THE MIDDLE ISLAMIC PALACE AT KARAK CASTLE: A NEW INTERPRETATION OF THE GRAND QĀ'A (RECEPTION HALL)

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Introduction

The archaeology of the Islamic periods in the lands of the eastern Mediterranean has received marked attention over the last few decades, resulting in fresh exploration and research, new knowledge, and a widening range of theoretical and methodological approaches. Within this practice, some topics long established in scholarly literature have received renewed attention. Among them, the wave of Muslim citadel and palace constructions that swept the Levantine landscape (Bilād ash-shām) from the 12th through the 14th centuries has re-emerged as an important focus of study. The recent and continuing documentation and study of the physical forms and socio-economic functions of palatial architecture in this era have been exceptionally fruitful. In this light, a re-consideration of the findings of the 1987 excavations in the Middle Islamic palace at Karak castle is appropriate and timely. The primary objective of this paper is to reassess the archaeological material associated with the construction of the grand $q\bar{a}$ (salon for reception and domestic life) of the palace, interpreted initially as a 14th century monument (Brown 1988a: 11; 1989a: 292; 1989b: 346), with attention to the apparent functions of the $q\bar{a}$ 'a, as indicated by the nature and sequence of the occupational remains. From a historical perspective, this approach casts light on the palatial complex at Karak, first as a consequence of the expansive palace-building tradition that shaped the medieval urban topography of Bilad ash-Sham, and second as a suite that was later adapted to new social circumstances during the Ottoman era. Prefacing these discussions are an overview of the historical trends that describe the changing roles and functions of Karak castle through the duration of the Ayyubid, Mamluk, and Ottoman periods, and an introduction to medieval references to palace constructions at this citadel.

Karak Castle and the Grand Qā'a of the Palace

The Frankish establishment of the mid-12th century hilltop castle was accompanied by the growth of an adjacent and dependent settlement, situated on the present site of the modern Jordanian town of Karak. The Frankish fortress site provided the structural base for the subsequent medieval Muslim castle of the late 12th through the 15th century. Over the course of the Ayyubid and early Mamluk periods, infrastructure continued to evolve as reconstructions were undertaken and major new features were added to the growing citadel, as well as within the prospering town. The structural remains of the multi-phase castle (Fig. 1) have been examined by several architectural historians (e.g. Deschamps 1939: 35-98; Biller, Burger, and Häffner 1999: 45-53; Korn 2004 [2]: 93-95; see also Kennedy 1994: 45-52; Raphael 2011: 163-72). Yet more study is warranted as adequate documentation has yet to emerge for a number of components, including corridors and chamber suites cleared in recent decades.

The fortress at Karak consists of an upper castle, which retains some Crusader constructions from between 1142 and 1188 (outer defenses, vaulted galleries, bakery, chapel and sacristy, etc.), and an extensive lower bailey attached beneath its western flank. The lower bailey is a post-Frankish construction, most likely of the Ayyubid period. Supported by a projecting defensive wall, this addition provided an open terrace suitable for military exercises, as well as substantial vaults on its upper level. Beneath the



1. Karak castle plan (adapted from Biller et al. 1999: 46, fig. 9).

terrace, the subterranean level includes the west castle entranceway (featuring a small portal set within a huge, yet superficial, external facade) leading to a substantial inner vestibule, designed as a grand $q\bar{a}$ 'a, and thence to stairs ascending to the open courtyard. Flanking this grand qā'a are large vaulted galleries, providing vast subterranean storage space. Each of these features was recorded during a 1929 expedition led by Paul Deschamps (1939: plans 1-2). Lorenz Korn's architectural assessment indicates an Ayyubid date for the lower bailey, perhaps as early as the 1190s' building campaign of al-`Adil I Sayf ad-Din (2004 [2]: 94). In the upper castle, the massive southern half-tower functioned as the master tower (tour maîtresse), which Deschamps described as a *donjon* (1939: 80). This is generally accepted as a Mamluk construction from the building campaign initiated by Sultan az-Zahir Baybars I in 1263. While most of the monumental inscription on the exterior face of this tower is illegible, Baybars is clearly named, and carved representations of his emblematic panthers frame either end of the dedication.

The upper castle also hosts a Middle Islamic palace, boldly indicated by the surviving grand $q\bar{a}$ (Fig. 2), an arrangement that lay at the heart of every palatial residence constructed during the Ayyubid and Mamluk periods in Bilad ash-Sham and Egypt (Tabbaa 1997: 84-92; David 2007: 54-65; Revault 1982: 34-125; see also David and Rousset 2008). Qā'a configurations were traditionally composed of a square, or approximately square, central court or $durq\bar{a}a$ that was flanked by *īwāns*. The iwans, which numbered between one and four, stood as chambers, or more modest alcoves (suffahs), with openings facing the durqā'a. Historical sources suggest that at least two medieval palaces with grand qā'as were built at Karak to accommodate the ruling elites, both of which would have been situated within the upper castle precinct. One of these is attributed to the mid-13th century rule of the Ayyubid prince an-Nasir Da'ud, while the other appears to have been patronized by Sultan an-Nasir Muhammad in the early 14th century of the Mamluk period (Ghawanimah 1979: 219). To date, only one grand $q\bar{a}$ has been ascertained within the ruins of the upper castle, and this was identified as a 13th or 14th century Islamic palace by architectural historians Terry



2. Plan of the grand $q\bar{a}$ 'a of the palace at Karak castle.

Allen and Colin H. Brooker (see Brown 1989a: 287; *contra* Deschamps 1939: 88).

The grand qā'a of the palace stands upon a low bedrock shoulder near the southern half tower. The plan displays a symmetrical fouriwan pattern in which the square durqā'a is faced by two large vaulted chambers on the north-south axis and two vaulted alcoves on the east-west axis (Fig. 2 - 4); see also Deschamps 1939: pl. XVII A). The qā'a is surrounded by additional chambers and corridor passages, yet a full plan of the palace configuration is not available as some areas remain inaccessible. Circulation was facilitated by two points of entrance that linked the $q\bar{a}$ 'a with other parts of the palace via throughways. These included a doorway at the northwest (fed by doorways from the ring corridor and north chamber) and a doorway at the southeast. Only one entrance would have been available to guests, however, and this may have been the northwest doorway that is used by visitors today (although the descending staircase linked to this doorway is a recent addition). The ring corridor skirting the $q\bar{a}$ a on its western



3. Grand qā'a of the palace, north iwan facade with triple entrance way. The central monumental doorway is flanked by two smaller doorways, both of which are now nearly entirely filled in with stone blocks, leaving only window-sized openings.



4. Grand qāʿa of the palace, east facade of the durqāʿa with the monumental iwan alcove (suffah) in the center of the tripartite facade. The alcove includes a central niche, the back wall of which is now broken through to the Early Islamic tower chamber modified for use as a mosque in the Middle Islamic period.

and southern sides was connected to it through arrangements of bent accesses approachable from the northwest entrance. The ring corridor

was also connected to the southeast entrance of the qā'a, although aspects of this relationship remain obscured by debris blockage. The full scope of the original palace complex would have reflected the objectives and assets of its patron, in addition to the availability of space and the natural contours of the site. The eastern extent was defined by the mosque, and perhaps the hall of rosettes. The western limit may have been defined by the ring corridor, but more likely by vaulted chambers extending along the entire western face of the ring corridor. The palace probably spread farther to the north and south as well, beyond what is clearly understood today. A connection to the southern defenses may have existed as well.

The primary activities in qā'a settings included formal audiences, social interactions, and family life that often involved sleeping arrangements as well as meal service (see Tabbaa 1997: 84; David 2007: 62-63; Ibrahim 1984: 47-55). In addition, the Middle Islamic qā'a compounds of Bilad ash-Sham typically granted access to an adjacent bath suite, as demonstrated in Avyubid palatial residences at the Aleppo Citadel - the main Ayyubid palace (Tabbaa 1997: 81; David 2007: 64, fig. 53, 65), Qal`at Sahyun (Grandin 2007: 163, figs 117, 135), and Harem (Gelichi 2006: 188, fig. 2, 194). Similarly, the bath at Qal`at Najm is located quite close to the palace complex (David 2007: 61, fig. 48, 64-65). Baths also appear in elite dwellings of the Mamluk period, as for example at Qal`at Sahyun (Grandin 2007: 163, fig. 135, 164) and Hisban (Walker and LaBianca 2003: 451-52, fig. 13). A bath has yet to be identified at Karak, but one may have existed. The palatial qā'as of Bilad ash-Sham typically also included, or provided access to, chambers designated as guard posts, as well as storage depots for various goods, such as weapons, commodities, and probably cash and valuables. Examples of these functions are indicated at the Aleppo Citadel - the main Ayyubid palace, where the arsenal was probably situated south of the larger qā'a (Tabbaa 1997: 78, 81). At Hisban, weapons, luxury ceramics, metal bowls, and highly valued commodities were kept in a storeroom next to the $q\bar{a}$ 'a of the 14^{th} century Mamluk governor's residence (Walker and LaBianca 2003: 449-51). At Karak, storage facilities are also indicated within or near the $q\bar{a}$ 'a, as described in more detail further in this text.

Religious practice is also evident at Karak. A private mosque, distinguished by a *mihrāb* cut into the south wall and indicating the direction of prayer (*qibla*), stands adjacent to the qā'a (**Fig. 2**); originally this chamber constituted the interior of an Early Islamic tower, which may have been raised during the Jarrahid interlude of 981-982 (see Biller *et al.* 1999: 48-49; Bianquis 1986-1989 [1]: 141-42). Overall, the palace configuration at Karak closely replicates design conventions and functional purposes displayed in royal palaces and elite residences throughout the Muslim Levant and Egypt, in which the versatile qā'a theme was the key organizing principle.

The subterranean aspect of the qā'a at Karak deserves comment, for access to the palace complex is only possible today by a stairway descending from the upper ground level (see Deschamps 1939: pl. XV A-B; the square opening in the lower left shows the upper courses of the durgā'a). Here there are two points of clarification. First is that the elevation of bedrock within the confines of the upper castle varies considerably, with the $q\bar{a}$ a resting upon a relatively low outcrop. Second is that the current upper ground level, which facilitates pedestrian traffic, stands above an artificial earthen fill. This massive leveling fill, which embedded parts of the palace complex and numerous other structures, created what was once a reasonably stable and open area (ibid. pls XV-XVI). The fill was probably inserted during the final Ottoman occupation of the castle that began in 1893, for travelers to Karak noted that Ottoman conscripts were engaged in massive earth moving works within the castle (Libbey and Hoskins 1905: 346; Brünnow 1895: 70; Bliss 1895: 219; Dowling 1896: 330, 332). Some of the filled-in areas of the upper castle have been recently cleared of debris, yet portions of fill remain in the areas to the north, west, and south of the palace $q\bar{a}$ 'a.

Karak during the Middle and Late Islamic Periods

Karak held a prominent position within the Transjordan realm during both the Middle Islamic (1100-1516) and Late Islamic (1516-1918) periods, particularly in relationship to

regional socio-economic trends and broadly influential political transitions (e.g. Johns 1992, 1994; Lancaster and Lancaster 1995; Milwright 2008: 25-134; Rogan 2002: 29-32, 52-55, 238-39; see also Walker 2011: 45-83, 86-101). The principal themes and events briefly introduced here situate the castle, its palace tradition, and its archaeological profile within the prevailing social and cultural spheres of the time. While political history does not account for or explain the full scope of Karak's experience between the late 12th and the early 20th century, it offers a framework for describing the roles and uses of the castle that consists of four general stages. From the late 12th through the 14th century, under Ayyubid and early Mamluk rule, Karak was strategically valued on the imperial level and its status was enhanced through royal patronage. From the 15th to the 16th century, under late Mamluk and early Ottoman rule, Karak represented a provincial citadel-town with a role in regional administration. From the 17th through late 19th century, Karak was a small town center within the largely autonomous frontier region of the southern highlands - a territory ruled by tribal coalitions. From the late 19th century through the early 20th century, Karak was reintegrated within the imperial Ottoman domain as an important garrison town for regional administration. Pertinent aspects of these historical stages are described below.

Karak and its companion castle at Shawbak were important objectives of Ayyubid penetration into southern Transjordan and both were immediately absorbed as key strategic assets following the Crusader defeat at the battle of Hattin in 1188. This territory passed as $igt\bar{a}$ to a succession of Ayyubid princes (1188-1263) who implemented repairs and patronized new constructions at Karak, while also demonstrating their confidence in its secure position by installing treasuries within the fortress (see Korn 2004 [2]: 93-95; Milwright 2006: 5, 11, 13). Yet most of the Ayyubids who held title to Karak kept primary residences elsewhere, typically in the more urban centers of Cairo, Damascus, or Jerusalem, while leaving provincial administrative duties to their appointed representatives. Exceptionally, an-Nasir Da'ud kept his principal residence at Karak, while ruling southern Transjordan as an independent principality (r. 1229-1249). The

Ayyubid claim to Karak grew increasingly insecure, however, as a result of the 1250 Mamluk political and military coup in Cairo and the Mongol advance into the southern Levant led by Hülegü Khan in 1260. Ultimately, Sultan Baybars I deposed the entitled Ayyubid prince, al-Mugith `Umar, thereby ushering Karak and its territories into the Mamluk domain in 1263.

Over the course of the Mamluk period (1263-1516), Karak's stature shifted from that of a prominent player within the wide arena of imperial priorities and events to that of a more narrowly defined and regionally focused administrative node. The early Mamluk era (through the end of the 14th century) brought prosperity to Karak as it garnered imperial favor and patronage, and its hinterlands attracted elites seeking investments in rural production (Milwright 2008: 78-93; Walker 2011: 86-105). In this period, Karak was recognized as an important imperial storage depot, continuing a role established under the previous era of Ayyubid rule. With the institution of Mamluk authority in 1263, Baybars I distributed as largesse the valuables that had been stored by al-Mugith `Umar. He then inspected and stocked Karak's granary, established a substantial treasury and armory, and supplied the castle with new stores of valuables, such as fabrics, while at the same time installing royal flocks in the countryside (al-Zahir, in Sadeque 1956: 181). Through these efforts, combined with a major building campaign, Baybars I gained a formidable stronghold that embraced a plentiful supply depot. Subsequently, Karak continued to flourish under the Qala'unid dynasty (1279-1382), benefiting from close cultural, political, and economic ties with Cairo. It was not unusual for sultans, heirs to the throne, and high ranking amīrs to frequent Karak and its region for the purpose of maintaining political and economic ties, while also engaging in social activities, such as sport hunting. In this era, the fortress also provided an imperial prison and place of exile for political contenders who had been banished from Cairo. In 1311, Sultan an-Nasir Muhammad glorified Karak by patronizing new facilities, among them a bath, a caravan hostel fountain, hospital, parade ground, mosque, religious school, and palace (al-Asqalani 1973: 317). Yet fortunes shifted as Karak's prestige and imperial favor diminished after the 1390-1399 reign of Sultan az-Zahir Barquq.

Under the late Mamluk rulers of the 15th century, the eclipse of Karak's political and economic significance within the imperial realm signaled a broader transition across the southern highlands and the rest of Transjordan, as profound socio-economic transformations were underway. These changes were linked to shifts in Mamluk administrative and military policies, including the dissolution of the iqta' system of land distribution and the growing privatization of former state lands (Walker 2011: 233-71). Increasingly marginalized from the state, the economic and cultural patterns of 15th century Transjordan were more localized. Despite greater isolation, Karak remained a provincial seat hosting regional governors who were appointed by the sultan and supported by the military (al-Bakhit 1992: 50-60).

The early 16th century Ottoman administration of Karak introduced a new imperial authority and accompanying soldiery. Initially, socioeconomic conditions in southern Transjordan appear to have remained much the same as in the prior century (Walker 2011: 273-74; 2009: 40-41). Yet Ottoman authority soon weakened in the Karak region and its virtual dissolution in the early 17th century led to localized decision-making among semi-independent or fully autonomous leaders and their tribal coalitions (see Peake 1958: 188-91: Milwright 2008: 50-51). With this transition, the castle shifted from a node of imperial Ottoman administration to a less formal resource whose functions lay at the discretion of the people of Karak and its vicinity. It was clearly no longer a seat of regional political authority, for prevailing tribal influence was not dependent on control over a local citadel or similar infrastructure. There are few specifics regarding the use of the castle in the mid- and late Ottoman centuries, but one mid-18th century chronicler referred to it as "... in a dilapidated condition and used by the bedouin for shelter" (al-Wakil, in Rafeq 1966: 228). Such informal activities within the castle appear to have continued through most of the 19th century, at which time the leading al-Majaly tribe exerted its greatest influence over the region. A comment by the passing traveler Theodore Dowling asserts that Karaki tribes kept stolen animals and goods within the castle prior to the 1893 reintroduction of Ottoman rule (1896: 326). This hearsay remark, perhaps referring to property acquired during raiding campaigns, implies that the castle had provided secure housing for livestock and quantities of storable commodities or other items. It appears that family units also occupied the castle interior during these centuries, establishing village-like social environments, as was the practice at Ajlun and Shawbak castles (Burckhardt 1822: 267, 416-17; Brown 1988b: 227, 237, 240).

In 1893, Karak resumed its former role as a district center under Ottoman authority. While a new administrative bureau was constructed in the town, the castle housed cavalry horses and a garrison of some 1,200 to 2,000 Ottoman troops, most of whom were Palestinian and Circassian conscripts (Libbey and Hoskins 1905 [1]: 346). Among other duties, the soldiers were tasked with moving substantial amounts of earth and debris within the castle, as indicated above. It appears that at this time portions of the palace were infilled and the descending stairway was inserted to access the qā'a, which remained open. The Ottoman authorities used the qā'a, at least periodically, as a prison (*sijin*).¹ In its modified subterranean condition, the qā'a was well suited to enforcing confinement, particularly as only one passage for entrance and exit remained open. Elsewhere in the castle, a few new constructions were raised during this last occupation, but these were removed in 1925 (Key, in Lee 2003: 8).

Royal Palace and Grand Qā'a Constructions at Karak

The scattered historical references to royal residences at Karak are both informative and enigmatic. Fortunately, insights on this topic are offered by historians Yusuf Darwish Ghawanimah (1979: 219) and Bethany Walker (2011: 87-89). It is evident that Karak accommodated multiple structures built in the palatial style during the Ayyubid and Mamluk periods, yet the texts lack clarity with respect to the sequence and scope of these monuments, as well as the relationships among them. A $Q\bar{a}$ a an-Nāṣiri or Nasirite Qā'a is attributed to the Ayyubid prince

an-Nasir Da'ud, who resided primarily at Karak during his autonomous tenure over Transjordan (1229-1249). This hall played significant practical and symbolic roles when the Mamluks seized Karak from al-Mugith `Umar, the last Ayyubid prince to hold title to the castles of southern Transjordan. Arriving in Karak in 1263, the conquering Sultan Baybars I occupied the citadel (*hisn*) and held court in the $Q\bar{a}$ 'a an-Nasiri, while establishing his administration over the region (al-Zahir, in Sadeque 1956: 179). Additionally, an-Nasir Da'ud is credited with having raised a residence of authority ($d\bar{a}r$ as-sultāna) at Karak, which was known as the Dār as-Sa`āda or House of Prosperity. The Dar as-Sa`ada and the Qā'a an-Nasiri probably comprised a single palace complex, and these facilities eventually accommodated a succession of governors appointed to the citadel by the Mamluk sultans (Ghawanimah 1979: 219). An-Nasir Da'ud also possessed an extramural suite (*jawsaq*) for housing guests, which was located in the valley below the castle; here Ibn Wasil and his party were given lodgings during a visit to Karak in 1231-1232 (Ibn Wasil 1972: 330).

During the Mamluk period, royal patronage of civil and religious monuments at Karak was closely associated with an-Nasir Muhammad. The suite of facilities commissioned by this enthusiastic sultan in 1311 embellished the castle and town, showcasing Karak's status within the imperial circles of that time. A palace (qasr) was included among his works (al-Asqalani 1973: 317). This configuration was apparently known as (or included within it) the $Q\bar{a}a$ an-Nahās or Hall of Copper, which would have accommodated the sultan during his visits and domiciled his resident sons who were sent to Karak for their education (Ghawanimah 1979: 219; Walker 2011: 87-89). By virtue of its name, the Qā'a an-Nahas presumably displayed highly accomplished metalwork – as decorative features or objects of copper or bronze - probably produced with raw material extracted from copper mines operating in the Faynan region south of the Dead Sea (see Jones, Levy, and Najjar 2012: 70, 72). Toward the close of the 14^{th} century, Sultan az-Zahir Barquq resided within the Hall

^{1.} This function was related by elders at Karak in 1987, but other parts of the castle could have been used for

similar purposes (see comments by Ginsburg 1873: 216; Forder 2002: 112-13).

of Copper while exiled to Karak castle during his 1389 interregnum. This qā'a was noted for its windows opening toward Jerusalem and Hebron (Ibn al-Furat 1936: 138), attributes that imply a prominent west façade, which perhaps also contained a portal. Multi-storied dwellings with upper level windows offering landscape views were characteristic of Mamluk residences, and while the windows of the Hall of Copper might suggest a position at or near the western edge of the upper castle, this is not necessarily the case.

Despite many unanswered questions, it appears certain that multiple palatial residences functioned simultaneously at Karak during the Mamluk period, housing various elite castle dwellers and visitors, and these may have stood largely independent of one another. With respect to the surviving grand $q\bar{a}$ in the upper castle, the apparent lack of fenestration is noteworthy. While one might conjecture an erstwhile second story with a west facing gallery having once been structurally associated with the $q\bar{a}$ 'a in some manner, there are no real indications of such. Presently, and taken at face value on this basis, the surviving $q\bar{a}$ appears to be a most suitable candidate for the Ayyubid Qā'a an-Nasiri of the second quarter of the 13th century.

The qā'a concept provided an essential and central feature of royal and elite residences throughout Middle Islamic Bilad ash-Sham and Egypt, yet it also appears frequently in other architectural forms, particularly religious schools (madrasas), but also baths (hammāms) and hospitals (māristāns). At Karak, there are two standing qā'as in addition to the grand qā'a of the medieval palace. One is the aforementioned grand qā'a within the subterranean level of the lower bailey (Fig. 5), an addition to the castle that probably dates to the Ayyubid period. This truly magnificent inner vestibule at the heart of the gate complex consists of two iwans (on an east-west axis) flanking the durqā'a through which entering visitors or residents passed in order to reach the vaulted staircase ascending to the open terrace on the upper level (Deschamps 1939: plan 1, pl. XXIV A; also in Brown 1988a: 289, fig. 2). Most impressive is the lofty pendentive dome above the durq \bar{a} 'a, featuring a drum base encircled with a broad band of muqarnas. The floor plan of this $q\bar{a}$ 'a is approximately the same size as that of the grand $q\bar{a}$ in the upper



5. Grand qā'a within the west castle entrance complex, situated in the subterranean level of the lower bailey (adapted from Deschamps 1939: plan 1).

castle palace, yet very different spatial arrangements and styles of masonry were employed in the construction of these two suites. The second additional example is a small two-iwan qā'a situated directly north of the hall of rosettes (Fig. 1); unfortunately no drawing of this feature has been published. Apparently a reception area, this qā'a appears to have provided a modest inner vestibule linked to a palatial suite of some sort, or possibly a bath facility. Its striking elegance in design and execution implies no less than a reception chamber in the service of the royal family. The two vaulted iwan alcoves (on a north-south axis) flank a small durqā'a. The northern alcove hosts a plaque engraved with a geometric rosette pattern, and its floor block once accommodated a water fountain that presumably discharged water into a small pool nearby (Fig. 6). The southern alcove likely also held a matching or similar plaque that has since been dislodged. The fine finished masonry of both alcoves is complemented by alignments of muqarnas cells set in vertical panels (**Fig. 6**). At some point, however, the floor of the south iwan was removed and replaced by a descending stairway leading into the hall of rosettes; originally a Frankish chamber that incorporated an Early Islamic defensive wall (Biller *et al.* 1999: 48-49). This staircase linked the reception area of the small $q\bar{a}$ 'a to the grand $q\bar{a}$ 'a of the palace via the hall of rosettes and its doorway (now blocked) leading into the north chamber (**Fig. 2**).

The date of the small reception area is undetermined, yet its remarkable elegance stands in sharp contrast to the grand $q\bar{a}$ 'a's rough masonry, which was originally hidden behind finished surfaces of plaster. This stylistic divergence indicates that the small $q\bar{a}$ 'a was not constructed as part of the same building program as the grand $q\bar{a}$ 'a of the palace. Future research on



6. Small qā'a reception area in the upper castle, view of the north iwan.

the rosette panel, mugarnas, and fountain will certainly provide greater insights. Presently, it may be useful to point to the close affinity between the rosette panel at Karak and the carved panels situated directly above two lintels in the 1352-1353 turba of Turkan Khatun in Jerusalem (Burgoyne 1987: 323, pl. 28.1). Nevertheless, the question remains open as to whether the rosette panel is original to the construction of the north iwan. As the graceful integrity of the small qā'a was destroyed by the modification of the south iwan, that adaptation signaled an end to the original social functions and intentions of this reception area, as superseded by a new priority in establishing a direct connection to the palace and its grand qā'a. Presently, one might speculate that this transition in the way in which the reception area was valued took place toward the later Mamluk or early Ottoman eras.

The historical references and structural remains discussed above are important illustrations of Karak's status as a seat of royal presence and administration during the Middle Islamic period. As a royal citadel, Karak boasts repeated applications of the quintessential qā'a concept, a hallmark of the Middle Islamic architectural tradition throughout the Muslim eastern Mediterranean region. Moreover, the expressions of this theme at Karak display both predictable continuities and marked individuality. The following section considers the grand qā'a of the palace from another perspective, as described by the archaeological finds.

Summary of the Excavation in the Grand Qā'a of the Palace

The 1987 excavation in the grand qā'a of the palace was a preliminary investigation with limited objectives to define the stratigraphic sequence and describe associated material remains. The project was conducted by the author in collaboration with architectural specialists Colin Brooker and Ruba Kana'an, faunal analyst Kevin Rielly, and Department of Antiquities representative Nabil Beqa'in. The principal findings including the occupational deposition and ceramic groups, are presented in detail in the field reports (Brown 1988a, 1989a). The faunal report offers further information on the functions of this core area of the palace (Brown and Rielly forthcoming), and a summary of these

animal bone findings is presented here.

The sounding conducted in the south iwan of the qā'a (along the west wall, 4.2 m northsouth x 2.0 m east-west) showed that the walls were set upon bedrock (Figs. 7 - 8). Above the bedrock, the founding soil layers supported the original plaster floor, a large portion of which remained intact. The soil and debris accumulations above the floor level represented two occupation phases, which were described in the field reports as Phase I dating to the Mamluk period and Phase 2 representing the Ottoman era (Brown 1989a: 292, 294-95; 1988a: 12-16). Significantly, this paper offers a refinement in phasing terminology, as well as a review of selected artifacts from the construction debris beneath the plaster floor. While the artifacts are discussed more fully below, the salient points are introduced here. Most noteworthy, a poorly preserved coin that was initially interpreted as a 14th century Mamluk issue has been re-examined and found, conclusively, to be pre-Islamic. With respect to ceramic indicators, the latest datable sherds belong to a single 12th century stonepaste vessel that would have been traded into Karak during the Frankish or early Ayyubid occupation at the site. Thus, on the basis of the artifacts, it remains an open question as to whether the palace was constructed during the Ayyubid period (1188-1263) or the Mamluk era (1263-1516).

In light of this now clear possibility of an Ayyubid date for the palace, the construction and sub-floor level fills are redefined as Phase



7. South iwan excavation in the palace $q\bar{a}$ 'a, east balk section.



8. South iwan excavation in the palace $q\bar{a}$ 'a, west balk section.

1a, whereas the Mamluk era accumulation of earth and artifacts above the floor are redefined as Phase 1b. It should be emphasized, however, that this refinement in phasing terminology does not alter the original dating and analysis of the Mamluk and Ottoman deposits overlying the floor, which constitute the greater majority of the excavated material and of the initial reporting. As previously described, the ceramics from the Phase 1b deposit are typical of the 13th through 15th century, while those from the following Phase 2 include types that are characteristic of the Ottoman period, among them being examples that appear most indicative of the 18th and 19th centuries (Brown 1989a: 295-97).

As described in the field reports, the Middle and Late Islamic pottery corpus includes four type categories (for distributions of pre-Islamic wares see Brown 1989a: 295, Table 2). Among them are unglazed wheel-thrown cream wares with white, buff, and / or pink colored surfaces, and wheel-thrown glazed wares. These vessels were produced by specialist potters using specialized technologies for production, firing, and surface glazing, and show sophistication and standardization of manufacture through the Middle and Late Islamic periods. Handmade wares, some of which were painted with geometric or linear patterns, appear to have been

produced and marketed by skilled specialist potters as well, although these practitioners were less dependent on the use of specialized technologies (see Johns 1998: 70-71). While this appears to have been the case during the Middle Islamic period, the quality of production diminished among handmade wares of the Late Islamic period, suggesting that in this period much handmade pottery was fashioned by semiskilled potters (likely including part-time and / or seasonal workers), using local materials and perhaps producing wares from household industries for local exchange. Fragments of large storage jars $(z\bar{\imath}rs)$ that typically display handcoiled bodies and handmade or wheel-thrown necks represent a fourth group.

Sherds from all four ceramic categories occurred within each phase (no whole vessels were retrieved), as shown in **Tables 1 - 2**. The distributions of sherds within each ceramic type are recorded in **Table 1**. This chart shows that nearly half of the total assemblage belongs to wheel-thrown cream wares, and that storage jar fragments account for over a quarter of the total. Differences between the phases are also clear. Most of the sherds from storage jars, wheelthrown cream wares, and wheel-thrown glazed wares (ranging between 82.8% and 69.0%) occurred in Mamluk Phase 1b contexts. In con-

Phase	Locus	Handmade (w/ some painted)		Wheel-made Cream (unglazed)		Wheel-made Glazed		Storage Jar (zir)	
		No.	%	No.	%	No.	%	No.	%
1a	K1.7; K.8	11	14.5	17	7.3	3	7.1	17	12.7
1b	K1.4	8	10.5	171	73.1	29	69.0	111	82.8
2	K.1.1; K1.2; K1. 3; K1.5	57	75.0	46	19.6	10	23.8	6	4.5
&]	Sub-Totals Percentages by Type	76	15.6%	234	48.1%	42	8.6%	134	27.6%
Grand	Fotal = 486 sherds		1		1	<u>.</u>	1		

Table 1: Middle and Late Islamic ceramic type distributions across all phases (with column totals and percentages).

Notes: Adapted from Brown 1989a: 295, table 2; 296, table 3. All 3 sherds in the Phase 1a Wheel-made Glazed category belong to an imported, lustre-painted stonepaste bowl.

Table 2: Middle and Late Islamic ceramic type distributions within each phase (with total sherds per p	hase and
row percentages).	

Phas	Locus	Handmade (w/ some painted)		Wheel-made Cream (unglazed)		Wheel-made Glazed		Storage Jar (zir)		Total Sherds per Phase	
		No.	%	No.	%	No.	%	No.	%	No.	
1a	K1.7; K.8	11	22.9	17	35.4	3	6.2	17	35.4	48	
1b	K1.4	8	2.5	171	53.6	29	9.1	111	34.8	319	
2	K.1.1; K1.2; K1. 3; K1.5	57	47.9	46	38.7	10	8.4	6	5.0	119	
	1	1	II	Grand	Total = 4	86 sherds	1	1	1		
	Adapted from y belong to ar						ds in the P	hase 1a W	heel-made	e Glazed	

trast, three quarters of all handmade sherds in the assemblage belonged to Ottoman Phase 2 contexts. TABLE 2 shows the relative distributions of these same ceramic types as they occur within each phase.

The sources of the pottery retrieved in excavation cannot be confirmed at present, yet much of it was probably produced in or near Karak. Historically, manufacturing of handmade vessels may have been undertaken by itinerant potters and / or by potters at any number of local workshops serving markets in nearby towns. By the later Ottoman centuries, less specialized household or village production appears to have been common in the southern Levant (Johns 1998: 83; Walker 2009: 55-56). Some manufacturing of plain and lead glazed wheelthrown wares is likely to have taken place in or near Karak during the Middle Islamic period as well (Milwright 2008: 248), and this practice may have endured through the first century of Ottoman rule or beyond. However, use of both wheel-thrown wares and the largely handmade storage jars decreased over the course of the Ottoman period in southern Transjordan, suggesting a combination of lesser availability and lower demand for these products.

The stratigraphic outline below, which is excerpted from the field reports (Brown 1988a,

1989a), facilitates a discussion of the construction and subsequent uses of the palace $q\bar{a}$ 'a.

Phase 1a: Construction of the Qā'a

- Features included two sub-floor layers of leveling fill (K1.8, K1.7) beneath a thick plaster layer (K1.6) that was the original floor or bedding for a floor of paved stone.
- The few Islamic era artifacts from fill layers beneath the floor included undiagnostic cream ware body sherds and three adjoining sherds from the base of an imported, luster painted, stonepaste bowl or plate of the 12th century (Figs. 9 - 10). Also present were Nabataean, Hellenistic, Roman, Byzantine, and earlier pottery fragments, as well as a Seleucid coin.
- Chronology: the artifacts retrieved shed little light on the date of the qā'a. The lustre-painted, vessel fragment of the 12th century refers to either the Frankish presence at the castle (1142-1188) or the early decades of the subsequent Ayyubid occupation.

Phase 1b: Mamluk Period Occupation in the $Q\bar{a}$ 'a

• The principal feature was occupation ac-



9. 12th century lustre-painted bowl base, profile.



10. 12th century lustre-painted bowl base, photo.

cumulation (K1.4) overlying the original plaster floor of Phase 1a.

• The ceramic fragments are typical of 13th through 15th century deposits and consist of local and imported monochrome glazed and slipped wares, wheel-thrown cream wares, storage jar fragments, and handmade coarse wares - some of which display decorative paint (Brown 1989a:

295-97, 300-302, figs 5-7). Imported ceramics include sherds from Syrian blue and white glazed vessels that are well documented in 14th and 15th century contexts. This range of ceramic types is similar to that of Phase III at Shawbak (Brown 1988b: 232, 237).

 Chronology: the post-construction occupation debris is characteristic of the 14th and 15th centuries, with some earlier material.

Phase 2: Ottoman Period Occupation in the $Q\bar{a}$ 'a

- Features included a packed earth surface with an overlying fill (K1.3) cut by two later pits (K1.2, K1.5). Above these, and just below topsoil, lay a cobble pavement (K1.1). The pavement may be associated with refurbishing activities of the late 19th and early 20th century.
- The ceramic assemblage includes the same range of types as in Phase 1b, but demonstrates a sharp increase in the proportion of sherds from handmade vessels as well as a sharp decrease in storage jar fragments. The Phase 2 handmade pottery forms are typical of the Ottoman period, and some fragments indicate a relatively late range within the 18th and 19th centuries (**Fig. 11, Table 3**; Brown 1988a: 25-26, 38, fig. 7).
- Chronology: the ceramics confirm the reuse of the $q\bar{a}$ 'a during the Ottoman era. The Phase 2 accumulation appears to have extended at least to the mid-19th century. It is possible that the most recent accumulation was swept away in tidying up efforts during the first half of the 20th century.

Phase 1a: Construction of the $Q\bar{a}$ 'a

As indicated above, the construction date of the $q\bar{a}$ 'a has yet to be ascertained with certainty. Of the Phase 1a artifacts from the fills beneath the original plaster floor, it should be emphasized that the damaged copper coin from a sealed deposit (K1:7) has been reassessed. The initial numismatic study concluded that the coin was a Mamluk issue of the 14th century (see Brown 1989a: 294). As this determi-



11. Ceramics from Phase 2, the Ottoman era occupation.

 Table 3: Ceramics from Phase 2, ware descriptions.

III. No.	Square, Locus, Pottery Basket & Reg. No.	CERAMIC DESCRIPTIONS Form, Ware, Surface & Core							
1	K1:3.3.122	Bowl rim (Wh): W = pinkish (5YR 7/4-7/6); I&EG = dark green; C = none; D = 33							
2	K1:3.3.150-52	Bowl rim (Wh): W = whitish stonepaste (10YR 8/2); E&IP = dark cobalt blue; I&EG = colorless, over paint; C = none; D = 15							
3	K1:3.3.14	Jug/Jar rim (Wh): W = pinkish cream (7.5YR 7/4); SS; C = none; D = 6							
4	K1:3.3.39	Jug/Jar rim (Wh): W = cream (10YR 8/2); SS; C = none; D = 5							
5	K1:3.3.112	Jug/Jar rim (Wh): W = cream (10YR 8/2); SS; C = none; D = 5							
6	K1:3.3.80	Jug/Jar base (Wh): W = dark pink (2.5YR 6/6); SS; C = none							
7	K1:3.3.34	Jug/Jar base (Wh): W = pink (E = 5YR 7/4; I = 7.5YR 6/2-7/2); SS; C = thick, grey							
8	K1:3.3.76	Jug/Jar handle (Wh): W = cream (2.5YR 8/2); SS; C = thick, pink							
9	K1:3.3.100	Jug/Jar handle (Wh): W = cream (10YR 8/2); SS; C = none							
10	K1:3.3.101	Jug/Jar handle (Wh): W = cream (10YR 8/2); SS; C = none							
11	K1:3.3.149	Bowl BS (Wh): W = whitish stonepaste (10YR 8/2); E&IP = dark cobalt blue; I&G = colorless, over paint; C = none							
12	K1:3.3.127	Jug/Jar BS (HM): W = pinkish grey (7.5YR 6/2-7/2); ES = cream (10YR 8/3); EP = brown (5YR 5/2); C = grey; some chaff inclusions							
13	K1:3.3.55	Jug/Jar BS (HM): W = light red (5YR 6/4); ES = dark cream (7.5YR 8/4); EP = brown (7.5YR 5/2); C = thick, black							
14	K1:3.3.94	Jug/Jar BS (HM): W = pink (5YR 7/4); ES = cream (10YR 8/4); EP = brown (2.5YR 4/4); C = none							
15	K1:2.2.16	Hole-Mouth Jar rim (HM): W = dark grey (10YR 3/2); ES = dark cream (10YR 7/3); EP = red-brown (2.5YR 5/4); C = thick, grey; chaff inclusions; D = 13							
16	K1:2.2.18	Bowl or Jug/Jar base (HM): W = red-grey (10YR 4/2); SS; EP = traces of red (2.5YR 5/5); C = thick black							
17	K1:2.2.21	Jug/Jar BS (HM): W = pink (5YR 7/4); ES = cream (10YR 8/2); C = thick, dark grey; some chaff inclusions; raised bands with impression							
18	K1:2.2.22	Jug/Jar BS (HM): W = grey-brown (7.5YR 5/2); ES = dark cream (7.5YR 6/4-7/4); EP = grey-brown (5YR 4/3); C = very thick, black; very little chaff							
19	K1:2.2.20	Jug/Jar BS (HM): W = pink (5YR 7/4); ES = dark cream (5YR 7/3); EP = dark red (10R 5/3) & an incidental drip of black; C = thick, black; some chaff inclusions							
20	K1:1.1.39	Jug/Jar base (HM): W = pinkish cream (7.5YR 7/4); SS; C = very thick, black; some chaff inclusions							
21	K1:1.1.42	Jug/Jar BS (HM): W = red (2.5YR 6/4); ES = pink-cream (5YR 7/4-8/4); EP = black (5YR 5/1); C = very thick, black; chaff inclusions							
•	•	= core; D = diameter; E = exterior; G = glaze; HM = handmade; I = interior; P = paint; S = = ware; Wh = wheel-thrown (or belonging to a wheel-thrown vessel)							

nation seemed to eliminate the possibility of a 13th century construction date, it appeared that the palace qā'a was likely to have been constructed under the patronage of Sultan an-Nasir Muhammad in 1311 (ibid. 292). The author is especially grateful to numismatist Stefan Heidemann of the University of Hamburg for recently undertaking a second examination of the coin. While noting that the poorly preserved coin has features that might suggest a 14th century Mamluk origin, Heidemann determined that it represents a Seleucid issue from between the second and first century BC (personal communication, 2010).² The coin is therefore irrelevant to the founding date of the Middle Islamic palace qā'a. Rather, it is consistent with the sub-floor level Classical and Late Antique pottery fragments that reflect occupation at Karak during the pre-Islamic centuries.

Aspects of the Phase 1a ceramic profile refer to the medieval cultural environment of the castle. Whereas the Islamic era sherds from this sub-floor context are generally small and of little diagnostic value, one exceptional fragment is composed of three adjoining sherds from the base of a lustre-painted stonepaste bowl or plate of the 12th century (Figs. 9 - 10). Lustre-painted stonepaste wares are rare at Karak and no other examples were retrieved during the excavation, which yielded a total of forty-two sherds (from all phases) belonging to glazed vessels (Table 1). More notable, however, is the near absence of lustre-painted ceramics within the large unstratified assemblage of Middle Islamic glazed wares from the castle. Collected during a regional survey (see Miller 1991: 89, no. 204), this assemblage includes 2,747 sherds with lead or alkaline glaze, as determined by Marcus Milwright (2008: 274, table 1). Within this group are 876 alkaline glazed sherds from stonepaste vessels, most of which were interpreted as Damascene products from the mid-13th century onward (ibid. 207-208, 252, 372-83, catalogue pages 25-36). Only two of these stonepaste sherds represent lustre-painted vessels, and Milwright dated these to 1175-1225 (ibid. 254, 338, 383, catalogue page 36: 4).

Research on Islamic lustre-painted wares from Levantine sites has grown markedly since the 1987 excavation at Karak. The author is particularly grateful to Stephen McPhillips of the University of Copenhagen and Robert Mason of the Royal Ontario Museum, each of whom examined the Phase 1a lustre-painted base and offered valuable insights; the discussion below draws on their expertise. The stonepaste base fragment belonged to a wedge-footed bowl or plate and displays a colorless alkaline glaze with a light greenish tinge (indicating the presence of iron oxide). An incidental drop of cobalt is also evident. The over glaze, lustre-painted decoration features a schematized floral design executed as a roundel encircling the bottom of the bowl's interior (Figs. 9 - 10). The dark brown tone of the paint indicates a copper-rich pigment that is typical of Syrian alkaline glazed and lustre-painted wares from the second quarter of the 12th century through the beginning of the 13th century. The relatively coarse granular paste of grey-white color is also familiar in this period.

Ceramic assemblages from the Syrian-French excavations at the citadel in Damascus demonstrate that this city was a major center of innovation in manufacturing technologies, and that it hosted a growing stonepaste ware industry from the late 11th century through the 12th century (McPhillips 2012: 448-49, 455-56, 459). The new typology of Damascene stonepaste wares is largely based on stratified collections from between the fourth quarter of the 11th century and the first decade of the 13th century, with additional material from contexts dating to the first half of the 13th century (McPhillips 2002: 140-41, 2012: 451-52). As a production center relatively close to the towns of southern Transjordan, Damascus probably supplied much of the stonepaste found in this region (Milwright 2008: 252). In the citadel assemblage, McPhillips dis-

^{2.} The flan was prepared from a flattened cast copper bar, from which slightly rectangular pieces were cut, flattened, and struck. This flan preparation is typical of some 14th century Mamluk coins, yet several features indicate a Seleucid origin. The initial bar was produced in an open mold giving the coin's cross section a slightly trapezoid shape, whereas the cross section of a Mamluk coin is usually that of a flattened ellipse. The bulge on

the obverse is too high for a Mamluk issue, but it could indicate a portrait head. The plain field in front of it is typical of Seleucid portrait coins, whereas traces of an inscription or a marginal circle are expected on Mamluk coins. The reverse shows parallel lines from the right, probably representing a galley prow. Traces of a Greek inscription are above it, with the apparent final letters of (...)OY (Heidemann, personal communication 2010).

tinguished between stonepaste wares emerging in the late 11th century and continuing through the mid-12th century (Seljuk and Burid eras) and those of the second half of the 12th century (Zangid and early Ayyubid periods), noting that the latter show: more standardized production, relatively thick-walls (among bowls) and duller, friable fabrics (2012: 456). Although stonepaste sherds displaying the technologically sophisticated technique of metallic lustre paint are infrequent, they occur throughout the 12th century at the Damascus citadel, and examples of brown lustre-paint over green-tinted colorless glaze are attested (McPhillips 2002: 142, table 1.2, 2012: 456, 458; see also François 2008: 73-75).³

The lustre-painted stonepaste bowl from Phase 1a at Karak was probably a Damascus product from between the second quarter of the 12th century and the early 13th century. As such, it could have been traded into southern Transjordan during either the Frankish occupation (1142-1188) or the initial decades of the ensuing Ayyubid period. While this provides an interesting example of the robust trade in luxury ceramics that benefitted the residents of Karak, it offers only a *terminus post quem* with regard to the construction date of the palace complex.

Introduction to Phase 1b & Phase 2: The Mamluk and Ottoman Period Occupations in the $Q\bar{a}$ 'a

For the Mamluk and Ottoman period occupations, the field reports remain the primary source of information on stratigraphy and artifacts from above the Phase 1a plaster floor (Brown 1988a, 1989a). Additional remarks are presented here in reference to both ceramic distributions and recent research on faunal remains from these phases. It should be noted that this discussion assumes a chronological gap between the construction of the $q\bar{a}$ and the deposition of the Phase 1b debris. As medieval palace qā'as typically accommodated both formal audiences and private domestic activities, it is likely that the qā'a at Karak required and received routine cleanings during much of the time in which it served these functions for the elites in residence. The onset of the Phase 1b debris accumulation above the floor may indicate a gradual shift to less formal uses, accompanied by more casual or intermittent cleaning. Yet the duration of such a presumed gap between the $q\bar{a}$ 'a construction and the Phase 1b debris accrual is a matter of conjecture.

Phase 1b: The Mamluk Period

The Mamluk period ceramic and faunal remains have important implications for envisioning some of the economic and social activities that took place in the $q\bar{a}$ 'a during this era. Broadly speaking, the palace complex was an area where strict control and supervision could be exercised over the stores that accrued within it. Storage functions are indicated by fragments of storage jars, which account for over a third of the Phase 1b assemblage (Table 2). This representation is consistent with the role of medieval Islamic palaces and elite residences as important storage facilities for commodities and other highly valued goods, as aptly demonstrated by the excavations at the 14th century governor's residence at Hisban (Walker and LaBianca 2003: 451). Foodstuffs stored in ceramic jars within the qā'a at Karak may have included local and regional products, such as olive oil, honey, fruit syrups or preserves, molasses, and processed sugar, which were ultimately consumed or redistributed through trade or gift-giving protocols. In the context of this discussion, it should be noted that the vast facilities at Karak castle housed imperial bulk supplies of grain to support the military in the region and provide emergency reserves for the regional population, in the event of famine. In the Mamluk period, this function is attested from the reign of Baybars I through the end of the 14th century, and may have extended beyond that (see Walker 2011: 87, fn 207; Raphael 2011: 162). These stores would have been secured in the large vaults beneath the lower bailey, facilities that were most certainly initially stocked with grain during the Ayyubid period.

The artifact distributions also describe the $q\bar{a}$ 'a as a setting for social interactions during the Mamluk period, particularly with respect to refreshment and dining. The majority of

^{3.} See also Mason's Group 2, dated from 1125 to 1150 (1997: 181-83, 190, 2004: 97-98, 101) and Tonghini's

Fritware 2, dated from the second half of the 12^{th} century through the early 13^{th} century (1998: 46-51).

the Phase 1b sherds belonged to wheel-thrown vessels, as shown in Table 2 (glazed and unglazed sherds combined account for 62.7%, Nn = 200). These were decorated serving bowls and undecorated jugs and jars facilitating food service and consumption of beverages. Most of the glazed sherds belonged to earthen ware vessels with yellow lead glaze, although examples of brown, green, or green and yellow bichrome glaze also occur. Among the seven examples from imported wares are sherds representing a green glazed, imitation celadon bowl (possibly as late as the 15th century) and several alkaline glazed stonepaste vessels. The latter include (1) rims from an incurved rim bowl and flange rim bowl, both decorated with blue and black paint beneath a colorless glaze - a familiar decorative technique in Bilad ash-Sham during the 13th and 14th centuries, and (2) a bowl base with blue paint beneath a colorless glaze, providing an excellent example of the 'blue and white' tradition of the 14th century, which also extended into the 15th century (Brown 1989a: 300, fig. 5: 4-6; see also Milwright 2008: 226-36). Most if not all of these were likely produced in Damascus, although alkaline glazed stonepaste vessels were also manufactured in Cairo (see summary in Tonghini 1998: 52-53). In general, Middle Islamic imported wares were relatively common at Karak. Milwright's study of the unstratified material from the castle showed that of the total 2,747 glazed sherds collected, nearly a third (31.8%, N = 876) represented vessels with alkaline glaze (or less frequently lead alkaline glaze), most of which were stonepaste wares with fabrics characteristic of Damascene products (2008: 207-208, 211-12, 274, table 1). This assemblage further confirms that dining activities accompanied by luxury table wares were characteristic of the Mamluk era cultural milieu at Karak.

The animal remains also reflect dining practices within the $q\bar{a}$ 'a during the Mamluk period, and this discussion refers to analyses in Brown and Rielly (forthcoming). The distributions of faunal material from food animals in Phase 1b and Phase 2 are shown in TABLE 4 with corresponding data from the Mamluk and Ottoman

occupations within the Ayyubid palace at Shawbak; data from Ottoman era contexts at Umm al-Jimal are included for comparison as well.⁴ The Mamluk faunal assemblage from Karak shows consumption of domesticated sheep, goat, cattle, and chicken. In this sample, local game is limited to gazelle, but imported fish provided an additional supplement to the meat diet. The latter were probably saltwater varieties originating in the Red Sea, although some fish from the Mediterranean Sea may have been traded into Karak as well. Such imported saltwater fish are well-documented in medieval assemblages from across the southern highlands, and at Hisban some local freshwater fish appears and these specimens were most likely procured from the Jordan River system (Brown and Rielly 2010b: 135-36, table 7). As is typical of medieval faunal assemblages from southern Transjordan, most sheep and goat at Karak appear to have been slaughtered within their second year, with some of the herd surviving into the third year and beyond. While this suggests a priority on meat production, secondary products of milk and wool probably played important roles in the local economy as well. The faunal data also indicate a selective preference for meat-rich bones, with a corresponding low incidence of bones that are typically removed as butchers' waste. Thus the sheep / goat representations in Phase 1b suggest that slaughtering and kitchen preparation tasks were largely accomplished elsewhere. Cattle remains from this phase are exceptional, however, as they consist exclusively of head and foot parts. These imply dumping of butcher's waste or a possible incidence of on-site butchering. A hind leg articulation of an equid was also present. As equids were generally not eaten and there is no evidence that this animal was consumed, these remains were likely abandoned in this location.

Phase 2: The Ottoman Period

The Ottoman era ceramic and faunal remains indicate domestic activity as in the preceding period, although the Phase 2 artifacts are relatively fewer (**Tables 2** and **4**) and may suggest

^{4.} To date, the only published Ottoman era faunal assemblages from Jordan are collections from Karak, Shawbak, and Umm al-Jimal (Brown and Rielly forthcoming; Brown and Rielly 2010a; Toplyn 1998). The Stratum I

data from Hisban is potentially relevant, although only the domesticated mammal species are reported (Driesch and Boessneck 1995: 72, table 5.9).

different cultural trends. Profile drawings of sherds from Phase 2 loci, and their ware descriptions, are included here (Fig. 11, Table 3) to illustrate aspects of this discussion (as in Brown 1988a: 38, fig. 7; this figure was not included in the published version of the field report due to limitations of space). While the ceramic type categories remain the same in Phase 2, there are changes in the relative representations of these types, as indicated above, as well as in some aspects of production. Nearly half of the Phase 2 ceramics belong to handmade vessels, as shown in Tables 2 (see also Fig. 11: 12-21). These include plain and decorated wares, the latter featuring painted geometric patterns or other motifs that were widespread in the southern Levant from the 12th century onward (Fig. 11: 12-16, 18-19, 21). With the relative increase in sherds from handmade vessels in Phase 2, the assemblage shows a correspondent decrease in the frequency of sherds in other type categories, most notably storage jar fragments (Tables 1 and 2). This implies a shift away from the use of these containers within the $q\bar{a}$ 'a setting. The extent to which the wheel-thrown plain wares represented in Phase 2 may date to the Ottoman period is unclear, for these generally small fragments display the same characteristics as the Phase 1b plain wares (Fig. 11: 3-10). At least some of the wheel-thrown fragments are residuals, as indicated by two small fragments from stonepaste wares. Of these, one belongs to the blue and white bowl base from Phase 1b (Fig. 11: 11), while the other is a poorly preserved rim fragment from either a blue and white bowl or a blue and black under glaze painted bowl (Fig. 11: 2).

The Phase 2 sherds from handmade vessels generally represent the rather less sophisticated manufacturing techniques that tend to be typical of the Ottoman period, although a fragment from a more skillfully produced vessel, of the sort that appears commonly in the Mamluk period, is also present (**Fig. 11: 14**). Most of the sherds from handmade vessels display relatively poor clay fabrics and rudimentary manufacturing and firing techniques (**Fig. 11: 15-21**). Decorations among these wares include broad, more loosely painted, patterns and one instance of a raised band with thumb impressions (**Fig. 11: 18-19, 21, 17**). These features suggest an 18th to 19th century time frame (see Walker 2009: 44).

Green glazed ceramic products, largely bowls, continued to circulate in Transjordan throughout the Ottoman period (Walker 2009: 41-44). The Phase 2 assemblage includes three representative fragments, two of which are small body sherds that probably belonged to the same unslipped vessel. The third is a small portion of a rim from a plate or broad, shallow bowl with a dark green and glossy glaze that was also applied directly to the clay surface (Fig. 11: 1). Both the glaze technique and the vessel form are documented among the Ottoman era glazed wares of northern Transjordan (ibid. 41). The Phase 2 assemblage also includes sherds from lead glazed wares displaying various ranges of yellow - brown, but most of these are poorly preserved. The sources of manufacture of these glazed wares is unknown. While they may have been regional products traded into Karak, the possibility of local production should not be dismissed.

Some specialized ceramic products that were widely distributed as imports in the Ottoman period do not appear in the Phase 2 assemblage. Given the presence of rudimentary handmade wares that are typical of the 18th to 19th century, it would be reasonable to expect fragments of the ceramic tobacco pipes and porcelain coffee cups that were traded throughout the Ottoman lands from the 18th century onward (see Walker 2009: 47 ff.). The absence of these imports is notable, as is the lack of representation of wheel-thrown and reduction-fired gray wares, variants of which were produced in Gaza and other locations in Ottoman Palestine during this period. While Milwright found relatively few sherds from vessels imported during the Ottoman era overall, the unstratified collection nevertheless includes several examples from tobacco pipes, coffee cups, and reduction-fired gray wares (2008: 138, 254), suggesting that their absence in the Phase 2 assemblage may be a function of sample size.

Ascribing chronological parameters to Ottoman era pottery groups in Bilad ash-Sham is an enduring challenge, yet temporal and regional distributions began to emerge with studies by Marcus Milwright (2000) and Veronique François (2008). Currently, the most comprehensive framework for Ottoman ceramics in Transjordan is found in Bethany Walker's masterful assessment (2009). In summarizing the distributions of Ottoman pottery in this region, she notes "...

a relative scarcity of imports and glazed wares, a greater percentage of handmade wares, and a more limited range of wares and forms (and these are dominated by multi-purpose vessels used for food preparation, serving, and smallscale storage; large storage and transport vessels are rare), mostly of local production" (ibid. 39). In this discussion, Walker also points to the highly regional nature of Ottoman ceramic distributions in Bilad ash-Sham, particularly in the later centuries, with the result that assemblages vary considerably from site to site. This general characterization of Ottoman ceramic assemblages in Transjordan is certainly applicable to the Phase 2 ceramics from Karak.

The Ottoman period assemblage of bones from food animals is shown in Table 4, and while this sample is small, it offers some preliminary insights. Domesticated sheep and goat appear to have been the principal sources of meat, although chicken was also consumed. Supplements to the typical meat diet were provided by game species, such as gazelle and birds. The latter included chukar partridge and graylag goose, either of which could have been procured in the wild or raised in captivity. The lack of fish and cattle in Phase 2 stands in contrast to the Mamluk faunal assemblage. The general absence of fish bones in Ottoman contexts in the southern highlands implies a discontinuation of the widespread saltwater fish trade in this region, perhaps

resulting from a cultural shift in meat preferences (Brown and Rielly 2010a: 192). The absence of cattle in the assemblage from Ottoman Karak is not necessarily characteristic of this period and may reflect sample bias, for cattle appear in Ottoman contexts at Shawbak and Umm al-Jimal (**Table 4**).

The sheep and goat representations suggest a relative increase in reliance on these species in Phase 2. Specifically, the proportion of ovacaprid bone elements within the overall representation of meat animals shifts from 57.0% during the Mamluk period to 74.3% in the Ottoman era (Table 4). It is possible that a similar trend is indicated for the Shawbak data. As in the Mamluk period, most sheep and goat from the Ottoman phase at Karak appear to have been slaughtered within their second year. However, the Phase 2 assemblage shows a lesser concentration of meat-rich bones from sheep and goat (Brown and Rielly forthcoming). Overall, the distribution of skeletal parts suggests that ovacaprid butchering as well as culinary preparations took place either within or in close proximity to the qā'a.

Summary of the Mamluk and Ottoman Periods

Referring to the archaeological remains of the Mamluk and Ottoman eras, the ways in which the palace $q\bar{a}$ 'a was used over time may, in some respects, reflect the historically indicated socio-

Site, Phase/Stratum & Period	Karak Ph. 1b Mamluk		Shawbak Ph. 3 Mamluk		Karak Ph. 2 Ottoman		Shawbak Ph. 4 Ottoman		Umm al-Jimal Str. II Ottoman	
Meat Animals	No.	%	No.	%	No.	%	No.	%	No.	%
Sheep & Goat	146	57.0	99	81.8	104	74.3	80	88.9	279	94.6
Cattle	18	7.0	2	1.7			5	5.6	9	3.1
Camel			2	1.7			1	1.1	1	0.3
Pig							1	1.1		
Chicken	87	34.0	10	8.3	32	22.9	3	3.3	6	2.0
Fish	4	1.6	5	4.1						
Gazelle	1	0.4	3	2.5	2	1.4				
Game Birds					2	1.4				
Totals per Phase	256		121		140		90		295	

 Table 4: The Mamluk and Ottoman era remains of food animals from the Middle Islamic palaces at Karak and Shawbak, and the Late Ottoman contexts at Umm al-Jimal.

Notes: Data are presented as total fragment counts. The Umm al-Jimal data refer to Areas B and C. Faunal remains from Area A are omitted as this material appears partially or entirely deposited by French troops occupying the site in the early 20th century and therefore is less useful for comparison with Ottoman era faunal remains from Karak and Shawbak.

economic conditions of the region. The Mamluk artifact distributions show the importance of the $q\bar{a}$ a for social activities, such as dining practices that were accompanied by displays of imported luxury table wares and substantial use of other vessels manufactured by potters specializing in wheel throwing and glazing techniques. These wares were used in serving meals that featured a diverse meat diet, with selected cuts of sheep and goat, and some fish, chicken, and beef. Storage of commodities is also indicated, although most of the goods and valuables that were likely to have been housed within or near the qā'a have, understandably, left no trace. These functions resonate closely with the intended purposes of a typical palace qā'a.

In general, the sophisticated life-style indicated for the Mamluk phase of occupation is echoed, to a greater or lesser extent, at other Mamluk sites in Transjordan. The widespread availability of highly specialized wheel-thrown ceramics, and the consistent appearance of at least a few examples of imported luxury wares (largely Damascene), as well as other products, is seen in similar repertoires from many sites, among them: Tabaqat Fahl, Area XXIII (McPhillips and Walmsley 2007: 132-36), Tall Abu Qa`dan, Phases J-T (Franken and Kalsbeek 1975: figs 35-38, 42-45; see also Sauer 1976), Hisban, Strata IIIA, IIIB, and II (Walker 2012: 562-87), Dhiban, Phase 2b (Porter et al. 2005: 207-209; Porter et al. 2010: 19-20; see also references to Tushingham's Middle Islamic ceramics from Dhiban in Sauer 1975: 108) and Khirbat Faris, Far. I and Far. II (Johns, McQuitty and Falkner 1989: 90-92, figs 25-27). Similarly, the long distance trade in saltwater fish, which is well documented in Middle Islamic contexts from the 12th century on, continued across southern Transjordan during the Mamluk period (Brown and Rielly 2010a: 191-92, 2010b: 135, table 7, 136). In these respects, the domestic debris from the Mamluk phase at Karak reflects widespread patterns of consumer preferences and the availability of specific goods traded throughout the region during this period.

The use of the $q\bar{a}$ during the Ottoman era shows a wide range of everyday domestic activities. Consumption of meals remained an important social practice, yet relatively few decorative table wares are evident. Furthermore, kitchen

tasks including food preparation and butchering appear to have taken place within the $q\bar{a}$ 'a, in addition to meal service. Sheep and goat played a larger role in the meat diet and there is no evidence for consumption of fish. The distinctive nature of this Ottoman era material from Karak suggests greater dependence on locally produced goods and, with respect to livestock, greater priority on the rearing of sheep and goat. In the context of local history, it is likely that the $q\bar{a}$ 'a was occupied by tribal households.

The ceramics indicate an increased reliance on technologically less specialized vessels of local manufacture. As ceramic storage jars appear to have been used sparingly, other types of containers fulfilled storage needs at this time. Both of these trends are apparent throughout Transjordan (Walker 2009: 39). Additionally, evidence for the fish trade is lacking, as are luxury imported ceramics from highly specialized workshops, although the latter, including table wares, tobacco pipes, and coffee cups, are represented in the substantially larger unstratified collection, as noted above. The extent to which wheel-thrown glazed and unglazed table wares were imported into Karak in this period is unclear, for the point at which local manufacture ceased has yet to be determined. Nevertheless, the hallmark green glazed wares of the Ottoman era appear to have been among the ceramic types traded into the Karak region at this time. Overall, the ceramic assemblage from the Ottoman phase implies a shift that favored local manufacture of handmade wares. Inter-regional trade in various goods was practiced throughout the southern highlands during this period by travellers of all sorts, among them merchants, caravaneers, and *hajj* pilgrims. However, many of high-demand trade items would have left little direct archaeological evidence. For example, a partial list of trade goods bartered in the Ma`an market in 1845 cites coffee, sugar, spices, firearms, gun powder, and lead (Wallin 1854: 123). These and other items were certainly offered in 19th century Karak as well.

The original concept of the palace $q\bar{a}$ as a monumental hall for hosting a relatively wealthy family of the ruling elite, whose priorities included formal reception of guests and supervising access to personal wealth, including currency and high value goods, carried little explicit

consciousness into the later Ottoman centuries. Nevertheless, some universal household functions were shared throughout the ages, despite differences in household means or priorities. Overall, these observations, grounded in historical archaeology, offer an intriguing although still preliminary picture of the functions of the $q\bar{a}$ 'a within the variable social and economic environments associated with the castle.

Themes in Ayyubid Palace Architecture in Syria and Transjordan

Relatively recent studies addressing Middle Islamic palaces and dwellings in the palatial style have lent considerable depth to the literature on historical architecture in the Muslim Levant (e.g. Yovitchitch 2011: 269-77; David 2007; Korn 2004 [1]: 75-79; Tabbaa 1997: 71-96; see also David and Rousset 2008; Fourdrin 2005: 167-73), providing an opportunity to review the architectural attributes of the qā'a at Karak with increasing clarity. In particular, fresh insights regarding the characteristics of the Ayyubid qā'as of Syria describe strong continuities that are relevant to the history of medieval palace architecture in Transjordan.

By the late 12th century, citadel-palace constructions were proliferating rapidly throughout Bilad ash-Sham and the neighboring territories of Egypt, the Jazira, and southeast Anatolia. This concept gained particular currency and momentum in and around Ayyubid Syria, where a great number of citadels embracing royal and elite residential complexes were erected (Rabbat 2006). While some of these palaces are known only in historical literature, a number of qā'as have survived. Among the prominent examples of these are the qā'as at: Raqqa (ca 1168), Qal`at Sahyun (late 12th or early 13th century), Qal`at Najm (ca 1215), Bosra – Tower of al-`Adil (1215-1218), Diyarbakir (early 13th century), Aleppo Citadel - main Ayyubid palace (first half of the 13th century), Aleppo Citadel – Tawashi Palace (1230-1231?) and Harim (late 12th to early 13th century). The elite private res-

idence known as Matbakh al-Ajami in Aleppo (late 12th to early 13th century) provides an additional example of the Syrian palatial style of the Ayyubid period. The palace at Mu`azzara is most likely a mid-13th century construction of either the late Ayyubid or early Mamluk decades. Comparative documentation on Ayyubid palace qā'as in Egypt is quite limited, but a late 18th century plan of the qā'a of as-Salih Najm ad-Din Ayyub (d. 1249), built within his citadel on Rawda Island at Fustat, has survived (Creswell 1978 [2]: 86, fig. 38). Aspects of this design appear transitional, including traits that are well known expressions among qā'as of the Mamluk era (Revault 1982: 38; Ibrahim 1984: 53). In Syria, these transitional traits are also expressed in the design of the qā'a at Mu`azzara (Fourdrin 2005: 174-77).

Bridging the Muslim territories of Syria and Egypt, Transjordan was also a stage for the citadel-palace building culture of the Middle Islamic period, as evident at Karak and several other sites. Shawbak hosts a grand qā'a of the late 12th or early 13th century (Brown 1989b: 229, fig. 3), and remnants of a palatial residence stand within the 1214-1215 tower of Aybak at Ajlun castle (Yovitchitch 2006: 236). An elite dwelling within the citadel at Hisban from the first half of the 14th century probably housed the Mamluk governor (Walker and LaBianca 2003: 447-53). Among these four surviving examples of palatial constructions in Transjordan, the qā'a at Shawbak provides a particularly useful basis for comparison with that of Karak. There has been general consensus that the Shawbak palace was built during the early Ayyubid period (Rugiadi 2009: 120-21; Nucciotti 2007: 44-45; Brown 1988b: 240, 242). The durqā'a, flanking alcoves, and large iwan (to the southeast of the durqā'a) all bear dimensions that are nearly identical to those at Karak. The second large iwan (to the northwest of the durqā'a) remains blocked by overburden. As a result, the qā'a plan remains incomplete, as indicated in the original architectural drawing (Brown 1989b: 229, fig. 3).⁵ Nevertheless, a

^{5.} Unfortunately, an altered and inaccurate, yet widely replicated version of the original plan of the qā'a at Shawbak includes the false implication of the existence of a wall sealing the northwest side of the durqā'a (e. g. Bertocci 2009: 112, fig. 25, 111, fig. 26, 115, fig. 30; Bini 2009: 29, fig. 39, 2004: 64-65, fig. 63, 69, fig. 66,

^{70,} fig. 67, 71, figs 68-69; Faucherre 2004: 53, fig. 8, 54, fig. 9; Luschi 2004: 198, fig. 205; Yovitchitch 2011: 270, fig. 332,; 338, plate VII; Vannini 2012: 45, fig. 11). Such a wall does not exist, and its implication disrupts the actual integrity and symmetry of this monument.

tentative reconstruction of the dimensions of the blocked large iwan to the northwest, prepared by Thomas Biller, Daniel Burger, and Hans-Heinrich Häffner following their on-site examination of the structural evidence, suggests quite plausibly that the qā'a followed a rigorously symmetrical arrangement, as was the case at Karak (Biller et al. 1999: 34, fig. 1). Most notably, the Shawbak qā'a is elongated by an additional unit attached to the end of the large iwan (to the southeast), a feature that may have been duplicated beyond the second large iwan, as hypothesized in the reconstruction proposed by Biller et al. (ibid.). In addition to this distinguishing feature, the Shawbak qā'a also displays marked accomplishment in execution, suggesting a costly undertaking with particular attention to the creation of a luxurious environment. While the patron is unconfirmed, it is likely a work of al-'Adil, dating to the 1190s, or of his son al-Mu'azzam 'Isa Sharaf ad-Din (d. 1227), who formally received the southern Transjordan castles in 1207-1208 (al-Magrizi 1980: 150-51), but probably acted as governor of this region from 1198. While the investment at Karak was more modest, its design may have drawn some measure of inspiration from the $q\bar{a}$ a at Shawbak.

Palaces constructed in Bilad ash-Sham between the late 12th century and the 1260 inception of Mongol penetration display well documented continuities in spatial design and other attributes. Principal stylistic themes include muqarnas portals and sculptural ornament, and qā'a arrangements that express variations on the four-iwan design principle and include tripartite facades and water pools or fountains for embellishment (Tabbaa1997: 81-95). Triple entrances through closed iwan chambers (travée rythmique) facing the durqā'a are also quite common.⁶ While such themes constituted a widely repeated vocabulary among the Ayyubid palace qā'as of Bilad ash-Sham, these suites also tend to exhibit distinct and conscious individualism in design and decorative traits, undoubtedly reflecting the specific tastes and preferences of their patrons.

At Karak, the $q\bar{a}$ displays a four-iwan plan that is precisely symmetrical on both the

axis of the two large iwans (aligned north and south) and the axis of the two smaller iwan alcoves (aligned east and west). While not typically found in Syria, such exact symmetry may well exist at Shawbak also, as noted above, but this is yet to be confirmed. Tripartite facades, consisting of an iwan with doorways opening to either side of it, are represented at Karak on the east and west faces of the durgā'a. In contrast, the large iwans to the north and south are closed by partition walls featuring triple entrance doorways that include a large central portal (most likely originally fitted with wooden double doors) flanked by smaller doors to either side (Fig. 2; Deschamps 1939: pl. XV A). An identical arrangement of tripartite facades and triple entranceways appears at Shawbak. These features are common among in Ayyubid Syria, yet most $q\bar{a}$ as in that region include only one closed iwan with triple entrances. At Karak, the symmetry of the $q\bar{a}$ 'a arrangement raises the question as to the functions of these spaces relative to one another, particularly with respect to the location of the grand iwan (seat of authority) from which the prince or governor received guests, and the same question pertains to the qā'a at Shawbak.

The design of tripartite facades and closed iwans with triple entrances arranged around the durqā'a underscores the remote, mysterious, and inaccessible nature of the grand qā'a, as perceived by palace visitors. From the durqā'as at Karak and Shawbak, guests would have faced a total of ten doorways (!), referring to nine portals in addition to the one through which entrance to the qā'a had been gained. Not only would the activities and contents within the two large iwans have been fairly obscured from the visitor's view by facades that likely included wooden doors that could be shut, it would not have been readily apparent to guests if the other doorways facing the durqā'a led to passages, rooms, or blind cubicles. Such arrangements were characteristic of the Ayyubid period and intended to baffle visitors, who typically would have entered the palace complex through a series of bent access corridors or vestibules that also contributed to a sense of intricacy, if

^{6.} In Egyptian housing documents, closed units with triple entrances that faced a durqā'a were termed <u>majlis</u>, distinguishing them from the structural form of the <u>īwān</u>,

which was completely open to the durq \bar{a} 'a (Sayed 1987: 37-39).

not disorientation. In these respects, illusions of spatial complexity were well planned and well conveyed. These labyrinthine patterns are found in nearly every Syrian palatial dwelling cited above. In contrast, Mamluk $q\bar{a}$ 'as in elite residences tended to emphasize spaciousness, often favoring broad open iwans that extended the principal axis.

Conclusion: A New Interpretation of the Grand Palace Qā'a at Karak

Architecturally, the surviving qā'a at Karak reflects close similarities of design and style with the qā'as of Ayyubid Syria. Therefore, it may be most beneficially discussed in the context of the Ayyubid palace repertoire of Bilad ash-Sham, as above, rather than being treated as a Mamluk construction. Given the various threads of circumstantial evidence presented here, one may reasonably infer, at this junction, that this grand qā'a at Karak is the Qā'a an-Nasiri of an-Nasir Da'ud (r. 1229-1249), and that it is situated within his palace, the Dar al Sa`adah. This assertion inevitably raises the question as to the location of the Mamluk era Qā'a an-Nahas or Hall of Copper. In this respect, there may be a faint hint in the small $q\bar{a}$ a or reception area. Yet this remains unresolved and such inquiries are beyond the scope of this discussion. Most significantly the role of Karak in the development of Middle Islamic palatial architecture in Bilad ash-Sham remains a rich field for further exploration.

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Bibliography

al-'Asqalāni, A.

- 1973 Ad-Durar ul-Kāmina fī A'yān il-Mi'atith-Thāmina, Vol. 2. Hyderabad: Osmania Oriental Publications Bureau.
- al-Bakhit, M. A.
 - 1992 Das Königreich von al-Karak in der mamlūkischen Zeit. Aus dem arabischen Geschichtswerk von Muhammad 'Adnān al-Bahīt übersetzt und ausführlich erläutert; Alexander Scheidt. Frankfurt am Main: Peter Lang.

Bertocci, S.

2009 I rilievi dei castelli crociati dell'area di Petra. Pp. 87-133 in S. Bertocci and M. Bini (eds.), *Castelli medievali a Petra e nel vicino oriente tra rilievo e archeologia*. Firenze: Società Editrice Fiorentina.

Bianquis, T.

- 1986-89 Damas et la Syrie sous la domination fatimide (359-468/969-1076). Essai d'interpretation de chroniques arabes medievales. 2 vols. Damascus: Institute Français de Damas.
- Biller, T.; Burger, D.; and Häffner, H.-H.
 - 1999 Neues zu den Burgen des Königreichs Jerusalem in Transjordanien, Montréal (Shobaq) - Li Vaux Moïse (Wu'eira) - Kerak. Pp. 33-58 in M. Kozok (ed.), Architektur, Struktur, Symbol: Streifzüge durch die Architekturgeschichte von der Antike bis zur Gegenwart: Festschrift für Cord Meckseper zum 65. Geburtstag. Petersberg: Imhof.

Bini, M.

- 2004 Il castello di Shoubak. Pp. 55-95 in M. Bini and S. Bertocci (eds.), Castelli di pietre: Aspetti formali e materiali dei castelli crociati nell'area di Petra in Transgiordania. Firenze: Edizioni Polistampa.
- 2009 The Eastern Border. The Wu'ayra Fortifications – Habis Castle – Shoubak Castle – Kerak Castle. Pp. 15-40 in M. Bini and C. Luschi (eds.), Castelli e cattedrali. Sulle tracce del regno crociato di Gerusalemme. Resoconti di viaggio in Israele. Firenza: Alinea.

Bliss, F. J.

1895 Narrative of an Expedition to Moab and Gilead in March, 1895. *Palestine Exploration Fund Quarterly Statement*: 203-234.

Brown, R. M.

- 1988a Report of the 1987 Excavation at Kerak Castle: The Mamluk Palace Reception Hall. Document on file at the American Center of Oriental Research and the Department of Antiquities, Amman.
- 1988b Summary Report of the 1986 Excavations: Late Islamic Shobak. Annual of the Department of Antiquities of Jordan 32: 225-245.
- 1989a Excavations in the 14th Century A.D. Mamluk Palace at Kerak. Annual of the Department of Antiquities of Jordan 33: 287-304.
- 1989b Kerak Castle. Pp. 341-347 in Archaeology of Jordan II.1. Field Reports: Surveys & Sites L-Z. Akkadica Supplementum VII, ed. D. Homes-Fredericq and J. B. Hennessy. Leuven: Peeters.
- Brown, R. M., and Rielly, K.
- 2010a Faunal Remains from Excavations in the Ayyubid Palace at Shawbak Castle in Southern Transjordan. *Berytus* 51-52 (2008-2009): 169-198.

2010b A Twelfth Century Faunal Assemblage from al-Wu'ayra in the Southern Highlands of Jordan. *Annual of the Department of Antiquities of Jordan* 54: 121-141.

Brown, R. M., and Rielly, K.

forthcoming Faunal Remains from Mamluk and Ottoman Occupations in the Middle Islamic Period Palace at Karak Castle (Qal`at al-Karak). *Annual of the American Schools of Oriental Research* 69 (2014).

1895 Reisebericht, I. Von Jerusalem bis Madaba. Mittheilungen und Nachrichten des Deutschen Palaestina-Vereins: 65-79.

- 1822 *Travels in Syria and the Holy Land.* London: Murray.
- Burgoyne, M. H.
- 1987 Mamluk Jerusalem, an Architectural Study. London: British School of Archaeology in Jerusalem, World of Islam Festival Trust.
- Creswell, K. A. C.
 - 1978 *The Muslim Architecture of Egypt.* 2 vols. New York: Hacker Art Books.

David, J.-C.

2007 Ayyubid Palace Architecture in Syria. Pp. 51-70 S. Bianca (ed.), in *Syria: Medieval Citadels Between East and West.* Turin: Umberto Allemandi for The Aga Khan Trust for Culture.

David, J.-C., and Rousset, M.-O.

- 2008 La qā'a de la maison Wakil à Alep: origine d'un nouveau modèle d'espace domestique. Pp. 55-69 in J. Gonnella and J. Kröger (eds.), Angels, Peonies, and Fabulous Creatures: The Aleppo Room in Berlin, eds.. Rhema-Münster: Museum für Islamische Kunst, Staatliche Museen zu Berlin.
- Deschamps, P.
 - 1939 Les chateaux des croisés en Terre-Sainte, II. La défense du royaume de Jérusalem: Étude historique, géographique et monumentale. Bibliothèque archèologique et historique 34. Paris: Geuthner.

1896 Kerak in 1896. Palestine Exploration Fund Quarterly Statement: 327-332.

Driesch, A. von den, and Boessneck, J.

1995 Final Report on the Zooarchaeological Investigation of Animal Bone Finds from Tell Hesban, Jordan. Pp. 65-108 in Ø. S. LaBianca and A. von den Driesch (eds.), Faunal Remains: Taphonomical and Zooarchaeological Studies of the Animal Remains from Tell Hesban and Vicinity. Berrien Springs, MI: Andrews University. Faucherre, N.

2004 La forteresse de Shawbak (Crac de Montréal), une des premières fortresses Franques sous son corset mamelouk. Pp. 43-66 in N. Faucherre, J. Mesqui, and N. Prouteau (eds.), *La fortification au temps des Croisades*. Rennes: Universitaires de Rennes.

Forder, A.

2002 Ventures Among the Arabs in Desert, Tent, and Town. Thirteen Years of Pioneer Missionary Life with the Ishmaelites of Moab, Edom and Arabia. New York: Gospel. Reprinted from 1909 edition. Piscataway, NJ: Gorgias.

Fourdrin, J.-P.

2005 Le palais fortifié médiéval de Muazzara (Syrie). Annales Islamologiques 39: 149-204.

François, V.

2008 *Céramiques de la citadelle de Damas. Époques mamelouke et ottomane.* Aix-en-Provence: Centre National de la Recherche Scientifique, Laboratoire d'Archéologie Médiévale et Moderne en Méditerranée (CD-ROM).

Franken, H. J., and Kalsbeek, J.

- 1975 Potters of a Medieval Village in the Jordan Valley. Excavations at Tell Deir `Allā: A Medieval Tell, Tell Abu Gourdan, Jordan. North-Holland Ceramic Studies in Archaeology 3. Amsterdam: North-Holland.
- Ghawānimah, Y. D.
 - 1979 Tārīkh Sharqī al-Urdun fī 'asr Dawlat al-Mamālīk al- Ūlá: al-Qism al-Hadarī. Amman: Wizārat al-Thaqāfa wash-Shabāb.

Ginsburg, C. D.

1873 Report on the Exploration of Southern Moab. Pp. 210-223 in Report of the Forty-Second Annual Meeting of the British Association for the Advancement of Science. London: Murray.

Grandin, T.

2007 Introduction to the Citadel of Salah al-Din. Pp. 139-180 in S. A. Bianca (ed.), *Syria: Medieval Citadels Between East and West*. Turin: Umberto Allemandi for The Aga Khan Trust for Culture.

Ibn al-Furat, M.

1936 *The History of Ibn al-Furat*, ed. C. K. Zurayk. Beirut: Printed at the American Press.

Ibn Wāșil, M.

- 1972 *Mufarrij al-Kurūb fī Akhbār Banī Ayyūb*, Volume 4. Cairo: National Library.
- Ibrahim, L. A.
 - 1984 Residential Architecture in Mamluk Cairo. Muqarnas 2: 47-59.

Johns, J.

1992 Islamic Settlement in Ard al-Karak. *Studies in the History and Archaeology of Jordan* 4: 363-368.

Brünnow, R.

Burckhardt, J. L.

Dowling, T. E.

- 1994 The Longue Durée: State and Settlement Strategies in Southern Transjordan Across the Islamic Centuries. Pp. 1-31 in E. L. Rogan and T. Tell (eds.), Village, Steppe and State: The Social Origins of Modern Jordan. London: British Academic.
- 1998 The Rise of Middle Islamic Hand-Made Geometrically-Painted Ware in Bilād al-Shām (11th-13th Centuries A. D.). Pp. 65-93 in R.-P. Gayraud (ed.), *Colloque international d'archéologie islamique*, ed. R.P. Gayraud. Cairo: Institut Français d'Archéologie Orientale.

Johns, J.; McQuitty A.; and Falkner, R.

- 1989 The Fâris Project: Preliminary Report upon the 1986 and 1988 Seasons. *Levant* 21: 63-95.
- Jones, I. W.; Levy T. E.; and Najjar, M.
 - 2012 Khirbat Nuqayb al-Asaymir and Middle Islamic Metallurgy in Faynan: Surveys of Wadi al-Ghuwayb and Wadi al-Jariya in Faynan, Southern Jordan. *Bulletin of the American Schools of Oriental Research* 368: 67-102.
- Kennedy, H.
 - 1994 *Crusader Castles*. Cambridge: Cambridge University Press.
- Korn, L.
 - 2004 Ayyubidische Architektur in Ägypten und Syrien: Bautätigkeit im Kontext von Politik und Gesellschaft 564-658/1169-1260. 2 vols. Heidelberg: Heidelberger Orientverlag.

Lancaster, W., and Lancaster, F.

1995 Land Use and Population in the Area North of Karak. *Levant* 27: 103-124.

Lee, J. R.

- 2003 Kerak Castle The 1997 Church Excavations. Paper presented at the Archaeology of Crusader States & Medieval Culture symposium, St. Louis Community College – Florissant Valley, St. Louis.
- Libbey, W., and Hoskins, F. E.
- 1905 *The Jordan Valley and Petra*. 2 vols. New York: Putnam's Sons.

Luschi, C. M. R.

2004 Il Palazzo Ayyubide. Pp. 197-201 in M. Bini and S. Bertocci (eds.), *Castelli di pietre: Aspetti* formali e materiali dei castelli crociati nell'area di Petra in Transgiordania. Firenze: Edizioni Polistampa.

McPhillips, S.

- 2002 Twelfth Century Pottery from the Citadel of Damascus. Bulletin d'ètudes orientales 53-54. Supplément: Études et travaux à la citadelle de Damas 2000-2001: Un premier bilan, 139-155.
- 2012 Continuity and Innovation in Syrian Artisanal Traditions of the 9th to 13th Centuries. Ceramic Evidence from the Syrian-French Citadel of Da-

mascus Excavations. *Bulletin d'ètudes orientales* 61: 447-473.

McPhillips, S., and Walmsley, A.

2007 Fahl during the Early Mamluk Period: Archaeological Perspectives. *Mamluk Studies Review* 11.1: 119-156.

al-Maqrīzī, T.

1980 A History of the Ayyūbid Sultans of Egypt. Trans. and notes R. J. C. Broadhurst. Boston: Twayne.

Mason, R.

- 1997 Medieval Syrian Lustre-painted and Associated Wares: Typology in a Multidisciplinary Study. *Levant* 29: 169-200.
- 2004 Shine Like the Sun: Lustre-painted and Associated Pottery from the Medieval Middle East. Costa Mesa, CA: Mazda.

Miller, J. M., ed.

1991 Archaeological Survey of the Kerak Plateau. Atlanta: Scholars.

Milwright, M.

- 2000 Pottery of Bilad al-Sham in the Ottoman Period: A Review of the Published Archaeological Evidence. Levant 32: 189-208.
- 2006 Central and Southern Jordan in the Ayyubid Period: Historical and Archaeological Perspectives. *Journal of the Royal Asiatic Society*, ser. 3, 16.1: 1-27.
- 2008 The Fortress of the Raven: Karak in the Middle Islamic Period (1100 - 1650). Leiden: Brill.

Nucciotti, M.

2007 Analisi strategrafiche degli elevati: primi risultati. Pp. 27-55 in G. Vannini (ed.), Archeologia dell'insediamento crociato-ayyubide in Transgiordania: il progetto Shawbak. Florence: Borgo San Lorenzo.

Peake, F. G.

- 1958 A History of Jordan and Its Tribes. Coral Gables: University of Miami.
- Porter, B.; Routledge, B.; Fatkin, D. S.; Zimmerle, W.; Hakes, J.; Salvant, J.; and Schultz, W.
 - 2010 The Dhībān Excavation and Development Project's 2005 Season. *Annual of the Department of Antiquities of Jordan* 54: 9-34.

Porter, B.; Routledge, B.; Steen, D.; Parslow, C.; de Jong, L.; and Zimmerle, W.

2005 Tall Dhībān 2004 Pilot Season: Prospection, Preservation, and Planning. Annual of the Department of Antiquities of Jordan 49: 201-216.

Rabbat, N.

2006 The Militarization of Taste in Medieval Bilād al-Shām. Pp. 84-105 in *Muslim Military Architecture in Greater Syria: From the Coming of Islam to the Ottoman Period*, ed. H. Kennedy. Leiden: Brill.

Rafeq, A-K.

- 1966 *The Province of Damascus, 1723-1783.* Beirut: Khayats.
- Raphael, K.
 - 2011 Muslim Fortresses in the Levant: Between Crusaders and Mongols. London: Routledge.
- Revault, J.
 - 1982 L'architecture domestique au Caire a l'époque mamelouke (XIII^e-XVI^e siècles). Pp. 19-142 in J.-C. Garcin, B. Maury, J. Revault, and M. Zakariya (eds.), *Palais et maisons du Caire I. Epoque mamelouke (XIII^e-XVI^e siècles)*. Paris: Centre National de la Recherche Scientifique.

Rogan, E. L.

- 2002 Frontiers of the State in the Late Ottoman Empire. Cambridge, England: Cambridge University.
- Rugiadi, M.
- 2009 Il palazzo ayyubide a Shawbak. Pp. 120-121 in Da Petra a Shawbak: Archeologia di una frontiera, ed. G. Vannini and M. Nucciotti. Florence: Giunti.

- 1956 *Baybars I of Egypt*. Dacca: Oxford University. Sauer, J. A.
 - 1975 Review of *The Excavations at Dibon (Dhīban)* in Moab: *The Third Campaign 1952-1953*, by
 A. D. Tushingham. Annual of the Department of *Antiquities of Jordan 20: 103-109.*
 - 1976 Pottery Techniques at Tell Deir `Allā. Bulletin of the American Schools of Oriental Research 224: 91-94.
- Sayed, H. I.
 - 1987 The Development of the Cairene Qā`a: Some Considerations. Annales Islamologiques 23: 31-53.
- Tabbaa, Y.
 - 1997 Constructions of Power and Piety in Medieval Aleppo. University Park, PA: Pennsylvania State University.

Tonghini, C.

1998 Qal`at Ja`bar Pottery: A Study of a Syrian Fortified Site of the Late 11th-14th Centuries. British Academy Monographs in Archaeology 11. Oxford: published for the Council for British Research in the Levant by Oxford University Press.

Toplyn, M. R.

1998 Animal and Human Skeletal Remains (1977). Pp. 221-228 in B. de Vries, *et al.*, *Umm el-* Jimal: A Frontier Town and Its Landscape in Northern Jordan, Vol. 1: Fieldwork 1972-1981. Journal of Roman Archaeology Supplement 26. Portsmouth, RI: Journal of Roman Archaeology. Vannini, G.

2012 Archeologia di una frontiera Mediterranea. Pp. 35-48 in G. Vannini and M Nucciotti (eds.), La Transgiordania nei secoli XII-XIII e le 'frontiere' del Mediterraneo medievale. BAR International Series 2386. Oxford: Archaeopress.

Walker, B. J.

- 2009 Identifying the Late Islamic Period Ceramically: Preliminary Observations on Ottoman Wares from Central and Northern Jordan. Pp. 37-65, 127-153 in B. J. Walker (ed.), *Reflections of Empire: Archaeological and Ethnographic Studies* on the Pottery of the Ottoman Levant. Annual of the American Schools of Oriental Research 64. Boston: American Schools of Oriental Research.
- 2011 Jordan in the Late Middle Ages: Transformation of the Mamluk Frontier. Chicago: Middle East Documentation Center.
- 2012 The Islamic Period. Pp. 507-593 in J. A. Sauer and L. G. Herr (eds.), *Ceramic Finds: Typological and Technological Studies of the Pottery Remains from Tell Hesban and Vicinity*. Hesban 11. Berrien Springs, MI: Institute of Archaeology and Andrews University.
- Walker, B. J., and LaBianca, Ø. S.
- 2003 The Islamic Quşūr of Tall Hisbān: Preliminary Report on the 1998 and 2001 Seasons. *Annual* of the Department of Antiquities of Jordan 47: 443-471.
- Wallin, G. A.
 - 1854 Narrative of a Journey from Cairo to Medina and Mecca, by Suez, Arabá, Tawilá, al-Jawf, Jubbé, Háil, and Nejd, in 1845. *Journal of the Royal Geographical Society of London* 24: 115-207.

Yovitchitch, C.

- 2006 The Tower of Aybak in 'Ajlun Castle: An Example of the Spread of an Architectural Concept in Early 13th-Century Ayyubid Fortification. Pp. 225-242 in H. Kennedy (ed.), *Muslim Military Architecture in Greater Syria: From the Coming of Islam to the Ottoman Period*, ed. H. Kennedy. Leiden: Brill.
- 2011 Forteresses du Proches-Orient: l'architecture militaire des Ayyoubides. Paris: Paris-Sorbone.

Sadeque, S. F.