fabric with few incls.; white slip over int. and rim ext.; int. covered in green glaze	Mamluk
4	SW06.03.4.4.P85	Slip-painted	bowl; wheel-made	2.5YR6/6 (light red); fine, hard fabric with few visible incls.; white slip-painted design covered in a mustard yellow glaze (spotted with lead concentrations)	probably Mamluk (for forms – Avissar and Stern 2005: 13, Fig. 4 and Walker 2005: 86, Fig. 11.3, 5)
5	SW06.01.6.5.4.P75	Monochrome-glazed	bowl; wheel-made	5YR6/8 (reddish yellow); fine, hard fabric with few visible incls.; int. covered in white slip and dark green glaze (thickly applied, glossy)	Mamluk (Avissar and Stern 2005: 12-13, Fig. 4.2)
6	SW06.01.01.P57	Monochrome-glazed	bowl; wheel-made	2.5YR6/6 (light red); moderately coarse fabric with medium-sized limestone incls.; int. and ext. covered in white slip and thick, glossy, dark green glaze	Mamluk (Avissar and Stern 2005: 12-13, Fig. 4.1)

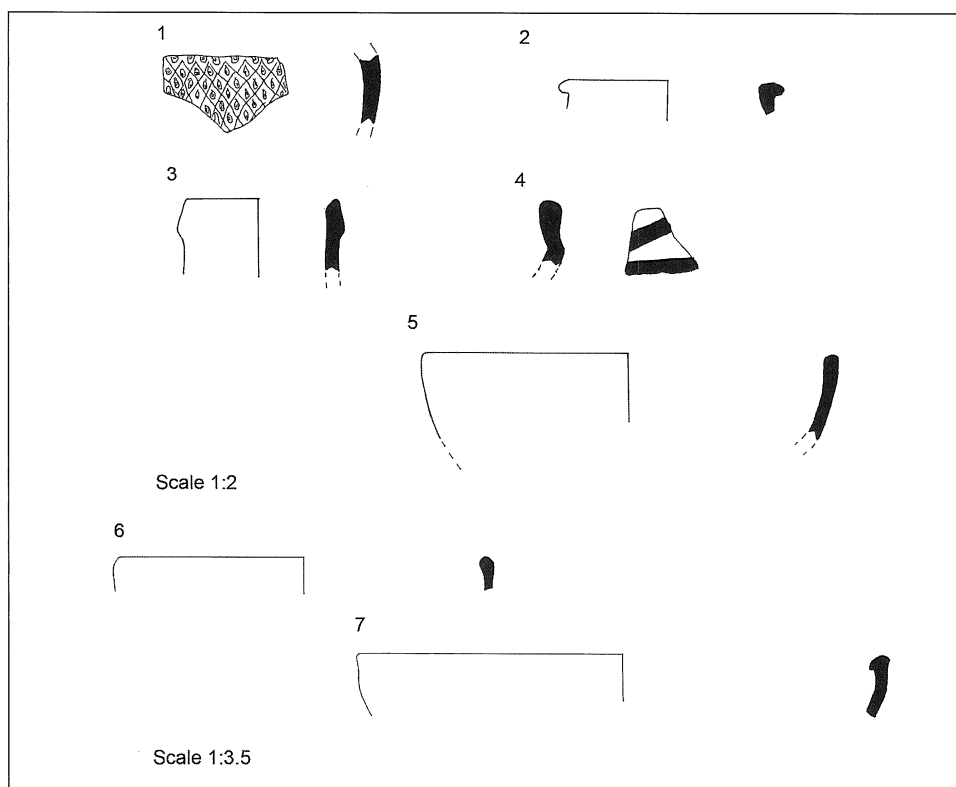
vation (234 from Field A and 299 from Field B) and the remainder from the village and wadi surveys in Saḥam. Of these, 1% were Roman, 3% were Byzantine in date (collected almost entirely from Saḥam, none from the mosque site at Ḥubrāṣ), 5% were Early Islamic (Umayyad and Abbasid – divided evenly between Fields A and B), 13% Mamluk, 30% Ottoman, and ap-

proximately 27% that were initially identified as “Mandate” in date, with the caveat that some may represent late Ottoman or early Hashemite wares (discussion below). 104 sherds were glazed: a relatively high percentage of the total assemblages collected that reflect the selective collection of our students (especially on survey), or a respectable level of economic integra-



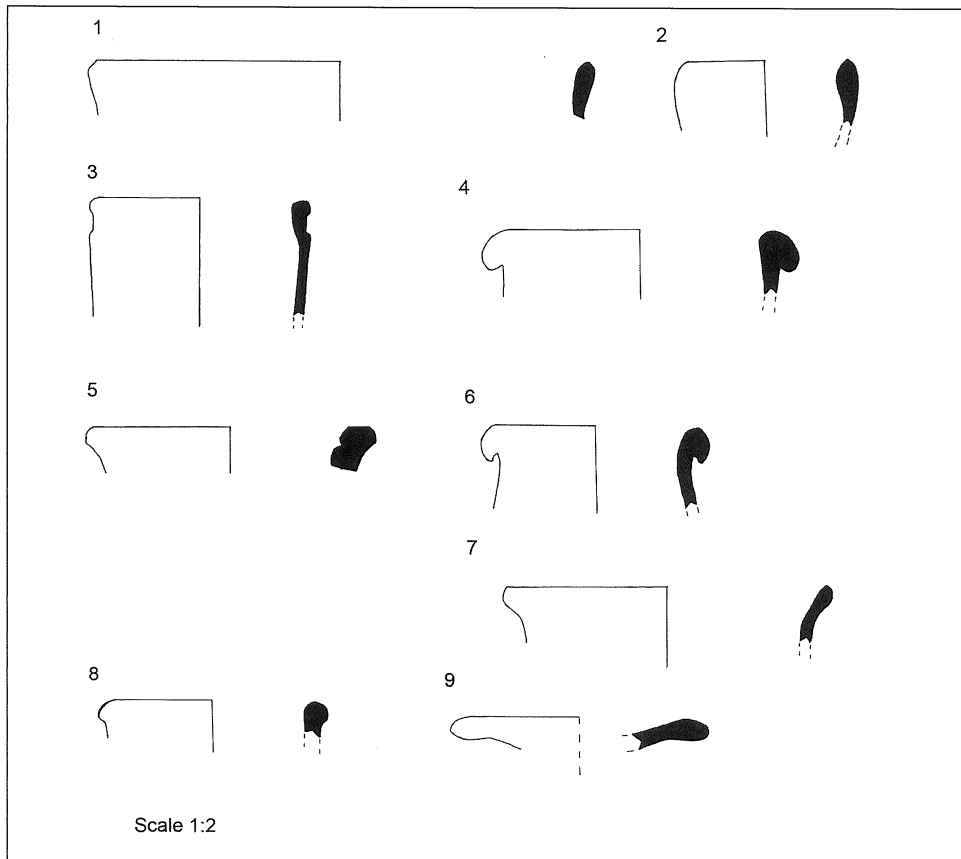
23. Pottery from Wādī Saḥam.

No.	Registration	Ware	Form	Fabric	Published parallels
1	SW06.M.P124	Coarse ware	cookpot lid; wheel-made	(core/int.) 2.5YR4/4 (reddish brown); (ext.) 2.5YR4/2 (weak red); moderately coarse, hard fabric full of small quartz and mica incls. and quartz pockets; evidence of burning of surface	Umayyad (McNicol and Hennessy 1980: Pl. 23.2,3); (Avisar 1996: 146, Fig. XIII.10.2); 11 th /12 th c. (Johns et al 1989: 88, Fig. 24.24)
2	SW06.01.01.P61	Monochrome-glazed	casserole; wheel-made	2.5YR6/6 (light red); sherd burned throughout; evidence of a dark, yellow glaze on int.	Mamluk (Avisar and Stern 1005: 98-99, Fig. 41.8); (Walker 2005: 98-99, Fig. 19.5-6)
3	SW06.4.4.P83	Monochrome-glazed	casserole; wheel-made	10YR6/6 (light red); fine fabric with small quartz incls.; int. covered in a mustard yellow glaze; evidence of burning on ext.; rim ridge for a lid	NOTE: compare to #3 Mamluk - as above
4	SW06.03.4.4.P84	Gaza Ware	bowl/basin; wheel-made	2.5YR5/6 (red); fine, hard fabric with small limestone and black incls.; incompletely fired (grey core); vestigial yellow glaze	Ottoman (Lazar 1999: Fig. 8.6); (Walker 2005: 94, Fig. 17.2 – reverse drawing)
5	SW06.03.4.4.P86	Gaza Ware	bowl/basin; wheel-made	(core) 2.5YR6/1 (reddish grey), (surfaces) 2.5YR5/8 (red); fine, hard fabric with small limestone incls.	Ottoman (Lazar 1999: Fig. 8.5); (Walker 2005: 96, Fig. 18.5, 7, 8)



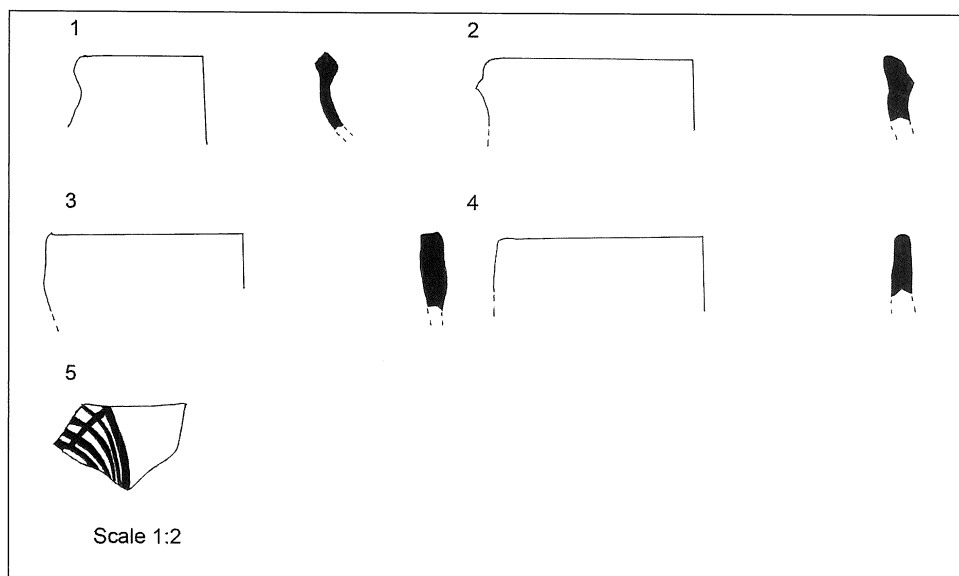
24. Pottery from Ḥubrās mosque.

No.	Registration	Ware	Form	Fabric	Published parallels
1	HM06.A3.9C.33.P375.5	Mamluk whiteware	flask; mold-made	10YR8/1 (white); fine, rather soft fabric with few visible incls.; repeated molded design of dotted lozenges on ext.	13 th /14 th c. (Avisar and Stern 2005: 169, Pl. 3; 117-8, Fig. 49.3)
2	HM06.A3.9B.38.P437	Plain ware	jar; wheel-made	5YR8/3 (pink); fine, lightweight fabric with faint traces of quartz and mica incls.	NOTE: This is a key locus. likely Mamluk (see Tushingham 1985: 394, Fig. 42.5)
3	HM06.A3.B3.20.P201	Slip-painted	jar or narghila; wheel-made	5YR6/6 (reddish yellow); well-levigated fabric with small limestone and quartz incls.; broad bands of painted slip on ext, and rim int.; trace of dark green glaze on edge; faint grayish discoloration on int. (from smoke?)	NOTE: This is a key locus. likely late Ottoman or Mandate-period in date
4	HM06.A3.B3.20.P199	Slip-painted	bowl; wheel-made	2.5YR5/6 (red); hard fabric with many small quartz and black inclusions; int. criss-crossed in thick white-slipped bands and covered in yellow glaze	Mamluk (Avisar and Stern 2005: design - 19, 21, Fig. 7.7; form - 13, Fig. 4.7, 14, and 15); (13 th /14 th c. (Avisar 1996: Fig. 32.4); also (Walker 2005: 20, Fig. 11.1)
5	HM06.A3.10B.39.P415	Slip-painted	bowl; wheel-made	2.5YR5/6 (red); hard fabric with few visible incls.; int. as above	NOTE: same ware as #5 (this plate) and Plate 5.1 Mamluk (Avisar and Stern 2005: design - 19, 21, Fig. 7.4; form - 13, Fig. 4.2); Mamluk (Walker 2005: design - 22, Fig. 13.5); 13 th /14 th c. (Pringle 1986: design - 151, Fig. 50.69)
6	HM06.9C.33.P357.4	Monochrome-glazed	bowl; wheel-made	2.5YR7/8 (light red); fine, well levigated fabric with small quartz and black incls.; int. and ext, with a thin, white slip and a heavy and glossy, dark green glaze	NOTE: This is a key locus. Mamluk (Avisar and Stern 2005: glaze - 137, Pl. III.8; form - 13, Fig. 4.2 and 5)
7	HM06.A3.Balk1.17.P184	Monochrome-glazed	bowl; wheel-made	10YR8/4 (pink); moderately coarse fabric with medium-sized gray incls. and air pockets; white slip on rim tip and upper ext., none on int.; int. covered in yellow glaze (appears mustard yellow on fabric), with lead streaks	NOTE: This is a key locus. Mamluk (Avisar and Stern 2005: glaze - 136, Pl. III.2; form - 13, Fig. 4.3)



25. Pottery from Ḥubrāṣ mosque.

No.	Registration	Ware	Form	Fabric	Published parallels
1	HM06.A6.11.9.P354.2	Slip-painted	bowl; wheel-made	2.5 YR5/6 (red); fine, hard fabric with small limestone incls.; int. criss-crossed in thickly applied white slip and covered in yellow glaze	Mamluk (see Pl.4.5) NOTE: Same ware as Pl.4.4 and 5.
2	HM06.A3.5B.16.P183.1	HMGP	bowl; hand-made NOTE: diameter unknown	5YR7/4 (pink)l moderately coarse fabric with quartz pockets; covered in pink slip (perhaps a self-slip) and painted in dark brown lines	Mamluk (McQuitty and Falkner 1993: 57, Fig. 20.36-38); (Johns et al 1989: 91, Fig. 26.39)
3	HM06.A3.6D.29.P220	plain ware	jar; wheel-made	10YR8/2 (very pale brown); fine, hard fabric with few visible incls.; poss. black paint on rim	
4	HM06.A6.10.8.P352	Rushaya al-Fukhar ware	jar; wheel-made	(core) 2.5YR7/4 (light reddish brown), (Surfaces) 2.5YR8/4 (pink); fine fabric with small incls.; rim int. and ext. painted in dark brown	late 19 th /early 20 th c. (Zevelon 1978:195, #5 and 6)
5	HM06.A3.9C.32.P194	Coarse ware NOTE: poss Gaza ware-derivative	bowl?; wheel-made NOTE: diameter uncertain	5YR6/4 (light reddish brown); moderately coarse fabric full of small quartz and black incls.; int. covered in gray slip	NOTE: This is a key locus.
6	HM06.A3.3.5.P148	Gaza ware	jar; wheel-made	(surfaces) 2.5YR5/1 (reddish gray) (core) unreadable; fine, hard fabric	likely 19 th /20 th c.
7	HM06.A3.6D.29.P221	Gaza ware	jar; wheel-made	(core) 2.5YR6/4 (light reddish brown); (surfaces) 2.5YR5/1 (reddish gray); very fine hard fabric with no visible incls.	likely 19 th /20 th c.
8	HM06.A2.1.2.P129	Gaza ware	jar?; wheel-made	(int./core) 5YR5/1 (gray); (ext. surface) 5YR5/4 (reddish brown); fine, hard fabric with very small quartz and black incls.	NOTE: This is a key locus.
9	HM06.A2.1.2.P131	Gaza ware	holemouth basin NOTE: reverse drawing, diameter = 8 cm	(core) 2.5YR6/6 (light red), (surfaces) 2.5YR5/1 (reddish gray); fine, hard fabric with very small black incls	



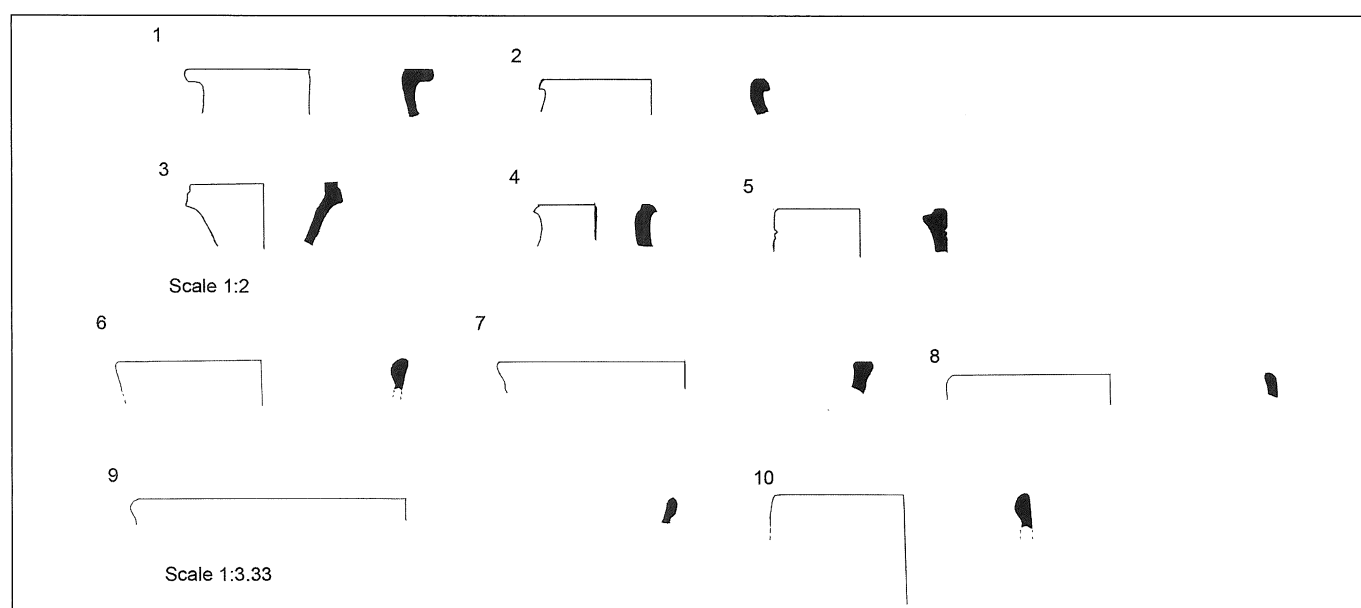
26. Pottery from Ḥubrās survey.

No.	Registration	Ware	Form	Fabric	Published parallels
1	HF06.survey.1.P322	Gaza ware	jar; wheel-made	(core) 2.5YR6/4 (light reddish brown); (surfaces) 2.5YR5/1 (reddish gray); very fine hard fabric with no visible incls.	
2	HF06.survey.1.P314	Plain ware	bowl; wheel-made	5YR6/6 (reddish yellow); fine fabric with small black incls.	
3	HF06.survey.1.P328.6	Monochrome-glazed	bowl; wheel-made	2.5YR7/4 (light reddish brown); moderately coarse fabric with small quartz incls.; rim covered in thin white slip and green glaze	Mamluk (Avissar and Stern 2005: 12 – Type I.1.4)
4	HF06.survey.1.P328.3	Monochrome-glazed	bowl; wheel-made	5YR7/6 (reddish yellow); fine fabric with faint traces of quartz and gray incls.; int. covered in white slip and green glaze	Mamluk (as above)
5	HF06.survey.1.P327.6	NOTE: same ware as #3 Gaza ware or poss. derivative	basin	(core) 2.5YR6/2 (pale red), (surfaces) 2.5YR5/1 (reddish gray); fine, hard fabric with very small black incls.; deeply incised design on ext.	

tion of the region into regional markets in the Mamluk and Ottoman periods, or both. The remainder (body sherds) could not be identified. **Figs. 21-29** illustrate and describe some of the most representative samples, as well as pottery from the most important loci, which will be described below. References to registered sherds in the following text are those illustrated in the accompanying tables and plates.

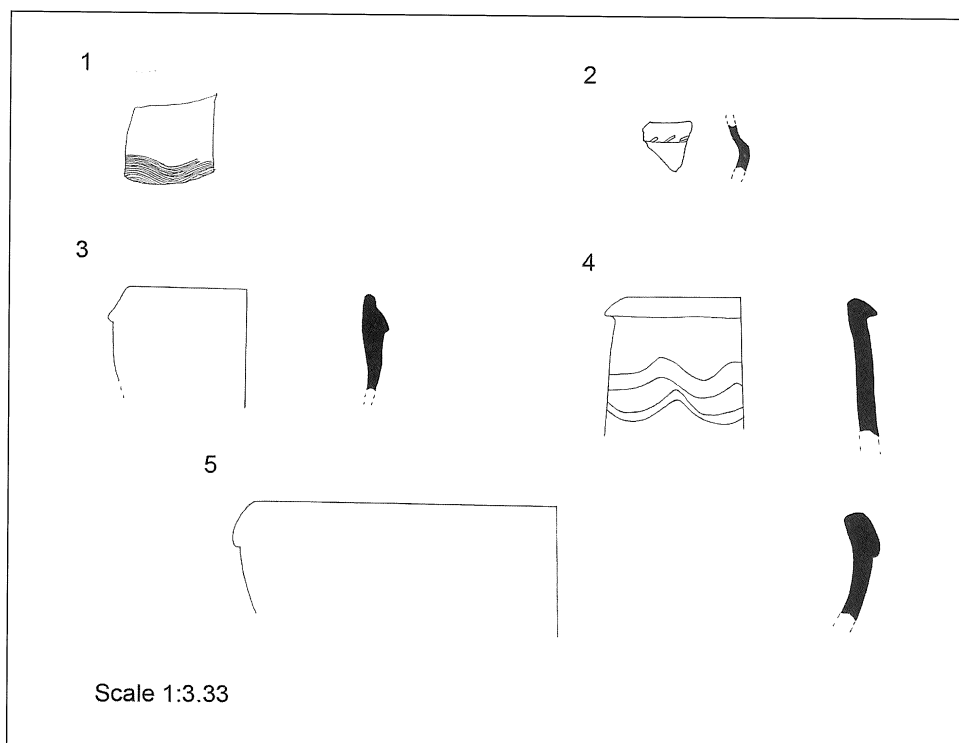
The range of Mamluk wares described from the Malkā survey was present at Saḥam and Ḥubrās: monochrome-glazed (P56, 73, 74, 75, 57, 61, 83, 357.4, 184, 328.6, 328.3, 253, 341, 347.2), slip-painted (P85, 199, 415, 354.2), Syrian underglaze-painted “fritwares” (very few), glazed relief wares (extremely rare, though

— only a single sherd), sgraffito (also very rare — P299), glazed casseroles (P61, 83), “white-ware” (P375.5), HMGP (Hand-Made Geometric Painted) Ware (P19, 15, 183.1). The majority of the Mamluk sherds were by far green-glazed bowls and HMGP jars. The chronology of monochrome, green-glazed bowls is still poorly known for southern Syria. They appear during the Mamluk period and continue through the Ottoman: slight changes in rim and base form and quality of the glaze indicate subtle differences between the products of the two periods. Many of these were sherds recut at a later time as stoppers and found in the “eastern building” at Ḥubrās. As for the HMGP, which also bridges the Mamluk-Ottoman transition and clearly contin-



No.	Registration	Ware	Form	Fabric	Published parallels
1	HF06.B4.1.1.P336.6	Plain ware	small jar/jug; wheel-made	5YR7/4 (pink); very fine fabric, poorly fired (light gray core)	fabric likely Byzantine
2	HF06.B3.1.1.P336.5	Plain ware	small jar/jug; wheel-made	same as Pl.4.2	likely Mamluk (see Tushingham 1985: 394, Fig. 42.5)
3	HF06.B3.13.15.P300	Gaza ware	narghila (?); wheel-made	2.5YR6/4 (light reddish brown); fine, hard fabric with no visible incls.; borad bands of beige slip applied to ext.; clear glaze applied haphazardly to int. and rim ext.	likely late Ottoman-early 20 th c.
4	HF06.B1.4.4.P344.2	Plain ware	juglet; wheel-made	7.5YR7/6 (reddish yellow); fine, lightweight fabric with small black incls.	
5	HF06.B1.17.20.P256	Plain ware	small jar; wheel-made	2.5YR5/4 (reddish brown); hard, gray fabric with few visible incls.	
6	HF06.B1.3.3.P347.3	Glaze-painted	bowl; wheel-made	2.5YR6/6 (light red); fine fabric with small, angular incls. of quartz and mica; covered with a white slip and yellow glaze stained with dark green glaze	Mamluk, late 13 th c. on (Pringle 1986: 147-8); Mamluk (Avisar and Stern 2005: 12-13, Fig. 4.8)
7	HF06.B1.17.20.P253	Monochrome-glazed	bowl; wheel-made	7.5YR8/3 (pink); int. covered in yellow glaze, directly on surface (no slip)	Mamluk, late 13 th -15 th cs. (Avisar and Stern 2005: 14-15, Fig. 5.7)
8	HF06.B1.4.5.P341	Monochrome-glazed	bowl; wheel-made	5YR6/6 (reddish yellow); fine fabric full of very small black incls.; int. covered in a white slip and green glaze	Mamluk (Avisar and Stern 2005: 13, Fig. 4 – misc.)
9	HF06.B3.13.15.P299	sgraffito	bowl; wheel-made	2.5YR7/6 (light red); fine fabric with small black incls.; int. covered in white slip and pale yellow glaze; a sgraffito line marks base of rim in int.	Mamluk – 13/14 th c.
10	HF06.B1.3.3.P347.2	Monochrome-glazed	bowl; wheel-made	5YR6/6 (reddish yellow); fine fabric with tiny quartz and gray incls.; int. and rim ext. covered in white slip and dark green glaze	Mamluk, 2 nd half 13 th to 15 th c. and later (Avisar and Stern 2005: 13, Fig. 5, 7, and 8)

27. Pottery from Ḥubrāṣ farmhouse.



28. Pottery from Ħubrāş farmhouse.

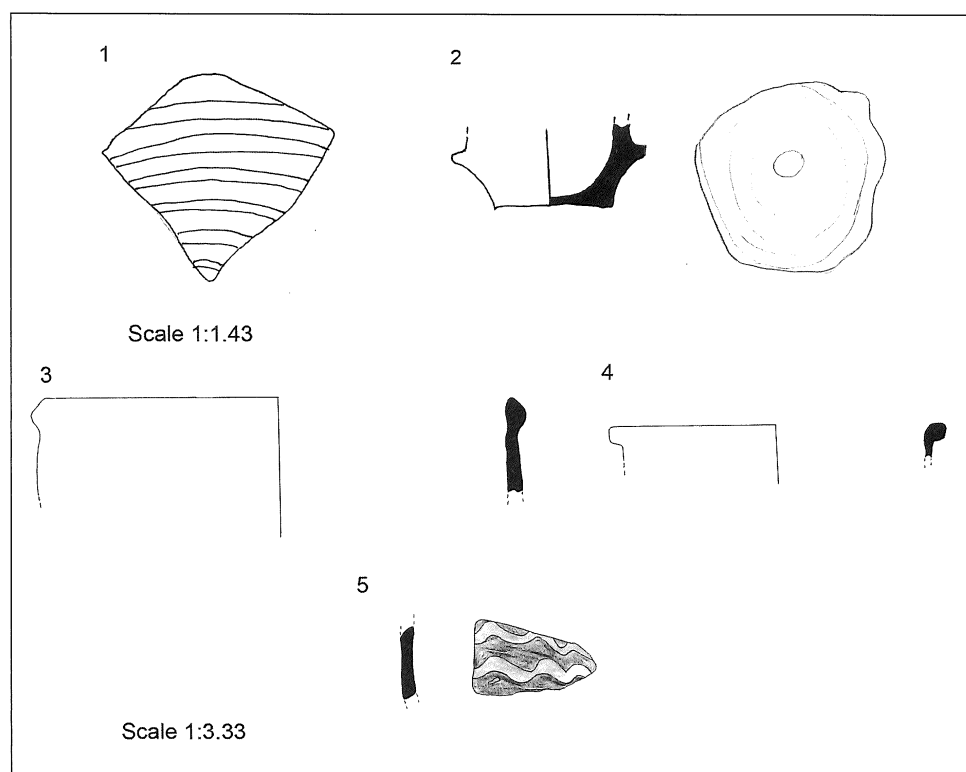
No.	Registration	Ware	Form	Fabric	Published parallels
1	HF06.B3.balk.3.19.P257	Gaza ware	basin	(core/int.) 5YR5/6 (yellowish red), (int. surface) 5YR5/1 (gray); hard, red-firing gray fabric; ext. decorated with a fine combed wavy design (by a 10-tine comb)	
2	HF06.B4.2.2.P214	Gaza ware or derivative	bowl (?); wheel-made	(core/int.) 2.5YR7/4 (light reddish brown), (ext) 2.5YR5/1 (reddish gray); hard, fine fabric with little evidence of incls.; impressed diagonal lines above carination on ext.	
3	HF06.B1.3.3.P347.5	Gaza ware	jar; wheel-made	(core/int.) 5YR5/8 (yellowish red), (ext. surface) 5YR4/1 (dark gray); fine, hard and well-levigated fabric with few visible incls.; ext. gray-slipped	
4	HF06.B4.10.10.P259	Gaza ware derivative	storejar; wheel-made	(core.int.) 2.5YR5/6 (red), (ext. surface) 2.5YR4/3 (reddish brown); hard, fine fabric with few incls.; parallel wavy lines incised on ext.; trace of glaze on ext.	
5	HF06.B1.13.15.P251	Gaza ware	krater	(core) 5YR7/4 (pink), (surfaces) 2.5YR5/6 (red); fine, hard and moderately levigated fabric with many small quartz and black incls.; self-slipped surfaces; int. covered in transparent glaze	19 th c. (Boas 2000: Pl. 2.1-4); late Ottoman (Walker 2005: 96, Fig. 18.6)

ues into the early 20th century AD, the Mamluk wares in our study area tend to be of finer fabric and more careful surface decoration.

The Late Ottoman ware *par excellence* of southern Syria — the gray-firing “Gaza Ware” — is represented in abundance from all fields (P66, 84, 86, 148, 221, 129, 131, 322, 300, 257, 347.5, 251, 394, 388, 396). Although the finest jars and basins may have been imported from southern Palestine, the variety in the color

and quality of the fabrics suggest that a kind of “Gaza-derivative” was produced nearby (P327.6, 214, 259, 390, 194). In addition, the HMGP jars known from the Mamluk period continues, with a much coarser fabric (grog and chaff inclusions — P319) and, a plaster is often used for repairs or to hold the coarse fabric, which can be quite friable, together.

Some 50 sherds were read as “Ottoman/Man-date” because they appear to be later develop-



29. Pottery from study collection.

No.	Registration	Ware	Form	Fabric	Published parallels
1	HS06.P394	Gaza ware	cookpot lid (?); wheel-made	(core) 2.5YR7/3 (light reddish brown), (int. surface) 2.5YR5/2 (weak red), (ext. surface) 2.5YR4/1 (dark reddish gray); fine, hard fabric with small limestone incls.; wheel-ridged ext. and haphazard application of transparent glaze	
2	HS06.P392	Plain ware	saucer lamp (base); combination of slow wheel and mold NOTE: base is 2.5 cm wide	(core/int.) 2.5YR5/6 (red), (ext.) 2.5YR5/2 (weak red); fine fabric with small quartz and black and medium-sized limestone incls.; no evidence of glaze	12 th /13 th c. (Hadad 1999: 215, Type 7, Fig. 4.14, 9.30); (Brosh 1986: for form - 81, Fig. 6:1); Crusader (Avissar and Stenr 2005: 171, Pl. XXXIV.1; 124-5, Fig. 22.1 – Type III.1.1.1)
3	HS06.P388	Gaza ware	basin; wheel-made	(core/int.) 2.5YR5/6 (red), (ext. surface) 2.5YR5/3 (reddish brown); hard fabric with small limestone incls.; poorly fired (grey core)	19 th /20 th c. (Walker 2005: 94, Fig. 17.3)
4	HS06.P396	Gaza ware	bowl/basin; wheel-made	(core) 2.5YR6/6 (light red), (surfaces) 2.5YR4/3 (reddish brown); fine, hard fabric with very small black incls.; ext. covered in a thin, transparent glaze	19 th /20 th c. (Walker 2005: 104, Fig. 22.7)
5	HS06.P390	poss. Gaza ware derivative	basin	(core/int.) 7.5YR7/6 (reddish yellow), (ext. surface) 7.5YR4/1 (dark gray); hard fabric with medium-sized black incls.; ext. covered in a gray slip through which a wavy design is broadly incised and painted over in a red slip	

ments of Ottoman HMGP (as red-painted) and gray-fired wares. We believe the majority of them to be local derivatives of Gaza (as above), Sinjil (P153.2 - not illustrated), and Rashayya al-Fukhar (P352) Wares. The large storage jars with strap handles and basins (often whole-mouth jars) of Gaza Ware, while first identified in southern Palestine, seem to have multiple places of manufacture. Wheel-made gray wares at Ḥubrās include body sherds from large jars and basins with combing, incisions, punctuate designs, white and red paint, and occasional splashes of glaze. While usually dated to the late 19th and early 20th centuries, they have been identified as early as the 15th century (Sinai) and as late as the mid-20th century (northern Jordan — Mer-shen 1985). Sinjil Ware, a handmade ware produced in central Palestine (Nablus) and covered in wide, red paint on a cream-colored ground (Crowfoot 1932: 180-181; Amiry and Tamari 1989: 45), seems to be only one of many red-painted wares known from Palestine and Transjordan (for northern Jordan, see Khammash 1986: 69-70). Production of Sinjil Ware, and its derivatives of red-painted bowls and jars, spans the late 19th century through the early 20th century, perhaps as late as the 1960s, when its manufacture was revived (personal communication Dr. Robin Brown). Excavations in the Galilee and the Golan and as far south as Nazareth are producing a painted wheel-made ware named after its type site, Rashayya al-Fukhar in Mt. Hermon (Dalman 1964: 199-200). The fabric of this ware is a well-fired orange-pink or white and painted in brown, red, or white paint over a white slip, with occasional splashes of glaze on parts of the interior and exterior (personal communication, Dr. Edna Stern, I.A.A.). Its center of production is quite close to our study area, and its chronology spans the late 19th-early 20th centuries. The forms are primarily thin-walled water jars and *ibriqs* (Zevelon 1978; Olenik 1983). We have identified derivatives of all of these wares from Fields A and B and define the turn-of-the-century assemblage at Ḥubrās. Several Rashayya-derivative sherds were recovered from Loc. A6.10, in the north door of the medieval mosque, directly on top of the outside pavement and the threshold. A comprehensive report on the local derivatives of all of these can be found in Walker, n.d.(b).

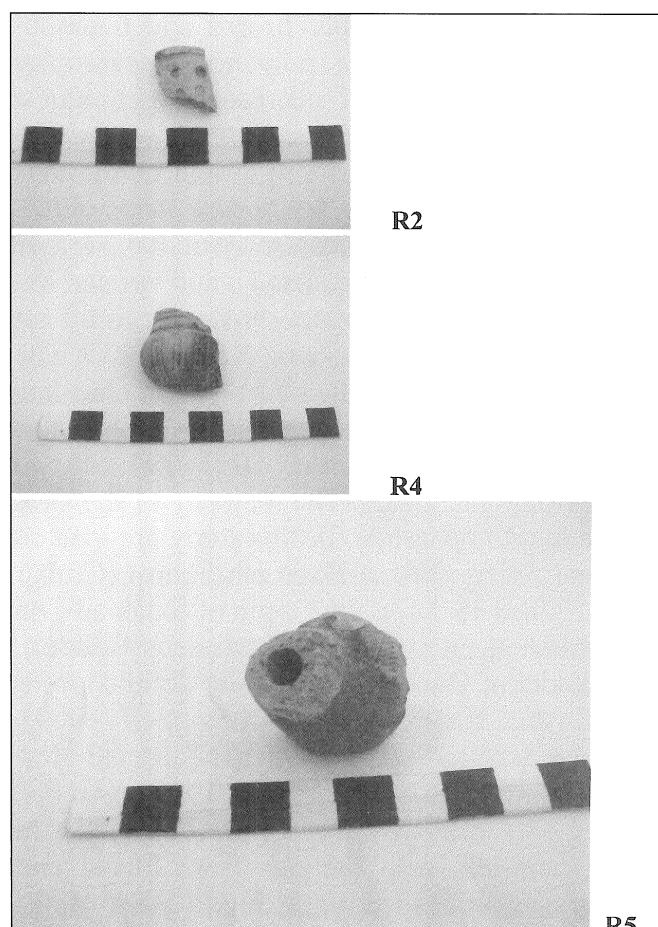
While pottery was largely missing from the “key” loci in the Ḥubrās mosque, a few produced some datable sherds. Loc. A3.9C, a soil layer laying on the pavement of the “eastern building”, was a mixed locus, producing pottery from the Mamluk (P375.5 – Mamluk “white-ware”, P35.4 – Mamluk monochrome-glazed) and Ottoman (P194 – a Gaza Ware derivative) periods. Likewise, Loc. A3.6D, an equivalent layer of fill in another part of the square, though mixed, yielded sherds that were more consistently Ottoman in date, including an 18th/19th century blue-and-white import and a range of wheel- and hand-made wares from the late Ottoman period (P221 – Gaza Ware). Mamluk sherds (P437) were identified in the space (Loc. A3.9B) between the western edge of the pavement in the “eastern building” and east-west field wall Loc. A3.10A. A deep plaster deposit, mixed with charcoal, in place of a missing flagstone was mixed with Mamluk (P415 – Mamluk slip-painted) and late Ottoman/Mandate-period sherds.

Pipes Catalogue

Twelve Ottoman-period smoking pipes (*chibouk*) were recovered from excavations in both fields at Ḥubrās, largely from bulldozer debris in Field A and sub-topsoil in the courtyard deposits in Field B. Eleven are illustrated in (Figs 30-33) and described here. They were found in association with fragments of glass bracelets (see below) and should be considered part of the same corpus of personal goods that defined the late Ottoman period. The pipes range from 18th-early 20th century in date, according to stylistic parallels from more securely dated sites. The best stratigraphic contexts come from Field A: pipes R9 (Loc. A6.9 – plaster layer above threshold of north door of mosque, associated with Rashayya-derivatives), R4 (Loc. A3.8A – wall collapse above flagstones of “eastern building”), R11 (Loc. A3.6D – same context, found with 18th/19th century Ottoman glazed imports and Gaza Ware), and R37 (Loc. A3.7A – wall collapse on the pavement of the “eastern building”).

R2 (Fig. 30) – shank end, impressed circles, light gray. 18th century (Hayes 1992: 393; Robinson 1985: Pl. 46).

R4 (Fig. 30) – bowl, vertical incisions, light



30. Ottoman pipes from Ḥubrāṣ.

gray. Second half 19th century (Simpson 2002: 163, fig. 3.19).

R5 (Fig. 30) – bowl, impressed ferns in vertical columns, light brown. 18th/19th century (Robinson 1985: 190, C.115-6, Pl. 58; 177, C.32).

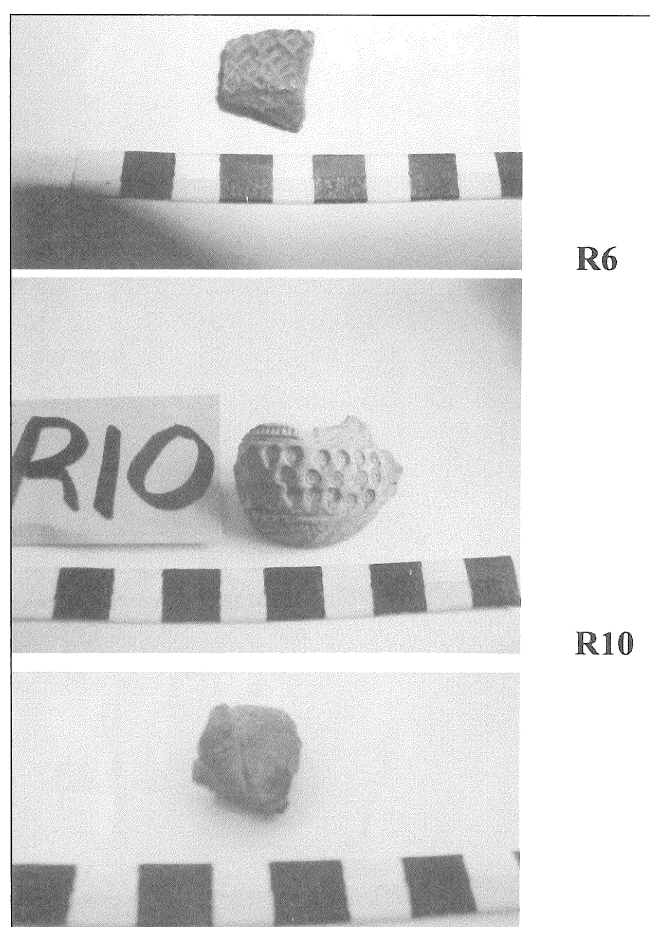
R6 (Fig. 31) – rounded bowl, impressed woven pattern, red-slipped, burnished, red. 19th century (Robinson 1985: 185, C82, Pl. 55).

R10 (Fig. 31) – bowl, impressed circles, pale gray. Turkish import, 17th/18th century (Robinson 1985: 168; Hayes 1992: 393).

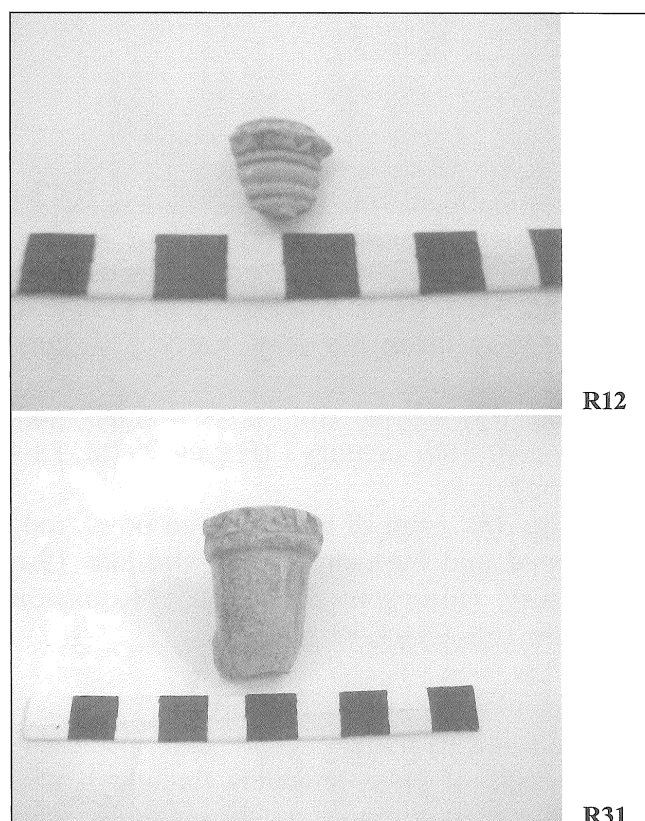
R11 (Fig. 31) – gourd-shaped bowl, burnished, yellow-red. Second half 19th century (Robinson 1982: 182, C61-65; 1983: 276-7, #23, Pl.53; Hayes 1992: 393, Type 22).

R12 (Fig. 32) – shank end; wreath, rayed dots, and scallops, yellow-red. Early 19th century (Robinson 1983: 276, #23, Pl. 53).

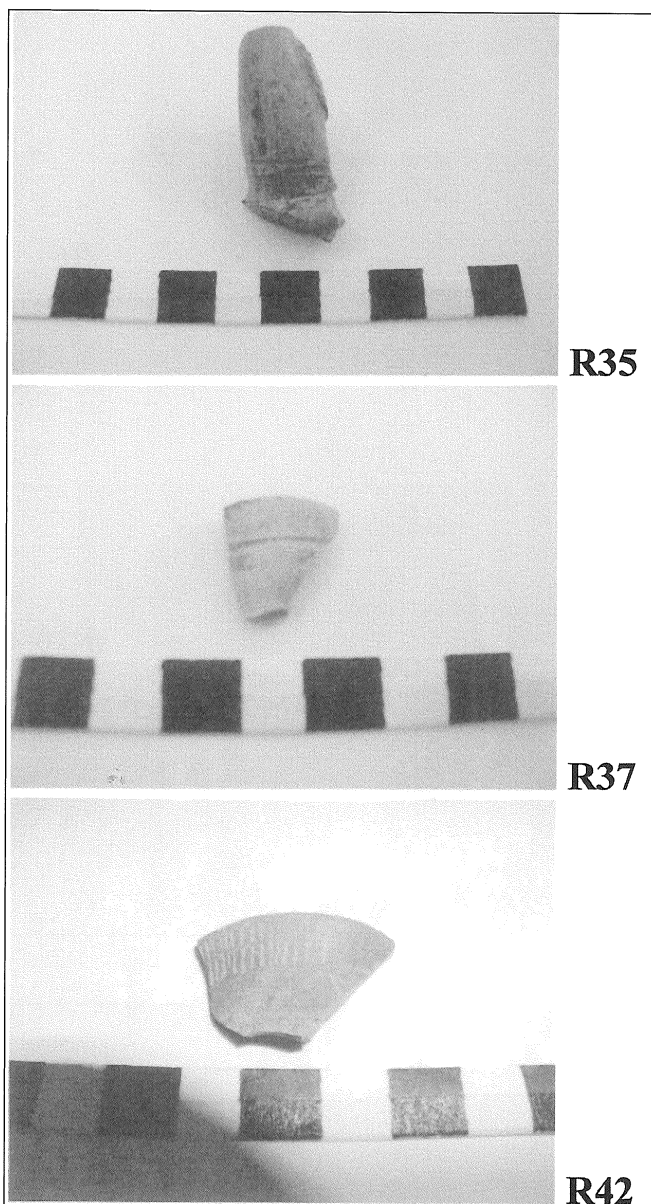
R31 (Fig. 32) – shank, triangular cuts at end, yellow-red. 18th-early 19th century (Robinson 1985: 182, C63 and 187, C95, Pl. 56; Hayes 1992: 393 – fabric).



31. Ottoman pipes from Ḥubrāṣ.



32. Ottoman pipes from Ḥubrāṣ.



33. Ottoman pipes from *Hubrās*.

- R35 (Fig. 33)** – shank and bowl end, polished, light-grey firing red clay. Early 19th century.
- R37 (Fig. 33)** – bowl rim, vertical-sided, yellow-red. 18th century? (Hayes 1992: 393 - fabric).
- R42 (Fig. 33)** – rim of a disk-based bowl, red-slipped and burnished, red. Mid-late 19th century (Simpson 2002: 165; Robinson 1985: 188, C104, Pl. 57).

Glass (Boulogne) – **Figs. 34 and 35**

In addition to pottery, glass, and specifically fragments of glass bracelets (bangles), was among the most chronologically sensitive small finds of the 2006 season. This corpus of 21 ban-

gles consisted of 15 polychrome and 6 monochrome fragments. The polychrome examples represented a range of decorative techniques: prunts (*R31*), mosaic eyes (*R30*), patch decoration (*R34* and *R40*), a single and continuous band of glass crossed by transverse strips (*R19*), a twisted wire on the centre of a flat surface (*R32*), combined patterns (*R41*), and twisted designs (*R3*). Some techniques, however, could not be identified, such as those on *R16* and *R39*. The corpus can be dated to the Mamluk and Ottoman periods through comparative and stylistic analysis (Spaer 1992; Spaer *et al.* 2001: 194; Shindo 1996; Boulogne 2007). The majority of the sites producing comparanda for this study are located in Great Syria: Qaṣr al-Ḥayr ash-Sharqī (Grabar *et al.* 1978: 138-147), the Castle of Ṣalāḥ ad-Dīn (unpublished, in storage in Damascus Citadel), the Citadel of Damascus (Berthier 2000-1), Masyaf Castle, Khirbat Fāris (Johns *et al.* 1989), Tall Abū Sarbūṭ (Steiner 1997-8), Tall(s) al-Hesi and Erani (Spaer 1992; Toombs 1985: 200, Pls. 91-92), and Jarash (Meyer 1988). We have also found parallels with bangles from Fustat and Quṣayr al-Qadim in Egypt (Shindo 1996; Whitcomb and Johnson 1979: 9, 64, 196, 199, 203; Whitcomb and Johnson 1982: 233-241, 327, 339), Kawd am-Saila in Yemen (Monod 1975 and 1978), and Julfar in the United Arab Emirates (Hansman 1985: 76-83). Some of the *Hubrās* bracelets demonstrated exact parallels with other excavated sites: *R3* and *R19* were quite similar in form and surface treatment to those at Tall Abū Sarbūṭ and Tall Erani; the best parallels for *R19* came from Masyaf and Kawd am-Saila; *R39* compared favourably to examples from Masyaf (Boulogne 2007: Pl. 15, #83 and Pl. 58C), Fustat (Shindo 1996: 372), and Quṣayr al-Qadim (Whitcomb and Johnson 1979 and 1982).

The monochrome corpus is composed of twisted (*R20* *R29* *R27*) and smooth bands (*R23* *R33*), with only one fragment exhibiting a different engraved decoration (*R15*). Twisted bracelets of this kind are generally found on most of the Greater Syrian sites and are well represented in Jordan: at Tall Abū Sarbūṭ and Khirbat Fāris they are securely dated to the Ayyubid to Ottoman periods (Steiner 1997-8: 145-151; Boulogne 2007; Johns *et al.* 1989). The smooth-contour samples are more widely distributed for the same period, though in a

Bethany

Fouilles du nord de la Jordanie Planche I Ensemble polychrome

R40

R31

R20

R.34

R30

R32

R41

R19

R24

R3

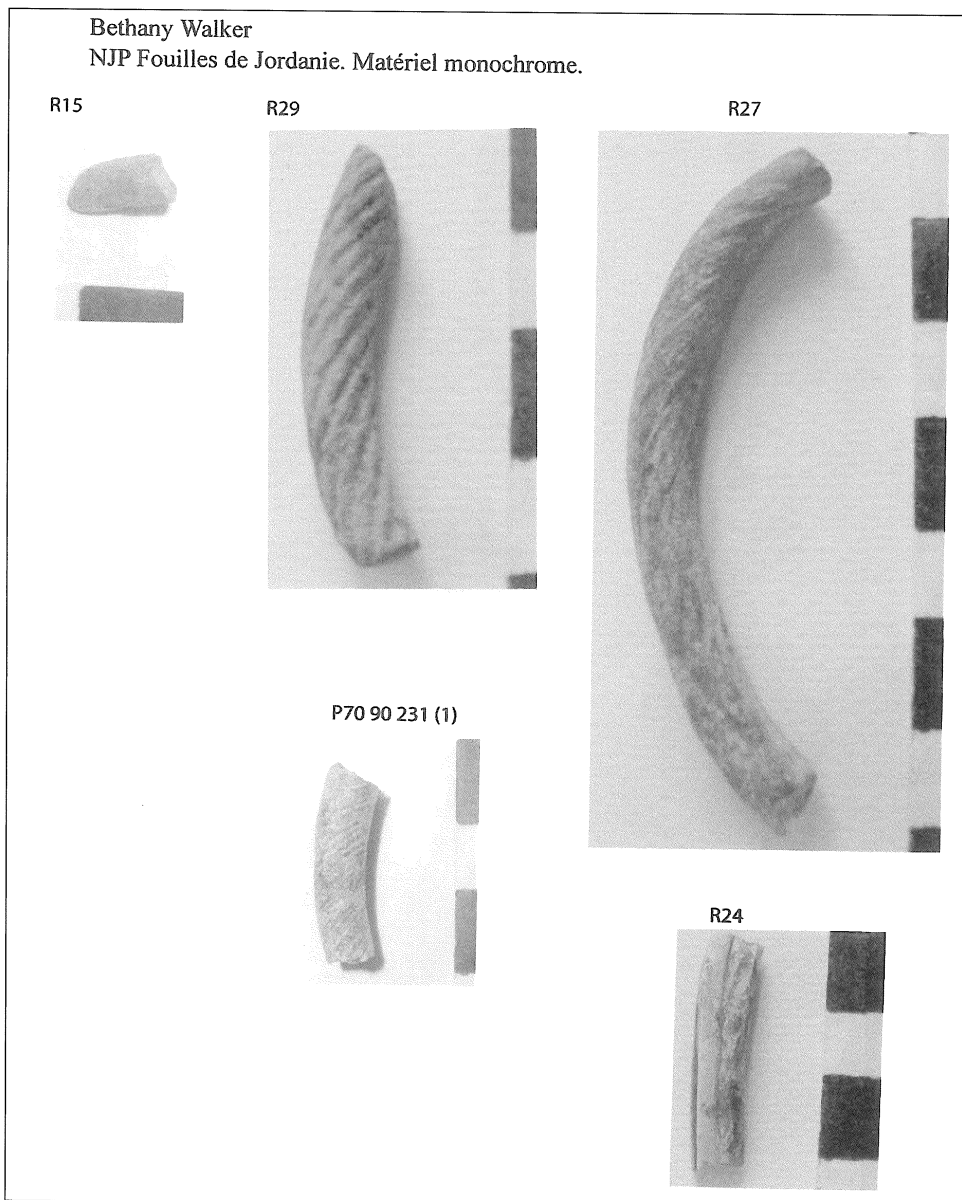
R36

R16

R1

R39

34. Polychrome glass bracelets from Ḥubrāṣ.



35. Monochrome glass bracelets from Ḥubrāṣ.

different colour scheme, than the twisted-band variety. Nevertheless, the brown or translucent fragments from Ḥubrāṣ are not very common at other sites. Similarly, sample R1, a fragment of polychrome glass illustrated in the accompanying plates but not described in the catalogue below, has no close parallels and could be of local manufacture. Unfortunately, we do not have any bangles with the same design.

Although the polychrome and monochrome bangles of Ḥubrāṣ have also been identified at other sites in Greater Syria, the Ḥubrāṣ assemblage stands out for its range of colours (some not known elsewhere), combined with patterns (such as sample R30) familiar from other sites. This seems to be the case with the corpuses identified thus far from Greater Syria: though shar-

ing the same range of patterns, they otherwise demonstrate considerable variation.

Bracelets Catalogue

Polychrome Samples (Fig. 34)

R31

Inv. # HM06.A3.8A.11. Flat in section. Length: 2.6cm; width: 1cm; thickness: 0.5cm.

This polychrome sample is decorated with a kaleidoscope decoration, comparable to those at Tall Abū Sarbūt dated to the Mamluk period; also identified at Khirbat Munya, where they are Umayyad and Mamluk in date (Steiner 19997-8: 145-151; Spaer 1992: 59-60; [HYPERLINK "http://www.virtualegyptianmuseum.org/Collection/FullVisit/Collection"](http://www.virtualegyptianmuseum.org/Collection/FullVisit/Collection) www.virtualegyptianmuseum.org/Collection/FullVisit/Collection

tion). Not very common but is known in Yemen: Kawd am-Saila (Late Islamic – Monod 1978: 119). Those last comparative data show a kaleidoscope pattern of same yellow colour, with more red and blue.

R30

HM.06.A3.1.2. Triangular in section. Length: 4.5cm ; width: 1.3cm ; thickness: 1.1cm.

This polychrome sample has a black core. One side is decorated in a yellow and orange-checked pattern. Reverse is black and brown. This kind of decoration of mosaic eyes is generally known from the Ottoman period. Samples identified at Dan and Tall Erani (Palestine), dated to the medieval period (Spaer *et al.* 2001: 197; Spaer 1992: 158).

R34

HF06.B3.1.1. Triangular in section. Length: 5.5cm; width: 0.8cm; height: 0.7cm.

Polychrome fragment with a green core and yellow, blue, brown decoration. Of relatively poor quality. This type has an applied decoration of “separate strips”, which is well-known at the Citadel of Damascus, Tall al-Hesi, Tall Erani, Jarash, and Julfar, although colors vary (Boulogne 2007: Pl. 12, #44; Hansman 1985: 76-83; Spaer 1992: 44-62, 197; Toombs 1985; Meyer 1988: 214-215). Mostly Ottoman in date.

R40

HMO6.A3.4.7. Circular in section. Length: 1.5cm; width: 0.6cm; height: 0.5cm.

Blue core with yellow, white, and black lines. Very small polychrome fragment but seems to be the same type as R34, with a blue paste. This kind of decoration made of strips of glass wound around the bangle is a well-known type that demonstrates regional variety. Parallels: cf.R.34.

R32

HF06.B4.7.7. Circular in section. Length: 1.3cm; width: 0.6cm; height: 0.3cm.

Polychrome green paste, white and black twisted wire, yellow and orange decoration.

One kind of this model of polychrome bangle has been identified at Khirbat Fāris, dated to the Mamluk period. However, the central wire of Khirbat Fāris is not a twisted bichrome, but is entirely white. Not common (unpublished; see Boulogne 2007: Pl. 24, #399).

R19

HFO6.B1.4.4. Triangular in section. Length:

9cm; width: 0.5cm; height: 0.8cm.

This very interesting polychrome fragment is clearly represented at Masyaf Castle by two samples: one of Mamluk date and the other Ottoman. A similar bangle, flat in section and decorated in yellow, brown, and white transversal strips, has been identified in samples bought in San‘a in 2003 (Boulogne 2007: pl. 15, #74 and #82).

R16

HFO6.B1.1.1. Triangular in section. Length: 1.9cm; width: 0.1cm; height: 0.1cm.

Polychrome fragment: one side is black and yellow with small black strips; the other is white and black on a yellow strip. Difficult to ascertain the manufacturing technique. Very rare, few parallels can be made; comparable to a fragment from Masyaf Castle, dated to the Mamluk period (Boulogne 2007: Pl. 16, #89).

R3

HF06.B4.9.9. Circular in section. Length: 1.7cm; width: 1.1cm; thickness: 0.5cm.

This polychrome, twisted bangle with one wire of white colour is closely paralleled at Tall Abū Sarbūṭ by a nearly identical fragment, Mamluk in date (Boulogne 2007: Pl. 20, #37); see a comparable example from Tall Erani (Spaer *et al.* 2001: 197). Others examples with twisted bands are well-known, such as at Qaṣr al-Ḥayr al-Sharqī (Abbasid-Mamluk: Grabar *et al.* 1978: 138-147 — exhibited in Palmyra Museum and in storage), and the Castle of Ṣalāḥ ad-Dīn (Ayyubid: Boulogne 2007: Pl. 41, #A-B-C — unpublished and stored in the National Museum in Damascus).

R39

HM06.A3.4.6. Rectangular in section. Length: 1.7cm; width: 1.1cm; thickness: 0.5cm.

The polychrome design of chevrons is unusual but can be compared to fragments discovered at Masyaf Castle (Ottoman: Boulogne 2007: Pl. 15, #83 — in storage on-site; Pl. 58C — private collection), Fustat (Shindo 1996: 372), Quṣayr al-Qadim (Mamluk: Whitcomb and Johnson 1979 and 1982).

R41

HF06.B4.7.7. Triangular in section. Length: 5cm.

Polychrome fragment with a green core and a black and white twisted strip.

Clearly identified at Khirbat Munya (Umayy-

ad), and Quṣayr al-Qadim (Mamluk: Whitcomb and Johnson 1979 and 1982).

R24

HF06.B4.10.10. Triangular in section. Length: 3.1cm; width: 0.6cm.

Polychrome sample, white horizontal strip on turquoise blue and brown. No parallels have been found.

Monochrome Samples (Fig. 35)

R20 (not illustrated)

HF06.B3.5.7. Circular in section. Length: 5.5cm; width: 0.6cm; thickness: 0.7cm.

Brown core, blue surface. This monochrome twist sample is decorated by one strip of prunts. Not really common on monochrome bangles, though one is clearly identified at Tall Abū Sarbūt (unpublished).

R29

HF06.B1.10.11. Semi-circular, flat section. Length: 3.1cm; width: 0.6cm; thickness: 0.6cm.

Monochrome, twisted band. Green core, brown surface. Twisted, dark-colored bangle is quite common at Tall Abū Sarbūt and Khirbat Fāris, dated to the Mamluk and Ottoman periods (Boulogne 2007: 445).

R27

HM06.A3.2B.14. Semi-circular, flat in section. Length: 6.5cm; height: 7cm; width: 6cm.

Monochrome blue fragment with twisted band. Common, like R29.

R23 (not illustrated)

HS.06.B1.19.16.19. Circular in section. Length: 1.9cm; width: 0.7cm; thickness: 0.5cm.

Green core; brown, smooth surface. Although bangles with a smooth surface are known from most sites, the brown colour is not common. A few samples have been identified at Damascus (triangular in section, Mamluk in date), Tall Abū Sarbūt (semi-circular in section, also Mamluk in date), and at Jarash (Bourgone 2007: 445; Meyer 1988).

R15

HF06.B1.6.7. Circular in section. Small fragment.

Translucid, with engraved decoration. No parallels have been found.

Stratigraphic Contexts

Only two of the bracelets excavated at Ḥubrāṣ were retrieved from loci of some impor-

tance. A3.8A.11, which was wall collapse above the flagstone floor of the “eastern building”, produced R31, a polychrome bangle of likely Mamluk date. The pavement may have been part of a late Ottoman expansion of the complex, this locus representing its final use and collapse, contaminated to some extent by bulldozer debris. Associated objects in this locus include mostly Mandate-period pottery (jars) and a late Ottoman pipe; the locus is, thus, a mixed one. Nonetheless, together they suggest a domestic use of this space before the collapse of the structure, sometime in the mid 20th century, perhaps as late as the bulldozing of 1970. The second (R20) was found in abandonment, post-collapse fill inside the ‘Obeidat farmhouse (square B3). Most of the pottery from this locus was late Ottoman through modern in date.

The remainder of the loci are fill and destruction debris; none represent sealed or stratigraphically secure contexts. Four of the bracelets (R30, R40, R39, R27) were found in association with Mamluk-Mandate period sherds, late Ottoman pipes, ceramic stoppers made from recycled sherds, and miscellaneous glass fragments in the bulldozer debris of the eastern building (A.3). They collectively illustrate the range of domestic items used in the village in the late medieval period until today and at the very least identify this part of today’s Ḥubrāṣ as the location of the medieval village, in the absence of standing architecture of the period (outside of the mosque). As for the farmhouse (Field B), three bracelet fragments (R3, R41, and R24) came from what is likely kitchen refuse in B.4, a square placed immediately outside the kitchen of the farmhouse to determine refuse disposal patterns and to examine kitchen cleaning patterns. These loci contained the expected concentrations of charcoal and ash, as well as lithics, glass, and personal items, including jewellery. The remaining glass fragments in this catalogue (R34, R19, R16, R29, R23, and R15) are among the objects retrieved from the courtyard fill of the ‘Obeidat farmhouse.

Soil (Lucke)

To determine the extent to which climatic events or human land use were factors in first, rural decline, and second, landscape transformation, we included a soil genesis study in the de-

sign of the 2006 field season. Research followed a twofold approach: on the one hand, soils and colluvia were compared applying a variety of analytical techniques. On the other, historical sets of air photos and CORONA satellite images were evaluated in order to understand the age and stability of field systems, landscape change, and the presence of ancient land use installations.

Erosion and field systems: Soils in the study area consist of red Terra Rossa on the plateaus, and grayish-white Rendzinas in the valley and on slopes. It has been frequently suggested that Terra Rossa is prone to erosion, and that historic land use has contributed to no small degree to soil degradation (Lowdermilk 1944; Dregne 1983). However, the landscape has been apparently stable since the earliest CORONA images were taken in 1963. There have been no significant changes in field systems, and remains of an ancient Roman road could be traced on all photos. Increasing plowing activities in the recent past seemingly led to a dispersal of the stone band marking the ancient road, which was nonetheless quite visible, while there is no indication that the past landscape looked very different from today.

In this context, it should be mentioned that the color and physical properties of the Terra Rossa soils do vary on a small scale, those variations apparently following old field borders. However the differences visible on the ground are not always evident on air photos, but seem to be hidden by changing soil moisture and vegetation coverage, indicating that they are not pronounced enough to produce well-visible crop marks. It was also not possible to relate color changes to organic matter or iron oxides: the only remaining explanation is content of calcium carbonate. CaCO_3 -additions seem to contribute significantly to soil color, leading to brightening, a possible contribution that was so far not discussed in the literature. A laboratory experiment was set up to further examine the matter: additions of chalk from the nearby slopes to a deeply red Terra Rossa led to a quickly decreasing redness of the samples, with a very strong negative correlation ($R^2=0.98$), confirming the earlier assumption (Lucke, 2007). Up to now we can only speculate about the reasons behind

such CaCO_3 -additions: some manure praxis involving easily accessible chalk seems indicated. Thus, human action changes soil color, but does not necessarily induce erosion in this manner, as it involves no transport of soil.

Erosion and flooding: A Roman bridge in the nearby Wādī Quwayliba worked as natural sediment trap, filtering out huge stones and providing a 90° wall which allowed us to distinguish several phases of wadi flow. While no complete dating is available so far, it is clear that the bridge section represents the sedimentation history of the last 1500 years. From the different sediments it can clearly be deduced that the flow of the perennial stream in the wadi changed strongly during this period, ranging from dry conditions to sustained flow and even periods of heavy flash floods (Table 1). Analysis of the magnetic susceptibility indicated that no Terra Rossa was eroded during this period. Deposition of the much better developed Terra Rossa would be characterized by increasing susceptibilities, however the values remain very low throughout the whole bridge profile and are very similar to unweathered chalk on the slopes. Those layers connected with the heaviest sedimentation show even the lowest susceptibilities, making clear that the material deposited at the bridge came from the soft rocks exposed at the wadi slopes, rather than soils eroded from the plateaus above.

The bridge profile, as well as other colluvia, suggests that notable erosion sedimentation in the area was always connected with high-energy mass movements, most likely represented by heavy precipitation events. But since indicators for sedimentation of red soil are missing, this suggests that Terra Rossa under the given climate is not easily eroded, but is in fact erosion-resistant. In addition, land use probably played no role for land degradation: not only were Terra Rossa not eroded during historical times, but the transport of chalky material from the valleys is identified only in connection with heavy rainfall. In this context, excavation of some test pits in the courtyard of the 'Obeidat farmhouse in Ḥubrāṣ (Field B) indicated that the Mandate-period village was built on the rubble of the ruins of the Mamluk settlement, which had been partially washed down the slope of Wādī Ḥubrāṣ. An

Table 1: Sediments at the Roman bridge over Wādī Quwayliba.

Sample No.	Depth from top [cm]	Description/Comment	Magnetic susceptibility χ
Brücke 9	0-20	Bright brown, loose, ~10% stones	75.15
Brücke 8	20-45	Dark greyish-brown, some smaller stones, creek seemingly dry	64.69
Brücke 7	45-65	A lot of well-rounded gravel with grayish-brown sediment, quick and strong flow of the creek (probably perennial)	65
Brücke 6	65-125	Many big, angular stones, mixed with chalk, mortar and stones seemingly collapsed from the bridge, looks like a huge landslide or flash flood, and possibly dry creek	59.35
Brücke 5	125-150	Reddish-brown sediment, fine, few stones, clay-rich prismatic structure (seemingly indicating reduced flow of the creek with stagnating water)	76.8
Brücke 4	150-158	Reddish-brown sediment, subangular gravel (indicating more turbulent, perhaps alternating transport and intermittent flow)	77.65
Brücke 3	158-193	Brown, fine, with bigger stones (20%), not very much water but periodic flooding	77.45
Brücke 2	193-203	Gravel band (80% gravel), small and well rounded, indicates perennial, steady good flow of the creek	67.45
Brücke 1	203-227	Grey, fine, oxidation-channels along root remains (indicates stagnant water - gley), a few small stones, no running water but muddy conditions in the creek	75.72
Brücke 0	227-247	Grey, fine, no coarse material, but ash, charcoal and carbonised olive seeds, could indicate garbage dumped into mud while the city was still intact	79.67

earthquake may have contributed to the physical decay of this part of the Mamluk village, though there is neither historical nor architectural evidence for such an event. The layering of stone bands points, however, more to movement by water, and in fact occasional heavy deluges as reported by Schumacher (1913), documented by eyewitness sources in the Mamluk period (Walker 2007c), and attested as recently as 2005 in Saḥam (see above) might fully suffice to wash a settlement away. Challenging traditional theories about repeated episodes of drought contributing to rural collapse at the end of the Mamluk period (see sources in Walker 2007d: 196-7), Lucke (2007) suggested that heavy rainstorms might have been more frequent at this time, as it coincided with the onset of the little Ice Age. A precise dating of the sediments would be needed to support this idea. So far it was very difficult to date the sediments which largely contain neither archaeological materials nor organic remains suitable for C¹⁴-dating. A test with two samples showed, however, that optical stimulated luminescence (OSL) can well be applied to the soils in the investigation area. The collection of additional soil material is therefore currently ongoing, and will hopefully provide a clearly dated stratigraphic sequence in the near future.

While it is likely that soils and valleys looked as they do today during the Mamluk through Mandate periods, there is evidence that the supply of spring water experienced pronounced changes, which was most likely connected with changing precipitation. The prevalent karst determines quick movement of rainwater through the rocks, leading to strong differences of spring water flow already during the seasons of the year (al-Farajat, 1997). Although the geology determines the course of landscape development, it seems that the frequency of heavy rainfall events governs the speed of landscape change. Lucke (2007) suggested in this context that most rubble layers in the ruins of Jordan might have been deposited by heavy precipitation, since their clear structures of bands point to movement by water, while the size of the stones implies very strong energies (see Fig. 4). It seems possible that this evidence was overlooked by earlier excavations, and that a more thorough study of the debris covering ancient sites might allow for the establishment of a chronology of heavy precipitation events.

In summary, for the purposes of NJP, this soil study suggests that: 1. there were no significant changes in landscape or field systems during the 20th century (land continued to be used as it al-

ways was); 2. there is no evidence that soil erosion has been a real problem in the study area; 3. land use did not apparently degrade local soils, and 4. torrential rains historically contributed to the structural collapse of buildings and, thus, should be considered as a factor behind abandonment of villages or neighborhoods.

Conclusions

The 2006 season provided multiple levels of evidence for the continued viability of village life in northern Jordan from the Middle Islamic period. Settlement and traditional land use continue without significant change through the troubled transition from Mamluk to Ottoman rule. Local initiative in organizing village life and production and ensuring continuity of communal worship, as well, suggests ways in which local society weathered the political and economic storms that accompanied the collapse of the Ottoman state. It will be the goal of future seasons to determine the extent to which villages in the region today were rooted in the village structure of the Mamluk period.

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References

- Almagro, A.
1992 Building Patterns in Umayyad Architecture in Jordan. *SHAJ* 4: 351-356.
1995 Remarks on Building Techniques During Umayyad Times. *SHAJ* 5: 271-275.
- Amiry, S.
200 'Imarat Qura al-Kurasi. Min Tarikh-l-Iqta' fi Rif Filistin fi al-Qarnin al-Thamin 'Ashr wa-l-Tasi' 'Ashr. Ramallah: Riwaq.
- Amiry, S. and Tamari, V.
1989 *The Palestinian Village Home*. London: British Museum Publications.
- Avissar, M.
1996 The Medieval Pottery. Pp. 75-172 in A. Ben-Tor, M. Avissar and Y. Portugali (eds.), *Yoque'am I: The Late Periods*. Qedem Reports 3. Jerusalem: Hebrew University.
- Avissar, M. and Stern, E.J.
2005 *Pottery of the Crusader, Ayyubid, and Mamluk Periods in Israel*. IAA Reports, No. 26. Jerusalem: Israel Antiquities Authority.
- al-'Awdat, R. M. F.
2005 al-Masajid fi Muhafazat Irbid Khilal al-'Asr al-'Uthmani al-Muta'khir (Dirasat Mi'mariyya Muqaranah). Unpublished M.A. thesis, Yarmouk University.
- Berthier, S.
2000-1 Introduction. Études et travaux à la citadelle de Damas: Un premier bilan. *Bulletin des Études Orientales*. supplément 53/54: 29-46.
- Boas, A.J.
2000 Pottery and Small Finds from the Late Ottoman Village and the Early Zionist Settlement. Pp. 547-580 in Y. Hirschfeld (ed.), *Ramat Hanadiv Excavations: Final Report of the 1984-1998 Seasons*. Jerusalem: Israel Exploration Society.
- Boulogne, S.
2007 Reflet d'un art populaire : les bracelets de verre coloré de la période médiévale (1171-1517) et ottomane (1517-1864) du Bilad al-Sham. Unpublished Ph.D. dissertation, University of Paris

- IV – Sorbonne.
- Brosh, N.
1986 Pottery of the 8th-13th Centuries C.E. (Strata 1-3). In L.I. Levine and E. Netzer (eds.), "Excavations at Caesarea Maritima. 1975, 1976, 1979 – Final Report". *Qedem* 21: 66-89.
- Brown, R.
1989 Excavations in the 14th Century A.D. Mamluk Palace at Kerak. *ADAJ* 33: 287-303.
- Burckhardt, J.L.
1822 *Travels in Syria and the Holy Land*. London: John Murray.
- Crowfoot, G.M.
1932 Pots, Ancient and Modern. *Palestine Exploration Fund Quarterly Statement*: 179-187.
- Dalman, G.
1964 *Arbeit und Sitte in Palästina*. Hildesheim: Georg Olms.
- Dregne, H.
1983 *Desertification of Arid Lands. Advances in Desert and Arid Land Technology and Development, Vol. 3*. London: Harwood.
- Al-Farajat, M.
1997 Karstification in (B4) Unit Northwest of Irbid and Its Role in Enhancing Human Impacts on the Local Groundwater Resources. Unpublished M.A. thesis, University of Jordan.
- Fishbach, M.
2000 *State, Society, and Land in Jordan*. Leiden: E.J. Brill.
- Fuchs, R.
1998a The Palestinian Arab House and the Islamic 'Primitive Hut'. *Muqarnas* 15: 157-177.
- Ghawanmeh, Y.
1986a *Madinat Irbid fi al-'Asr al-Islami*. Irbid: Yarmouk University.
1986b *al-Masajid al-Islamiyya al-Qadima fi Mintaqat 'Ajlun*. Irbid: Yarmouk University.
- Grabar, O., Holod, R., Knudstad J. and Trousdale, E.
1978 *City in the Desert: Qasr el Hayr East*. Cambridge, MA: Harvard University Press.
- Hadad, S.
1999 Oil Lamps from the Abbasid through the Mamluk Periods at Bet Shean, Israel. *Levant* 31: 203-223.
- Hansman, J.
1985 *Julfar, an Arabian Port. Its Settlement and Far Eastern Ceramic Trade form the 14th to the 18th Centuries*. London: Royal Asiatic Society.
- Hayes, J.W.
1992 *Excavations at Saraçhane in Istanbul. Vol 2: The Pottery*. Princeton: Princeton University Press.
- Johns, J.
1998 The rise of middle Islamic hand-made geometrically-painted ware in Bilad al-Sham (11th-13th centuries A.D.). Pp. 65-93 in R.O. Gayraud (ed.), *Colloque international d'archéologies islamique*. Cairo: Institut Français d'Archéologie Orientale.
- Johns, J., McQuitty, A. and Falkner, R.
1989 The Faris Project: Preliminary Report upon the 1986 and 1988 Seasons. *Levant* 21: 63-95.
- Kana'an, R.
1993 *Patronage and Style in Mercantile Residential Architecture of Ottoman Bilad al-Sham: The Nablus Region in the 19th Century*. Unpublished M.Phil. Thesis, University of Oxford.
- Khammash, A.
1986 *Notes on Village Architecture in Jordan*. Lafayette, LA: University Art Museum, University of Southwestern Louisiana.
- Lazar, D.
1999 A Mamluk and Ottoman Settlement at Giv'at Dani in the Ayalon Valley. 'Atiqot 38: 27*-38* (Hebrew text), 231-232 (English summary).
- Lenzen, C.J. and McQuitty, A.
1988 The 1984 Survey of the Irbid/Bait Ras Region. *ADAJ* 32: 269-270.
- Lenzen, C.J., Gordon, R.L. and McQuitty, A.M.
1985 Excavations at Tell Irbid and Beit Ras, 1985. *ADAJ* 29: 151-159.
- Lowdermilk, W.
1944 *Palestine – land of promise*. London: Victor Gollancz.
- Lucke, B.
2007 Demise of the Decapolis. Past and Present Desertification in the Context of Soil Development, Land Use, and Climate. Unpublished Ph.D. dissertation, Brandenburg Technical University, Cottbus, Germany.
- Lucke, B., al-Saad, Z., Schmidt, M., Bäuml, R., Lorenz, S.O., Udluft, P., Heussner, K.U. and Walker, B.J.
n.d. Soils and Land Use in the Decapolis Region (Northern Jordan). Implications for landscape and the impact of climate change. *ZDPV*. (Under review.)
- Mackenzie, N.D.
2002 Ayyubid/Mamluk Archaeology of the 'Ajlun Area: A Preliminary Typology. *ADAJ* 46: 615-620.
- McNicol, A.W. and Hennessy, J.B.
1980 Preliminary Report on the 1979 Season of the Sydney-Wooster Joint Expedition to Pella: The Winter Session (Sydney). *ADAJ* 24: 14-33.
- McQuitty, A.
2004 The Architecture of Hospitality: A *Madafah* in Northern Jordan. Pp. 255-264 in K. von Folsach, H. Thrane, and I. Thuesen (eds.), *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of His 70th Birthday*. Aarhus: Aarhus University.

- 2005 The rural landscape of Jordan in the seventh-nineteenth centuries AD: the Kerak Plateau. *Antiquity* 79.304: 327-338.
 - 2007 Khirbat Faris: Vernacular Architecture on the Kerak Plateau, Jordan. *Mamluk Studies Review* 11.1: 157-171.
- McQuitty, A. and Falkner, R.
- 1993 The Faris Project: Preliminary Report on the 1989, 1990 and 1991 Seasons. *Levant* 25: 37-61.
- Meinecke, M.
- 1992 *Die Mamlukische Architektur in Ägypten und Syrien (648/1250 bis 923/1517), Part 2: Chronologische Liste der Mamlukischen Baumassnahmen*. Abhandlungen des Deutschen Archäologischen Instituts Kairo, Islamische Reihe 5. Glückstadt: Augustin.
- Mershen, B.
- 1985 Recent Handmade Pottery from North Jordan. *Berytus* 3: 75-87.
- Meyer, C.
- 1988 Glass from the North Theatre Byzantine Church and Sounding at Jerash, Jordan. *BASOR, Supplement* 25:175-222.
- Mittmann, S.
- 1970 *Beiträge zur Siedlungs- und Territorialgeschichte des norlichen Ostjordanlandes*. Wiesbaden: Harrossowitz.
- Monod, T.
- 1975 À propos des bracelets de verre sahariens. *Bulletin de l'Institut Français d'Afrique Noire* 34: 703-718.
 - 1978 Sur un site à bracelets de verre des environs d'Aden. *Raydan* 1: 111-125.
- Mundy, M. and Smith, R.S.
- 2007 *Governing Property, Making the Modern State: Law, Administration and Production in Ottoman Syria*. N.Y.: I.B. Tauris.
- ‘Obeidat, M.
- 1996 *Dirasah fi Tarikh Baldat Hubras*. Irbid: Dar lil-Khidimat al-Jam‘yat Irbid.
- Olenik, Y.
- 1983 *Rashia of the Potters: A Catalogue of an Exhibition of Pottery of Rashia el-Fukhar*. Tel Aviv: Haaretz Museum Catalogue. (in Hebrew).
- Petersen, A.
- 2001 *A Gazetteer of Buildings in Muslim Palestine: Volume 1*. Oxford: Oxford University Press.
- Pringle, D.
- 1986 *The Red Tower (al-Burj al-Ahmar). 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.
- Robinson, R.
- 1983 Clay Tobacco Pipes from the Kerameikos. *Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung* 98: 265-285, Pls. 52-56.
 - 1985 Tobacco Pipes of Corinth and of the Athenian Agora. *Hesperia* 54: 149- 203, Pls. 33-64.
- Rogan, E.
- 1999 *Frontiers of the State in the Late Ottoman Empire: Transjordan, 1850-1921*. Cambridge: Cambridge University Press.
- Schumacher, G.
- 1890 *Northern ‘Ajlun, “Within the Decapolis”*. London: Watt.
 - 1897 Das südliche Basan. *ZDPV* 20: 65-227.
 - 1913 Eine Wetterkatastrophe im Ostjordanland. *ZDPV* 36: 314-315.
- Shaqirat, A. S.
- 1988 *al-Masjid al-Zaydani fi Tubna*. Amman.
- Shindo, Y.
- 1996 Islamic Glass Bracelets Found in the Red Sea Region. *Annales du Congrès de l'Association Internationale pour l'Histoire du Verre* 13: 269-276.
- Simpson, S. J.
- 2002 Ottoman Pipes from Zir’in (Tell Jezreel). *Levant* 34: 159-172.
- Spaer, M.
- 1992 The Islamic Glass Bracelets of Palestine: Preliminary Findings. *Journal of Glass Studies* 34: 44-62.
- Spaer, M., Barag, D., Ornan, T. and Neuheus, T.
- 2001 *Ancient Glass in the Israel Museum: Beads and Other Small Objects*. Jerusalem: The Israel Museum.
- Steiner, M.L.
- 1997-8 The Excavations at Tall Abu Sarbut: a Mamluk Village in the Jordan Valley. *ARAM* 9: 145-151.
- Steuernagel, D.C.
- 1924-6 Der ‘Adschlun. *ZDPV* 47 (1924): 191-240; 48 (1925): 1-144 and 201-392; 49 (1926): 1-167 and 273-303.
- Tawalbeh, D. A.
- 2002 Islamic Settlement in Umm Qays (Gadara). *ADAJ* 46: 621-8.
- Tisserand, B.
- 2005 Les mosaïques de pavement au début de l’Islam, 3 vols. Unpublished Ph.D. dissertation, University of Paris I, Panthéon-Sorbonne.
- Toombs, L.E.
- 1985 *Modern Military Trenching and Muslim Cemetery in Field I Strata III*. Tell el Hesi: The Joint Archaeological Expedition to Tell el Hesi, Vol. II.
- Tushingham, A.D.
- 1985 *Excavations in Jerusalem 1961-1967, Vol. I*. Toronto: Royal Ontario Museum.

Walker, B. J.

- 2004 Mamluk Investment in Transjordan: A "Boom and Bust" Economy. *Mamluk Studies Review* 8.2: 119-147.
- 2005 The Northern Jordan Survey 2003 – Agriculture in Late Islamic Malka and Hubras Villages: A Preliminary Report on the First Season. *BASOR* 322: 67-111.
- 2007a Northern Jordan Project, 2006 Season: Preliminary Report on Fieldwork in Sahm and Hubras. Part of larger "Archaeology in Jordan". In C. Tuttle and B. Porter (eds.), *American Journal of Archaeology* 111.3 (July): in print.
- 2007b Peasants, Pilgrims, and the Body Politic: The Northern Jordan Project and the Landscapes of the Islamic Periods. Pp. 473-480 in T. E. Levy, P.M. Michèle Daviau, R. W. Younker and M. Shaer (eds.), *Crossing Jordan – North American Contributions to the Archaeology of Jordan*. Bedfordshire, UK: Equinox Publishing Ltd.
- 2007c The Role of Agriculture in Mamluk-Jordanian Power Relations. In "Proceedings of Roundtable on the Age of the Sultanates", B. J. Walker and J.F. Salles (eds.), *Bulletin des Études Orientales*, supplement 57. In print.
- 2007d Sowing the Seeds of Rural Decline?: Agriculture as an Economic Barometer for Late Mamluk Jordan. *Mamluk Studies Review* 11.1: 173-199.
- 2008 Rural Sufism as Channels of Charity in Nineteenth-Century Jordan. In N. Naguib and I.M.

Okkenhaug (eds.), *Interpreting Relief and Welfare Activities in the Middle East: 1800-2005*. Social, Economic and Political Studies of the Middle East and Asia. Leiden: Brill. In print.

n.d. (a) Imperial Transitions and Peasant Society in Middle and Late Islamic Jordan. *SHAJ* 10 (Forthcoming).

n.d. (b) Ottoman Wares from Northern and Central Jordan. In B.J. Walker (ed.), *Reflections of Empire: Archaeological and Ethnographic Perspectives on the Pottery of the Ottoman Levant and Beyond*. Annual of the American School of Oriental Research (Forthcoming).

Walker, B.J. and Kenney, E.

2006 Rural Islam in Late Medieval Jordan: NJP 2006 – the Mosques Project. *Newsletter of the American Center of Oriental Research* 18.2: in print.

Walker, B.J. and LaBianca, Ø.S.

2003 The Islamic *Qusur* of Tall Hisban: Preliminary Report on the 1998 and 2001 Seasons. *ADAJ* 47: 443-471.

Whitcomb, D.S. and Johnson, H.

1979 *Quseir al-Qadim 1978, Preliminary Report*. Cairo: American Research Center in Egypt.

1982 *Quseir al-Qadim 1980*. Malibu: Undena Publications.

Zevelon, U.

1978 The Pottery of Rashia el-Fukhar. Pp. 190-197 in S. Appelbaum (ed.), *Hermon and its Slopes*. Tel Aviv (in Hebrew).