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UNIVERSITY OF CALIFORNIA, SAN DIEGO

Craft Production in an Islamic Empire: Copper Exploitation in the Southern Jordanian
Periphery

A Thesis submitted in partial satisfaction of the requirements
for the degree Master of Arts

in

Anthropology

by

Ian William Nasser Jones

Committee in charge:

Professor Thomas E. Levy, Chair
Professor Guillermo Algaze
Professor Paul S. Goldstein

2010

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Chair

University of California, San Diego

2010

DEDICATION

For my parents, for bringing me into this world and then putting up with me for this long
on top of that.

And of course, for Terri, who puts up with me without even being required to.

TABLE OF CONTENTS

Signature Page	iii
Dedication	iv
Table of Contents	v
List of Figures	vi
Acknowledgements	vii
Abstract	viii
1) Introduction	1
2) Difficulties in Islamic Period chronology	3
3) Theoretical discussion	5
4) Historical and archaeological context	15
5) Khirbat Nqeib Aseimer/WAG 53/el-Furn	30
6) The survey pottery from Khirbat Nqeib Aseimer	33
7) Discussion	42
Appendix 1) Figures	48
Works Cited	58

LIST OF FIGURES

Figure 1: Comparison of chronological schemes for the Islamic Periods in Jordan ..	48
Figure 2: Late Byzantine and Early Islamic I settlement patterns in Jordan	49
Figure 3: Late Early Islamic I and Early Islamic II settlement patterns in Jordan	50
Figure 4: The Islamic world circa 900 AD	51
Figure 5: Late Early Islamic II and Middle Islamic I settlement patterns in Jordan ..	52
Figure 6: The Islamic world circa 1300 AD	53
Figure 7: Middle to Late Islamic settlement patterns in Jordan	54
Figure 8: Map of Khirbat Nqeib Aseimer	55
Figure 9: Painted ceramics from Khirbat Nqeib Aseimer	56
Figure 10: Glazed ceramics from Khirbat Nqeib Aseimer	57
Figure 11: Sherd 261, provincial Syrian fritware found at Khirbat Nqeib Aseimer ..	57

ACKNOWLEDGEMENTS

I would like to acknowledge the inhabitants of the UCSD Levantine Archaeology Lab, especially Erez Ben-Yosef, Kyle Knabb, and Aaron Gidding, for their valuable input and on the ideas I put forth here, and many that I did not.

I would also like to acknowledge my committee – Tom Levy, Guillermo Algaze, and Paul Goldstein – for their guidance and encouragement.

Finally, I would like to acknowledge my advisor, Tom Levy, for allowing me to use the survey data on which this thesis is based.

ABSTRACT OF THE THESIS

Craft Production in an Islamic Empire: Copper Exploitation in the Southern Jordanian Periphery

by

Ian William Nasser Jones

Master of Arts in Anthropology

University of California, San Diego, 2010

Professor Thomas E. Levy, Chair

This thesis examines the relationship between Islamic empires and the peripheral areas of southern Jordan, focusing specifically on the relationship between the Islamic state and copper producers, with some attention also given to the ways in which the rulers of Islamic empires legitimated their power and the relationships between craft producing and local nomadic groups. After presenting the historical and archaeological background of the region, the site of Khirbat Nqeib Aseimer will be presented as a case study for these issues during the Middle Islamic (1000-1400 AD) period. A preliminary analysis of the survey pottery from the site will be discussed, as well as its implications for the dating of the site, and Khirbat Nqeib Aseimer will be placed in its regional and theoretical context to the extent that the currently available data allows.

1) Introduction

The Islamic period in the Near East is marked by the emergence and decline of several dynasties, which moved the capital and shifted the boundaries of an empire rooted in, and almost as old as, the Islamic religion. Throughout this period – or these periods – the area that is now Jordan, which at various times during the Islamic period was divided into at least two, and sometimes more, administrative districts, was generally a periphery (cf. Schick 1994; Whitcomb 2001). Various imperial powers often had an interest in the area, especially the large cities, but the core of Islamic culture is generally seen as being the capitals of the caliphates in Syria, Iraq and Egypt.

This is especially true of the Faynan district in southern Jordan, and little evidence is found there of permanent occupation during the Islamic period. A notable exception to this is the metal production site Khirbat Nqeib Aseimer, initially discovered by Nelson Glueck in his surveys of the Transjordan (Glueck 1935). This site is generally given a Middle Islamic date (see “Chronological Issues” for discussion of this “archaeological” chronology), however evidence has also been found of an Early Islamic occupation. Given the long history of copper exploitation in the region (cf. Levy *et al.* 2002; Levy *et al.* 2003), it is not surprising that it was also a center of copper production for at least part of the Islamic period.

In this thesis, I will begin by discussing theoretical issues concerning theocratic and patriarchal empires, specifically Islamic political theory, craft production, and nomad/state relations. I will then give a brief account of the history and archaeology of the Islamic period, with a specific focus on topics relevant to Southern Jordan. After this,

I will discuss the Faynan District in particular, and give a brief account of previous archaeological work that has been done there, focusing on the Islamic periods. I will then briefly analyze the pottery collected from Khirbat Nqeib Aseimer during the 2002 Wadi al-Ghuwayb survey (Levy *et al.* 2003). Finally, I present a discussion that will attempt to synthesize all of these things, and offer some preliminary conclusions regarding Khirbat Nqeib Aseimer.

Khirbat Nqeib Aseimer and the surrounding Faynan area provide a test case for analyzing the role of copper production in the Islamic periods. First, to what periods specifically does KNA date? Although a definite answer to this question is not possible without excavation, survey data can provide at least some answers. Second, what is the relationship between the people who worked at KNA and the ruling Islamic dynasties, and, on a related issue, who were the people who worked at KNA in each period? Third, and finally, how does KNA fit into the larger picture of Jordan during the Islamic period, and specifically during the periods in which it was occupied?

2) Difficulties in Islamic Period chronology

The Islamic period is generally divided according to political history, with various periods referred to by the name of the dynasty currently in control of a region. This dynastic periodization differs from region to region across the Islamic world (cf. Insoll 1999:16), but in Jordan the period is generally divided into the Umayyad period (636-750 AD), the 'Abbasid period (750-969), the Fatimid and Crusader periods (969-1171), the Ayyubid period (1171-1263), the Mamluk period (1263-1516), and the Ottoman period (1516-1918) (Whitcomb 1992b:386).

While this division makes sense when discussing historical events, Whitcomb argues that it is not always adequate for describing the period archaeologically, as “earthquakes and conquests do not necessarily make useful cultural periodizations” (1995:488). When differences in material culture do not mark these dynastic divisions, terminology can become confusing. An example of this problem is a term common in surveys of Jordan, “Ayyubid-Mamluk,” which implies dates anywhere between the 12th and 16th centuries AD (Walker 1999:207).

Whitcomb (1992b), therefore, has suggested an archaeological periodization akin to those used in earlier periods which takes into account these difficulties. His scheme is divided into seven main periods: the Early Islamic I (600-800 AD), Early Islamic II (800-1000), Middle Islamic I (1000-1200), Middle Islamic II (1200-1400), Late Islamic I (1400-1600), Late Islamic II (1600-1800), and Modern (Fig. 1). This has several advantages for discussing archaeological materials that are difficult to date to a single dynastic period, notably in the Early Islamic I period, which covers the Umayyad period, as well as late

Byzantine and early 'Abbasid, and Middle Islamic II, which is Ayyubid and early to middle Mamluk. Other archaeological chronologies are possible, which are often used by regional survey teams and generally contain fewer divisions of the Islamic period (cf. Tomber 2007:446), but Whitcomb's (1992b) seems to be the best-suited for discussing the material culture of the Islamic period in particular.

In this thesis I use a combination of both chronologies. When dealing with the history of the Islamic period in Jordan, I use the dynastic chronology, as this is often more appropriate for historical events. However, when describing and analyzing artifacts from Khirbat Nqeib Aseimer specifically, I use Whitcomb's (1992b) archaeological chronology.

3) Theoretical discussion

Religion and culture

Doyle (1986) asks how it is that tribal societies are able to become imperial polities. Unlike Barfield (2001), who explains the emergence of nomadic “shadow empires” as dependent on the success of nearby sedentary empires – a scenario which does not seem to adequately explain the historical particularities of the Islamic empires – Doyle (1986) turns to the political theory of the 14th century Islamic scholar, Ibn Khaldun. He suggests that, although tribal empires are normally nearly impossible, intense religious movements can produce “the power of a metropole without its sociopolitical institutions” (Doyle 1986:106). However, this situation is “soon corrected,” and the tribe, in order to maintain political control, must become a centralized, sedentary political unit (Doyle 1986:106).

It is interesting that Ibn Khaldun himself seems to suggest that this is related to religion, and not necessarily positive. Despite the doctrines described by Tamandofar (1989) and discussed above, Ibn Khaldun noted that *Shari'a* was essentially abandoned as an authority in itself beginning as early as the late 'Abbasid period (Rabi' 1967:94). Rabi' argues that for Ibn Khaldun, this change in the authority of *Shari'a* was brought about by a shift from a primitive way of living, *badawa*, to a more “civilized” one, *hadara* (Rabi' 1967:95).

Williams (1996) discusses a situation in modern Massachusetts which has some useful implications for my purposes here. He points out that,

the civic culture [of Springfield] is permeated by Catholicism. . . . Thus, Catholicism permeates public life, from elections, to civic celebrations, to the institutions of civil society. But the Church, as an organization, has little direct political influence (Williams 1996:375).

Granted, the structure of authority in early Islam is quite different from the way authority is structured in the modern Catholic Church in America. However, the key point, that religion can maintain its political influence by structuring the ways in which people think about politics even when it has little or no direct political influence, can be applied to the way Doyle (1986) and Rabi' (1967) interpret Ibn Khaldun. Although *Shari'a* lost its political authority as such, it continued to structure the ways in which Islamic political authority was conceptualized.

Religion and power

Any discussion of “theocracy” should acknowledge, and perhaps move beyond, Weber's (1978) classificatory scheme for relations of religious and political authority. For Weber, theocracy is a situation in which there is “a high priest who is also a king,” as opposed to a non-theocratic hierocracy, with “a ruler who is legitimated by priests, either as an incarnation or in the name of God” or “a secular, caesaropapist ruler who exercises supreme authority in ecclesiastic matters by virtue of his autonomous legitimacy” (1978:1159-1160). With respect to the Islamic empires, it is interesting to note that Weber himself states that, during the Umayyad period, the Caliphate developed “in an outright anti-theocratic manner” (1978:1138). However, during the 'Abbasid period, the situation was the opposite (Karsh 2006:41). It is not my goal, though, to discuss Weber's thoughts on Islam; this has already been done much more thoroughly than I can manage here (e.g. Huff and Schluchter 1999; Turner 1974). His categories can, however, be

useful in describing the relationship of politics to religion in the Islamic empires.

The institution of the Caliphate is described by two Sunni doctrines: delegation, which states that leadership is a right delegated to the leader from God and man, and obligation, which requires that the leader be obeyed, given that his authority comes from God's sovereignty (Tamandofar 1989:78). Tamandofar notes, however, that the notion of *khalifa* does not imply religious leadership (1989:78) and that, in fact, “[a]ccording to the Quran, the entire Muslim community and its leadership is appointed as God's vicegerents” (1989:79). Kennedy describes two competing early Islamic conceptions of rule: the first, based on tribal customs, argued that the leader should be elected from the Quraysh, the Prophet's tribes, and the second argued that, since God had chosen the Prophet, the leader should come directly from his family (1981:38). For those who subscribed to the first point of view, the leader should not be able to alter religious doctrine, since he was elected by men, but those who held the second point of view thought that, since the leader was chosen by God, he would have the authority to make religious decisions (Kennedy 1981:38). Certainly, these are idealized conceptions, and Lane and Redissi (2004) describe the Islamic state as having been, at one time or another, patriarchal, charismatic, patrimonial, theocratic, and caesaropapist.

It is beyond the scope of this thesis to attempt to fit all of the Islamic imperial powers into Weber's (1978) categories, although they provide a useful framework for beginning a discussion of how politics and religion interact, and I will make use of them. At the same time, it is tempting to exert too much effort determining exactly which of these categories is the closest fit for any given caliphate or sultanate, which can obscure

other, perhaps more important, issues (cf. Eickelman 1985, who comes to a similar conclusion).

One of these important issues is the way in which religion is used as a means of control and legitimation. A good starting point here are Durkheim's (1995) notions of how moral and religious force work. As he states, “[r]eligious force is none other than the feeling that the collectivity inspires in its members, but projected outside the minds that experience them, and objectified” (Durkheim 1995:230). Religious force is a reified, externalized version of the things members of a group collectively believe.

Giddens (1984) deals directly with Durkheim's (1995) notion of externality. For him, the structure of a social system is not external to the individual, but has to be internalized (Giddens 1984:25). This is because “the structural properties of social systems are both medium and outcome of the practices they recursively organize. . . . Structure . . . is always both constraining and enabling” (Giddens 1984:25). Structures, then, not only dictate what type of practice is possible, but also make practice possible to begin with. It is important, though, that the structures are, indeed, constraining, and that this constraint occurs even as structures change. Structures not only are both medium and outcome, but are always both medium and outcome, of practices. Some reproduction of the structure is always occurring, “even during the most violent upheavals or most radical forms of social change” (Giddens 1984:26). This is useful in understanding the power of the social or symbolic structure to constrain (and, of course, enable) the practice of individuals, but to understand theocratic states, it is also important to look at the ways in which elites are able to use these structures to achieve legitimacy.

Bourdieu, in his synthesis of Marxist notions of the political mobilization of symbolic power and practice theory, argues that symbolic power is not rooted in the symbolic system itself, but in the “relationship between those who exercise power and those who undergo it” (1979:83). He also recognizes that the “dominant” class is not a monolithic group, but that symbolic power often expresses a tension between those whose interests are meant to be served by symbols and those actually responsible for producing them (Bourdieu 1979:81-82). Symbolic power, then, is neither something instituted entirely from the top down, nor does it achieve its power through its externality, as it does for Durkheim (1995). It is, rather, the product of an unseen negotiation, so to speak, which often favors the dominant group, although it does not always occur on their terms. However, as Williams notes, religion seems always able “to support the dominant political culture or to undermine it” (1996:375). Following this, it seems necessary to pay attention not only to the ways in which religion legitimates rule, but also the ways in which it can be mobilized to challenge that rule.

Craft Production

Costin (1991) defends the study of economic systems through production, rather than exchange, with two points. First, it is difficult to understand exchange without understanding the entire *system* of exchange, whereas craft production can often be understood well at a local level (Costin 1991:1). This is not to say that craft production can be understood in isolation, without any consideration of exchange systems – understanding production does require some understanding of both distribution and consumption (Costin 1991:3) – but that a detailed understanding of the system of

exchange requires a spatially much broader data set than a system of production. Second, unlike exchange, craft production leaves archaeological remains which are more easily interpreted than those left by exchange, which is often, Costin argues, “invisible in the archaeological record” (1991:1). This certainly depends on how craft production is defined – Sinopoli (1998) includes many activities which do not leave any archaeological trace, such as the production of music and poetry, dance, and gardening, under the label of “craft production” – but in general, productive activities should leave more evidence accessible to archaeologists than distribution activities.

The economic realm is not the only one in which studies of craft production can be important, however. Costin has also argued that craft production intersects the economic, political, social and ritual domains of a given culture (1998a:3). Moreover, it is difficult, in her view, to understand the economic relationships between producers and consumers without also understanding the social relationships that underlie them, and which are often expressed both in craft objects and in the way the act of crafting takes place (Costin 1998a:3).

One of the most common ways of treating craft production in archaeological contexts is through the degree of elite control or sponsorship of crafting. Brumfiel and Earle (1987) make the distinction between attached and independent specialists, the two end points of a continuum between total and no elite control of craft production. For them, attached production occurs because of a desire on the part of elites to control goods with political value and activities of political importance (Brumfiel and Earle 1987:5). Independent craft specialists, on the other hand, develop due to demand not on the part of

elites, but instead on demand for utilitarian goods that require unevenly distributed resources, special skills, or economies of scale to produce (Brumfiel and Earle 1987:5).

This distinction, although potentially useful, has been problematized by several scholars. Wright argues that in some societies, notably Ur III Mesopotamia, focusing on the degree of elite control of production misses the point, as production varies in interesting ways, but not along this continuum (1998:57). Along similar lines, Lass points out that it is not always the degree but often the nature of elite sponsorship or control of production that is important (1998:19). Sinopoli (1988) recognizes this point, and attempts to resolve it by adding a third point to the continuum suggested by Brumfiel and Earle (1987). She argues that craft production can be categorized as administered, centralized or noncentralized (Sinopoli 1988:581). Administered and noncentralized production are roughly equivalent to attached and independent specialization, while centralized production implies “large-scale and spatially segregated production by specialists, without imputing any *direct* involvement by the administrative apparatus of the state in such production systems” (Sinopoli 1988:581).

Costin (1991) goes farther and points out that any typology based on a single variable will inevitably have its drawbacks, and suggests that abstracting from many different systems, often based on small sets of data, will produce a model better suited to a wide variety of archaeological and ethnographic applications. In doing so, she suggests that four different variables are important for understanding systems of craft production. The first of these is the context of production, or the “affiliation of the producers and the sociopolitical component of the demand for their wares” (Costin 1991:11); in other

words, this is the same continuum suggested by Brumfiel and Earle (1987) and Sinopoli (1988). The second is the concentration of production, or how craft producers are distributed spatially and the spatial relationships between different producers and between producers and consumers (Costin 1991:13). The third is the scale of the production unit, or how many people are involved in production and the ways in which they are recruited (Costin 1991:15). The final variable is the intensity of production, or how much time each producer spends on production (Costin 1991:16). It should be noted, however, that Brumfiel and Earle list very similar variables – and a fifth, the amount of output by each specialist – although they do not discuss any but the first at length (1987:5).

Each of these variables is important in terms of understanding a system of craft production, and it is especially easy to overlook the concentration of production if the primary focus is on only the context of production. Brumfiel (1998) shows that it is difficult to understand the social identities of Aztec craft producers without also understanding the differences in the way production was organized in urban and rural areas. She points out that because the scale and intensity of production was different in both areas, urban craft producers were able to better define their social identities than rural producers (Brumfiel 1998:145). The key here is the way in which all of the variables interact. Presumably intense, large-scale production in a peripheral or rural area would look different again from either of the two situations discussed by Brumfiel (1998).

Finally, two points raised by Costin (1998b) bear discussion here. The first of

these is that craft goods themselves can have a variety of meanings within a culture. For example, “[i]n the Inka empire, cloth was a utilitarian good, medium of taxation, and conspicuous sign of wealth and political favor” (Costin 1998b:123). For her, there are five ways in which material objects become valuable or meaningful in a sociopolitical sense: the rareness of value of the material, the amount of labor invested, the meanings of the material or design, the social identity of the producer, and the social identity of the consumer (Costin 1998b:125). This is particularly important, as the same types of goods and the same types of materials do not always “mean” the same things, depending on the context of their manufacture and use.

Nomads

Bienkowski and van der Steen (2001), based on comparisons of 19th century and Roman/Byzantine sources, construct a model for patterns of nomadic activities, specifically in southern Jordan and the Negev. They suggest that there are five aspects of nomadic activity which tend to occur regardless of period; three of these are especially useful here. These are 1) that certain tribes control trade with the Mediterranean coast, but will also occasionally raid that trade, 2) that affiliation with the governing state is weak compared to tribal kin relationships, and 3) that imperial powers will not be able to conquer the tribes, and will instead attempt to control them by creating mutual dependency (Bienkowski and van der Steen 2001:35).

In terms of trade, Bienkowski and van der Steen (2001) see nomadic participation in trade as being primarily, or at least universally, the type that Khazanov describes as “mediation or participation in the trade between different sedentary societies, and the

services and other contacts linked to these” (1994:202). Although he gives some evidence for the importance of direct trade between nomads and sedentary peoples in the Islamic periods, notably a quote from the 12th century Seljuq sultan, Sanjar, describing the benefits of trading with nomadic peoples (Khazanov 1994:206), it seems more likely that in the case of the copper trade, my primary interest here, nomadic participation would have been mostly limited to “the transportation of loads, the sale or renting out of transport animals, the conducting or safeguarding of caravans, or simply to payment for unimpeded passage” (Khazanov 1994:209).

On a similar note, Marx argues that Sinai Bedouin society can best be understood, from an economic perspective, at least, as “so deeply involved in the market economy that they should be viewed as specialized segments of a complex, city-based economy” (2007:76). Although he initially was of the opinion that labor migration was the best way to understand them, it became clear that they were able to survive because of their integration with the local economies (Marx 2007). This conception of integration with local economies is useful for considering the ways in which nomadic groups in the past interacted with sedentary groups, although the specifics of the roles played by the Sinai Bedouin probably are not.

4) Historical and archaeological context

Although generally a peripheral area during the Islamic period, with the exception perhaps of several Crusader kingdoms, Jordan nonetheless has a wealth of Islamic period settlement (Fig. 2), and its location between the capitals of the various Islamic empires, as well as along several *hajj* routes, at times made it an economically important region during the Islamic period.

Although I draw from sources throughout modern Jordan below, note that the treatment of Jordan as a single entity is somewhat artificial. During the Islamic periods, this area was generally considered part of the larger *Bilad ash-Sham* – or Greater Syria – and when this was split, the area of modern Jordan was never part of a single administrative district. Furthermore, Walmsley has argued that northern and southern Jordan – with Wadi Mujib serving as the boundary between the two – are distinct entities in terms of material culture (Walmsley 1998:439), politics and, perhaps, society (Walmsley 2001:522).

The initial conquest and expansion

The Islamic period in what is now Jordan, as in much of the Middle East, begins with the initial period of expansion from the Arabian Peninsula. In 633, Abu Bakr sent three columns of soldiers to conquer Syria and Palestine, and two of these columns entered the area through Transjordan (Rahman 1989:20). The majority of the cities in Syria and Palestine, with the notable exceptions of Caesarea and Damascus, put up little resistance to the Islamic conquest – indeed, at some inland towns the discontentment with Byzantine rule was so great that the invaders were welcomed with celebration (Kennedy

2006:146-147). The reasons for this are not entirely clear, but in addition to dissatisfaction, Kennedy notes that many of these cities had already entered a period of decline, due possibly to a combination of climate change, a decrease in Mediterranean trade and the bubonic plague, by the time the Islamic armies arrived (2006:182-183). Along the same lines, Rosen-Ayalon notes that Ayla (modern Aqaba) had already aligned itself with the Muslims as early as 630 AD (2006:19-20). At any rate, “[b]y roughly the mid-seventh century, Arab-Islamic forces controlled regions stretching from Egypt across Syria and Iraq into central Iran” (Gordon 2005:27).

Although Islamic influence spread rapidly through the region, this early period is difficult to distinguish from the preceding Late Byzantine period in terms of material culture, as suggested by Whitcomb's extension of the archaeological Early Islamic I period into what is politically the Late Byzantine period (1992b:386; Fig. 1; cf. Whitcomb 2001:505, where he instead places the beginning of the Early Islamic I in 650 AD, extending the archaeological Late Byzantine period into the political period of the Islamic conquest). On this Whitcomb states, “the idea that 636 was a turning point has given way to an appreciation of the continuity of material culture” (2001:503). Similarly, Newson *et al.* suggest that one problem in the archaeology of the Islamic periods is “distinguishing between Late Byzantine and early Islamic wares, especially those of the Umayyad” (2007:349).

In terms of daily life, in fact, it is likely that little would have changed from late Byzantine times even into the early Umayyad period. Christian churches continued to be used, and even built, well into the Umayyad period (Bisheh *et al.* 2000:78). Lenzen and

Knauf have argued that the region near Beit Ras/Capitolias and Gadara was integrated well enough into the Arabian trade network by the early 7th century AD that the Islamic conquest probably meant very little to the inhabitants, who were possibly Arabs themselves, in terms of their daily lives (1987:37-38).

The Umayyad period

Byzantine continuities or Umayyad revivals?

During the rule of the Umayyad caliphate, the traditionally accepted picture of Jordan is one wherein “[t]he Byzantine cities and countryside continued to flourish” (McQuitty 2005:330). This view, however, is complicated by issues of interpreting chronology and regional differences (McQuitty 2005:330). As Kennedy points out, it is likely that many cities in Palestine and Syria were in a period of decline when Islamic armies arrived in the region (2006); as such, although the general picture of the area flourishing under Umayyad rule is probably correct, interpreting this as a continuation of Byzantine-era prosperity may not be.

Likewise, the scale at which these patterns are being discussed is important to consider. Lucke *et al.* (2005) point out that, in general, the entire Decapolis region of northern Jordan is marked by the flourishing of cities during the Umayyad period. At the same time, Geraty *et al.* have shown, in the area of Tell el-'Umeiri more specifically, settlement patterns show a decline from 23 Byzantine period sites to nine of the Umayyad period (1986:124). Of course, this raises the issue of chronological control again. It is difficult to tell from survey data exactly when these Byzantine sites were abandoned, so whether this shows a decline in the region during the late Byzantine or early Umayyad

period is unclear. Also, the size of the settlements themselves is important to consider when deciding whether this shows a decline or an intensification of sedentism during the period. Most importantly, though, Schick notes that at many sites in Jordan, Early Islamic settlement not suspected from surface sherding is revealed through excavations (1994:136). Geraty *et al.*, however, have interpreted the data as showing an abatement in the settlement of the Tell el-'Umeiri area during the Umayyad period (1986:124).

Unfortunately, this picture depends heavily on evidence from the north. Knowledge of southern Jordan during this period is not as complete, although MacAdam has pointed out that “as field work in the south expands, more and more Umayyad and 'Abbasid pottery is found associated with sites . . . attested in the early Islamic sources” (1994:51). Despite this, the south seems generally to have been more sparsely settled in both the Umayyad and Late Byzantine periods, and although settlement patterns seem to change, it would be difficult to describe this as an abatement (Fig. 2).

Desert Castles and continuity

Generally, though, the Umayyad period of Jordan is marked by the flourishing of settlement and a sort of continuity from the late Byzantine period. The “desert castles” of Jordan, Syria and Iraq serve as examples of this. One of these, Qasr Hallabat, gives some insight into the continuity from the late Byzantine into the Umayyad period. Bisheh states that it is “beyond any doubt” that the initial foundation of Hallabat is pre-Umayyad (1993:49). At the same time, the structure was completely rebuilt during the Umayyad period, and a mosque, a bath, and a large agricultural enclosure added (Bisheh 1993:50). It is likely that the rebuilding of Hallabat marks a shift in function from a fortress –

perhaps part of the Roman *Limes Arabicus* (cf. Bowersock 1976) – to an elite residence (Bisheh 1993:50), and Bacharach argues that it was built under the patronage of the Umayyad caliph al-Walid I (1996:33). Continuity, then, is perhaps not the best word in this situation; Qasr Hallabat is entirely rebuilt in the Umayyad period, and its function changed considerably.

Desert Castles and Umayyad policy in Jordan

Qasr Kharaneh is a functionally interesting site, although its dating is rather problematic. Ulrice (1987), who worked at the site in the late 1970s and early 1980s, has argued that it is the earliest of the Umayyad desert castles. His interpretation of the function of the site differs from most of the other desert castles, as well. He suggests that the site was used as a place where local tribal authorities could meet with representatives of the Umayyads (Ulrice 1987). Although at least one reviewer has criticized this interpretation on the rather damning grounds that “no positive evidence supports it” (Bloom 1989:255), other scholars (e.g. Bacharach 1996; al-Asad and Bisheh 2000) have accepted Ulrice's view of Qasr Kharaneh's function as a meeting place between the Umayyads and local tribal authorities, pointing out that controversy mostly surrounds Ulrice's early dating.

Concerning the purpose of the desert castles taken as a group, Grabar points out that Qusayr 'Amra and Qasr Mshatta have, in the past, been “taken to be symbols of an ill-explained Umayyad megalomania and romantic attachment to the desert” (1963:6). Paraphrasing Sauvaget, however, he notes that, with the exception of Qusayr 'Amra, all of the desert castles are associated with agricultural exploitation (Grabar 1963:7),

suggesting an attempt at development, or, in the case of pre-Umayyad foundations, an adaptation of an existing network of settlements.

Although sites like Ayla did retain their prominence, this Umayyad interest in Jordan, whether romantic or practical, does not seem to have extended to the south, where desert castles are not found and where settlement remains more sparse (Fig. 2). Some type of occupation continued during this period in the south, however, including, apparently, in Wadi Faynan, where a single glazed sherd dated to the Umayyad period was found during survey (Barker *et al.* 1998:20).

It is also worth noting here that several surveys have revealed evidence of intensive copper production in the region of Eilat in Israel that most likely dates to the Umayyad or early 'Abbasid period. Willies argues that in the Wadi Amram, the 7th-8th centuries were “the time of the bulk of the mining” (1991:138). In addition to this, Avner and Magness (1998) discuss early Islamic mines in Jebel Merah, Nahal Rehavam, Wadi Tweiba and Nahal Tsfunot, all near Eilat. In addition to the mines, Islamic period smelting camps have also been found near Eilat (Avner and Magness 1998:40). Whitcomb suggests that these were seasonal mining operations carried out to support Ayla, and relates them to a fill containing remnants of copper production, as well as “clearly pre-Abbasid ceramics” (2006:241).

The 'Abbasid period

Changes in settlement patterns

The 'Abbasid period has traditionally been thought to mark a decline in settled life in Jordan. This prompted Kennedy to lament that “Palestine seems to have suffered more

than any other area from the transference of the capital to Iraq. . . . We hear little about it in the chronicles and the archaeological evidence suggests that villages and towns were abandoned during this period” (1981:24). Certainly, there is some evidence of this in certain parts of Jordan. Geraty *et al.* note that sedentism decreases sharply in the Tell el-'Umeiri region during the 'Abbasid period (1986:24). This is somewhat surprising, given that trade increased markedly throughout the Mediterranean during the 'Abbasid period, and the 'Abbasids were active participants (Wickham 2004).

In fact, Whitcomb (1988) has found that Aqaba played a role in that trade during the 'Abbasid period, although it may be an anomaly as far as cities in Jordan are concerned. Nonetheless, Whitcomb (1995) argues that the picture of decreasing sedentism is not accurate for much of Palestine, especially cities like Caesarea and Aqaba, which would have been integrated into the Mediterranean trade network. Stacey explains the commercial decline of Tiberias at the beginning of the 'Abbasid period along similar lines: because Damascus, and not the Mediterranean, was one of the primary markets Tiberias was connected to, the movement of the capital to Baghdad by the 'Abbasids temporarily disrupted this network (2004:247). Nonetheless, especially in the south, settlement does seem to decline during the rule of the 'Abbasids in Jordan (Fig. 3).

Religion and revolution

Unlike the Umayyads before them, the 'Abbasids, at least at the beginning of their rule, were self-consciously theocratic (Karsh 2006:41). It is under their rule that the empire shifts from being an “Arab empire,” with fewer than 10 percent of the population having converted to Islam – the situation at the end of the Umayyad period – to being an

“Islamic empire” in which most populations had converted (Karsh 2006:40).

From their beginnings at Humayma, in southern Jordan, the 'Abbasids made use of the Shi'ite belief that a leader should be chosen from the family of the Prophet to justify their claim to the empire (Kennedy 1981:41). As mentioned previously, this belief had an explicitly religious dimension (Kennedy 1981:38), and this played out in the way the 'Abbasids initially promoted their revolution: “There was no need to spell out a detailed programme of reform; if the family of Muhammad ruled, and the Qur'an was obeyed, all the other problems which beset the community . . . would naturally solve themselves” (Kennedy 1981:41). Throughout the 'Abbasid period, various rulers were able to mobilize this religious symbolism to their advantage (Kennedy 1981).

Interaction with the provinces

Despite this newfound religious piety, Karsh points out that “the substantive differences between the Abbasids and their predecessors were far smaller than might appear” (2006:42). Although they made much more effective use of religious imagery than the Umayyads, this was primarily mobilized as a way of legitimating their rule, creating a friendly environment in which to rule, and, perhaps most importantly, providing some cover for the extravagance of their rule – Dawud ibn 'Ali, for example, claimed at his nephew's coronation that the rebellion was not about growing rich, although this was, indeed, what happened (Karsh 2006:43).

This extravagance was achieved through exploitation of the provinces of the empire. Particularly relevant here is the fact that the 'Abbasids were very interested in silver, copper and iron imported from Iran, as well as gold imported from Sudan, and also

plundered both Iranian palaces and Egyptian pharaonic tombs for gold (Karsh 2006:45).

The fragmentation of empire

Needless to say, all of this did little for the 'Abbasids' popularity as caliphs. As had happened both to the existing empires during the initial conquest of Islam and later to the Umayyads, peripheral groups began to set their sights on control of the 'Abbasid empire (Fig. 4), which even during Umayyad rule was too big to rule effectively (Karsh 2006:56). By 970 AD, control of southern Jordan had passed from the 'Abbasids to the Fatimids of Egypt (Schick 1997:73). Although unrelated to Jordan, it is interesting to note, in relation to craft production and social identity, that a dynasty which challenged 'Abbasid authority in Iran were known as the Saffarids, from the Arabic word *saffar* (coppersmith), the profession of their founder (Karsh 2006:59).

The Fatimid and Seljuq periods

Fatimid theocracy

The Fatimids, like the 'Abbasids, were able to use the concept of an *imam* to their political advantage, and like Ma'mun, the Fatimid leaders referred to themselves as *imams* (Lindsay 2005:103). Unlike the 'Abbasids, however, the Fatimid rulers subscribed to Isma'ili Shi'ite Islam, and they were openly opposed on religious grounds to the Sunni 'Abbasid caliphate (Lindsay 2005:103). This religious belief was also connected to imperial ambitions, and the Fatimid *imams* believed that they should replace the 'Abbasids as the rulers of the entire empire (Karsh 2006:52). Ultimately, they were unable to achieve this goal – indeed, no polity would achieve control of anything approaching the holdings of the 'Abbasids at the beginning of their rule until the

Ottomans – but they were able to take control of much of the Levant and Arabia (Karsh 2006:52) and make Egypt an important center of Islamic culture and commerce (Lindsay 2005:103).

The Fatimids and Seljuqs in Jordan

The history of the Fatimid and Seljuq periods in Jordan is not very well-known. The settled cities of the Decapolis region in northern Jordan were essentially abandoned in the 10th century AD (Lucke *et al.* 2005). Geraty *et al.* note that in the area near Tell el-'Umeiri, there is “a nearly complete return to nomadism during the Abbasid, Fatimid, and Seljuq-Zengid periods” (1986:124).

The situation in southern Jordan is slightly different. Although sedentism declines during these periods, evidence of fairly extensive occupation has been found at Ayla, as well at least some limited occupation in Humayma (Schick 1997:82). That Ayla would show significant occupation during this period makes sense, as it was a stopping point for caravans on the *hajj* route from Egypt, at least until the Crusaders constructed Montreal/Shobak in 1115 AD and were able to disrupt pilgrimage traffic through southern Jordan both from Egypt and Syria (Schick 1997:78).

It is possible that other sites were also settled during this period in the south. Schick quotes a passage from William of Tyre suggesting that the area around Montreal/Shobak was both fertile and occupied when the Crusaders arrived in the 12th century (1997:80), and it is not entirely clear whether the absence of Fatimid and Seljuq pottery from most surveys of the region is due to actual scarcity or to the attribution of these sherds to earlier or later periods, as suggested by Whitcomb (1992b) (Schick

1997:81-82). Mapping sites identified as Fatimid does show a significant decline in settlement across Jordan (Fig. 5), but, again, interpreting this decline is problematic.

The Crusades and their impact

In late 1095, Pope Urban II, inspired both by practical concerns regarding the Eastern church and a desire to “liberate” Jerusalem from the Muslims, urged an organized campaign against the East (Karsh 2006:69-70). The practical effect of this in the long term was that, contrary to what had been promised to the Byzantines, several Crusader kingdoms were set up in Syria (including Jordan) and Palestine (Karsh 2006:70). The response to this on the part of the now-disparate imperial powers was, rather surprisingly, very little. They were as worried about each other as about the Crusaders, and the Crusader presence, rather than inspiring a united effort against them, instead resulted in a complex and constantly shifting web of alliances between various Crusader and Islamic powers (cf. Karsh 2006:70-76 for an in-depth discussion of this).

Part of the reason for this is that, although the Crusades were disruptive at a local level in Palestine and Syria, they had little effect on the centers of imperial power off in Iraq and Egypt (Karsh 2006:72), and, surprisingly, the Crusaders began to become assimilated with the local communities (Karsh 2006:76). It was not until Reynald, governor of Karak, cut off the *hajj*/trade route between Syria and the Red Sea that an attempt was made to oust the Crusaders (Abu Mustafa 2006:25).

The Ayyubid period

The Ayyubids and religion

Lindsay makes the argument that the Ayyubids engaged in a sort of “jihad against

the Franks as well as against the domestic enemies of Sunni Islam – the Shi'i Fatimids in Egypt” (2005:77). The first Ayyubid sultan, Saladin, certainly would have used this to his advantage, as well. However, like the supposed concentration of power in the 'Abbasid caliph, rather than the Ayyubid sultan – a practice begun by the Buyids in Iraq in the 10th century AD (Karsh 2006:60) and maintained by the Mamluks after the Ayyubids – the religious motivations of the Ayyubids should probably be questioned.

The Ayyubids and trade

Although the Ayyubids certainly fought other Islamic powers for control of the Levant and Egypt, he generally maintained good relations with the Crusaders (Karsh 2006:80-81). It was not until Reynald, governor of Karak, attempted to disrupt the *hajj* route from Damascus through Jordan, the last remaining connection between Damascus and the Ayyubid capital of Cairo, and plundered a caravan, that Saladin launched his campaign against the Crusaders to reopen the trade routes, and even then he had preferred negotiation (Abu Mustafa 2006:25; Karsh 2006:81). Saladin did sack Karak, reopening communication and trade between Cairo and Damascus, and later moved on the Crusader towns on the coast, in an attempt to prevent reoccupation (Abu Mustafa 2006:23-25).

The Mamluk period

The institution of Mamluks

The Mamluks (Arabic for “thing possessed”) were slave soldiers and bodyguards employed by the Ayyubid dynasty (Abu Mustafa 2006:26). They had been employed since the beginning of Ayyubid rule – in fact, as far back as the 'Abbasid period (Abu Mustafa 2006:27) – but in 1250 AD, due to a shift in the manner of Ayyubid rule, they

were able to take control of Egypt from the Ayyubids (Levanoni 1990).

An important thing to note about the Mamluks, though, is that, at the time they were recruited, they were not Muslims. As Lindsay points out, Islamic law stated that a free person could only be made a slave if he were also a non-Muslim and resided outside of Muslim countries, which is why the Mamluks were recruited from the “Turks,” or people who lived in the Central Asian steppe (2005:71). This fact, perhaps, played an important role in the way the Mamluks chose to prove their legitimacy as rulers.

Mamluk mobilization of symbolic authority

As might be expected, the Mamluks faced a problem in attempting to legitimate their authority. Not being Muslims, originally, or ethnic Arabs, neither of the routes to power discussed by Kennedy (1981) were open to them. One way in which they attempted to achieve legitimacy was through the same means as the Buyids and Ayyubids before them: by drawing on the symbolic power of the 'Abbasid caliph. The Mamluks were actually able, after the fall of Baghdad to the Mongols in 1258, to bring the last 'Abbasid caliph to Cairo, transferring the “political centre of the 'Abbasid Caliphate from Baghdad to Cairo” (Abu Mustafa 2006:28-29).

Also, like Saladin, the Mamluk sultan Baybars I began another campaign against the Crusaders, and by 1291 they had been expelled from the Levant entirely (Karsh 2006:84). Although the Crusaders were ousted, and the coastal towns, except Gaza, destroyed to prevent their reoccupation (Abu Mustafa 2006:24), it is difficult to attribute this to religious motivations, although the Mamluks did attempt to legitimate their authority using religion (Abu Mustafa 2006:32). At the same time they were fighting the

Crusader states, the early Mamluk sultans were also establishing close trade relations with the Italians and other European merchants (Abu Mustafa 2006:44-45).

These attempts at legitimation were especially unsuccessful with the Bedouin, who considered the Mamluks slaves unfit to rule the Muslims, and used this as an opportunity to raid trade caravans and towns (Abu Mustafa 2006:38-39). Although Bienkowski and van der Steen (2001) argue that this type of raiding is perhaps a key feature of the nomadic presence in the southern Levant at any given time – and although the Bedouin also occasionally assisted the Mamluk sultans (Abu Mustafa 2006:42) – it is interesting to consider the differing mobilizations of symbolic power at play in this specific instance.

The Mamluks and metals

Lindsay points out that the minting of coins was one way for a ruler to assert political legitimacy in the Islamic world (2005:81). It should be noted, however, that all coins were not seen as equal. Although gold and silver coins often had religious associations, and associations with rulers, copper coins were generally seen as secular, everyday objects without these types of connotations (Wasserstein 1993:316).

Egypt was dependent on foreign sources for metal of any kind, and the Mamluks had to rely on the import of copper from Europe in order to obtain the quantities they needed (Shoshan 1982:107). Minting coins at all, then, required the Mamluk government to trade with Europeans. Ashtor points out that, of the metals exported to Egypt by the Venetians, copper was imported in the highest quantities “by the agents of the sultan and governors of the provinces, who needed it for the mints, their industrial enterprises, and

other purposes” (1983:126). As Shoshan (1982) notes, in the 14th century it became difficult to import silver from Europe, and at the beginning of the 15th century, the economy in Egypt began to shift towards one based on copper. Although silver could be conserved in this way, it required an even greater amount of copper than that which was already being imported from Europe before this time. Ultimately, the shift from silver to copper was difficult to sustain, and it often turned out that despite the initial benefits, people who relied on the copper economy ended up worse off than before (Shoshan 1982).

Copper mining and smelting activities in the area of Eilat also continued into the Mamluk period, although on a decreased scale after their peak in the Early Islamic period (Willies 1991:138; Avner and Magness 1998:42). What mining operations in the southern Levant during this period might mean is still unclear, however, as their contribution to the economy was small compared to the amount of metal that was actually required. Shatzmiller notes that “[t]he decline in mining occupations corresponded to the changes in the monetary system of the Middle East,” but also points out that controlling mines tended not to produce the amount of metals, especially precious metals, that were needed, and a large part of this had to be imported from Europe (1994:176). Likewise, despite the fact that many metal craftsmen seem to have worked throughout the Islamic periods, it appears that “[t]he availability of raw material most likely resulted, not from greater productivity in the Islamic mines, but from the availability of sufficient quantities of imported metals” (Shatzmiller 1994:236).

5) Khirbat Nqeib Aseimer/WAG 53/el-Furn

The copper-rich Faynan district is located in southern Jordan, roughly 50 km south of the southern tip of the Dead Sea (Fig. 7). Both it and the Timna district in Israel were important centers of copper exploitation throughout antiquity, but compared to regions such as Cyprus, neither contains enough ore to be particularly important at an international level (Hauptmann 2006:125).

Occupation in the region dates back as far as the Upper Paleolithic (Levy *et al.* 2003; Hauptmann 2007:39), with local copper production beginning in the Early Bronze Age (Levy *et al.* 2002). Despite arguments suggesting that Faynan was unoccupied from the mid-6th century AD until the mid-12th century (e.g. Weisgerber 2006:25-26), there is, in fact, evidence of some occupation in Faynan for all of the Islamic periods, although evidence of specifically Umayyad occupation is limited to a single sherd of glazed pottery found in the field system near Khirbat Faynan (Barker *et al.* 1998:20).

In his survey of Transjordan, Nelson Glueck visited the site of Khirbat Nqeib Aseimer (KNA) in the Faynan district, which he dated, based mainly on architecture and pottery, to the medieval Islamic period (Glueck 1935:30-32; 1940:65-66). He does not give a more specific date than this, but he does point out that the construction techniques used in the walls parallel those used at Qasr Kharaneh, a castle dating to the Umayyad period (Glueck 1940:66). It is worth noting, however, that Glueck's analysis of the architecture is not meant to date the site within the Islamic period, but rather to point out that the buildings “are certainly different from the building types found in the Iron Age mining and smelting sites in the Wadi Arabah” (1940:66; cf. 1935:32).

In 2002 the Jebel Hamrat Fidan Project conducted surveys of the Wadi al-Ghuwayb and Wadi al-Jariya, which also included the smaller Wadi Neqeib Aseimer (Levy *et al.* 2003); KNA was surveyed as part of this project and assigned the site number WAG 53. The publication of the survey data echoes Glueck's dating of the site as medieval Islamic, but given the Iron Age focus of both surveys, the date of the site is given as simply "Islamic" (Levy *et al.* 2003:252). Although a detailed analysis of the data has not yet been published, the JHF team mapped each surviving structure at KNA (Fig. 8) and collected pottery from each individually. Both the spatial data and the pottery will be discussed in sections that follow.

Hauptmann suggests, on the basis of ceramic and numismatic evidence, that KNA, which he calls el-Furn, dates to the Middle Islamic II period (2007:126). The (limited) pottery collected during the 1980s at KNA was dated either to the 13th century AD or as "Mamlukish-tuerkisch" (Hauptmann *et al.* 1985:190-192) and, interestingly, the six Islamic coins found at KNA – as opposed to those found near Khirbat Faynan – date to the early 13th century, specifically 1203-1235 AD (Kind *et al.* 2005:188).

Hauptmann also notes that the metallurgical evidence, specifically the copper-iron alloys found there, do not necessarily indicate copper production, and an argument could be made for the production of iron instead (2007:126-127). An argument for the function of KNA being primarily copper production will be presented in the conclusion of this thesis. Grattan *et al.* (2007) note that some copper smelting probably occurred at KNA during the early Islamic periods, but agree with Hauptmann (2007) that the majority of Islamic copper and, interestingly, perhaps lead, smelting occurred during the Middle

Islamic II (Grattan *et al.* 2007:90).

References in historical texts to mining and smelting activities in Faynan are, unfortunately, limited to the Roman period, in the context of Christian martyrs sent there as slaves (Knauf and Lenzen 1987:83; cf. Glueck 1935:28 n. 61a, who draws parallels between these texts and possible slavery during the Iron Age at Khirbat en-Nahas). As such, it is not possible to use historical texts to directly answer questions about KNA, including the period to which it should be dated. However, in my discussion I will suggest that these texts, combined with historical information, can perhaps be useful for conceiving of how production was organized at the site.

6) The survey pottery from Khirbat Nqeib Aseimer

Unglazed Wares

Undecorated handmade wares

This group makes up the majority of the pottery collected at KNA, although it makes up a relatively small percentage of the diagnostic sherds which were collected. Surface color ranges from light brown to orange to light red, and it is sometimes painted in brighter orange or red. It is often tempered with chaff or fairly large pieces of quartz, and is generally poorly fired, with cores that tend to be black.

Despite the fact that the majority of the pottery collected at KNA during the 2002 survey was of this type, only three diagnostic sherds of this ware were found. Even with diagnostic sherds, however, this ware is not particularly datable, due to its long period of use. Writing about bowls of this ware, Avissar and Stern state, “They cannot be dated according to form, only by stratigraphic context” (2005:88). This ware was found at other sites in Faynan by the Wadi Faynan Landscape Survey and dated as “Mamluk,” but it is important to note that this dating was arrived at “by comparison with pottery seen on the surface at al-Furn” (Tomber 2007:449). On the other hand, this ware does not seem to occur before the Middle Islamic I, and “becomes abundant in every Mamluk occupation level” (Avissar and Stern 2005:88). It seems likely, then, that this ware at KNA mostly dates from the main Middle Islamic II occupation, and was produced locally as needed, rather than imported, if the late Ottoman ethnographic examples given by Avissar and Stern are accurate for the Middle Islamic period, as well (2005:88).

Thin wares

This ware is very similar to the “thin, decorated ware” described by Walmsley and Smith as characterized by a “very even, if somewhat gritty, fabric with medium-fine and occasionally large white limestone inclusions. Firing produces a reddish-yellow to pink coloured pottery, sometimes with a red core” (1992:194). They are, as their name suggests, very thin in section. A total of five diagnostic sherds of this type were found at KNA: 223 from room 5310, 225-226 from room 5311, 228 from room 5312, and 224 from room 5313. All are fairly similar to a form from Pella (McNicoll *et al.* 1992:Pl. 125.5), jugs or juglets with flaring, flat-topped rims. The fabric is for the most part very similar to that described by Walmsley and Smith (1992), but with occasional finely chopped chaff temper. The most complete sherd, 223, has a pinched spout on the rim, suggesting that it was used for storing and pouring liquids, which is the function that Smith (1973) attributed to them, as well.

It is rather difficult to date the sherds of this ware. Walmsley and Smith state that “[t]hese vessels, both in fabric and decoration, could easily be mistaken as late Umayyad or Abbasid in date” (1992:194). Indeed, Smith had previously suggested, tentatively, an 'Abbasid date for this ware at Pella (1973:238). However, it later became clear that vessels of this type do not appear in 'Abbasid contexts at Pella, and it is generally given an Ayyubid-Mamluk – and, in this case, the less precise Ayyubid-Mamluk designation is accurate, as this ware continues to be used into the 15th century, or the first half of the Late Islamic I – date there, although it is also found in Fatimid contexts at other sites (Walmsley and Smith 1992:194). In trying to date this ware at KNA, there are several points to consider. First, at Pella this ware is almost always painted, which is part of the

reason it is attributed to the Ayyubid and Mamluk periods (Walmsley and Smith 1992:194). Sauer points out that, in Jordan, one of the characteristics of 'Abassid pottery is that “there is no painting” (1982:333), and so it is unlikely that the painted examples from Pella are 'Abbasid. None of the sherds found at KNA are painted, which makes a Middle Islamic date less likely. However, Sauer also notes of 'Abbasid pottery in general that “[t]he firing is ... excellent, and there are virtually no grey cores” (1982:333). The sherds from KNA are fairly well-fired, but two examples, 223 and 228, have at least partially gray cores. The Wadi Faynan Landscape Survey also identified several of the forms in this group, belonging to both their Orange Oxidized Ware and Cream Ware groups (cf. Tomber 2007 for discussion of these wares), as either Late Byzantine/Early Islamic or Early Islamic (Adams *et al.* 2007:781, 797).

Handmade Painted Geometric Wares (Fig. 9)

This ware is also very common in Middle to Late Islamic pottery assemblages, and is similar in many ways to the Plain Handmade Ware discussed earlier. It begins to appear slightly later than that ware, roughly in “the second half of the twelfth century” and “continu[ing] in production during the Ottoman period until the beginning of the twentieth century” (Avissar and Stern 2005:88). Like the Plain Handmade ware, Avissar and Stern point out that it most commonly dates to the Mamluk period (2005:88).

Sherds 243-245 from WAG 53 building 5311 strongly resemble Middle Islamic I and II “geometric painted wares,” as found at Khirbet Sheikh 'Isa (Whitcomb 1992a). Specifically, they resemble a ware described as “black, buff surfaces, brown paint, common medium sand and chaff” (MacDonald 1992, plate 31.i). One example, sherd

244, has black, as opposed to brown, paint on the exterior. Several examples of this black, sand and chaff tempered ware occur among the body sherds from room 5311, as well, some with faint remnants of paint. The designs on several (243 and 245) also at least superficially resemble those on Middle Islamic II (i.e. late Ayyubid-early Mamluk) geometric painted wares from al-Rujoum (Whitcomb 1992a), specifically Macdonald 1992, plate 34.f and r, although of the same ware as those from Kh. Sheikh 'Isa, rather than that at al-Rujoum, which seems more similar to that discussed by Schaefer (1989; discussed below). Structure 5306, the large building near the center of the site, also yielded a diagnostic sherd, 240, of a similar fabric and decoration. It is of a black, sand and chaff tempered ware, with a “buff” slip and a geometric decoration in red and black paint. Like structure 5311, structure 5306 also yielded nondiagnostic sherds of the same ware. At least three of the sherds published by Glueck from Khirbat Neqeib Aseimer (1940:67, Fig. 29, 2-4) seem to be of this type, as well. Walmsley (1998) points out that this ware develops over time, and discusses a specifically Ayyubid form from Gharandal in southern Jordan, painted in red, which possibly corresponds to sherd 241 from KNA.

Schaefer also describes a “painted geometric ware,” although the ware he describes is “made from a coarse paste that fires to a pink, pale brown, or pale yellow color. Most pieces contain medium to high amounts of crushed sherd temper” (1989:46). This is quite different from the black, chaff and sand tempered ware of sherds 240 and 243-245, but seems to accurately describe sherd 242 from structure 5312, which is of a cream to light pink color with a cream slip and reddish-brown paint. Schaefer notes that the dating of this ware is somewhat difficult, and although fairly specific dates have been

suggested, it has been found in contexts ranging from Early Islamic through the Mamluk period; he notes, however, that later dates seem more likely (1989:46). It is worth noting, however, that Walmsley and Grey (2001) identify a Red-Painted Ware with a similar description dating to the Early Islamic period.

Glazed Wares

Raqqa-type Wares

Many of the sherds glazed sherds found at KNA fall into the category of turquoise and black underglaze-painted ware and probably date to the Middle Islamic II (i.e. Mamluk) period. Hauptmann *et al.*, on the basis of two body sherds found during their earlier survey of KNA, refer to this as Raqqa Ware (1985:171), which is a reasonable identification. This is a rather broad term for Syrian-produced glazed fritware – although Tonghini suggests that production of this ware might not be limited to Syria (1998:50; cf. Milwright 2008 for discussion of an imitation of this ware produced outside of modern Syria) – often without much attention to the differences between different wares of this type (Tonghini 1998:70). Although Raqqa Ware is common throughout the Islamic world (Henderson *et al.* 2005:131), the shape of several of the rim sherds found at KNA in 2002, discussed below, make it less likely that they were actually manufactured at Raqqa and probably are a later, provincial development, and as such I prefer to call this group Raqqa-type, rather than Raqqa, Ware.

Sherds 258-260 from structure 5311 all are fairly straightforward examples of this type. Sherd 259 is turquoise and black under a clear glaze, 258 is light cobalt under a clear glaze, and 260 is a darker cobalt and black under a clear glaze. Sherd 247 from

room 5310 is of a similar ware, but glazed in turquoise. Sherd 249 is painted in light turquoise and black under a rough, thin, clear glaze. Room 5312 produced three sherds – 250-252 – painted in turquoise and black under a clear glaze. Sherd 252 is especially interesting, in that there is a fragmentary Arabic inscription painted in black under the glaze (Fig. 10). Four sherds painted in turquoise and black under a clear or turquoise glaze – 261-264 – were also found outside of any room on the south slope of the site.

One of these sherds, 261 (Fig. 11), is one that is unlikely to have been manufactured at Raqqa. It is similar in profile and design to a Syrian bowl in the Ashmolean Museum (Porter 1981: 40-41; Fig. 7; Pl. XXVIII), which is also glazed turquoise with black underglaze painting. The rim decoration on the piece in the Ashmolean Museum is almost identical to that of sherd 261, and both share the distinctive overhanging lip. Based on a comparison to a complete waster excavated near Ma'arrat Nu'man, near Hama (Porter 1981:39-40; Pl. XXVII), Porter suggests that this shape is a “provincial variant,” although the decoration shows a connection to Raqqa (1981:40). This find, unfortunately, came from an illicit excavation, and should be treated with caution, but it remains an important find regarding this shape (Porter and Watson 1987:192).

Although Raqqa-type Wares can date from anywhere between the late 12th and 13th centuries (Porter 1981:10), this particular rim shape, when compared to similar vessels from Persia, suggests a later 13th century date (Porter 1981:41). Tonghini, referring to a vessel with this rim at Qal'at Ja'bar, mistakenly cites Porter (1981) to suggest that this shape is a late 13th to early 14th century Iranian imitation of Chinese

Celadon wares (Tonghini 1998:Fig. 67); in fact, the line she cites refers to a different vessel without the distinctive overhanging lip (cf. Porter 1981:41). A late 13th century date also makes it unlikely that this type was produced in Raqqa, even ignoring stylistic issues, as the Mongols destroyed the city in 1259, effectively ending pottery production there (Porter 1981:10).

Another sherd, 238 from room 5306, is of the same overhanging rim profile as sherd 261, and is also similar in terms of fabric, but is decorated differently. The sherd is painted in black under a purple manganese glaze, which Velloso de Costa suggests was a popular glaze for lustrewares made at Raqqa (1985:40). She also points out that potters at Raqqa (many of whom made it to Damascus or Cairo after the Mongols sacked the city) added red to the Persian blue and black underglaze painted wares, which suggests that the purple manganese glaze might also have been experimented with by potters who, at one time or another, were influenced by Raqqa (Velloso de Costa 1985:41). Porter notes that, at Ma'arrat Nu'man, sherds of “grey-white, manganese, and turquoise ware which are indisputably wasters” were found, indicating that manganese-glazed pottery was being produced at this site (Porter 1981:39-40).

At present, more work needs to be done to say where exactly this type was imported from in Syria. It is possible that these vessels were produced at Ma'arrat Nu'man, where a waster with this profile was found (Porter 1981:31-40), and at least one example of a vessel painted in black under a turquoise glaze with this profile has been found at Qal'at Ja'bar (Tonghini 1998:Fig. 67), where other Raqqa-type (Fritware 2, in Tonghini's classification) forms were produced (Tonghini 1998:50).

Very few parallels for this particular form seem to exist in Jordan, although vessels with similar decorations are present, for example one shown in a photograph in a preliminary report from Khirbat ash-Shaykh 'Isa, near Ghor es-Safi (Politis *et al.* 2005:319, Fig. 10). This suggests that this form is rather rare at Middle Islamic II sites in Jordan – or perhaps just underpublished – although Raqqa-type wares in general are fairly common.

Gritty Glazed Wares

Sherd 256 from structure 5311 is a small, glazed body sherd (Fig. 10). Notably, it is the only glazed sherd found during the 2002 survey with fabric other than fritware. Although only a body sherd, and not particularly diagnostic, it is likely that it dates to the earlier part of the Middle Islamic occupation at KNA. It is most likely of the type that Avissar and Stern designate Bowls with Gritty Glaze, which tend to be glazed only on the interior and rim in either “dirty yellow or green” or “[d]ark reddish-brown or brick red, gritty clay” (2005:8). Avissar and Stern suggest that they are “characteristic of the Crusader period,” first appearing in the second half of the 12th century, and “do not continue into the Mamluk period” (2005:8).

It is also possible, however, that this sherd dates to the Early Islamic II or Late Islamic I (i.e. Mamluk period). Rosen-Ayalon (1995) mentions that monochrome green or yellow glazed pottery is often found at sites of this period. More suggestive is Porter and Watson's identification of Monochrome Glazed Earthenware of the Mamluk period (1987:203). This ware is usually glazed in green, muddy-yellow, or deep orange, and is commonly made in both Egypt and Syria throughout the Mamluk period (Porter and

Watson 1987:203). Considering the date of much of the rest of the pottery, this seems like a reasonable identification, but the sherd itself seems closer to the Gritty Glazed Bowls. At present, though, it is difficult to assign a firm date to this sherd.

7) Discussion

Dating

It is worth noting at the beginning of this discussion that it is not yet possible to know exactly the periods in which Khirbat Nqeib Aseimer was occupied. First, as discussed earlier, it is not uncommon in Jordan for excavation to reveal Islamic layers that were not suspected at all based on surface survey (Schick 1994:136). Second, the 2002 JHF survey (Levy *et al.* 2003) was not the first to collect pottery from the site. Glueck (1935; 1940), during his surveys of Transjordan, and the German Mining Museum team (Hauptmann *et al.* 1985) collected surface pottery, and this has perhaps skewed the sample obtained by the JHF team in 2002. Finally, some of the pottery from KNA, notably the oil lamps, remains to be analyzed. While it does not appear that any of those sherds will considerably change the dating suggested here, it is certainly possible. As Barker *et al.* (1998) point out, nearby Wadi Faynan seems to be occupied during the entire Islamic period, and so it would not be surprising to discover that KNA was occupied for a larger percentage of this period than is currently obvious.

KNA in the 'Abbasid period

Although the dating of the Thin Wares from KNA is not certain, it is tempting to place them in the Early Islamic period. Following Walmsley and Smith (1992) and Adams *et al.* (2007), it is probably best to place them in the Early Islamic I. It is, again, tempting to suggest a specifically 'Abbasid date for these wares at KNA. The field notes from the 2002 survey mention that several of the buildings at KNA seem to be earlier than the others. Although the surveyors suggested these might be pre-Islamic, an

'Abbasid date does not seem out of the question. Furthermore, the surveyors note that a coin found at the site is possibly 'Abbasid, although this has not yet been analyzed by an expert.

Nonetheless, 'Abbasid exploitation of the site seems reasonable. The 'Abbasids were known to exploit the provinces for metals (Karsh 1996:45), and prior to the 'Abbasid revolution, the family was based at Humayma, in southern Jordan (Kennedy 1981:41). It is not out of the question, then, especially in the caliphate's early days, that some knowledge of southern Jordan led the 'Abbasids to attempt to exploit the Faynan area for copper and, as noted by Hauptmann, iron (2007:126-127). How long this might have lasted is impossible to say without excavating the site, but it is very unlikely that they would have been able to maintain this operation, if exploitation of Faynan was indeed still occurring, after the Fatimids took control of southern Jordan in the mid-10th century AD. It also may not be necessary to look for state control of production at KNA, especially if the majority of the buildings date to the Middle Islamic II. The smelting camps near Ayla discussed by Whitcomb (2006) appear to have been organized mostly by the residents of Ayla, and not the imperial state. It is possible, following Whitcomb (2006), that KNA might be associated in a similar way with the northern site of Sughar, possibly in the Early Islamic period, although it is impossible, presently, to say for certain if this is the case.

In terms of the organization of production, little can be said for sure at this point. As noted previously, historical references to copper production in Faynan are limited to the Roman period (Knauf and Lenzen 1987:83), and discuss Christian martyrs sent to

work in Faynan as slaves. Glueck notes these sources, and uses them to suggest how production may have been organized at Khirbat en-Nahas in the Iron Age (1935:28 n. 61a). Certainly, the use of slaves is also known in the Islamic period. The Zanj, slaves from East Africa, are documented in terms of rebellions as early as the Umayyad period, and another rebellion in Basra occurred during the rule of the 'Abbasids (Karsh 2006:46). It is also likely that the most important aspect of trade with Europe in the 7th through 11th centuries was the acquisition of slaves, mostly of Slavic origin (Karsh 2006:65).

KNA in the Middle Islamic I

Presently, a Middle Islamic I occupation at KNA seems unlikely, but it is still worth discussing this possibility for several reasons. First, again following Whitcomb (2006), it is possible that the occupants of Sughar engaged in activities similar to those of the occupants of Ayla, who exploited the Wadi Amram region in modern Israel for its copper. If this is the case, the residents of Sughar might have exploited the Faynan region, which is the closest copper ore source to the city. Likewise, Schick (1997) discusses Sughar as an important city during the Middle Islamic I. Finally, sherd 256, which seems to belong to the Gritty Glazed group, seems likely to date to the Middle Islamic I period. It is also possible that it dates to the earlier part of the Early Islamic II, and this date would perhaps make more sense, but this possibility is nonetheless worth discussing, if only because of Shick's warning about the difficulty of detecting Middle Islamic I layers in surveys (1997:81-82).

The Middle Islamic II occupation

The majority of the activity at KNA seems to have taken place during the Middle

Islamic II. As Kind *et al.* (2005) point out, the Middle Islamic II occupation of KNA begins under the rule of the Ayyubids, at least as far as the numismatic evidence is concerned. This is also supported by sherd 241, which appears to be an earlier Ayyubid form of Handmade Geometric Painted Ware. It is likely that a late Ayyubid occupation would have continued into the Mamluk portion of the Early Islamic II, and the presence of apparently mid- to late-13th century Raqqa-type forms at KNA seems to indicate that this was the case. Another possibility is that there were two separate occupations of KNA in the Middle Islamic II, one during the short rule of the Ayyubids and another during the period of Mamluk control of the southern Levant. It is, perhaps, impossible to distinguish between these two possibilities with data from surveys, especially since the lines between Ayyubid and Mamluk pottery are not entirely clear.

Newson *et al.* (2007) argue that Khirbat Nqeib Aseimer was intimately connected with Mamluk monetary policy in the 14th century. They point out that the copper *fulus* of the Mamluk period was changed to contain higher purity copper, and suggest that this might be due to “a newly available source of copper,” i.e. KNA (Newson *et al.* 2007:365). They acknowledge both that KNA was in use at least a century before this monetary reform, and also that the Mamluk state by this period was relying, at least in part, on copper imported from Europe, but suggest that “it is possible that the initial yield from the Faynan/al-Furn operations was not sustainable and that the metallurgical activity was abandoned after no more than 100-150 years” (Newson *et al.* 2007:365), which would agree with Hauptmann's (2006) statement that the amount of copper in Faynan is not enough to make it an internationally important copper-producing region. It could also

be reconciled with Shoshan's (1982) point that the switch from silver to copper seems to have been driven by a shortage of silver, rather than an abundance of copper. Certainly, if a relatively new source of copper were available, it would be the logical choice when supplies of silver dried up.

Nonetheless, several factors make this an unlikely suggestion. First, the Middle Islamic II occupation of KNA significantly predates the monetary reform, which dates to the 14th century (Shoshan 1982). Newson *et al.* (2007) acknowledge this point, but the fact remains that since KNA was founded considerably before this event, it is quite unlikely that the Mamluk monetary reform is the *raison d'etre* for Middle Islamic II KNA. Likewise, the existence of KNA in itself does not necessarily change the picture of the availability of copper in this period. Shatzmiller acknowledges that Islamic mines did produce metal, but notes that having enough metal depended more on the availability of imports (1994:236). It is possible that excavations at KNA will reveal copper exploitation significant enough to have the effect proposed by Newson *et al.* (2006), but presently it is safer to assume that whatever the effect KNA had on the monetary reform, it was probably not as large as they suggest.

It is likely, however, that the Mamluk state did play a large role in the organization of copper exploitation at KNA during the Middle Islamic II, a scenario which differs considerably from Whitcomb's (2006) discussion of the locally-organized smelting camps around Ayla. Jordan was an important part of the Mamluk agricultural economy, providing both sugar and grain for Egypt, especially in times of shortage either in the region or in Egypt specifically (Walker 2008:80). Moreover, this agricultural production,

and especially the production of sugar, was often monopolized by the state, and in Jordan overseen by the sultan himself (Ashtor 1983:278; Walker 2008:82). Lapidus points out that wood and metals were even more subject to state monopolies than sugar, arguing that they were “strictly controlled to assure the availability of military supplies” (1969:1). He also suggests that the economy of the Mamluk period was more complicated than simply being state-controlled, and that many independent enterprises also flourished, although the concerns of the state came first (Lapidus 1969:13), but it seems likely that copper production would have been heavily state-controlled. However, how this was actually organized and who was doing the mining and smelting remain to be determined.

Appendix 1) Figures

Dynastic Chronology							
491	630	750	969	1171	1263	1516	1918
Late Byzantine	U m a y y a d	'Abbasid	Fatimid Crusader	A y y u b i d	Mamluk	Ottoman	
Late Byzantine	Early Islamic I	Early Islamic II	Middle Islamic I	Middle Islamic II	Late Islamic I	Late Islamic II	M o d e r n
600		800	1000	1200	1400	1600	1800
Archaeological Chronology							

Figure 1: A comparison of political and archaeological chronologies of the Islamic periods in Jordan (after Whitcomb 1992b).

Late Byzantine and Early Islamic I sites in Jordan

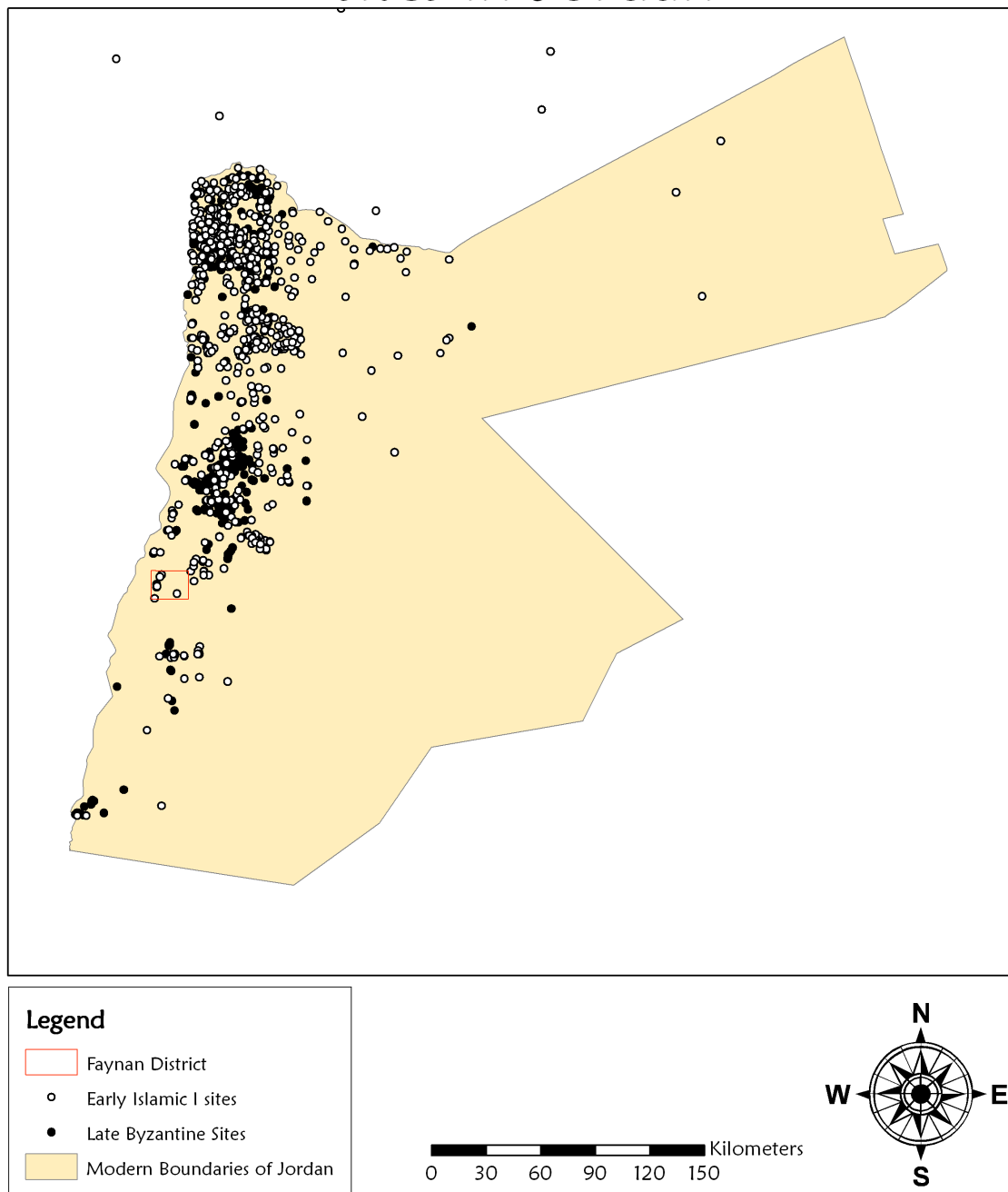


Figure 2: An overview of Late Byzantine and Early Islamic I (Umayyad) settlement patterns in Jordan using data from the Digital Archaeology Atlas of the Holy Land (DAAHL 2010).

Late Early Islamic I and Early Islamic II sites in Jordan

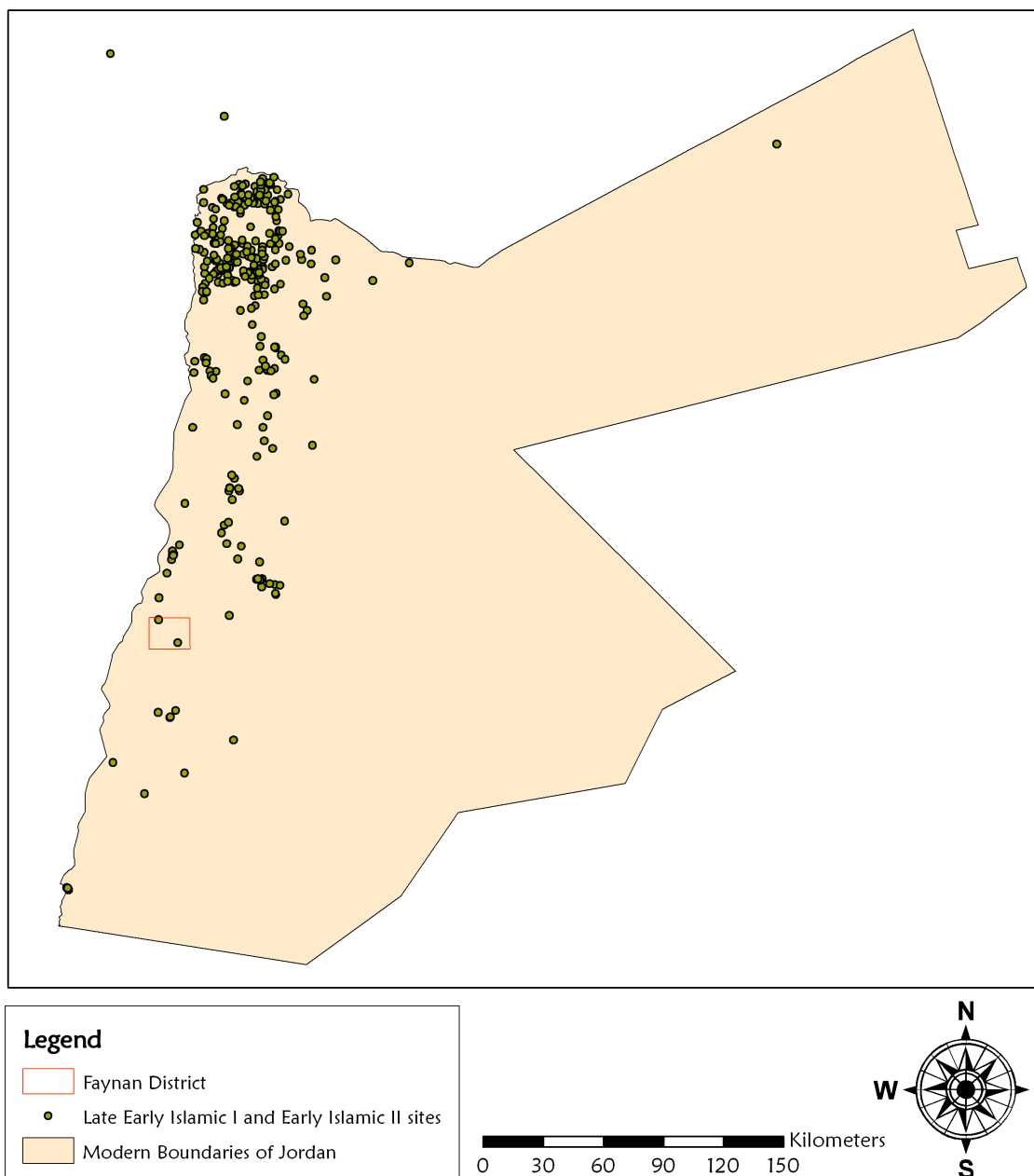


Figure 3: An overview of Late Early Islamic I and Early Islamic II ('Abbasid) settlement patterns in Jordan using data from the Digital Archaeology Atlas of the Holy Land (DAAHL 2010).

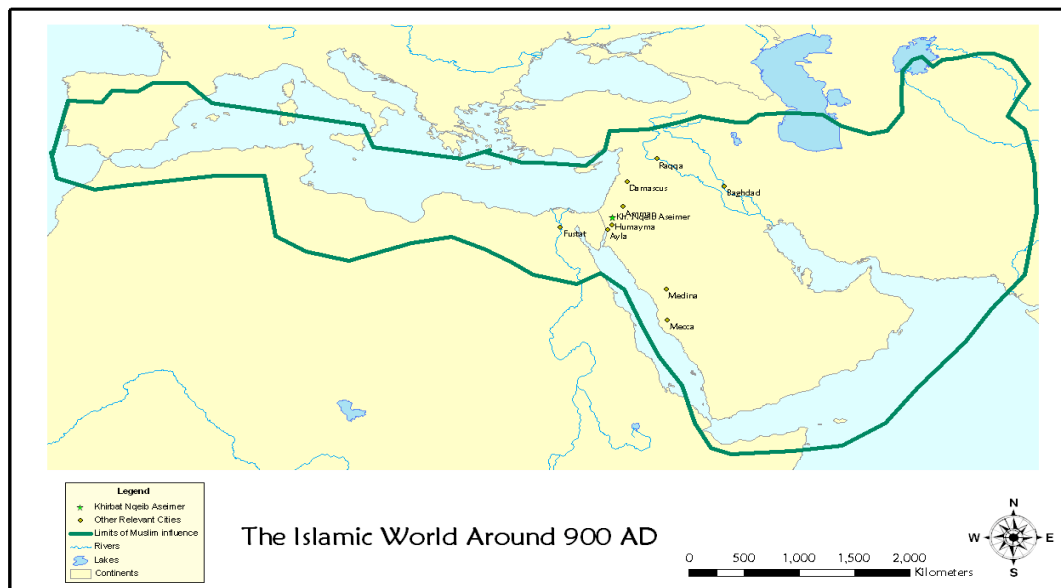


Figure 4: The boundaries of Muslim rule around 900 AD. At the time, most of this territory was under ‘Abbasid control (after Kennedy 2002).

Late Early Islamic II and Middle Islamic I sites in Jordan

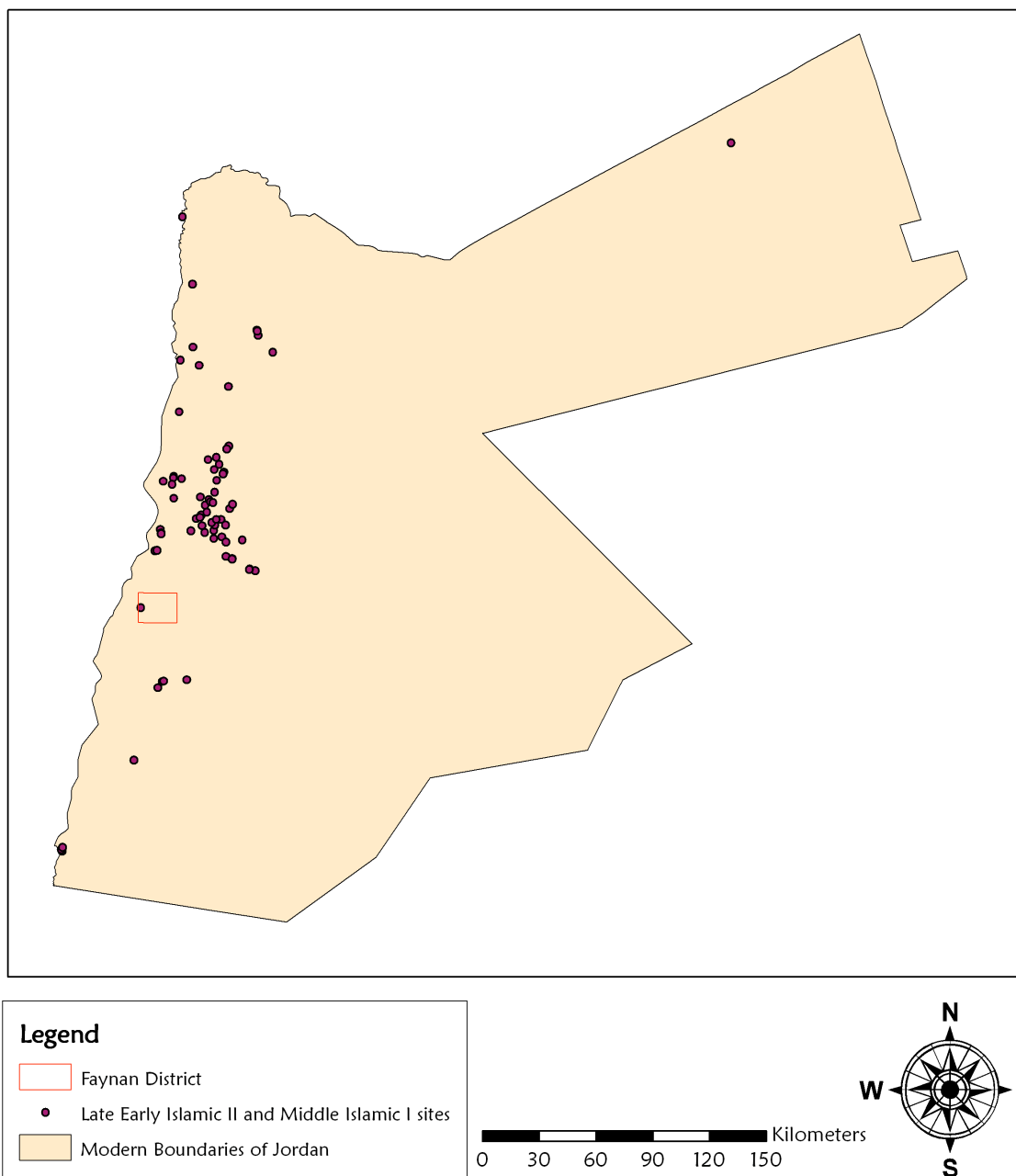


Figure 5: An overview of Late Early Islamic II and Middle Islamic I (Fatimid) settlement patterns in Jordan using data from the Digital Archaeology Atlas of the Holy Land (DAAHL 2010).

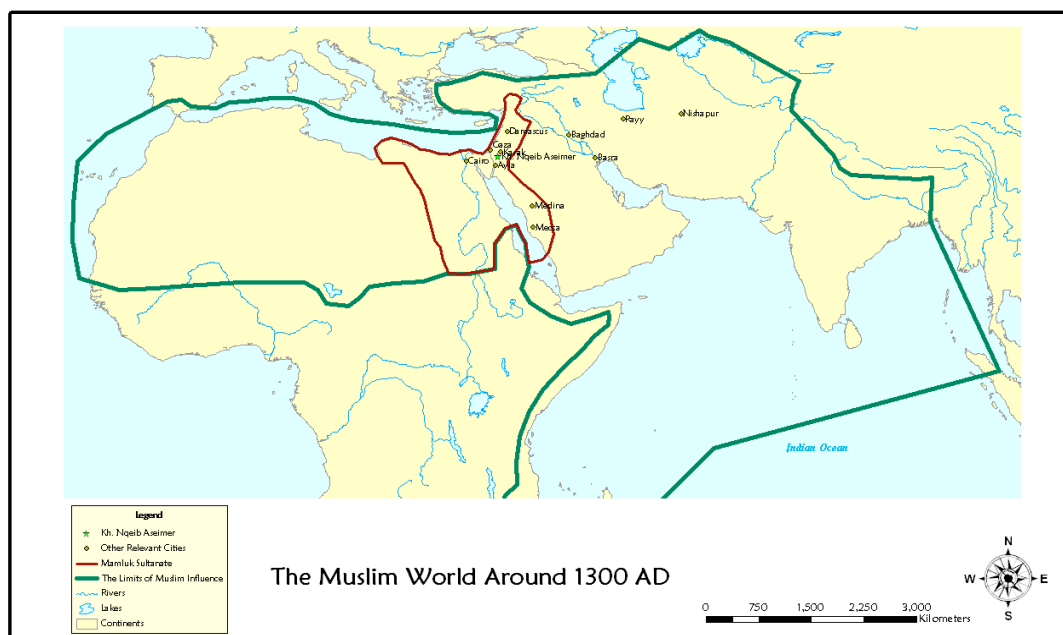


Figure 6: The boundaries of Muslim rule around 1300 AD, showing the extent of the Mamluk Sultanate within the larger Islamic world (after Kennedy 2002).

Middle to Late Islamic Sites in Jordan

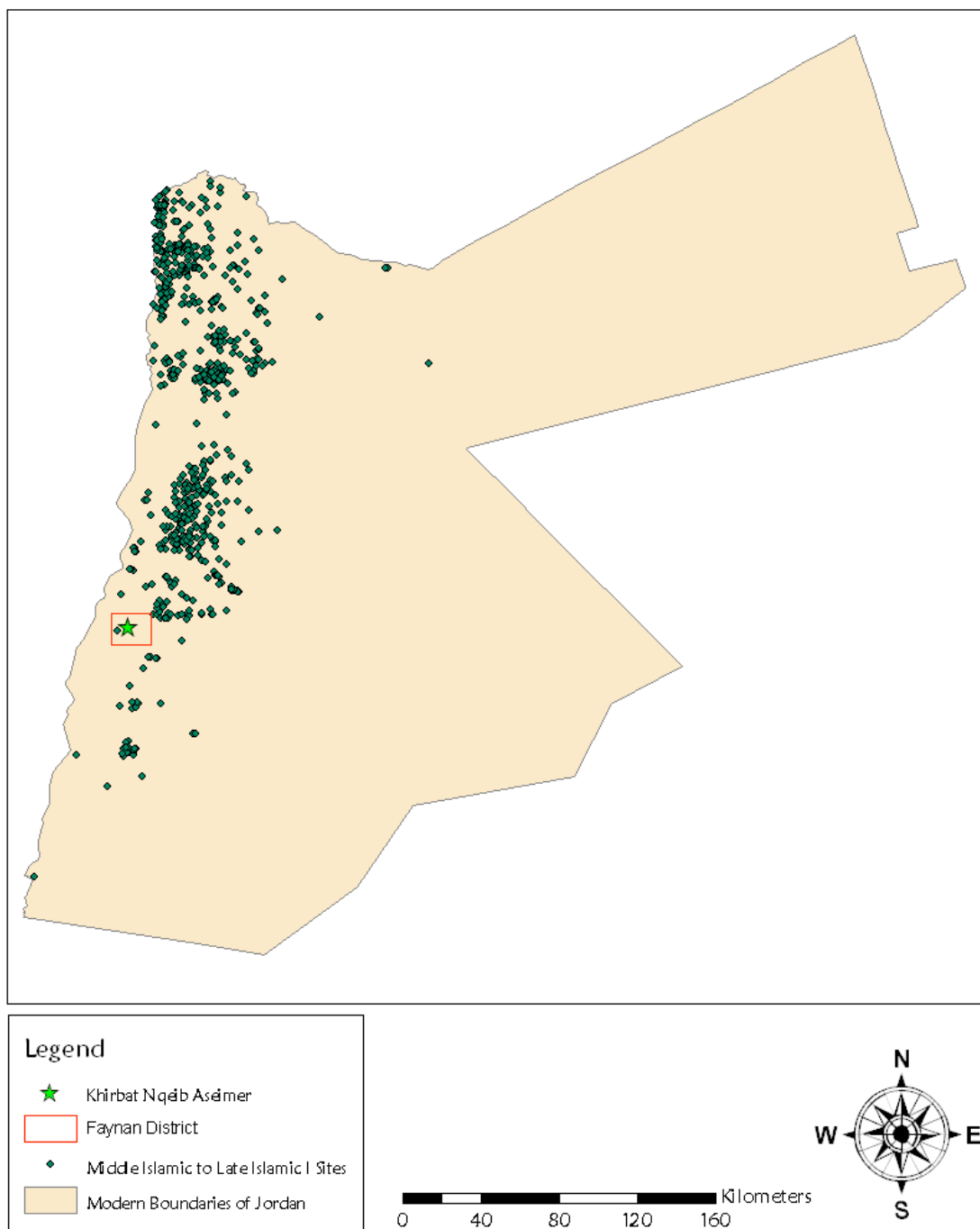
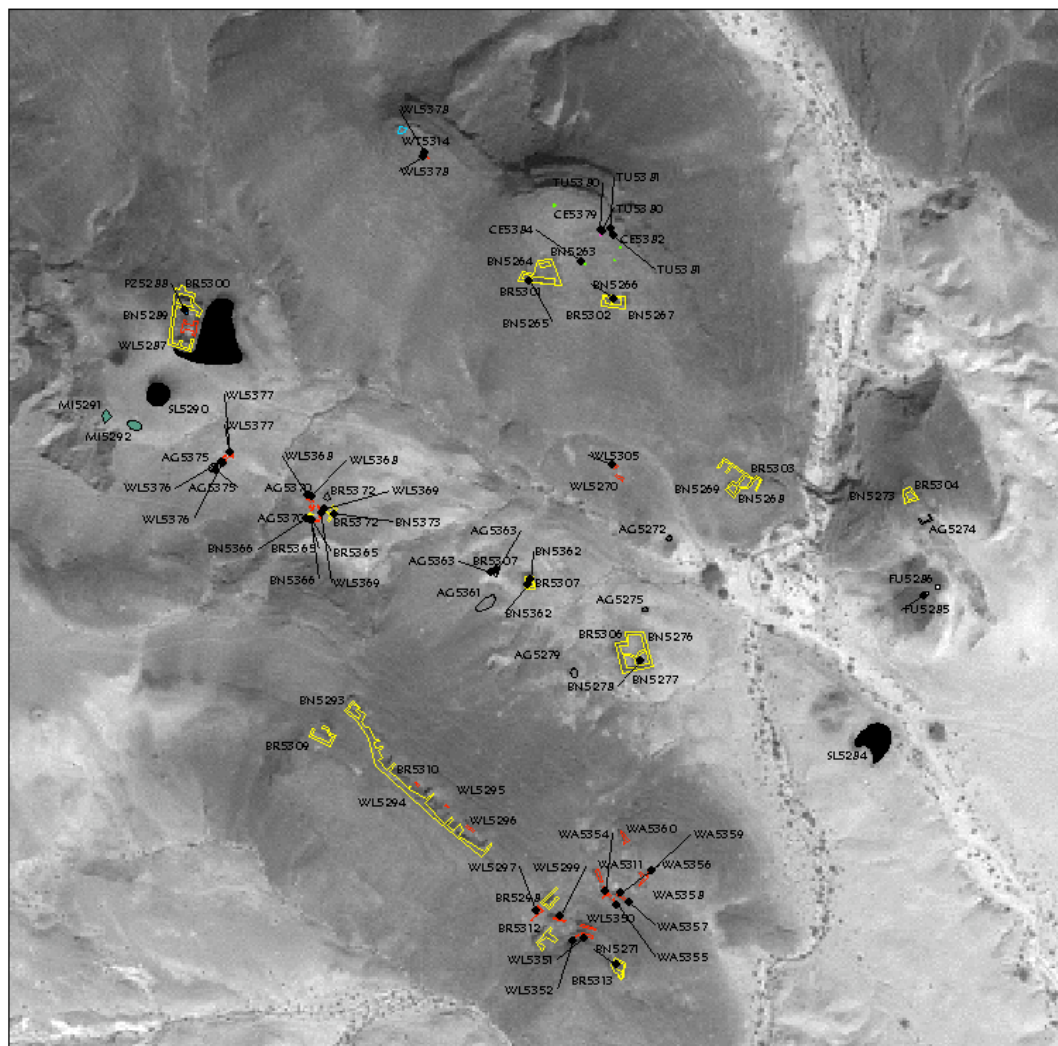


Figure 7: An overview of Middle to Late Islamic settlement patterns in Jordan using data from the Digital Archaeology Atlas of the Holy Land (DAAHL 2010).

Khirbat Nqeib Aseimer (WAG 53/el-Furn)



Legend	
	Building
	Entrance Marker
	Furnace
	Mine Tailing
	Platform
	Sherd Scatter
	Slag Mound
	Wall
	Watchtower
	Agricultural Feature

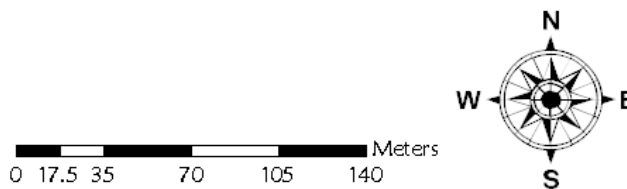


Figure 8: Map of features at Khirbat Nqeib Aseimer recorded by the Wadi al-Ghuwayb Survey team in 2002.



Figure 9: Sherds of painted ceramics from Khirbat Nqeib Aseimer. From left to right, top row: Sherd 240, later Handmade Geometric Painted Ware; Sherd 241, possibly earlier Ayyubid red-painted form of Handmade Geometric Painted Ware; Sherd 242, possibly a less-coarse type of Geometric Painted Ware, or earlier Red-Painted Ware. Bottom row: Three sherds of later Handmade Geometric Painted Ware.



Figure 10: Sherds of glazed ceramics from Khirbat Nqeib Aseimer. From left to right, top row: Sherd 252, turquoise underglaze painted Syrian fritware bearing an inscription; Sherds 254 and 257, clear underglaze painted Syrian fritware. From left to right, bottom row: Sherd 256, sherd of Gritty Glazed stoneware, possibly Middle Islamic I; several small sherds of underglaze painted Syrian fritware.



Figure 11: Two views of Sherd 261, an example of provincial Syrian fritware with a distinctive overhanging lip similar to a waster found at Ma'arrat Nu'man discussed by Porter (1981).

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