

**Settlement in Crusader Transjordan (1100–1189):
a Historical and Archaeological Study**

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Abstract

The subject of Crusader-period Transjordan has still not been analyzed in depth by scholars. Nevertheless, this region, the *Lordship of Crac and Montreal* of the Latin kingdom of Jerusalem, is usually assumed to have had more or less the sole function of serving as the southeastern frontier of the kingdom, consisting essentially of a series of fortified points defending a border. This image of a series of castles in a largely deserted border area arises from several factors: the relative scarcity of textual sources available for 12th-century Transjordan, those that survive being largely focused on its military aspects; the scarcity of archaeological excavations at 12th-century sites, including the important castles of Karak and Shawbak; the fact that these two castles, being relatively well preserved, have attracted more scholarly interest than any other sites; and the lack of archaeological *comparanda* for the region, due to the only very recent development of interest of archaeologists in excavating medieval sites. The goal of the research exposed here is therefore to combine all available sources, including updated results from archaeological projects, in order to present a picture of settlement in Crusader Transjordan that is as complete as possible.

A case study for Petra and the Jabal Shara is included in this work, since this area was intensely settled in the 12th century and currently offers new evidence from recent archaeological excavations. The conclusions from this research have provided information on the dynamics, variety and timing of settlement in the region, on the importance of the various settlements, on socio-economic aspects, and on the significance of Transjordan for the Latin kingdom of Jerusalem. Finally, this study provides some archaeological tools for better identifying the 12th century in the Petra region, in particular through the more precise characterization of local ceramics and building techniques.

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Chapter 1.

Crusader Transjordan: the current state of archaeological research.

1.1. Introduction

The main purpose of this work is to present an up-to-date review of the archaeological evidence for settlement in Transjordan in the 12th century, and assess it in the light of historical sources. Chapter 2 examines the historical sources for 12th -century Transjordan in a chronological order, and draws some conclusions on the basis of this body of evidence. The core of the thesis is centred in chapters 3 and 4, where a comprehensive summary of the currently available archaeological evidence is discussed, in combination with the available textual sources. Chapter 3 is organized according to the geographical regions of Jordan, which had a specific importance for settlement in the 12th century. The sites within these regions are presented from north to south and by their modern names, when known. Chapter 4 is a case study on Petra and the Jabal Shara. The historical sources and archaeological material are presented here together for the whole area, since the sites are all closely connected to each other. The conclusions of chapter 4 build on the results summarized on appendices A and B (12th -century ceramics and building techniques in Petra). The textual sources on the subject of the relationship with the local populations are commented upon in chapter 5.

1.2. Transjordan before the Crusader period

The information available from textual sources in the Seljuk and Fatimid period for Transjordan south of the Wadi Mujib, where most of the settlements examined here are located, is very scarce. Most information comes from al-Muqaddasi, who wrote around AD 985. He reports that at his time Zughar was the capital of the Shara district, extending over the whole of southern Jordan; Karak had a citadel but it does not emerge from the sources as an important site at this time. Southern Transjordan is seldom mentioned in accounts of this period reporting political events. One significant event quoted in the sources is the earthquake of 1068, which was felt very intensely in ‘Aqaba.¹ Al-Idrisi, who wrote in the mid 12th century, described the whole region south of the Wadi Mujib as very fertile.²

¹ Schick 1997, 73-77

² Le Strange 1890, 35

Transjordan in the Fatimid period had at least eight major population centres, including 'Amman, Zughar (in the Ghawr as-Safi), Ma'ab (Rabba), Mu'an (Ma'an), Udruh and Ayla ('Aqaba). Among these, the site of Zughar was well connected to Jerusalem and Nablus and, in Transjordan, to 'Amman. At this time, an important branch of the Hajj road passed through Zarqa, 'Amman, Mu'an and Tabuq. By the last quarter of the 11th century, Karak was the centre of the region of Ma'ab.³

During the 6th century, Petra was already an average-sized provincial city. During the Umayyad period it did not play any important role politically or economically; in this period, it was Udruh, the capital of the Jabal Shara, which was thriving together with Humayma. At the end of the 10th century, Petra and Wadi Musa are not even mentioned in al-Muqaddasi's detailed geographical description of settlements in Southern Transjordan,⁴ on the other hand Wadi Musa had already acquired much more importance from at least the 11th century.⁵ In the mid 10th century Jabal Harun is listed as a Christian site in the possession of the Melchites.⁶

It is reported that during the 10th and 11th centuries there were Bedouin attacks on the caravans passing along the Hajj road and in the mid 11th century caravans of Egyptian pilgrims had to abandon passing through 'Aqaba because of them. In 1047, it is recorded by Nasir-i Khusraw that no pilgrim caravans travelled to Mecca in that year because of the risk of Bedouin attacks; however, he travelled safely through southern Jordan during the same year.⁷

Archaeologists have detected occupation during the Fatimid period at several sites, including 'Amman, 'Aqaba, Khirbat ash-Shayk 'Isa, Hisban, Dhiban, Faris, and Tall Abu Ghurdan. At 'Amman and 'Aqaba, the archaeological evidence has been interpreted as showing a drastic reduction in administrative activities and political function not later than the early 11th century, and this phase was characterized by mediocre building techniques but a high individual standard of living, as is reflected by the quality of the objects recovered. However, the number of identified sites is closely connected to the still initial state of research on this period, since in the northern Jordan valley, where the ceramic sequence is better known, the number of identified sites is higher.⁸

³ Schick 1997; Walmsley 2001, 518

⁴ Fiema 2002, 237-238

⁵ Walmsley 2001, 518

⁶ Schick 1997, 76

⁷ Schick 1997, 77-79

⁸ Walmsley 2001, 523-526

Recent historical research has shown that in the period following the Byzantine period and preceding the arrival of the Franks the economy of the country was flourishing. There was therefore no ‘settlement gap’, as has often been assumed on the basis of the scarce archaeological remains. In this respect, the textual evidence is clearer than the archaeological sources, which are still scanty, despite a recent growth of interest in them.⁹ This conclusion is important in view of the research questions asked in this thesis.

1.3. Transjordan at the time of the Crusader settlement

Archaeological studies on Crusader Transjordan are extremely limited, to the extent that even scholars who specialize in the Crusader kingdom of Jerusalem consider it of only marginal interest. Some examples of recent overviews of the Latin kingdom illustrate this clearly. In his recent work on the contribution of archaeology to the study of the Crusader Kingdom of Jerusalem, Boas does not mention any archaeological study or material relating to Transjordan.¹⁰ Similarly, in his study of Frankish rural settlement in the Latin Kingdom of Jerusalem, although Ellenblum cites Karak and Shawbak to support his theory about the importance of the presence of Christian communities as a reason for the Franks to choose where to settle, he concentrates his discussion of rural settlement on Palestinian sites. Besides omitting southern Lebanon from his study, he also excludes Transjordan from his maps of Christian sites, almost as if this region was not in reality part of the kingdom.¹¹

The only comprehensive study on settlement in Transjordan is currently the one by Mayer, which however is based exclusively on historical sources.¹² Short summaries on the basis of the main textual sources have also been prepared more recently, one of which has focused especially on the area north of the River Zarqa.¹³ Several concise surveys of the historical sources available for 12th century Transjordan have also been presented, mainly in connection to the study of the castles. Milwright has examined several textual sources relating to Karak, but these unfortunately cannot be matched with data from excavations, since these do not yet exist.¹⁴

This situation of fragmented situation is even more evident for the studies of the material culture. The castles of Transjordan and their architecture have received most

⁹ Walmesley 2001

¹⁰ Boas 1999

¹¹ Ellenblum 1998, 226

¹² Mayer 1990, summarized in Mayer 1987

¹³ Devais 2008; 2013

¹⁴ Deschamps 1939, 35-79; Pringle 2001; Milwright 2008, 25-37

attention compared to other sites and have been the subject of several short discussions, either by site,¹⁵ or in an attempt to understand patterns of chronology or patronage.¹⁶ These overviews have normally focused on the main castles, already identified a long time ago: Karak, Shawbak, al-Wu‘ayra and sometimes al-Habis, especially in their general defensive characteristics. These castles also naturally caught the attention of early explorers and scholars, who described them and have often been especially useful in illustrating parts of buildings that no longer survive, such as the apse of the church of al-Wu‘ayra drawn by Savignac.¹⁷

Some general observations have been made on the aspect of building techniques for the Crusader castles of Transjordan,¹⁸ and the castles of Karak, al-Wu‘ayra, Shawbak and al-Habis have been at the centre of a few studies on the theme of architecture and phasing of the built structures. However, while at Karak, after the preliminary observations of Deschamps, Biller and his collaborators have analysed large parts of the castle and have produced new conclusions on the general phases,¹⁹ the detailed analysis of phasing and building techniques at Shawbak has been concentrated mainly on the castle’s entrances.²⁰ Some preliminary observations have been expressed on walls, stratigraphy and building techniques for al-Wu‘ayra castle and al-Habis castle.²¹ Some observations on the architecture of the Petra castles have also been offered by Marino and his team.²²

Some studies have concentrated on Crusader-period sites of Petra and the Jabal al-Shara. In the 1980s, different teams excavated and mapped the Crusader castles of al-Wu‘ayra²³ and Shawbak.²⁴ However, only part of the excavated data from the Italian team is published, while Brown’s excavations have been very limited in size. The Italian team has offered an interpretation on the Crusader-period settlement in the area of Jabal al-Shara,²⁵ and as a result of his surveys and excavations Lindner has also attributed some sites of the Petra region to the Crusader period. Bellwald has also expressed some opinions on Crusader-period site identification and interpretation in

¹⁵ Boase 1967; Muller Wiener 1966

¹⁶ Kennedy 1994

¹⁷ Savignac 1903; Brünnow and Domszewski, 2004; Burckardt 1822; Conder and. Kitchener 1881-1183; Glueck 1939; De Laborde 1838; Robinson 1841

¹⁸ Brooker and Knauf 1988; Marino and Coli 2012

¹⁹ Deschamps 1939; Biller et al. 1999

²⁰ Faucherre 2004 ; Nucciotti 2007

²¹ Hammond 1970; Vannini and Nucciotti 2003

²² Marino 1993 ; Marino et al. 1990, 10-13

²³ Brown 1987b ; Vannini and Vanni Desideri 1995; Vannini and Tonghini 1997; Bini and Bertocci 1997

²⁴ Brown 1988a ; Vannini 2007

²⁵ Vannini and Vanni Desideri 1995; Vannini and Tonghini 1997; Vannini 2006; 2007; 20011b; 2012

Petra²⁶ However, these teams' identification of Crusader-period sites has not been based on a system for separating specifically 12th -century pottery and building techniques from those of other periods in the region.. Moreover, some of their comments are not based on a comparison with the rest of the Latin Kingdom of Jerusalem and with the textual sources, so these conclusions need some revision.²⁷ On the Petra region, other observations on the Crusader period have also been offered by scholars whose projects were not aimed at medieval-period phases,²⁸ analysing either specific sites in Petra (e.g. Jabal Harun, Bayda, Wadi Farasa, Wadi Musa), or several sites together; however the aim was never to frame the results within a general view of the rest of Transjordan or of the Latin Kingdom in the same period, but rather to understand the history of the site. In terms of studies on more specific aspects of material culture from 12th -century stratified contexts in the area of Petra and Shawbak, those of course depend on the excavations limited to the sites of Shawbak (faunal remains) and al-Wu'ayra (faunal remains and anthropological remains).²⁹ Studies on the pottery of the 12th century are limited to observations and a preliminary study by Tonghini and Vanni Desideri on ceramics from the excavations at al-Wu'ayra.³⁰

Other site-specific studies considering both historical and archaeological sources on sites dated to the 12th century include those on Karak, Jazirat Fara'un, 'Ajlun, and Habis Jaldak,³¹ but it is notable that none of these places has been excavated in its Crusader-period phases. Studies are therefore limited to analysis of architecture and pottery from surveys.

In summary, the main problems to progressing towards a better understanding of Crusader Transjordan seem to be not only the scarcity of sources currently available, but also the separation of scholarship between textual and archaeological sources, and the fragmentation of the archaeological sources themselves. However, some significant progress has been made in this sense in recent years. In the context of his projects of identifying all sites with Crusader-period occupation in the Latin Kingdom of Jerusalem, Pringle has offered the most comprehensive analysis of the archaeological, architectural and historical sources referred to the sites of Transjordan where a 12th - century occupation is included or suspected, and on this basis has offered some

²⁶ Lindner 1999; Lindner et al. 1996; 1997; Bellwald 2006

²⁷ See chapter 4

²⁸ 'Amr 2006; Schmid 2006; 2012; Bikai, submitted; Fiema 2008b

²⁹ Brown and Rielly 2010; Corbino and Mazza 2013; Brown and Rielly 2010; Mazza and Corbino 2006; Rose and Khwaleh 2013

³⁰ Vannini and Tonghini 1997 ; Tonghini and Vanni Desideri 2001

³¹ Johns 1931; Pringle 2005b; Al-Shqour, De Meulemeester and Herremans 2009, Nicolle 1988; Milwright 2008

interpretation of the sites' identification, function and chronology.³² Some observations on the basis of the joint use of sources for the Crusader period in Transjordan have also been made by Walmsely.³³

Transjordan is often commented upon relatively briefly by historians and scholars in accounts of the political events of the Latin kingdom of Jerusalem, but despite the scarcity of the sources, the general assumption seems to be that the main function of Transjordan for the Franks was to serve as a frontier land located on the periphery of the kingdom. Although Deschamps identified military, commercial and agricultural advantages behind the Frankish settlement of Transjordan and discussed the sources relating to the minor castles, the focus of his discussion was still on the relationship between political history and fortifications.³⁴ Prawer described Transjordan in terms of its military and commercial importance to the Latin kingdom, mainly because of its position between Cairo and Damascus and on the Darb al-Hajj.³⁵

At the time these scholars wrote there was still no archaeological evidence beyond the main castles to show that such perspectives were too simplistic. However, such images persist even today and are still supported by archaeologists currently working on the sites of Transjordan itself, who support the traditional view of "frontier" even more openly. Vannini in particular states that thanks to the Crusader period, Transjordan returned to its traditional role of frontier that had already characterized the Nabataean/Roman/Byzantine periods. In particular, he argues that this role of frontier was centred on the Petra valley, which was the main centre of the region of Transjordan and had an important revival during the Crusader period, after which it was abandoned again.³⁶ However, it can be noticed that the currently accepted theories viewing Transjordan as a frontier are again not based on specific supporting evidence, but rather on a scarcity of research on other aspects of Transjordan beyond the main castles in their defensive function. In addition, Vannini does not take into account the growing body of archaeological evidence of recent years for Islamic-period Transjordan, which suggests that there was no gap in settlement or economic crisis between the Byzantine and the Mamluk periods, interrupted only by a Crusader-period revival, as assumed by some currently accepted views.³⁷

³² Pringle 1997; 1993; 1998

³³ Walmsley 2001

³⁴ Deschamps 1939, 35-98

³⁵ Prawer 1975, I, 247

³⁶ Vannini 2007, 15; 2009, 25-27

³⁷ Harding 1967, 52

Concise discussions on settlement in the Crusader period have been offered by other scholars, on the basis of their joint study of sources. In addition to the reason of the Franks for settling in Transjordan outlined by Deschamps (military, commercial, agricultural), Pringle identifies also the presence of Christian communities.³⁸ Walmsley, who reflects more broadly on the Middle Islamic period, concludes that in Transjordan, contrary to what the scholarly tradition assumes, the Crusader period was characterized by a prosperous economy in continuity with the earlier period; therefore the 12th century prosperity was not at all a temporary revival due to the presence of the Franks in the country.³⁹ Preliminary summaries of the conclusions reached by this thesis support the views of these two scholars.⁴⁰

1.4. The shortcomings of previous research and the aims and methodology of the present work

Textual sources for Crusader-period Transjordan are very scarce when compared to the rest of the Latin Kingdom, and generally speaking are substantially concentrated on the sites of Karak and Shawbak. It can be noticed that this is another aspect which has probably contributed to the interpretation of Transjordan as a purely military zone.

In his survey of historical sources of Karak castle for the Middle Islamic period, Milwright notices that Karak was never at the centre of political life in the Levant, and this has necessarily influenced the perspective and contribution of writers. This is also part of the reason why Karak did not have a local important historian, who could write the history of the town, as happened in Damascus or Cairo. If this was true for the Mamluk period, it is even more to be expected for the Crusader period, when a significant medieval town and castle had been just founded. Beyond the political information, the limitations of the sources are even more evident regarding administration and economy. There is a poverty of information on topics such as administrative structures, the military and bureaucratic personnel, and the relationship between Karak, its territory and the dependent regions. In general, while it is possible to have a general idea of the middle Islamic period at Karak as a whole, it is much harder to gather the variations within specific periods. Despite this important shortcoming, Milwright suggests it is reasonable to assume that there were no substantial changes relating to agricultural cultivation or livestock production through the whole period.⁴¹

³⁸ Pringle 2001

³⁹ Walmsley 2001

⁴⁰ Sinibaldi 2010; 2013a; 2013e

⁴¹ Milwright 2008, 16-17

Some specific sources for understanding economy and administration, however, are completely missing; Milwright noted for example that cadastal records for Jordan all date from the 16th century onwards.⁴²

The limitations expressed for the sources on Karak are valid also for Shawbak, only more so. As a consequence, it is therefore necessary to reconstruct the history of Karak and Shawbak from works which are not directly focused on them, such as the reporting of the main political events in chronicles. Other kinds of sources are rare, as can be seen from the historical outline in chapter 2. What is possible to understand from these fragmented sources, however, is the importance in political and military terms of the castles, especially Karak.

Despite these important limitations, it is possible, by putting together all available textual evidence, to obtain fragmented information on settlement, not only on specific political and military events, but also on a number of different aspects, such as sites names, type of sites, changes of property, relationship with the local population, and economy. It can be noted, as may be expected, that the western sources are more useful in this respect because they sometimes have an interest in describing the process of settlement by the Franks, especially in its first phase; this includes their observations on the territory, the relationship with the locals, the names of sites, and on the role of the sites. On the other hand, the Arabic sources, with some exceptions, are more useful for dating Muslim attacks on the Frankish settlements, especially Karak. These accounts naturally tend to concentrate more on the later period of the Frankish presence in Transjordan, because of the increased interest by the Muslims in this period in eliminating Frankish settlement.

Concerning the main authors offering information on Crusader-period Transjordan, the most important western sources of information can be considered Fulcher of Chartres, Albert of Aachen and William of Tyre. Fulcher of Chartres, the chaplain of Baldwin I, lived in Jerusalem from at least 1100 to 1127. He was one of the few eye witnesses of some of the events of the First Crusade. His account of the early years is very valuable since it is completely independent from other sources,⁴³ but he is particularly important in the case of Transjordan for his presence during the first expedition of Baldwin I in 1100. Albert of Aachen was born no later than 1080 and lived in the Rhineland; therefore, he was not a direct witness of the events but rather

⁴² Milwright 2008, 11

⁴³ Fulcher of Chartres, ed. Fink, 1969, 3

collected accounts of returning Crusaders.⁴⁴ His whole *Historia Ierosolimitana* was written between the first years of the 12th century and 1130.⁴⁵ Albert's work was based mainly, as he claims himself, on oral sources of eye witnesses, which are very valuable but also have specific problems, including the fact that time, numbers, distances and names are not directly under the control of the historian, and the fact that the interpretation of events is very personalized by the oral source. In addition, Albert based himself on a variety of accounts from witnesses among those who survived, and therefore the sources are self-selected. It is believed also that, unusually, he did not base his work on any of the main sources for the first Crusade available at the time, such as Fulcher of Chartres, the anonymous *Gesta Francorum* and Raymond of Aguilers.⁴⁶ Another characterizing element of the work of Albert is his lack of prejudice towards Muslims and Byzantines and his ecumenical view of the different doctrines of Christians.⁴⁷ William of Tyre (died 1186), whose work has contributed importantly to understanding the subject in question, described the history of the kingdom from 1095 to 1184, and being an adult resident there from 1165 onwards he could report many events from his own experience or his own reactions to contemporary events. However, for some information of the time of the First Crusade, he based himself on other accounts, including Albert of Aachen and Fulcher of Chartres⁴⁸ and therefore this dependence must of course be taken into account when analysing his work. His reports are particularly valuable for the details of the events, including for example the foundations of Karak and Shawbak castle, but also on events of less important sites, such as the castle of Habis Jaldak.

Some of the main Muslim sources mainly contributing the most useful references to Transjordan in their accounts of political events of the Islamic states are Ibn al-Qalanisi (1073-1160),⁴⁹ Imad al-Din (born in 1125),⁵⁰ Ibn al-Athir (born in 1160),⁵¹ Baha' al-Din Ibn Shaddad (1145-1235),⁵² Ibn al-Furat (1334-1405),⁵³ al-Maqrizi (1365-1442).⁵⁴

⁴⁴ Edgington 2007, 23-24

⁴⁵ Edgington 2007, 25

⁴⁶ Edgington 2007, 26-28

⁴⁷ Edgington 2007, 33-35

⁴⁸ Edbury and Rowe 1988, 44-45

⁴⁹ Lewis et al. 1979, 815

⁵⁰ Lewis et al. 1979, 1157

⁵¹ Lewis et al. 1979, 724

⁵² Lewis et al. 1979, 933

⁵³ Lewis et al. 1979, 768-769

⁵⁴ Lewis et al. 1979, 193

The limitations of archaeological sources available emerge from the overview outlined above of previous research on Crusader Transjordan. Beyond the limited published excavations, in particular at the most important sites, such as Karak and Shawbak, other limitations are evident, mostly strictly connected to the preliminary state of archaeological research on the topic, and in particular to the lack of excavations itself.

Firstly, the ceramic sequence for handmade pottery, which forms a large percentage of the assemblages in Transjordan, is still virtually unknown. Because excavations of Crusader-period stratigraphy have still not been connected to a specific ceramic sequence at Karak and Shawbak, it is hard to know how to isolate this period from the others at sites where a 12th-century horizon may be suspected, and therefore to use this as a basis for identifying sites of this period. There are important sites where, although continuity of occupation can be observed, 12th-century pottery is hard to distinguish from the earlier and later periods because of its still unknown local characteristics. These sites include for example Hisban, Tall Abu Ghurdan, Faris and Gharandal.⁵⁵ Some progress has been made on the ceramic chronology at Tall Abu Ghurdan, however, first by Franken and Kalsbeek and later by Sauer and more recently by Walmsley.⁵⁶ In my current study of the chronology of handmade pottery from Petra, I have confirmed the regionality of the characteristics of this kind of pottery; it seems therefore that progress in understanding these sites can be only achieved by studying them by region, linked to a dated site. This means, for example, that conclusions reached in Petra can hardly be used to separate safely the 12th century at Karak. Moreover, the study has pointed out important elements of longevity, sometimes lasting for the whole duration of the Islamic period. What is true for the difficulties in chronological separation in a stratified site, therefore, is much more so for the ceramics from surveys. This is the main reason why the 12th century is virtually invisible in reports of surveys based on ceramics,⁵⁷ together with a general assumption that geometrically painted pottery is “Ayyubid-Mamluk”. At most sites, wheel-thrown pottery appears to represent a small percentage of the assemblages. While unglazed, wheel-thrown pottery is a completely unexplored group, identification is now possible of some types of glazed wheel-thrown pottery on the basis of very recent work in

⁵⁵ Sauer 1973; 1976; 1982; 1994; Walker 2012; Franken and Kalsbeek 1975; Johns, Mc Quitty and Faulkner 1989; 1993; Walmsley and Grey 2001

⁵⁶ Franken and Kalsbeek 1975; Sauer 1976; Walmsley unpublished

⁵⁷ Mac Donald 1992; 2011; Mac Donald et al. 1987; Mabry and Palumbo 1988a; 1988b; King et al. 1987; Brown 1991.

Israel.⁵⁸ As a consequence, some progress in identifying 12th -century sites will take a very long time from the current state of research. Pringle has listed sites where pottery of the time period spanning from the 12th to the 15th centuries has been identified.⁵⁹ In this thesis, the sites listed in Pringle's work are discussed, but because of the difficulty in separating ceramics of the 12th century from those of other periods, rarely some progress has been made in understanding this specific chronology at these sites..

Similar limitations are applied to building techniques as a tool for both identifying 12th -century sites and commenting on their meaning in a historical context. Beyond the main castles, little interest has been shown in understanding how buildings were constructed in this period or whether it is possible to separate them chronologically on this basis, but here again, longevity connected to the local tradition is most likely an important limitation. In general, in order to appreciate the difference between the main castles and other buildings of the same period, it will be necessary to start analysing the architecture and building characteristics of the castles associated with 12th -century ceramics.

The potential for making joint use of textual sources, archaeological analysis of building phases and excavation is still largely untapped, especially at the castles of Karak and Shawbak.

For all the reasons outlined above, what has been missing until now has been a discussion of all the fragmented but available evidence, including that from sites mentioned in the sources whose identification with material remains is debatable.

In particular, the area of Petra currently offers an opportunity to analyse a case study in depth. This is because the evidence from the textual sources indicates the presence of a certain intensity of settlement, which is also witnessed by the identification of several Crusader-period structures over very recent years. Furthermore, a number of interpretations of the Crusader-period settlement in this area have already been offered. More importantly, it was possible to start the analysis from dated structures, in order to offer a new interpretation for these conclusions.

From what it has been outlined above, it is clear that the main problems underlying the lack of understanding of a complete picture of Crusader Transjordan can be summarized as follows:

- the scarcity of available historical sources;

⁵⁸ Important work has been summarized in Avissar and Stern 2005

⁵⁹ Pringle 1997, *passim*

- the separation of historical sources from archaeological ones in the studies of the subject, apart from in a few isolated cases;
- the scarcity of available archaeological sources, due to the relatively recent development of interest in the subject, and in particular, a lack of published stratigraphical excavations at the castles of Karak and Shawbak;
- a focus of scholarship on the monumental structures, i.e. castles;
- the virtually unknown local ceramic sequence for handmade pottery, which in most sites of the 12th century in Transjordan comprises most of the assemblage;
- the still very preliminary study of wheel-thrown ware in the wider region, and particularly in Transjordan;
- the current very general level of understanding of the characteristics of the material culture of the 12th century such as for example, building techniques.

This thesis has tried to contribute to the theme of Crusader Transjordan by bearing in mind these shortcomings in the discipline and by making use of all the relevant known textual and archaeological sources currently available. This includes an updating of the most recent archaeological work which does, or has been thought to, include a 12th-century chronology. I have also attempted to use both kinds of sources together, in order to obtain new discussion and conclusions, and have included in the discussion all sites which may cover a 12th-century chronology, rather than limiting myself to castles or to sites known to have been founded by the Franks. I have also selected a specific case study, Petra, where I conducted my own fieldwork in order to make sure that all sources of evidence were treated using the same methodology (including surveys of structures, excavation, analysis of pottery from excavations and surveys). On the basis of this study, I have been able to draw some conclusions on settlement in the area, which may serve as a basis for further discussion, besides creating a set of preliminary archaeological tools relating to the study of pottery and building techniques that may serve to help separate Crusader-period sites from the others within the Petra area as a whole.

With these objectives in mind, I have tried to address research questions about settlement, with a specific focus on the potential of archaeology to answer them, although always combined with the available textual sources. The research questions addressed in this thesis, which scholarship has not answered yet, can be summarized as follows:

- What was the meaning and importance of Transjordan to the Latin Kingdom of Jerusalem?
- Is really the common understanding that it had only the function of a peripheral frontier really justified?
- What are its characterizing aspects, when compared other areas of the Latin kingdom?
- In which forms and areas did settlement develop, and what were its timing and process?
- How did the Franks interact with a quite different environment from the one in Palestine and how did they organize the control such a large territory?
- What was the impact of the Crusader period in Transjordan in the 12th century and was there an impact on the later periods?
- And finally, is it true that the Crusader period brought a temporary revival to a period of general decline, as stated by currently accepted theories?

Chapter 2

The textual sources

2.1 Outline of historical events

Frankish interest in exploring Transjordan began as early as 1100, when some scouts exploring Arabia beyond the Jordan reported that there were certain Arab tribes living there, in the land of the Ammonites, without adequate defences. Duke Godfrey was therefore persuaded to organise an attack; he returned with very rich spoils of flocks, herds and prisoners.⁶⁰

Later the same year, King Baldwin I went on an expedition to the south of the country. Fulcher of Chartres, who participated in the expedition, tells us that in that year King Baldwin I set out to Ascalon with his men and that during his trip the party talked to some Muslim converts to Christianity about what they knew about the cultivated and desert areas. After this conversation they decided to proceed from there to Arabia.⁶¹ Fulcher's account of the trip through Hebron and the Dead Sea area includes a description of the Dead Sea and mentions the village of Zoar and its palm trees.⁶² The group then entered the mountains of Arabia and spent one night there in caverns. During the following days, around 24 November,⁶³ after climbing some mountains, the party saw some villages; but the inhabitants all knew of their arrival and hid in the caverns with all their possessions. Going ahead, the party reached Wadi Musa, which is described as a valley very rich in all fruits of the earth, where Moses' spring was so powerful that it was used for powering corn mills. They then came, as it seems from Fulcher's description, to the monastery of St Aaron on top of the mountain (Jabal Harun) and were happy to contemplate such a holy place that they had not known about before. Because the land outside that valley was uncultivated, they did not care to go further. They spent three days in Wadi Musa and then returned the same way by which they had come, south of the Dead Sea and through Hebron, arriving safely in Jerusalem on 21 December.⁶⁴

Baldwin's expedition to the south is reported in detail also by Albert of Aachen, who adds that they crossed the mountains of Arabia with great difficulty over at least six days and that 30 foot soldiers died because of the cold weather. Later during the trip

⁶⁰ William of Tyre, 9.22, RHC, Occ., I, 397-399; Huygens 1986, 448-449.

⁶¹ Fulcher of Chartres, II.4, RHC, Occ., III, 378-379; Fink 1969, 144-145

⁶² Fulcher of Chartres, II.4-5, RHC, Occ., III, 379-381; Fink 1969, 145-146

⁶³ Fulcher of Chartres II.7; Fink 1969, 146.

⁶⁴ Fulcher of Chartres, II.5, RHC, Occ., III, 381-382; Fink 1969, 146-147.

the party looted, destroyed and burnt a city called Susumus⁶⁵ which was very rich and easy to conquer as it was unprotected by walls, and whose inhabitants had escaped at their arrival; information about this town was provided by some “Saracens” in the hope of preserving their lives.⁶⁶ Before reaching Susumus, however, King Baldwin and his party spent a whole day crossing a plain and they reached a very rich estate where they were restored by hospitality and supplies.

William of Tyre also describes this survey: after travelling by way of Hebron, En Gedi, and Segor (Kh. al-Shaykh ‘Isa), the king’s party entered the country of Moab, or Syria Sobal.⁶⁷ The inhabitants knew about their arrival and had hidden in their fortresses; so they found the land itself abandoned. Since he was unable to accomplish anything in terms of robbing the enemy and as Christmas Day was approaching, Baldwin returned by the same route and re-entered Jerusalem on 21 December.⁶⁸ In later sources and summaries, the episode is reported with similar details as those by the three main authors reported here.⁶⁹

In 1101, according to William of Tyre, King Baldwin, following the advice of those who were meant to explore the neighbouring regions and investigate the enemy’s weak points, gathered a large number of soldiers and crossed the Jordan again to go to Arabia far into the desert and arrived at a place that had been indicated to him. He made a night attack on their tents and took all women, children, possessions and some of the men, the rest of whom escaped to save their lives abandoning their families.⁷⁰

A few points may be observed about these two explorations beyond the River Jordan in 1100–1101. The first is that the fact that both these early expeditions into Ammon and the one to Arabia followed reports from messengers sent to explore the areas indicates that interest in the lands beyond the Jordan River already existed immediately after the conquest of Jerusalem in 1099.

⁶⁵ Albert of Aachen, 7.42; Edgington 2007, 549, note 58: Hagenmeyer identifies Susumus as Ma’an, while Mayer identifies it as Wadi Musa (Mayer 1990, p. 183).

⁶⁶ Albert of Aachen, 7.41–42; Edgington 2007, 546–551.

⁶⁷ As noted by Prawer (1975, I, 265), travel through Ein Gedi is not mentioned by Fulcher, so perhaps this information is not reliable. Burckardt of Mount Sion identifies Moab with Syria Sobal (Pringle 2012, 245).

⁶⁸ William of Tyre, 10. 8, RHC, Occ., I, 426–427; Huygens 1986, 462–463.

⁶⁹ The same episode of exploration in the south of Transjordan in 1100 is reported with almost the same words of Fulcher by Bartolf of Nangis, who adds that the land outside Wadi Musa was deserted and uncultivated all the way to Babylon (Egypt) (Bartolf of Nangis, *Gesta Francorum Espugnantium Iherusalem* 45, RHC, Occ., III, 522–523), in the resumé attributed to Lisiard of Tours (*Secunda Pars Historiae Ierosolimitane*, 6–7; RHC, Occ., III, 555–556). A synthetic report of the same events is also in the *Historia et Gesta Ducis Gotfridi*,⁶⁹ (*Historia et Gesta Ducis Gotfridi*, 2.32, RHC, Occ., V, 504–505), in the *History of Jerusalem and Antioch*, another resume of Fulcher of Chartres, (*Li Estoire de Jerusalem et d’ Antiochie*, 3.2, RHC, Occ. V, 640) and in the *History of Nicaea and Antioch*. (*Balduini III Historia Nicaena vel Antiochena*, 64, RHC, Occ, V, 177).

⁷⁰ William of Tyre, 10.11, RHC, Occ., I, 414–415

Secondly, it can be observed that the explorations started slightly earlier in the land of Ammon than in the south; in the north, apparently, large areas of the land were not under the continuous control of Damascus, suggesting that Transjordan at this time, at least as north as Amman, was actually not closely guarded by the Damascenes; William of Tyre noticed that those populations were undefended, although the area had a great importance for them.

Another important aspect is the description of Wadi Musa and Jabal Harun, as this is one of the best described areas of Transjordan during the Crusader period. Wadi Musa is described by the authors as rich in water and cultivated land; but just outside the valley itself, the cultivated land ended. It is clear that the “valley” referred to is not the Petra valley, but Wadi Musa, where the centre of settlement had already moved by this time. This fact is supported by archaeological evidence which shows that while the Petra valley was never abandoned, it was not densely inhabited or cultivated. It is not clear if the Franks had some contact with the population during the three days of their stay, but on this occasion they certainly noted the richness of the area in agricultural terms. Moreover, Fulcher of Chartres points out the pleasant surprise of the existence of the monastery on Jabal Harun as a sacred site. It seems that this first expedition therefore had given solid grounds for considering Wadi Musa as a place for conquest and settlement. The presence of the monastery on Jabal Harun is also significant since it testifies to its existence at that time, or at least of parts of it.⁷¹

The fact that Fulcher of Chartres records that their information was obtained from Saracen converts to Christianity is also worthy of note, as it supports the idea that some collaboration with some locals may have been made easier by the fact that they were Christians.

Around 1106, the Emir al-Ispahbad was assigned the areas of Wadi Musa, Moab, Balqa', al-Sharat, and al-Jibal and set out for these districts. The Franks attacked him there, forcing him to take flight. Ibn al-Qalanisi comments that the population of those areas had suffered a lot because of the killings, enslavement and looting by the Franks.⁷² This piece of information seems to bear witness to the frequent episodes of looting by the Franks during the very early years of the 12th century in various areas of Transjordan.

In 1108, when Lent had just begun,⁷³ on the advice of a Syrian Christian named Theodore, Baldwin led an expedition with 500 soldiers to Wadi Musa in order to

⁷¹ See chapter on Petra for the discussion on the monastery during the 12th century.

⁷² Ibn al-Qalanisi, trans. Gibb, 81-82.

⁷³ Between February and April (Prawer 1975, II, 274).

destroy a fort that had been built there by 3000 Damascenes with the support and at the request of the local Arabs to block the passage to Christians; it is specified that the castle was built so that no way would be open to the king's people who were in that place for the sake of business. The king received help from local Christians in order to approach the castle: the king arrived at a site inhabited by Christians and realising that they were Christians, he summoned their priest, and asked his advice about the new fortress. The priest accompanied the king to a place near the fortress, after travelling for three days.⁷⁴ The next day, he entered the camp and told the occupants of the Turkish camp that Baldwin was approaching with great forces and advised them to escape; Baldwin found nobody in the camp the next morning.⁷⁵ The Arabs who called the Turks also hid in mountain caves, together with their herds and all their goods. The king surveyed all the caves of the region and then lighted a fire so that the smoke would force them to come out; as well as killing and making prisoners of them, he took their spoils including donkeys, oxen, sheep and goats.⁷⁶ Afterwards, the king assembled from the region "Syrian brothers and fellow Christians" and took about 60 with him, who were scared of the Arabs, and once they arrived at the Jordan River, the booty was shared.⁷⁷

This information is important in attesting that Frankish settlement in the Wadi Musa area still did not exist, but was probably already contemplated as a future plan. It can be hypothesized that the Arabs helping to build the fort may have been the Bedouins and it is likely that the fort in question is actually al-Wu'ayra.⁷⁸ In Prawer's opinion, moreover, this was the episode that led the Muslims to accept an agreement with Baldwin for the territories in the north.⁷⁹

In 1105/1106 the Franks entered the cultivated zone of al-Sawad where they built a formidable fortress called al-'Al. Tughtegin attacked by night and conquered the castle, returning to Damascus in February/March 1106 with a large quantity of loot and prisoners.⁸⁰ Ibn al-Qalanisi explains that the castle was located between al-Sawad and al-Bathaniya and that the atabeg attacked it on 24 December while it was still being built, fearing that it would be much harder to destroy once it had been completed.⁸¹ This is the first historical information about any attempt being made to build beyond the

⁷⁴ Albert of Aachen 10, 28; RHC, Occ.; IV, 644; Edgington 2007, 745.

⁷⁵ Albert of Aachen 10, 29; Edgington 2007, 745-746.

⁷⁶ Albert of Aachen 10, 30; Edgington 2007, 747.

⁷⁷ Albert of Aachen 10, 31; Edgington 2007, 747.

⁷⁸ See chapter on Petra.

⁷⁹ Prawer 1975, II, 274.

⁸⁰ Sibṭ ibn al-Jawsi, *Mirāt al-Zamān fī Tārīkh al-Ā'yān*, RHC; III, Or.; 529-530.

⁸¹ Ibn al-Qalanisi, trans. Gibb, 71-72.

Jordan, and specifically in a very fertile part of the country. The episode of the destruction of the castle of al-‘Al also shows that this area was kept under tight control by the Damascenes, although from a distance. This is even more evident in 1106/1107, when the ravages of the Franks in the countryside of Damascus, al-Sawad, Jabal ‘Awf and Hawran are documented as being so frequent that Tughtegin decided to camp in the Sawad.⁸² These conflicts continued until 1108, when Tughtegin agreed to a truce of four years with Baldwin I. Ibn al-Athir felt that this truce was a fortunate achievement for Damascus and the Muslims because it relieved a great pressure on them,⁸³ which shows the frequency of attacks in the area and the motivation of the Franks to conquer it. It also suggests that the Damascenes were initially not very prepared to counter those attacks.

A truce between Baldwin I and Tughtegin was agreed upon in 1109, as documented from other sources. The conditions of the agreement were that the Sawad and Jabal Awf would be divided into three parts, one part to be assigned to the Turks, one to the peasants and one to the Franks.⁸⁴ In 1110-1111, Baldwin broke the truce, following which it was decided that Baldwin should have half of the Sawad along with Jabal Awf and al-Jabaniya in addition to what he possessed in the neighbouring districts.⁸⁵

In 1111/1112, as an act of retaliation for not being able to conquer Tyre, Tughtegin went to the Sawad towards a large fortress called al-Habis, which is described as a castle very difficult to take; after besieging it, he massacred the whole garrison.⁸⁶ According to Johns, this castle was built by the Franks to secure payment of revenues,⁸⁷ it was already established by 1109.⁸⁸

On 28 June 1113, Joscelin, count of Edessa, wrote to Zahir al-Din asking for the cessation of hostilities and the castle of al-Habis in the Sawad together with half of the Sawad, in exchange for the castle of Thamanin. Al-Zahir refused and attacked the Franks, who lost this battle.⁸⁹

In 1115, the construction of Montreal (today Shawbak) is attested. Fulcher of Chartres states that King Baldwin named the castle after himself because he was proud

⁸² Ibn al-Qalanisi 1932, 74-75; Sibṭ ibn al-Jawṣi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*. RHC; III; 530.

⁸³ Ibn al-Athir, RHC, Or. I, 269; Richards 2006, 97.

⁸⁴ Ibn al-Qalanisi 1932, 92; Sibṭ ibn al-Jawṣi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*; RHC, Or; III; 537.

⁸⁵ Ibn al-Qalanisi 1932, 113; Sibṭ ibn al-Jawṣi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*; RHC, Or; III; 491.

⁸⁶ Ibn al-Qalanisi 1932, 121; Sibṭ ibn al-Jawṣi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*; RHC; III, Or; 544.

⁸⁷ Johns 1931, 22 based on William of Tyre 22.15; Ibn al-Athir 286, 315 Richards 2006, 158.

⁸⁸ Pringle 1997, 18, n. 10; Deschamps 1935, 289.

⁸⁹ Ibn al-Qalanisi 1932, 133-136. The text has a blank where it is explained where the castle of Thamanin is; Gibb suggests that it was near Banyas.

of the result that was achieved in a very short time, and adds that the garrison was placed in the interest of the Christians, probably meaning both native Christians and Franks, in the interest of Christendom as a whole. He also says that the castle was located three days' journey from the Red Sea and four from Jerusalem,⁹⁰ which appears a convenient location for controlling the area all the way to the Dead Sea.

The resumé of Fulcher's *Historia Ierosolimitana* attributed to Lisiard of Tours states that the area was threatened by robbers,⁹¹ who may perhaps be identified as Bedouin.

William of Tyre gives the most detailed account of the construction, explaining the motivations, the travel to the area where the castle was to be founded, the origins of the name, the identity of the inhabitants of the castle after the foundation and the kind of settlement founded. According to him, at the time of foundation, the Christians had no fortress in the country beyond the Jordan River and because the king wanted to extend the boundaries of the kingdom in that locality, he proposed to build a fort in Syria Sobal or Arabia III. This statement is the most important of this account, since it states clearly that this was the first castle to be built in Transjordan. The Petra castles must therefore have been built after this one. The chronology proposed by the excavators of the castle at al-Wu'ayra therefore needs to be revised.⁹² The king's army travelled around the Dead Sea, passed through Arabia II⁹³, and went into Arabia III, where on a hill appropriate for his project they founded a very safe citadel, protected by natural and artificial defences. William adds that the garrison there would be able in this location to protect from the enemy the fields tributary to the king below it and that the king granted the garrison of knights and foot soldiers extensive possessions. The fields produced large quantities of wine and oil and all the land around was under its jurisdiction. Since the king was its founder, he gave it the name of Montreal.⁹⁴

The account shows that this area had been surveyed beforehand, probably during one of the expeditions to Petra, and suggests that the destruction of the Muslim-held fort in Wadi Musa may possibly have been in preparation for the foundation of a castle in the area. The reason for choosing this location instead of Wadi Musa was clearly the

⁹⁰ Fulcher of Chartres, II.55, RHC, Occ., III, 431.

⁹¹ Lisiard of Tours, *Secunda Pars Historiae Ierosolimitane*, 29; RHC, Occ., III, 573.

⁹² See chapter 4 on Petra.

⁹³ Here William of Tyre makes some confusion in geography, since he states that the metropolis of Arabia II is Petra. However, elsewhere (15.21), he says that the metropolis of Arabia II is Karak, which was formerly called Raba and then Petra Deserti. It appears therefore that there is confusion between the two sites (Karak and Petra). Although William of Tyre probably refers here to Karak, the city did not become a metropolitan see until 1167, when it was moved here by the Franks (Pringle 2012, 198-199, note 6).

⁹⁴ William of Tyre, 11.26, RHC, Occ., I, 499-500. Huygens 1986, 534-535.

advantages of being located in a position that provided both security and the ability to overlook extensively cultivated fields in a very fertile area of the south. Al-Wu‘ayra castle, on the other hand, was sited in a rocky area and at a certain distance from the fertile area of Wadi Musa itself. The management of the site was arranged by distributing land to the inhabitants of the castle, therefore the site was planned at least in part to have the function of producing financial resources from the land and establishing a centre of control over the territory.

Albert of Aachen explains that during the autumn of 1116, the king went with 200 knights and 400 foot soldiers to Mount Horeb commonly called Orel, where he built a new castle in 18 days. The aim of building a castle here was to better conquer the land of Arabia, prevent merchants from passing that way without the king’s permission and prevent ambushes by making it clear that the citadel was an obstacle to them; it is clear therefore that Albert conflates the two expeditions of 1115 and 1116.⁹⁵ Apart from the implausibly short time needed to build a castle, it is interesting that he states that as well as conquering the land, the other aim was to restrict/control the passage of merchant caravans on the King’s Highway, presumably in order to levy tolls from them. He continues that once he had ensured that the castle was built, since he was always eager to explore new things, he proceeded towards Egypt with 60 knights with the aim of conquering more, and arrived at the Red Sea. From there he wanted to visit the Monastery of S. Catherine on Mount Sinai, but he was asked not to do so by the monks themselves, so he decided not to go.⁹⁶

However, it seems that the trip to the Red Sea in fact happened the following year, because in 1116 several sources document the king travelling to the Red Sea after visiting Montreal. The expedition is described by Fulcher of Chartres as one organised from Montreal, which he visited in 1116 with nearly 200 knights, in order to see a new territory that he would possibly be interested in. When the king had observed everything in Aqaba, he returned to Montreal and then to Jerusalem.⁹⁷ It is therefore clear that at this moment Montreal was also considered a base to explore the situation for potential settlement farther south, and that Aqaba was contemplated as a possible site to settle.

William of Tyre says that King Baldwin desired to have a better knowledge of the neighbouring regions and of their condition; he therefore crossed the Jordan and Syria Sobal with a retinue and guides and then crossed the desert to arrive at the Red Sea. He

⁹⁵ Albert of Aachen, XII, 21, Edgington 2007, 857. Mount Orel is identified as Mount Sinai in the Middle Ages.

⁹⁶ Albert of Aachen, 12.21, Edgington 2007, 857-859.

⁹⁷ Fulcher of Chartres, II.56, RHC, Occ., III, 431-432; Fink 1969, 215-216

came to the city of Elim, where the inhabitants had escaped on boats, knowing of his approach. After carefully investigating these places, he returned by the same route through Montreal, then to Jerusalem.⁹⁸ The same episode is quoted by other sources, mentioning always the city of Elim⁹⁹ which needs to be interpreted as Ayla (today Aqaba).¹⁰⁰ The King plundered the town before returning to Montreal.¹⁰¹

It is generally assumed that Transjordan became a lordship between 1115, the foundation of Montreal, and 1118, the year of the king's death, and around which time Roman le Puy was the first lord.¹⁰² The *Assises of Jerusalem* contains a list of the baronies having the right of "*cour, coins and justice*", and Outrejourdain was one of the 36 lordships granted this right.¹⁰³ The Lordship of "Crac et Montreal" had to ensure 40 knights to the king, and together with St Abraham (Hebron), which owed 20, they owed 60 knights in total.¹⁰⁴ The relatively high number of 40 knights may reveal the importance and wealth of the Lordship compared to the rest of the kingdom.

John of Ibelin stated also that it was debated whether the Lordship of Karak, Shawbak and St Abraham (Hebron) was the fourth barony of the Kingdom, and that he thought it could not be classified as such, because it did not provide a minimum of 100 knights for the Kingdom of Jerusalem and it did not have a constable and a marshal, both conditions being necessary, according to him, to classify as a barony.¹⁰⁵ William of Tyre however supports the hypothesis that Transjordan was in fact a barony, while the French continuation never mentions it as a barony.¹⁰⁶

In 1118/1119, Tughtigin demanded that the Franks surrender the revenues from the Ghawr, the mountain of Awf, Jabanja, and al-Salt. When they refused, he pillaged the countryside around Tiberias.¹⁰⁷

In 1121, Tughtigin again sent troops near Tiberias and devastated the lands; the king then started to approach him and hearing of this, Tughtigin withdrew. The king reached Gerasa (Jarash), where the year before Tughtigin had caused "a fortress of

⁹⁸ William of Tyre, 11.29, RHC, Occ., I, 505; Huygens 1986, 541-543; Lisiard of Tours, *Secunda Pars Historiae Ierosolimitane*, 30; RHC, Occ., III, 573.

⁹⁹ Balduini III *Historia Nicaena vel Antiochena*, 76, RHC, Occ, V, 182.

¹⁰⁰ The site has often historically taken the name from the Biblical name Elim or Elath, which appears also in the medieval sources (Whitcomb 1997, 359).

¹⁰¹ Li *Estoire de Jerusalem et d' Antiochie*, 3.10, RHC, Occ, V, 645.

¹⁰² Mayer 1987, 201. The lords of Transjordan included Roman the Puy (ca. 1120-1130/31); Payen the Butler (1130/31-ca.1150); Maurice (ca. 1150-1153); Philip of Milly (1161-1165/1166); Walter III of Beirut (1165/1166-1174); Milo (Miles) of Plancy (1174); Reynald of Châtillon (1177-1187). (Mayer 1987, 201).

¹⁰³ John of Ibelin RHC Lois, I, 420.

¹⁰⁴ Jean d'Ibelin, 1841, I, 422.

¹⁰⁵ Jean d'Ibelin, 1841, I, 418.

¹⁰⁶ Mayer 1990, 7.

¹⁰⁷ Ibn al-Athir, RHC, Or. I, 315; Richards 2006, 160.

immense hewn stones to be built with much expense in the better fortified part of this place,” because the rest of the town had been abandoned. The king attacked the castle, but the garrison of forty men surrendered on condition that their lives be spared. Baldwin then deliberated with his knights whether to destroy the fortress from its very foundations or to keep it for the Christians. Unanimously it was decided to raze it, because it would have been hard and expensive to keep it as it was extremely dangerous even to reach it.¹⁰⁸

The fortress is described as built on a high place¹⁰⁹ and Fulcher of Chartres describes the stones as “square,”¹¹⁰ elements which have helped in its identification.¹¹¹ It is also clear from these events that northern Transjordan, including Jarash, which was abandoned by both parties, was at this time too dangerous an area in which to establish settlements.

In 1125/6, after gathering his forces, Baldwin invaded the Hawran.¹¹² An important piece of information for the south of Transjordan is that between 12 August and 9 September 1127, Baldwin marched against Wadi Musa, devastated and robbed the village and enslaved and dispersed the population.¹¹³ This suggests that the castle of al-Wu‘ayra did not yet exist and its construction must therefore be dated on or after this date.¹¹⁴

In 1133/4, hostilities are documented because the Franks invaded the Hawran, breaking a truce and causing the Damascenes to retaliate. The invasion of the Hawran was in response to Isma‘il prince of Damascus attacking the castle of al-Shaqif (taken by the Franks a few years later and called Beaufort, in southern Lebanon) from al-Dahhak ibn Jandal, chief of the Wadi al-Taym.¹¹⁵ The fact that the Franks reacted to this event suggest clearly that al-Dahhak was a client of the Franks.

In 1139 or a little after, Thierry of Alsace, count of Flanders decided to lay siege to a stronghold beside the Jordan in the land of the Ammonites, near Mount Gilead (Galaad, today’s Jabal Jal‘ad).¹¹⁶ The fortress is described as a great menace to the Frankish lands, a cavern on the slopes of a very high mountain whose access was almost impossible, unless one walked along a narrow and dangerous path between a high

¹⁰⁸ William of Tyre, 12.16, RHC, Occ., I, 535-536; Huygens 1986, 565-566.

¹⁰⁹ Lisiard of Tours, *Secunda Pars Historiae Ierosolimitane*, 35; RHC, Occ., III, 578-579.

¹¹⁰ Fulcher of Chartres, III.10, RHC, Occ., III, 446-447; Fink 1969, 234-235

¹¹¹ See chapter 3, Jarash.

¹¹² Sibṭ ibn al-Jawsi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*,; RHC; III; 565.

¹¹³ Ibn al-Qalanisi 1932, 182; Sibṭ ibn al-Jawsi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*,; RHC; III; 566.

¹¹⁴ See chapter 4 al-Wu‘ayra.

¹¹⁵ Abu al-Fida; RHC; I; 21; Ibn al-Qalanisi 1932, 226-227; Sibṭ ibn al-Jawsi, *Mirāt al-Zamān fī Tārīkh al-Ā‘yān*; RHC; III; 569.

¹¹⁶ The site is between Salt and Jarash (Johns, 1931, 22).

projecting cliff and the precipice. It was occupied by robbers from the land of Moab, Ammon and Gilead and used as a base for attacking the Frankish territories in the area. The Franks besieged the fortress by employing almost the entire Christian army, causing the Turks, who heard that the whole region along the Jordan was left unprotected, to rob Tekoa (southeast of Bethlehem). The Franks however did manage to take the fortress.¹¹⁷ According to Runciman, this was an attempt of King Fulk to try to reinforce the possessions in Transjordan in a moment of weakness on the side of Damascus.¹¹⁸

William of Tyre reports that after Roman le Puy and his son were deprived of their inheritance in Transjordan because of their crimes, in 1142, Payen (Paganus), who had been a butler of the King, and at that time held the land of Transjordan, built a fortress in Arabia Secunda, named Karak, which was strongly fortified both by its natural position and by artificial means. It was situated near the ancient city formerly called Rabba.¹¹⁹ Outside this castle, where was once the town, now was a *suburbium*.¹²⁰

The city was later on called Petra Deserti, for which reason Arabia Secunda was also later called Petracensis¹²¹ It is also stated that Payen actually founded the castle where there was already previously a village, on that part of the mountain in which the terrain is less inclined which ran down to the plain below and that the successors Maurice and Philip of Nablus improved the place with towers and a moat.¹²²

In 1144 the Turks, at the invitation of the local inhabitants, seized the fortress in Wadi Musa and killed the garrison. At this news, Baldwin III travelled there, passing through the Jordan Valley and the territories of Karak and Montreal. The inhabitants of the country, knowing of the approach of the Franks, took refuge in the impregnable fortress. The Franks besieged the castle for several days by launching stones and arrows until they made another plan. It was decided to uproot the groves of olive trees and burn them. As soon as the inhabitants saw their trees being cut down, they gave back the fortress to the king on the condition that their lives and those of the Turks would be spared. The king then installed a new garrison, provided with arms and supplies of food.¹²³ This is the first certain date that we have for the castle of al-Wu‘ayra in Frankish hands, but it also indicates some collaboration between the locals and the

¹¹⁷ William of Tyre, 15.6, RHC, Occ., I, 665-668; Huygens 1986, 681-682.

¹¹⁸ Runciman 1952, II, 227.

¹¹⁹ William of Tyre, 15.21, RHC, Occ., I, 692-693; Huygens 1986, 703-704.

¹²⁰ William of Tyre, 22, 29, Huygens 1986, 1056-1057.

¹²¹ William of Tyre, 15.21, Huygens 1986, 703-704. See note 35 on William of Tyre confusing the two sites.

¹²² William of Tyre, 22.28; Huygens 1986, 1056.

¹²³ William of Tyre, 16.6, RHC, Occ., I, 712-714; Huygens 1986, 721-722.

Turks, therefore indicating that the relationship with the local population could not be trusted all the time. It also bears witness to the presence of olive trees as an important means of livelihood for the locals.

In a charter of 1152, in addition to a tenth part of the revenues from the Muslims, Maurice makes several concessions to the order of the Hospitallers, including a village, a house and some land, all in the Terra Monti Regalis (Montreal), also in the land of the Crac, or land of Moab (Karak), the village of Cansir, a tower and barbican inside Karak castle,¹²⁴ some land and the right to transport goods on the Dead Sea without charge,¹²⁵ and all donations to the Hospitallers except those inside the castle are confirmed by Raynald of Chatillon in 1177.¹²⁶

In 1156, a truce between the Franks and the vizir of Egypt, Ibn Rozzik, was broken and the vizir sent both troops and Arab nomads to ravage Frankish territories.¹²⁷ During these years, therefore, there were attacks also from the Muslims in the south of Transjordan, from Egypt. It is possible that these attacks were carried on with the help of the Bedouins, who knew the area well.¹²⁸ In August/September 1156, an expedition from Egypt charged with attacking the towns of al-Shawbak and Tafilah returned home with a lot of prisoners and booty.¹²⁹

In 1158, troops from Egypt besieged al-Wu'ayra castle for eight days without taking it; from there they then went to ravage the territory of al-Shawbak before returning to Egypt, leaving two officials with troops to besiege this site.¹³⁰ Thus, an attack came this time from Egypt, after the Damascenes.

Around 1160 Nur al-Din decided to attack the Cave de Suet, a cavern in the Sawad on a very steep hillside. There was no access to this place from above or below, the only approach being along a narrow and dangerous path on a precipice. There were rooms and a spring inside and was very useful to control the area. When the king heard of the siege, he departed to bring relief to the garrison, who had already communicated that after ten days they would surrender the fortress if help did not arrive. Nur al-Din confronted the king's army, who won the battle and rescued the fortress.¹³¹

¹²⁴ See chapter 3 for further comments on the location of these structures.

¹²⁵ Delaville le Roulx, J., 1894, I, 160, n. 207.

¹²⁶ Röhrich, 1893, 71, n. 279; Delaville le Roulx, J., 1894, I, 355, n. 521; Röhrich, 1893, 146-147, n. 551.

¹²⁷ Ibn Kallikan; RHC; III; 470.

¹²⁸ See chapter 5, the relationships with the nomadic populations.

¹²⁹ Ibn Kallikan; RHC; III; 471; Ibn Moyesser; RHC; III; 472.

¹³⁰ Ibn Moyesser; RHC; III; 472.

¹³¹ William of Tyre, 18.21, RHC, Occ., 855-856; Huygens 1986, 841-842.

On 31 July 1161, King Baldwin III donated to Philip of Nablus and his heirs Montreal with all its land; the castle of Karak, Amman (Ahamant), the castle of Wadi Musa (Vallis Moyses) with the lands previously owned by Baldwin, son of Ulrich, viscount of Nablus. This land, which is described as the land across the Jordan extending from Zarqa to the Red Sea held by Payen the Butler, including its inhabitants born there, was given to Philip in exchange for lands in the areas of Tyre and Tibnin (Toron).¹³² This document gives information on the extension of the territory of Transjordan during these years, and at the time of Payen the Butler.

In about 1166, an impregnable cave, a fortress, beyond the Jordan River on the borders of Arabia, was surrendered to Shirku by the Templars caring for it; as a consequence, the king condemned twelve Templars to be hanged.¹³³ It is not clear from the context of the description which cave fortress this was and if it could have been 'Ain al-Habis, but if not, this was another cave fortress that should be counted in the number of fortified points.

On 17 January 1166, King Amaury confirmed the Templars in their possession of Amman (Hamam) and its territory, in addition to half of what Philip of Milly owned in the Balqa,¹³⁴ because in this year Philip of Nablus joined the order.

In 1167, a Latin bishop was appointed in Karak, capital of Arabia Secunda, which still did not have one.¹³⁵

On 18 November 1168 Walter (Galterius), the husband of Helena, Philip of Milly's daughter, is quoted as being the Lord of Montreal and in memory of his wife Helen donated 40 bezants every year to the brothers of S. Lazarus of Jerusalem from the exchange in Beirut.¹³⁶

In 1168/1169, Raynald, future lord of Karak and Shawbak went to Karak and Shawbak, reunited his garrisons and waited for Asad al-Din to come out in the desert. But Asad al-Din decided to take the way of the Ghawr and exited the Balqa region, arriving safely all the way to Damascus.¹³⁷ This is one of the many sources showing that the castles of the Franks in Transjordan, and especially Karak were a serious obstacle to movement on the King's Highway. Asad al-Din died in 1169, and the sources state that since when Saladin's power was consolidated, he sent incessantly expeditions against

¹³² Röhricht, 1893, 96-97, n. 366; Strehlke 1975, 3-5

¹³³ William of Tyre, 19.11, RHC, Occ., I, 902; Huygens 1986, 879

¹³⁴ Chartes de Terre Sainte, Archives de l'Orient Latin 1964, II, 183-184.

¹³⁵ William of Tyre, 20.3, RHC, Occ., I, 944; Huygens 1986, 914. Mayer 1990, 221-228. Here William of Tyre again erroneously refers to Petra in the land of Moab, rather than to Karak; see note 35.

¹³⁶ Röhricht, 1893, 119, n. 454; de Marsy 1884 [Archives de l'Orient Latin, II], 141-142, no. 24.

¹³⁷ Abu Shama, RHC, Or., IV, 127-128.

the Christians of Karak, Shawbak and the villages near by.¹³⁸ Indeed, the information about these castles, but Karak in particular, and the hostilities around them, becomes much more abundant starting from these years.

The following year (1169/1170), Nur al-Din besieged Karak but abandoned the siege¹³⁹ when the Franks came out against him with a large force.¹⁴⁰

In February/March 1170 Nur al-Din marched towards the Frankish territories and besieged Karak, which Ibn al-Athir described as one of the strongest sites to the east of the Dead Sea and on the edge of the desert. The reason for this siege is revealed in the fact that Saladin had asked Nur al-Din to send him his father from Syria to Egypt. When Nur al-Din saw that a large number of people, friends of Saladin and merchants, wanted to join the group travelling to Egypt with Saladin's father, fearing that they may be attacked by the Franks, left himself for Karak with his army, besieged it and built some trebuchets outside it. When the news arrived that the Franks were directed towards him, led by Humphrey III of Toron and Philip of Milly,¹⁴¹ Nur al-Din prepared to meet them before they could be joined by the rest of the Frankish army; however, the armies did not meet and Saladin's father managed to arrive in Egypt safely.¹⁴² In another document, it is stated clearly that the same Nur al-Din's siege of Karak, where Nur al-Din's army consisted of 200 knights, 1000 Turcoples and a large infantry, was specifically aimed at preventing the Franks from leaving the castle and go out on a campaign.¹⁴³

It is clear from these events that not all attacks on Karak were meant to take the castle; on the contrary, some were aimed at keeping it under control for a limited period of time and often to allow a safe passage of caravans. In this case, it is Nur al-Din himself who needed to move his army and besiege Karak in order to ensure safe travel along the way from Damascus to Egypt, and this gives a very concrete example of the seriousness of the problem that was attached to the existence of Karak castle at this moment.

From 20 April to 19 May 1170, it is reported that Nur al-Din attacked Karak as soon as he knew that the Franks were under the walls of Damietta.¹⁴⁴ This appears to be

¹³⁸ Abu Shama, RHC, Or., IV, 122-123.

¹³⁹ Abu al-Fida; RHC; I, 40.

¹⁴⁰ Ibn al-Furat, 1971, II, 51.

¹⁴¹ This is the interpretation by Richards about the identity of the two leaders, uncertain because of the gap in the document (Richards 2007, 184).

¹⁴² Ibn al-Athir, RHC, Or., I, 570-571; Richards 2007, 184.

¹⁴³ Ibn al-Athir; RHC, Or., II.2, 260-261. In the *Histoire des Atabecs de Mosul*, these events are reported to happen in March/April 1170.

¹⁴⁴ Abu Shama, *Le Livre des Deux Jardins*, 1898, RHC, Or., IV, 149.

the same event, recorded as occurring on the same date, when Nur al-Din arrived in Karak after a stop of a few days in Amman in the Balqa region. Karak was besieged for four days and two trebuchets were built against it. The Franks united their forces and started going towards Maʿin.¹⁴⁵

Again, in 1169/1171, William of Tyre refers to a siege of Karak by Nur al-Din which provoked the king to go to meet him, whereupon Nur al-Din abandoned the siege.¹⁴⁶ It may be, however, that these three attacks on Karak between 1169 and 1171, so close in time, are in fact the same one and have been separated by the sources.

At his return to Egypt after an incursion in the Frankish territories, Saladin built some boats that could be disassembled, loaded the pieces on camels and went towards Ayla, where he assembled the pieces, put the boats in the sea, and besieged Ayla from both land and sea. He took Ayla between 12 and 22 December 1170, pillaged it, took the inhabitants prisoner and returned to Cairo.¹⁴⁷

This expedition perhaps was originally also planned to meet a caravan from Damascus with members of Saladin's family¹⁴⁸ and if this was the real reason, it gives an example of how a Frankish settlement in Ayla was also felt as a serious threat.

It is noteworthy that the attack from Egypt was by both land and sea; although this does not necessarily help establish whether the Frankish fort was on the island or on the mainland. Pringle identified the fortress related to these events as the one on the island.¹⁴⁹

An account of an episode in 1171 refers to plans to attack Karak and Shawbak. After Nur al-Din planned to combine forces with Saladin against Karak and Shawbak, Saladin left Cairo on 25 September 1171 to carry on this plan; however, as it is reported perhaps diplomatically by some sources, there were obstacles that did not allow the reunion of the two armies, and Saladin went back to Cairo on 16 November 1171.¹⁵⁰ Nur al-Din had ordered Saladin to besiege Karak together with the Egyptian troops while he would also assemble the troops from Syria, but a letter from Saladin reached him telling him that he had to go back to Egypt to take care of internal disorders.¹⁵¹ The

¹⁴⁵ Abu Shama, *Le Livre des Deux Jardins*, 1898, RHC, Or., IV, 153-154.

¹⁴⁶ William of Tyre, 20.26; Huygens 1986, 949-950.

¹⁴⁷ Ibn al-Athir, RHC, I, 578; Richards 2007, 194; Abu al-Fida; RHC; I; 41. Prawer comments that these dates do conflict with the attacks of Darum and Gaza between 16 and 21 of December (Prawer 1975, II, 449). However, Lyons and Jackson think that Saladin did not necessarily participate in the Ayla expedition personally. The castle mentioned here is on Jazirat Fara'un.

¹⁴⁸ Richards 2007, 194. According to this editor, Saladin returned to Cairo in February 1171.

¹⁴⁹ See chapter 3, Aqaba.

¹⁵⁰ Abu Shama, *Le Livre des Deux Jardins*, 1898, RHC, Or., IV, 155-156.

¹⁵¹ Ibn al-Athir, (*The Histoire des Atabecs de Mosul*); 1876, RHC; II.2, 286-288). According to this source, Saladin left Cairo on 23 September.

interesting account of Ibn al-Athir, however, offers the details of the problem that occurred. According to him, Saladin left Egypt for the Frankish territories in October and besieged Shawbak. He lifted the siege and agreed to spare the lives of the garrison. This initiative caused Nur al-Din to leave Damascus for the Frankish territories and Saladin was advised that if Nur al-Din entered the territories at this moment, with the current state of affairs, he would actually manage to conquer them, as they would be attacked on one side from Saladin and from the Atabek on the other. Moreover, if Nur al-Din would meet Saladin in Shawbak, he would be able to treat him as he wished; for this reason, he was advised to return to Egypt as soon as possible, and this was the reason that Saladin did not take Shawbak. He therefore excused himself to Nur al-Din for having to return to Egypt because of internal disorders and apologized at great length. Nur al-Din did not believe him and prepared to enter Egypt to exercise his authority, and Saladin asked for a meeting with his family and counsellors to decide what to do, during which, while some members of the family did advise him to confront him, his father persuaded him that most people would be on Nur al-Din's side. Eventually, Saladin accepted his suggestion to write him confirming his submission to him.¹⁵² Abu al-Fida explains that Saladin feared that if Shawbak was taken, there would be no barrier anymore for Nur al-Din to enter Egypt.¹⁵³

These accounts document the first clear plan by Nur al-Din and Saladin to actually take Karak and Shawbak castles, a plan which was eventually not carried out for reasons of internal strategy and mistrust between them, more specifically because Saladin was worried about losing control of the Egyptian territories and possibly also wanted to be have the glory of this conquest all for himself. The presence of Shawbak and Karak is therefore used at this moment as a barrier to protect his own territories from Nur al-Din.

In October/November 1172, the Franks marched against the Hawran, which was under the control of Damascus. Nur al-Din joined them with his troops, and when the Franks learned of his arrival, they moved to the Sawad, also part of the Damascus territory, but Nur al-Din attacked the Franks and took their possessions.¹⁵⁴

It can also be noticed that for the first time an attempt to actually take Karak castle in particular, and Shawbak castle, which went beyond the mere plan to do so, is documented during these years. Sources document with abundance these attacks. These

¹⁵² Ibn al-Athir, 1872, RHC, I, 581-583 Richards 2007, 198-200.

¹⁵³ Abu al-Fida; 1872, RHC; I; 42.

¹⁵⁴ Ibn al-Athir, 1872, RHC, I, 586; Richards 2007, 209.

expeditions are described, in fact, as the first ones of Saladin against the infidels outside Egypt.¹⁵⁵

In 1172, Saladin besieged Montreal but without any success, and he turned away without achieving any result.¹⁵⁶ In 1172-1173, he went with his armies to the territories of Karak and Shawbak, but came back to Egypt without having taken any advantage from this expedition.¹⁵⁷ Ibn Shaddad reports the reasons for these attacks on Karak and Shawbak, and from his account it may appear that several attacks took place. He says that Saladin decided to start conquering these two places “because they were the nearest to Egypt and because they were on the route to this country, in such a way that they did not allow travellers to go there. Some caravans could not pass through, unless the sultan himself escorted them personally. He wanted to enlarge and improve the road, so that the two countries could communicate and that travellers could easily pass through. He then left in 1172-1173 to besiege these places and had several encounters with the Franks.”¹⁵⁸

According to William of Tyre, in 1172 Nur al-Din besieged Karak and because of this, the Frankish armies were assembled; however, Nur al-Din abandoned the siege.¹⁵⁹ The following year at the beginning of autumn, Saladin prepared to invade the Frankish territories and marched through Idumaea into Syria Sobal, where he besieged what is described as the principal fortress of the entire district [Shawbak] located on a high hill and splendidly fortified with walls, towers and ramparts. William of Tyre adds that the village outside was on the slope of the hill which was so steep that could not be attacked with machines or bows. After some days of siege, Saladin returned to Egypt understanding that the place was impregnable.¹⁶⁰ William of Tyre reports also that again, during the tenth year of Amaury's reign, which is 1172, Saladin made preparations to invade the Frankish territories, and he arrived in July in the same place as the year before, realising that he had accomplished very little the previous year. The king prepared to meet him but eventually retired to Carmel (Khirbat Karmil, south of Hebron) in order to check Saladin's movements. Saladin burned, cut and destroyed all that was outside the fortress, and then he returned to Egypt.¹⁶¹

¹⁵⁵ Abu Shama, *Le Livre des Deux Jardins*, 1898, RHC, Or., IV, 157-158.

¹⁵⁶ William of Tyre 20.27; Huygens 1986, 950-951.

¹⁵⁷ Ibn Shaddad, RHC; III, 53-54; Richards 2002, 48.

¹⁵⁸ Ibn Shaddad; RHC; III, 53; Richards 2002, 48.

¹⁵⁹ William of Tyre, 20.26, RHC, Occ., I, 992; Huygens 1986, 948-950.

¹⁶⁰ William of Tyre, 20.27, RHC, Occ., I, 992-993; Huygens 1986, 950-951.

¹⁶¹ William of Tyre, 20.28, RHC, Occ., I, 994; Huygens 1986, 951-952.

William of Tyre thus describes three attacks made by Saladin on Karak in 1172/1173; it can be noticed that all these descriptions are similar and close in time, and it is possible that some confusion may have occurred for the authors describing them.

In 1172/1173, Ibn al-Furat states that Nur al-Din besieged Karak a second time, but then for some reason he left the siege,¹⁶² therefore, it seems that at least two attacks on Karak occurred during these years. A detailed account is given by Ibn al-Athir of a siege of Karak in 1173 and of the internal political reason for its failure. Between 16 May and 13 June 1173, Saladin left Egypt for the Frankish territories in order to attack Karak and to attack the Frankish territories together with Nur al-Din from two different directions: Nur al-Din would arrive from Damascus and Saladin from Cairo. It was agreed that the first to arrive would wait for the other. Saladin left and arrived first and besieged Karak. Nur al-Din also left as soon as he heard that Saladin left. As soon as Nur al-Din was two days' distance from Karak, Saladin and his family were filled with terror and agreed to go back to Cairo, as they knew that it would have been easy for Nur al-Din to take away the power from him if they met. Saladin therefore sent someone to tell him that he apologized and sent expensive presents to Nur al-Din; he made him know that he had left his father seriously ill in Egypt and that if he were to die, the country was at risk of escaping from their control. Nur al-Din pretended not to understand the real reason of the problem. In the meantime, Saladin found his father dead at his return in Egypt.¹⁶³

In 1177 Reynald of Châtillon became lord of Karak.¹⁶⁴

In 1181, Roger de Molins, master of the Hospital, with the consent of the entire chapter and in agreement with Guericus, the archbishop of Petra, agreed that the order will pay every year a tenth part on what it owned, that the payment would be always proportional to the property, and that nothing else would be requested from the church.¹⁶⁵

In 1180, Reynald of Chatillon gave permanently to the Abbey of S. Mary of Jeosaphat half of a Casale called Bethomar, after the example of Guy de Milly who had done the same in the past, in addition to land, vineyards, olive trees, a wood and a *gastina* attached to this village.¹⁶⁶

In 1181/1182, Reynald of Chatillon decided to attack Medina and take control of that sacred area. Having learned of this, Farrukh-Shah, a lieutenant of Saladin, left

¹⁶² Ibn al-Furat, 1971, II, 51.

¹⁶³ Ibn al-Athir, RHC, I, 593-594; Richards 2007, 212.

¹⁶⁴ Prawer 1975, I, 612.

¹⁶⁵ Delaville le Roulx, J., 1894, I, 415-416, n. 610.

¹⁶⁶ Röhrich, 1893, 159, n. 596; Delaborde 1880, 88-89.

Damascus and devastated the territory of Karak. When the prince heard of this, he abandoned his expedition.¹⁶⁷ In the same year, however, Reynald of Chatillon attacked the Hagi Road, taking advantage of the fact that the desert was covered abundantly with plants that year.¹⁶⁸

William of Tyre reports that around this time, while on the march towards Damascus Saladin intended to damage the Frankish territories beyond the Jordan as much as possible, in order to retaliate against Reynald de Chatillon, who had violated the agreement, kidnapped some Arabs and refused to release them. Saladin camped 10 miles from Montreal, the Christian fortress, and he was waiting to be informed about the king's army arriving to meet him. Baldwin camped about 36 miles from Saladin's camp, in an ancient city called Petra of the Desert, in Arabia Secunda, which is presumably to be identified with Karak, as usual with William of Tyre.¹⁶⁹ The rulers from Syria attacked the Frankish territories in Galilee and the area of Mount Tabor knowing that the Latin army was absent.¹⁷⁰

On May 11, 1182, Saladin marched from Egypt to Syria and went towards Ayla, where the Franks were trying to prevent him from passing. He sent his luggage ahead to Damascus and remained with his troops. He also sent detachments to different areas of the country, especially in the territories of Karak and Shawbak. But no enemy came out to meet him, and Saladin just proceeded to Damascus.¹⁷¹ During this trip, which was apparently when Saladin left Egypt to never come back again, he stopped in Bawayb, al-Jisr, Wadi Musa, Hatha and Sadar. When he was in Aqaba, he heard that the infidels were grouped in Karak in order to block him the road.¹⁷²

This is a concrete example of how the presence of the Frankish castles at this time was still important and how probably the Franks organised raids from Shawbak and, more often, Karak, which is mentioned more often. The Franks could clearly still threaten the Aqaba area without holding it. When Aqaba was still Frankish, it was first of all considered a threat to travellers to the Holy Cities, as it is described as a "frontier place" where the Franks had settled on the way to the two sacred cities and from where they threatened the coasts of the sacred territory and made prisoners. By the "cut" made here by the infidels, it is said that "the Kiblah was threatened to its foundations and the sacred places risked being occupied by the foreigners". After it was recovered, it was

¹⁶⁷ Abu al-Fida, 1872; RHC; I, 50; Ibn al-Furat, 1971, II, 51.

¹⁶⁸ Abu Shama, *Le Livre des Deux Jardins*, 1898, RHC, Or., IV, 214-215.

¹⁶⁹ See above, notes 22 and 54.

¹⁷⁰ William of Tyre, 22.14, RHC, Occ., I, 1088; Huygens 1986, 1024-1025.

¹⁷¹ Ibn al-Athir, 1872, RHC, I, 651 Richards 2007, 281.

¹⁷² Abu Shama, *Le Livre des Deux Jardins*, 1898, RHC, Or. IV, 217.

again considered “a refugee for the travellers of the country and for other servants of God”.¹⁷³ According to Mayer, one of the effects of the Frankish presence on the territory was the fact that the Haji road in effect and at times shifted temporarily east to avoid the roman road through Karak and Shawbak. However, although it was possible to pass through Aydhab rather than Aqaba in the south, it was much harder for the pilgrims to avoid the castles of Karak and Shawbak, because it was not possible to travel much more east than the route which corresponds to the nowadays Desert Highway, just a few kilometres east of the King’s Highway. From Wadi Musa it was possible to control caravans passing through Ma’an. During the 13th century, however, it returned safely to the route through Karak and Shawbak castles.¹⁷⁴ The shift from Aqaba to Aydhab, however, made the travel much less convenient, as witnessed by Ibn Jubair.¹⁷⁵ The episode of Saladin being forced to change route to cross Transjordan is in any case illuminating of how the Haji road during the Crusader period could in practice take different routes from the ones through Karak and Shawbak, an important point which would require further research.

Between 6 June and 4 July 1182, the Muslims conquered from the Franks the cave castle called Habis Jaldak in the territory of Damascus. This happened because when the Franks heard that Saladin was arriving from Egypt to Syria, they gathered their troops and placed them in Karak. This way, the Syrian territories were left undefended, and Farrukh-Shah took advantage of their absence to attack their territories and conquered the cave castle. Ibn al-Athir reports that this castle in the hand of the Franks was for the Muslims a reason of great damage and that this event damaged very much the power of the Franks.¹⁷⁶ This episode is one of those showing that for the Frankish army, concentrating their forces in Karak did actually leave the rest of the territories undefended and that they only covered militarily the territory with some difficulty, if Saladin could take advantage so easily of their presence in Karak. It also shows the importance attached to this small cave castle as an observation point for the territories north of Transjordan, which allowed having some control of the territories. The loss of this site is also commented upon by William of Tyre, who defines this event as a disaster, and explains in detail the structure and location of this place, the function that this site had for the Franks, and the event of its loss. The cave fortress was located 16 miles from Tiberias in the land of Sawad and was under the care of Fulk of Tiberias.

¹⁷³ Abu Shama, , *Le Livre des Deux Jardins*, 1898, RHC, Or., IV, 174-175.

¹⁷⁴ Mayer 1990, 128-129

¹⁷⁵ Schick 1997, 78

¹⁷⁶ Ibn al-Athir, 1872, RHC, I, 651-652; Richards 2007, 184.

The fact that the Franks held this impregnable fortress was of great service to them because it was nearer to the enemy's domain than to theirs, so they could control the inhabitants as they wanted. It used to be that control, taxes and tributes were shared. The cave had three floors and was situated in a cave under an immense cliff and there was no way to approach it from above; there was only a narrow footpath by which there was a very difficult access. He reports the castle was lost while the king was still busy in Syria Sobal and that the Turks took this place within five days. Hypotheses were made initially as to whether it had been taken by bribing the garrison or by managing to undermine it, but eventually it was known that the soldiers had actually surrendered. William blames the fact that the commanders in charge were Syrians, whom he defines as a weak and effeminate race, although the blame fell on Fulk of Tiberias, and comments on the great consternation of everyone at this news, especially Raymond of Tripoli who had the responsibility for this fortress.¹⁷⁷

An even more detailed description of the site is given again by William, who says that the path for reaching it was hard even for one foot soldier free from any load, as the path was barely a foot wide, and just below there was a precipice all the way to the bottom of the valley. The three stories were connected by a wooden staircase.¹⁷⁸

William describes also the events of October 1182 (the same year) when the Franks decided to try to take the Cave de Suet back from the Muslims. They camped near by, and because the fortress was extremely well defended and was approachable only from its upper part, and only by cutting through the rocks, some stonecutters were put at work to penetrate into the upper level. In the meantime helpers threw rocks down the valley and shifts were provided so that the work would proceed day and night, and it was fast because the cretaceous stone was easy to remove, apart from the flint veins. The army was divided in two parts: one protected the work of those trying to break into the cave, the other was in the plain below to prevent the besiegers from escaping. The siege lasted for three weeks or a bit longer, and the garrison, consisting of about 70 men carefully chosen by Saladin for their loyalty, with a good supply of food and weapons, surrendered the fortress asking for their lives to be spared. The fortress was therefore retaken by the Franks, but this time it was given to men of unquestionable loyalty and ability.¹⁷⁹

This precise description helps with the identification of the site and explains better the function and great importance attached to the castle from both sides, since a major

¹⁷⁷ William of Tyre, 22.15, RHC, Occ., I, 1090-1091; Huygens 1986, 1028-1029.

¹⁷⁸ William of Tyre, 22.21, RHC, Occ., 1105; Huygens 1986, 1040.

¹⁷⁹ William of Tyre, 22.21, RHC, Occ., 1104-1107; Huygens 1986, 1042.

effort was employed in trying to recapture it. It also lets us know that a castle of such importance was held by a Syrian garrison, and not by Europeans, when in the hands of the Franks. This is a reason to believe that the sites in Transjordan would also be garrisoned in the same way, that is to say, by local Christians, to make up for the very low numbers of available western soldiers.

Around this time, there is also mention of Saladin and his army devastating the territory of Montreal, where the army cut the vineyards. The Franks considered attacking Saladin, but they did not, and he could return safely to Damascus.¹⁸⁰

In 1182/1183, Reynald of Chatillon built some ships in Karak that could be assembled somewhere else.¹⁸¹ He took them to Ayla, assembled them, filled them with warriors and made them leave. Some of them stopped next to the fortress in Ayla, to besiege it and prevent the inhabitants from approaching the water sources which fed the fortress.¹⁸² Much distress seized the population, seeing that the enemy was so close. The second detachment went to Aydhah and pillaged it. The population did not expect it, because they were not used to see any Franks, either warriors or merchants. Saladin's brother al-Malik al-'Adil Abu Bakr was in Cairo as Saladin's lieutenant, and sent ships led by Lu'lu' who immediately dealt with the detachment in front of Ayla. He killed some and made others prisoners and then followed after those in Aydhah, but could not find them. Lu'lu' chased after the Franks who planned to enter Mecca and Medina and killed some and took others prisoner, who were taken to Egypt to be killed as well.¹⁸³ This expedition was apparently preceded, in 1181/1182, by the news of his arrival and his intention of marching on Medina; he actually also arrived in Ayla in November 1181 with the intention of attacking it.¹⁸⁴

This passage by Ibn al-Athir gives interesting information about Ayla. Only one fortress is mentioned in several sources, including this one, so there are no suggestions that there have ever been two fortresses.¹⁸⁵ It seems also clear that the fort in this description is the one on the Jazirat Faraun, since there is no mention of an attack by land, and there is only mention of an attack with boats by Reynald of Chatillon. It is likely that the water springs were therefore on the Egyptian mainland.¹⁸⁶ Abu al-Fida, in

¹⁸⁰ William of Tyre, 22.15, RHC, Occ., 1091-1092; Huygens 1986, 1027.

¹⁸¹ 'Imad al-Din states that Reynald transported the boat parts all the way to Ayla by camel (Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 231).

¹⁸² Two ships had this specific task, according to Maqrizi (Maqrizi, 70).

¹⁸³ Ibn al-Athir, RHC, I, 658-659 Richards 2007, 289.

¹⁸⁴ Al-Maqrizi, 63-64; 66.

¹⁸⁵ However, Deschamps thinks that the fortresses in 'Aqaba are two and not one, at least at some stage (Deschamps 1939, 37).

¹⁸⁶ See also Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 230-231.

giving a short summary of the event, also states that the inhabitants of Ayla were very surprised by this attack, since they had never seen Franks in this area.¹⁸⁷ This confirms that the Franks did not organise any raids of the area during those years.

‘Imad al-Din adds that the victory of the Muslim armies led by Lu’lu’ occurred between 28 January and 26 February 1183. In his report, the position of the Ayyubid fort, in the middle of the sea, is also clearly mentioned, and he also states that any defence was lacking as the attack from the Franks was not expected. He also states that the presence of the troops in this fort at Ayla was a great harm to the Franks.¹⁸⁸ This account supports the idea that Ayla was a considerable loss to the Franks, since after they lost it they were unable to have complete control of the Hajj road, between Cairo and Damascus. Saladin ordered that all the Franks captured would be killed, so that none of them would be alive of those who remembered the way to where they arrived, on the way to the Holy Cities.¹⁸⁹ The fact that they had arrived all the way there seems to have been, therefore, unexpected by Saladin. According to al-Fadil the reason was that the knowledge of this route to the holy cities and the pilgrimage places would have made it possible to commit the worse crimes in these areas.¹⁹⁰

Interestingly, another account states that the Franks who managed to penetrate all the way to Rabigh and El-Hawra kept on attacking caravans and that “some Arabs, more insidious and hypocritical than the Franks themselves, guided them towards the pride of our country”.¹⁹¹

The information from these two accounts suggests that the fact that the Franks got so deep into the Muslim territories was unexpected and that by killing the men who took part in this expedition, Saladin was hoping that this would never happen again. Moreover, it is well indicated that the Franks were guided by some Arabs who are described with contempt. It seems that such a situation may indicate that the Franks were helped in this case by some Bedouins, who typically would have extensive knowledge of the territory, and who of course would also in this case assist the Franks in attacking caravans, and probably share at least part of the loot.

On 19 July 1183, the traveller Ibn Jubair reports that the way to Medina from Egypt through Ayla was the shortest for the pilgrims, but that he sailed from Aydab to Jiddah as the land route through Aqaba was considered unsafe because of a Frankish

¹⁸⁷ Abu al-Fida; RHC; I; 51-52.

¹⁸⁸ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 230-231.

¹⁸⁹ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 231-232.

¹⁹⁰ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 232.

¹⁹¹ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 234.

fortress which did not allow the passage,¹⁹² and which presumably was Shawbak rather than Ayla.¹⁹³

There is also an account of several events that occurred in 1182/1183. Since the Franks heard that the sultan had left Egypt followed by a large number of merchants, they met in Karak, hoping to make a good looting from the caravans. Farrukh Shah therefore found the Frankish territories empty of troops and wasted the territories of Tiberias, Acre and Dabburiya at the foot of Mount Tabor. He also managed to take Habis Jaldak. He went back to Damascus with 1,000 prisoners, 20,000 animals and much booty.¹⁹⁴ This is therefore another episode describing the Franks attacking a caravan from Karak, which appears to be the most common place for these attacks. Also, it shows once again that the army available to the Franks was quite limited, if organising an attack to a caravan meant leaving such a large territory undefended, as well as the fact that they thought the attacks were well worth the risk.

In another report, there is mention of Saladin devastating the territory of Karak during the same year, following an attempt by Saladin to start a battle, but the armies never met. Saladin left Egypt for the Holy War and the Franks reunited their forces and occupied Karak ready for the battle. Saladin burned the countryside around Karak and marched against the Franks inside the castle but the Franks did not come out of Karak.¹⁹⁵

On 30 September 1183, Saladin left Aleppo in order to make an incursion in the Frankish territories. When he was near El-Djalout, ('Ayn Jalut) he sent troops in order to obtain information about the Franks; the troops met some contingents of Karak and al-Shawbak going to help the Frankish forces. Here the Muslims attacked them, killed some and came back with more than 100 prisoners.¹⁹⁶ This is therefore an example of an incursion which had the specific purpose to acquire information about the Franks.

After this moment, the sultan undertook many expeditions against Karak. Saladin crossed the Jordan on 29 September 1183, attacked and burned Baisan and the countryside near by, then went to Karak.¹⁹⁷ He had ordered his brother al-Malik al-'Adil to meet him under the walls of Karak and when he heard that he had left Egypt, he also left Damascus; al-Malik al-'Adil arrived on 22 November 1183. The Franks, hearing of

¹⁹² Ibn Jubair, *Travels*, 67.

¹⁹³ Pringle 2005b, 343.

¹⁹⁴ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 217-218.

¹⁹⁵ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 218-219.

¹⁹⁶ Ibn Shaddad; RHC, Or, III, 73-74; Richards 2002, 61 ; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 243.

¹⁹⁷ Abu al-Fida; RHC; I; 53.

the arrival of al-Malik al-‘Adil, called their infantry and chivalry towards Karak to defend it. The sultan, having appreciated that the size of the Frankish army was very large, feared that it would move towards Egypt and sent his nephew to Egypt to meet them. The Franks camped under the walls of Karak and the sultan, after attacking this place very vigorously, decided to leave.¹⁹⁸

According to another account, Saladin arrived in Karak between 20 October and 18 November 1183; Saladin’s army managed to take the faubourg and started besieging the fortress from this point, using seven trebuchets and launching stones day and night. However, he had thought that the Franks would never let him besiege the castle, and would concentrate all their efforts to push him back. Consequently, he had not left with enough siege engines to take such an important and difficult place. On 3 December 1183, he therefore left the siege.¹⁹⁹ It seems therefore that the intentions of the sultan were not to take Karak at this moment, but still to test its resistance.

William of Tyre tells us more details about this assault on Karak by Saladin. Saladin recruited his forces and marched through the land of the Ammonites and Moabites and prepared to besiege the city formerly called Petra Deserti, but at the time known as Karak. William states that there, upon a very high mountain surrounded by deep valleys, the ancient city of Petra²⁰⁰ had been located, although it had been in ruins for a long time. The village present at the time of the Franks was west [sic] of the fortress in a safe location and even the walls were quite low, since the inhabitants needed not to fear anything because only two points were vulnerable to an attack and they could be defended by a few men. As soon as he learnt about Saladin’s arrival through his scouts, Reynald also assembled an army; the camp was immediately placed in a circle around the fortress and the siege began. The day Saladin arrived was the day of the wedding of Humphrey of Milly, son of Stephanie, and the king’s sister. Saladin gained possession of the “mountain” and almost made it to the citadel; inconsiderately, the besieged had left the bridge down. Crowds of people sought refuge in the fortress and many Syrians also joined from the nearby country. The fortress at this moment was largely stocked with provisions but perhaps not enough weapons.²⁰¹ The account tells about the works done on the fortress by Maurice after the construction by Payen, but

¹⁹⁸ Ibn Shaddad; RHC, 76-77; Richard 2002, 62 ; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 248.

¹⁹⁹ Ibn al-Athir, RHC, I, 664 Richards 2007, 297. However, according to Abu al-Fida, the siege was started on 3 December 1183 (Abu al-Fida; RHC, I; 53). A summary of the event is also given by Ibn al-Furat (1971, II, 52).

²⁰⁰ The sites of Petra and Karak are confused again by William of Tyre.

²⁰¹ William of Tyre, 22.28, RHC, Occ., 1124-1126; Huygens 1986, 1055-1057.

also tells that a large quantity of “Syrians” from the countryside was relying on Karak for their own defence. Regarding the siege of Karak on this occasion, it is said that Reynald seeing that the enemy was approaching suggested that people leave the *burgus* and transport their things into the citadel. This crowd of people was however more of a problem than a benefit, and that included Syrians with their families and entertainers who came for the wedding.²⁰² It is stated therefore in this account that before the construction of Karak there was a village on the same site. How close this attack came to conquer Karak is clear also by the account of al-Fadil, who writes that on this occasion “the towers of Karak were prostrated in worship, the veils of their mantlets had been removed and their noses cut off”, and that victory was close by.²⁰³

In 1184, there is account from Ibn Shaddad of another attack on Karak Castle not carried through. Saladin arrived near Karak castle, at Ra’s al-Ma’, waiting for troops to gather²⁰⁴ and stayed a few days waiting for al-Malik al-Muzaffar, his nephew, who arrived from Egypt on 30 July 1184.²⁰⁵ The sultan left Ras el-Ma’ on 13 July to march against Karak; al-‘Adil also joined with his own troops on 23 August; now the contingents from Egypt, Syria and Mesopotamia were reunited²⁰⁶ and the fortress was surrounded on 13 August; the trebuchet was mounted. The Franks, having heard this, directed their infantry and chivalry towards Karak. It is also explained in the account of Ibn Shaddad that this fortress was a great trouble to the Muslims, since it cut so much communications with Egypt that caravans could not travel without a considerable escort; the sultan was very worried and wanted to make travelling to Egypt possible. Saladin therefore got ready to meet the Franks and ordered the troops to move on the heights outside Karak. The Franks did stop at el-Oualeh (al-Wala),²⁰⁷ and the sultan camped at Hisban and later Ma’in. On 4 September, the Franks went to Karak, followed by the Muslims who followed them and attacked them. Since the Franks were really going to Karak, the sultan sent troops to the coastal regions, where there were not enough troops to defend them; he then attacked and pillaged Nablus.²⁰⁸

However, on another account on the same year, it is stated that on 17 August 1184, Saladin placed in front of the gate of the city nine trebuchets that destroyed all the frontal section of the walls. The worst obstacle was, however, the large and deep moat,

²⁰² William of Tyre 22.29, Huygens 1986, 1056-1057.

²⁰³ Cited in Lyons and Jackson 1982, 210.

²⁰⁴ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 249.

²⁰⁵ Ibn Shaddad; RHC; 80 ; Richard 2002, 64-65

²⁰⁶ *Le Livre des Deux Jardins*, RHC, Or., IV, 250-251.

²⁰⁷ Identified as ‘Ayn Awaleh, 10 km from Hisban (note 2 on Ibn Shaddad 2002, p. 65).

²⁰⁸ Ibn Shaddad; RHC; 81-82 ; 65 ; Richards 2002, 65

not of an ordinary size, and the only way of proceeding was to fill it. The moat at one point was so well filled that a prisoner threw himself in it and he survived; the people filling it were protected by a shelter.²⁰⁹

According to Ibn al-Athir, on this occasion the Muslims took the *faubourg*, but the citadel resisted. Although these were both on the same level, there was a moat about 60 cubits deep between them. Saladin ordered to fill it with stones and soil, but nobody could approach it because of the quantity of arrows from arbalest and bows and of stones from trebuchets launched from the castle. Therefore Saladin ordered a shelter to be built with an assembly of beams and mud bricks²¹⁰ under which the soldiers could approach the moat without being touched by pebbles and spears. After it was built, they could approach under their moving shelters and in the meantime, the trebuchets of the Muslims threw projectiles against the fortress day and night. The Franks asked for help letting it be known that they could not defend the place. The Frankish army started marching to Karak to help, and Saladin, after he knew this, went towards them to confront them and return to besiege Karak afterwards; he camped next to them. He could not reach them because of the difficulties of the terrain and he waited for them to come out instead, but they did not dare, so Saladin left someone to tell him about their movements. Overnight, the Franks approached Karak and he saw that he could not attack them. Therefore, he went towards Nablus and pillaged it.²¹¹ Abu al-Fida and Ibn al-Furat provide a summary of the same information as Ibn al-Athir.²¹²

In 1184-1185, the construction of the castle of 'Ajlun started under the supervision of 'Izz ad-Din Usama.²¹³

In 1186, Reynaud was warned that a large caravan going from Cairo on the Nile to Damascus would pass through the territory of Karak or al-Shawbak, taking advantage of the truce; Reynald therefore attacked and took the caravan and perhaps Saladin's sister was there, but possibly on another caravan, as she is mentioned only by a late source, the Continuation of William of Tyre. Both Saladin and the King asked him to return both and he refused; this episode was traditionally considered to be the cause of the loss of the Latin Kingdom of Jerusalem.²¹⁴ At Renaud's refusal of Saladin's request

²⁰⁹ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 252-255.

²¹⁰ Transl. Richards, p. 300.

²¹¹ Ibn al-Athir, RHC, I, 667, Richards 2007, 300-301.

²¹² Abu al-Fida; RHC, I, 53; Ibn al-Furat, 1971, II, 52.

²¹³ Abu al-Fida, RHC, Or., I, 70, 86, 143; Qalqashandi, IV, 105; XII, 105, cited in Johns, 1931, 23.

²¹⁴ *L'Estoire d'Eracles Empereur*, II, 23.27; RHC, Occ, 41; II, 23.23; RHC, Occ, 34, note c. Ibn Shaddad states that it was Shawbak territory that the caravan was going through (Ibn Shaddad; RHC III, 96; Richards 2002, 74).

to free all travellers because of the agreement they had, and at Renaud's offensive words for the Prophet, Saladin swore to kill him with his own hands.²¹⁵

In 1187 the sultan decided to march against Karak and asked Aleppo to send troops and he left Damascus on 15 March.²¹⁶ He then remained in the territory of Karak until the pilgrim caravan that he protected with his presence in Karak arrived back in Syria from Mecca. The army from Syria and Egypt that he was waiting for was delayed because it was observing the Franks in Antioch and Armenia. Because King Baldwin V had died, Saladin ordered the troops to invade the territory of the enemy.²¹⁷ While waiting for the Egyptian army to arrive, Saladin proceeded towards Karak by destroying orchards, vines, he uprooted plants to the extent that the region was deprived of food and that the food as a result became expensive and the territory a desert. Then he proceeded to Shawbak and spoiled the region of everything including olive trees and vines. He divided the Egyptian army in the two citadels.²¹⁸ Again, an attack against Karak which was not carried through is documented here.

The day that the Battle of Hittin took place, Saladin finally got hold of Reynald of Chatillon, whom he had vowed to kill with his own hands. The episode of Reynald's death is reported with very similar details in many accounts: Saladin asked that Reynald and the king of the Franks be taken to his tent; he then offered a rose iced water sorbet to the king, who offered some to Reynald. Saladin explained that the drink had not been offered by himself to Reynald, meaning that his honour did not normally allow him to mistreat anyone who enjoyed his hospitality by receiving food or drinks. He then reminded him of his shameful action, offered him Islam and at his refusal he cut his head with his own hands.²¹⁹

Stephanie of Milly asked the sultan that her son Humphrey IV, taken captive during the Battle of Hittin, be freed, and the sultan agreed on condition that the fortresses of Karak and Shawbak surrendered; however, both garrisons refused to surrender and resisted until they ran out of supplies.²²⁰

²¹⁵ Abu al-Fida; RHC; I; 55; Ibn al-Furat, 1971, II, 52; Ibn Shaddad; RHC III, 96; Richards 2002, 74

²¹⁶ According to 'Imad al-Din, Saladin left Damascus on 13 March 1187 (Abu Shama, *Livre des Deux Jardins*, RHC, Or., IV, 261).

²¹⁷ Ibn Shaddad; RHC III; 91; Richards 2002, 76; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 280-281.

²¹⁸ 'Imad al-Din al-Isfahani, 1972, 14; 93; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 261.

²¹⁹ Ibn Shaddad; RHC III; 39-40; 96-97; Richards 2002, 75; Abu al-Fida; RHC; I; 56; *L'Estoire d'Eracles Empereur*, II, 23.45; RHC, Occ, 67; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 275-276; 284-285; Lyons and Jackson 1982, 264.

²²⁰ 'Imad al-Din al-Isfahani, 1972, 105-107.

Karak surrendered between 24 October and 23 November 1188 after a siege of a year and a half; the sultan gave it afterwards to his brother al-Malik al-‘Adil.²²¹ On 24 October 1188 Saladin entered Damascus and commented that it was necessary to take from the Franks the fortresses of Kawkab (Belvoir), Safad, Karak and Tibnin, which were in the middle of the Muslims’ territories and that there was no safety guaranteed against the attacks of their inhabitants. Saladin therefore kept on besieging Karak until the provisions and munitions were exhausted and the garrison was reduced to eating the working animals. When more resistance was impossible for them, they sent a message to al-Malik al-‘Adil asking for terms; he accepted, and the Muslim commander took the fortress while sparing the lives of the garrison. Ibn al-Athir also mentions that al-Malik al-‘Adil later received the forts of Shawbak, Hurmuz, Wu‘ayra and Sela and tranquility was then re-established in the country.²²²

What can be noted here is that again, Shawbak is not mentioned next to Karak as threatening the Muslim territories, which supports the idea that it was not felt to be as important as Karak in that respect. It is also interesting that the order in which the names of the fortresses are listed appears to follow a geographical order from north to south; if the location of Hormuz was near the contemporary one, this corresponds exactly to the position of Hormuz in the list, between Shawbak and al-Wu‘ayra. Abu Shama reports that at the capitulation of Karak the Muslims took also possession of the nearby fortresses: Shawbak, Hormuz, El-War, Es-Salt.²²³ It seems therefore that there may be a mistake in reporting second-hand information.

Abu al-Fida reports the same events about Karak being taken by a very long siege;²²⁴ and it is reported in other sources that Karak was taken after two years’ siege as people were suffering hunger and they had to sell their women and children in exchange for food; when there was nothing to eat or to sell, they surrendered and Saladin gave them back their families.²²⁵

Ibn Shaddad, in contrast, states that in 1188 Karak was evacuated by the soldiers in order to free Humphrey IV of Toron, who was captured at Hittin.²²⁶ In any case, all sources agree on the fact that Karak was never taken by force by the Muslim army, but

²²¹ Ibn al-Furat, 1971, II, 52; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 382.

²²² Ibn al-Athir, RHC, I, 733-735; Richards 2007, 354-355; Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 382.

²²³ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 382.

²²⁴ Abu al-Fida; RHC; I, 60.

²²⁵ *L’Estoire d’Eracles Empereur*, II, 23.54; RHC, Occ, 81.

²²⁶ Ibn Shaddad, RHC, 119 Richards 2002, 88.

was abandoned by the Frankish garrison, which does justify the comments in the sources about the difficulty in taking the site.

In 1187/1188, a letter from Saladin to his brother with a list of sites conquered by the Muslims includes the sites of Hurmuz and Sela, in addition to cities, farms and fortified towers which had the function of castles and fortresses distributed in the territories listed. It is also stated that each of the “cities” on the list had other sites at its dependencies, villages, fields, smaller sites or territories.²²⁷ This therefore suggests that the sites of Hurmuz and Sila’ were each at the centre of a territory and administrative district of some sort, and not, as suggested at some point by some archaeologists, that the castle of Sela, for example (identified by some scholars with el-Habis), was dependent on the castle of al-Wu’ayra.²²⁸ The information is important when combined with other sources mentioning settlement in Transjordan. James of Vitry, who wrote in the 13th century, mentioned in his *Historia Orientalis* the existence of seven very strong fortresses dependent on Karak and Shawbak in the Crusader period, but he does not name them. Deschamps interpreted them as located in ‘Amman, Tafilah, Khirbet al-Hurmuz (Petra), al-Wu’ayra, Sela (al-Habis in Petra), ‘Aqaba and Jazirat Fara’un.²²⁹ Pringle on the other hand, identified them as ‘Amman, Tafilah, Khirbat as-Sil (south of Tafilah), Khirbet al-Hurmuz (Petra), al-Wu’ayra, al-Habis and Aqaba.²³⁰ However, following a recent review of the available evidence, he has shown that the castle in the Aqaba region controlled by the Franks was in fact located on Jazirat Fara’un, an island about 15 km from ‘Aqaba.²³¹ In any case, the hypothesis that Hurmuz and Sila’ were between the seven most important fortresses of Transjordan beyond Karak and Shawbak is supported by Saladin’s letter. If the castle of al-Habis in Petra can be identified with the site called al-Aswat,²³² this site, on the other hand, is not listed among the castles having some territory at its dependency. The information that by 1188 the sites of Sela and Hurmuz²³³ were in Muslim hands, moreover, does support the one about al-Wu’ayra falling into their hands in 1188.

In April/May 1189, the news arrived that Shawbak had been taken; this fortress had been blocked for one year by troops sent by the Saladin, and capitulated as it had run out of food.²³⁴ According to the Continuation of William of Tyre, the besieged

²²⁷ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 303.

²²⁸ See chapter 4 on Petra.

²²⁹ Deschamps 1939, 39, n. 1

²³⁰ Pringle 2001, 678

²³¹ Pringle 2005b

²³² See chapter 4

²³³ See chapters 3 and 4 on the identification of the two sites.

²³⁴ Ibn Shaddad; RHC; 122 Richards 2002, 91.

people of Shawbak ran out of salt and became blind.²³⁵ From this moment, the sources are full of announcements of the Muslim victory over the territory of Transjordan. The conquest of Karak is announced with great satisfaction, mentioning which serious difficulties and hard obstacles this town created for Islam.²³⁶ The Order of the Temple announces to Henry II of England the loss of Jerusalem, but also that Montreal is among the sites still resisting.²³⁷ Later on the grand master of the Hospitallers announced to Leopold, duke of Austria, that Saladin had conquered several positions including Karak and Montreal, which surrendered.²³⁸ ‘Imad al-Din writes in 1189: “We are today owners of all the Latin Kingdom, which is bordered on the Hijaz side by Karak and Shawbak”.²³⁹

2.2. Conclusions: the contribution of historical sources to understanding settlement

Several points can be made after analysing the available historical sources for Crusader Transjordan presented in this chapter and describing chronologically the presence of the Franks in Transjordan: the development in time of the process of settlement; the great importance attached to the site of Karak; the dynamics of strategies of the Muslims in order to deal with the Frankish settlements; and the form and character of Frankish settlements. Other social aspects highlighted by the historical sources, as well as information about specific sites, are analysed separately in Chapters 3, 4 and 5.

The first aspect, the development through the 12th century of the process of settling Transjordan, is clearly outlined by the sources, when they are analysed in their entirety.

A first observation is that interest in the area beyond the Jordan River began very early, already in 1100, and focused on the areas of both Ammon and Edom. It developed slightly earlier, however, in the north. The castle of al-‘Al was constructed already in 1106, while al-Shawbak, the first castle of southern Transjordan, was constructed only a few years later, in 1115. Although the area north of the Zarqa River was not technically part of the lordship of *Outrejourdain*, it will be analysed here as an area important to understand settlement in Transjordan proper.

The north was clearly the first area where settlement was quickly attempted, at least one of the main reasons surely being its very fertile territory. This area was of

²³⁵ L’Estoire d’Eracles Empereur, II, 24.2; RHC, Occ, 105.

²³⁶ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 388.

²³⁷ Delaville le Roulx, J., 1894, I, 527, n. 847.

²³⁸ Delaville le Roulx, J., 1894, I, 549, n. 863; Röhrich, 1893, 181, n. 678.

²³⁹ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 391-392.

much importance to the Damascenes; the significance of conquering the area of Jebel ‘Ajlun and Jabal ‘Awuf already at the time of the conquests of Tancred was the fertility of this area and the ability to confine the enemy beyond the desert. According to Prawer, al-Sawad was by far the most important part because there it was possible to gather troops from Damascus, being a fertile area to feed horses and provide them with water; Tancred thought of this area as the place that could sustain economically the Principality of Galilee with agricultural production.²⁴⁰

The frequency of raids by the Franks recorded by the sources, the attempts at making agreements with the Muslims starting from as early as 1108, the breaking of those agreements and the truces show that the Franks made a solid attempt at controlling this area. The fact that the Muslims, also, had to accept several compromises on this area, shows that, as reported to the Franks by their surveyors, this area was not under tight control from Damascus, whose rulers were clearly not prepared to defend that area. The Muslims had to camp there to observe the situation from a closer point. The great importance attached in the sources to the site of Habis Jaldak, and the great efforts put into its conquest by both sides also shows that control of this area was very important to both Franks and Muslims, although it was clearly maintained by very small sites such as this cave castle. This area continued to be at the centre of both sides’ competition through the 12th century, since the Franks lost Habis Jaldak as late as 1182, to reconquer it again later the same year; the competition and raids on this area really continued for the whole presence of the Franks in Transjordan, until at least the construction of ‘Ajlun castle in 1184-1185.

This area was clearly distinguished from the rest of Transjordan not only administratively, but also in terms of settlement dynamics, where the control of the territory was achieved through a few fortified points, such as Habis Jaldak and al-‘Al (this second castle unidentified and therefore undefined in its specific function), and by short-term agreements between the Muslims and the Franks on sharing the territory’s resources, continuously interrupted by attacks and truces for the entire duration of the Frankish presence in Transjordan.

The area just north of Amman and Amman itself, however, technically within the borders of the lordship of Transjordan, appears also to be described in the sources as very little populated with settlements, since still in 1121 the Franks chose not to maintain a fort in Jarash, because it would have been too dangerous and expensive to maintain; Jarash is also described as almost completely deserted. This suggests that the

²⁴⁰ Prawer 1975, 256.

settlement in Amman itself, only a few kilometres south of it, was not particularly significant if it was not capable of defending a fort such a short distance away. There are no clues that this situation had changed after the construction of Karak castle (and this is understandable as the main aim of its construction was not to control the north), but it can be noticed that the construction of 'Ajlun castle by the Ayyubids began only in 1184-1185, in order to face the threat of the castle of Belvoir on the other side of the River Jordan and also to control the areas south of Damascus.

It is in the south that settlement developed in a constant and planned manner during the first half of the 12th century. It is evident from both our historical information on the area of influence of the Muslim towns and the sources mentioning specific episodes that this area was not as directly threatened by Damascus as the area north of it. Despite the fact that reconnaissance parties had identified both the north and the south as free from Muslim control, the exploration and conquest of the south did not provoke so intense and immediate a reaction as had occurred in the north. In the south, what is evident from the sources is that the local inhabitants were used to being attacked and to taking refuge in caves; possibly because of the presence of Bedouin tribes, who attacked them regularly.

From the sources, it is possible to distinguish in the south a first phase of exploration and preparation to settle from 1100 to 1115, when the first settlement was founded. In 1100-01, the Franks had the opportunity to explore the Petra area for several days, and appreciate the aspects that made it attractive for settlement: first of all, the economic aspect, which was evident from the richness of water and fertile land in Wadi Musa; and secondly the religious aspect, represented by the existence of a local Christian population and also possibly by the presence of a sacred site, Jabal Harun, which may have appealed as a potential pilgrimage site for the Christians. In 1108, the Franks did not yet make this plan a concrete reality, but they were surely planning at least some control of this area, and probably contemplating settlement, because they arrived to destroy a Damascene fort in Wadi Musa, possibly built to have under control the area in response to the explorations and raids by the Franks since 1100. It was on this occasion or during one of the early reconnaissance expeditions that the Franks noticed the area where a few years later they decided to build their first settlement, and the main castle of the south, al-Shawbak.

The exploration phase in 1100-1115 clearly included an interest in looting undefended populations in Transjordan, but although the sources do not report as directly as they do for the north the specific purpose of settling there, it can be gathered

by considering the whole of the sources that an interest in establishing settlements in Transjordan developed very early. There are clear signs of this desire at the latest already in 1106, when the Franks attacked the Muslims in the south, and certainly during the destruction of the fort in Wadi Musa in 1108.

The phase of explorations was concluded therefore with a first phase of constructions, in 1115, of the first fortress in Transjordan, Shawbak, and presumably of a number of smaller settlements near by. The reasons why al-Shawbak was selected is explained by the sources, which highlight the need for a site that would provide a location that could both be considered safe and would easily keep under control the surrounding fertile area. In addition, another aspect is quoted by the sources, which is the ability to control – and presumably levy taxes from – the passage of merchants along the King's Highway, which runs very close to Shawbak itself. It is also clear from what followed immediately after its foundation in 1115/1116, that the site was also considered suitable as a base for further exploration and settlement expansion southwards, towards the Red Sea, on the King's Highway and the Hajj road, where many caravans passed continuously on the way to Mecca and Medina.

Although Aqaba was probably not settled by the Franks until after 1160,²⁴¹ it was probably considered already at the beginning of the 12th century as a potential site where to establish more settlements; after it was lost in 1170 by the Franks, control over the southern segment of the Hajj road was lost, which would have provided additional revenues, in addition to the much more important strategic reason, since Aqaba was interrupting movements of troops between Cairo and Damascus.²⁴² Despite this, the Franks could apparently still threaten it from their base in al-Shawbak, as is shown by the raid of Reynald of Châtillon in 1182 who tried to take control over it again. After 1170, Ayla was constantly in Muslim hands and was controlled by the Ayyubid castle on the island; it therefore was in Frankish hands for a shorter time than other territories and in a discontinuous way.

It is therefore in the area of al-Shawbak and Petra that we know for sure that the territories were held by the Franks during the whole duration of their settlement in Transjordan, from 1115 to 1189, and where it is possible to observe a certain development in the settlement strategy of the Franks. This area, moreover, has also been the southernmost settled area for most of the duration of the Frankish presence in

²⁴¹ Deschamps and Runciman seem to think that it was immediately after this expedition that the Franks established a fort in Aqaba, on the mainland (Deschamps 1939, 44; Runciman 1952, II, 98) but more recent studies by Pringle show that the city was more likely to have been taken in about 1160 (see chapter 3, Aqaba).

²⁴² Prawer 1975, II, 298.

Transjordan. Despite the fact that Transjordan had reached its maximum geographical extent around 1160, from the Zarqa River to Aqaba, this whole, extensive territory was therefore held at the same time for a relatively short time by the Franks, between about 1160 to 1170, when Aqaba was reconquered by the Muslims.

There was an attempt at expanding these “borders” of the Lordship of Transjordan even southwest of Aqaba, as witnessed by Reynauld de Chatillon’s expedition of 1182-1183 on the Red Sea, and also by the claim that S. Catherine’s monastery would be under the authority of the archbishop of Karak.²⁴³

Transjordan also achieved later on not only a wider extension but also greater political independence. As observed by historians,²⁴⁴ the episodes of 1181, 1183 and 1186 that Reynauld of Chatillon provoked and the fact that the king was unable to discipline him showed the political independence of Transjordan from the rest of the Latin Kingdom, in a moment when the king was no longer able to exercise his power on these territories.

According to the sources, the construction of al-Shawbak castle was followed by the construction of several castles in Petra. However, this appears not to have started before around 1130/1140; according to several scholars, al-Wu‘ayra was founded by Baldwin II (1118-1131).²⁴⁵ The later years can therefore be considered meaningful ones for planning a new phase of settlements in Transjordan, and can be interpreted as a sign of increased confidence in planning settlement and territorial control, probably once control of the areas west of the Jordan River and in the Latin Kingdom of Jerusalem had built some basis for its existence and planning; including the foundation of Karak castle in 1142.²⁴⁶

The described phases in settlement can therefore be summarised as follows:

Phase I: 1100-1115. Raids, looting and explorations, especially in the south of Transjordan. Foundation of al-‘Al castle in the Sawad.

Phase II: 1115-1130 c. First phase of settlement: foundations mainly in the south. Investment in settling south of Zarqa and control of these territories with the help of the castle at Habis Jaldak with more stability since 1119; foundation of al-Shawbak (1115); creation of the Lordship in *Outrejourdain* (around 1118) and the Petra main settlements (c. 1130).

²⁴³ Prawer 1975, II, 612.

²⁴⁴ Prawer 1975, II, 596-597.

²⁴⁵ See chapter 4 on Petra

²⁴⁶ See chapter 3

Phase III: from c. 1142: Second phase of settlement: foundations in the northern area of *Outrejourdain*; foundation of Karak castle (1142); perhaps foundation of a castle in Amman (by 1161).

Phase IV: from 1160 c. Third phase of settlement: completion of settlement in *Outrejourdain* to its full extent. Settlement in Aqaba (c. 1160); *Outrejourdain* given to Philip of Nablus by Baldwin III (1161); seat of the Archbishop of Petra transferred to Karak (1167).

This first aspect, the early interest in settling in Transjordan, as well as the phases of preparation before settling, the time involved in the whole process of settlement and the number of settlements founded themselves, all show clearly the effort that was invested in settling in this area, and therefore the importance that was attached to it. The process of full settlement took almost half a century and therefore much effort was involved in it.²⁴⁷

A second aspect highlighted by the sources is the great importance of Karak, as opposed to all other sites of Transjordan.

Prawer notices that, as well as reinforcing the position of the Franks in Moab and becoming the residence of the Lords in Transjordan, it also made it possible to construct smaller other castles both in Palestine and in Transjordan, and therefore improved widely safe communications between and along the region.²⁴⁸

This great importance is particularly evident from several elements. One is that the Muslim sources generally speak overwhelmingly about Karak as opposed to al-Shawbak and other sites, which are actually rarely mentioned in the sources, and always mention Karak as a very strong and important site. Why Karak was a great burden to the Muslims is expressed very clearly in the Muslim sources, which state that its existence made it very problematic and dangerous to travel on the road between Syria and Egypt, and that very often Nur al-Din and Saladin had to escort personally caravans travelling on this route. It was from Karak that most of the attacks on caravans are mentioned, and it is through the information on Karak that it is possible to trace the development and dynamics of the Muslims' strategy for getting rid of the Frankish sites in Transjordan, a third point highlighted here.

Attacks on Karak by the Muslims, as reconstructed from the sources, are complex and numerous, and it seems possible to distinguish a first phase, when attacks on Karak are rather strategic moves for distracting the Karak garrison in order to allow caravans

²⁴⁷ An aspect highlighted by Mayer (1987, 199, 201).

²⁴⁸ Prawer 1975, II, 330-331.

to pass by safely (such as in 1170); a second phase where attacks on Karak appear to be especially aimed at testing the castle's resistance; a third phase when the attacks appear to be actually aimed at taking the castle, but also appear not to be very organised, sometimes interrupted just by the arrival of the Frankish army in support of the garrison. The failed attack of 1171 to Karak and Shawbak, which was never carried on because of the lack of trust in the relationship between Nur al-Din and Saladin can be included in this third phase. It is in the context of this third phase that the reason is explained in the sources for the fact that Karak and Shawbak had not been a target by the Muslim forces in a more organised way: because of the resistance of Saladin to eliminate what was considered a barrier to control Egypt, under his influence, and the areas controlled by Nur al-Din, in Syria. Saladin again declined to attack Karak in 1173, because Saladin was not able to concert this action together with Nur al-Din. The mistrust between Nur al-Din and Saladin can be identified as the main reason why it is only later on, starting from 1183, that attacks are intensely directed on Karak until its fall in 1188, by Saladin alone who could now finally concentrate on trying to eliminate Frankish control in Transjordan, after Nur al-Din had died and therefore was not a threat anymore to his ambitions. Therefore, although attacks of various kinds start appearing very frequently in the sources since about 1170, it seems that it is not until about 1183 that they are really aimed at conquering the sites of Karak and Shawbak, Karak in particular, and become even more frequent. In particular it is in 1183-1184 that these attacks are very intensely directed towards Karak.

Prawer notices in particular that the attacks of the years 1171-1174 on the castles in Transjordan were never a real danger to the Franks because Saladin did not want to increase Nur al-Din's power with this move, and perhaps, in addition, did not consider it safe to leave Egypt for a long time. Nur al-Din, moreover, could not have managed to take the castles by himself.²⁴⁹

The need to test the Frankish military resources and strategy appears to be confirmed by other episodes; the campaign of May 1182 for example may have been an attempt on Saladin's side to test the Frankish forces.²⁵⁰

Military attacks are documented also more often at Shawbak starting from about 1170, and an attack from Egypt to Shawbak and Tafilah not before 1156 (from Egypt); al-Wu'ayra is documented as having been attacked in 1144 (by the Turks) and in 1158 (from Egypt). All three castles surrendered between 1188 and 1189. In 1184-1185, the

²⁴⁹ Prawer 1975, II, 450.

²⁵⁰ Prawer 1975, II, 598.

construction of the castle of 'Ajlun is documented by a decision of Saladin, in order to control the newly built castle of Belvoir across the Jordan and mainly to be able to get northern Jordan under control against the Franks.²⁵¹

Prawer comments that the main aim of Saladin's campaign in Aqaba in 1170 was very clear: liberating Aqaba from the control of the Franks would have meant to Saladin relief from the problem of the large quantity of pilgrims being charged and controlled by the Franks; therefore, reconquering Aqaba would bring him prestige without however many risks.²⁵² As he notes, Abu Shama stated in 1174-1175 that the Franks had built one of their sites in Aqaba on the way to the two Holy cities of Islam, threatening thus the *Qibla* in its foundation; now, after it had been reconquered, it was a refugee for travellers.²⁵³

While, as pointed above, in the area north of the Zarqa River and therefore outside of Transjordan proper conflicts are continuous until at least the construction of 'Ajlun castle in 1184-1185, it is possible to summarize the military actions of the Muslims against the Franks in Transjordan in the following way:

Phase I: before c. 1140: raids and construction of forts such as the one in Wadi Musa (1108).

Phase II: c. 1140-1169: attacks on the new Frankish settlements of south by the Turks (from Damascus) to Wadi Musa (1144) and from Egypt to Shawbak and Tafilah (1156) and to Wadi Musa again (1158).

Phase III: 1169-1189: continuous attacks on Karak and Shawbak by Saladin and Nur al-Din, but especially Karak; Saladin reconquers Aqaba (1170); aims more consistent attacks on Karak since 1183; and founds 'Ajlun castle in 1184-1185.

Therefore we may possibly say that while in phase I the Muslims were reacting to the episodes of exploration and raids by the Franks, in phase II they were reacting especially to the construction of the settlements in the south. In phase III, the intervention of Saladin as a *wazir* in Egypt and later on his independence from Nur al-Din clearly aimed at reconquering the Hajj road, by concentrating on the sites of Karak, Shawak and Aqaba, reflecting their importance compared to the other sites, and on Karak in particular.

A fourth aspect that emerges from the analysis of these sources is the organisation of the sites and the territory. First of all, it is important to notice that while in the north, as explained above, the Franks did organise settlement with the aim of controlling

²⁵¹ Johns 1931, 23.

²⁵² Prawer 1975, 449-450.

²⁵³ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 175.

territory but without feeling safe enough to actually build significant sites, in the south, and later on in Karak, the process was very different. Here settlement apparently aimed not only at collecting economic benefits out of a territory and controlling the enemy, but also to settle a Frankish population and control agriculture and the trade system. Chronologically, the first settlement that we know about is al-Shawbak in 1115; settlement appears to have continued along these lines until 1189, with the fall of al-Shawbak to the Muslim armies. In terms of territory, it is the area between Karak and Petra that can give us evidence for uninterrupted settlement during this period, the Petra and Shawbak area for the full duration of it and the Karak area from 1142. In contrast, the areas north and south do not appear to have been as safe for settlement, since they were both too close to either Damascus or Cairo; therefore, although the sources describe Transjordan as extending in its central years from the Zarqa River to the Red Sea, these limits did not correspond to the area of uninterrupted settlement through the period 1115-1189. There are also no specific reasons to think that some well-defined borders did exist for the controlled areas in Transjordan. It seems, on the contrary, that in the documents the area is described rather approximately.

The best case studies for the purpose of studying the development are therefore those of Wadi Musa and Shawbak; moreover, they are also described by the sources with details of the motivations for settlement in these specific sites. As explained above, the reasons for settling in Wadi Musa but also selecting Shawbak as the main site of the area can be defined as the presence of good water and agricultural resources, safety, and, in the case of Shawbak, the ability to control from its location not only the fields, but also, the passage of caravans on the Hajj road, an aspect of economic value that the Franks made important in their system. In addition, the presence of a Christian population in the area of Petra and Shawbak must have been a further encouragement. In Shawbak, land was distributed in exchange for the defence of the territory, and also produced presumably some additional revenues for the Kingdom. It is stated in the sources, moreover, that the process was one of planned gradual expansion.

An aspect which is not entirely clear, however, is the relationship between the different sites. Petra and Shawbak are the best case studies to analyse, since it is here that several sites have been recorded in a really small geographic area. For example, some sources suggest that there was an independent administration for some of the sites, and not that some depended on others. Hypotheses have been advanced about the possibility that al-Wu'ayra was the main fortress of Petra, in visual connection with el-Habis, but Sela and Hormuz are listed as controlling their own territory. The sources

also helped in identifying some of the sites, although some of them still remain unidentified.²⁵⁴

Another point that can be highlighted by the sources is the fact that castles were probably often entrusted to local Syrians, as in the example of Habis Jaldak, and this is all more likely for several castles in Transjordan, far away from Palestine, where most of the Europeans would be probably settled. This is supported by the fact that the army, as seen when it was summoned in order to bring relief to the Karak garrison, left unprotected most of the territories in Palestine. The sources clearly reveal that the Frankish army always had limited forces and that therefore, as observed by Prawer, the strategy of the Franks was mainly one of defence, by relying on strong castles allowing resistance until help would arrive from other locations.²⁵⁵

An aspect of interest, connected to the evolution and management of the Lordship in time is the relationship between the monarchy, the nobility and the military orders and their role in the lordship of Transjordan. For example, the transition of Transjordan from royal direct possession to lordship must have required the establishment of new governmental structures because from this moment there were new duties to deal with which were originally organized from Jerusalem.

Barber has analysed these elements through the career of Philip of Nablus. In 1161, Philip of Nablus obtained Transjordan in exchange for the territory of Nablus. According to Barber, the timing of this major political rearrangement was also a result of the fact that it was only then that Baldwin III was able to remove Philip, loyal to his mother, Queen Melisende, who had long opposed her son's independent power, from controlling the important territory of Nablus and absorbing it under his control. In addition to regaining control over Nablus, he also was able to charge someone very experienced with the defence of an area which was considered more and more important, as seen from the fact that in those years the assistance of the military orders was increasingly sought to defend borders.²⁵⁶ In addition to keeping for himself the revenues collected from the Bedouins and the caravans passing through the country, the king included another limitation in the charter: the fact that John Gothman would have to continue to pay homage to the king; this was probably to limit the independence of the lordship, of whose great strategic importance the kingdom was apparently already aware.²⁵⁷

²⁵⁴ See chapter 4.

²⁵⁵ Prawer 1975, II, 596.

²⁵⁶ Barber 2003, 68-71.

²⁵⁷ Barber 2003, 69.

We know from a document from the Templar's archives that in 1166 Philip of Nablus joined the order of the Temple and as a consequence, a large part of Transjordan, previously under his control, passed now to the Order. According to Barber, this operation needs to be seen in the framework of the growing awareness of the need to develop a partnership with the military orders, and of a wider royal policy to concentrate military security on the frontiers, specifically promoted by King Amaury; specifically, the monarchy was now becoming more and more interested in trying to control Egypt especially during the 1160s, so control of the borders, especially the southern ones, was crucial.²⁵⁸ In the same year, the king hanged 12 Templars who surrendered an important castle beyond the Jordan.²⁵⁹ According to Barber, this episode is also to be read in the same light: the king wanted the Templars to be defenders of the frontiers; for this reason it was important for him to gain control over them. This is again confirmed in 1169 when Philip of Nablus became master of the order; this has again been interpreted by Barber as the result of great pressure from the king's side to choose specifically Philip, again in order to control the order as much as possible.²⁶⁰

In summary, it seems that starting from the 1160s, when the Lordship was at its maximum extent, and Karak had consolidated the control over the region, there was also a growing awareness of the importance to protect its borders, which were also the southeastern borders of the Kingdom.

²⁵⁸ Barber 2003, 60-61.

²⁵⁹ Perhaps the castle was Habis Jaldak, as stated above.

²⁶⁰ Barber 2003, 72-73.

Chapter 3

Settlement in Crusader Transjordan: the evidence from the archaeological sources

3.1. Topography and geography of Transjordan

The region of Transjordan (corresponding to the modern Kingdom of Jordan) may be broadly divided into five geographical zones, each aligned roughly north-south. From west to east these are: the tropical desert of the Wadi Araba-Dead Sea-Jordan River depression (the Ghor or Rift Valley); the highlands east of the Ghor; the arid plains of the eastern and southern deserts; the northeastern Jordanian basaltic and limestone plateaux of the Badia; and the Azraq-Wadi Sirhan depressions.²⁶¹ Almost all the sites discussed in this work fall into the first two areas, but especially the highlands, which is also where most inhabited sites of the more recent historical periods can be found. Exceptions are the sites of Ma'an and Udruh, which are between the Badiya desert and the highlands and fall into the eastern desert area, as does the eastern slope of the Jabal Shara. Here it is possible to grow barley, wheat and fruit trees.²⁶²

The Jordan Valley and the Wadi Araba Rift is the lowest depression on earth (the Dead Sea being 419 m below the sea level) and includes the Jordan Valley and the southern Ghor. It is an important agricultural area, characterized by relatively warm temperatures in the winter; the Ghor has currently 34,000 ha of irrigated farm land.²⁶³ Here, the climate is semi-tropical, with a hot summer and a warm winter. Rainfall is high in the northern part of the Jordan valley with 300-400 mm but drops dramatically to 100-200 mm just north of the Dead Sea, and again to 50-100 mm in the Wadi Araba south of the Dead Sea.²⁶⁴

The highlands to the east of the Wadi Araba and Jordan valley are divided in the Northern and Southern Highlands. The former extend from Umm Qays to the Mountains of Edom, and are crossed by wadis running east-west, such as the Wadi Mujib, while the southern Highlands, east of the Aqaba, include the highest mountain in Jordan (Jabal Umm al-Dami, 1,854 m).²⁶⁵ This zone has the most abundant rainfall, especially in its northern sector, between the Yarmuq and Zarqa and between the Zarqa and the Madaba plains, where it reaches 500 mm or more per annum; however, in the highlands, rainfall gradually decreases from north to south, from a peak of 400-600 mm in the 'Ajlun mountains to 100-300 mm in the Jabal Shara. Here, the climate is

²⁶¹ Al-Bilbisi 2013, 42-45.

²⁶² Al-Bilbisi 2013, 44-45.

²⁶³ Al-Bilbisi 2013, 42-45.

²⁶⁴ Ababsa 2013 b, 64.

²⁶⁵ Al-Bilbisi 2013, 43-45.

Mediterranean, with a moderate and dry summer and a cold and rainy winter.²⁶⁶ Most sites discussed in this work are located in this area and nowadays about 90% of the population lives in this zone.

The Aqaba-Dead Sea-Jordan Valley rift is an active fault line,²⁶⁷ and the whole region around it is therefore highly vulnerable to earthquakes, in particular along the rift itself. Historical documents refer to more than 300 earthquakes in the Dead Sea basin since 2150 B.C. ten of which had a devastating effect.²⁶⁸ Several earthquakes are documented by the sources in the 12th century.²⁶⁹

3.2. Geography and extension of Transjordan in the 12th Century

The name of the Frankish lordship covering Transjordan that is found in contemporary charters and chronicles is actually that of Montreal, Crac, or Montreal and Crac, but there is not a single instance in a charter where the region is called “*terra trans Iordanem*”. The official name of the lordship therefore derives from the two main castles and centres of the region;²⁷⁰ in fact, apart from a few exceptions, lordships often take the name from their central places. The denominations of Transjordan and *Oultrejourdain* actually derive from a geographical definition; in the sources, it is often indicated as “the land beyond the river Jordan” William of Tyre, for example, always uses these terms to indicate the region geographically, although never formally.²⁷¹

To William of Tyre, Arabia Secunda was the region of Moab around Karak, while Arabia Tertia was the region of Edom around Montreal.²⁷² William wrote that Payen the Butler built a castle, the Crac, “in finibus Arabie Secunde”,²⁷³ the Metropolis of Arabia Secunda, moreover, was “in finibus Moab”.²⁷⁴ Arabia Secunda was also called Petracensis in his time; Syria Sobal was at his time the area where Montreal was located²⁷⁵ and this area is also called Idumea in the French translation of his chronicle.²⁷⁶ At his time, these two regions were called Moab and Edom.²⁷⁷ The Sawad,

²⁶⁶ Ababsa 2013 b, 64.

²⁶⁷ Jreisat 2013, 48.

²⁶⁸ Yazjeen 2013, 56-58.

²⁶⁹ Anon 2014.

²⁷⁰ Mayer 1990, 12-15.

²⁷¹ Mayer 1990, 5-6.

²⁷² Mayer 1990, 10.

²⁷³ William of Tyre XV.21; Huygens 1986, 703.

²⁷⁴ William of Tyre XX.2; Huygens 1986, 914.

²⁷⁵ William of Tyre XI.26; Huygens 535; XX.5; Huygens 1986, 1012; XXI.4.; Huygens 1986, 964; XXII.25; Huygens 1986, 1048.

²⁷⁶ L’Estoire d’Eracles Empereur, II, 24.2; RHC, Occ, 103.

²⁷⁷ William of Tyre VIII.1; Huygens 1986, 381.

or Terre de Suet, corresponded to the Jawlan and the north Jordanian plains, where Habis Jaldak castle was, while the Jabal Awf was in practice the 'Ajlun district.²⁷⁸

A charter of 1161 makes it clear what the approximate borders of the lordship were at this time, as it clarifies that it extended from Aqaba to the River Zarqa,²⁷⁹ although Aqaba was probably not controlled until about 1160, and this was therefore probably about the largest extent of the lordship in time.²⁸⁰ The area between the Zarqa and the Yarmuk rivers was actually part of the principality of Galilee.²⁸¹ The monastery of the Saviour on Mount Tabor also had possessions in northern Transjordan, which were confirmed with documents of 1100, 1103, 1106/7. These possessions must therefore have been already there since before the Franks controlled Transjordan, when they belonged to the Greek Orthodox Monastery of Mount Tabor's dominion. Mayer, who analysed the charters which confirm the possessions of the monastery, proposed that the identification of these villages by Dussaud needed revision, and suggested his own identification of 20 sites, which were located in the *Tere de Suet* (all within about 15 km from Irbid), the *Terra de Grosso Villano* (all about 15 km distance from 'Ajlun), the *Terra Aura* and the *Terra Bettanie* (between Dar'a and Busra).²⁸² While the borders to the east were approximate, the western borders were the natural limits of the River Jordan and the Wadi Araba.²⁸³

After 1170, Raynald of Châtillon held Transjordan and the lordship of Hebron at the same time; he was also the only lord of Transjordan to hold an additional territory that was not part of Transjordan itself. This is proved by the fact that Raynald had separate seals for the two territories.²⁸⁴

3.3. The Archaeological evidence

3.3.1. The area north of Wadi Zarqa

Al-'Al

A Frankish fortress called al-'Al and described by the sources as exceptionally strong was founded in the Sawad in 1105/06. It was promptly attacked and conquered by the Damascenes while still under construction.²⁸⁵ This is the first castle in

²⁷⁸ See Walmsely 2001, 519 for a map.

²⁷⁹ Röhricht, 1893, 96-97, n. 366.

²⁸⁰ See chapter 3.

²⁸¹ Mayer 1987, 201.

²⁸² Mayer 1990, 249-253.

²⁸³ Mayer 1987, 201.

²⁸⁴ Mayer 1990, 15; Mayer 1987, 202.

²⁸⁵ See chapter 2.

Transjordan of which we have notice from the sources, but it still remains unidentified. According to Deschamps, Qasr Bardawil was a castle which dominated a village called Al, controlling the Roman road from Baysan to Damascus, about 12 km west of the Lake of Tiberias,²⁸⁶ and in theory the site looked a good candidate for identification with the castle of al-‘Al. However, the site has now been identified as a Bronze Age site.²⁸⁷ The castle is therefore still unidentified.

‘Ain al-Habis

It has been suggested that this cave castle in the Sawad was constructed by 1109 because at this time there was an agreement with the Damascenes to share the revenues of the area of Jabal Awf between Damascus, the Franks and the locals. In 1111 the *atabek* of Damascus conquered the castle, identified in the account of Ibn al-Athir as a site called Jaysh. Deschamps argues that it was retaken by Baldwin II only in 1118,²⁸⁸ but Pringle has suggested that it was in Muslim hands again in 1118.²⁸⁹ It is thought that it was lost by the Frankish army when Tiberias was taken on 1 July 1187, which is implied in an account by Abu Shama witnessing that at this time the revenues from this area were not longer shared.²⁹⁰ It was also perhaps the one important, but unidentified, cave castle mentioned in the sources as having been lost by the Templars in 1166.²⁹¹

Horsfield, who visited the castle at the beginning of the 20th century, noted the bad state of preservation and managed to see only the first of three floors, including two rooms, one of which was cross-shaped and groin vaulted. He also noted a water cistern and on the third floor, a square niche which he identified as the east end of a church, where a pointed arch was carved, framing a cross.²⁹² However, Schumacher and later Nicolle, who visited also the site, suggested that the castle was built on a former early Christian *laura*, of which the cruciform room may have been part.²⁹³ It seems very likely, however, that the Franks would have reused, like they did in many other cases, a former church or oratory or at least a pre-existing space.

²⁸⁶ Deschamps 1935, 286.

²⁸⁷ Pringle 1997, 117, R14.

²⁸⁸ Deschamps 1935, 289.

²⁸⁹ Pringle 1997, 18, n. 10.

²⁹⁰ Deschamps 1935, 290.

²⁹¹ See chapter 2.

²⁹² Deschamps 1935, 295-296.

²⁹³ Schumacher 1917, 164-168; Nicolle 1988, cited in Pringle 1993, I, 26.

In general it has been observed that holding cave castles allowed their garrisons to mount quick raids on nearby sites or to cut roads used by armies on the march,²⁹⁴ and this apparently was the purpose of this castle.

Qal‘at al-Rabad (‘Ajlun)

According to some scholars, Saladin’s decision to construct the castle in 1184/85 was a direct consequence of Raynald de Châtillon’s attempts to reach the towns of Arabia in 1183, which provoked Saladin’s reaction to challenge the control of the Franks on Transjordan; this included intensified attacks on Karak castle as well as the construction of Qal‘at al-Rabad. Its general position was chosen because the ‘Ajlun region lay between Damascus and Karak, the main centre of the lordship, and the strongest castle in Jordan. This position provided also surveillance of Belvoir castle, on the opposite side of the Jordan River; but it also served to prevent the Franks from raiding the Sawad and specifically was closer to the castle of ‘Ain al-Habis, clearly an important strategic spot. Saladin sent one of his most trusted generals, ‘Izz al-Din Usama, to take care of the castle.²⁹⁵ Its construction is well documented by the Muslim sources, presumably a clue of its military significance. Ibn Shaddad reports that the castle was constructed against the Banu ‘Awf, a bedouin tribe, to whom it was told that the castle was actually constructed against the Franks.²⁹⁶

The castle has been studied in detail historically and archaeologically by C.N. Johns, who drew plans and sections of it and identified several phases, including the original one of 1184, a later, extensive one of about 1214 at the time of al-Mu‘azzam ‘Isa, and some addition and repairs of the 13th and 17th centuries. It has a roughly quadrangular form with a towered keep and two baileys, stands on the top of a hill, its position strengthened by a rock-cut fosse. It was still inhabited at the time of Burckhardt’s visit in the 19th century.²⁹⁷

In general its similarity to Frankish work has been observed,²⁹⁸ so that sometimes it has been confused with a Crusader castle, but Johns noticed that nothing typically Frankish had been incorporated in the building, and that the military architecture of the castle is more the fruit of a local tradition and of shared knowledge of the Crusader period. He observed that a few elements of masonry tooled with diagonal marks was, as

²⁹⁴ Deschamps 1935, 291.

²⁹⁵ Johns 1931, 23-24.

²⁹⁶ See Ibn Shaddad cited in Johns 1931, 23-24.

²⁹⁷ Johns 1931; Johns 1997, b.

²⁹⁸ Kennedy 1994, 181.

an exception, a typically Crusader element.²⁹⁹ Others have pointed out rather that in terms of elements of military architecture, this castle was more advanced than Frankish castles of the same time.³⁰⁰ Information from an unpublished, handwritten manuscript in the Johns archive at the Palestine Exploration Fund in London includes some notes by Johns reflecting on the architecture of ‘Ajlun and comparing it with the Crusader castles of rectangular shape with corner towers, including Yibna (Ibelin), Bait Jibrin, Blanchegarde (Tall as-Safi), Darom, and others in the southern Bilad al-Sham.³⁰¹ The aspect of comparison of architecture and building techniques at Ayyubid and Frankish castle is a subject which would require ample research and is not researched further in the context of this thesis.

The castle was thought to have been built on older ruins, because of *spolia* found in its construction,³⁰² according to Ibn Shaddad, at his time the tradition was alive of a Christian monastery, inhabited by a monk called ‘Ajlun who gave the name to the site.³⁰³ The recovery of a Byzantine mosaic within the castle would appear to confirm the general date of a former settlement at the site.³⁰⁴

‘Ajlun

The village of ‘Ajlun, above the Wadi Kafranja, ca. 2-3 km northeast of Qal‘at al-Rabad, has a well-preserved Ayyubid mosque dated by an inscription to or before 1218-27, and partially reconstructed in 1264.³⁰⁵ It has been pointed out that the name of Qal‘at al-Rabad implies the presence of a suburb (from the Arab Rabad), which may equally apply to a suburb of the town of modern ‘Ajlun (which would be however considered independent of the castle itself), but also to other towns, such as the village of al-Khadr, about 1 km south-west of the castle, where a Christian shrine has been found, or a village called Ba‘un some 6 km to the north, as witnessed by Abu al-Fida‘.³⁰⁶ However, C.N. Johns demonstrated that the village, which Ibn Battuta found flourishing with markets during his visit in the 1330s, was at the foot of the castle hill, where he found archaeological evidence of 13th- to 15th century occupation.³⁰⁷

²⁹⁹ Johns 1931, 29.

³⁰⁰ Minnis and Bader 1988.

³⁰¹ See footnote below for information from the archives on John’s further work.

³⁰² Johns 1931, 29.

³⁰³ Johns 1931, 24.

³⁰⁴ MacKenzie 2002, 616.

³⁰⁵ Johns, J. 1997, b.

³⁰⁶ MacKenzie 2002, 616.

³⁰⁷ Johns 1931, 30-31.

Johns studied the town of 'Ajlun and was hoping to publish the results in the *Annual of the Department of Antiquities in Jordan*, although this never happened.³⁰⁸ My visit in 2012 to the archives of the Palestine Exploration Fund in London and of the Rockefeller Museum and Israel Antiquities Authority archives in Jerusalem have resulted in finding some more information about John's work, but nothing has been identified as belonging to the phase of the building of the castle.³⁰⁹

Magharat al-Warda

This mining and smelting site is located in the richest area for iron in Jordan, the 'Ajlun region, and it was selected specifically for excavation as it was the richest deposit of the area. It is located about 25 km NNW of Amman on the Jabal 'Ajlun and 50 km south of Qal'at al-Rabad.³¹⁰

The site of these ancient abandoned iron mines was visited and described by Glueck, who described it as extensively worked and very rich in material. He did not find any pottery that could help him in dating the use of it.³¹¹ However, later exploration identified large amounts of Ayyubid-Mamluk pottery, and also a few Roman-period fragments. Excavation identified three phases of iron smelting at the site: Ayyubid (1185-1250); Mamluk I (1250-1401); Mamluk II (1401-1450).³¹²

It has been proposed that, given the documented interest during the Ayyubid period in the iron industry in Ajlun, which was probably a monopoly of the state, it is logical that the site including three caves would still be of great attraction to the rulers

³⁰⁸ Johns, C.N. 1997, notes, 14, n. 33.

³⁰⁹ The Israel Antiquities Authority archive has on file only photos of the 'Ajlun mosque, and this probably due to the archive having suffered from the splitting of material and documentation between Jerusalem and Jordan after 1948. The archive of the Rockefeller Museum has on file the description of some objects which appear to be "special finds" (mainly lamps and metal objects), all transported to Jordan. It is currently not known where the objects from the excavations are kept. The PEF in London holds material related to a file called: 'Medieval 'Ajlun II. Faubourg and Mosques' including many notes with sketches of architectural details, triangulations of the mosque top plan, sketches of a "chapel", presumably in the castle, sketches of maps of Transjordan and of the location of Crusader castles, pottery descriptions, both from the castle and 'Ajlun (including underglaze painted ware and monochrome yellow glazed pottery) and drawings (including the transcription of an inscription from a 13th-14th century mold-decorated bowl and several lamps, glazed bowls, cooking wares), a list of coins, almost completely Mamluk in date, except very few Ottoman, Roman and Byzantine, a description of the mosque inscription, references to textual sources, a list of Crusader-period sites by region from Syria and Jordan, top plans and photos of habitations in 'Ajlun, photos of special finds including pottery, iron and glass, and some extra comments on the architecture of Qal'at al-Rabad (see above). Johns believed he had identified some Crusader workmanship in the masonry of the castle. However, judging from the sketches and the list of plates that he prepared for the publication, the impression is that his work has concentrated, in addition to Qal'at al-Rabad itself, mainly on the study of the 'Ajlun mosque and only on a few additional structures, mainly domestic.

³¹⁰ Coughenour 1976, 72.

³¹¹ Glueck 1939, 237-238.

³¹² Coughenour 1989, 388-389.

of Qal‘at al-Rabad in the Ayyubid period. The construction of the castle presumably implied the presence of specialized workmanship in iron production. The craftsmen could have come from Beirut, an important iron producer site, and they could have been Frankish in origin, perhaps explaining the name of the site called Kafrinje (i.e. village of the Franks) near ‘Ajlun.³¹³ Oak trees are also available in ‘Ajlun, to supply the need for iron production, and the abundant iron slags both around the hill and in ‘Ajlun village demonstrate that there were numerous furnaces for smelting. The iron industry was also carried on until recent years.³¹⁴

Abu Thawwab

The site is about 50 km southeast of Magharat al-Warda, not associated to it by any activity. It was also an iron-smelting site, which was used almost continuously, including the Ayyubid/Mamluk period.³¹⁵ The site may have had a similar function to Magharat al-Warda.

Jarash

According to the Crusader-period sources, Jarash was never settled by the Frankish armies, who decided instead to destroy a castle formerly built there by the Muslims in 1120, as it would have been too difficult to defend.³¹⁶ The location of the castle built by the Muslims, however, may possibly be identified with the Temple of Artemis, since according to Harding, before a clearance of the Department of Antiquities of Jordan, the main doorway to the temple was blocked by walls built between the columns, although the exact position of the wall is not specified.³¹⁷ The excavations by an Italian team at the temple have recovered large quantities of Islamic-period pottery, currently under study.³¹⁸ Some ceramic material from seven years of excavations at the east Propylaeum of the temple has been published by the Italian team and the last phase of occupation has been dated to the first half of the 8th century A.D.; some pottery has also been dated to the Mamluk period,³¹⁹ but specific reasons for this dating have not been given and therefore a basis for the identification of 12th-century

³¹³ Coughenour 1976, 75-75.

³¹⁴ Johns, C.N. 1931, 30.

³¹⁵ Gordon and Knauf 1987, 292, 294, site 3/3; Glueck 1939, 225, 238.

³¹⁶ See chapter 2.

³¹⁷ Harding 1967, 98.

³¹⁸ Personal communication by Roberto Parapetti, who conducted excavations at the temple; the report is currently unpublished.

³¹⁹ Brizzi et al. 2010, 357-358.

occupation is lacking. Another possibility is that the castle was located in the Temple of Zeus, which also has preserved very strong walls and is located on a high position.

3.3.2. The Balqa

Amman

According to Muqaddasi, during his time Amman, which belonged to the Balqa district, had many cultivated fields and villages around it although it was on the edge of the desert. It was rich in grain and flocks, fruit and mills, and many streams ran through the town.³²⁰

One of the Frankish castles held by Philip of Milly in 1161 and by the Templars in 1166 was in Amman,³²¹ (and not in Ma'an), but it is still not safely identified with material remains. A likely site would be the Citadel. However, the only surviving medieval fortified structure in the citadel, tower B, has been interpreted as Ayyubid on the basis of a coin dated 1190-91, used as a *terminus post quem*.³²² Rescue excavations by Crystal-M. Bennett between 1975 and 1979 exposed the last phases of occupation at the site, whose abandonment has been interpreted as caused by an earthquake. Areas B, C and D, which were abandoned after the collapse, yielded similar pottery in the collapse level (level III)³²³ to suggest that all these areas were affected by the same event which caused the abandonment; the inhabitants did apparently not have the resources to reconstruct the area. The possible earthquake post-dated 1021 A.D., a date offered by a coin in the stratigraphy; Northedge proposes that the most likely earthquake affecting this situation was the one that occurred in AD 1068.³²⁴

However, it cannot be excluded that the earthquake occurred later,³²⁵ and in fact this possibility may be supported by the pottery found in level III.³²⁶ Possible earthquakes in the 12th /13th centuries affecting Amman include those of 1139, 1170, 1202, 1212, 1293, 1312, one of the most intense at that time being the one of 20 May 1202, which affected for example the castle of Jacob's Ford (*Vadum Iacob, le Chastelez*) in the Jordan Valley; any of these, however, could have equally affected the citadel.³²⁷

³²⁰ Al-Muqaddasi, 147.

³²¹ See chapter 2.

³²² Northedge et al. 1992, 113-114.

³²³ See appendix A

³²⁴ Northedge et al. 1992, 159-161.

³²⁵ Personal communication by Alastair Northedge.

³²⁶ See appendix b.

³²⁷ Agnon 2014 and personal communication by Agnon.

Qasr Shabib

Qasr Shabib in Zarqa, on the Ottoman Hajj road route, has been surveyed by Andrew Petersen, who observed that this was probably a tower of an Ayyubid-Mamluk date. The former existence of an upper floor is revealed by a staircase.³²⁸ Although there is no textual evidence for a 12th-century construction of the tower, the rectangular plan and the thin casemated, arrow-slits are comparable to ones found in medieval buildings in the region, such as Qaqun, where the tower with a rectangular plan is compatible with a date in the second half of the 12th century;³²⁹ parallels have been proposed also with the 12th-13th century fortified building at Saffuriya³³⁰ and more recently with a Syrian Mamluk-period building of the mid-13th century.³³¹ The building may however also be Frankish because of its top plan reminiscent of Frankish towers and of its position on an important communication road. Further survey of the building would be worthwhile in order to see if an original architectural phase may be attributed to the 12th century, and maybe confirm the possibility that a tower would be placed on the Hajj road already by the Franks, in connection with the much larger structures of Karak and Shawbak.

Dhiban

Excavations at Dhiban have resulted in the interpretation of a 12th and 13th century phase, where the 12th century is documented by several coins (Mahmud b. Zengi, 1146-73, and Salah al-Din Yusuf, 1169-1193),³³² but the pottery published does not allow for further comments on the presence of a 12th century phase. More recent work has focused on the settlement of the Mamluk period, but given the importance of the site, which has constantly been the most important of the Dhiban plateau and located on the route of the King's Highway connecting Madaba with Karak, it would be interesting to know more about the pottery from the Middle Islamic phase detected during the surveys and excavations.³³³

Hisban

The site of Hisban has been excavated continuously since 1968 and a very long history of occupation has been discovered at the site, from at least the Late Bronze Age

³²⁸ Petersen 1991, 347-349.

³²⁹ Pringle 1986, a, 65, fig. 15-17; 69-70.

³³⁰ See Pringle 1997, 92, n. 192; 7, fig. 2c; Pringle 1998, 209-210.

³³¹ Petersen 2012, 61.

³³² Winnett and Reed 1964, 29, 67.

³³³ See Routledge et al. 2013.

to the Modern periods, but the archaeological evidence between the 9th and the 13th centuries is defined by the archaeologists as “scant”, and limited to only a few glazed sherds of pottery. This has been partially attributed to an abandonment of the site by the mid-9th century, due to the political turmoil of the period, followed by a period of squatting at the site, and partially to the important Mamluk-period occupation at the tell which in the 13th-14th century, when it became an important administrative centre, obliterated earlier phases. However, there is mention in the historical record of an Ayyubid-period of a mosque and therefore of a village,³³⁴ which has been interpreted as very small, on the basis of the reuse of earlier structures on the top of the *tell*.³³⁵

Hisban is mentioned in the sources in 1184, when Saladin camped there during one of his attempts at attacking Karak castle, while the Frankish army camped about ten kilometres away.³³⁶ If Saladin camped at the tell, it would seem that at the time there were organized structures at the site sufficient to support an army for several days, and it can be probably assumed that the site was not controlled by the Franks at that time, since there is no mention of an attack or conquest of the site there on this occasion.

It seems reasonable to assume, therefore, that although the site was not controlled by the Franks during the 12th century, and it was certainly not as important as during the later Early Mamluk period, there is no specific reason to hypothesize an interruption in the settlement occupation. On the basis of the pottery from the site studied by Sauer it has still not been possible to separate a 12th-century occupation phase from the other periods, and there appears to be a gap in the pottery record of the 12th century.³³⁷ However, this is probably due both to the analysis of ceramics originating from the excavated areas at the site, which of course cannot cover the whole history of settlement, and to the still undeveloped study of the “handmade” pottery of the region, which still does not allow for the definition of separate historical periods. Thietmar passed through Hisban in 1217.³³⁸

Salt

A small Armenian church dedicated to St George is documented in as-Salt in the 12th century.³³⁹ In 1118/19, we know from Ibn al-Athir that Tughtigin demanded that

³³⁴ LaBianca 2011; LaBianca and Walker 2007.

³³⁵ De Vries 1994, 151-155.

³³⁶ See chapter 2.

³³⁷ See appendix b.

³³⁸ Pringle 2012, 120.

³³⁹ Aghavnouni 1931, 438-9; Pringle 1998, 278, n. 222.

the Franks surrender the revenues from several areas and towns north of the River Zarqa, including as-Salt (the Ghawr, the mountain of Awf, Jabanja, and as-Salt).³⁴⁰

However, the area surrounding Salt, which was clearly well positioned between Damascus, Jerusalem and Nablus, was never under the direct control of the Franks. It was under their partial control only in terms of collecting taxes;³⁴¹ so they would probably not have had much influence on the Armenian community in Salt, and it is unlikely that the Franks themselves would have built a church there. There are no remains attributed to the Crusader period. The citadel is recorded to have had a castle controlling the Ghawr at the time of Abu al-Fida. Under the castle, constructed in order to control local rebellions, was a spring with plenty of water; the city was prosperous, well populated, rich in gardens and known for exporting pomegranates.³⁴² A tower has also been identified in al-Salt, although it may be post-Crusader.³⁴³

The church has not been identified but a possible medieval church may be one discovered by the early travellers south of town, where a Byzantine rock-cut tomb was later reused as a Christian chapel, which included frescoed walls.³⁴⁴

3.3.3. The Ard al-Karak

3.3.3.1. Karak castle and town

The town and castle of Karak before Frankish settlement

Karak is thought to have been a major city from at least the 9th century B.C.; archaeological and epigraphic traces of settlement are present more or less without gaps from this period, and material traces include Nabataean *spolia* used in the Crusader castle. Karak had the status of *polis* under Hadrian; however, it was Rabba which was the main regional centre from the Roman through the Umayyad periods.³⁴⁵

In the Madaba map Karak is represented during the 6th century with a monumental entrance flanked by towers and at least one street flanked by a portico. The city was the centre of a bishopric at this time, and included several churches, also represented in the map;³⁴⁶ the town here is represented as a fortified one.

³⁴⁰ Ibn al-Athir, RHC, Or. I, 315; Richards 2006, 160.

³⁴¹ See chapter 2.

³⁴² Le Strange 1890, 529-530.

³⁴³ Pringle 1997, 2.

³⁴⁴ Conder and Kitchener 1882, 12 ff.

³⁴⁵ Knauf 1992, 23; Johns 1997, 280; Miller 1991, 89.

³⁴⁶ Zayadine 1999, 229.

Very few references to Karak are identifiable in the pre-Crusader period. Ibn Shaddad stated that he could find no mention of the town in his researches.³⁴⁷ The first Arab geographer to mention a city here was Yakut; this author was probably known by Ibn al-Furat, who however said that he never saw Karak mentioned in the sources during the early Islamic period, either historical or geographical. Formerly to being named Karak or Crac de Montreal, the site was known as Charachmoba (Karak of Moab),³⁴⁸ which as shown in the Madaba map was the name used in the 6th century;³⁴⁹ this change of name probably explains at least in part the difficulty in finding information about it during the medieval period.

In describing the foundation of Crusader Karak, William of Tyre states that the “the ancient city of Petra”, meaning, in confusing the two sites, the former settlement in Karak, had been in ruins for a long time,³⁵⁰ and that outside the castle, where once the town was, there was now a *suburbium*.³⁵¹ He also mentions that it was near the ancient city of Rabba, later called Petra Deserti.³⁵² It is possible that the ruins that he refers to as having been abandoned for a long time were in the area of the castle, which, in contrast to the town, may well have had a less continuous occupation. The most recent survey has in fact identified some pre-Crusader remains (interpreted as Early Islamic) at the castle.³⁵³ However, it seems much more likely that the statement originates from William’s erroneous conviction that Karak was built on the site of Petra, at the time abandoned and apparently still completely unknown in its location.³⁵⁴

In fact, Ibn al-Furat tells us that Frankish settlement in Karak started because the monks of a Christian monastery already existing, after fortifying it to add more safety to the site, asked some Franks to move there to protect them from the Beduins who were regularly kidnapping them.³⁵⁵ Al-Dimashqi stated that it was said at his time that in “Roman days” it was a convent, later turned into a fortress.³⁵⁶ Although Qalqashandi (1355-1419) lived late, his account is the most detailed and clear about the several stages of settlement at Karak. According to him, Karak’s citadel, called Karak al-Shawbak, was built after Shawbak itself. The town of Karak used to be formerly a

³⁴⁷ Ibn Shaddad 1963, 69, (in Arabic); Milwright 2008, 2, n.4; cited also by Ibn al-Furat 1971, 50.

³⁴⁸ Le Strange 1890, 479; Mayer 1990, 123.

³⁴⁹ Zayadine 1999, 229; Piccirillo and Alliata, 60, n. 29.

³⁵⁰ William of Tyre, 22.28; Huygens 1986, 1055; see chapter 3.2 for the denomination of “Petra” for Karak.

³⁵¹ William of Tyre, 22.29, Huygens 1986, 1056-1057.

³⁵² William of Tyre, 15.21; Huygens 1986, 703-704.

³⁵³ See below and Biller et al. 1999, 46, fig. 9.

³⁵⁴ See chapter 3.2 for the discussion on denominations of the sites.

³⁵⁵ Ibn al-Furat 1971, 51; see chapter 2.

³⁵⁶ Le Strange 1965, 479.

monastery which was enlarged over time. After this, some Christian populations from the surroundings came to live near them. Some *suqs* were then created and trade was organized. The Franks moved there and built a wall surrounding it. Afterwards, they built its citadel. He also adds that the land of Karak was very fertile.³⁵⁷

Less known by scholarship but important information is also Ibn al-Dawadari's report of a Fatimid conquest of Karak in 372-373/982-983,³⁵⁸ which is further supporting evidence to the existence of a settlement closer in time to the arrival of the Franks.

In summary, Qalqashandi's account tells that, in terms of structures, pre-Crusader Karak included a monastery probably developed from the time of the Byzantine town, located in the town and used until at least the Crusader period, and a Christian, Early Islamic-period settlement in the town which was later fortified and inhabited by the Franks. However, William of Tyre implies that the castle came before the main development of the town.³⁵⁹

Karak castle and town during the Frankish settlement

The town and castle are located roughly in the centre of the Karak plateau (the Ard al-Karak) which extends from the Wadi al-Mujib to the Wadi al-Hasa, on a high position overlooking a rich agricultural territory and from where Jerusalem is visible on clear days.

During the Crusader period, Karak was called Crac, or Crac de Montreal (because it was in the Lordship of Montreal of which it became the *caput*, and for its relative proximity to Montreal, which was built earlier, and in order to distinguish it from the Crac des Chevaliers), or Civitas Petraceutensis, or Petra Deserti (for the reason that the bishopric of Petra was moved from there to Rabba, and then to Karak).³⁶⁰ Recalling the events of 1183, William of Tyre says that "Saladin [...] marched through the land of the Ammonites and Moabites beyond the Jordan and prepared to besiege the city formerly called Petra of the Desert, but now known as Karak".³⁶¹

There is no doubt that during the whole Middle Ages the castle was considered impressive in terms of its defences and position. Yaqut described Karak as a strongly fortified castle about midway between Jerusalem and Ayla, located on a mountain

³⁵⁷ Cited in Gaudesfroy-Demombynes 1923, 131-132.

³⁵⁸ Bianquis 1986-89, 141-142.

³⁵⁹ William of Tyre 22.28; Huygens 1986, 1056

³⁶⁰ See chapter 2.

³⁶¹ William of Tyre, 22.28, RHC, Occ., 1124; Huygens 1986, 1055

surrounded by wadis except on the side towards the suburb.³⁶² Dimashqqi described Karak as impregnable, on the summit of a mountain, with its fosses being the very deep valleys around it.³⁶³ According to Abu al-Fida, Karak was one of the most unassailable fortresses of Syria.³⁶⁴ Ibn Battuta visited the castle, also called the Fortress of the Crow at his time, in 1355 and described it as one of the strongest and most celebrated fortresses of Syria.³⁶⁵

Already the Frankish castle was well celebrated for its impregnability, with direct and indirect information of the sources, for example when they are describing Saladin's sieges.³⁶⁶ Ibn al-Furat explains that Karak was at his time a well-fortified stronghold with a walled town, both located on a mountain and separated by a deep trench.³⁶⁷

William of Tyre mentions briefly the construction of Karak castle in 1142. He states that the first lord of Transjordan, Payen the Butler (1126-52), founded a city where there was previously the town, but "on that part of the mountain in which the terrain is less inclined".³⁶⁸ He states that it was the main stronghold of the whole region, fortified with walls, towers and ramparts, and that the population was largely Christian,³⁶⁹ a fact also mentioned by the French translation of William of Tyre,³⁷⁰ which confirms what all other sources indicate in one way or another: that the site had probably been largely Christian since the Byzantine period.

William states that Karak castle was strongly fortified both by its natural position and by artificial means.³⁷¹ The aspect is significant, as in terms of the general idea of defence Karak has a lot in common with other Crusader castles in that it was a naturally strong site reinforced by walls and ditches; a possible parallel is for example Beaufort, which was also located on a rock spur, artificially isolated with a ditch on its weak side. The strength of the castle was, therefore, in the hard accessibility given by both the rock-hewn ditches and its natural elevation. A moat was cut across the spur created by the conjunction of two wadis. The castle is also naturally divided in two levels, with a natural drop-off of 10 to 15 m between a lower and an upper bailey.³⁷²

³⁶² Le Strange 1965, 479.

³⁶³ Le Strange 1965, 479.

³⁶⁴ Le Strange 1965, 479.

³⁶⁵ Le Strange 1965, 479-480.

³⁶⁶ See chapter 2.

³⁶⁷ Ibn al-Furat 1971, 50-51.

³⁶⁸ William of Tyre, 22.28; Huygens 1986, 1056

³⁶⁹ William of Tyre, 20.27; Huygens 1986, 1052-1055

³⁷⁰ *Histoire d'Eracles L'Empereur*, 22.28, RHC I, 993; See also chapter 5.

³⁷¹ William of Tyre, 15.21, RHC, Occ., I, 692-693; Huygens 1986, 702-704

³⁷² Biller et al. 1999, 48.

The moat separating the town from the city, in particular, although not as large as the south one, was not considered of an ordinary depth for the time, and the main difficulty in taking the castle in 1184, when the attempt of the enemy to fill the moat was unsuccessful.³⁷³ Ibn al-Athir reports that it was about 30 m deep,³⁷⁴ which was therefore as deep as the one of Sahyun (Saone).³⁷⁵

William of Tyre states that the successors of Payen, Maurice (1152-61) and Philip of Nablus (1161-65/66) improved the castle with a moat and towers.³⁷⁶

Important information comes from a Hospitaller charter, which tells us know that in 1152 the Hospitallers received by Maurice donations both in the lands of Montreal and Moab, and in Moab they included a village called Cansir, some land next to the vineyard of John the castellan, and parts of Karak castle, specifically a tower on the left hand side as one enters the castle's gate, and the barbican, which was between two walls and projecting from the mentioned tower to the tower of St Mary.³⁷⁷ All the donations mentioned in this document were confirmed by Raynald of Châtillon in 1177, apart from those in the castle; other possessions are added instead,³⁷⁸ which shows that the Hospitallers for some reasons by this time no longer had the duty to protect those parts of the castle.³⁷⁹

The scholarly tradition, based on information of William of Tyre, assumes that two bishops were appointed in 1168: in Petra in the land of Moab (i.e. Karak) and capital of Arabia Secunda, which still did not have a Latin bishop, and in Hebron "which also never had had that honour before".³⁸⁰

One aspect which has been analysed by Mayer is the establishment of the archbishopric in Karak. According to Mayer, the founding of the bishopric of Petra happened in 1167, differently from what is normally assumed by most of the scholarly tradition. The wrong date of 1168 is actually based on some information by William of Tyre reporting on the founding of the archbishopric of Petra and Hebron, but the mention of "eodem anno" in his report is unclear in what year it is referred to. Mayer thinks that the events referred to as "eadem estate", doubtless in 1168, and "eodem anno", which is, on the contrary, ambiguous, actually refer to two different years. His proposed date of 1167 does also not conflict with any other source. Moreover, he

³⁷³ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 252-255.

³⁷⁴ Transl. Richards, p. 300.

³⁷⁵ Kennedy 1994, 45.

³⁷⁶ William of Tyre, 22, 28; Huygens 1986, 1056

³⁷⁷ Delaville le Roulx, J., 1894, I, 160, n. 207.

³⁷⁸ Röhricht, 1893, 71, n. 279.

³⁷⁹ Pringle 1993, 288.

³⁸⁰ William of Tyre, 20.3, RHC, Occ., 944; Huygens 1986, 914

believes that this date is supported by the fact that it is very likely that both bishops in Petra and Hebron took office in 1167, the same year that William IV of Nevers arrived in the Holy Land.³⁸¹

Mayer also thinks that, although the initiative of the foundation of the archbishopric in Karak came directly from the king, as clearly mentioned by several sources, of course it must have involved also the Lord of Transjordan, Walter, whose lordship had just started. The event, however, was not isolated but part of a larger programme, since at the same time plans for archbishopric sees were made by the patriarch of Jerusalem in Hebron, Nablus and Jaffa. The reason for moving the see to Karak was that although Petra had a long tradition in holding a bishopric sees, it was considered more or less uninhabited at that time, and for this reason Karak was chosen instead. However, the see of Petra had already been moved to Rabba (Aeropoli) by the late Byzantine period.³⁸²

Guerricus was the first archbishop, and most likely also the last one, as his name appears in the documents until 1183, and it may well have covered this role later than this date. The only suffragan of the archbishop of Karak was the bishop of Sinai, who was an orthodox abbot. However, apparently this was very theoretical and in practice there was no suffragan; if there were a suffragan, this would have been the only orthodox bishop whose existence we know of, because there were no Latins within the diocese, which was also very small.³⁸³

Guerricus's main duty (the first archbishop of Petra) was to raise funds for its archbishopric; in theory, this was easy, since according to the edict of Nablus of 1120, the tithe should go to the bishop and not the parish; this already happened in Europe, where a net of numerous parish churches were composing the administrative system. So, in theory, the tenth part of the gains of the bishopric would go directly to the archbishop of Karak. In practice, however, collecting funds directly did not always happen, and conflicts arisen, as it happened in the well documented case of S. Mary of Jehoshaphat, which had actually a conflict with the archbishop of Petra, regarding the tithes from Transjordan, and eventually managed to take control over them. Jehoshaphat eventually kept the rights over four villages mentioned in a document describing the final arrangement. These *casalia* have been identified with the names of La, Bessura, Jerraz and Suesme; the first three according to Mayer were in northern Transjordan,

³⁸¹ Mayer 1990, 221 and 281-281 (appendix 18).

³⁸² Mayer 1990, 221; Pringle 2012, 283, n. 300.

³⁸³ Mayer 1990, 221-222.

while Suesme was maybe in the Golan. In practice, the tithes of the archbishop of Karak were so negligible that they can be considered basically a nominal right.³⁸⁴

Moreover, the bishop had a similar problematic situation regarding the tithes with the Order of St John, whose position was stronger than his. Therefore, the archbishop of Petra did not have full control over his diocese, as the tithes went partially to the Hospitallers and partially to Jehoshaphat. But this opens the question as to how the diocese was financially supported. Originally, the diocesis was subordinated to the patriarchate of Jerusalem, but this did not continue after 1112.³⁸⁵ According to a document of 1152 issued by Maurice, which is giving the solution to this question, the Hospitallers received from him a tithe on everything the Lord of Transjordan took from the Muslims,³⁸⁶ although normally the tithe should belong to the bishop. However, at this time, there was still no bishop, and therefore before this moment, some Institution must have assumed the bishop's role. It seems that the Templum Domini exercised pontifical power in Transjordan, and this is supported by the fact that Guerricus was originally one of their regular canons; the patronage of the prior of the Templum Domini may have been therefore transferred from Jerusalem to the cathedral in Karak.³⁸⁷

Many attempts at taking Karak are documented in the Crusader period; the castle was lost by the Franks in 1188 but was never taken by military force.³⁸⁸

Surveys of structures

Castle

The castle measures 220 m N–S by 40–110 m E–W.³⁸⁹ The phasing at the site is complex: not only there are pre-Crusader and post-Crusader phases (mainly Ayyubid and Mamluk), but we know from William of Tyre that there are also at least three main Crusader-period ones. However, relatively little has been done so far in terms of observations on structures and more in-depth analysis. The early explorers have been useful in mentioning or documenting what was still standing at the time of their visit; an example is Musil (see below) who found the castle crowded with recent structures.³⁹⁰ Plans have been published, including one by Deschamps and Anus³⁹¹ who according to

³⁸⁴ Mayer 1990, 223–224.

³⁸⁵ Mayer 1990, 224–225.

³⁸⁶ Delaville le Roulx, J., 1894, I, 160, n. 207.

³⁸⁷ Mayer 1990, 225–227.

³⁸⁸ See chapter 2.

³⁸⁹ Pringle 1997, 59, n. 24.

³⁹⁰ Musil 1907, 54.

³⁹¹ Deschamps 1939, plan 1.

the most recent survey conducted by Biller and his collaborators, included considerable errors in measurements of the structures internal to the enceinte walls; more structures have been gradually revealed in time by later clearance.³⁹² The most up-to-date survey of the castle is now the one by Biller, Burger and Häffner done in 1998,³⁹³ which although preliminary, provides important observations on phasing and suggest that some of the observations by Deschamps need revision.

Deschamps³⁹⁴ was the first to attempt to distinguish Crusader-period phases of construction at the castle from post-Crusader ones. He hypothesized that the Frankish parts of the castle were identifiable by the use of undressed volcanic stone quarried on site, while the later Ayyubid and Mamluk constructors used a soft limestone cut in larger more regular blocks and quarried outside the castle, in the bottom of the valley west of it, in a place called Batn Taouil. He highlighted the very rough level of work on the building elements of Karak castle compared to other Crusader castles, possible reasons being the hard nature of the stone used, the lack of specialized workmanship at the site or shortage of manpower; in particular he thought that the quality of the first phase was influenced by the rushed construction. He also observed that the later builders more or less followed the Crusader construction lines.³⁹⁵ Mayer proposed that the choice of a hard building stone was necessary in order to withstand attack by catapults.³⁹⁶ A higher quality of work was dedicated to the most strategic parts, namely the south and east glacis, made of finely dressed building elements.³⁹⁷ Today, however, part of the glacis is a reconstruction.

Deschamps identified the best preserved Frankish construction on the east side of the castle, and he interpreted these as later reinforcements added either by Maurice or by Philippe de Milly, as documented by William of Tyre (and as mentioned above).³⁹⁸ These structures have been analysed more in detail by the most recent survey. About 7–10 m from the first Crusader enceinte (built c.1142), another wall with five towers was added in the 12th century; at the same time, rooms, some of them with two floors, and corridors, were added between the new and the older wall.³⁹⁹ Brooker and Knauf noticed that the first phase on the east front is largely made up of reused material incorporating variously sized dressed stone blocks and reused Nabataean and Roman

³⁹² Biller et al. 1999, 45-48.

³⁹³ Biller et al. 1999.

³⁹⁴ Deschamps 1939, 80-98.

³⁹⁵ Deschamps 1939, 80-81, 87.

³⁹⁶ Mayer 1990, 125.

³⁹⁷ Deschamps 1939, 186.

³⁹⁸ Deschamps 1939, 82.

³⁹⁹ Biller et al. 1999, 48; 46, fig. 9.

decorative elements, and that during a second phase the first phase was concealed behind more “conventionally” fabricated walls, made of large, roughly tooled building elements, suggesting that first phase was either inadequate or perhaps it was only meant to be temporary.⁴⁰⁰

On the west side of the upper ward of the castle, the phasing is less complicated, since substantial parts of the walls of the first Crusader phase are still visible. These can be identified in a wall running continuously behind the Mamluk towers, characterized by at least five flat projections very similar to those seen at Shawbak in the Crusader phase, and therefore probably, like them, not representing towers, since their walls are not very thick; their corners are made of bossed elements of limestone.⁴⁰¹

The moat separating the northern side of the castle from the town is today filled and is 20–25 m wide and 30 m deep. Behind it, the northern wall of the castle is 4 m thick and stands over 20 m in height, with projections at its ends. The eastern one is 24 m wide and contains in its flank a postern.⁴⁰² A characteristic is that it is constructed of large bossed masonry elements, but while the stones’ margins are drafted to fit precisely the other elements, the bosses are completely unworked, and the elements purposely laid with the roughest edge facing outward.⁴⁰³ Attached to its inner side are two large pointed barrel-vaults, 70 m long and 6 m wide, one on top of the other; these have arrow slits facing the ditch and town.⁴⁰⁴ It has been hypothesized that these barrel-vaults, entered through a narrow entrance from west, were used as stables or accommodations, and to access arrow-slits⁴⁰⁵ although Mayer suggests that horses were not kept in the castle,⁴⁰⁶ but they could also have been a storage area. This complex all belongs to the Frankish period, but to a later phase, partially incorporating the original one, of which the remains have also been detected. This original phase, belonging to before the strengthening of the castle with the addition of the eastern wall, consisted of a NE tower, which was also the eastern corner of the whole castle, probably mirrored by another corner tower to the NW, whose remains are still visible in the northern wall of a second projection, and identified mainly on the basis of their building technique.⁴⁰⁷ The second phase would therefore have unified the whole northern front of the castle by diminishing the projections of the two towers.

⁴⁰⁰ Brooker and Knauf 1988, 186.

⁴⁰¹ Biller et al. 1999, 49.

⁴⁰² Biller et al. 1999, 49.

⁴⁰³ Observations from personal viewing at the site.

⁴⁰⁴ Biller et al. 1999, 49-50.

⁴⁰⁵ Kennedy 1994, 50.

⁴⁰⁶ See below.

⁴⁰⁷ Biller et al. 1999, 50; 46-47, figs. 9-10.

The northern castle wall can be connected to specific events quoted in the historical sources. It is suggested by Biller and his collaborators that this belongs to a different phase to the eastern wall reinforcement, both being built either in 1152-1166 (by Payen's successors), 1170-1188 (following one of Saladin's attacks to the castle), or perhaps 1192 (when repairs by al-Malik al-'Adil are documented). If the textual sources are correct, it is most likely that the last main building phase of the current northern wall belongs to the period 1170-1188, because it may not have been extensively damaged by the 1188 assault, since on that occasion the garrison surrendered relatively quickly.⁴⁰⁸ The 1183 assault of Saladin must have damaged the town's northern wall because it is said that his troops conquered the town and from it besieged the castle with seven trebuchets day and night;⁴⁰⁹ the north wall must have then been repaired by Raynald of Chatillon if in 1184 it was still able to confront another attack from Saladin. In 1184 the sources tell that the walls were greatly damaged by trebuchets,⁴¹⁰ and it can be implied that on this occasion also the castle's northern wall was badly damaged, because the attackers made it all the way to the castle and it is said that the greatest obstacle for conquering the castle was the moat. If this is the case, and if, as it seems, the castle's northern wall was therefore rebuilt by the Franks at least twice after its original construction around 1142, at least three construction phases occurred and some may still be visible to an accurate analysis. According to my preliminary observation from a visit at the site, several traces of modifications to earlier phases are very clear on the external front of the northern wall; these include the traces of an arch and a very clear junction between two very differently built parts: the two extreme parts of the wall on the one hand and the central part of the wall on the other. In contrast to the building technique used in the ends of the wall, the central part of the wall is made of longer and thinner, non-bossed stones.

Regarding the original Crusader-period entrances (the current one being through the lower part of the castle on its northwest corner), this point is still partially unclear. Mayer suggests rightly that the northern entrance to the castle was very small, because William of Tyre mentions that this was overcrowded when people sought refuge there from the town after the 1183 attack by Saladin. Therefore, it seems that this entrance was not designed for such emergencies, but rather for the access of one person at the time only; he argues that horses were therefore normally kept in the town.⁴¹¹

⁴⁰⁸ Biller et al. 1999, 50.

⁴⁰⁹ Ibn al-Athir, RHC, I, 664 ; Richards 2007, 297.

⁴¹⁰ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 252-255.

⁴¹¹ Mayer 1990, 118-119; William of Tyre, 22.28 Huygens 1986, 1056-1057 (see chapter 2).

Regarding its more specific location, William, when reporting on the 1183 attack by Saladin, adds the detail that by mistake someone forgot to withdraw the bridge across the moat, and also that the bridge across the moat was “next” to the gate.⁴¹² This means that he was probably talking about the postern with a pointed arch in the northern wall and currently visible, which is in fact quite small and as mentioned above was the one used in this period: it appears also from my preliminary viewing that the gate and tower were not part of the most recent repairs, but rather part of a much more substantial phase, perhaps the one involving the vaulted halls.

Mayer’s view assumes also that the northern entrance was the only one and William of Tyre seems in fact to confirm this, by saying that “the bridge afforded the only passage across the moat, the one way by which those inside the citadel could come or go”.⁴¹³ It is very unlikely, moreover, that a second gate would be opened in the same wall, as it would have weakened this side unnecessarily.

The possibility that the postern still in place today was the main entrance from the town, at least since the early 1180s, and the only one on the north side of the castle, is therefore extremely likely. This raises the question of whether there was also another entrance on another side of the castle. Biller et al.⁴¹⁴ suggest that the original main entrance may not have been necessarily on the northern wall, but some 20 m south of the original northwest corner tower, corresponding to a rock-cut tunnel which enters the castle; the entrance would therefore face west and not north, because the west side was less exposed to attacks, while an entrance to the west would have been harder to see and to shoot at from the enemy’s point of view. Ibn al-Furat witnessed in the 14th century that the entrance to the courtyard of the fort was through a vault cut into the mountain which was guarded and it also served the purpose of gate;⁴¹⁵ the entrance of the castle at the time of Ibn Battuta’s visit was also through a rock-cut tunnel,⁴¹⁶ if indeed he meant that this served to access the castle and not the town. Musil during his visit noted that access to the castle was still possible in three different ways, one of which through a tunnel in the northwest tower, which at his time was already partially collapsed and dangerous.⁴¹⁷ This rock-cut tunnel, which may have allowed access of horses and a larger number of people in the castle, may well have been already opened in the Crusader period, but there actually is no evidence for this. Moreover, the observation by

⁴¹² William of Tyre, 22.28, RHC, Occ., 1124-1126; Huygens 1986, 1056-1057

⁴¹³ William of Tyre, 22.28, RHC, Occ., 1124-1126; Huygens 1986, 1056-1057

⁴¹⁴ Biller et al. 1999, 50.

⁴¹⁵ Ibn al-Furat 1971, 50-51.

⁴¹⁶ Le Strange 1965, 479-480.

⁴¹⁷ Musil 1907, 54.

the German architects that the still surviving north entrance was too unprotected does not take into account the reiterated information by the textual sources that the town, also, was considered very hard to take, both by the Franks and by their enemies. Therefore, an attack from the town was probably not normally taken into consideration and the gate not particularly protected, as demonstrated by the episode of 1183 itself, when the bridge across the moat was left down. The fact that the town was considered safe would also support the hypothesis that the castle's entrance was not designed to be accessed by large masses of people in case of emergency. Since the town was considered safe, therefore, Mayer is probably also right in hypothesizing that the horses may have been kept in the town.

I propose therefore that it is likely that through the whole Crusader period there was only one main access to the castle and that it may have been always on the northern wall, although before the actual postern was used, the entrance may well have been located in a different position on the northern wall; it is possible that the traces of the arch in the central part of the northern wall's repaired part may be the remains of an earlier entrance on this side, before it was replaced by the actual postern after 1170.

Certainly a main gate with a direct entrance like the one at al-Wu'ayra (which also had a moat about 30 m wide defending the castle), rather than a bent one like at Shawbak, would have protected enough the north wall given the extra protection of the massive moat. However, since the time when Saladin successfully conquered the town and therefore demonstrated that it was not impregnable, a gate directly exposed to attacks from the north would not have been considered safe anymore; this is therefore probably, at the latest, when the direct entrance was closed; the northern gate construction may also have been a direct consequence of the siege of 1183. This does not imply, however, that secondary entrances from other sides of the castle may not have existed in addition to the main one.

In summary, while the main construction phase of the northern wall may be dated to 1170-1183 (perhaps as late as 1183 for what concerns the construction of the postern), the last, extended phase of the wall repairs should probably be dated to after the 1184 siege.

The southern side was naturally the most vulnerable and it was therefore reinforced with a rock-cut ditch, 30 m wide, to separate it from the mountain opposite,

which was higher than the castle; according to Deschamps, a donjon was placed on this side for further protection.⁴¹⁸

Today the best preserved tower, which Deschamps calls a *donjon*, is actually a Mamluk construction, as appears both from an inscription set in it and its similarities to the tower at Shawbak, which is dated by an inscription to 1297-1298; however, this is not a *donjon* but a building with the function of shielding the areas behind it. Next to it there are remains assigned by Deschamps to two pre-Mamluk phases. The earliest remains of a first construction phase are south and west of the Mamluk structure and are bonded to the original western wall of the castle; this wall ends with a very wide projection which should then be interpreted as the remains of this southern building, also belonging to the construction of c.1142. The minimal remains of the southern wall of this 35 m-long building are constructed directly on bedrock and the southeastern corner, built in good quality masonry, is also still visible. The existence of a further wall behind it (its internal wall) proves that this was a building and not part of the enceinte. Therefore, the hypothesis of the most recent survey is that this is a long narrow donjon of the original Crusader phase, badly damaged by one of Saladin's assaults and probably also by an earthquake, since it stood on the edge of the cliff. In addition, there was also a later Frankish expansion: a wall running E-W, between the Crusader donjon and the Mamluk building, and characterized by a Crusader-period building technique, bossed stones, as seen elsewhere in the castle, namely in the projections of the original 1142 phase in both the original western wall enceinte and the northern wall. Its presence does not imply the destruction of the Crusader donjon, but it is reasonable to assume that it replaced it. It is also contemporary in its use, though perhaps not necessarily in its construction, to the reinforcement of the eastern wall of the castle and to the remains of the enceinte external to the Crusader donjon. The German surveyors interpret these three constructions as a protection measure against Saladin's attacks,⁴¹⁹ and therefore, to be placed chronologically after 1170.

Less data are available concerning the structures within the enceinte, partially because of the still limited clearance. Deschamps identified traces of Frankish construction in the lower ward of the castle;⁴²⁰ on this basis and on the basis of information from historical sources, Pringle hypothesized that this may have been a possible location for the barbican and area granted by Maurice to the Hospitallers in

⁴¹⁸ Deschamps 1939, 80.

⁴¹⁹ Biller et al. 1999, 50-52.

⁴²⁰ Deschamps 1939, 87.

1152 and described as located between two walls.⁴²¹ The most recent survey did in fact confirm that there were Crusader-period structural remains here, although these seem to have been interpreted as chronologically following the first Crusader phase.⁴²² Mayer, on the other hand, suggested that the barbican may have been in the area of the castle chapel, in the eastern part of the castle;⁴²³ Brown agrees with Mayer that a possible location of the barbican may also be on the eastern side of the upper castle.⁴²⁴

The recent surveys propose that the area of the chapel was always connected to the area of the upper castle and therefore that it was unlikely that the chapel was part of an independent fortification. The upper castle was naturally divided in two parts, an upper and a lower one, the upper being about 3-4 metres higher. Although it is not clear to Biller and his collaborators if this area was ever dedicated to a more internal fortification, they note that this space was not really separated from the lower one; instead, the chapel itself was unifying these two spaces since, because, although built entirely in its upper part, it was accessed from its lower part, as the main door on its western side was accessed from the lower area and the sacristy itself was also connecting these two levels by means of some steps.⁴²⁵ This, in principle, does not interfere with the possibility of a barbican being placed here, but the problem is the lack of evidence for a double wall mentioned in the sources, so the location of the barbican is currently still unclear.

Locating the castle entrance would, among other things, help in understanding the location of the tower and barbican granted to the Hospitallers in 1152. We should probably attach no documentary value to the representation of the Karak castle's main entrance represented on the seal of Raynaul of Chatillon, which is depicted as a large and high arched gate flanked by two crenellated towers.⁴²⁶ Since it is during this year that Maurice takes charge of the castle, the structures referred to in the document should most likely be referred to the first, original Crusader phase. If the original main entrance, as suggested by the German surveyors, is to be located south of the western tower, in the tunnel still in use until recently, than the tower granted to the Hospitallers, "on the left hand side as one enters the castle gate" could be the one identified by them as the one at the NW corner of the north wall, belonging to the first construction phase. The barbican donated through the same document to the Hospitallers was placed

⁴²¹ Pringle 1993, 287.

⁴²² Biller et al. 1999, 46, fig. 9.

⁴²³ Mayer 1990, 227.

⁴²⁴ Brown 2012, 164.

⁴²⁵ Biller et al. 1999, 52.

⁴²⁶ Clermont-Ganneau 1900, 129.

between two walls, and was protruding from the mentioned tower to the tower of S. Mary. If the barbican was placed along the western rather than along the northern wall dominating the town side, it would have been extending south of the NW corner tower, between this and a tower of S. Mary, now disappeared under later construction, and perhaps placed in the area of a sharp turning of the rock spur. In this position, the barbican would have dominated the castle entrance. However, the problem is that at this moment there is no evidence that the main castle entrance was from west.

The hypothesis that the tower of S. Mary mentioned in the Hospitaller's document may be the donjon recently mapped to the south,⁴²⁷ would imply an entrance on the eastern wall enceinte, right north of the donjon itself, where the glacis is now placed, and where no entrance has been identified, so this possibility appears unfeasible.

Mayer's solution of the barbican being located in the church area implies that the main gate was on the northern wall, which as mentioned above, is very likely. The Hospitaller's tower would be, according to Mayer, in this way on the eastern wall.⁴²⁸ The tower of S. Mary would be the one just outside the castle chapel, the largest of all towers, the church would be under the patronage of S. Mary, and that this would also explain the tower name.⁴²⁹ However, Pringle thinks that the tower of S. Mary and the castle chapel were not necessarily related.⁴³⁰

Moreover, this tower belongs, according to the recent surveys, to the later enlargement and not to the original one, and it is therefore unlikely that it would have been already completed by 1152, unless Maurice was actually describing in the document not what already existed, but what he was planning to construct and donate to the Hospitallers. No towers were identified during the first phase according to the latest survey if we exclude the NE tower itself, but the survey did not uncover and analyse the full extent of the wall of the first phase, so it is actually possible that a tower would also be on the eastern wall. This interpretation would imply that both the tower and the barbican were later destroyed for some reasons by the later renovations of the area, in this case by Philip's construction of the towers on the east side of the castle. The unresolved problem with this interpretation is however that the barbican, which was extending between the two towers, is described as between two walls; Mayer himself admits that the only double walls he can notice are on the western part of the castle, those dividing the two castle wards. If the original entrance was on the eastern end of

⁴²⁷ Brown 2012, 165.

⁴²⁸ Mayer 1990, 227.

⁴²⁹ Mayer 1990, 227.

⁴³⁰ Pringle 1998, 310-311.

the northern wall, as he implies and indeed it is possible, the two walls referred to in the document could not be the old eastern walls and its reinforcement, between which some vaulted rooms were constructed, because this would imply again both that Maurice was responsible for building the eastern wall reinforcement, and that he would grant something which was still not constructed. It can be noticed however that the survey of the internal structures is not complete and that remains of a second wall may be recovered in the future. A destruction of the barbican on the eastern side of the castle by the time of Philip's lordship may be connected to the fact that the Hospitallers stopped having any function of military protection at the castle by 1177, and structurally it could be justified by the fact that the reinforcement of the east side did actually imply an advancement of the eastern defences of the castle, which would make useless an old barbican placed on the older enceinte wall.

In summary, conclusive evidence for the location of the Hospitallers' structures is currently not available. This may be one of the points to be prioritized by future research at the castle. However, it can be noticed that in the Latin East a barbican usually is an outer wall and the space between it and the inner wall, and it is used to access the inner part of the castle, therefore the N and S sides should be excluded as they would not serve this purpose. It is possible that the barbican had not been still built when the Hospitallers were given it and that they were expected to build and maintain it. However, a barbican on the west side of the castle, in place of the Mamluk lower ward, appears to be the most likely, since it is here that a double wall can be identified, and this is the less logic solution. This would also imply that the entrance was north, which, as explained above, is very likely.

Pringle identified the castle chapel in the inner ward, made of a simple barrel vault, constructed with columns in the thickness of the wall (about 2 m thick or more) and leading to a side chapel or sacristy. Both were covered internally with fine plaster, that of the main chapel having being frescoed with human figures, which today have completely vanished.⁴³¹ The apse is not visible anymore, but Deschamps recorded its presence⁴³² and based on this information, the most recent survey has hypothesized that the two windows on the eastern walls of the chapel and sacristy were later closed by the reinforcement of the eastern enceinte that has been attributed to a later 12th-century phase;⁴³³ this evidence supports the idea that both the chapel and sacristy belonged to the first construction phase at the castle and suggests that the four windows recorded by

⁴³¹ Pringle 1993, 288-290.

⁴³² Deschamps 1939, plan 1.

⁴³³ Biller et al. 1999, 48.

early explorers (of which one in the southern wall and one perhaps in the northern wall)⁴³⁴ may have been necessary at this later stage because the one in the apse was not bringing light in the church anymore.

The chapel is similar in its general simple structure to those of Shawbak and al-Wu'ayra since it is a narrow nave covered by a pointed barrel-vault; this would be consistent with a roughly similar chronology of construction at these three churches. The Karak church is presumably one of the first buildings to have been constructed with the castle in or after 1142; the al-Wu'ayra church was built between 1127/30 and 1144, and the lower church at Shawbak was most likely built later than 1115,⁴³⁵ perhaps as late as a few decades.

In the upper castle, there were also a bread oven and vaulted cisterns.⁴³⁶

Very interesting is the discovery by Biller and his colleagues of the oldest visible structure in the castle, pre-dating the Frankish construction. This is a rectangular tower (now incorporated in the so-called Mamluk palace) with arrow-slits, according to the architects connected to a wall running north-south, incorporated by and in use with the Crusader original wall enceinte of c. 1142. During this first Crusader phase, a vaulted corridor was built by making use of this earlier wall. This earlier phase is indeed made in a very different building technique from the Crusader one, characterized by large, very finely worked ashlar and by the decorative use of three roughly worked rosettes c. 50 cm in diameter, identified as typical of Islamic-period architecture but, according to the architects, not known in Crusader buildings.⁴³⁷ Canova recorded somewhat similar rosettes as architectural decoration in Ader, 7 km north-east of Karak, which she interpreted as Late Imperial (i.e. late Roman),⁴³⁸ but which could probably be interpreted as Byzantine or Umayyad. The beautiful quality of the ashlar working is reminiscent of the Late Roman/Byzantine period construction, although Early Islamic buildings are less available for a parallel, and this chronology should therefore probably not be excluded as a possibility. The fact that the building in the Mamluk palace included a tower, and elements like very thick walls with arrow-slits, undoubtedly characterizes this earlier phase as one with a fortified function.

Concerning building techniques at the castle, many interesting points can be observed. For example, the use of long bars of lithic material (limestone or basalt), sometimes over 150 cm, has been noticed in one of the moats at Karak; this technique is

⁴³⁴ Pringle 1993, 289, fig. 84.

⁴³⁵ Pringle 1998, 313; see chapter 4 and appendix b for more details.

⁴³⁶ Pringle 1997, 59, n. 24.

⁴³⁷ Biller et al. 1999, 46-49, figs. 9-11.

⁴³⁸ Canova 1954, 176.

similar in its function to the use of through columns, witnessed by Maqrizi in the 13th century as important against mines, and whose efficiency was demonstrated by the siege of Caesarea by Baybars in 1265.⁴³⁹ This is a technique which was widely used in fortifications of the Latin Kingdom of Jerusalem, but is of local origin. Creswell identified its first documented use in the gates of Cairo at the end of the 11th century⁴⁴⁰ and al-Muqaddasi, in describing the construction of the port of Acre in the 9th century witnesses the use of marble or granite columns every five courses, to reinforce them.⁴⁴¹ In Frankish buildings, this technique has been identified, in addition to Karak, for example at Yibna, Gaza, Ascalon, Ramla, Caesarea, Tyre.⁴⁴² Although often used to contrast the pressure of the water movement and therefore used for constructions on the sea shores, it also had the function to reinforce the building also in the absence of water. Perhaps less commonly recorded is the use, like at Karak, in the walls of the castle chapel, as seen above, although the thickness of the walls adds a character of fortification to the church. Regarding the abundance of building material in secondary use on the first phase of the eastern wall enceinte, some caution should be applied before making suggesting equivalence between reusing of earlier material and shortage of workmanship, time or economic means, since this practice is widespread among Crusader-period sites all over the Latin Kingdom of Jerusalem.⁴⁴³

Architecturally, the surveys demonstrated that the Crusader castle had only one enceinte wall in all its phases, a fact which can be attributed to the extra defended location of the site on a rock spur, as it happened at al-Wu'ayra; a parallel with Shawbak is rather in the presence of the salients shaped like towers.⁴⁴⁴

Summarizing the identified Crusader phases at the castle, the most recent survey has so far contributed the most to this subject. The original phase, started in 1142 by Payen the Butler, has been identified as occupying the whole rock spur of the castle and is architecturally characterized by rectangular flat projections, similar to those at Shawbak.⁴⁴⁵

During this first phase, at the ends of the northern wall there were two flanking towers and most likely the original entrance. On the south side, there was also a donjon; its existence on the castle's most vulnerable point has parallels with the Crusader castles

⁴³⁹ Marino and Coli 2012, 105, note 50; Röhrich 378.

⁴⁴⁰ Creswell 1952, 113-114.

⁴⁴¹ Gertwagen 1996, 555.

⁴⁴² Sinibaldi 2002

⁴⁴³ Sinibaldi 2002; see also appendix b for a discussion of this subject in the architecture in Petra.

⁴⁴⁴ Biller et al. 1999, 54; see conclusions.

⁴⁴⁵ See chapter 4.

of Saone and Beaufort.⁴⁴⁶ The church and chapel also was built at this time on the upper part of the castle; originally the windows were opened on the eastern enceinte wall. The building technique of this first phase was characterized by secondary use of building material and roughly cut stones with bossed corners, with the majority of stones being not bossed.

This first Crusader phase was much increased in its defence ability during later phases. Two substantial improvements of the defence system were the reinforcement of the east enceinte wall with another wall and towers and of the southern end of the castle, where a shield wall replaced the earlier donjon. These improvements to the defence may have been done both at the time of Saladin's attacks, between 1170 and 1188, as suggested by the German surveyors, or before, at the time of Payen's successors, between 1155 and 1166. Although both possibilities are open, we may wonder, if this was in fact the initiative of Maurice and Philip, why the need was felt to replace with a shield wall the southern donjon, which would have had therefore a relatively short life; it seems more likely therefore that the donjon may have been destroyed by one of Saladin's assaults. However, it cannot be excluded, on the basis of the stratigraphy recorded by the Germans, that the construction of the eastern walls and towers may have been done during an earlier phase. William of Tyre reports that towers and a moat were added by Payen's successors; therefore the eastern reinforcement may well be the work of either Maurice or Philip (1152-1166). The reinforcement of the walls did also close the church and sacristy's windows and possibly made it necessary to open new ones in the other walls. The moat mentioned as constructed later by William may be either the one to the south or to the north, but perhaps it is reasonable to think that the excavation of the southern moat, on the most vulnerable part of the castle, would have been absolutely necessary during the original phase, and that a moat on the northern side would have been less urgent, especially since, as discussed above, the town north of it was considered untakable.

Another important element of defence was the construction of the glaçis; although it is still uncertain to which specific phase it belonged to, since it is now partially reconstructed.

A substantial, later work has been one of reconstruction, rather than reinforcement, of the north castle front, which also created a large vaulted space behind it. This operation may have been done as a consequence of the sieges of Saladin, because it seems to take into account the possibility that attacks could come from the

⁴⁴⁶ Kennedy 1994, 49.

town. Perhaps the creation of the large halls behind the north wall was created to better stand long sieges on the most vulnerable part of the castle. The north wall was repaired several times during Saladin's attacks.

The original Crusader phase was also making use of a tower and wall of an earlier fortification, perhaps from the Islamic or Byzantine period. These structures did not belong to the Christian monastery, which was located in the town, but may belong to the settlement mentioned by the sources as conquered in the Fatimid period or to an earlier construction; since they seem to have been already in ruins at the time of the Frankish construction. However, more clearing of rubble and analysis of wall stratigraphy may well add further information on the presence of earlier structures. The data about the presence of an earlier settlement at the castle is, in any case, placing Karak in a similar situation to Shawbak and al-Wu'ayra, where earlier fortifications in ruins were incorporated in the wall enceintes. We also have some partial answer to the question posed by Smail on whether the castle design was partially dictated not only by the terrain conformation but also by earlier constructions at the site,⁴⁴⁷ which it does, because according to the most recent survey the tower is reused by the first Crusader phase as part of the main wall enceinte.

Town

The town, which measures about 850 m N-S and 750 m E-W,⁴⁴⁸ has been even less explored than the castle for its Frankish remains.

William of Tyre states that the village present at the time of the Franks' settlement was west (but mistakenly, since it is north) of the fortress in a safe location and that even the walls (which were possible not town walls for defence, but simply walls to stop people from falling over) were quite low, since the inhabitants were safe because only two points were really vulnerable to an attack and those could be defended by only a few men.⁴⁴⁹ The two vulnerable points mentioned by William of Tyre are not identifiable since the complete location of the medieval walls is nowadays hard to identify, but the fact that low walls were protecting the town because better defences here were not needed may explain why the castle, as clearly shown in the description of the siege of 1183, was not designed to give access to large masses of people from the town in case of an emergency; the fact that the town was also considered untakable probably also explains the confidence in the general safety which allowed even the

⁴⁴⁷ Smail 1956, 220.

⁴⁴⁸ Pringle 1997, 59, n. 24.

⁴⁴⁹ William of Tyre, 22.28; Huygens 1986, 1056

bridge connecting town and castle to be left incautiously down during the attack of 1183. William of Tyre reports that the crowd of people who entered the castle on the occasion of this emergency was a burden for the besieged who did not have enough space to defend the castle; the castle, moreover, did not have enough weapons for its defence.⁴⁵⁰ The town was, in summary, evidently well defended, if it withstood successfully several sieges before being taken for the first time in 1183, and Saladin himself was not hoping to be able to take it on this occasion;⁴⁵¹ it was connected to the castle by a bridge across the large moat, as seen above. William himself comments also elsewhere that the town location was so steep and high that it did not fear attacks by either bows or machines.⁴⁵² In 1184, after a few months, Karak had to withstand another attack and Saladin's trebuchets in front of the city gate destroyed all the frontal sections of the wall.⁴⁵³ Since William talks about two points of the city walls being the only ones vulnerable to attacks, it is possible that the attacks always occurred on the same sections of the walls.

Deschamps thought he recognized in the city enceinte traces of the same building technique seen at the castle, therefore characterized by the use of hard volcanic stone and easily distinguishable from the later construction.⁴⁵⁴

Musil observed during his visit that some of the recent buildings in the town had reused older material,⁴⁵⁵ but the presence of earlier buildings apart from the churches, appears not to be recorded; as mentioned above, at this point the town was apparently including a Christian monastery, which has however not been identified yet.

Pringle has also identified the remains of three churches in the town.⁴⁵⁶ Two churches have been identified by Zayadine in the 6th-century Madaba map, and he suggests that the large one was near the Jami' al-'Umar while the smaller one can be identified as the existing St George (al-Khadr),⁴⁵⁷ this church, and the site of the Umariyya mosque, identified as the old Latin cathedral, may have been used in the Crusader period, as proposed by Pringle on the basis of his architectural and historical survey; at this second one, Deschamps noticed some 12th-century architectural remains⁴⁵⁸ and here Bliss had noticed an inscription in Arabic flanked by two chalices

⁴⁵⁰ William of Tyre, 22.28; Huygens 1986, 1055-1056

⁴⁵¹ See chapter 2

⁴⁵² William of Tyre, 20.28 ; Huygens 1986, 1055-1056

⁴⁵³ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 252-255.

⁴⁵⁴ Deschamps 1939, 95.

⁴⁵⁵ Musil 1907, 54.

⁴⁵⁶ Pringle 1993, 287-295, n. 130-132.

⁴⁵⁷ Zayadine 1999, 229.

⁴⁵⁸ Deschamps 1939, 97, fig. 25.

on the pointed-arched entrance.⁴⁵⁹ Mayer observes that the cathedral church was not necessarily located in the town, but could have been also in the castle itself, like in the example of Hebron. He points out that the castle chapel was probably large enough for the Latin population, and that the Franks may have chosen to leave the church in the town to the majority of the city inhabitants who were Orthodox.⁴⁶⁰ However, Pringle has demonstrated that the church in town, a Romanesque aisled basilica, was a cathedral.⁴⁶¹

He also observed that the Crusader-period church in the town may pre-date its role as a cathedral, (since there were Franks in town since before 1142, but there was not a cathedral before 1167) because it is unlikely that there would have been two Latin churches in the town.⁴⁶²

Another church, the Greek Church of St George was probably used in the medieval period, and although it is hard to define a specific chronology for its use, it was probably used through the Crusader period until today without interruption.⁴⁶³ Canova commented that a marble capital found near by may be a clue that the church was used in the Crusader period, and that perhaps the capital was used as a decoration in the main church door.⁴⁶⁴ The church of St George (al-Khidr) is actually known to have been built on a Byzantine-period one, but no traces are recorded of an earlier building at the site of the Latin cathedral,⁴⁶⁵ so it may have not been built on top of one of the earlier Byzantine churches. Thietmar⁴⁶⁶ during his visit in 1217 was received by a Greek woman and by a Greek bishop.

On the basis of historical sources, Pringle has also identified the existence but not the remains of a fourth church in the town, an Armenian church to St George, used in the 14th century.⁴⁶⁷ The presence of an Armenian community is not safely documented at Karak already in the 12th century, but there is a basis to think that it was not only present, but also strongly encouraged by the arrival of the Franks.⁴⁶⁸

⁴⁵⁹ Bliss 1895, 220; Canova 1954, 27.

⁴⁶⁰ Mayer 1990, 227.

⁴⁶¹ Pringle 1993, 287-288.

⁴⁶² Mayer 1990, 225.

⁴⁶³ Pringle 1993, 293-295, n. 131.

⁴⁶⁴ Canova 1954, 28, fig. 25.

⁴⁶⁵ Pringle 1993, 287-295, n. 129 and 132.

⁴⁶⁶ Pringle 2012, 120.

⁴⁶⁷ Pringle 1993, 295, n. 133.

⁴⁶⁸ See chapter 5 for a discussion of Christian communities.

Excavations at the castle

Excavations at the site have been extremely limited. Brown, as part of a broader archaeological study in Southern Transjordan to explore key sites during the Islamic periods, excavated the castle for a week in 1987 and dated what was initially considered an Ayyubid/Mamluk palace to the 14th century mainly on the basis of a coin;⁴⁶⁹ however, a very recent reconsideration of coin suggests that the date is more likely to be Ayyubid, contemporary with the similar Ayyubid palace at Shawbak.⁴⁷⁰

Excavations revealed that the palace was not built on former buildings. The ceramics from the excavation could be dated at the narrowest to a chronological span ranging from the 12th to the 13th centuries, and some had parallels with ceramics from the Ayyubid palace at Shawbak but did not include types that could be narrowed down more specifically to the 12th century.⁴⁷¹ Therefore, any information specifically on the Crusader period is missing from this excavation campaign.⁴⁷²

The only archaeological excavations aimed at investigating the Crusader period at the castle were in 1997, led by Lee. He excavated the chapel and sacristy; the finds included Late Ottoman and Modern period remains, Roman and Nabataean pottery, but no medieval finds were included in the report, which shows that the building was probably cleaned and reused after the medieval period.⁴⁷³

In summary, no original stratigraphy from Crusader-period building has ever been excavated at the castle or associated with ceramic finds.

Tentative archaeological phasing for Karak castle and town:

- 1) Pre-Crusader phases: these included a Byzantine fortified town, in the location of the actual town, with a cathedral, several churches and a medieval monastery, perhaps founded during the Byzantine period. The town probably developed beyond the Byzantine walls after the 6th century, and became a Christian trade-oriented town, still significant enough to be mentioned as conquered at the end of the 10th century. Other structures include a fortification, in the location of the present castle, perhaps Early Islamic or Byzantine, which was found abandoned by the Franks.
- 2) Crusader phase I: building of the castle under Payen the Butler (from 1142). This implied incorporating the fortified pre-Crusader phase and an extension of the new

⁴⁶⁹ Brown 1988c; 1989, 287-292.

⁴⁷⁰ Brown, personal communication and Brown 2012, 166, n. 87.

⁴⁷¹ See appendix b for a comment on the pottery from excavations, surveys and surface collection at Karak castle.

⁴⁷² Brown 1988c, 12-38.

⁴⁷³ Lee 2003, quoted in Brown 2012, 165-166.

walls to the east of this earlier phase. It occupied all the upper extension of the rock spur and included a donjon to the south, a moat on this side of the castle, walls characterized by salients similar to those at Shawbak castle on the eastern and western sides, a northern wall at whose endings stood two projecting towers and almost certainly an entrance gate, and the castle chapel, fortified and projecting from the eastern wall enceinte. It also included a barbican projecting out of the walls, probably on the west side. The building technique of this phase is characterized by roughly worked building elements and reuse of earlier material.

- 3) Crusader phase II: interventions at the castle by Maurice (1152-1161) and Philip of Nablus (1161-1165/6). These included the cutting of a moat, probably the northern one (perhaps this was the work of Maurice), and the construction of the eastern reinforcements on the eastern side of the castle with towers which blocked the eastern window of the church, and perhaps destroyed the barbican which by now was not useful anymore (perhaps this was the work of Philip). This phase included the use of roughly cut stones, but less use of earlier materials and bossed stones used occasionally.
- 4) Crusader phase III: (1170-1184) reinforcement and reconstructions of the northern side of the castle, under the lordship of Walter III (1165/1166-1174), Miles of Plancy (1174) or Raynald of Châtillon (1177-1187). This intervention incorporated the first construction of the northern castle wall (Crusader phase II) by reconstructing this whole northern external wall and constructing a postern in its northeastern corner, perhaps replacing an earlier direct access on the north wall (maybe after the 1183 siege). Possibly, the construction of the large vaulted halls behind the northern wall also belongs to this phase. The building technique characterizing this phase included the use of bossed stones with unworked bosses positioned on the wall facing.
- 5) Crusader phase IV: repairs made after Saladin's attacks (1183-1188). These include the clearly visible repairs on the centre of the northern wall and the construction of a shield wall in place of the donjon which had probably been damaged by the sieges of either 1183 or 1184. The repairs on the northern wall were characterized by a building style made of long, roughly cut stones, arranged in regular courses and no use of bossed stones.

Perspectives for future research

It should be noticed that the fact that there were reconstructions at the castle from Payen's successors, in itself, is already meaningful of the importance attached to Karak by the Crusader lords for the Latin Kingdom of Jerusalem through the period 1142-1166, even before repairs and maybe reinforcements were made urgent by the threatens of Saladin's attacks. The castle is the most important in Transjordan for understanding the development of settlement in the region through time and contains a wealth of information.

Much more clearance will be necessary at the castle before it will be possible to survey the structures inside the fortifications and analyse their building phases. Excavation would also be important, after some work on reconstructing the building phases, in several key points of the castle. Much work can be done leading to important information on the castle's construction phases and building techniques. A complete identification of former structures both in the castle and town would also be interesting; earlier remains may include the medieval fortified monastery and the fortified Byzantine town with several churches, some of which were probably used until the Middle Age without interruption, as it could have happened for the church of S. George al-Khidr.

Another central point of future research should be recording the building techniques more in details, and record differences and similarities by phase, and to compare them with those used in the rest of the Latin Kingdom of Jerusalem.

3.3.3.2. The Karak plateau

Khirbat Faris is a rural settlement of the northern Karak plateau, about 25 km north of Karak and 15 km south of Wadi Mujib. In the 1980's, it was selected for a multidisciplinary project, with, among other aims, that of clarifying the common idea of Transjordan having mainly the function of a frontier military zone from the 10th to the 15th century.⁴⁷⁴ Stratigraphy and ceramics from excavations revealed a general continuity of occupation more or less from the Iron Age to the 20th century. However, the 12th century is part of a longer period, from the 9th to the 13th century, less characterized by construction activities, than the periods covering the 7th to 8th century and 14th to 19th century. Only one of the buildings that have been analyzed has identified traces of frequentation in the period including the 12th century.⁴⁷⁵ Some glass

⁴⁷⁴ Johns et al. 1989, 63.

⁴⁷⁵ Mc Quitty and Falkner 1993, 49; 60.

also may include 12th-century finds.⁴⁷⁶ The presence of a 12th-century Crusader *denier* (perhaps of the time of Baldwin III: 1143-1163) but perhaps minted into the early 13th century⁴⁷⁷ has been used to date a structure to the 12th to 13th centuries; its presence here may well be connected to the proximity to the King's Highway and Karak castle. This seems to be confirmed in general for the Islamic period by the preliminary analysis of ceramics, which included several imports.⁴⁷⁸

Al-Franj is a village about 1.5 km southwest of Karak, on the eastern slope of the Jabal Franj, where no medieval remains have been recorded.⁴⁷⁹ Only remains of the Byzantine period have been recorded there;⁴⁸⁰ however, it should be noted that its toponym perhaps gives a clue that this was a Frankish-inhabited village (meaning “the Franks’ settlement”), perhaps a suburb of Crusader-period Karak,⁴⁸¹ which would certainly fit with the very short distance from the castle.

In 1152 the Hospitallers received from Maurice, lord of Transjordan, donations both in the lands of Montreal and Moab; in Moab they included a village called *Cansir*, some land next to the vineyard of John the castellan, and parts of Karak castle.⁴⁸² A site called **Khanzira**, which may be possibly the same as *Canzir*, is located on the southwest borders of the Karak plateau and is one of its southernmost villages, just north of Wadi al-Hasa. While at al-Franji undifferentiated Late Islamic sherds had been identified, at Khanzira the pottery identified is called Ayyubid-Mamluk and perhaps Ottoman.⁴⁸³ The name of the site is not unique.⁴⁸⁴ Further comment on the origin of the toponym has not been offered in Miller's study of the Karak plateau, but this name in modern Arabic and its current meaning suggests a farming of pigs in the area, i.e. it must be connected with the presence of Christians, or, alternatively, it indicates a village with a bad reputation.

3.3.3.3. Conclusions

The historical sources suggest that a monastery was probably present in Karak town since the Byzantine period, built on the site of the fortified Byzantine town

⁴⁷⁶ Johns and McQuitty 1989, 254-256.

⁴⁷⁷ Johns and McQuitty 1989b, 250; 252; McQuitty 1994.

⁴⁷⁸ See appendix b.

⁴⁷⁹ Miller 1991, see foldable map, section 6 and page 88, n. 201.

⁴⁸⁰ Canova 1954, 219.

⁴⁸¹ Miller 1991, 283.

⁴⁸² Delaville le Roulx, J., 1894, I, 160, n. 207.

⁴⁸³ Miller 1991a, 318, 6, 148-149 (n. 401), foldable map section 12.

⁴⁸⁴ Another site with the same name is about 6 km south of Faifa, where Islamic-period pottery has been collected, including some glazed pottery. (Rast and Schaub 1974, 12-14 and 18) but apparently pottery of this period was very poorly represented (King et al. 1987, 451).

(Characmoba) which was big enough to have several churches. The monastery was further enlarged as its population increased in time, but when it attracted the Christian population near by and became a larger town where trade was flourishing, probably the earlier Byzantine walls could not protect the population anymore from the Bedouin incursions, likely attracted by the prosperous economy.

Qalqashandi's statement suggests that in Karak, as in the Jabal Shara, Frankish settlement went through various stages and was carefully planned; in the case of Karak, it is only after settling in the town for a few months or years that they decided to take the important initiative to make it the administrative centre of Transjordan. This must have happened, therefore, after having had the time to appreciate the many advantages of the area, including the short and even visual distance to Jerusalem, the fertility of the land, the various opportunities for trade with the local villages of the Ghawr and the Jordan valley, the position of control over both the King's Highway (for both military and commercial reasons) and the main connection to the Frankish territories in the west, and finally the largely Christian population.

In addition to indicating the continuity of settlement at the site since the Byzantine period, the information offered by Ibn al-Furat and Dimashqi in particular demonstrates that a Christian community had been there for centuries when the Franks arrived. Clearly, the whole area was largely Christian, as suggested by William of Tyre's account reporting that many Syrian families looked for safety in the castle during the siege of 1183.⁴⁸⁵ The process of settlement described by Qalqashandi is also suggesting that at a certain point in time, settlements like monasteries, at least in this area, might have changed in their safety requirements and become fortified because of the threat of the Bedouin. Moreover, it tells us that here the Franks dealt with the Bedouins for the protection of locals and were rewarded by incorporating part of the land, and controlling the town that they protected by fortifying it. However, dealing with the Bedouin probably involved more than just a passive structural defence, and it is reasonable to hypothesize that the Franks, like in the south, may have had financial agreements with them in terms of taking revenues from the traffic on the King's Highway.⁴⁸⁶

The process of first settlement in Karak, like in the Jabal Shara, was therefore characterized by careful planning, the selection of a Christian area on the King's Highway, and some agreement in the Bedouin populations.

⁴⁸⁵ William of Tyre, 22.28. Huygens 1986, 1057. For the relationship with the Christian population, see chapter 5.

⁴⁸⁶ For the relationship with the Bedouins, see chapter 5.

In terms of timing of the phases of settlement, if the Franks had already possessions in the Balqa as early as 1126,⁴⁸⁷ it is reasonable to hypothesize that settlement in Karak may also have started as early as this time, especially if we consider that during the expedition of 1100 to southern Transjordan, the Franks already explored the Ghawr al-Safi. It is likely that the Franks during this time may have mainly been in a phase of observation of the economic and social aspects of the area, before deciding on the large investment on a new castle, which however had the advantage of moving the centre of Transjordan considerably closer to Jerusalem. The choice of the moment of the construction of Karak castle, however, was also based on wider considerations involving the whole kingdom. According to Prawer, King Fulk's military policy was at this time to consolidate the Crusader conquests carried on by the earlier expansionist kings, by securing the borders with castles; Karak was therefore also, of course, part of a bigger political plan.⁴⁸⁸

As for the economic aspects, the position of Karak had the advantage to control traffic on the Dead Sea and south of it towards west, which must have been part of the economy of the Lordship. In Maurice's document of 1152 granting possessions and rights to the Hospitallers, he also gives them exemption from taxes when travelling and trading across the Dead Sea and permission to have a boat, rights confirmed by Reynauld of Chatillon in 1177,⁴⁸⁹ and Idrisi in 1154 mentions the traffic of boats on the Dead Sea (although he does not mention to which destination), some of which transporting dates.⁴⁹⁰ The area was certainly agriculturally productive: at the time of Thietmar's visit in 1217 to the "plains of Moab", he commented that it was abundant in goats and corn, although most people lived in caves. He commented that the land was flat, green but without trees.⁴⁹¹

Johns' study on the Karak plateau has concluded that in the 12th century there was a large number of agricultural villages and a lively and varied economy, which represented a pattern of continuity with the past, and which is supported by both archaeological and historical sources. This pattern was temporarily interrupted by Saladin's incursions in the territory in the years around 1181-1187, but this did not create a long-term disruption. However, an impact created on the territory was the creation of the castle itself, which, with time, increased the difference in the socio-economic situation between the castle inhabitants and the plateau inhabitants. The state

⁴⁸⁷ See Tibble 1989, 35-36.

⁴⁸⁸ Prawer 1972, 328 and ff.; Mayer 1990, 132-134.

⁴⁸⁹ Delaville le Roulx, J., 1894, I, 160, n. 207 and 355, n. 521; Röhrich, 1893, 71, n. 279.

⁴⁹⁰ Cited in Marmardji 1951, 15.

⁴⁹¹ Pringle 2012, 119.

of economy and population in the plateau in the Crusader period, moreover, are interpreted by Johns as appropriate to a peripheral zone. The period after the Byzantine/Early Islamic should not be seen as long decay; it was the Byzantine period which was unusually inflated.⁴⁹²

3.3.4. The Southern Ghawr and the Southern Jordan Valley

3.3.4.1. The Ghor al-Safi

Evidence from textual sources

Plenty of sources in the Islamic period mention Sughar/Zughar which has been interpreted as the flourishing Zoara of the Byzantine period, also represented in the Madaba map as a city surrounded by palm trees on the Dead Sea. The site of Zoara has been long recognized as located in the area of what is today Khirbat al-Shaykh 'Isa and Tawahin al-Sukkar near al-Safi in the Ghawr.⁴⁹³ It was so well known in the Islamic period that one of the ways to refer to call the Dead Sea itself was “The Sea of Zughar”, and the proximity to Zughar was otherwise used to explain the location of the Dead Sea itself.⁴⁹⁴ Zughar is mentioned by al-Muqaddasi in the late 10th century as one of the main towns of the Ghawr, although Ariha (Jericho) was considered more important.⁴⁹⁵

Zughar was known by al-Muqaddasi as extremely exotic to foreigners visiting for the first time, inhabited by black people and near some boiling water (i.e. the Dead Sea), so much so that it was apparently called “lower hell”,⁴⁹⁶ Yaqut was astonished at the idea that anyone would want to live in such an unpleasant climate.⁴⁹⁷

The importance of al-Safi is easily explained by the plentiful evidence in the sources from at least the 10th century of the great economic value attached to the location of the site. Istakhri-Ibn-Haukal said that along the Ghawr, which begins at the Lake of Tiberias and extends past Zughar and Riha down to the Dead Sea, are palm trees, meadows, springs, and streams.⁴⁹⁸ Some 11th century documents, the Geniza letters, state that at that time Zughar was involved in the trade between north Arabia and the Mediterranean.⁴⁹⁹

⁴⁹² Johns 1995, 11-14.

⁴⁹³ Miller 1991, 287; Albright 1924, 4.

⁴⁹⁴ Le Strange 1965, 64.

⁴⁹⁵ Al-Muqaddasi, 157.

⁴⁹⁶ Al-Muqaddasi, 149.

⁴⁹⁷ Goitein 1983, 44-45.

⁴⁹⁸ Le Strange 1965, 31.

⁴⁹⁹ Goitein 1983, 45.

The site was known by al-Muqaddasi in the 10th century as a site producing large quantities of dates and indigo,⁵⁰⁰ which is confirmed by several other sources. Idrisi in the 12th century wrote that the principal crop of the Ghawr, where the inhabitants are brown-skinned and some even black, was indigo.⁵⁰¹ A letter of AD 1065 witnesses that at the time indigo was brought from Zughar, and also that it was dangerous at that time to travel there from Hebron. Jewish merchants were particularly interested in the trade of indigo, which was used to extract dyes for textiles; Zughar included a Jewish population until at least the 10th century.⁵⁰² Jericho was also producing indigo,⁵⁰³ but its competition and the risks involved in reaching as-Safi apparently did not prevent production on the eastern bank of the Jordan from continuing to be quite important.

Nasir-i-Khusrau, in the 11th century, reported that bitumen was collected from the Dead Sea as a source for preventing worms from eating plants and trees but it was also traded to towns and countries nearby.⁵⁰⁴ In the area of the Ghawr there were also mines of sulphur and other minerals, and again according to al-Muqaddasi, salt was obtained from the Dead Sea.⁵⁰⁵ Finally, at the time of Muqaddasi there was a feast on the Dead Sea in the month of August when people with sicknesses would gather in the hope of being healed,⁵⁰⁶ so it is possible that al-Safi, being so close to it, was involved in this activity as well.

Idrisi specifies that there were ships crossing the Dead Sea to transport corn and various sorts of dates from Zughar and al-Darah to Jericho and to the other provinces of the Ghawr;⁵⁰⁷ it is interesting that a trade along cities of the Dead Sea is clearly witnessed in this report, and it is possible that boats were used to transport also other items in addition to dates. Yaqut stated that the main product of the time in the Ghawr, the 13th century, was sugar cane.⁵⁰⁸

In summary, indigo, bitumen, salt, dates, minerals including sulphur, are all witnessed as important products from the Ghawr already before the Crusader period, and dates and indigo production are mentioned as important specifically in as-Safi. Mention of sugar production seems to appear, however, only starting from the 13th century, and there is therefore no direct evidence for the production of sugar in the 12th

⁵⁰⁰ Al-Muqaddasi, 151.

⁵⁰¹ Le Strange 1965, 31.

⁵⁰² Gil 1992, 203, 206.

⁵⁰³ Al-Muqaddasi, 1 53.

⁵⁰⁴ Le Strange 1965, 65.

⁵⁰⁵ Al-Muqaddasi, 154.

⁵⁰⁶ Al-Muqaddasi, 156.

⁵⁰⁷ Le Strange 1965, 66.

⁵⁰⁸ Le Strange 1965, 31-32.

century, although if by this time there was already an important production in the Ghawr, this is supporting evidence for the fact that it may have been already established during the 12th century.

As far as Crusader-period sources are concerned, Fulcher of Chartres writes that during Baldwin's expedition of 1100 to Transjordan, he noticed a large quantity of palm trees, and the party he travelled with spent all day eating dates,⁵⁰⁹ but there is no mention of sugar production at this time on the Dead Sea and as-Safi.

According to Thietmar who visited the place in 1217, Zoara/Zoram, Khirbat al-Shaykh 'Isa, was also called *oppidum palme*.⁵¹⁰

Evidence from archaeological sources

Khirbet al-Shaykh 'Isa

Tawahin al-Sukkar and Khirbet al-Shaykh 'Isa in the Ghawr al-Safi were surveyed in the 1980s and their proximity suggested to the surveyors that they had been connected at some point in time. Sherds from this survey at Kh. al-Shaykh 'Isa produced fragments of the Islamic period starting from the Fatimid period and with a sudden increase in the Mamluk and Ottoman periods, just like anywhere else in the area, but no mention was made of the Crusader/Ayyubid period ceramics in the report. The site was identified as Zughar of the Arab geographers, flourishing in the early Islamic period and the Zoara of the Madaba map.⁵¹¹

Excavations at the sites of Kh. al-Shaykh 'Isa and Tawahin al-Sukkar from 2002 to 2009 have opened 8 trenches and recorded, mostly at Kh. al-Shaykh 'Isa, a large amount of Islamic-period pottery reflecting the evidence already collected by more recent surveys, and although the full stratigraphic information is not available yet, some ceramic types can be safely said to cover the 12th century; it can therefore be assumed that occupation was present at the site during this period, and that these objects show a lively trade with the Palestinian region, especially the coast. In particular, the recovery of cooking pots of the Beirut type both at Kh. al-Shaykh 'Isa and at Qasr Zuwayra south of the Dead Sea are evidence supporting that these two sites were, at least in the Ayyubid and Mamluk periods, connected to each other and an important connecting point between Transjordan and Palestine.⁵¹² In contrast with the conclusions drawn from

⁵⁰⁹ Fulcher of Chartres, II.-4-5; Fink 1969, 146; see chapter 2.

⁵¹⁰ Pringle 2012, 118.

⁵¹¹ King et al. 1987, 447-448.

⁵¹² See appendix b for more details.

the analysis of ceramics from the early surveys, the recent excavations at the site of Kh. al-Shaykh 'Isa have proved that the area was occupied from the Abbasid (8th century) to the late Mamluk period (15th century) and excavations in 2013 at Kh. al-Shaykh 'Isa revealed an even earlier occupation (5th-7th century), interpreted as belonging to the structures of the Byzantine Zoara.⁵¹³

A general continuity of occupation is supported by the stratigraphic situation and a 12th-century occupation at the site is also supported by the presence of a Crusader coin, currently under study, found in a 13th-15th century context (although its authenticity needs to be confirmed) and from a mid-12th century coin minted in Damascus. Other relevant items in the assemblage include several Ayyubid-Mamluk period slipper lamps from both Khirbat al-Shaykh 'Isa and Tawahin al-Sukkar, of a type produced in Jerusalem.⁵¹⁴ The nature of the occupation at Kh. al-Shaykh 'Isa appears to be mainly domestic but includes some industrial activity; however, all deposits containing pottery were from the 10th-13th centuries and included some very fine ceramic types. Pig bones appeared in the 6th-10th century phase but not in the 10th-15th century phase of one of the trenches explored; parrotfish was also part of the assemblage. The faunal analysis reveals an society based on agricultural production⁵¹⁵ The disappearance of pig bones in the continuing life of the village though the Middle Islamic period may be a clue that the village became largely or completely Muslim, whether or not the Jewish population was still present, and that the Christian population disappeared; the presence of parrotfish in several trenches at Kh. al-Shaykh 'Isa during the Mamluk period or earlier is very interesting because, since this product must have arrived from the Red Sea, it could be that this item was reaching locations as far from Aqaba as al-Safi, probably via Karak castle and the King's highway, therefore reinforcing the likely possibility that it is through this way that pottery was travelling from the Ghawr al-Safi (and Palestine) to sites as south as Petra.

Tawahin al-Sukkar

Archaeological research had originally suggested the presence of some earlier structures in addition to those above ground and that much of the buildings are buried by wind-blown sand and collapsed buildings. Moreover, many buried structures have been recorded by geophysical survey.⁵¹⁶ Current evidence at Tawahin al-Sukkar

⁵¹³ Personal communication from Konstantinos Politis, project director.

⁵¹⁴ See appendix b.

⁵¹⁵ Politis et al. in progress.

⁵¹⁶ Jones et al. 2000, 527, 532.

suggests that the sugar factory was operational between the 13th and the 15th centuries and was abandoned shortly afterwards; according to the team currently working at the site, evidence of earlier production activity is currently not available from former construction phases of the structures, and the study of sugar pots, currently in progress, does not allow at the moment the identification of 12th-century production.⁵¹⁷

In trench II, occupation was dated to the last part of the period 13th-15th century and it was mainly the waste of the industrial process, ceramics consisting mainly of sugar pots. In trench VI, burials of the 15th-16th century indicate that by this time the mills went out of use; probably the mill was therefore operational between the 13th and the 15th centuries and was abandoned shortly afterwards.⁵¹⁸

The fact that a bronze cauldron for boiling the sugar was found at Safi confirms that the production process here included both the crushing of canes and the boiling of the sugar juice. A large amount of cones was discovered at Tawahin al-Sukkar in an area identified as the one where the cones were broken, north of the eastern mill house. The large presence of sugar cones found at Kh. al-Shaykh 'Isa, in particular an intact one, have also been interpreted as this being a production site for this specialized pottery type.⁵¹⁹ Sugar pots possibly from as-Safi have been found at Karak. This would imply that at Tawahin al-Sukkar both sugar and sugar pots were produced, and since at Karak many sugar cones were found, possibly part of the sugar production from sites like as-Safi would travel to Karak in a sugar vessel, where it would be distributed. The fact that a large part of the breaking of the sugar cones, however, and therefore the preparation of the sugar for transport occurred here, suggests that the site, was distributing and trading the sugar products in different ways, as may also have been the case at other sites.⁵²⁰

Ceramic wasters were found in the stratigraphy both at Kh. al-Shaykh 'Isa and Tawahin al-Sukkar, and at Kh. Shaykh 'Isa also some kiln wall wasters from a pottery manufacturing structure were recovered.⁵²¹

Conclusions

In summary, 12th-century occupation at the site of Khirbat Shaykh 'Isa was almost certainly present, although the ceramic sequence does not currently allow one to narrow any further the time span of settlement at the site. Moreover, the pottery was not

⁵¹⁷ Politis, et al. in progress.

⁵¹⁸ Politis et al. in progress; Photo-Jones et al. 2002, 605.

⁵¹⁹ Politis et al. 2005, 324.

⁵²⁰ See appendix b, Karak.

⁵²¹ Photo-Jones et al. 2002, 612.

associated with specific structures by the excavators, perhaps because these were not visible in the trenches explored, or perhaps because the 12th century was incorporated in the definition of 'Ayyubid.' However, given the continuous occupation at the site and the domestic character of the earlier and following periods, it is likely that 12th-century occupation was also mainly domestic in nature; it involved the use of imported pottery which resulted from an intense contact with the Palestinian area, and probably also with Karak castle and the King's Highway.

While there is archaeological evidence for 12th-century settlement at Kh. al-Shaykh 'Isa, this does not imply that the Franks were controlling the Zughar village. If the stratified coin is authentic, this would not imply a Frankish control of the area, but would probably only reinforce the notion that al-Safi was connected with Crusader-period sites. Textual evidence does not provide any information on this, apart from Fulcher of Chartres' account of the arrival of the Franks in 1100, when he talks about the presence of a village with a large quantity of date trees.⁵²²

Evidence of occupation in the 12th century is not available at Tawahin al-Sukkar. The main structural phase at the sugar factory appears to be quite consistent, i.e. possible structures in elevation belonging to a former period are not obviously identifiable. Moreover, if the manufacturing activity was continuous from the 12th century at the site, we should perhaps expect a reuse and repair of former structures rather than a reconstruction on top of them, especially given that the basic technology for the sugar processing was generally the same, and it was already well known in the region.⁵²³

The analysis of the pottery, including the sugar pots⁵²⁴ does still not allow for accepting or rejecting the hypothesis that sugar production was already developed at al-Safi during the 12th century, although the knowledge for such activity was available at that time in the region. The evidence for the production of sugar at Tawahin al-Sukkar is therefore currently limited to the 13th-15th century; its beginning corresponds therefore with the peak in the production of sugar in the region in the Mamluk period, and its end after this time may well have to do with a general crisis of this production in the Middle East. It is therefore possible that it was one of those new sites established in the Mamluk period.

⁵²² See chapter 2.

⁵²³ See chapter 5.

⁵²⁴ It seems that ceramic remains, currently on study, were scarcer compared to those at Kh. Shaykh 'Isa, and consisted mainly of sugar pots.

Zughar was an important site in the Crusader period, whether or not it was already involved in the sugar production during the second half of the 12th century. Its position was looking at one of the most important crossings to west, and this has probably determined later on a good connection with Karak castle, as seems likely from the same types of pottery found at both sites; it was one of the main villages noted by the Franks during their first exploration of the south in 1110. Al-Safi may have had an economy based mainly on some of the resources mentioned in the texts, such as indigo and dates, until the 13th century, when the sugar industry started reaching its peak, and when, according to the sources, sugar was already the main product in the Ghawr. At both sites, the pottery indicates that there was termination of settlement at the end of the 15th century at the latest, despite the fact that the burials at Tawahin al-Sukkar may push the chronology of abandonment a little later. Based on a specific study of the chronology of the sugar pots at Tawahin al-Sukkar, now in progress, it should be possible to see if Kh. al-Shaykh 'Isa was also abandoned at the same time, the end of the 15th century, because of the end of the sugar industry in this area, after a period during which this became the main basis for the local economy, may have replaced the production of indigo, which until at least the mid-12th century was apparently still the main local product, and in many different sources until at least the 10th century it was mentioned with dates as the local product, while sugar is not mentioned.

3.3.4.2. Other sites

A survey of the Southern Ghor in 1982 recorded a gap between the Byzantine and the Fatimid period, when there is a recurrent but faint presence of settlement, and well represented Mamluk and Ottoman periods,⁵²⁵ however, it is necessary to be cautious because of the limited knowledge in pottery dating.

Two sites called **Birkat al-Hajj**, on the Lisan peninsula, include water tanks, one of them hypothesized to be used by pilgrims or caravans travelling sometimes between Karak and as-Safi. It can also be noticed, however, that it is very close to the ford on the narrowest point on the Dead Sea which was open until the mid 19th century. The position of the site would definitely be better explained by the function of assisting travellers to and from Palestine, who, even if the ford itself was not used, could still use boats through this point in order to have a shorter travel than they would from other points;⁵²⁶ if the situation of this point was similar in medieval times, it can be assumed

⁵²⁵ King et al. 1987, 451.

⁵²⁶ King et al. 1987, 445.

that travellers would have taken advantage of it, especially since Karak is located almost on a direct line east of the ford. This would definitely provide a shorter crossing than through Safi on the southern end of the Dead Sea.

At several sites along the Jordan Valley and the Ghawr sugar factories of the Middle Islamic period have been identified; at none of them has a specific analysis of sugar pots been done, so some of them may include a 12th-century phase, but they are included here as a possible answer to the Karak network of sugar-production sites during this period. Sugar pots appear in large quantities in Palestine during the Crusader period (including the 12th century),⁵²⁷ although at Tall Abu Ghurdan they do not appear before phase H, dated from the end of the 12th century to the 13th century.⁵²⁸

Sugar pots were recovered and therefore have been interpreted as relating to a sugar factory at **Abu Arabi al-Shamali**⁵²⁹ and at **Tall Fandi al-Janubi**,⁵³⁰ **Khirbat al-Mahruqat** (at this site, the fragments published appear to belong mainly to the Mamluk-period type)⁵³¹ **Tall Abu Sarbut** (published sugar pots appear to be Mamluk but a molasses jar with rounded rim may belong to the 12th/13th century),⁵³² and **Tall Dayr ‘Alla** (where the sugar pots were buried in graves of the cemetery);⁵³³ they were in a very large concentration in a small spot at the first three sites, perhaps an indication that this was the sugar-processing spot at the site. **Tall Abu Ghurdan** in the Jordan Valley was a village which used the nearby site of Tall Dayr ‘Alla as a cemetery in the late (perhaps mainly Mamluk) period.⁵³⁴ Due to the still unknown characteristics of local pottery, it was not possible to isolate a specifically 12th century phase, but here excavations revealed a long sequence of occupation, from the 7th to the 15th centuries; the ceramics included sugar pots not before the late 12th century and to the 15th century.⁵³⁵ A recent reassessment of the ceramic evidence from the site, however, suggests that the 12th century is included in phases F and G from Franken and Kalsbeek’s excavations.⁵³⁶

⁵²⁷ Avissar and Stern 2005, 86-87; 103-104.

⁵²⁸ Franken and Kalsbeek 1975, 143-154, fig. 39-45; Sauer 1976, 94.

⁵²⁹ Pringle 1997, 15, n.1; Lenzen, Kareem and Thorpe 1987, 316-317, n. 10.

⁵³⁰ Pringle 1997, 48, n.93; Lenzen, Kareem and Thorpe 1987, 315, n. 2.

⁵³¹ Mabry e Palumbo 1988a, 426-427, n.41; 1988b, 296-297, n. 41, fig. 14.96-100. Cfr. Avissar and Stern 2005, 86-87; 103-104.

⁵³² De Haas, LaGro and Steiner 1992, see figs.7-8 on page 338 and Avissar and Stern 2005, 103.

⁵³³ Van Der Kooij 1993, 342; Van Der Kooij, and Ibrahim 1989, 90.

⁵³⁴ Van Der Kooij 1993, 342.

⁵³⁵ Franken and Kalsbeek 1975; Sauer 1976; see appendix b.

⁵³⁶ Walmsley, unpublished

Other sites identified as sugar-producing sites were detected along the southern shores of the Dead Sea and the Southern Ghawr. At **al-Haditha**⁵³⁷ sugar pots were found. A site called **Tawahin al-Sukkar**, northwest of Karak, had sugar factory structures now vanished but whose original location is still remembered, pottery identified as belonging to the Mamluk and Ottoman periods; interestingly also some glazed wasters have been found here, suggesting that glazed pottery may have been produced locally.⁵³⁸ At **Fayfa al-Gharbiya**, there was a presence of sherds of the Islamic period. Here there is a resurgence of the Mamluk-Ottoman period as at the other sites in the Ghawr in general⁵³⁹ and remains of a sugar mill have been found here.⁵⁴⁰ In the ceramic assemblage, glazed cooking pots and slip-painted ware may include the 12th century.⁵⁴¹

At **Tall Sahl as-Sarabat**, interpreted as a site possibly related to glass manufacture, a continuous occupation identified as from the Fatimid to the Ayyubid/Mamluk period on the basis of ceramic remains may well include the 12th century,⁵⁴² but the published pottery does not allow for further comments.

3.3.4.3. Conclusions

Although it is certain that the Khirbat Shayikh 'Isa village was thriving in the 12th century, it is possible that the Franks did not identify as-Safi as an ideal place to organize a new settlement or re-organize the existing one. One of the possible reasons may have been the absence of a prevalent Christian population (as may be witnessed by the possible interruption of the use of pork in the diet during the Islamic period).

Moreover, the Franks did probably not have control of the Ard al-Karak and the Ghawr until they constructed Karak castle. From that moment, they may have been able to exercise control over the villages indirectly, from Karak castle, rather than from the villages themselves, in contrast to what happened, for example, in Wadi Musa, where they actually built structures in the local villages, such as a parish church.⁵⁴³ This kind of control may have meant just trading relationships with villages, and in the case of al-Safi, it may have been for purchasing pottery, dates and indigo, or other products from Palestine, to which it was clearly well connected. Unfortunately it is not clear when

⁵³⁷ King et al. 1987, 439-42; 453.

⁵³⁸ King et al. 1987, 443.

⁵³⁹ King et al. 1987, 449-450.

⁵⁴⁰ Mc Donald 1992, 258, n. 91 ; Mc Donald et al. 1987, 410, site 91.

⁵⁴¹ Whitcomb 1992, 115 and 234, pl. 30.

⁵⁴² Suleiman and Betts 1981.

⁵⁴³ See chapter 4.

sugar production was introduced in the area; but since it may have been already organized in the Ghawr and Jordan valley by the end of the 12th century, the relationship of Karak with other villages, including perhaps some of those mentioned above which were active in the Mamluk period, may have included purchasing sugar, perhaps transported with the cones, for distribution at Karak castle, as clearly happened for the Mamluk period. This would justify the name which was given to the sugar product and which refers to Karak castle. In summary, the castle was controlling the distribution and sale, probably through some sort of commercial agreement.

The fact that sugar pots at Karak came from several production centres, including possibly al-Safi⁵⁴⁴ is interesting because it proves that Safi was not the only sugar production centre in the Mamluk period serving Karak. It is likely that Karak was always supplied by a number of sugar production centres, including some closer to the castle, but the network was presumably much smaller in the Crusader period, when the process of organizing the system was still so much in the beginning.

Karak was also presumably well connected to the west not only through land connections, of which al-Safi seems to have been an important point but also through crossing the Dead Sea. This may have been especially useful when travelling to and from Jerusalem.

3.3.5. The south and the eastern Wadi Arabah

Tafila

The existence of a castle (*castrum*) of Traphyla (read as *Taphyla*) is witnessed by a 13th-century document among the possession of the sultan around 1239.⁵⁴⁵ A certain Martin, lord of Taphilia, is mentioned in 1177,⁵⁴⁶ and it is assumed that he was most likely connected to the existence of this medieval settlement and castle. This has led some scholars to suggest that Tafila was one of the seven fortresses dependent on Karak castle.⁵⁴⁷ The identification of the Crusader castle with modern Tafila is persuasive because Tafila was attacked in 1156 by an expedition from Egypt together with Shawbak castle, about 30 km south of it on the King's Highway.⁵⁴⁸

In terms of the existence of material remains, the castle has not been safely identified, but Musil noted that the presently standing fortification on top of a hill in the

⁵⁴⁴ See appendix b.

⁵⁴⁵ Deschamps 1941, 88, 90; Pringle 2012, 182.

⁵⁴⁶ Röhrich 1893, 144, n. 542.

⁵⁴⁷ Rey 1883, 395; Prawer 1975, II, 156, n. 53.

⁵⁴⁸ See chapter 2.

modern village of Tafilā included older building materials.⁵⁴⁹ This may well be the location of the Crusader-period castle.⁵⁵⁰ Brünnow and Domaszewski noted that the town of Tafilā has a very advantageous strategic position and that it is set in a very fertile area.⁵⁵¹

Khirbat al-Silā‘

This site, opposite a village with the same name, north of Busayra and south of Tafilā, was first noted by Musil as a fortified site located on a natural high place near a cultivated area.⁵⁵² The identification with the Crusader-period fort (Sila) mentioned by Ibn al-Athir and Abu Shama as falling at the same time as Shawbak and the Petra castles in 1188 and from this moment taken under the responsibility of al-Malik al-‘Adil⁵⁵³ is currently supported by several scholars.⁵⁵⁴ The fact that the site is mentioned in the sources also suggests that it was a fortification of a certain importance, either strategically or in terms of the size of the castle. This would fit well with the fact that Sila is listed by Abu Shama with sites like Hurmuz, as controlling its own territory, and therefore was not simply an outpost depending on another castle.

Surface collection has recorded ceramics dating from the Early Bronze Age to the Islamic period (identified as Mamluk) which made up most of the fragments; rock-cut structures, including many large cisterns and apparently Nabataean-period cultic features were also recorded, although Nabataean fragments were apparently a minority compared to those of other periods. The survey also recorded a keep made of rock-cut features and masonry and several rock-cut towers and habitations, and it was noted that in most buildings the carved rock was complemented by masonry.⁵⁵⁵ Although of course, this cannot exclude that the structures could belong to a different period, it should be noted that the fact that masonry was used in connection with rock-cut features (often reusing those of the Nabataean period) is a building style encountered in Petra at the main Crusader-period castles of al-Wu‘ayra and al-Habis.⁵⁵⁶ Most fragments have been attributed to the Mamluk period; however, it can be observed that the chronological interpretation of this type of pottery has received in Petra from Lindner in other publications is not grounded on a local ceramic chronology, and therefore, these

⁵⁴⁹ Musil 1907, 317.

⁵⁵⁰ Pringle 1997, 98.

⁵⁵¹ Brünnow and Domaszewski 2004, I, 110.

⁵⁵² Musil 1908, 318.

⁵⁵³ See chapter 2.

⁵⁵⁴ Zayadine 1985, 167-168, fig. 9; Pringle 1997, 95, n. 202.

⁵⁵⁵ Lindner 1983, 268-271; Zayadine 1985, 167.

⁵⁵⁶ See appendix b.

fragments should probably be interpreted more broadly simply as belonging to the Islamic period.⁵⁵⁷ Several aspects therefore generally support an attribution to the Crusader period.

The relatively short distance from Tafila raises the question of the function of this castle, of its connection to the castle in Tafila, and of the density of settlements in this specific portion of the King's Highway.

Gharandal

Located about 15 km S/SE of Tafila and 5 km SE of Busayra, the site is located on a spot rich with water and suitable to agriculture, an important site in the Byzantine and Early Islamic periods.⁵⁵⁸ The study of pottery shows that the 12th century at the site was included. This period seems to represent rather elements of continuity than of rupture with the past; moreover, it does suggest that the area had a lively economy in the broader period between the Byzantine and the Mamluk period, and that there is continuity of occupation at the site through these periods, often supposed to represent a gap in settlement in Transjordan.⁵⁵⁹

Ma'an

The presence of a fortification located in Ahamant, as witnessed by the sources,⁵⁶⁰ has led some to hypothesize that its remains could be found here, where there is a fortified building,⁵⁶¹ but the oldest buildings recorded at the beginning of the 20th century were dated at the latest to the 18th century.⁵⁶² Ahamant has therefore been identified with Amman.⁵⁶³

Hagenmeyer identifies Susumus, the site mentioned by Albert of Aachen as attacked by Baldwin I during his expedition in 1100, as Ma'an, while Mayer identifies it as Wadi Musa.⁵⁶⁴

Udhruh

According to Kammerer, the church at Udhruh has traces of "catholic" use, but he does not specify what these were.⁵⁶⁵ However, a superficial observation of the ruins at

⁵⁵⁷ See chapter 4.

⁵⁵⁸ Walmsley and Grey 2001, 139.

⁵⁵⁹ Walmsley and Grey 2001, 148-163; see appendix b.

⁵⁶⁰ See chapter 2.

⁵⁶¹ Rey 1883, 398.

⁵⁶² Kammerer 1929, 354-355.

⁵⁶³ See Amman.

⁵⁶⁴ Mayer 1990, p. 183; see chapter 2; Albert of Aachen 7.42; Edgington 2007, 549, note 58.

the Udhruh Byzantine church does not show obvious traces of repairs in the walls. It seems that in general the church may have been still in good conditions during the 12th century.⁵⁶⁶

Early explorers observed that there was a tradition of presence of Christian population at the time.⁵⁶⁷ It has been suggested that it may have been here that Baldwin I camped on his expedition in 1100,⁵⁶⁸ as Ma'an, while Mayer identifies it as Wadi Musa

Aqaba and Jazirat Fara'un

There is no direct mention in the sources of a castle built in the Aqaba region, although Saladin conquered one in 1170, and the presence of several fortifications in Aqaba has made its location doubtful. Lack of identification with material remains of the castle or castles of the Frankish period mentioned in several historical accounts has led to several tentative interpretations or assumptions by scholars about its location, without, however, reaching any persuading conclusion. One of the hypotheses offered was for example the one that the site of Ayla had been suddenly abandoned because of the Crusader garrison arriving in 1116, that the local population took refuge on the island offshore from Aqaba, Jazirat Fara'un, and that the Franks built a new fort, probably under the Aqaba Mamluk and Ottoman castle, where resources were now more readily available. Another of the reasons carried forward for this hypothesis is that it may have been more convenient to build another fortified site rather than using an old one.⁵⁶⁹

Recent work by D. Pringle has finally clarified that some of the textual evidence indicates without any doubt that the Crusader castle mentioned in the sources was not located on the mainland, but on the island off-shore from the Egyptian coast and about 15 km from Ayla, Jazirat Fara'un, where a heavily reconstructed Ayyubid fortification now stands.⁵⁷⁰ This is an important starting point for being able to locate potential archaeological remains and to comment on the Aqaba castle in the broader discussion of Frankish settlements in Transjordan.

⁵⁶⁵ Kammerer 1929, 352.

⁵⁶⁶ Observation from personal observation of the church at the site.

⁵⁶⁷ Brünnow and Domaszewski, I, 462.

⁵⁶⁸ Fazy 1936, 481.

⁵⁶⁹ Whitcomb 1997.

⁵⁷⁰ As is clear from the accounts of 'Imad ad-Din, Abu Shama and Maqrizi: Pringle 2005b, 338-339; see the whole contribution for a comprehensive review of the evidence from the historical sources and of the several interpretations by other scholars of the location of the castle.

The castle has been surveyed,⁵⁷¹ but details about the construction techniques have not been published before the conservation. It has been observed that it has been constructed without mortar, that the stones are not dressed and that roofs and platforms generally covered palm logs, finished with clay.⁵⁷² Despite the distance of the castle from Petra and Shawbak, it can be observed that the aspect of dry building is not encountered in those areas, unless the site was not supposed to be a main fortification, as perhaps at Wadi Farasa.⁵⁷³ The site was also excavated by the Israelis between the 1970s and the 1980s, but a published report on the results is not available. It has been rightly noticed that the castle was clearly threatening the safety and passage through the area, although it was relatively small and could therefore only accommodate a small garrison.⁵⁷⁴ It is witnessed in the textual sources that it did not have direct access to water resources because Raynald of Chatillon in 1182/1183 attempted to cut off their water supply by a blockade,⁵⁷⁵ and the way of supplying the water on the island is made clear especially by an account of Maqrizi; the garrison normally took water from a well in the mainland, because a heavy rain in 1181 allowed the garrison not having to go to the well for a month, which was presumably at some distance; this also implied also that the castle had also some water catchment system on the mainland immediately on the shore.⁵⁷⁶ In 1217, Thietmar saw the castle and reported that he got sick from drinking water from there, presumably because of the bad conditions of the cisterns, but that however a good spring was not far away.⁵⁷⁷ Because of the small size of the castle, it probably would not have accommodated a large garrison, but given the care that was given to have large supplies of water available during sieges in the other Frankish castles in the region,⁵⁷⁸ it should be expected that the Franks took great care of this aspect for the Ayla castle, and that the cisterns would be capable of sustaining a long siege and be kept clean, since the castle is mentioned as one of the most important ones in the region. Idrisi stated that there was no water in Ayla,⁵⁷⁹ perhaps meaning that there are no springs near the town on the mainland.

⁵⁷¹ For a top plan and profile of the castle, see Kammerer 1929, 353.

⁵⁷² Brooker and Knauf 1988, 187.

⁵⁷³ See appendix b.

⁵⁷⁴ Lyons and Jackson 1982, 43.

⁵⁷⁵ According to 'Imad al-Din and Ibn al-Athir (see chapter 2).

⁵⁷⁶ Pringle 2005b, 342.

⁵⁷⁷ Pringle 2012, 123.

⁵⁷⁸ See especially Shawbak and al-Wu'ayra, where a cistern was protected by a fortified church, and al-Habis, where a large Byzantine cistern was reused and partially reconstructed during the Crusader presence at the castle.

⁵⁷⁹ Le Strange 1965, 549.

Remains of a wall surrounding the island may belong to a much earlier fortification, perhaps Middle Bronze Age⁵⁸⁰ It is interesting that the evidence collected so far for Crusader-period castles (and not only) does suggest that in the whole region the presence of already available building material was highly valued and very often, for this and other reasons, a new settlement was constructed on an older one,⁵⁸¹ and therefore the fact that a castle was constructed by reusing some ruins on the island fits better than the proposed idea of a completely new settlement at the site of the Mamluk castle.

Although some scholars have suggested that there may have been two castles,⁵⁸² or at least a bridgehead on the mainland to secure control of the city and of its communications,⁵⁸³ there do not seem to be any clues in the textual sources to support the hypothesis that there was also a second castle on the mainland. There is also no evidence to date of possible Crusader-period structures on the mainland.

The archaeological evidence from the Mamluk-period fort suggests that earlier structures may have occupied the site, and dates are supported by C14 analysis, but these have been identified as remains of structures rather connected to agricultural activities (phase I, 8th-12th century) and to the first phase of a Khan (phase II, late 12th-early 13th century) before the construction of the 16th century Khan still largely in place today.⁵⁸⁴ Ceramics from the castle⁵⁸⁵ may cover a 12th century chronology, and would therefore fit with the evidence of settlement of this period from the excavations, but this does not imply in any way that this was the location of the Crusader castle.

The lack of evidence of a 12th-century castle is clearer from the excavations at Ayla, where Whitcomb has interpreted the end of the occupation at the site by the late 11th century or early in the 12th century,⁵⁸⁶ and seems to be generally supported by the ceramic evidence,⁵⁸⁷ although according to the current excavations, some mid 12th century ceramic types (a type of porcelain) may indicate that settlement at the site did not stop until this time. However, it is not thought that a fortification was here at this time.⁵⁸⁸

⁵⁸⁰ Pringle 2005b, 340.

⁵⁸¹ See appendix b.

⁵⁸² Deschamps 1939, 44; Prawer 1975, I, 297.

⁵⁸³ See for example Al-Shqour, De Meulemeester and Herremans 2009, 642.

⁵⁸⁴ Al-Shqour, De Meulemeester and Herremans 2009, 642-649.

⁵⁸⁵ See appendix b.

⁵⁸⁶ Whitcomb 1988; 1987.

⁵⁸⁷ See appendix b.

⁵⁸⁸ Personal communication by Kristoffer Damgaard, project director, Ayla excavations, March 2010.

Aqaba was traditionally located at an important crossing point of roads, including during the Medieval period, the Darb al-Hajj, the pilgrimage road to Mecca and Medina, and the Darb al-Shi'wi, leading through the Sinai.⁵⁸⁹ The presence of a castle on the island would have therefore at the time of the Crusades been important for controlling the Damascus-Cairo road, in particular the critical point of the Naqb al-'Aqaba, only 10 km away; this would have served the double purpose of protecting the pilgrims travelling to Sinai and controlling the roads through the southern deserts, as part of a wider policy of the Latin Kingdom of Jerusalem.⁵⁹⁰ Qalqashandi reports that during the conquest of 1170, Ayla was located under the 'Aqaba pass on the route of the pilgrims from Egypt.⁵⁹¹ However, by the time Thietmar had visited the site in 1217, it seems that the castle, although not abandoned, was inhabited by poor fishermen, both captive Christians and Muslims,⁵⁹² and by the time the Franks lost control of the region in 1187, it would have lost its importance as a fortified post.⁵⁹³ Saladin did manage to take the castle in 1170 as part of his efforts to attack the Kingdom from its southern borders, since only a few months earlier he attacked unsuccessfully Darum and Gaza.⁵⁹⁴

Concerning the dates of the control of Aqaba by the Franks, Mayer suggested that it was not until the reign of Fulk that Ayla was under Frankish control, since in 1134 Ayla still had an Egyptian governor; Pringle proposes that probably this area was actually not firmly under their control until after 1154, because at this time Idrisi described Ayla as a town controlled by the Arabs.⁵⁹⁵

⁵⁸⁹ Zayadine 1994, 500-501.

⁵⁹⁰ Pringle 2005b, 347; Prawer 1975, I, 298; Runciman 1952, II, 98.

⁵⁹¹ Pringle 2005b, 338.

⁵⁹² Pringle 2012, 123.

⁵⁹³ Pringle 2005b, 347-348.

⁵⁹⁴ Pringle 2005b, 337; Lyons and Jackson 1982, 43.

⁵⁹⁵ Le Strange 1890, 549; Pringle 2005b, 337; Mayer 1990, 54 and n. 90.

Chapter 4

Petra and the Jabal al-Shara

4.1. Current interpretations of Crusader-period settlement in Petra and the Jabal al-Shara

This theme has been, perhaps surprisingly, very little developed. The first attempt to advance a theory on the significance of the Crusader-period settlements in Petra was by Philip Hammond, who also produced in 1970 the first publication of data from a Crusader-period settlement in Petra, al-Habis castle, which is currently still the only one completely published, beside Robin Brown's work. In addition to a review of earlier explorations at the site, an analysis of historical sources related to the area of Petra and Transjordan, and short observations on the architecture and building techniques of the Crusader period at al-Habis, Hammond presented his own interpretation of the Frankish settlements in the Petra region and of the role and identification of al-Habis castle in this context.

Hammond believed that the fortifications of southern Transjordan, including Shawbak, the Petra settlements and Aqaba, were all founded by 1115-16 and, following Rey, that by the death of Baldwin I (1118) a line of fortified sites already stretched from Jerusalem to the Red Sea. He defined the settlement system as a feudal one, based on a network of fortified sites.⁵⁹⁶

Hammond argued that the system of fortifications in Petra reflected a characteristic feature of the Latin military approach, where smaller posts were used to control points of strategic importance, which it was not possible to check from the main fortress; al-Habis was able in this case to control several routes around Petra, otherwise not easily accessible from al-Wu'ayra (الوعرة). Also, the two castles would be able to communicate thanks to their mutual visibility, for example with fire signals; al-Habis would be only the main of a series of watch posts in the Wadi Musa area, including the Jabal Attuff. The small size of the castle and the fact that it does not include a chapel, halls, and extensive storage areas would point to its secondary role. He therefore identified al-Habis as a minor castle, whose name is not mentioned in the documents listing the castles because of its limited importance.⁵⁹⁷

In terms of chronology, Hammond proposed that the date range for the construction of al-Wu'ayra was 1108-16. He therefore suggested a date range of 1116-

⁵⁹⁶ Hammond 1970, 7, 9.

⁵⁹⁷ Hammond 1970, 33; 38.

18 for al-Habis castle, on the basis of the observation that it was a subsidiary installation dependent on al-Wu‘ayra and therefore later than it. He also observed similar characteristics of construction between the two. Because he detected no signs of violent military disaster, he interpreted the end of the occupation at al-Habis as if the castle was abandoned before the fall of al-Wu‘ayra castle in 1188, perhaps because of an earthquake; the lack of signs of a re-occupation he interpreted as resulting from the area’s loss of strategic importance for the Muslims, once Petra was included in the area that they controlled.⁵⁹⁸

Hammond stated that the road north–south linking Egypt with the north (i.e. the King’s Highway) passed through Wadi Musa and therefore control of this route was imperative for the Franks, and the fact that Petra was located on the branch leading to the coast made control of the valley essential for the revenues of the Kingdom; for this reason, Petra emerged once again during the Crusader period as a site of primary importance for the history of the entire Near East.⁵⁹⁹

The work of Robin Brown has focused on a preliminary analysis of a series of sites (al-Wu‘ayra, Shawbak, Karak) and was aimed at understanding at these sites a period ranging from Crusader to Ottoman, and not specifically the Crusader period.

In the more general framework of his study of Crusader-period sites in the Latin Kingdom of Jerusalem, Denys Pringle has offered some thoughts on Crusader-period sites in Transjordan, by collecting the historical sources for every known site and carrying on a historical study at all of them, completed by architectural surveys at some of the structures, Shawbak in particular. On this basis, and for what concerns the Petra and Jabal Shara area, he proposes that the date of foundation of al-Wu‘ayra is to be placed after 1127 and that sources suggest that settlement was not contemplated until *Montreal* was founded in 1115 as the first settlement in the area and a centre for Frankish settlement, which was largely based on agriculture and on taking advantage of the revenues from the Darb al-Hajj.⁶⁰⁰

The only other attempt focused specifically on understanding the Crusader period in Southern Transjordan and Petra has been that of Guido Vannini and his team, who since 1986 have been conducting fieldwork, including excavation and survey, at the sites of al-Wu‘ayra, Shawbak and al-Habis. Publications have so far set out the team’s proposed interpretation of the pattern of settlement, rather than offering data, which remain mostly still unpublished. The settlement model proposed by Vannini, which

⁵⁹⁸ Hammond 1970, 35-36.

⁵⁹⁹ Hammond 1970, 39.

⁶⁰⁰ Pringle 1993; 1997; 1998; 2001.

follows and supports completely Hammond's, will be here examined in detail, since it is the most recently presented and at the same time it has been consistently proposed, more or less without variations for the last 20 years and more.

The core concepts of Vannini's view are perhaps presented most clearly and comprehensively in an article dating from 1995. The aim of his project was to define the characteristics of European settlements in Transjordan during the 12th century, paying specific attention to how they took root there, the relationships with the local culture and the profound changes introduced by the Europeans.⁶⁰¹ According to Vannini, the Europeans' principal aim in settling in Petra was to control the Petra valley itself. This was shown by the presence and position of the Crusader fortifications around the Petra valley, which would have been built more or less simultaneously as part of the same programme. More specifically, the aim behind the construction of al-Wu'ayra (the main castle controlling the main access roads to the Petra valley from Wadi Musa) and of the fortifications on al-Habis and Jabal Attuff was to secure control of the bottom of the Petra valley and to make it "a safe and strategically well-located town by taking advantage of its favourable position."⁶⁰² This interpretation was confirmed by the lack of "maintenance services" at al-Wu'ayra and al-Habis, which supported the idea that "the headquarters of the Europeans were elsewhere, and specifically in the carefully guarded bottom of the valley." The team's surveys, moreover, illustrated the range of the entire settlement system and supported the central importance of the Petra valley as a site for Frankish settlement.⁶⁰³

For what concerns the chronology of this system, Vannini argued that the building programme of the Crusader settlements in Petra "must have begun in the first decade of the 12th century" and was "carried on by the second decade of the 12th century", resulting in a co-ordinated project of fortification in the region of Petra being established by the first 15 years. Vannini argued that a construction programme was completed by the Crusaders in a quarter of a century between the Yarmuk River and the Red Sea and that the founding of the lordship of Transjordan represented an unexpected success; however, reasons for why this success was unexpected are not given.⁶⁰⁴

A second concept proposed by Vannini and his team was that the Crusader settlement in Petra resulted in "a rapid though ephemeral re-emergence of the historical conditions that had already constituted twice in the past the basis of the fortunes of

⁶⁰¹ Vannini and Vanni Desideri 1995, 509.

⁶⁰² Vannini and Vanni Desideri 1995, 512 and 513, note 12.

⁶⁰³ Vannini and Vanni Desideri 1995, 512-513.

⁶⁰⁴ Vannini and Vanni Desideri 1995, 511-513.

Petra.” This view, also following Hammond’s model, was based on the notion that Petra had been abandoned since the early Middle Ages (to be presumably understood as the early Islamic period) and that the Crusader-period led to “the reoccupation of the ancient Nabataean capital—after a period of abandonment lasting almost half a millennium.” Petra became “the focal point (together with al-Karak, and probably even more so that al-Shawbak) of the entire system of defence and colonization of the Lordship of Transjordan.” In addition, the presence of several settlements in a small area is noted, which is considered proof that the Petra area had great importance when compared to other areas in Crusader-period Transjordan. “After the fall of the Latin Kingdom, also, Petra became deserted and the same phenomenon of decadence that had been caused by the Roman (and later Arab) conquest occurred all over again. In this manner Petra suddenly became a site of minor importance without a lasting settlement...”⁶⁰⁵

Some considerations on the archaeological consequences of this settlement pattern are also advanced. According to Vannini, the re-emergence of the importance of Petra for the short duration of the Crusader period, and therefore the lack of settlement immediately before the Franks’ arrival and after their departure, is one of the elements that creates ideal conditions in which to analyse the Crusader phase in this region – this along with the fortunate conditions of preservation of the archaeological areas. This aspect, however, is considered specific to the whole Transjordan, since the Crusader sites of Transjordan are “usually preceded and followed by cultures which are radically different and therefore have an easily recognisable material culture; this offers excellent conditions for offering precisely dated archaeological material.”⁶⁰⁶

All the ideas summarized here, including the chronology of settlements, are re-stated in all the subsequent publications of the project team, which only reinforce what had already been said before. For example, a paper in 1997 states that ‘the region of Petra... was the focal point of the renewed settlement system of Crusader Transjordan, from al-Karak to Isle de Graye’, to the extent that when Karak was chosen as the capital of the Seigneurie, this had no substantial consequences for the role of Petra).⁶⁰⁷ The main difference of more recent publications is that new sites are included in the discussion in order to support the model proposed.⁶⁰⁸ Thus it is proposed, for example, that the castles of Petra formed “an authentic, complex, mature traditional feudal

⁶⁰⁵ Vannini and Vanni Desideri 1995, 512, 513, 515, 538.

⁶⁰⁶ Vannini and Vanni Desideri 1995, 509-510, 512.

⁶⁰⁷ Vannini and Tonghini 1997, 371-373.

⁶⁰⁸ Vannini and Tonghini 1997; Vannini and Nucciotti 2003; Vannini 2007; Vannini 2009; Vannini 2011a ; Vannini 2011b; Vannini 2012; Vannini and Nucciotti 2012.

fortification system of the whole valley, founded on the two large castles of al-Habis and al-Wu‘ayra, and other strongholds including among others those located in the Jabal Attuff or al-Khubthah”⁶⁰⁹ and the concept is expressed that Petra was a “frontier” in the sense that it was a region that united the west and the east in the same way that it had during the Nabataean period.⁶¹⁰ In his most recent publications, Vannini has stressed again this model by stating that the conquest of the Franks in the period 1100-15 involved the whole territory of southern Transjordan as far as the Red Sea, that Shawbak was part of a territorial system centred on the Petra valley, which emerged after an eclipse of half a millennium thanks to a classical feudal system centred on the castles of al-Wu‘ayra and al-Habis, and that an extraordinary confirmation of the proposed settlement model came from some recent discoveries. These included the sites of Wadi Farasa and Baydha, and traces of ploughing in the Petra Pool Complex. Shawbak and the Petra region were seen as lying in a kind of “no man’s land “ between Egypt and Syria from AD 630, until the Franks brought an end to their marginality.⁶¹¹ The idea that the Petra and Shawbak regions become a “no man’s land” after AD 630 is again repeated in another paper, but it is now said that the area gained in the Crusader period “role, identity and importance” that would never be lost again. Also, that the fortunate stratigraphic conditions of Transjordan were unique and not shared by settlements in Palestine, and that the control of the Petra valley was the main aim of the Franks in the area, a fact confirmed from the presence of settlements of Wadi Farasa and Baydha; it is again repeated that the system of settlement, finally, was feudal.⁶¹² It is added also that Shawbak from the analysis of the textual sources emerges as a much more important site than Karak.⁶¹³

In summary, the core concepts of Vannini’s theory may be identified as follows. Settlement was characterized by a pre-conceived strategy on the part of the Franks, rather than a gradual process of settlement formation. The foundation of most settlements occurred between 1110 and 1120, both in Petra and in the rest of Transjordan in the area from the River Yarmuk to the Red Sea. The arrival of western European populations bringing their own new settlement models had an intense impact on Petra. The Petra valley was the main focus of Crusader-period settlement in southern Transjordan, and the headquarters of Frankish settlement in the area was carefully guarded by a number of small forts, such as al-Habis, Jabal al-Khobta and Jabal Attuff.

⁶⁰⁹ Vannini 2011a, 297-298.

⁶¹⁰ Vannini 2007, 15.

⁶¹¹ Vannini 2011b, 145-148.

⁶¹² Vannini 2012, 35-36.

⁶¹³ Vannini 2012, 36; Vannini and Nucciotti 2012, 137.

Al-Wu‘ayra was founded before Shawbak and Shawbak itself was part of a settlement system protecting the Petra valley. An important phase of revival for Petra occurred during the Crusader period, between a period of abandonment of half a millennium and a subsequent loss of its importance after the Franks’ departure. The easily recognizable material culture of the Crusader period helps to identify settlement of this period from that of earlier and later ones.

Vannini’s model therefore follows Hammond’s model in all his points, with the additional concept, developed from Hammond’s statement of the presence of fortifications around the Petra valley, that the focus of settlement during the Crusader period in the Wadi Musa area was not Wadi Musa itself but the Petra valley, to the extent that Shawbak castle was also built to protect access to it. In addition, it is stated that the new excavations at Wadi Farasa, Baydha and the Petra Pool complex support the theory of the Crusaders’ aim of controlling the Petra valley. The other element emphasized in comparison to Hammond’s view is the assertion that the Crusader period brought a moment of exceptional revival, and that the Petra valley was largely abandoned in the periods before and after this one.

Hammond’s and Vannini’s model, which has now been consistently proposed for more than 40 years, and in particular by Vannini for about the last 20 years, is the currently acknowledged one, but it will be demonstrated in this chapter that all its points need to be revised substantially and different conclusions reached. The reasons for the need to revise this model are first of all a general problem of methodology, a lack of updates on the development of archaeological work in the region, and the existence of some pre-conceived ideas about settlement in the Crusader period. More generally, the proposed model does not have a solid basis because the reasons for supporting the theory’s core concepts and the data necessary to back them up have in fact never been offered. This settlement model will be discussed after summarizing the available historical and archaeological evidence for the area analysed.

4.2 Description of the area of Petra and the Jabal al-Shara

The limestone massif of the Jabal Shara rises to over 1,700 m, and Petra, on a sandstone formation to its west, was chosen for its location on the western slope of the mountain because it is at the interface of the two formations that perennial springs are formed. Several villages such as Wadi Musa and Tayyiba are located along this spring line. On the eastern side of the mountains is Udhruh with the largest perennial spring on this side of the plateau. Because of the steepness of the mountain towards the west,

precipitations often occur as torrential rains, which do not allow slow infiltration into the soil and create erosion; therefore, on the mountain itself fertility is mediocre and soils are not easily regenerated. However, the agricultural potential is very high in the lower exposures of sandstone under the western side, in spite of the limited usable surface area; several sites on the plain, such as at Baydha, have been traditionally used for agriculture, such as production of wine. While the Classical period fell into a phase of wetter weather and therefore good agricultural conditions, the Islamic period was characterized by a dry phase. However, since Abu Shama mentions that wood was transported from here to the Red Sea in the 12th century it is possible that there was also a temporary return of wetter conditions in this period, perhaps indicated by the rise in the level of the Dead Sea, and that a reduction in the forest exploitation of the Early Islamic period could have created the conditions for a regeneration of the plant cover on the mountains.⁶¹⁴ For these reasons, the area of Wadi Musa is still nowadays well suited for cultivation; the early travellers to Petra were impressed by a land suitable for agriculture, pasture, wheat and fruit trees of different kind.⁶¹⁵

The area of Wadi Musa is described as very fertile in the medieval sources,⁶¹⁶ and the same can be said about Shawbak. In the early 14th century Abu al-Fida described Shawbak as located in the Shara province and as a small town with many gardens and mainly Christian inhabitants. He adds that at the foot of the hill are two springs, one to the right and one to the left, and their water runs through the town and irrigates the gardens which are in a valley to the west of the town; its fruits, including apricots, were exported even to Egypt.⁶¹⁷ Al-Dimashqi, contemporary of Abu al-Fida, also celebrates the richness of the fruits and sources in the fertile city of Shawbak.⁶¹⁸

The fertile character of the Shara area, separating the western side, suitable for cultivation, from the steppe, on the eastern side, offers an interesting example of coexistence in history between sedentary and nomadic population, confirmed by the surveys offering examples of agricultural terraces associated with rock shelters for flocks. It appears that the existence of both groups was not simply characterized by competition, but by a much more interesting system where they were working in synergy with each other for a better exploitation of resources.⁶¹⁹

⁶¹⁴ Tholbecq 2013, 296-297.

⁶¹⁵ See for example Brünnow and Domaszewski 2004, 430.

⁶¹⁶ See chapter 2.

⁶¹⁷ Abu al Fida, 247, cited in Le Strange 536.

⁶¹⁸ Cited in Faucherre 2004, 45.

⁶¹⁹ Tholbecq 2013, 297-298. See also chapter 3, and al-Karak, for similar considerations about the interaction between nomads and farmers on the Karak plateau.

The road southwest of Wadi Musa and through the village of Tayyiba nowadays connects to the Desert Highway and Aqaba, while a modern road leading northwards from Wadi Musa, on which al-Wu‘ayra castle is located, proceeds to Baydha. Another road leads north-east to the road to Shawbak over the Jabal Shara.⁶²⁰

There are several entrances to the Petra valley, but until recently only three were used intensely: one from Wadi Musa, from the east, through the Siq; one from Umm Sayun and Baydha through Wadi Turkmaniyya, from the north, and another from the south-west, passing under Jabal Harun and through the Wadi Thughrah.⁶²¹ The latter was considered the usual road for travelling from the Wadi Araba to Wadi Musa, while the one through Wadi Nemela was also used until recently as an alternative for ending the trip in Baydha rather than in the Petra valley itself.⁶²² Travellers coming from the west until recently often used the route Hebron–Qasr Zuwayra-Ghawr-Gharandal-Wadi Araba-Wadi Namala-Baydha-Wadi Musa, returning the same way.⁶²³

4.3. Identification of sites

Several of the sites of the 12th century are mentioned in the textual sources listed in chapter 2, but not all of them have been identified so far. *Montreal*, the mountain of the monastery of St Aaron, *Vallis Moysis* and the *castellum Vallis Moysis* of the sources can be easily and safely identified nowadays respectively with Shawbak, the Jabal Harun, Wadi Musa and al-Wu‘ayra castle.⁶²⁴ The *castellum Vallis Moysis* can reasonably be assumed to be al-Wu‘ayra, the main fortification identified in the area of Wadi Musa, which is often quoted in the Arabic sources with this name in association with Wadi Musa, the Arabic form of *Vallis Moysis* of the Crusader period. Shawbak was already called with the current name and well documented in the Ayyubid period.⁶²⁵ Identification has been less obvious for the fortified sites of al-Sila‘and Hurmuz and for a village called Hara.

Brooker and Knauf among others proposed identifying al-Sila‘(al-Sal‘, Celle) with al-Habis;⁶²⁶ probably most attempts to identify this site with a Petra castle have been on the basis that this is an ancient name for Petra, but as Hammond pointed out, if this were the case, any part of Petra could have this name, so there is no specific reason

⁶²⁰ Tholbecq 2013, 305.

⁶²¹ Robinson 1930, 31.

⁶²² Robinson 1841, II, 504-511.

⁶²³ Robinson 1841, II, 463-513; 544; X-XII.

⁶²⁴ Pringle 1993; 1998.

⁶²⁵ Brown 1988, 10.

⁶²⁶ Brooker and Knauf 1998, 187.

to point to al-Habis. Other scholars following this opinion were Dalman and Horsfield, who identified biblical Sela with the mountain of Umm al-Biyara, but Zayadine⁶²⁷ proposes identifying Sela with a rock castle on a site with this name (Khirbat al-Sila') north of Busayrah, south of Tafilah, which had been previously noticed by Musil.⁶²⁸ Pringle agrees with Zayadine's identification.⁶²⁹ The view that Sela should not be identified with al-Habis appears to be supported by the sources mentioned above, which list Sela as a city having administrative control over other sites, a status which al-Habis seems unlikely to have had.

Al-Habis, now established as a Crusader castle on solid archaeological grounds,⁶³⁰ has been convincingly identified by Zayadine as al-Aswat, quoted in the text of al-Nuwayri when recording the passage of Sultan Baybars through Petra in 1276,⁶³¹ to which identification Pringle also agrees.⁶³² As Zayadine noticed, although the fortress of al-Aswat is described by Nuwayri as an extremely strong fortress, which has dissuaded some authors from identifying it with al-Habis,⁶³³ it is possible that the description refers to the fact that it is so skillfully adapted to the bedrock formations, and that it was very well strategically located; it does, more importantly, fit the position described inside Petra when it was visited by Baybars.⁶³⁴ If al-Habis is not to be identified with Sela (Celle), it does not appear to be mentioned in any of the surviving Latin sources.

The location of the site of Hurmuz is still debated. Hurmuz is mentioned by Yakut at the beginning of the 13th century as a citadel in Wadi Musa.⁶³⁵ However, as Zayadine has observed, Yakut tends to speak of Wadi Musa in general as a point of reference for the whole area.⁶³⁶ Hurmuz also appears in the lists of conquered sites given by Ibn al-Athir and Abu Shama between the castles of Shawbak and al-Wu'ayra, and therefore presumably the position roughly corresponded to the area today called Hurmuz, in the Baydha region and north of Siq al-Barid. What is interesting in the sources mentioned above is that it appears in a list of sites described as "cities", which, it is specified, have some other kinds of sites dependent on them; this may include villages, fields, farms, territories and towers. This fact may therefore place Hurmuz in a category of larger sites, and therefore it should probably not be looked for as a simple tower; on the

⁶²⁷ Zayadine 1985, 164-167.

⁶²⁸ Musil 1907, 318.

⁶²⁹ Pringle 1997, 95.

⁶³⁰ See below and appendix b.

⁶³¹ Zayadine 1985, 164-167.

⁶³² Pringle 1997, 49.

⁶³³ Hammond 1970, 33.

⁶³⁴ Zayadine 1985, 167.

⁶³⁵ Barbier de Meynard, 1861, 595.

⁶³⁶ Zayadine 1985, 167.

contrary, it may have had smaller fortifications or agricultural estates as its dependencies. It also seems from the sources that it was lost by the Franks with al-Wu‘ayra castle in 1188 rather than with Shawbak, which resisted until 1189.⁶³⁷

Scholars have engaged in a long debate about this identification. Musil identified Hurmuz with al-Naq‘a. He observed that its role must have been to control the Wadi Namala, because al-Wu‘ayra was not enough for this purpose; in fact, anyone coming from Egypt or from the west through the Wadi Namala would be in Dababda, the Christian village opposite the Baydha plain, or well east on al-Hisa before anyone in al-Wu‘ayra would know.⁶³⁸ In this identification, he was followed by Dalman.⁶³⁹ Kob⁶⁴⁰ proposed instead as the best candidates al-Qarn and al-Qal‘a, both east of Naq‘a and Baydha, on the slopes of the Jabal Shara. Brooker and Knauf⁶⁴¹ ruled out both of these sites; they agreed with Musil that al-Qarn was a much older site,⁶⁴² and this was confirmed by a ceramic analysis by Robin Brown, who did not identify a significant amount of Islamic-period pottery, but more of much earlier periods. The site has been surveyed and excavated by Brown University in 2012, and has been now interpreted as a Bronze Age site; my pottery reading from excavations and surveys confirms that the handmade pottery at the site is consistent and clearly different from that of the Islamic period.⁶⁴³ The site of al-Qal‘a has been interpreted by Brooker and Knauf as a Roman/Nabataean tower, a chronology supported by Brown’s reading of the ceramics as predominantly Iron Age and Nabataean. They suggest instead that Hurmuz should be identified with one of the structures mentioned by Dalman on the ridge of al-Hisa;⁶⁴⁴ however, they did not locate or map these structures. Lindner published a map of the Naq‘a site and, following Knauf, suggested that the best candidate for Hurmuz was actually the fort on Naq‘a, as first proposed by Musil; he also collected some handmade unpainted pottery, which he identified as from the Islamic period and described in general terms.⁶⁴⁵ It is Naq‘a, therefore, which seems to be currently considered the most likely site for the location of Crusader-period Hurmuz. This identification will be questioned in this chapter.

⁶³⁷ Abu Shama, *Le Livre des Deux Jardins*, RHC, Or., IV, 391-392.

⁶³⁸ Musil 1907, 220.

⁶³⁹ Dalman 1912, 14.

⁶⁴⁰ Kob 1967, 147, fig. 2.

⁶⁴¹ Brooker and Knauf 1988, 187.

⁶⁴² Musil 1907, 219.

⁶⁴³ Observations from my pottery readings for the Brown University Petra Archaeological Project.

⁶⁴⁴ Dalman 1908, 36.

⁶⁴⁵ Lindner 1999, 492-494.

Finally, a village called Hara (or variations of this name), discussed below, is mentioned in the sources but has not been identified with any remains.

4.4. Summary of archaeological evidence

Shawbak

Surveys and analyses of structures

Considering the importance and monumentality of the site, studies of Shawbak have been surprisingly limited. Mauss and Sauvaire provided a very basic plan of the castle;⁶⁴⁶ Brown published and used for her preliminary study a plan of the site obtained from an aerial photo taken during a photogrammetric survey.⁶⁴⁷ Pringle carried on the first comprehensive architectural study of the two churches at the castle, including planning of the churches and recording their architectural details. He also placed the site in its historical and architectural context and proposed a chronology for the churches; this still remains the most complete study of the site.⁶⁴⁸

Thietmar, during his visit in 1217 commented that Shawbak castle was enclosed by three walls, and that he had never seen a stronger castle. At this time the castle was under the control of al-Malik al-‘Adil, Sultan of Egypt,⁶⁴⁹ and therefore may have already included the Ayyubid additions to the walls.

In 1999 Biller and his collaborators preliminarily analysed the castle structures, together with Karak and al-Wu‘ayra. They noticed that it is the Crusader barbican which is one of the best preserved parts of the castle. They also concluded that the original plan of the Crusader castle had two walls, of which the most internal was the one constructed first, while the external one dates to a later date in the 12th century.⁶⁵⁰

A French team conducted an architectural survey of the external walls of the castle in 2000, and hypothesized the existence of five Frankish quadrangular towers under constructions dated by inscriptions to the Mamluk period.⁶⁵¹ They thought in particular that the Crusader-period barbican, encased in Mamluk work and located in the south-eastern part of the castle, still survived in a few fragments and that one of these can still be seen under the Mamluk-period southernmost tower, west of the lower church, in a position controlling the joining point of the two Crusader-period enceintes.

⁶⁴⁶ Brown 1988b, 42; Kammerer (pl. 132, 1).

⁶⁴⁷ Brown 1988a, 228; Brown 1988b, 43; Almagro 1980, 119.

⁶⁴⁸ Pringle 1998, 304-314.

⁶⁴⁹ Pringle 2012, 120.

⁶⁵⁰ Biller et al. 1999, 35-39.

⁶⁵¹ Faucherre 2004, 49.

They moreover suggested that this may be the tower mentioned in a donation to the Hospitallers in a charter of 1152.⁶⁵² One of the arrow slits in the tower has been also recognized as similar to the ones at al-Habis and Karak castles and has therefore been identified as 12th century.⁶⁵³ The second Crusader-period enceinte has been interpreted as having the only function to reinforce the first one, as the distance between them is very small, and they observed that the lower church had the function of controlling the entrance gate,⁶⁵⁴ with the result that the barbican had a military, religious and residential function. However, the charter of 1152 refers to Karak and not to Shawbak; this erroneous interpretation has also led the team from the University of Florence, who based their conclusions on the French team's interpretation, to the same misinterpretation of the barbican structure.

A French team from IFPO surveyed the area around Shawbak in 2003/2006 over three campaigns and discovered traces of the *burgus* below the castle hill and remains of several watchtowers and structures connecting Shawbak with the Petra and Wadi Musa area, but unfortunately this is only mentioned in a brief summary of their research and the data are not yet fully available.⁶⁵⁵

More recently, the team from the University of Florence has also engaged some study of the structures. Working from observations made by the French team that it is here that 12th-century remains are mainly concentrated, their analysis has started in the southeast area of the castle in order to clarify the Crusader-period phases; so far the publication consists of a description of the building techniques employed in the fortified gate of the inner enceinte.⁶⁵⁶ Both the French and the Italian team propose that two lines of walls are identifiable in the Crusader castle in addition to the barbican.⁶⁵⁷

Regarding the two Crusader churches, as well as the collection and study of historical sources, the most complete study is the one by Pringle published in the 1990's. He observed that the upper church overlooks the castle's main approach and that its architectural style, characterized by some very fine details, has a lot in common with other Frankish churches in the Middle East.⁶⁵⁸ The upper church was used as a *diwan* at the time of Burckardt's visit in 1812⁶⁵⁹ and it remained occupied by later

⁶⁵² Delaville le Roulx, J., 1894, I, 160, n. 207.

⁶⁵³ Faucherre 2004, 58-59.

⁶⁵⁴ Faucherre 2004, 63-64.

⁶⁵⁵ Devais et al. 2012, 226.

⁶⁵⁶ Nucciotti 2007; see appendix b.

⁶⁵⁷ Faucherre 2004, 53, fig. 8; Nucciotti 2007, 45; 46, fig. 30.

⁶⁵⁸ Pringle 1998, 307-308.

⁶⁵⁹ Burckardt 1822, 416.

buildings until recently.⁶⁶⁰ Irby and Mangles,⁶⁶¹ among the first of the many early visitors to the castle, entered the upper church in May 1818 and noted, in addition to a large number of building remains on the NE side of the castle hill, an inscription in Latin above the architrave of the main (west) door of the upper church, which has now unfortunately disappeared. Lagrange also noted the inscription, already not *in situ*, in 1897, and described it as including a date of 1118, the mention of a Ugo and a cross. Brünnow and Domaszewski added some clarity to the inscription by suggesting that it mentioned an *ecclesia*.⁶⁶² Pringle discussed the possible interpretations of the inscription and suggested that the church may have been constructed in 1118 with the viscount Ugo, mentioned in the inscription, playing a leading role, perhaps on the occasion of the new appointment of Roman Le Puy around 1118, and that this was the parish church of the Latin community. Mayer has pointed out that the ecclesiastical organization of the lordship before 1167 was in the hands of the *Templum Domini* and therefore that this could be identified with the church of St Mary, mentioned in the 1152 charter, where possessions in Karak castle are also mentioned.⁶⁶³

Pringle observed that the lower church's southern wall corresponded to the external walls of the castle and that the church provided access to a rock-cut passage from its northwestern corner.⁶⁶⁴ It is likely, therefore, that this passage was originally connected to the tunnel leading outside the castle to one of the springs and whose other access was from the street at the entrance to the inner ward. Two springs have been identified at the foot of the hill since the Middle Ages and were also noticed by Burckardt.⁶⁶⁵ If this is the case, the tunnel from the castle to the spring, reached by means of 372 steps or so, was probably used to reach water in time of siege from both the church and from outside the church, as happened as late as during the 19th century, when the bedouin managed to resist a siege by other tribes by sending their women to use this tunnel to collect water.⁶⁶⁶ The rock-cut passage to the spring has been known for a long time and Savignac, who entered it, explains that it led to excellent, abundant spring water; he also thought that two arches supporting two weak points of the passage were constructed with stones tooled with Crusader-period diagonal dressing.⁶⁶⁷ The

⁶⁶⁰ Vailhé 1989, 77, fig.

⁶⁶¹ Irby and Mangles 1985, 378-381.

⁶⁶² Brünnow and Domaszewski, 2004, I, 116. The inscription was also noticed by other travellers, such as Vailhé (1989, 78).

⁶⁶³ Mayer 1990, 221-228; Pringle 1998, 308-311; Pringle 2004, 35; see Karak in chapter 3.

⁶⁶⁴ Pringle 1998, 312-313.

⁶⁶⁵ Burckardt 1822, Abu al-Fida 247, cited in Le Strange 1965, 536.

⁶⁶⁶ Hill 1897, 141.

⁶⁶⁷ Deschamps 1939, 43, n. 1.

tunnel has recently been mapped and it appears to drop down for about 100 m with a length of about 150 m.⁶⁶⁸ It seems therefore that both churches would contribute to the security of the site, including the control of water resources. It is therefore possible that the access to these water resources was one of the reasons why the garrison and population managed to resist the final siege for so long.

Langendorf and Zimmermann carried out an architectural survey of the two Shawbak churches in the 1960s and noticed close parallels between the Shawbak chapel and the church of al-Wu‘ayra, suggesting that the two churches were roughly contemporary and early 12th century.⁶⁶⁹ Pringle, however, who points out in particular the similarities in the moldings of the apse, observes that there are also close similarities between the Karak castle chapel, built after 1142, and the Shawbak lower church, which he suggests was a church built for the local Christian community; it was also probably not the first church to be constructed at the castle because it is placed in the outer ward.⁶⁷⁰ A later date for the lower church compared to the one of the upper church would fit with both the architectural parallels at al-Wu‘ayra and Karak, because the churches’ foundations are dated by historical sources to after 1127 and after 1142 respectively, and this should therefore be considered the strongest hypothesis.

My very preliminary survey in 2013 has recorded some general characteristics of the building techniques of a selection of the Crusader-period structures at Shawbak and has recorded similarities in the building techniques at the two chapels of the two castles (the lower church at Shawbak and the church at al-Wu‘ayra); these preliminary observations contribute the information that a generally comparable level of workmanship was used at the chapels of the two castles, although clearly the upper church is of a much higher level, especially in the finishing of some stone details.⁶⁷¹ Pringle observes that close similarities at the two chapels may also indicate that the communities using both churches were Orthodox.⁶⁷²

⁶⁶⁸ Burri et al. 2009.

⁶⁶⁹ Langendorf and Zimmermann, *Trois Monuments Inconnus del Croisés, Geneva*, new series, 12, 1964, 139-143, cited in Pringle 1998, 313-314.

⁶⁷⁰ Pringle 1998, 313-314; Pringle 2004, 35.

⁶⁷¹ See appendix b for details on this comparison.

⁶⁷² Pringle 2004, 35.

Excavations and ceramic and archaeozoological evidence

It was Robin Brown who carried out the first excavations at Shawbak. In her unpublished report.⁶⁷³ Brown has provided also a very preliminary but useful survey of architecture at the castle.⁶⁷⁴

During her excavations in 1986, Brown focused on the exploration of the Ayyubid palace area; although this also involved pre-Ayyubid stratigraphy and some Crusader-period pottery has been recovered there, the Crusader-period evidence was minimal;⁶⁷⁵ therefore, the results for the Crusader period at the site are extremely limited. Her pre-phase I (before the construction of the Ayyubid palace and interpreted as Nabataen/Crusader), was found in three squares in area A (Ayyubid Palace Hall) and in one square in area C (the East Palace Complex), while area B, near the church, did not provide any relevant information for the Crusader period.⁶⁷⁶ However, only square A3 outside the Ayyubid palace revealed some structures probably associated with Crusader pottery. This assemblage consisted of only five handmade pottery fragments, one of which was painted and interpreted as Crusader thanks to a parallel with the al-Wu‘ayra material. They were associated with the probable use of a boulder pavement, a wall and a cistern, which, however, have not been exposed by excavations.⁶⁷⁷ The assemblage from pre-phase I consisted only of eight fragments in total, including cooking pots, and was so fragmentary that it was not even suitable for illustration. Some of the pottery from phase I (Ayyubid Palace foundation) may have been residual from the Crusader period, but it was not possible to establish this.⁶⁷⁸ What can be noticed is that in phase I there are fragments similar to the glazed types found at al-Wu‘ayra: some common “Southern Levantine” glazed ware, typically bowls glazed in yellow or green, which at al-Wu‘ayra are found in Brown’s Phase IB, and some Syrian Fritware, found in Vannini’s phase III, therefore dating roughly to the second half of the 12th century.⁶⁷⁹ This is interesting, since it shows that, unless of course the fragments were residual, the trade of these products continued after the ending of the Crusader presence in the region. It also supports the hypothesis that it was from Shawbak, located on the King’s Highway, that these long-distance trade products arrived in Petra. Some additional

⁶⁷³ Brown 1988b.

⁶⁷⁴ Brown 1988b, 43-55.

⁶⁷⁵ Brown 1988a; 230.

⁶⁷⁶ Brown 1988b, 60; 118; 140-141.

⁶⁷⁷ Brown 1988b, 71-72.

⁶⁷⁸ Brown 1988b, 150-152.

⁶⁷⁹ Brown 1987b, 285-286, fig. 10.28 (see also appendix b); Vannini and Tonghini 1997, 382.

comments from the ceramic sequence at Shawbak have also allowed some observations on the development of decoration during the 12th century.⁶⁸⁰

Excavation since 2005 by the University of Florence have opened several squares, including one at the northeast corner of the upper church (area 10 000). This resulted in the hypothesis that the church has been constructed on a building of an earlier phase, interpreted as Roman/Byzantine.⁶⁸¹ No specific reason has been offered, however, for suggesting this specific chronology. The most likely reason for proposing this hypothesis, until further evidence is provided, may be the generally abundant traces of settlement of this period in southern Transjordan, in addition to the discovery of Byzantine-period sites in the area of Shawbak.⁶⁸² The presence of an earlier period had already been noticed by Brown because of the presence of Nabataean pottery in her excavations and surveys, and even by earlier visitors. Moreover, some historical sources mention the presence of earlier buildings at Shawbak, so this discovery is very interesting: both Abu al-Fida and Yaqut report that the castle was “rebuilt” on earlier ruins.⁶⁸³

Although the archaeozoological evidence from area 10 000 has been published, the excavation and the pottery reports are still unpublished. Excavations outside the lower church (area 6000) did not recover any stratigraphy associated with 12th-century structures.⁶⁸⁴ Ceramics from area 6000 included a wide variation of ceramic types and chronological periods, from Hellenistic to Modern, but a preliminary analysis of the ceramic assemblage indicates that the stratigraphy belongs to the post-Crusader period. The presence of Nabataean/Byzantine pottery is also notable as it testifies to the presence of an earlier settlement at the site, some additional parts of which have been identified within the Crusader castle’s inner walls. Ceramics of the Ayyubid and Mamluk periods reveal an intense connection with the trade along the Syria/Egypt route, but also with a much wider network, and show the great importance and potential of the study of ceramics at the castle.

Several important questions still remain largely open, including the one of differences and similarities, for example, between the 12th-century ceramic assemblages of Shawbak and al-Wu‘ayra; the analysis of this aspect would contribute answering a wide range of socio-economic matters, such as for example the influences on the two

⁶⁸⁰ See appendix b.

⁶⁸¹ Nucciotti 2007, 33, fig. 18; Vannini and Nucciotti 2009, 65, fig.

⁶⁸² Fiema 2002, 205-206.

⁶⁸³ Cited in Le Strange 1890, 536. It has been suggested that the castle occupies the site of the Roman fort of *Theman* (Pringle, 2012, 264 n. 163).

⁶⁸⁴ Molducci and Pruno 2007.

sites of the proximity to the King's Highway and the relationship between the two sites.⁶⁸⁵

According to the Italian team, many other parts of the castle can be attributed to the Crusader period; these include extended wall remains, a "Crusader palace" (area 35 000) and a Crusader chapel southeast of the lower church's main entrance (area 24 000), interpreted as a chapel of the Knights Hospitaller (although as stated above, this interpretation is incorrect as it is based on the wrong interpretation of textual evidence),⁶⁸⁶ but for now, details of this study are still unpublished. Because the newly discovered "chapel" lies south-east of the lower church, is very small and is connected to it through a narthex, it is likely that it was part of the same complex, and perhaps it was a sacristy.

The assemblage of animal bones excavated from the foundation of the upper church (area 10 000) is presumably associated with a 12th-century, or pre-12th-century chronology. Interestingly, according to the results, there are many similarities with the assemblage from al-Wu'ayra castle.⁶⁸⁷ As at al-Wu'ayra, the main animals consumed at Shawbak were sheep/goat; parrotfish, cattle and pigs were also present. Most animals were slaughtered shortly after maturity and meat was represented by the best cuts, suggesting that animals were mainly slaughtered outside the castle and were destined for high-status consumers. The only main difference from the assemblages analysed at al-Wu'ayra seems to be that Shawbak is characterized by a higher presence of marine animals in general (including fish), while al-Wu'ayra has a higher presence of domestic and wild birds.⁶⁸⁸ It is likely that this was due to a more direct connection of Shawbak with Aqaba or in general with its connection to the wider network of the King's Highway.

Discussion

Preliminary work has shown the great potential of the site where still very little research has been done. It is still not clarified and documented in detail, for example,

⁶⁸⁵ Sinibaldi 2007a.

⁶⁸⁶ Vannini et al. 2013, 363, fig. 7; 365, fig. 11; 367, fig. 15; Vannini 2007, 130.

⁶⁸⁷ See below for al-Wu'ayra.

⁶⁸⁸ Corbino and Mazza 2013. Animal bones were also analysed from area 6000C (a few metres east of the apse of the lower church). For results of this area, see Mazza and Corbino 2007 and Corbino and Mazza 2009. However, the dating of the assemblage (AD 1075-1150) was reliant on C14 analysis results only and not on an associated stratigraphy dated to the Crusader period. For a report of the excavation area, see Molducci and Pruno 2007, 67, where period 5 (Crusader) is described as consisting of the church apse, and no stratigraphy associated to it is mentioned. However, archaeozoological data still seem to have close similarities with those provided by the stratigraphic context of the upper church, area 10 000, in terms of the dietary reliance on goat/sheep, largely dominant, pig and cattle (in decreasing importance), the presence of parrotfish and the slaughtering of animals at an early stage after maturity.

which are the Crusader-period structures identified at the site apart from the two churches. This will require a considerable amount of work in analysing the long history of construction at the castle; chronology can be best obtained with the concurrent work of architectural study, phasing of built structures, study of building techniques, excavations, study of ceramics and other artifacts working in synergy with each other, in association with the available information from textual sources. Further work, moreover, would certainly be important also on all possible levels of comparisons with al-Wu‘ayra castle (building techniques, architecture, ceramic assemblages, and other finds) in order to add clarity to the role and relationship of the two castles in the area of Jabal Shara and Petra during the Crusader period; the few data available until now show clearly strong similarities in architecture and building techniques of some parts of the castle and in the diet of the inhabitants.

The most useful data obtained at Shawbak so far are those from the historical sources and from the study of the two churches by Pringle, which appear to be well integrated in the defence system of the castle. The church of St Mary was a parish church for the Latin community, probably founded in 1118 and built in a Frankish style with some very high-level workmanship involved. According to Mayer the viscount and castellan were both responsible for the administration of the judiciary and the military, as well as the collection of revenues in the area, and the posts of viscount and castellan may have been filled by the same man.⁶⁸⁹ Therefore, it is possible that Ugo had both these roles at Shawbak.

Later on, perhaps around 1130/1140, at a moment when the size of the *burgus* was increasing and the investment in Outrejourdain also was materially expressed by the foundation of al-Wu‘ayra and Karak, a lower church was built in the barbican in a simpler style, to serve the local Christian Orthodox community, very similar in architecture and building style to the one built at al-Wu‘ayra.

The topic of possible sugar production at Shawbak has received a lot of interest among scholars;⁶⁹⁰ The Italian team members for example argue that sugar was produced at Shawbak.⁶⁹¹ Much of the basis for this supposition appears to be Francesco Pegolotti’s mention during the 14th century of the sugar from the *Cranco (or Cracco) de Montreal*.⁶⁹² However, this is clearly a reference to Karak, rather than Shawbak, and

⁶⁸⁹ Mayer 1990, 67-68.

⁶⁹⁰ Brown 1988b, 14.

⁶⁹¹ Vannini et al. 2013, 372-3, n. 28.

⁶⁹² Francesco Balducci Pegolotti, *La Pratica della Mercatura*, ed. Allan Evans, Cambridge, Mass., 1933. See appendix A for a discussion of sugar in Transjordan in the 12th century

more particularly the area controlled by Karak, rather than the castle itself⁶⁹³. Deschamps, for instance, attributed it to the area of Ghawr al-Safi,⁶⁹⁴ which is where production is archaeologically actually well documented.⁶⁹⁵ In any case, as already noticed, the climate of Shawbak is not ideal for sugar production, and if there was cultivation of sugar in the Wadi Araba under the control of Shawbak, it should be taken into account that sugar must be processed within three days after cutting the cane⁶⁹⁶ and therefore this solution does not appear very feasible either, given the relatively distance of Shawbak from this area. Moreover, despite the fact that running water was abundant at Shawbak compared to other areas, it was still insufficient to irrigate plantations or drive mills. It should be noticed, moreover, as a general rule, that potential findings of sugar pots do not guarantee necessarily a proof of a production site, unless – perhaps – what is identified are several examples of cones, i.e. the upper part of the two vessels used for the sugary refinery process; as a matter of fact, it is thought that the lower part, the one containing molasses, was actually also used to trade this product after the refinement process was completed.⁶⁹⁷

A village called Benisalem was also dependent on Shawbak.⁶⁹⁸

Al-Wu‘ayra

Surveys

The site has been identified as Crusader-period and visited and surveyed by several scholars well before any excavations took place. Some of the descriptions of these first visits are valuable since the site was in a better condition than today, in particular the church apse, which was still completely preserved. Savignac was the first to recognize the building as a Crusader castle based on the presence of tower corners, a pointed arch in the apse and the arrow-slits; he also noted that the rock-cut gate was the only point of access to the castle. He provided a very general plan of the keep and some detailed recording of the church's plan, section and apse, and drawings of the arrow-slit windows in the ravelin.⁶⁹⁹ During his visit to Petra, Musil⁷⁰⁰ also documented the ravelin and the church, in particular the apse which had two aumbries on either side; he also observed that the cistern under the church, still covered by a partially preserved

⁶⁹³ For the problem of confusion on names of sites, see Karak, chapter 3.

⁶⁹⁴ Cited in Deschamps 1939, 49, fn. 3.

⁶⁹⁵ See al-Safi.

⁶⁹⁶ Brooker and Knauf 1988, 25.

⁶⁹⁷ Personal communication by Bethany Walker.

⁶⁹⁸ Delaville le Roulx, 1894, I, 160, n. 207.

⁶⁹⁹ Savignac, 1903, 117 sgg.

⁷⁰⁰ Musil 1907, 65-69.

cross-vault, was accessible from the western part of the church floor by a hole in the ground. Enlart described a semi-dome over the apse, decorated with a moulded opening.⁷⁰¹ More recently, Pringle studied and described the church and proposed a chronology for both the church and castle of 1127/30-1140 c., based on historical and architectural sources.⁷⁰²

The parts of the castle explored until recently consisted in fact only of its most fortified area, including several towers. The observation that the castle area extended far beyond the keep itself is very recent.⁷⁰³ Bini and Bertocci of the University of Florence team have mapped a much wider area than recognized early on; the realization that the castle area expanded beyond the keep itself is so far the main contribution of the Italian archaeological mission at al-Wu‘ayra. The crusader-occupied area was identified as stretching for 17,330 m² and a perimeter of 1,100 m; the architects also drew a detailed map of the keep, as well as detailed plans and elevations of some features. They also mapped individual features at 1:20 and 1:10 and the survey has also contributed to a preliminary recording of some of the building techniques, however still unpublished. In addition, they recorded earlier structures at the site, interpreted by archaeologists as ranging from the Bronze Age to the Nabataean period.⁷⁰⁴ They also noticed similarities between the church and the lower church at Shawbak castle in that they were both controlling water sources.⁷⁰⁵

In 1999 Biller and his team made some further observations on the basis of the top plan drawn by Bini and Bertocci. They observed for example that the suburb area to the south was not protected by a wall since it was already naturally fortified. Also, that rock-cut rooms were probably used to monitor the castle approaches and that the walls were often founded on rock, without foundations. They also located the donjon on the SE corner of the castle, and recommended that this is the ideal place for future excavations.⁷⁰⁶

Marino in 1990 has published some observations on building techniques at the castle.⁷⁰⁷ My brief survey of building techniques at al-Wu‘ayra and at al-Habis castle was carried out in 2013. In addition to contributing to a definition of the character of Frankish construction in Petra and to making observations on the earlier phases at the

⁷⁰¹ Enlart 1925, 314.

⁷⁰² Pringle 1998, 373-376.

⁷⁰³ Marino 1993.

⁷⁰⁴ Bini and Bertocci 1997.

⁷⁰⁵ Bini and Bertocci 1997, 412.

⁷⁰⁶ Biller et al. 1999, 40-45.

⁷⁰⁷ Marino 1990; see appendix b.

castle, I also recorded examples of products of what appears to be specialized workmanship. Some typical characteristics of other castles of the Frankish East, and close parallels in building techniques with Shawbak castle have also been identified.⁷⁰⁸

Phasing and chronology from stratigraphic excavations

Al-Wu‘ayra castle has been the object of excavations by two different teams. A group led by Robin Brown undertook brief soundings in 1987 as part of a wider programme of excavations of several medieval fortresses (including Karak and Shawbak) in order to contribute, among other things, to the construction of the ceramic sequence of the Islamic period;⁷⁰⁹ excavations were therefore intentionally limited in size and duration. In the following years, a mission of the University of Florence led by Guido Vannini has worked on the site on several survey and excavation campaigns, starting from 1989; ten soundings have explored several parts of the fortress.

The excavations by Robin Brown⁷¹⁰ identified two medieval phases: phase I, chronologically interpreted as Crusader (1108/1116-1188), subdivided into phases IA (Crusader foundation) and IB (12th century); and Phase II, Ayyubid (late 12th to early 13th). Architecturally, phase I included the northeast tower and remains of the flanking east and north walls, and the east tower. Original accumulations of phase I have been identified in connection with the north-east tower and in the east fortification wall, while in the area of the east tower deposits from phase I were present but were interpreted as residual and shallow, due to the reuse of the east tower structure during phase II. Accumulations of phases IA and IB, in summary, appear in their original context only in square 4, a small sounding a few metres south of the north-east tower entrance, where the project has identified the most complete sequence of the medieval occupation.⁷¹¹ The stratigraphy from square 4 is also the one which has produced the ceramic sequence analyzed in this thesis.⁷¹²

The earliest architectural feature of phase IA is the foundation of the east fortification wall and a series of associated layers in square 4; the wall, founded directly on the bedrock, was built by means of two facings of rough-hewn boulders filled with a rubble core and was about 80 cm in width. Associated with this wall was a fill about 1 m deep which included abundant ceramic and bones, interpreted as the result of outdoor activities for the maintenance of the fortification and for duties of the garrison,

⁷⁰⁸ See appendix b and conclusions of this chapter.

⁷⁰⁹ Brown 1987b, 267.

⁷¹⁰ Brown 1987a.

⁷¹¹ Brown 1987a, 12-15.

⁷¹² See appendix A.

contemporary with the original construction of the fortress. Included in this phase's finds were unbaked mud bricks, probably used in construction activities.⁷¹³ The east tower, also attributed to phase IA, incorporates a variety of masonry types, including reused material, but seems to have been built in only one phase. Phase I is in general characterized by a distinctive building technique, described as solidly and regularly built, with a better quality than structures related to phase II.⁷¹⁴ Phase IB in the north-east tower area included a finely crushed white sandstone bed, interpreted as the floor of a courtyard, which sealed phase IA. It is possible that this feature indicates a conversion from an open area to an enclosed one, but the limited size of the excavation did not make it possible to detect any architectural element.⁷¹⁵

Excavations of the University of Florence have extensively explored the site with ten sondages in different areas of the castle. The final report of the excavations and surveys at the site is still not available, but some preliminary publications give an indication of the recorded stratigraphy.⁷¹⁶ The three excavation areas included the area around the south-west corner of the central fortification (area I, sondages 1-3), its northwest part (area II, sondages 4, 5, 6, 8, 9) and an area southwest of the central fortification (area III, sondages 7 and 10). In area I (sondages 1, 2, 3) excavations have identified eight main phases, from prehistory to the 20th century; of these, three phases are attributed to the Crusader occupation of the site.⁷¹⁷ Phase I has been interpreted as the first fortification of the area. Following Hammond, the construction of the castle is attributed by Vannini to the period 1107/1116, on the basis of Hammond's interpretation of the historical sources, in particular the mention of a *preasidium novum* built in 1116. This Hammond interprets as referring to al-Habis, and assumes that if al-Habis was "new" then there must have been an earlier fortification, which would necessarily have been al-Wu'ayra.⁷¹⁸ However, the 'new castle' referred to by the source is clearly Shawbak castle, not al-Habis.⁷¹⁹ This text, therefore, has no connection with a possible chronology of al-Wu'ayra castle. Moreover, there is no reason to assume that al-Habis is necessarily later than al-Wu'ayra. Phase II is related to radical modifications of the ground plan during the 12th century, whose arrangement does not change through phase III; both phases II and III are chronologically interpreted as mid-

⁷¹³ Brown 1987a, 18-20.

⁷¹⁴ Brown 1987a, 32-33.

⁷¹⁵ Brown 1987a, 22-23.

⁷¹⁶ Vannini and Tonghini 1997; Vannini and Vanni Desideri 1995.

⁷¹⁷ Vannini and Tonghini 1997, p. 376, fig. 8.

⁷¹⁸ Vannini and Tonghini 1997, 376 and footnote 17.

⁷¹⁹ See chapter 2 and above, historical summary.

12th century, on the hypothesis that the castle may have been reorganized by the Franks after its Turkish conquest in 1144. Phase IIIa and IV revealed a radical change in the use of the site after it lost its military function and have been interpreted as an Ayyubid occupation of the castle following its loss by the Franks in 1188.⁷²⁰

On the basis of a historical and architectural study, Denys Pringle has concluded that the castle is unlikely to have been founded before 1127/31, and that a date between 1127 and 1140 is the most likely period for the construction of the church and the foundation of the castle; the similarity with architectural details in the Karak castle church, dated to about 1142, support the historical data for this chronology.⁷²¹ I support this chronology, whose historical evidence is presented in chapter 2. In the light of this architectural and historical evidence, if we assume, as indeed seems to be the case, that the defensive eastern wall and the northeast and eastern towers excavated by Robin Brown are in fact of Crusader foundation, Brown's phase IA, interpreted as a phase of foundation of the castle and of related construction activities, should then most likely start around 1127/31 or little later. It would have been followed by at least one rearrangement of the area, phase IB, before the Ayyubid occupation, which began in or after 1188. Quite possibly, phase IA can be restricted to a short span of time, perhaps a few months, around the date of the foundation of the castle. Brown's Phase IB, interpreted as a rearrangement from an open to an enclosed area, should then be placed between 1127/31 and 1188 at its broadest, but more likely towards the later part of this chronology. Brown's phase I can thus overall be dated to within the range of 1127/1188. Vannini's phase I should therefore also be dated broadly as Brown's phase IA, while Vannini's phases II and III, should be dated like Brown's phase IB. Vannini's stratifications from the excavations on the church's foundation, moreover, and the associated ceramic context, can be dated most likely to about 1127/1140, about the date of the construction of the church. Overall, all Crusader phases on the site can be chronologically limited to maximum 60 years on the site, a well-defined time span for the study of pottery and other associated finds.

Crusader-period phases at al-Wu'ayra and their absolute chronology can be summarized as follows:

Date	Brown	Vannini
1127/1140	IA	I
1127/1140–1188	IB	II–III

⁷²⁰ Vannini and Tonghini 1997, 373-378.

⁷²¹ Pringle 1998, vol. 2, pp. 373-376.

- Brown's phase IA and Vannini's phase I: starting between 1127 and c.1140
- Brown's phase IB and Vannini's phases II-III: after 1127/1140 to 1188

Data from both excavations at the castle are the most important in the Petra area for the understanding of material culture of the Crusader phases in the region. Phase I of Brown's excavations originates mainly from a small but well-stratified sounding, clearly connected to some of the castle's main defensive structures; phase IA in particular, rich in archaeological finds, can therefore be considered as an excellent chronological point of reference for their study, especially ceramics, being restricted to only a few years before renovations are made in phase IB. Vannini's phases I-III include very valuable stratigraphy too, especially from the church area, most likely datable to about 1127/1140, and are overall an excellent observation point for the study of pottery during the 12th century, since three Crusader-period phases have been detected.⁷²²

Ceramic evidence

The results of the ceramic evidence are summarized in appendix A; my conclusions are based on the study of the unpublished material excavated by Robin Brown from phase I and on the published material from the excavations of both teams. General conclusions include the observations of the use mainly of local material, but with influences from other areas on some specific ceramic types; the connection to the Syrian and Palestinian trade network; the use of different kinds of production locally and of a large quantity of tableware at the castle compared to storage ware.

Archaeozoological evidence

A recently completed account of the archaeozoological evidence from Brown's excavations at al-Wu'ayra offers important and new evidence about Phase I at the site.

⁷²² The material and excavation documentation from the University of Florence is currently unpublished and has not been available to me for the research object of this thesis; a detailed publication of these important data is now urgent for the understanding of the 12th century in the Petra area. Conclusions in this chapter are based, therefore, on my direct analysis of the stratigraphic results and ceramic material excavated by Robin Brown, which is almost completely published, and on her limited unpublished material which has been offered to me for the PhD thesis study. I am deeply indebted to Robin Brown for making available the documentation and ceramics from her excavations for further studies. The results of my ceramic analysis of this assemblage were essential to draw some conclusions on the character of 12th-century pottery in the Petra area, which are presented in appendix b.

Phases IA and IB from square 4 have offered a rich, well preserved faunal remains assemblage, with 459 bones identifiable to species, mainly originating from remains of meals consumed in the tower area.⁷²³

The fauna identified was characterized by a clear predominance of ovicaprids followed by parrotfish, pig and cattle. The contribution that sheep-goat, the most important group in the assemblage, provided as *ante-mortem* products (wool and milk products) was an important aspect of consumption, perhaps even a priority compared to the meat consumption. Important were also the secondary products from chickens (eggs). Data support the idea that there may have been breeding of flocks inside the castle, in particular lamb, chicken and pigs. Most of the domesticated animals, if not bred in the castle, arrived there on foot, where they were slaughtered. The meat was mainly cooked on the bone and the fish with its skeleton, unless it was expertly filleted. A large part of the assemblage was kitchen waste and probably there was a dedicated area for butchering in the castle.⁷²⁴ The high quantity of piglets at the castle may indicate that they were bred at the castle; the consumption of young pigs, which is considered high-quality meat since it is tenderer and less fatty, is also found at the Red Tower during the period of occupation of the Templars.⁷²⁵ Parrotfish could almost never be assigned to specific specie, but those identified could come from either the Mediterranean or the Red Sea, this second option being by far the most likely for the site of al-Wu‘ayra because of its proximity. Domesticated chicken is well attested; in addition, gazelle and partridge have been identified as game animals.⁷²⁶

In summary, at al-Wu‘ayra, the food supply depended both on local resources and trade networks; the inhabitants made sure that there was enough long-term emergency supplies, including dried fish and meat; perhaps some of this meat, butchered on site, would have been distributed at sites such as al-Habis. The priority, however, was still on storable food, as it was at Wadi Farasa, interpreted as a way to reduce vulnerability in time of siege; it is possible, in fact, to store chickens, pigs and sheep/goats in a small space.⁷²⁷ Overall, the authors hypothesize that the existence of Frankish settlements had a strong impact on food production, distribution, trade and marketing practices.⁷²⁸ The economy was one where secondary animal products were valued. The trade network was probably linked to the local market of Wadi Musa, supplying parrotfish from the

⁷²³ Brown and Rielly 2006; 2010, 130.

⁷²⁴ Brown and Rielly 2010, 132-133.

⁷²⁵ Cartledge 1986, 178.

⁷²⁶ Brown and Rielly 2010, 131-132.

⁷²⁷ Brown and Rielly 2010, 136.

⁷²⁸ Brown and Rielly 2010, 137.

Red Sea. This scenario contrasts with the one from Wadi Farasa, whose faunal assemblage suggests rather isolation from the Wadi Musa markets, apart from the fish supply.⁷²⁹

In general, it should be noticed again that the quite detailed picture provided by this study can be referred to a very narrow chronology, 1127 to 1188 at its broadest (phases IA+1B); however, most of the bones analysed are from phase IA, related to the castle foundation (1127/1130-1140) and give us an idea of the situation, therefore, of the moment of the arrival of the Franks.

An assemblage from al Wu'ayra has been analysed also by members of the University of Florence. The phases analysed are I to III (Crusader foundation and Crusader-period alterations during the 12th century);⁷³⁰ the context of origin of the assemblage are structures in the southwestern quarter of the castle, area UT 83.⁷³¹ Here, sheep/goat was dominant; pig remains are present but it could not be determined whether they belonged to wild boar or domestic pig. Cattle bones were also present in the assemblage. There are also domestic birds, including chicken and chukkar; parrotfish is also represented. There is abundance, in general, of high-quality meat and the inhabitants of the castle consumed more domesticated than wild animals. Meat is represented by the best cuts.⁷³² Brown and Rielly⁷³³ comment that although this assemblage is similar in its dominance of goat/sheep meat, it indicates a preference on meat consumption within this group, in contrast with the findings from square 4, which may be due to the fact that this quarter is outside the castle keep and may therefore have been inhabited by different individuals; in general, though, strong similarities are to be noted.

As mentioned above, the only main difference between the analysed assemblages at al-Wu'ayra and Shawbak is that the latter is characterized by a higher presence of marine animals, including fish, and al-Wu'ayra by a presence of domestic and wild birds.

Anthropological evidence

Excavations by the University of Florence have uncovered a small graveyard just outside the south entrance of the church, described by the excavators as contemporary to the construction of the Crusader church itself and consisting of rock-cut graves. The

⁷²⁹ Brown and Rielly, 2006, 35-36.

⁷³⁰ Personal communication by Chiara Corbino.

⁷³¹ See Vannini and Tonghini 1997, 374, fig. 4, for the location of UT 83.

⁷³² Corbino and Mazza 2013.

⁷³³ Brown and Rielly 2010, 137.

cemetery was excavated in 1996-98 by the University of Florence, Yarmuk University and University of Arkansas, and remains were analysed in 1999 at Yarmuk University, Jordan.⁷³⁴ The graves themselves were apparently covered with rock slabs, as suggested by recesses carved in the rock; the quality of their workmanship is variable. The location and type of graves have been interpreted as clues that the deceased were inhabitants of the castle. They are suggested by Brown and Rielly to have belonged to families of commanding rank, because their position appears to have been reserved for a selected few; the primary cemetery of the castle, therefore, must have been located somewhere else.⁷³⁵

The bones belonged to 16 individuals, of whom only one was an adult and the remaining were sub-adult individuals. Bone pathology suggests that the women living at the castle had trouble in bringing pregnancies to term; the study has reconstructed that 54 percent of the children died at or just before birth and 53 percent show abnormal bone surfaces. This has been interpreted as a consequence of scurvy, an illness already present in the Middle East before the Crusades. Rose concludes that the problems behind children's pathology may originate from a lack of suitable nutrition and the excessive exposure of light-skinned mothers to sunlight in southern Jordan; this would have led to a lack in the intake of vitamin C, iron and folic acid.⁷³⁶

Data have also been compared to those from a cemetery at Jezreel,⁷³⁷ a village in Galilee. At Jezreel, interpreted as inhabited by Syrian Christian farmers, the general state of health was better than at al-Wu'ayra, where the population would be Frankish. The difference is explained by the more fertile land at Jezreel compared to al-Wu'ayra,⁷³⁸ where the access to fruit and vegetables was more limited, perhaps because of the need to prioritize storable food in time of siege or perhaps because the local inhabitants were not used to eating the right amount of fruit and vegetables as Europeans.

However, that the population at Jezreel was Syrian Christian and that the one at al-Wu'ayra was Frankish seems to be an assumption in both cases; in fact, it is more likely that most of the castle population, as in most castles in Transjordan, was local.⁷³⁹ Even if part of the castle's inhabitants were Frankish, their relationship with the local Christian population could have very likely involved intermarriage with local women

⁷³⁴ Rose at al. 1998; Rose and Khwaleh 2012, 177-180.

⁷³⁵ Brown and Rielly 2010, 124-125.

⁷³⁶ Rose and Kwaleh 2012, 178-179.

⁷³⁷ Bradley 1994; 2006; Mitchell 1994; 1997; 2006.

⁷³⁸ Mitchell 2006, 43.

⁷³⁹ See chapter 5.

(from Christian communities in southern Transjordan, possibly not only from Wadi Musa, but maybe also Shawbak or Karak). Moreover, even if the population of al-Wu‘ayra was completely European, it would be difficult to justify as a cultural choice not to include in their diet fruit and vegetables, which were a normal element of the diet of the European population living the Middle East, where agriculture held an important place. Finally, plenty of sources witness to the great availability of fruit and vegetables in the Wadi Musa area,⁷⁴⁰ where settlement was attractive from the beginning especially for the fertility of the area. Not only would the general area around the castle be suitable for cultivation, but some scholars also think that there was even space for cultivation inside the castle itself.⁷⁴¹ However, the main cultivated area around al-Wu‘ayra would have been Wadi Musa, very close and at the time under the direct control of the Franks, as proved by the control of a village, Hara, in that area. Baydha and Shawbak would also most likely have been producing large quantities of agricultural products, and their economy would have been closely tied to that in Wadi Musa, in order to provide agricultural and craft products, meat, raw materials and labour. The castle inhabitants did receive, for example, regular supplies of fish from Wadi Musa and livestock where they also purchased other products like pottery, and therefore the lack of access to fruit and vegetables would probably need to be explained by a specific reason, such as perhaps long sieges which were sustained by using mainly the livestock in the castle and dried fish. Archaeobotanical remains would help in answering this question; samples have been collected by the University of Florence but the publication is apparently not planned for now.⁷⁴²

Folate is present in high quantities in animal liver, brain and heart, but perhaps the population of the castle did not eat these animal parts. However, folate deficiency takes months before developing in the human body, and the sources do not suggest that the population of al-Wu‘ayra had to sustain long sieges. A possible long siege may possibly have occurred just before the castle was taken in 1188, but the sources do not allow understanding this. To better understand the pathology of the skeletons, one may perhaps speculate whether the burials may not have been the result of one single event, rather than being interred over several years; some information can perhaps be obtained with a detailed examination of the excavation documentation, although the fact that the burials are cut into the bedrock makes any stratigraphical observation harder. However,

⁷⁴⁰ See chapter 2 for the historical sources and below in this chapter, Khirbat al-Nawafra, for archaeological ones; for the general agricultural potential of the area, see 4.2, description of the area of Petra and Jabal al-Shara

⁷⁴¹ Vannini and Vanni Desideri 1995, 518.

⁷⁴² Personal communication by Chiara Corbino.

it should also be taken into account that the tradition of having a separate cemetery for children is local, and continues in Wadi Musa up to the present day;⁷⁴³ therefore, these burials are not representing necessarily one single event, and not specifically one which originated children mortality only, but may be distributed over a long time.

Another problem with this confident interpretation of the causes of death at the castle may be the connection of scurvy with the presence of the Frankish population, if the illness was already present in the Middle East before their arrival; a comparison with other case studies in earlier periods in the same areas would be beneficial to clarify the incidence of the problem during the Crusader period specifically. The main problem seems to be that the available parallels for this topic are extremely limited, and therefore a comparison with Jezreel, although useful, cannot be relied upon for drawing conclusions on the origin of pathologies affecting a population in general.

The study therefore cannot give for now definite answers for the reasons and timing of the children's mortality; however, it provides interesting information about the inhabitants of the castle, mainly the proof that the community living at the castle included families and not only soldiers. Families, therefore, may be included in the group of consumers of products indicated from the faunal remains at the tower, only a few metres away from the cemetery. Moreover, evidence from the anthropological data provides, again, a picture illustrating a relatively narrow chronology: the graveyard was used within the time range of 1127-1188.

Discussion

The castle is of primary importance for the understanding of the lifestyle of a Frankish castle in 12th-century Petra, and particularly so because its chronology is clear and very limited. The castle was built around 1127-1140 under the direction of non-local masters and probably with the large use of local workmanship on a site where former structures were reused. Al-Wu'ayra castle had a population including families, and at least some of them were consuming a variety of foods that seem to suggest a varied diet, including meat products of standard but also of high quality, fish, eggs, milk and probably cereals and other agricultural products available in Wadi Musa. The population of the castle probably included blacksmiths to produce metal objects such as weapons, and the large area covered by the castle's fortifications probably allowed keeping livestock. In addition to fish from Aqaba, the inhabitants were also purchasing local pottery in Wadi Musa, while ceramics from Palestine and Syria/Egypt were also

⁷⁴³ 'Amr et al. 2000, 246.

purchased, at least in part through Shawbak but perhaps also directly through Wadi Musa as far as the Egyptian products were concerned, since the trade with Aqaba was well established at the time of the arrival of the Franks.

Al-Habis

Surveys

To date, relatively limited archaeological research has been done at the castle of al-Habis and only limited clearance or excavation has been engaged at the site⁷⁴⁴; however, the site has been known and described since the time of the early explorers, and even since the visit of Baybars, as mentioned above.

Musil inspected and described the ruins, calling the site the “citadel” of Petra, which he defined as almost untakable.⁷⁴⁵ Dalman noticed an inscription in Greek made of four parts in the cistern wall, and denied the hypothesis formulated before by Von Schubert and Hoskins that this may have been a Crusader castle. Murray defined the fort as “undoubtedly of the Crusaders’ period” and impregnable but vulnerable to sieges for the absence of cisterns,⁷⁴⁶ which she clearly did not notice.

The most comprehensive survey is the one done by Hammond;⁷⁴⁷ Hammond produced what is today the only available plan and section of the site, on which he identified a keep, an upper ward and a lower ward built with a forecourt cut in the natural bedrock; he himself recommended mapping further details and excavations at the site.⁷⁴⁸

He also advanced a few observations on the character and function of the castle itself.⁷⁴⁹ He observed at al-Habis the presence of several elements recurring at other Frankish castles: the choice of a site based on the possibility to overlook important communication routes and to reuse earlier materials, the cutting of the bedrock to increase defence in substitution for the construction of walls, the indirect access, and the use of pointed arches, masons’ marks and diagonal tooling; these are in fact all recurrent elements in Frankish architecture in the Latin Kingdom of Jerusalem,⁷⁵⁰ although the diagonal tooling he has observed on the masonry is probably rather the local Nabataen

⁷⁴⁴ Some clearance has been conducted by the University of Florence, together with some analysis of building phases and techniques, although this research is currently unpublished. For some of their preliminary observations, see Vannini and Nucciotti 2003, commented upon in appendix b.

⁷⁴⁵ Musil 1907, II, 120-122.

⁷⁴⁶ Murray 1939, 63.

⁷⁴⁷ Hammond 1970.

⁷⁴⁸ Hammond 1970, 19; 20-21, plates III-IV.

⁷⁴⁹ Hammond 1970, 17-31.

⁷⁵⁰ For the role played by some of these elements, see appendix b.

tooling style, on material that was largely reused by the castle's constructors. He also noticed that the position was very well defensible as from the castle's height the advantage would have been with the defenders, who still would have been able to shoot arrows effectively down the valley. Moreover, the castle dominated the view on all the main entrances to Petra, especially the one from west; he also suggested that this may have been the reason for creating this outpost. Ceramics collected by Hammond are not commented on in details or illustrated, and for this reason it is not possible to assess their date.⁷⁵¹

Kennedy noticed that the arrow slit on the north wall is doubtless 12th-century, leaving no doubt as to the Crusader work on the site.⁷⁵² My brief survey of building techniques at al-Wu'ayra and at al-Habis castle was carried out in 2013; close similarities in building techniques between the two can indeed confirm even more safely that al-Habis is a Crusader fortification. In addition, some observations have been made on this occasion on the pre-Crusader phase at the castle.⁷⁵³

The castle is a very good candidate for studying building techniques of 12th-century fortifications in the Petra area, especially as it is possible to use Hammond's plan as a basis. Hammond did not analyse in detail the building phases at al-Habis, but did not observe any notable variations in the use of masonry, which supports the hypothesis that the structures at the site belong mostly to the Frankish castle.⁷⁵⁴ Even a short survey shows that some of the structures are well preserved, which gives enough material for study of the character of the structures.

Jabal Harun

A Finnish archaeological team led by Jaakko Frösén worked on the site of Jabal Harun from 1998 till 2007, with research activities including surveys and excavation, in particular on the plateau 1,245 m above sea level, some 150 m from the higher peak of the mountain, where the Islamic shrine is located, marking the cenotaph of Aaron. The focus of the excavation was a monastery of Byzantine foundation; data from excavations at the Church and Chapel have been published,⁷⁵⁵ and the publication of the excavations on the rest of the monastery is now in progress.⁷⁵⁶ The careful and integrated analysis of the team of both historical and archaeological sources has

⁷⁵¹ Hammond 1970, 36.

⁷⁵² Kennedy 1994, 29.

⁷⁵³ See appendix b and conclusions of this chapter.

⁷⁵⁴ Hammond 1970.

⁷⁵⁵ Fiema and Frösén 2008.

⁷⁵⁶ Fiema and Frösén, in progress.

reconstructed in detail the history of the site. As noted by Fiema and Frösén, it is the written sources in this case which provide more information on the Crusader to the Mamluk periods, not the archaeological ones. Sources witness the existence of a structure in 1100 and Fulcher of Chartres after his visit mentioned a monastery but not the tomb of Aaron;⁷⁵⁷ therefore it can be concluded that probably the structure mentioned in the sources was not on the *weli* but rather the site of the Byzantine monastery. Here, Thietmar visited the place in 1217 and stated that two Greek Christian monks were living in the church on top of the mountain.⁷⁵⁸

Stratigraphic excavations

The western area of the monastic complex was found to be occupied by the latest structure used on the site: a sloping wall, located west of the trenches O, K, S, A1, whose construction and form has been identified as a *talus* or *glacis*, found in Crusader-Ayyubid period structures, such as the one found at Belmont Castle;⁷⁵⁹ it is observed that this kind of wall is used not only for fortification purposes, but also against earthquakes. The reinforcement of the western building would have provided protection for pilgrims reaching the site, even after the monastery and church were no longer in use.⁷⁶⁰ My observation of the building techniques of the sloping wall shows that they are compatible with the other 12th-century constructions in Petra.⁷⁶¹

The monastery chapel could still have been used as it was still 2.5 m high at the moment of the excavation. The hypothesis proposed, allowing the reconciliation of textual and archaeological sources, however, has been that some of the rooms of the western buildings could have been inhabitable by people living in the monastery, because two of these rooms still had arches standing at the moment of excavation; the room in trench S in particular has been proposed to have been suitable for this purpose; it is harder to know if this was used as a church or chapel or was simply part of the monastery, but it would have offered a suitable space for a chapel, since it is oriented E–W.⁷⁶² Therefore, the possibility of the existence of a small, functional religious community witnessed by the historical sources is not in contradiction with the archaeological record.⁷⁶³

⁷⁵⁷ Fiema and Frösén 2012, 193-194.

⁷⁵⁸ Pringle 2012, 121.

⁷⁵⁹ Harper and Pringle 1988, 104.

⁷⁶⁰ Fiema 2008, 93 and fig. 12.

⁷⁶¹ See appendix b.

⁷⁶² Fiema and Frösén 2012, 197.

⁷⁶³ Fiema 2008b, 434-441.

Ceramic evidence

The analysis of ceramics has not been able to clarify the question on the extent of the occupation of the monastery during the 12th century; a fragment has been identified in the church stratigraphy, which may possibly belong to a 12th-century chronology, with a parallel with the 12th-century fragment from excavations at al-Wu‘ayra, a handmade bowl associated with the church foundation phase.⁷⁶⁴ This is interpreted, however, as an infiltration into an Early Islamic level, phase 11, which is dated, specifically, from its own context, to the mid-8th century / 9th century, or possibly to the early 10th century, with infiltrations of 10th to 12th-century materials.⁷⁶⁵ Moreover, my further analysis of a selection of ceramic fragments from the last phases of occupation at Jabal Harun has confirmed that there are no elements supporting a chronology later than the 10th century, even allowing for all available parallels from the well-dated site of al-Wu‘ayra.⁷⁶⁶

Finally, the survey of the team on the site has resulted in the collection of a large quantity of Islamic-period pottery datable, at the broadest, to the 11th to 20th centuries, with a high proportion of sherds related to the Mamluk period. No specific fragments of the 12th century have been identified at the site,⁷⁶⁷ but this does not necessarily mean that the site was not frequented during the 12th century, as although it is now possible, on the basis of my ceramic chronology for Petra, to distinguish broad ceramic periods, there is normally the need for a substantial assemblage to be available in order to distinguish its 12th-century chronology, and it has been shown that identification on survey material is harder than on excavated assemblages.⁷⁶⁸

Discussion

In conclusion, archaeological sources have not been able to clarify the exact location of the area that was still in ecclesiastical use for prayer in 1100, but there is no reason to doubt that the information about the existence of a monastery or a chapel on Jabal Harun at that time has a basis. Moreover, archaeology, such as the presence of a cross dated to this period, supports the fact that the western building at the monastery may still have been used until the 13th century, as stated by the textual evidence⁷⁶⁹

⁷⁶⁴ Tonghini and Vanni Desideri, 712, fig. 6b.

⁷⁶⁵ Gerber and Holmquist 2008, 299, fig. 5.114 and 307.

⁷⁶⁶ Sinibaldi, in progress, b.

⁷⁶⁷ Sinibaldi in press, b.

⁷⁶⁸ See appendix b.

⁷⁶⁹ Fiema and Frösén 2012, 196.

Although the ceramic evidence did not identify the 12th-century occupation, this may be partially due to the difficulties in identifying pottery of this period in Petra.

Wadi Farasa

Surveys

The Wadi Farasa East in Petra was explored by de Laborde⁷⁷⁰ and by Brünnow and Domaszewski, who made some brief observations, but almost exclusively about the Nabataean-period site. They also noticed, however, some slab stones with crosses, interpreted as gravestones; in particular, in the inner chamber of the Garden Tomb a gravestone engraved with a cross was interpreted as Crusader,⁷⁷¹ but later Dalman commented that the form of the cross is identifiable as belonging to the Byzantine period.⁷⁷²

My brief survey of building techniques at Wadi Farasa has recorded some basic characteristics of construction at the site and these have been compared with those at al-Wu‘ayra and al-Habis.⁷⁷³ Differences rather than similarities have clearly emerged from this comparison, which in general can be summarized as a much lower technical level of construction and the apparent absence of any specialized workmanship.

Stratigraphic excavations

The International Wadi Farasa Project has been analysing the east part of the Wadi Farasa in Petra since 1999 and conducted archaeological excavations from 2000 to 2007. Archaeological investigations have discovered an important complex of the Nabataean period with a funerary function, centred in the area of the Soldier’s Tomb and extending on two natural terraces. During this period Wadi Farasa also had the function of collecting water by means of a sophisticated hydraulic system, and of connecting the Petra valley to the High Place of Sacrifice. A medieval occupation of the area was recorded during the first excavation campaign; the project has gradually revealed the evidence of a large medieval settlement that extended on both terraces. The medieval phase has been documented as the only one of importance after the Nabataean one. Excavation activity has recorded several built structures, including some with a clearly defensive function, which have reused pre-existing walls from the Nabataean phase. On the upper terrace, some structures narrowed the access to the Garden Tomb,

⁷⁷⁰ De Laborde 1838, 196-199.

⁷⁷¹ Brünnow, R. E., and Domaszewski, 2004, 271-275, fig. 307.

⁷⁷² Dalman 1908, 196.

⁷⁷³ See appendix b.

and were founded on top of the fill of a large cistern, which at that time was therefore not in use any more.⁷⁷⁴ This also shows, interestingly that because the large cistern was filled with medieval pottery, the site, including probably the Garden Tomb itself, were already occupied in the Middle Ages before it was decided to fortify it. Moreover, medieval pottery has been recorded in all excavated areas, in connection with the use and construction of walls, and as rubbish pits that filled previous rock-cut structures.⁷⁷⁵

Finally, five funerary stone slabs, carved with Christian symbols, have been excavated on the upper terrace; they suggest the presence of a still unidentified cemetery nearby and therefore a presence of Christians in the area for at least two generations.⁷⁷⁶ Regarding the possibility that the carved gravestones are Byzantine, no Byzantine occupation has been identified by the excavators on the basis of ceramics. Schmid's team have also found some additional gravestones with Christian symbols, dumped between the ruins of the upper terrace, and identified one of the symbols as one found on Crusader-period coins. The Christian presence and the fortified character of the settlement point to a Crusader-period settlement; and this would be further supported by the presence of *ballista* ammunition. An Arabic coin of the Crusader period was found on the site and some of the pottery fragments were found in the walls of the structures,⁷⁷⁷ indicating a *terminus post quem* for the construction of the walls.

All these elements have made it possible to put forward the hypothesis of a significant settlement of the Crusader period, consisting of a fortified post in connection with another fortification held by the Franks in the area of the High Place of Sacrifice on the Jabal Attuff (Jabal Madbah), because otherwise the site would be undefended from attacks from this high position.⁷⁷⁸ Both of these, according this hypothesis, first put forward by Hammond and followed by Vannini, would have reflected the aim of the Franks in the area to ensure control of the Petra Valley.⁷⁷⁹

The ceramic evidence

To date, important quantities of medieval pottery have been excavated mainly in association with the following contexts: 1) on the upper terrace area, the fills of two Nabataean cisterns and a fortified medieval structure, in front of the entrance of the Garden Triclinium; 2) several contexts associated with medieval built structures in the

⁷⁷⁴ Schmid 2012, 83.

⁷⁷⁵ Schmid 2001; 2002; 2005; 2007; Schmid and Studer 2003; Schmid and Barmasse 2004; 2006.

⁷⁷⁶ Schmid 2002; 2006; 2009.

⁷⁷⁷ Schmid 2012, 83-84; the chronology of the coin is not specified.

⁷⁷⁸ Schmid 2006.

⁷⁷⁹ Vannini and Vanni Desideri 1995; Vannini and Tonghini 1997.

area of the lower terrace, more specifically the northeast and the south parts of the complex; 3) the filling of some Nabataean rock-cut tombs, part of a small necropolis in the western corner of the complex; 4) the filling of some Nabataean rock-cut tombs inside the so-called Renaissance Tomb.⁷⁸⁰ The medieval occupation has therefore extended at least over the area explored by the project, including the upper and lower terrace, the small necropolis in the western corner of the Nabataean complex, and the interior of the so-called Renaissance Tomb, north of it.

The stratigraphic deposits associated with medieval occupation belong to different types. Deposits associated with built structures, both on the upper and lower terraces of the site, often characterized by a rather fragmented state of ceramic conservation, have the advantage of having a direct relationship with walls, and in some cases of being included in the construction of the walls themselves. Different kinds of deposits, on the other hand, often interpreted as rubbish pits, are fills of previous rock-cut features; although disconnected from the medieval structures, these are generally characterized by a better state of conservation of ceramics, and are therefore very valuable for reconstructing pottery types. Excavations in the Wadi Farasa have unearthed an important quantity of medieval pottery in primary deposition; the assemblage is therefore certainly significant both for an understanding of the occupational phases at the site, and for the possibility to work on a pottery typology.

My analysis of the complete assemblage based on my ceramic chronology of the Petra region has highlighted that a long period of occupation was present at Wadi Farasa, in the range of the 11th to 16th century, with some frequentation of the site until the 18th or 19th century at least; moreover, that it is possible to distinguish the occupation of different areas of the wadi in different periods. The earliest phases of occupation appear to involve parts of the lower terrace, and the entire upper terrace, which was not reoccupied in the later periods. Later phases of occupation involved mainly the lower terrace, and the inhabitants used the necropolis and perhaps also the Renaissance Tomb as a dump for ceramics and meal remains.

The pottery from the earlier phases includes a chronology which is currently possible to define as within the range of the 11th to 13th century. After the ceramics have been compared to those from Robin Brown's excavations at al-Wu'ayra, it has been possible to state that the two assemblages have clear similarities in terms of their general characteristics. Further discussion of the ceramic chronology is provided in

⁷⁸⁰ Schmid 2001; 2002; 2005; 2007; Schmid and Studer 2003; Schmid and Barmasse 2004; 2006.

appendix A; in general, however, data allow for confirming a 12th-century occupation at Wadi Farasa, and therefore for supporting the hypothesis of a Crusader-period site.

The archaeozoological evidence

Archaeological excavations have recovered a large quantity of animal bones in a small cistern on the upper terrace, most likely used as a rubbish pit at the moment of use of the fortified structures built on top of the big cistern in front of the Garden Triclinium. The analysis of such remains is therefore important, since it relates to a well-identified phase of occupation on the site. The faunal assemblage from Wadi Farasa indicates that the diet relied on sheep/goat and on fish from the Red Sea. The presence of a high percentage of parrot fish from the Red Sea, has been interpreted as a dependence on the international trade market from Aqaba, despite the isolated and fortified character of the site;⁷⁸¹ however, the fish was dried or salted and could therefore have been preserved for long periods and purchased locally in Wadi Musa, together with the local pottery. Brown and Rielly observe that the assemblage at Wadi Farasa shows a reliance on storable food ($\frac{3}{4}$ of bones), indicated by the presence of meat-rich joints (suggesting off-site slaughtering) and parrot fish (storable if salted), which constituted over $\frac{1}{3}$ of the bones recovered. Pig and cattle are absent, a trend justifiable with the unsuitability of the site to breed this kind of animals, just like the site of al-Wu'ayra itself.

Discussion

The medieval settlement at Wadi Farasa is currently by far one of the most interesting sites discovered in Petra in the last few years, but also one of the least clearly understood and debated until this moment.

On the basis of the data presented in this chapter, a few observations can be made. Some of the observations by Schmid are certainly valuable: the fortified character of the structures, the fact that the site was not expecting attacks from Jabal Madbah, and the Christian character of the site. The settlement had a fortified character. There is clear evidence not only in the reused structures on the lower terrace and the narrowing of the entrances on both terraces but also, interestingly, in a small window made by perforating the sandstone back wall of the funerary chamber of the Garden Tomb; this would have commanded a view over the lower terrace, in a similar way to the one created at al-Wu'ayra to overlook the castle's entrance from the prehistoric cave.

⁷⁸¹ Schmid and Studer 2003; Schmid 2006, 58.

However, it can be noticed that the presence of *ballista* projectiles cannot be considered an element associated with a medieval fortified settlement, since these objects rather belong to the classical period and do not exist in the medieval one.

Secondly, it is right that the settlement was not expecting attacks from Jabal Madbah. Instead, it seems that it was focused first and foremost in controlling the valley, and this is especially clear from the rock-cut window in the Garden Tomb overlooking the lower terrace.

Also, it is clear that settled Christian presence can be identified at some point of the history of the site, because of the slab stones, although found out of context on the upper terrace and therefore unfortunately not associated with a specific phase of occupation at Wadi Farasa. It is not possible to locate the cemetery exactly, but the fact that several examples of gravestones have been found in the same place supports the idea that it was probably not far away from the site. They could well have been brought in as building material, but abundance of building material was available at the site, since several Nabataean buildings, according to the excavators, were not reused in the medieval phase; therefore probably there was a Christian graveyard near by. In any case, although it is not possible to associate the slab stones to the phase of occupation in the Wadi Farasa, a Christian presence in the Petra region in the medieval period is confirmed by written sources and it does not come as a surprise that the Wadi Farasa would be inhabited by Christians.⁷⁸²

Although the idea that this was a fortified settlement inhabited by Christians rests on solid ground, some other elements remain less clear, in terms of the specific function and chronology of the site. The first problem with Schmid's reconstruction is that there are still no clues of a medieval fortification existing on Jabal Madbah.⁷⁸³ The second problem in assuming safely that this was a Crusader fort are the clear differences in some of the details emerging from the study of the material culture between Wadi Farasa and the known Crusader fortifications in Petra. The first element are the clear differences in the building techniques: while at al-Wu'ayra and al-Habis, the building style is characterized by specific elements including the widespread use of lime mortar and the use of mud mortar only in a minority of cases, the only material used at Wadi Farasa to bond walls is mud mortar and in general the character of the building is of a

⁷⁸² See chapter 2 and 5.

⁷⁸³ See below in this chapter, Jabal Madbah.

much lower quality than at the Crusader castles,⁷⁸⁴ although of course settlements of different function and importance can be built in different ways.

Another aspect which reveals differences between this and the other Crusader sites is the diet of the inhabitants, since at Wadi Farasa pig and cattle are almost completely lacking. The sharp difference in the presence of faunal remains at the two sites could have different meanings. Brown and Rielly suggest that Wadi Farasa could have been occupied by Frankish armies who had no access to cattle and pig, or it could have been occupied only by Ayyubid forces arriving after the loss of the territory by the Franks, which did not have a preference for this kind of meat consumption.⁷⁸⁵

Finally, the pottery does suggest that a 12th-century occupation is present at Wadi Farasa, but the current state of research on 12th-century ceramics does not allow one to narrow down the dating of the assemblage with certainty to the short chronology of the Crusader period, i.e. about 60 years in Petra. The main problematic aspect relates to the fact that local pottery has a continuity of characteristics and therefore the presence of parallels does not necessarily mean that the chronology is the same.⁷⁸⁶ However, while more observations were not possible at the time of my analysis of only a small part of the assemblage,⁷⁸⁷ study of the whole assemblage in 2010 has allowed new observations to be made. A study of the ceramics associated with the different structures has revealed a longer occupation at the site. It is possible, therefore, to make a division between: 1) a phase before the creation of the fortified settlement, probably associated with the use of the Garden Tomb in the upper terrace and the use of the large cistern in front of it; 2) a phase associated with the fortification of the site, when both terraces were changed in their structure, by narrowing down entrances and building walls; 3) a phase that is not really associated with building constructions and is mainly residential, extending over the lower terrace and using as rubbish pits the small necropolis near the lower terrace and the Renaissance Tomb, extending to at least the 15th century; and 4) frequentation of the area in the Ottoman period, not necessarily associated with permanent settlement and characterized by the presence of 18th- to 19th-century smoking pipes. Therefore, the occupation at the site may have been more or less continuous between the 12th and the 15th centuries at least, with at least some frequentation later in time, between the 18th and the 19th century, and perhaps earlier, during the 11th century.

⁷⁸⁴ See above.

⁷⁸⁵ Brown and Rielly 2006, 35-36.

⁷⁸⁶ For observations on this preliminary analysis, see Sinibaldi 2009 and appendix b.

⁷⁸⁷ Sinibaldi 2009.

The best context to analyse is the one on the upper terrace, clearly associated with the use of the Garden Tomb and its fortification and with pottery from between the 11th century and the 13th century. The site had already been inhabited recently, or was already inhabited when it was decided to fortify it, because the cistern was already full of pottery of the same period, when it was covered with walls to fortify the Garden Tomb. The pottery does not differ at all in its general characters from that in Wadi Musa and was therefore purchased there, or at least part of it was. The assemblage is small but there is no trace of the luxury ceramic goods encountered at al-Wu‘ayra, such as the fritware from Syria or the *sgraffiato* bowls.

In summary, we are dealing with a site which was fortified during the 11th-13th century by Christian inhabitants, apparently without any professional building expertise, and whose dwellers were worried about some danger coming from down the valley rather than from the top of the mountain. They were also able to purchase storable food and pottery in Wadi Musa but did not buy luxury pottery goods or fresh meat, indicating that they had a lower standard of lifestyle than the inhabitants of al-Wu‘ayra.

Because the period of the Crusades is the only one for which there is information of a medieval military occupation of the Petra valley, it is reasonable to accept the hypothesis that the fortified settlement may be part of these events. As suggested above, the lack of pig and cattle meat in the diet does not necessarily mean that the inhabitants were not Christians of Frankish, but could be determined by the fact that non-regular connections with Wadi Musa only allowed the keeping of storable food.

A solution to the issue of there being no fort on Jabal Madbah would come from the Wadi Farasa being a refuge built in time of emergency and not a fort for controlling the territory; in fact, everything (the hidden position, the fact that it looks built very poorly and perhaps in a rush, and the lack of higher quality goods from Wadi Musa) may suggest that it was built in a time of weakness and not of military strength, quite differently from al-Habis, al-Wu‘ayra and Shawbak, where all these elements were very different, and are also very similar at all sites. It is obvious that the inhabitants of Wadi Farasa were interested, instead, in having a view towards the valley, in the direction of Umm al-Biyara and al-Habis, from where they were expecting an attack, but without being seen. Possible solutions for the interpretation of the site are discussed in the conclusions.

Wadi Musa

Surveys and archaeological excavations

Pottery of Ottoman or Late Islamic date has been found in large quantities and spread over a large area during emergency surveys in Wadi Musa by the DOA, but pottery within the range of the Ayyubid/Mamluk period has been found more frequently in the north and eastern part of Wadi Musa, towards the actual Musa spring, rather than in the lower part, closer to the entrance to Petra and Zurraba. Sites with pottery of this chronological range are: Khirbat al-Nawafra, al-Udmal, site 16 closer to the Spring of Moses, and site 21 on the road to Tayyiba.⁷⁸⁸ On the way to Tayyiba but still close to Wadi Musa, Khirbat Braq has also produced Ayyubid/Mamluk pottery, while further south towards Tayyiba only later pottery has been identified.⁷⁸⁹ The DOA surveys, while non-intensive due to the heavily built-up nature of the site, may therefore have provided some information for a possible location of the medieval village, somewhat further up hill, away from the entrance to Petra.

Salvage excavations in the Nawafra district, in the north-eastern sector of Wadi Musa, have discovered a site with a long history of occupation; investigations and consolidation works by the Department of Antiquities of Jordan (DOA) took place over four seasons in between 1997 and 2000. Seventy-two squares were opened in seven different areas in 1997; excavations have uncovered a long occupation including phases of Iron Age II, Nabatean (IBC), Late Roman and Byzantine, Early Islamic, Fatimid and Ayyubid/Mamluk. Interestingly, Early Islamic-period was very significant, especially compared to that in the Petra valley. Artifacts in the Umayyad and Abbasid phases indicate that the population was relatively affluent, and that there was a continuing Christian presence among the local population.⁷⁹⁰

On the basis of comparisons with stratified ceramics from Gharandal, a substantial 11th-century phase has been identified for the Fatimid period. The Ayyubid/Mamluk village was the most significant one on the site; structures consisted mainly of houses and courtyards. A well-preserved olive-press reused a monumental Nabataean structure and an Early Islamic olive-press. Fish bones were found in association with the Ayyubid/Mamluk phase, at least some of them from the Red Sea. Other finds from this phase are iron slag and agricultural tools. Also from the Ayyubid/Mamluk periods are two cemeteries, one in area III and one in area IV. The one in area IV includes only one

⁷⁸⁸ 'Amr et al. 1998, 516-529.

⁷⁸⁹ 'Amr et al. 1998, 529-535.

⁷⁹⁰ Amr at al. 2000, 241.

adult woman resting with a baby above her arms, while all the other burials belong to small children, according to the local tradition of burying children separately.⁷⁹¹

The site is essential and currently the most important in the all area to the understanding of the Islamic chronology in the Wadi Musa area, since, as expressed by the excavators themselves, “the long occupational history of Khirbat al-Nawafla produced excellent stratification of the material culture, resulting in very deep deposits going up to over six metres in some locations”. The Islamic periods remained, moreover, particularly well preserved. The main occupation started during the Nabataen period, with only a few gaps up to the present. Such a long occupational sequence has not been discovered up to the present anywhere else in the area, maybe because as an agricultural village the site was not influenced by political turmoil.⁷⁹²

The excavators did not distinguish specifically a 12th-century phase, but on the basis of the observation of an uninterrupted stratigraphy during the medieval period, they note that it is extremely likely that there is a 12th-century occupation.⁷⁹³ Moreover, they did observe the presence of linear-painted ware, attributed by Robin Brown to the 12th century.

‘Amr notices that in the Ayyubid/Mamluk period another village was situated in the Wadi Musa centre itself, but that this was less important and more modest in size; therefore, the important archaeological evidence from Nawafla suggests that this was the village of al-Udmal, mentioned as a resting place for Sultan Baybars in 1276 during his trip from Cairo to Karak, where Moses’ spring was located.⁷⁹⁴ Zayadine also thinks that al-Udmal mentioned in connection with Baybars’ stop is rather to be identified with the area under Nawafla because it is the spring here which in the Middle Age was known as the spring of Moses, and not the present one, which is further up hill.⁷⁹⁵ This has implications also for the location of the village of Hara mentioned in the sources, which was below the Spring of Moses;⁷⁹⁶ it is possible to hypothesize that in periods of different weather in history springs would gush out at different altitudes, and that in the early Mamluk period, characterized by wetter weather, a spring would emerge lower down the mountain. In any case, at the current state of research the pottery from the surveys may suggest that the Crusader-period village may have been in the Nawafla area or in the lower area of what is today known as Wadi Musa.

⁷⁹¹ Amr et al. 2000, 244-246.

⁷⁹² Amr et al, 2000, 233.

⁷⁹³ Personal communication. K. Amr, project director.

⁷⁹⁴ Amr et al. 2000, 246; Zayadine 1985.

⁷⁹⁵ Zayadine 1985, 170.

⁷⁹⁶ See below, Hara.

Olive trees, still present, gave their name to the whole area, which is called “Hayy al-Zaytuna”, the district of the olive tree. The continuity of occupation for agricultural purposes is very evident from the architectural remains, especially from the series of five olive-presses recovered in area V,⁷⁹⁷ and from the several ones scattered around, indicating that there would be many more. This corresponds with the historical sources, which witness that olive trees were the main source of income of the local population in 1144.

Fish from Aqaba and ceramics from Iraq, Syria and Egypt in the assemblage prove that the site was well connected to the main trade routes during the Ayyubid/Mamluk period.⁷⁹⁸

Ceramic evidence

In 2012-13, I carried out an examination of ceramics and excavation documentation from the Fatimid and Ayyubid/Mamluk phases from a selection of squares and made a comparative analysis with pottery of other sites, in particular al-Wu‘ayra. As a result I have been able to identify a 12th-century presence at Nawafra on the basis of similarities between types and technological aspects. This analysis has allowed me on the one hand to contribute towards the characterization of 12th-century pottery and on the other to prove that pottery used at al-Wu‘ayra was probably purchased in the Wadi Musa area.

Discussion

Three important implications can be made about the evidence summarized above. The first is the fact that archaeological excavations have shown that the town would have been fully productive and already with a long agricultural history in the 12th century at the arrival of the Franks. Moreover, my analysis of the ceramics does not show any substantial change in terms of increase of ceramic imports compared to the earlier periods;⁷⁹⁹ on the contrary, according to ‘Amr’s preliminary analysis of the pottery at several medieval phases at the site, pottery from Egypt, Syria and Iraq witnesses to a good connection with international roads. Therefore, the pattern appears to be more one of adaptation than of significant impact on the local community.

Secondly, because of the long sequence of occupation in the agricultural village involving also the 12th century, there is a reconciliation of historical and archaeological

⁷⁹⁷ Amr et al. 2000, 233.

⁷⁹⁸ ‘Amr 2006, 25.

⁷⁹⁹ See appendix A.

sources in the obvious importance of agriculture for this town and therefore the Petra region; the attraction of the agricultural potential is mentioned in the textual evidence and is confirmed by the fact that the sources mention that Wadi Musa was famous for its olive groves and that the Franks threatened to chop down the trees in Wadi Musa before occupying al-Wu‘ayra,⁸⁰⁰ this is therefore a case of correspondence of the two kind of sources.

Finally, it can be added that at the time of the arrival of Baldwin I in 1100, this was probably one of the main centres in the Wadi Musa area, and probably one of the main points of reference, if not the main one, of the inhabitants of al-Wu‘ayra and perhaps other sites for purchasing supplies. The inhabitants of castles needed to have good relationships with the locals in order to fulfill basic needs of survival. The archaeozoological results do suggests that the population from al-Wu‘ayra may well have depended on the population from Wadi Musa for food provisions and my pottery analysis at both sites shows that this was also purchased from the locals. It may have been also the place where the fish and pottery were purchased by the inhabitants of Wadi Farasa.

Since/as it was a large village in the medieval period, Nawafra may also be considered one of the best candidates for identifying with the village of Hara, containing the church of St Moses, mentioned in the sources, even though it is currently not possible to retrace the toponyms.⁸⁰¹

The main comparison with the agricultural village of Nawafra would be the one in Baydha, since these two sites can both be considered as agriculturally based.

Baydha

Surveys and archaeological excavations

Baydha is about 7 km from the Petra town centre, on the modern road leading north from Umm Sayun under the western slopes of the Shara mountains, opposite the recently abandoned Dibidba village.

A survey in the Baydha region found no pottery from the Ayyubid/Mamluk period, while Ottoman-period ceramics were found at only a few sites.⁸⁰² Pottery from later Islamic periods than Ayyubid/Mamluk has also been found extensively in the

⁸⁰⁰ See chapter 2.

⁸⁰¹ See below, Hara.

⁸⁰² Tholbecq 2013, 299-300.

Baydha region by a DOA survey, where it was always classified as Late Islamic. The area of Umm Sayhun, on the other hand, had no Islamic-period pottery at all.⁸⁰³

More recently, the Beidha Documentation Project led by Patricia Bikai had as a main objective the documentation of the features of a selected area of Baydha. Excavations have not therefore been planned on extended areas, but included six excavations campaigns in the Baydha area during the years 2003-08.⁸⁰⁴ Thanks to surveys and test excavations, the project has identified several structures relating to a post-classical phase at Baydha, since associated to some later pottery. What looked appeared to be a regular layout of the village occupying the central section of the investigated area and the presence of crosses in wall carvings of a Nabataean rock-cut structure, which was later reused as a church, has suggested the hypothesis of a Crusader-period phase on the site; this phase succeeded an occupation in the early Islamic period, which is evidenced by some ceramics dated to the 7th century. However, surface findings and excavations from this project have now collected ceramic material which present a picture of a very long occupation at the village, including the Nabataean, Byzantine and Islamic periods (7th century and much later into the Islamic period).

The Beidha Documentation Project demonstrated that in the Nabataean era, the area was dedicated to the cultivation of grapes and the production of wine. Five wine-presses were documented in the area by the project, and more than 30 others have been identified in the vicinity. Since the production of wine was well documented in Byzantine times, it was hypothesized that the site continued to produce grapes in the Islamic period, and possibly wine or grape syrup (*dibs*) during the later periods, when the village was Christian.⁸⁰⁵ However, it can be noticed that the Nabataean wine-presses were apparently not reused during the later phase of occupation at the village, because they were filled with pottery corresponding to this chronology.

Since 2007, as a member of the Bikai team, I have carried on a basic documentation of the site, including building techniques used at the village and some rock outcrops around the site, and on the route from Baydha to Petra.

Work has been undertaken at the village by Brown University under my direction with Christopher Tuttle during the 2010-11 seasons with a new project named Islamic Bayda,⁸⁰⁶ and three trenches have been opened near the ones opened by Bikai, in the

⁸⁰³ ‘Amr et al. 1998.

⁸⁰⁴ Bikai, Kanellouopoulos and Saunders 2005, 2007.

⁸⁰⁵ Bikai, submitted.

⁸⁰⁶ Sinibaldi and Tuttle 2011.

areas now named I, II and III. Finally, the Brown University survey team, whom I have assisted, has mapped the area of the village almost completely,⁸⁰⁷ and this has revealed that the village structure is much less regular than thought originally after the preliminary surveys by Bikai.

Recent analysis of individual structures

Village

Ceramics of the Islamic period were recovered at the village by the Bikai team in small soundings almost everywhere in the western area of the site, east of Siq al-Barid and south of the road to the Siq itself. Ceramics came especially from: (1) some village structures; (2) the area around a rock-cut Nabataean structure, which was later reused as a church in the Byzantine period; (3) some rock-cut as well as built structures located opposite the entrance to the church; (4) a large cistern nearby; (5) some village structures between this cistern and the road; and (6) an area to the west of the village, where a mosque has been discovered and which includes several rock-cut and built structures. Several of these features were investigated by small test soundings and appeared at least partially on the surface before excavation. In some areas, robbers' activities have been recorded, as well as a long-term disturbance of the original archaeological deposits connected to the structures due their use for keeping animals. The original stratigraphy has therefore been partially compromised in some areas of the site. However, some undisturbed deposits have also been recorded in other areas. As a result of the sampling aims of the project, the excavations have not completely uncovered all structures and excavation did not explore their foundations.⁸⁰⁸

The eastern of the two mosques has been also excavated by the Bikai team, and seems to have had an earlier phase. The village structure may remind one of the regularly laid out villages organized by the Franks in a completely western fashion—except that there are differences, such as the fact that those are normally organized along a central road rather than, like at Baydha, on multiple streets, and that Palestinian village homes are about twice the size of the houses discovered at Baydha, where the rooms average about 5m square.⁸⁰⁹

As part of my own preliminary survey at the site, I have observed that three structures excavated by Bikai at the centre of the village each consist of a roughly

⁸⁰⁷ See map in Sinibaldi and Tuttle 2011, 433, fig. 2.

⁸⁰⁸ Information summarised from fieldwork documentation material of the Beidha Documentation Project, courtesy of Director P. Bikai.

⁸⁰⁹ Bikai, submitted.

rectangular room with one transverse arch to support the roof, and are built sharing walls; entrances are all on the same side. All of them include a semicircular structure. The building technique can be described generally as characterized by elements of diverse size, partially reused, and not organized in rows. The built area extends much more widely than the excavated one, as it is very clear from aerial photographs. I have also made some observations on the village building techniques, which have little in common with those observed at the Crusader castles in Petra.⁸¹⁰

It can be observed that it is challenging to find parallels for the building techniques in Islamic Baydha, because, although they are very different from those of the Crusader-period castles in Petra, the 12th-century site also had a different function and there are no parallels available in the region for this kind of settlement and chronology. Of course, we should not necessarily assume that the Franks would have built new habitations in the village on their arrival; it is much more likely that they simply wanted some form of control over the local village, because there are no indications in the sources that there was any intention to transfer Frankish inhabitants into this region; on the contrary, sources tell us of local Christian population being transferred from here to Jerusalem. It is therefore very unlikely that the village included European inhabitants, since their presence was apparently scarce in the region, as discussed in chapter 5. Therefore, this was most likely a local village, built with local building techniques.

My pottery analysis has resulted in the hypothesis that the rooms in the village excavated in 2010-13 and a large part of the now visible village remains are of Ottoman date.

Church

The church, readapted from a rock-cut Nabataean funerary structure, does not offer, therefore, elements of building techniques or stratigraphy on which to base conclusions on its use during the 12th century. It is used today as a shelter for goats and is periodically emptied of the accumulated dung.

The presence of crosses carved into the wall of the church shows that there were Christian visitors in the past, and has also suggested to Bikai the idea that the church was reused in the Crusader era.⁸¹¹ One of them looks almost a variation of a cross. Another similar but “complete” one, which I have not viewed, has been identified on

⁸¹⁰ See appendix b.

⁸¹¹ Bikai, submitted.

the northern wall by Bikai. However, the kind of simple crosses incised in the church are not necessarily exclusive of the Crusader period. The incised crosses therefore are only indicative of the fact that the church had been visited by pilgrims, but they do not necessarily have a chronological value. Crudely incised crosses in a church are also present in the Shawbak chapel⁸¹² and like in the Shawbak case, these could just have been made by later visitors, as there is no guarantee that they belong to the original use of the church or to later one.

In general, it is possible to assume that even if the church is originally Byzantine, according to Bikai's interpretation, it may have been used for a long time afterwards because the local community remained Christian. It is harder however to say until when; the fragments of pottery associated with the construction of the walls inside the church, therefore marking a change of function for the cave-church to perhaps a domestic use, are dated between the 12th century and the 14th century; therefore, the structures would have been built at any time after this moment, although the church may have gone out of use earlier. The fact that there were only a few centimetres between these structures and the church floor may not be significant of its change of function, since the cave may have been swept for domestic use for a long time after abandonment. However, it can be noticed that some of the cooking pots which are so frequent at the site in its latest phase, now identified as Ottoman, are also present in the assemblage, and although this type is hard to date in Petra, it may well be that this wall was constructed during the Ottoman period.

In summary, because the pottery is residual, the structures in the church could have been built at any time between the 12th century and the Ottoman period. This allows for the hypothesis that the church was still used during the 12th century, whether it was just reused at that time or maybe even constructed by the Franks, a possibility which is not possible to prove at the current stage of research. However, it can be assumed that the Christian village already had a church at the time of the Franks' arrival, and that there would not have been a specific need for creating a second one. Another possibility is of course that the church used in the 12th century was not the rock-cut one, but one which at this moment is not identified. The specific rock-cut characteristics of this church, however, make it very feasible that it was used without variation through time from the Byzantine to the Crusader period at least. The only available element for a better understanding of the church's chronological use may be the excavation of the area in front of it, which is planned for the future.

⁸¹² Pringle 1998, 313.

Fortified structure

One of the rock spurs overlooking the village area has been included in my survey.⁸¹³ Here, I have noticed some ruins of built structures which do not appear to have been recorded before, not even by the early travellers to Petra, who often give some thought to the location of Crusader-period forts. The high place overlooks the village and controls easily the road that leads most directly from here to Petra, passing through Slaysha, the Wadi al-Mu'aysra al-Gharbiyya or the Wadi al-Mu'aysra al-Sharqiyya and past Qasr al-Bint and al-Habis castle, as I have verified by walking this route. It is developed on at least three rock outcrops located at different levels.

Structures, which are preserved at least four courses high in some parts, are built with elements of various dimensions and directly on the bedrock with a thin soil layer; judging from the conservation state, they are probably bonded with mud mortar and walls have a fill made of cobbles. Building elements of diagonally dressed masonry with the tooling covering the whole length of the stone—without marginal draft—have been identified, measuring about 40 × 15 cm, and appear to be reused from Nabataean buildings. Another wall of the structure is made of blocks measuring from 20 × 10 to 15 × 8.⁸¹⁴ In summary, the building character of the structure are different from those recorded at the Crusader castles in Petra, but are not incompatible because, like at Wadi Farasa, the level of workmanship employed is very low, and does not have very specific characteristics.

The access to the high place is hard and currently requires expert climbing skills; some steep steps carved roughly on the sandstone led to the lowest rock spurs, but perhaps some additional structures were originally needed to reach it.

Ceramic evidence

My pottery study concluded that the Islamic-period ceramic assemblage excavated from Bikai includes at least the range of the 7th to 16th century and probably later; the presence of material from the 11th to 14th century was also identifiable thanks to the presence of well-known ceramic imports. In addition, several fragments of painted and unpainted pottery have characteristics in common with the assemblage at al-Wu'ayra. This allows one to say that very probably the village included a 12th-century phase.

⁸¹³ The structures have been climbed and photographed by local inhabitants of Baydha for me because of its difficult accessibility. I have also asked colleagues surveying the region for aerial photos to include a picture of the structure in their surveys (see figure 5)

⁸¹⁴ Observations summarised from my survey at the site.

Because the 12th-century ceramics are not associated with structures, it is still not possible to assess, however, the exact character and extent of this occupation phase.

On the basis of my analysis of the pottery associated with the structures excavated for Brown University, it has now been possible to observe that most of the village structures now visible belong to later periods, probably Ottoman (16th century or later).

Ceramics that I have analysed from the Brown University surveys have not allowed me to identify any 12th-century pottery, but look very consistent with the last phase of occupation at the site, the Ottoman one.⁸¹⁵

A small quantity of pottery has also been collected from the small fortified site; all fragments from here are handmade, undecorated and not useful to reconstruct the form, and therefore, unfortunately, very hard to date more precisely than to sometime later than the 10th century.

Discussion

The scattered, often erratic ceramic evidence in Baydha allows one to hypothesize a 12th-century occupation of the village, although it has still not been possible to associate it with structures. The history of occupation at the village, however, is much longer.

Baydha is located on the main route between al-Wu‘ayra and Shawbak, beyond the eastern slope of the Shara mountains; in addition, Hurmuz castle, quoted in the sources, was near by.⁸¹⁶ Finally, as Bikai observes, just east of Baydha is the village called Dibibdeh, which was Melkite (Greek Orthodox) into modern times—like the monastic community at Jabal Harun. It is very likely therefore, that Baydha of the 12th century, just like the population in Wadi Musa and in Dibidba, was Christian. This is supported by the presence of a metal cross pendant found in the stratification of one of the houses opposite the church, belonging to the Ottoman period.⁸¹⁷ If these elements are added to the fact that the village had a great agricultural potential, it seems that all reasons would be there for this village to be attractive to the Franks, who would probably want to have some control over it in some way. The possible nature of this control and the relationship with other settlements of the Franks in the area is discussed in the conclusions.

One more element can be observed: the fact that the ceramics assemblage includes ceramic imports from Aqaba from the 11th to 12th century and Syria/Egypt in the range

⁸¹⁵ Sinibaldi, in progress, c.

⁸¹⁶ See below in this chapter, Hurmuz.

⁸¹⁷ Unpublished results from the 2011 season of excavations by Brown University.

of the 12th/14th centuries. This proves a connection with Aqaba in the Middle Ages, which is also attested by the finds of fish remains from the Red Sea in 12th-century settlements in the area between Petra and Wadi Musa. Moreover, it is very interesting to find relatively luxurious goods in an agricultural village, since even at al-Wu‘ayra castle, which may perhaps have been inhabited by Franks at some stage, a very limited amount of imports has been found; these are also among the few imported fragments found in Petra during the Islamic period. This suggests the idea that access to these items was not restricted to a small part of the population, but was also available to inhabitants of agricultural villages.

Hara

This village, mentioned in the textual sources with the possible orthographic variations of Hara, Bara or Ara in the plain of Sehan or Seham or Jeham, below the valley or hill of St Moses, has not been identified yet; the village included a church of St Moses. It has been hypothesized by scholars that this would have been a parish church.⁸¹⁸ The toponyms are today unfortunately not known, and it is not possible to associate them, therefore, with a more specific area of Wadi Musa. It is however suggested here that a good candidate for the location of the village would be the area of Khirbat al-Nawafila, as it is archaeologically proven that this was a densely inhabited area and there are remains of 12th-century occupation.⁸¹⁹

The document also tells us that by around 1160, when the village was granted to the Hospitallers, Frankish settlement was already well organized in the Wadi Musa area and not only in the castles.

4.5. Sites with no evidence of 12th century occupation

Hurmuz, al-Qarshaa and al-Naq‘a

Between 2011 and 2013 I undertook a basic survey of the sites known today as Hurmuz, en-Naq‘a, and el-Qarshaa, in order to have a clearer idea of the problem of the location of Hurmuz castle. I first visited the site which is nowadays called Hurmuz; this is a very small area just a few hundred metres north of Baydha, immediately west of the modern road to Wadi Araba. At the bottom of the valley there is a small wadi where a *betil* (Nabataean shrine) is carved. There is no trace, however, of any fortification. It is

⁸¹⁸ Mayer 1990, 98-99; Pringle 1998, 377.

⁸¹⁹ See above in this chapter.

possible that the name Hurmuz may not, therefore, correspond exactly in modern times to the one of the past or that the castle may have been named after a nearby site.

The location of el-Qarshaa, north of it, easily controls the area of the Baydha village including the small fortification above Siq al-Barid that I have identified, and it is higher than al-Naq'a. However, it is not well defended on the east side and can be climbed very easily from the valley. There are no remains of fortifications on the top but only lines of walls running east–west, which appear to be rather a system for collecting water ; the summit could have been cultivated until recent times. The sandstone blocks scattered all over the mountain are probably at least in part remains of former walls fragmented by the natural agents and washed down the cliff.

The site of al-Naq'a is north of it; the top of the site has an open view on the road to the Jabal Shara and Shawbak, but Baydha and the entrance to Petra from Baydha are not visible from the top of the ruins, unless, of course, a view from the top of a high building was much wider.

It is necessary to climb the top using hands from the west and east side, but it is impossible from the south. Structures are built on a rock spur occupied by a large building, in a way similar to those at al-Wu'ayra castle, but one difference is that it does not seem to have been cut on one side to improve the natural defense. The area is scattered with flat stones worked as construction materials. It is clear that there are several rooms built with large flat stones, partially still *in situ*, and also that walls were bonded with mud mortar and defined several spatial units. Building techniques do not correspond in any way with those used at the known Crusader castles, and there appear to be no signs of later reuse. The much lower quality of building construction at Hurmuz would seem to suggest that it was of lesser status than the major castles of Shawbak and al-Habis, on which profesional masons were evidently employed.⁸²⁰

Handmade ceramic was analysed from the site and was the only type noticed. Diagnostic pieces included a fragment of cooking pot with a similar form to the type found in large quantities at the Islamic Bayda excavations (tentatively interpreted as Ottoman period). The danger of relying chronologically on this specific form of cooking pot, however, is known, as this form is widespread from at least the 11th century to the Ottoman period,⁸²¹ and may even be confused with earlier types. Also included are a handle of a form unknown in the Islamic period and tempered with a very small amount of chaff and a sherd with many limestone inclusions, a fabric currently considered

⁸²⁰ For a comment on building techniques at Naq'a, see appendix b.

⁸²¹ Sinibaldi 2009.

identical, after petrographic analyses, to types current in the Ottoman period and in the Bronze/Iron Age.⁸²² Apart from the cooking pot fragment, there are currently no parallels for the Islamic period in Petra, and two more observations can be made: the absence of painted pottery and the generally high technological level compared to the Ottoman-period pottery at Islamic Baydha, which may indicate the presence of an earlier period. Three different kinds of grindstone have also been noted, one of them similar to a Neolithic-style one found in Baydha, which may well have been reused for a long period of time. 'Amr has classified the ceramics from surveys of the DOA at Khirbat al-Naq'a as Late Islamic, with no trace of Ayyubid/Mamluk pottery.⁸²³ At an-Naq'a there is a considerable amount of pottery preserved on the site, in contrast with 'Attuff and Khubta, where most likely it was washed down from the smooth rock surface, and no painted fragments, present in a considerable proportion during the 12th century, have been noticed. It is suggested in this thesis that painted and unpainted pottery may well belong to different industries and therefore they may have been distributed in a different way and that painted pottery is currently much more diagnostic than unpainted pottery for Islamic-period ceramics in Petra. However, at known 12th-century sites in Petra, the two productions are always found together.

In conclusion, while hoping for the possibility of more research at this very interesting site and not ruling out the possibility it could have been reoccupied in the 12th century even if it was not originally Crusader, in the current state of research there are no grounds for attributing to it a Crusader-period occupation.

Jabal Madbah

The site has received considerable interest by scholars and has been long associated with the existence of a Crusader castle. Brünnow and Domaszewski defined the structure on top as a Crusader castle and a fort defending the town,⁸²⁴ but they never explained why. Dalman thought, however, that the castle was definitely earlier, and that its first phase was connected to the cutting in the bedrock to obtain the Obelisks;⁸²⁵ to this opinion, Brünnow commented that not only it is not impossible that a later building would have been located at the site, but that the reason should be searched in the fact that the Franks did believe that Petra was in the Sinai and that because of this confusion,

⁸²² See Sinibaldi, in press, b.

⁸²³ 'Amr et al. 1998, 507.

⁸²⁴ Brünnow and Domaszewski 2004, 239: n. 85.

⁸²⁵ Dalman 1908, 174.

Moses' tables would be to them the obelisks themselves.⁸²⁶ Musil observed that from the top it is possible to control all the south roads to the Siq.⁸²⁷ Murray noticed that there is no actual proof to support this traditional association to the site with a Crusader castle, and that only excavation could provide an answer.⁸²⁸ Lindner also agreed that the building techniques of the fortification have nothing in common with those of the known Crusader castles.⁸²⁹ Hammond, following Deschamps⁸³⁰ also hypothesized the existence of a watch post here. Vannini, following Hammond, has proposed the same theory,⁸³¹ and Schmid has also noticed, after the discovery of the site of Wadi Farasa, that it is likely that a fort would be here, otherwise the Wadi Farasa valley would be unprotected from south.⁸³²

I have visited the site and my observations on building techniques cannot support in any way a 12th-century presence at the site, apart from the fact that part of the fortification is erected on top of an artificially smoothed bedrock wall.⁸³³ Here the masonry displays a high level of workmanship, unlike the buildings commented upon, such as Wadi Farasa, and its character is very distinctive.⁸³⁴ Moreover, no trace of medieval pottery could be found during this basic survey, but unfortunately this element cannot be relied upon, since it seems that earlier pottery is also scarce, most likely because it would have been washed down from the smooth bedrock surface.

Therefore, although the fact that a castle could have been built there by the Franks is a realistic hypothesis, the traces of such fortification have not been found. In conclusion, although the position certainly dominates impressively the area surrounding Petra, including Umm Sayun, Wadi Musa, Umm al-Biyara and the al-Shara mountains, this seems to be indeed the only concrete reason put forward by scholars for a Crusader fort on this mountain, until Schmid's association of this question with Wadi Farasa. It seems that a debate about a possible fort on this site has started since the time of the early explorers, based on the general notion that the Franks would always need to control the highest points.

The problem in identifying a Crusader-period fortification on Jabal Mabdah can be summarized in this way: 1) the present building cannot be identified as a Crusader-

⁸²⁶ Brünnow 1909, 247-251.

⁸²⁷ Musil 1907, 128.

⁸²⁸ Murray 1939, 62-63.

⁸²⁹ Lindner et al. 1997, 184.

⁸³⁰ Hammond 1970, 38.

⁸³¹ See above, 4.1.

⁸³² See above in this chapter.

⁸³³ See appendix b.

⁸³⁴ See appendix b.

period one (and most likely not medieval, either). 2) if the castle is not the current one but used to be there after the construction of the older one, we have the problem to justify why this fortification would have been completely destroyed without leaving any trace, in contrast not only with al-Wu‘ayra, very well preserved in some of its parts, but also with al-Habis, which was preserved up to 40 courses in some points and was also constructed in a point very exposed to the elements.

It is possible that if there was a Crusader fort on this mountain, it was not a fort as important as al-Habis or al-Wu‘ayra, since it was not mentioned in the sources; this may be the reason for constructing something in a very poor building style. But even allowing for the possibility that a fort may have been built with a lower quality workmanship because it was a minor one and not a major one, it is probably reasonable to assume that some of the masonry from this building would have been found scattered around the area. Therefore, if there was a fort on Jabal Madbah, it may have been not on the top of the mountain but somewhere else above the Wadi Farasa, and it still has not been discovered.

Finally, in order to assume that there was a Crusader fort on the mountain, we would also need to explain the function of such a site. So far, clues about Frankish settlement in Petra are pointing to the area northeast of the city centre or to Wadi Musa, not to the area towards the Siq, which would be easily watched by the Jabal Madbah. Therefore, it cannot be necessarily assumed that a fort on this mountain was really needed. As observed by Hammond, al-Habis castle had already a visual command of all the most important entrances to Petra, and this may be the reason why there was no fort on the top of the mountain. If excavation is feasible at some of the structures not entirely based on bedrock at this site, this could give an answer to the issue, but a Crusader-period settlement here cannot be assumed in the absence of any clues.

The main argument, however, is that the chronology of the fort on Jabal Madbah has, in any case, already been framed by Denys Pringle, who has identified the construction as having similar architectural characters to later Byzantine work (later 6th century onwards) and a possible candidate for the Petra citadel during the Byzantine period.⁸³⁵

⁸³⁵ Pringle 2005a, 245.

Jabal al-Khubtha

A fortification on top of Jabal al-Khubtha was noticed by the early travellers.⁸³⁶ Hints at the fact that the mountain could have hosted a Crusader-period observation point have been advanced by Lindner, on the basis of an incised cross, which looks like a Latin cross. He also argues on the basis of pottery found on the surface that a settlement inhabited by medieval Arabs existed on the summit, but ⁸³⁷ does not specify which kind of pottery has been found or identify any structure as medieval. The possibility of Jabal Khubta being the site of a Crusader castle has been put forward by Vannini, but this, again, has never been justified with archaeological or textual evidence.⁸³⁸ Very similar observations to Jabal Madbah can be made about Jabal Khubta regarding the presence of a Crusader-period fort. A French archaeological mission led by Tholbeq is currently surveying the western top of the mountain, and Wadeson is exploring the Nabataean Tombs overlooking the Petra valley, on a lower terrace of the mountain. I have visited both sites and some communication with both project directors has allowed me to draw some conclusions. Looking north from the western edge of the top of Jabal Khubta, the large built area commands, just under the mountain, a vast view over the road to the Siq and the Khaznah (the Treasury), (west), over the theatre, the Jabal Madbah and the whole Petra city centre and the mountains behind (north). Westwards, and outside the city center, it also commands the roads towards Jabal Harun. My visit to the site currently explored revealed nothing characteristically medieval in the building techniques of the structures.⁸³⁹ The excavated area by the Tombs on a lower point of the mountain has revealed that the structures were reused in a later period;⁸⁴⁰ a stone slab decorated with a cross probably belonging to the Byzantine period⁸⁴¹ was found out of context, and several fragments of later pottery indicate a later use of the place. My examination of this later pottery, which represents a homogeneous assemblage, suggests that it belongs to a later date than the Crusader period, the closest similarities being with the assemblage at Islamic Baydha, specifically in the Ottoman period.⁸⁴²

⁸³⁶ Dalman 1908, 329.

⁸³⁷ Lindner et al. 1997, 184.

⁸³⁸ See above, 4.1.

⁸³⁹ See appendix b.

⁸⁴⁰ Report in preparation by Lucy Wadeson for *ADAJ* 2012.

⁸⁴¹ I thank Denys Pringle for his help in discussing the cross chronology. Similar crosses, which have nothing specifically Crusader in chronology, are found often in Petra, such as those incised on a rock at Jabal Harun (Fiema 2008a, 87, fig. 1).

⁸⁴² See above, Baydha, and Sinibaldi and Tuttle 2011.

In conclusion, no trace of a medieval fortification has been recorded on the western edge of the mountain. However, the eastern edge has still not been surveyed in details, so until this will happen, it cannot be excluded that there was one there, connected with al-Wu‘ayra castle. At this moment, though, the evidence for a Crusader castle here is still missing.

Aslah Triclinium

Excavations at the Aslah Triclinium, a Nabataean structure, have uncovered a wall which has been interpreted as Crusader-period. It has been hypothesized that the wall could belong to a watchtower controlling the access to the city during the Crusader period, although the few finds do not allow a more precise dating of this structure.⁸⁴³

My brief examination of the small ceramic assemblage associated with the structure could not identify a 12th-century chronology and the building technique cannot be related to any of the known ones for the 12th century. Moreover, the “ballista balls” have not been described to explain why that they may be Medieval and not earlier.

The Petra pool complex excavations

Excavations by Leigh-Ann Bedal at the Petra Pool Complex, in the area of the Nabatean Great Temple have uncovered a raised field on an earthen terrace and a wall used to direct the water in the nearby fields, which testifies to post-classical agricultural productivity in the area. This activity belongs to phase VIII, when in post-classical times a pool was reused as an agricultural complex.⁸⁴⁴ In this phase, a complete handmade cooking pot with lug handles has been found, and a parallel has been observed with published cooking pots from al-Wu‘ayra, phase III.⁸⁴⁵

However, in the light of my more recent study of medieval pottery in the Petra area, this chronology cannot be accepted, since the only elements in common with the mentioned cooking pots would be their general function and the presence of lug handles. Nevertheless, while no specific *comparanda* can be found in the whole al-Wu‘ayra assemblage, this common form has parallels in the assemblages of the Baydha, Thugrah Tomb and Wadi Farasa, assemblages, with a chronology from the 12th century

⁸⁴³ Gorgerat and Wenning 2012, 225, fig. 4.

⁸⁴⁴ Bedal 1999, 230-231; Bedal 2000, 65, 143; Bedal 2003, 84.

⁸⁴⁵ Vannini and Tonghini 1997, 379f, fig. 16; Vannini and Vanni Desideri 1995, 530, fig. 16.

to the 16th century, since it belongs to a type with a long tradition.⁸⁴⁶ Moreover, it appears from the excavation report that the evidence of this phase simply suggests a post-classical period, and that the agricultural activity could therefore belong to any period associated to the parallels for the cooking pots, or later.

The Great Temple

According to Bellwald,⁸⁴⁷ the Petra Great Temple excavations have uncovered a Crusader-period stratigraphy, including a layer of “ballista balls” launched by Saladin (Salah al-Din Yusuf al-Ayyubi) in an attack of 1187/88. He suggests that the Great Temple housed Frankish troops from the Wadi Farasa and al-Habis who were attacked with a catapult by the Ayyubid troops garrisoned in the Temple of the Winged Lions. In her 2002 report Martha Joukowsky, director of the excavations at the Great Temple, states that at the moment of excavations it was unclear if the ballista balls found in the north gallery of the *propylaeum* west were used as sub floor fill or if the area was bombarded and the balls broke through the tiles to become therefore lodged in the mortar;⁸⁴⁸ however, in her 2004 report, as excavations proceeded, she finally observed that the 2nd-century floor was laid together with the subfloor containing the majority of the recovered ballista balls.⁸⁴⁹ Therefore, the hypothesis of a Crusader-period battle in this area of Petra has no archaeological evidence.

Qattar al-Dayr

A cross incised on a *betil* at Qattar al-Dayr, on the way to the Dayr, was noticed by Dalman;⁸⁵⁰ Bellwald has put forward the idea that the cross should be dated to the Crusader period and therefore demonstrate that the Franks may have controlled this area of Petra.⁸⁵¹ The cross has two horizontal arms, the upper one being shorter. However, there is no reason to attribute this kind of cross to the Crusader period in particular, and though this remains possible. Petra was at the time largely populated by Eastern Christians, so it would not necessarily have had any connection with a Frankish presence.

⁸⁴⁶ Publications of the assemblage from Wadi Farasa is in preparation and the one from Thughray is in Sinibaldi in progress, a. See Sinibaldi and Tuttle 2011 for Baydha. For a discussion on the longevity of this type, see Sinibaldi 2009.

⁸⁴⁷ Bellwald 2006, 74-75.

⁸⁴⁸ Joukowsky 2003, 396.

⁸⁴⁹ Joukowsky, 2005, 154.

⁸⁵⁰ Dalman 1908, 253-254.

⁸⁵¹ Bellwald 2006, 76.

Other sites

Other sites from the Petra region have been published as including a 12th-century phase, often on the basis of a general similarity to the published pottery from al-Wu‘ayra, but in these publications there does not appear to be sufficient evidence to support such a chronology. They include several sites mentioned by Lindner during his surveys and excavations: Mu‘allaq, whose excavated pottery is referred to as similar to that from Brown’s phase I, but whose description and appearance from the drawings suggest a different, probably earlier chronology; and Kutile I, where a 12th to 13th-century date is indicated on the basis of pottery from survey, which is not described; some of the ceramics illustrated from the site have clear parallels with excavated late Ottoman-period or modern assemblages.⁸⁵²

4.6 Discussion

On the basis of the elements presented above (and in appendices b and c), some conclusions, organized by themes, will be offered to some research questions addressed in this thesis, keeping account of those already discussed by scholarship, on the function, character and significance of the Crusader-period settlements of Petra and Sharat al-Jibal.

Function of settlements and their relationships

The function of the castle of al-Habis, corresponding to al-Aswit in the Arabic sources, has been a centre of some debate. Mayer and Kennedy have noticed the difficulty of explaining the function of al-Habis as controlling what was basically an abandoned archaeological site. Kennedy suggests that the only possible solution is that the castle was constructed at a time when the Crusader garrison was driven out of al-Wu‘ayra, either in 1144 or in 1188, and needed a place of refuge until help could arrive.⁸⁵³ However, this hypothesis is untenable, because the conquest of al-Wu‘ayra by the Turks in 1144 ended up in the Frankish garrison being killed and Baldwin III travelling to Wadi Musa to recapture it; this would not have left any time for the construction of a new castle. The castle fell in 1188, but at this time the motivation, resources and peaceful conditions required to build another castle would surely not have existed. It is also clear from the many aspects that al-Habis has in common with al-

⁸⁵² Lindner 1999, 480; 488; Brown 1988b, 191.

⁸⁵³ Kennedy 1994, 30.

Wu'ayra, such as the mortar preparation and arrow-slit typology, that it was constructed by specialized non-local builders, while other elements, such as the cutting of the bedrock to obtain a smooth and large surface on the forecourt, would also have required considerable work, including specialized one, and time. What seems even more important, moreover, is that the position of al-Habis was evidently chosen not to hide a small garrison from enemy attack, but rather to control several roads in and out of Petra. All these aspects suggest that the position was fortified not as a refuge, but rather as an outpost whose construction was carried out in a time of military confidence and intended to last for some time.

Another hypothesis, proposed by Vannini, is that al-Habis was intended to control the Frankish settlements concentrated in the bottom of the Petra valley and deter possible enemies from threatening them. But on the basis of the data presented in this chapter, this theory is untenable, since settlement during the Frankish period was focused not inside the Petra valley, but outside it.

The key to understanding the role al-Habis is its strategic position. The most notable aspect of al-Habis castle is its rocky location, overlooking all the main access routes into and out of Petra from the western end of the valley. Not only do the most direct roads from Baydha to the centre of Petra run directly below al-Habis castle, but so too does the main road to Jabal Harun, through Wadi Thughrah and past the Snake Monument. In fact, traces of this road still survive today; for a long time it was used by travellers to reach Petra from the Wadi Araba, the path turning either east or north at the south-eastern shoulder of the Jabal Harun.⁸⁵⁴ The road was frequented during the Middle Ages, as proved by ceramic remains at Thughrah Tomb 303.⁸⁵⁵

One possibility is that the castle was placed on the road leading to Jabal Harun to protect pilgrims visiting it during the Crusader period; after all, potential pilgrims would arrive from east or from north of al-Habis (either from Wadi Musa or from Shawbak). The sources encourage us to think that the Franks valued this site, because Fulcher of Chartres comments on the importance for the Franks of holding such a sacred place. However, although this is possible, archaeology suggests that Jabal Harun did not have a significant number of visitors during the 12th century, and that the monastery could not host large numbers of pilgrims as it was already mostly in ruins at this time;⁸⁵⁶ if the castle was used for this purpose, this was therefore not its main function.

⁸⁵⁴ Ynnilä 2006, 59-86.

⁸⁵⁵ Sinibaldi, in progress, a.

⁸⁵⁶ Fiema 2008, Sinibaldi, in press, b; in progress, b.

There is a much more urgent need, however, that the castle may have served. Archaeological finds also indicate that the road from Jabal Harun was commonly used from Roman times at least to reach Petra from the Wadi Araba.⁸⁵⁷ Although the road's condition started declining after the 2nd century, owing to failure to repair damage caused by flash floods,⁸⁵⁸ and it was much less maintained after the Byzantine period⁸⁵⁹ the road has been used more or less continuously until very recently, and it is still possible to use it today. During his trip to Petra in 1936, Horsefeld took a photo of a caravan, consisting of several hundred people and beasts of burden, taking the road that starts from Qasr el-Bint and Wadi Thughrah *en route* from Petra to Cairo.⁸⁶⁰ This path was also the one used in the opposite direction by Sultan Baybars in 1276, when he travelled from Cairo to Petra to reach Karak as soon as possible in order to interrupt a plot against him. He chose the most direct of the six accesses from the Wadi Araba into Petra: as described in details by Nuwayri, he arrived in Petra under Jabal Harun, then Jabal al-Barra and passed under Umm al-Biyara, where graffiti of the early 14th century can be found still today. Nuwayri also describes al-Habis, which he calls al-Haswit noting that the sultan was very impressed after climbing it.⁸⁶¹ Therefore, al-Habis was controlling the entrance to Petra of the fastest road from Cairo, only five days away.

In the framework of the events of 1156 (the break of the truce between Egypt and the Franks and an Egyptian attack on Shawbak) and 1158 (the Egyptian attack on al-Wu'ayra), it would seem possible that the Franks tried, at least starting from these dates, to create some protection for the areas where they were settled in Wadi Musa and around Baydha. It is therefore suggested here that the castle was intended not to guard and protect settlements inside the Petra valley as proposed by Vannini, but rather the settlements of Baydha and Wadi Musa, outside the Petra valley. This was done by controlling the entrance to Petra from west (the one from the Wadi Araba through Wadi Thughrah) and the accesses from the Petra center to these settlements: in particular Wadi al-Mu'aysra al-Gharbiyya and Wadi al-Mu'aysra al-Sharqiyya, both of which lead to Baydha, and the siq, leading to al-Wu'ayra. Concerning the direct communication with al-Wu'ayra hypothesized by Vannini, although some communication with al-Wu'ayra could be possible through some visibility of the last part of the Wadi al-Mataha, the position is not ideal for the two castles to communicate.

⁸⁵⁷ Ynnilä 2006, 85.

⁸⁵⁸ Ynnilä 2006, 88; 98.

⁸⁵⁹ Ynnilä 2006, 100.

⁸⁶⁰ Bellwald 2006, 69.

⁸⁶¹ Zayadine 1985, 163-164.

This position would also have made it possible to warn the northern settlements, including Shawbak castle, north of Baydha, of potential enemies entering the valley from west; the idea put forward by Vannini that, on the contrary, Shawbak was a part of the system to protect the settlements in the Petra valley, is not acceptable.

The reason why Umm al-Biyara, a much higher and better protected mountain only a few hundred metres from al-Habis, was not selected instead for building a castle was probably that al-Habis served the purposed well enough, perhaps in addition to the fact that it was also faster to reach the valley from a lower altitude in case of necessity. The consideration that al-Habis could guarantee the road control considered necessary apparently was a more important one than that of having a large and much more impregnable castle on this specific spot of Petra, for which Umm al-Biyara would have been more suitable. This may also explain why there was no fort on top of the other highest mountains of Petra, Jabal Madbah and perhaps Jabal Kubtha—it seems that for some reason the view over a long distance that the top of the mountain could offer, and which was considered so important in the Nabataean period, was not the most important aspect for the Franks.

This explanation for the existence of the castle of al-Habis resolves a question that has puzzled scholars for some time: not at the center of an agricultural territory and too small to have a non-military residential population (as it would appear, among other things, from the fact that there was no church), and also not mentioned in the list of castles controlling their own territory, al-Habis castle was probably formally dependent on a castle of the area mentioned in the sources: either al-Wu‘ayra or Hurmuz. Its important military function would also explain why a considerable effort was put into building this castle, by ensuring solidly built walls with lime mortar, cutting the natural rock in order to increase defenses and creating the conditions for the castle to resist a siege through the presence of a large cistern.

It is likely that also the still unidentified castle of Hurmuz would have had at least in part a similar role. The identification of Hurmuz castle is still an unresolved issue requiring further research. While the site of Naq‘a would seem to be a suitable spot for some aspects, its proposed identification is not supported by my review of the building techniques and ceramic evidence. The nearby sites of present-day Hurmuz and al-Qarsha‘a, despite their good strategic positions in terms of facing the Jabal Shara, show no evidence of 12th-century occupation or fortification.

As mentioned above, it is suggested by historical sources that the still unidentified site of Hurmuz was located between Shawbak and al-Wu‘ayra, since in the sources it is

listed between these two sites, and that, being listed among sites of a certain importance where, for example, the castle of al-Habis is excluded, it was not just a secondary fort; the sources also seem to suggest that this and other sites in the list had some territories dependent on them.⁸⁶² Hurmuz, therefore, was probably a relatively important castle and probably controlled some agricultural territory, and the fact that the Shara mountains area was an extremely fertile area may have motivated the Franks to build a castle as an administrative centre here. However, the castle must also have had an important role in controlling communications. One of the easiest ways to reach Petra from the Wadi Araba is through the Negev, Bi'r Madhkur and the Wadi Namala to Baydha.⁸⁶³ Again, this was therefore an important track for the Franks to control in order to secure their settlements from danger coming from the west, and Egypt in particular. Musil commented that a fort here would have been necessary to the Franks because otherwise anyone coming from the west could be in the Shara mountains a long time before anyone in al-Wu'ayra would even know about it;⁸⁶⁴ a view shared by Mayer.⁸⁶⁵ Therefore, al-Habis castle and Hurmuz castle would probably have had a similar role in this respect.

My own surveys suggest that that the castle was not located on any of the outcrops north of Siq al-Barid, in the area between Hurmuz, al-Qarshaa and al-Naq'a, i.e. west of the modern road which runs north–south. Although of course, further surveys would be necessary in order to clarify this point, the possibility should be considered that Hurmuz was located instead in the Shara mountains themselves, at a spot where the exit from the Wadi Namala would be visible. It would seem that for this purpose, almost any spot between the modern road to Shawbak and the village of Dibidba would have been good enough. Such a position, unlike Naq'a, would also allow a garrison to control with ease the exits from Petra; finally, if necessary, it would also be a good position to have some communication with settlements between the mountains and Shawbak, the site being in a high position. Moreover, the view would much more comfortably overlook the agricultural villages of Dibidba, on the mountains themselves, and Baydha, just under it.

As far as the small fortified site at the entrance of Siq al-Barid is concerned, the building will remain an interesting enigma at least until further survey is able to record it more precisely. However, it is possible to make some hypotheses regarding its

⁸⁶² Ibn al-Athir, RHC, I, 733-735; Richards 2007, 354-355. see chapter 2 for discussion.

⁸⁶³ Zayadine 1985, 163.

⁸⁶⁴ Musil 1907, II, 220.

⁸⁶⁵ Mayer 1990, 207.

function. Since the possible reasons for building a fort in this position at another time during the Islamic period are not known, it appears a very realistic possibility in the current state of research that this fort could belong to the Crusader period. Moreover, the building techniques of the castle appear to be not incompatible with the hypothesis of a secondary fort of the Crusader period. Hurmuz, listed in the sources among the major castles of the region, is probably not to be identified with fort, which appears to be very small and built much more poorly from the known Crusader castles in Petra.

The question of visual communication with other sites has now been long asked. If one of the purposes of the Franks was to dominate visually a very wide area around Petra or for al-Habis to communicate with al-Wu‘ayra castle, they would have decided to build their forts in at least one of the highest points of Petra: Umm al-Biyara, Jabal Madbah, Jabal Khubta, for which there is however still no evidence. It is possible of course that these spots were controlled with some low-quality built structures which have now been washed away and have not survived because of the unprotected nature of the sites to the natural elements, differently for example from the site of Wadi Farasa. But even sites like Naq‘a or the fort in Siq el-Barid, which are very exposed sites and where buildings are poorly bonded with mud mortar, still preserve traces of building materials and ceramics in a certain quantity. Therefore, we need to acknowledge that, until this is proved differently by archaeological excavations, there is currently no archaeological evidence for any Crusader-period settlements in the Petra valley itself on a higher position than al-Habis and that there was probably a reason for not needing to control those high positions. This reason may have been that the organization of the other forts was enough to protect the Frankish settlements where they were located: outside the Petra valley rather than inside.

The accesses to the Shara mountains from west and through Petra would be protected by the two castles of al-Aswit (al-Habis) and Hurmuz, which would have guarded the settlements north of Petra, including Shawbak castle through the Shara mountains and perhaps Baydha. Presumably, al-Habis would also at least in part warn of possible danger the settlements east of Petra (Wadi Musa through al-Wu‘ayra) through the Petra siq, but a connection with al-Wu‘ayra would not be its main purpose, otherwise a point of better visibility between the two castles would have been chosen instead. Wadi Musa and al-Wu‘ayra were vulnerable from attacks from Egypt also through other tracks—such as the one through Tayyiba,⁸⁶⁶ so there may have been other

⁸⁶⁶ Zayadine 1985, 163.

points protecting other accesses from the Wadi Araba, but this would require further research on the topic.

Also, no trace has still been detected of Crusader sites within the Petra valley, south of Wadi Farasa, which means probably that there was a direct visual connection between al-Habis and al-Wu‘ayra. But it also shows no indication of Frankish-period settlement in the Petra valley itself, as suggested by some theories.

The site of Wadi Farasa is currently the least understood of the Petra 12th-century sites, and since it allows for the hypothesis that it was inhabited during the 12th century, it may be important to try to understand it to learn more about the details of the Frankish settlement in Petra. Schmid suggests three possibilities for the interpretation of this site: a local Christian settlement; a Frankish settlement; or an Ayyubid settlement fortified against the Franks.⁸⁶⁷ As mentioned above, I suggest that the site is rather a refugee than a control point; if the site was, as suggested by Bellwald⁸⁶⁸ a station on the route to some other sites, it is not clear where such a route would lead, as the wadi only leads up to Jabal Madbah. The only possibility in this case would be that it would serve the road to Wadi Sabra, but in this case there would be no need to hide the site so far away from the road, and in any case, evidence is currently lacking for Crusader forts in this direction.

The possibility that this was an Ayyubid settlement built against the Franks in 1188 is not likely, because even if the Petra castles were taken by siege, which is not mentioned in the sources, we would have to explain why the settlement was located here in this remote place and why arranging a new site would be worth the effort for the siege of a relatively small castle such as al-Habis. If the dwellers were local Christians trying to defend themselves against the Franks at the moment of their arrival, this may better explain why the site was already inhabited before it was fortified, but we would have to justify this unique example of fortification in Petra, the effort employed in its building by cave dwellers, and find a reason why it would not be more convenient for them, instead, to move out of the area in this situation of emergency.

If this was a Frankish site, finally, it may be possible to hypothesize that the garrison from al-Habis took refuge there in a time of danger, and tried to control from this position the events in the area near al-Habis and the road passing under the castle, one of the main ones arriving from Egypt to Petra. It is possible that the garrison was hoping for help to arrive in a moment considered of danger for the Frankish sites.

⁸⁶⁷ Schmid 2012, 83.

⁸⁶⁸ Bellwald 2006.

Attacks on al-Wu‘ayra, and therefore on the castles of the Petra area, are documented in 1144 by the Turks and in 1158 by Egyptians; we do not know if there was a siege during the events of 1188, when al-Wu‘ayra was lost by the Franks. But the first two attacks on the castle were resolved in a relatively short time, since in 1144 the king arrived to resolve the situation as soon as he heard about it, and besieged the castle for a few days only, and in 1158 the castle was besieged by the Egyptians for only eight days. The site was occupied, from what can be said from the abundant pottery assemblage, for a relatively long time—months or years—and not for a few days. What is possible is that after al-Wu‘ayra fell to Saladin, part of the al-Habis garrison was hoping to receive help, since Shawbak castle still resisted for a few extra months. In this case, the settlement would perhaps be controlling visually also part of the path coming through Wadi Thughrah from the Wadi Araba, which crosses the last segment of the Wadi Farasa.

Another possible solution is that this fort may have been built by the Franks very early on, before the establishment of the Petra castles, to control from a hidden point an area of the Petra valley where several important roads met, again in a moment of weakness, either as a protection against the enemies who, as we know, were formally controlling the area from about 1106, or as a protection against bedouin tribes in Petra before reaching a more or less permanent agreement with them, which, was established at least at some point later, since at least about 1150.⁸⁶⁹ In any case, the solution proposed by Schmid about this being an ancillary position to another one being placed on top of Madbah is currently without any archaeological basis.

Robinson visited al-Wu‘ayra castle in 1838 and commented that it did not guard the access to either Wadi Musa or any other important site;⁸⁷⁰ however, the castle is very close to the south entrance to Petra through Bab al-Siq, and from the castle there is a partial view of the Petra valley. Al-Wu‘ayra’s proximity to the entrance to Petra has been given a lot of attention and has been interpreted by Vannini as an indication that its main purpose was to control the entrance to Petra from Wadi Musa. It could be equally true, however, that the castle was intended to protect the access from Petra to the village of Wadi Musa, since we know of a village there called Hara (or a variation of this name) that was under Frankish administration; we should expect therefore that there was a form of control over villages of this area. The castle of *Vallis Moyses* even had the same name of the village.

⁸⁶⁹ See chapter 5.

⁸⁷⁰ Robinson 1841, II, 513.

In addition to protecting the area of Wadi Musa, another obvious function of the castle which has not been much discussed would have been to command the road between Wadi Musa and the northern Jabal Shara, towards Baydha and Hurmuz, beyond which Shawbak was located; it is from the side of the castle facing the road along the Jabal Shara, as has already been noted, that the castle was most vulnerable and therefore most highly defended.⁸⁷¹

Historical sources are clear about the impression that the agricultural resources of Wadi Musa made on the Franks at their arrival; it is to be expected, therefore, that in the areas of Wadi Musa and Baydha the Franks would want to control agricultural villages. The fact that the Wadi Musa area has the highest concentration of archaeological sites in the region is due to the fortunate hydro-geological situation and to the pleasant climate.⁸⁷² Wadi Musa had always supplied Petra with its agricultural products and the Crusader castles would also have needed to have a good relationship with the village in order to survive.⁸⁷³ In summary, the connection of the castles with Wadi Musa was of vital importance.

In the Nabataean period, it was a natural choice for the élite to live in Wadi Musa, because of the better climate, richer soil and more plentiful water supply than the Petra basin itself.⁸⁷⁴ The population of Wadi Musa began to decrease in the 4th century, but archaeology indicates that at least since the 10th century the town was again inhabited. From the 7th century onwards archaeology fills the gaps in the historical sources. Clues of agricultural activities, including the finding of olive-presses at several sites around Wadi Musa, prove that agriculture continued in the area, and that in the Islamic period agriculture became the major activity, while trade and industry lost importance. These changes were reflected in the new arrangement of settlements from large conglomerations to small clusters. Settlement based on agriculture at Nawafra has been uninterrupted from this point until the present day; it was therefore fully productive at the time of the Franks' arrival.⁸⁷⁵ It was only abandoned for a short period at the end of the 3rd century and the olive cultivation is strong proof against the theory that it was no more than a wasteland inhabited only by nomads. Archaeological evidence shows that Wadi Musa was Christian well into the Abbasid period at least. In fact, the richest

⁸⁷¹ Kennedy 1925, 15.

⁸⁷² Amr 2006, 8.

⁸⁷³ 'Amr 2006, 26.

⁸⁷⁴ Amr 2006, 12.

⁸⁷⁵ 'Amr 2006, 18.

archaeological periods appear to be the Islamic ones, starting from the end of the 10th century.⁸⁷⁶

In summary, the Franks introduced themselves into a long-established situation of prosperity in Wadi Musa, whose attraction is well witnessed by historical sources, and they exploited the area to support their new settlements by nominating local administrators and importing local products.. They did not, apparently, significantly increase trade, contrary to what is suggested by Vannini's theory, as no notable ceramic imports have been noticed compared to other periods; on the contrary, connections with international roads were clearly established at the moment of the arrival of the Franks.

Regarding the Baydha village, as mentioned above, clear proof of a 12th-century agricultural village connected to the Frankish presence in the area have still not been found. But what can be hypothesized on more solid ground is the fact that this was a Christian village with a good level of agricultural production during the 12th century. Although not as important as Wadi Musa itself, it would therefore have surely been extremely useful to the Franks for its agricultural products, as it was located in the area between Wadi Musa and Shawbak and close to Hormuz castle. The fact that it was most likely a Christian village was surely an additional motivation to create a relationship with it, as also happened in Wadi Musa.

It is possible to hypothesize that in the 12th century this was a village inhabited by a Christian community, maybe Melchite, living more or less continuously at Baydha since the Byzantine period. The community was perhaps still using the rock-cut church built at that time. Economy was based on agriculture, which maybe included the long-established production of wine and made full use of the water abundance deriving from being at the feet of the Jabal Shara and the spring from the Dibidba village.

Such control may have been exercised in a similar way to that at Hara village⁸⁷⁷ in the Wadi Musa area, where an administrator was charged with running it, probably a local Christian, as suggested by the name Saba, son of George. Baydha should be interpreted, therefore, not as a village newly established by the Franks with new buildings and a Frankish population, as occurred elsewhere in the Latin Kingdom of Jerusalem, but much more likely, just like Nawafra in the 12th century, a long-established indigenous Christian settlement, that the Franks could rely upon for agricultural supplies, while maintaining a reasonably good relationship with its local Christian population.

⁸⁷⁶ 'Amr 2006, 23-24.

⁸⁷⁷ See below and chapter 5.

Frankish settlement and impact on the territory

It is normally assumed that at the beginning of the 7th century Petra went through a substantial political, religious and cultural shift, after which it lost its importance and disappeared from the historical sources.⁸⁷⁸ This is probably where the theory of a complete abandonment of the Petra valley comes from. Fiema argues, however, that the reason for Petra's disappearance from the sources is its transformation from a prosperous metropolis into a provincial town.⁸⁷⁹ More specifically, Petra as a city in the Classical-Byzantine sense had already disappeared in the late 7th century, but without a dramatic abandonment. Instead, settlement gradually broke up into clusters of habitations spread out among the ruins within the Petra valley, with an uneven occupation density. One example of these clusters is the one on the north ridge of the city centre, where the Byzantine churches are located.⁸⁸⁰ Excavations on the north ridge in Petra have proved that the structures were not completely abandoned during the Byzantine period, although the standard of life declined. The Petra's cathedral church was not reconstructed after a fire in the late 6th century and another two churches built in this area went out of use during the 7th century; water had to be collected in rainwater cisterns and did not arrive anymore through pipes. Although there is nothing indicating permanent settlement here after the 6th century, there is evidence of retaining walls and agricultural terracing and the area of the three churches was used until the 8th century as a domestic space; in the opinion of the excavators, retaining or terrace walls indicate "an almost constant but transient human presence" on the north ridge from the 8th to the modern era. A Mamluk coin was found in the area of the Petra church.⁸⁸¹ This evidence has been interpreted as the Petra population having significantly decreased during the 6th-8th century, and at least some having moved out of the Petra city centre, a process which was completed after the 8th century earthquake. The Franks, therefore, probably saw a city of collapsed buildings used by a transient population.⁸⁸² Thietmar visited Petra in 1217 and entered it through the Siq. He commented that the caves he saw were inhabited by no-one.⁸⁸³ It seems that at the time Baybars arrived in 1276, the Petra valley looked already more or less like an archaeological ruin, since no inhabitants or

⁸⁷⁸ Bikai and Perry 2012.

⁸⁷⁹ Fiema 2002, 192.

⁸⁸⁰ Fiema 2002, 241.

⁸⁸¹ Bikai and Perry 2012, 95-96.

⁸⁸² Bikai and Perry 2012, 97.

⁸⁸³ Pringle 2012, 121.

constructions are mentioned during his passage through Petra and the Siq from under al-Habis to Wadi Musa.⁸⁸⁴

My recent research on ceramics from the Petra area in the 11th to the 20th century from surveys and excavations, although still much in progress, is showing a more or less uninterrupted use of the areas of the Petra valley, Wadi Musa and Jabal Harun, although for the moment patterns are harder to define in the area of Jabal Shara and Baydha. As far as the Petra valley is concerned, data reveal an abundance of material proving a frequentation of this area not only connected to the pilgrimage to the Jabal Harun, but also to settlement, such as in the Wadi Thughrah, Wadi Farasa, the lower levels of Umm al-Biyara, the Pool Garden complex, the lower levels of Jabal Khubtha, and Djin Blocks in the Bab al-Siq, from the 11th century to the 16th century at least.⁸⁸⁵ Pottery excavated at these sites reveals not only that settlement in the Petra valley was continuous—although rarely associated with built structures such as in the Wadi Farasa, presumably because of the large availability of rock-cut structures in Petra which are far more efficient than buildings in maintaining a constant temperature and do not require any construction efforts—but also that among the long chronological span identified in it (from the 11th to the 19th century), the 12th century is by no means the most significant; in fact, data seem to reveal an especially intense phase of occupation during the Early Mamluk period, the time when Baybars visited Petra and found it, apparently, looking like an archaeological site, and the later periods. Even allowing for the preliminary state of research and for some additional difficulties of identifying 12th - century pottery compared to Mamluk-period pottery,⁸⁸⁶ it is possible to state that ceramic data do not in any way support the theory advanced by Vannini of a sudden increase in the population of the Petra valley during the 12th century followed by a sudden decline thereafter.

Although, therefore, the activities taking place in this area after the 8th century and before the arrival of the Bdul in Petra from at least the 19th century are still not completely understood in their nature and sometimes in their chronology, data seem to support the view that although the population had in large part moved out of the valley gradually since the late Byzantine period, it was never completely abandoned. Since the situation was actually more or less the same later in the 19th century, when more documentation is available, clear and substantial evidence would have to be offered to prove that the situation was completely different during the Crusader period and that the

⁸⁸⁴ Zayadine 1985

⁸⁸⁵ Sinibaldi in progress, a, b, c; in press, a, b; 2013 a, b; 2009 a; 2007 b and other personal observations.

⁸⁸⁶ See appendix b.

Frankish presence brought, as advocated by Vannini, a sudden and substantial increase in the population of the valley. The evidence offered by the historical sources shows that the Frankish population was not even large enough to be placed at the control of crucially strategic castles; it is unlikely, therefore, that the Franks would have had the resources to repopulate an abandoned valley. Moreover, the reasons for the Franks to want to populate the Petra valley rather than other areas, are not clarified by Vannini.

My fieldwork, summarized in Appendices B and C, shows that obtaining these conclusions, as well as those on the reconsideration of the 12th-century chronology of a number of sites on the basis of their ceramics or building techniques, has been possible only thanks to the construction of new archaeological tools, i.e. the definition of some of the characteristics of 12th-century building techniques and especially a ceramic typology for the Islamic period of the Petra area. Therefore, another of the assumptions by Vannini, the idea that Crusader-period material culture has a drastically different character from that of the periods before and after and is therefore easy to distinguish, must be rejected, unless this statement applies only to the building characteristics of the settlements of al-Wu'ayra and al-Habis.

Another statement from the model currently proposed can also be rejected. Vannini, although perhaps in not very specific terms, affirms that in the Crusader period the Petra valley reverted to the conditions previously met only once under the Nabataeans, when the region united the east and west. If this proposed parallel with Petra in the Nabataean period is meant to refer to the exceptional role achieved by the city at that time in linking the Far East with the Mediterranean coast and therefore serving as a trade centre of great importance, this interpretation must be also rejected. Although mainly limited to excavations at al-Wu'ayra castle, ceramic evidence demonstrates that the Frankish settlements in Petra did not create or increase significantly the trade of the region. Ceramics from al-Wu'ayra display an extremely modest percentage of imported pottery, and no imports specifically dated to the Crusader period have been found at Wadi Farasa. The percentage of ceramic imports is so low at al-Wu'ayra that it is almost comparable to that found at the agricultural village of Baydha.

Although only part of the evidence has been examined here, a very similar statement can be made for the area of Wadi Musa, where stratified ceramics from Nawafra reveal a continuous occupation of the area. Twelfth-century ceramics are represented but do not stand out in terms of ceramic imports compared to the other periods; on the contrary, ceramic imports are already present in the earlier Fatimid

period and are still present in the later Mamluk periods, when such finds appear more numerous.⁸⁸⁷ Once again, 12th-century settlement in Petra falls into a pattern of continuity rather than change, especially as far as international trade is concerned.

This is further confirmed by the fact that the connection of Wadi Musa with Aqaba, through the trade of fish, was already well established before the arrival of the Franks, since the Byzantine period at least. Ceramic imports from al-Wu‘ayra include Syrian *fritware*, southern Levantine glazed ware, probably produced in Palestine, and glazed cooking pots, probably produced in Lebanon and traded through the Palestinian coast; these imports do come from Palestine, but these ceramic types are best represented at Karak (some of which came through al-Safi), and it is probably from there that they came to Petra. Unfortunately, the ceramic evidence from Shawbak, which would provide the missing point for understanding its role and that of Petra, is currently not available. However, the role of Shawbak in trading goods arriving along the King’s Highway appears largely understated by Vannini compared to the role of Petra. He affirms that the real aim for the construction of the castle of al-Wu‘ayra was the strategic control of the Frankish settlements in the Petra valley, and that Shawbak also had the role of controlling the access roads to the Petra valley;⁸⁸⁸ this specific function of Shawbak is stated consistently as well as its later chronology compared to the Crusader fortifications in Petra,⁸⁸⁹ which may be the problem at the origin of creating this confusion in the role of Shawbak.

The supposed important direct communication of Petra with the west, implicit in Hammond’s original theory, and an opinion also followed and elaborated by other scholars, is therefore so far not supported by any archaeological documentation. Bellwald, for instance, has argued that the Franks necessarily had to control the roads linking Petra with the Mediterranean coast, such as the that leading through the Wadi Namala and Wadi Araba to Gaza, and that in exchange for protection, they would levy taxes.⁸⁹⁰ As stated above, however, the supposed intensive use of the main road entering Petra from the Wadi Araba for international trade is not reflected by any ceramic remains; nor does archaeological evidence show any trace of intensive exchange with Gaza, which was controlled by the Franks only from 1149 onwards.

The fact that the Franks were not making intense commercial use of the roads connecting Petra to the Negev is hardly surprising also for other reasons; apparently all

⁸⁸⁷ See appendix A.

⁸⁸⁸ Vannini 2007, 16.

⁸⁸⁹ Vannini and Nuccioti 2003, 524.

⁸⁹⁰ Bellwald 2006, 23-24; 76.

evidence indicates that by the later 6th century the communication between Petra and the Negev had largely disappeared; for example, sites along the road Petra to Gaza do not display any Byzantine ceramic.⁸⁹¹ This does not mean, (as expressed above), that the roads were no longer available for travellers, since they have been in use until very recently. On the other hand, at the end of the Byzantine period major roads were still functioning north and south of Petra: to the south Ayla was well connected to the Negev, Sinai, Egypt and the northern Hijaz, while in the north roads through the southern Ghor and the northern 'Araba connected Moab with southern Palestine and the Negev. Roads that had gained importance in the late Byzantine period and through the Umayyad period also included the one passing through Ma'an and Udhruh (Augustopolis), along which caravan routes passed from the northern Hijaz;⁸⁹² incidentally, Udhruh may be the site mentioned as a stopping place for King Baldwin I on his way to Wadi Musa in 1100.⁸⁹³ Finally, the main pilgrimage road still passed through Udhruh and Ma'an in the Fatimid period, when there is no evidence of important commercial roads connecting Petra with the coast through Wadi Araba.⁸⁹⁴ At the beginning of the 20th century, the main ways to reach Petra were those through Ma'an and Udhruh and the one through Jerusalem, Jericho, Karak, Tafilah and Shawbak.⁸⁹⁵

The little information that we have about ceramics and other items indicating networks in the Crusader period in Jordan suggest that these roads still had a leading role at this time; for Petra, this include fish from the Red Sea, which has an uninterrupted presence from at least the Byzantine period, Egyptian pottery from the 11th to 12th century, and, as mentioned above, ceramics which probably came from Palestine through Karak. Evidence to confirm that these wares were also present at Shawbak is unfortunately still missing because of the lack of studies on the subject, but it is most likely that they are present there, and that it is from this site that they arrived in Petra. It is possible that it was through this network, or perhaps through Aqaba, that the Syrian fritware arrived in Petra at the end of the 12th century.

All available archaeological evidence suggests that it was Karak, and not Petra, which had the role to connect Transjordan to the western parts of the Latin Kingdom of Jerusalem, and that it was through Karak, Shawbak and the King's Highway that Petra received the imports from this area; this is proved by the large quantities and variety of

⁸⁹¹ Fiema 2002, 232-233.

⁸⁹² Fiema 2002, 232-234.

⁸⁹³ Fazy 1936, 481.

⁸⁹⁴ Walmsley 2001, 518; 543; fig. 15.2.

⁸⁹⁵ Kennedy A.B.W. 1925, 6.

Palestinian ceramic objects present at al-Safi, and the absence of such a variety in Petra. This is also maybe the reason why at al-Wu‘ayra ceramic imports from Palestine do not start to appear before Brown’s phase IB, i.e. several years after 1140, after the foundation of Karak castle in 1142.

During the 6th century, Petra was already an average provincial city in the Middle East, with a transformation already started between the 4th and the 5th century. During the Umayyad period Petra did not play any important role politically or economically; in this period, it was Udruh, the capital of the Jabal Shara, which was thriving together with Humayma, and at the end of the 10th century Petra or Wadi Musa are not even mentioned in al-Muqaddasī’s detailed geographical description of settlements in Southern Transjordan;⁸⁹⁶ on the other hand, according to historical sources, Wadi Musa had already acquired much more importance from at least the 11th century.⁸⁹⁷

Indeed, historical sources show that in the Jibal al-Sharat the Franks introduced themselves into an already burgeoning process of economic prosperity begun in the 11th century, for which they were not mainly responsible. Moreover, the focus of population in the Sharat al-Jibal area in the Crusader period was actually Wadi Musa itself rather than the Petra valley. This fits perfectly with the archaeological evidence, since ceramic imports found in the excavations at Nawafla show that the area was already flourishing and well connected to international trade in the Fatimid period, while in the Crusader period the site does not show any major increase of in trade. More importantly, there are no traces of 12th-century settlement in the Petra valley, apart from al-Habis and Wadi Farasa, which had a fortified character, while there are traces of 12th-century settlement in Wadi Musa and Baydha. Historical sources, moreover, mention sites located in the Sharat al-Jibal outside the Petra valley (*Vallis Moyses*, Hurmuz) as controlling larger areas and having other sites under their control, while the plausible identification of Celle with a site outside the Petra region rather than with al-Habis means that the latter is not mentioned in contemporary sources.

Diet, life standards and cultural identity

One of the elements contributing to answering these questions is the archaeozoological data from four of the 12th-century sites: Shawbak, al-Wu‘ayra, Wadi Farasa and Khirbat al-Nawafla. Chicken, game, beef and fish together with eggs supplemented the diet at al-Wu‘ayra, which was based mainly on goat/sheep. Game was

⁸⁹⁶ Fiema 2002, 237-238.

⁸⁹⁷ Walmsley 2001, 518.

scarce, but this is not unusual at Levantine sites. Pig seem to also be easily available as part of the diet. Unfortunately, a study of pig bones presence in the medieval period is not available for the specific area of Petra, so it is difficult to frame these data. Pig was present at other Crusader-period sites in Palestine, although in higher proportions, i.e. at the Red Tower, it was more than three times as common as at al-Wu‘ayra; here it was about 20 percent.⁸⁹⁸ At the Red Tower, in phase C—the Templar occupation phase in c. 1191-c. 1248—there is a sudden appearance of pig bones, which are present in the highest percentage, with sheep/goat being only 14%. This dramatic change both from the earlier and later phases suggests that the Franks had a clear cultural preference for pigs as opposed to other local populations. Pigs, however, were raised in Palestine before the arrival of the Crusaders, as evident from historical sources.⁸⁹⁹ Pigs are far less common in the Palestinian area than sheep, goat and cattle⁹⁰⁰ and therefore the absence of pigs in a faunal assemblage in Palestine need not necessarily be an indication of a taboo or religion.⁹⁰¹ An observation of general trends in the southern Levant indicates an intense presence of pig in the Byzantine-Umayyad periods, a sharp decline in the Abbasid period, a sharp increase in the Crusader-occupied sites, and finally a sharp decline but at the same time a constant presence in the post-Crusader period sites, showing that pigs were still used widely but in small proportion in this last phase. According to Brown and Rielly, data from the Southern Levant suggest that the Frankish presence often had an influence on the local breeding of pigs,⁹⁰² although this is very possible, it should also be noted that the sites analysed from this point of view are still very few.

In summary, it is not currently possible to state if pork meat consumption at al-Wu‘ayra and Petra is just an indication of Christian population or, more specifically, should be attributed to a Frankish presence in the area, because data for the pre-Crusader period and from Wadi Musa are still not available and it is not certain to what extent pigs were bred outside al-Wu‘ayra castle. However, it is possible that if Franks were part of the population at al-Wu‘ayra they may have had an influence on the higher consumption of pork, as seems to have happened at the Red Tower, but that pig breeding would have existed in Petra just as it existed in Palestine. Pigs are raised best on acorns and fruits of the forests, although they could eat almost anything. There is an

⁸⁹⁸ Brown and Rielly 2010, 133-135.

⁸⁹⁹ Cartledge 1986, 178.

⁹⁰⁰ Davis 1982, 14.

⁹⁰¹ Cartledge 1986, 177.

⁹⁰² Brown and Rielly 2006, 33-36.

area of evergreen oak forest still today, between Shawbak and Petra;⁹⁰³ Brown and Rielly notice that in any case what remains today in the area (Mediterranean, non-forest, shrub growth or *garigue*) is typical of degraded forest land.⁹⁰⁴ Therefore, there is no difficulty in raising pigs here and in Shawbak, if care was taken to protect them from the very cold temperatures reached in the winter in this area.

The lack of pigs and cattle in the Wadi Farasa assemblage is very interesting, but does not necessarily indicate that the inhabitants were not Christians, as it may just mean that they did not consume this product because of a specific reason, such as having to rely specifically on storable food, although they still had access to buying storable products from Wadi Musa, such as dried/salted fish.

It has been noticed that at Palestinian sites inhabited by the Franks there was in general a request for high-quality meat,⁹⁰⁵ such as at the Red Tower. This is interesting, as this seems to be the case also at al-Wu‘ayra and Shawbak, where the best meat cuts were consumed, but not at Wadi Farasa. We may wonder therefore if and how much the best quality meat cuts can be connected to a Frankish presence in the area.

The presence of parrotfish from the Red Sea, for which more data are available locally, also deserves some comments. Preservation would have been necessary for its transport from the Red Sea; therefore it was dried or salted. Interestingly, parrotfish is widely documented in Jordan, as far as the Balqa, at Hisban, through the Ayyubid to the Mamluk periods, and in historical sources witnessing that at Karak and Shawbak in the 13th century dried fish was exchanged for agricultural products.⁹⁰⁶ It seems therefore that it was the King’s Highway which carried this product from the Red Sea as far as Karak, from where it reached the smaller centres. Parrotfish has been found in Petra on the Jabal Harun in the Byzantine levels, possibly connected to the pilgrims’ diet, and even in the later levels, indicating that the consumption went on after the monastery was not in use any longer;⁹⁰⁷ the presence of parrotfish in the Petra area seems to have therefore been a long-established tradition, that involved the Petra valley itself, as clearly seen from the case of the medieval settlement of Wadi Farasa.⁹⁰⁸ In summary, the distribution of this product in archaeological excavations speaks of a wide diffusion of parrotfish, both geographically and chronologically through the Islamic period, and therefore of a trade connection with Aqaba, which was apparently not at all interrupted

⁹⁰³ Al-Eisawi 1985, 52-53.

⁹⁰⁴ Brown and Rielly 2010, 122.

⁹⁰⁵ Brown and Rielly 2010, 133-135.

⁹⁰⁶ Brown and Rielly 2010, 135-136.

⁹⁰⁷ Fiema 2008, 93.

⁹⁰⁸ See below; cf. Schmid and Studer 2003.

or influenced by the Frankish presence during the Crusader period; on the contrary, data suggest a dependence on this trading network and an adaptation to the local diet, given the high presence of this product at al-Wu‘ayra castle in 12th century stratigraphy. The presence of this fish from the earlier and later periods also show that Petra was well connected to the Aqaba trading network well before the arrival of the Franks and the positioning of Shawbak castle on the King’s Highway. Moreover, parrotfish bones analysed originate mainly from the first phase of settlement at al-Wu‘ayra, by which time the consumption of this product was therefore well established on the site. This supports the hypothesis that such trading network was well established in Petra already before the arrival of the Franks, perhaps through a connection with Shawbak castle on the King’s highway, but more likely through the village of Wadi Musa itself. Shawbak, which apparently was uninhabited at the arrival of the Franks, probably integrated itself in this trading network after Petra.

More studies on fish consumption in Petra and Jordan would be important to know if it had some association with Christian populations; consumption was not exclusively Christian, since large quantities were found at Hisban for the Mamluk phase, but it is possible that this product was consumed by Christians in particularly large quantities. According to the rule of the Templars, for example, during the fasting of the two forty days-periods of the year, brothers were given fish to eat.⁹⁰⁹

In conclusion, the al-Wu‘ayra community was relying consistently on the local one and on the trading network that it found in Wadi Musa, but at the same time, it may have had an impact on the local economy and its production, as may be indicated by specific meat preferences and a demand for high-quality meat—perhaps to be specifically associated with a specific group of consumers within the community, the Franks; however, for the moment this question cannot be answered. Aqaba was probably not held by the Franks until at least 1160, and thereafter for no more than a decade; therefore, the Franks probably did not have much influence on the organization of such trade. Finally, the Franks’ dependence on the Wadi Musa community seems to have been intense but not complete, since storable supplies were organized at the castle.

In conclusion, archaeozoological data show that the Frankish presence did not have a significant impact on the existing trade of Petra with Aqaba; it also shows that the inhabitants of the castles did have a similar and relatively high-standard eating habits, but also that this does not help, for the moment, in knowing more about the inhabitants being Frankish or not. If, as has been suggested, it was the case that both

⁹⁰⁹ Pringle 1986b, 185.

chapels at Shawbak and al-Wu‘ayra were used by local Othodox communities, it must be noted that these communities living at the two castles led a lifestyle of a relatively high level, since they were using a church built by non-local architects, and would enjoy a diet including the best meat cuts, including beef and pork meat. At al-Wu‘ayra, perhaps the group running the castle would also have its own separate cemetery near the church, and would be able to afford occasionally purchasing imported objects, including Syrian fritware and southern Levantine wares.

As noted in this thesis, it is likely that most of the Transjordanian castles were run by or at least mainly inhabited by local Christians; therefore, it is likely that this was the case also at the Petra and Jabal Shara castles and even more at the agricultural villages. The names of the people mentioned in the 1161 document support the idea that Wadi Musa was largely Christian in the 12th century, a conclusion also supported by the fact that Christians were transferred from this area to Jerusalem, by the existence of the monastery on the Jabal Harun and by more indirect information from other historical sources.

Concluding remarks

The currently accepted theory, proposed by Vannini for now about 20 years and based on Hammond’s model, cannot be supported by any archaeological and historical data, which, on the contrary, reveal in fact the opposite of the concepts advanced. The problems actually involve all the points proposed by Vannini, namely: the chronology that he proposes for the Petra settlements and his view that settlement here was improvised; his understanding of the role of the Petra valley in the settlement strategy of the Franks; the picture that he presents of an exceptional revival phase of the Petra area caused by the Frankish occupation and an abandonment of the valley before and after the Crusader period; his assessment of the important role played by the Petra valley in trade with the Mediterranean coast; the deep differences in the material culture of Petra in the Crusader period, as compared to the preceding and later periods; and finally, the assumption of a significant “European” presence in Crusader-period Petra.

The main origin of such interpretation is an overreliance on Hammond’s ideas, which have not been tested against the available archaeological and historical data.

As demonstrated in this chapter, the claims that Petra was an important centre of trade and a frontier connecting east and west, that this state changed radically before and after the presence of the Franks over a short period of time, the concept that settlement was focused on the bottom of the Petra valley, that before and after the

presence of the Franks the Petra valley was abandoned and, finally, that the material culture of the 12th century is easily recognizable from the ones of the other periods, are all assumptions based on a lack of knowledge of the material culture of the Petra region, in particular of the pottery, and of a lack of study of the sites around the valley and of their comparison with the material culture known at the castles.

Moreover, the pre-conceived idea that settlement in this area consisted of sites inhabited by Europeans who brought radical changes and were characterized by a radically different material culture appears to be based on an old view of Crusader settlement, and not to take account of the research that scholarship has made since the 1980s, especially in the sphere of material culture, which cannot be limited anymore to the study of monumental architecture, such as castles.⁹¹⁰ This has also caused, probably, a failure to ask research questions on socio-economic aspects such as the relationship with villages and other kinds of sites.

Finally, the ideas brought forward that Petra was more important than Shawbak and that Shawbak, in turn, was more important than Karak, are mistakenly assumed on the basis of the scarcity of study at these two sites, and become patently untenable when the textual sources are considered.⁹¹¹

Materials and textual evidence, on the contrary, reveal a picture where patterns of continuity and adaptation are much stronger than those of change and of imposition of a different culture. As shown in chapter 5, the Franks created relationships with the local population in Petra, including local Christians and bedouins, without whose collaboration it would have been impossible to settle in the south. The focus of Frankish settlement was not the Petra valley but Wadi Musa, Shawbak and probably Baydha, northeast of the Petra valley. While the focus in Wadi Musa and Baydha was on agricultural exploitation, Shawbak also had the important function to levy taxes on the Darb al-Hajj and it was this settlement, not Petra, which was well connected to trade.

Finally, historical sources⁹¹² give very clear indications that Shawbak was the first settlement of the Sharat al-Jibal, founded in 1115, while al-Wu'ayra was founded only after 1127; this fits well with the fact that Shawbak is clearly revealed in textual sources to be a more important castle than al-Wu'ayra, and the main centre of settlement of the area and certainly not, as suggested by Vannini, a secondary castle whose position was chosen to protect the entrance to Petra.

⁹¹⁰ In particular, the work of Denys Pringle has much expanded our knowledge of Frankish settlements beyond the better known castles. Ellenblum has also stressed the importance of agriculture and rural settlements in the Crusader period.

⁹¹¹ See chapter 2

⁹¹² See chapter 2.

Textual sources leave no doubt that settlement in the south gradually developed over several phases during about 40 years, and that it was not improvised. The value of the area was carefully considered since the very beginning of the Frankish presence in the Middle East, in 1100, and the following years also demonstrate a gradually stronger motivation for investing in settlement in this area, which was not at all, as claimed by Vannini, the result of an unexpectedly fortunate situation. It was perhaps after the Egyptian attacks of 1156 and 1158 that al-Habis and Hurmuz were constructed, and it is likely that it was between 1127 and much later that the smaller forts between Baydha and Shawbak were also built to connect the two sites.

Chapter 5

Social Aspects of Crusader-Period Transjordan: The Relationship with the Local Populations

5.1 The Relationship with the Christian Communities

Textual and archaeological sources make it clear both that some areas of Transjordan, including Karak, Shawbak and Wadi Musa were largely Christian, unlike others such as Amman that were probably Muslim,⁹¹³ and that in general the Franks settled in the Christian areas.⁹¹⁴

William of Tyre describes the sieges of Karak by Saladin of 1183, and states that a large crowd of Syrians from the countryside fled to the castle to seek refuge.⁹¹⁵ The presence of a Christian population in Karak already before the arrival of the Franks⁹¹⁶ and even after Frankish control of the area had been relinquished is well documented. Thietmar, Ludolf of Sudheim and al-Maqrīzī mentions the existence of Greek Orthodox Christians in the town in the 13th and 14th centuries as well as of some Latin Christians. Baybars received expressions of loyalty of the Christian population when he ruled Karak and under Sultan al-Nāṣir Muḥammad in 1301, the rule of wearing a turban of a specific colour to distinguish the Christians was not enforced in Karak and Shawbak because they were a majority at these places;⁹¹⁷ still today the Christian population at Karak is significant. Pringle has found historical evidence of five medieval churches in Karak: the Crusader-period Latin cathedral, the castle chapel, a Greek church of St. George, probably originally the Crusader-period main Orthodox church, a smaller Greek church of St George and the mention of an Armenian church of St George, the only one not identified with material remains.⁹¹⁸ On this basis, the 12th-century community in Karak included Orthodox, Latin and probably Armenian Christians.

Excavations at al-Wu‘ayra have revealed the consumption of pork at the castle, maybe purchased in Wadi Musa like the pottery. On Jabal Harun, archaeology does not contradict the evidence from the textual sources that the monastery was inhabited until at least the early 13th century, and the village of Baydha may have remained Christian until very recently, like in the case of the nearby Dibidba. In Shawbak, the lower church was probably used by the local Christian communities. In Shawbak, Thietmar was

⁹¹³ Prawer 1972, 49.

⁹¹⁴ See chapters 3 and 4.

⁹¹⁵ William of Tyre, 22.28, RHC, Occ., 1124-1126; Huygens 1986, 1057

⁹¹⁶ See chapter 3.

⁹¹⁷ Mayer 1990, 124, citing Maqrizi.

⁹¹⁸ Pringle 1993, 286-295; see chapter 3.

received by a French widow who instructed him on how to travel to Mount Sinai and provided him a Bedouin guide for the trip. He also stated that both Saracens and Christians lived in the suburb.⁹¹⁹ This therefore shows that the Crusader-period community was composed of both local Christians and Franks. There are clear references to the fact that several areas of Transjordan stayed Christian until after the Crusader period. Ludolph of Sudheim⁹²⁰ states that in the mid-14th century, almost 7,000 Christians lived in the village outside the walls of Shawbak castle. In Petra, the monastery on Jabal Harun was still active in 1217 when it was visited by Thietmar,⁹²¹ and there was a lively community of Armenians in Karak in the 14th century.

The sources reveal that the local Christians were regularly employed by the Franks as scouts. Fulcher of Chartres reports that before Baldwin I's first expedition to Transjordan in 1100, information about this unknown region was gathered from local Christians in Palestine;⁹²² this means that already at this very early stage this kind of collaboration was sought with this community. This kind of relationship is again confirmed by an episode described by Albert of Aachen during Baldwin I's successful expedition to Wadi Musa in 1108 to destroy the Damascene fort at al-Wu'ayra. In this year, when Lent had just begun, on the advice of a Syrian Christian named Theodore, Baldwin led an expedition with 500 soldiers to Wadi Musa in order to destroy a fort that had been built there by 3,000 Damascenes with the support and at the request of the local Arabs to block the passage to Christians; it is specified that the castle was built so that "no way would be open to the king's people who were in that place for the sake of business".⁹²³ The king arrived at a site inhabited by Christians and realizing this, he summoned their priest, and asked his advice about the new fortress. After being asked for his advice "about everything" by the king, the priest accompanied the king to a place near the fortress, after travelling for three days.⁹²⁴ The next day, he entered the camp and told the Turkish occupants that Baldwin was approaching with great forces and advised them to escape immediately; Baldwin found nobody in the camp the next morning. The Muslims, also, hid in mountain caves, together with their herds and all their goods. The king surveyed all the caves of the region and then lit a fire so that the smoke would force them to come out; as well as killing and taking prisoners, he took

⁹¹⁹ Pringle 2012, 120-120.

⁹²⁰ Riant 1884, II, 356.

⁹²¹ See chapter 4, Pringle 1993, 251.

⁹²² Fulcher of Chartres, II.4, RHC, Occ., III, 378-379; Fink 1969, 144

⁹²³ It is not specified which is the business referred to.

⁹²⁴ Albert of Aachen 10, 28; ed. Edgington, 745. Since Albert of Aachen calls the Christians *Syriani* or *Syriani Christiani*, the *Arabes* must be the Muslims. It can be hypothesized that the Arabs in this case may have been the Bedouins.

their spoils including donkeys, oxen, sheep and goats. Afterwards, the king assembled from the whole region ‘Syrian brothers and fellow Christians’ and took about sixty with him, who were fearful of the Arabs, sharing the booty with them when they arrived at the river Jordan.⁹²⁵

This interesting report confirms not only that the region was largely Christian beyond Wadi Musa, if there was another Christian community three days march away, but also that the king regularly relied on Christians for advice on important operations. The Christian who was hired to guide the Franks managed to make sure that the Arabs left the fort before Baldwin’s arrival, and certainly made a difference in the success of the operation, as later facts demonstrated that it would probably have been impossible to conquer the castle even with a large army, let alone with a small group of soldiers. The Arabs who captured the fort in agreement with the Turks appear to have been Bedouin, who often cooperated with the Franks and are remembered in the Arab sources for their divided loyalty, as they also cooperated with the Muslims against the Franks.⁹²⁶ Finally, the fact that the king took with him about sixty from “Syrian brothers and fellow Christians” who were scared by the Arabs may have been part of a policy of trying to fill the Palestinian settlements with Christians from Transjordan, which is clearly mentioned in sources, as discussed below. It is not clear, however, why the authors refers to two different groups of Christians in this report; perhaps, they refer to two different categories of Christians, some of them considered closer to the Franks. Another episode where the aspect of protection of the local Christians in exchange for the advantage of controlling the territory is very clear is that of the foundation of Karak castle itself, when according to Ibn al-Furat, a community of monks asked the Franks to build the castle to protect them from the Bedouins.⁹²⁷

As William of Tyre noticed, one of the main concerns at the very beginning of the Frankish settlement was the fact that the few sites under Frankish control were surrounded by territory controlled by the enemy, which made it dangerous to move from one place to the other; this situation was one where the enemy was “at the door.” As a consequence, any Christian walking on a road risked being killed or kidnapped and handed over to the enemy. Also there was the problem that the local Muslims refused to cultivate the fields, and that safety was very uncertain within the towns, not only because of the ruinous state of their defences, but also because the population (meaning Christian) was scarce. As a result, many settlers started to leave and return home.

⁹²⁵ Albert of Aachen 10, 29-31, ed. Edgington, 745-747.

⁹²⁶ See 5.1.3.

⁹²⁷ Ibn al-Furat 1971, 51; see chapter 2.

Because of this some additional reward was given to those who agreed to remain for at least one year.⁹²⁸ Not only, therefore, is the general term “Christian” used here to indicate a group of people to be protected, but also the reasons for the importance of the relationship with the Christians are explained: the Christians could be trusted both for collaboration in the maintenance of the agricultural system, which to the Franks was very important, and for the safety of the cities.

Immediately after reporting on the foundation of Shawbak, William of Tyre writes that King Baldwin I realized that Jerusalem itself was almost devoid of inhabitants, with insufficient labourers and barely enough people to defend it. The king decided therefore to populate it with local Christians. William states that “the people of our country were so few in number and so needy that they scarcely filled one street”, while the original Syrian (meaning local Christians) citizens were also very few in number as many had been killed by the Muslims. The king made some careful investigations to find out where he might obtain citizens to fill the city, and finally learnt that in Arabia beyond the Jordan there were many Christians living in villages under conditions of servitude; he looked for these people and promised them improved conditions. Even some uninvited people arrived and the king filled the houses with them by placing them in the sections of the city which necessitated this the most.⁹²⁹ Burchard of Mount Sion stated that the Holy Land at the time of his visit between 1274 and 1285 was full of Christians to the extent that in most areas of the Middle East for every Saracen he found 30 Christians, except in Egypt and Arabia.⁹³⁰ According to Prawer, there were many Oriental Christians in cities like Nazareth, Bethlehem, Jaffa, Acre, Tyre, Sidon, Beirut, Antioch and Tripoli.⁹³¹ However, William’s account suggests clearly that Transjordan was an area particularly densely settled with Christians. It could be that it was more densely populated by Christians compared to Palestine, because if this were not the case, the king would not have looked for them as far as Transjordan. However, it could also be that Baldwin simply considered populating Jerusalem more important than holding Transjordan at this stage. According to Richard, most Christians lived in towns, but the countryside was largely Muslim.⁹³²

The account also shows that in this first phase of settlement, King Baldwin I’s policy was to conquer and secure the conquests by relying, among other things, on the presence of the Christian population. In some cases, this happened by redistributing the

⁹²⁸ William of Tyre, 9. 19, ed. Huygens (reference to Huygens missing)

⁹²⁹ William of Tyre, 11. 27, RHC, Occ., 500-501; Huygens 1986, 535-536

⁹³⁰ Pringle 2012, 71-72.

⁹³¹ Prawer 1980, 211.

⁹³² Richard 1979, 134.

local Christian population in Jerusalem and taking them from areas where settlement was not contemplated; in other cases, by starting new settlements next to Christian-occupied areas. At this later moment, Baldwin may have not taken the Christians from the areas of Shawbak and Wadi Musa as he did in 1108, because he was already planning to increase settlement there. As Mayer rightly observed, it is very likely that before the conquest of Moab was planned, Baldwin I did transfer some of the Christian population to populate Jerusalem not only from Shawbak, as we know from the sources, but also from Karak, which was much closer⁹³³ and of course had already been explored at this time, so the king was surely aware of the religious identity of the inhabitants. Although there is evidence for settlement in Karak before the foundation of the castle,⁹³⁴ this may not yet have been planned on a large scale.

William of Tyre states that the whole population of the village of Karak was Christian and therefore that more reliance could be placed on it; he also states that the fortress had a garrison to defend it, but it is not specified whether they were Franks or not.⁹³⁵ Around 1172, Saladin attacked Shawbak, which on this occasion proved to be impregnable. William of Tyre comments not only that the inhabitants were all Christians, but also that, for this reason, they could be trusted more.⁹³⁶ It seems clear, therefore, that the presence of a Christian population was one of the main reasons for choosing to build new settlements in Karak, Shawbak and Wadi Musa.⁹³⁷

William of Tyre's account of the events in 1144 in Wadi Musa⁹³⁸ is interesting, as it shows that the local Christian population could not be trusted all the time. The locals who invited the Turks to attack and occupy al-Wu'ayra were not Bedouins, but the local agriculturally-based community, because William states that they were persuaded to give up the castle only when the king threatened to uproot and burn the plantation of olive trees in Wadi Musa, which was the source of all their economy, as it had been also been for their fathers. This account also shows that the Turks relied on the acquiescence of the local Christians to conquer this fort, which was almost impossible to take, as William himself relates and as is demonstrated by the fact that the Franks tried for several days to recapture it. After all, the only possible way to approach al-Wu'ayra was through the rock-cut entrance gate in the middle of the natural wadi separating the castle from the bedrock east of it. This may mean that the locals normally had access to the

⁹³³ Mayer 1990, 124.

⁹³⁴ See chapter 3 and below.

⁹³⁵ William of Tyre, 20.28; Huygens 1986, 951-952

⁹³⁶ William of Tyre, 20.27, RHC, Occ., I, 992-993; Huygens 1986, 950-951

⁹³⁷ See chapter 4.

⁹³⁸ William of Tyre, 16.6, RHC, Occ., I, 712-714; Huygens 1986, 721-722

castle and were trusted by the castle garrison. The fact that local Christians were allowed or living inside the castle is supported by the archaeological evidence of the existence of an extensive area in the castle including habitations and at least two cemeteries. It also fits well with the evidence suggesting that the garrison were regularly purchasing food and other items such as pottery from Wadi Musa.⁹³⁹ The castle garrison may well have included some Franks, but there surely was not enough Frankish population at this time to fill in the whole castle, if what William reports about the number of Franks in Jerusalem and Palestine is correct; William's comment that the garrison in Habis Jaldak was Syrian also shows that this could have often been the case for other castles.⁹⁴⁰ It may be hypothesized, however, that the garrison of al-Wu'ayra was largely drawn from local Christians, but probably not from Wadi Musa, as otherwise on this occasion it would have given up the castle in agreement with the local population; instead, it was killed by the Turks, who were let inside by the locals in betrayal of the garrison's trust. The other possibility, however, was that family rivalries created a situation where a tribe negotiated with the Turks for advantage over another. When Baldwin I founded Shawbak, he gave large tracts of lands to knights and 'foot-soldiers', (sergeants) which according to Prawer was necessary to tie them to the territory. The French translation of William of Tyre adds that the people whom he gave land in Shawbak were "de sa gens", which means they were Franks;⁹⁴¹ However, it should be noticed that the translation is 13th century. In any case, Thietmar's account, witnessing that at the time of his visit there was a French widow in Shawbak⁹⁴² suggests that there were at least some Franks in the garrison, although perhaps in very small numbers. The same was may have been the case at al-Wu'ayra.

In 1182, the castle of Habis Jaldak surrendered to the Muslims and William blames this on the fact that the garrison in charge of it was Syrian, an effeminate and weak race,⁹⁴³ showing that it was not unusual to assign the defence of castles, even as important as this one, to local Christians, because of the scarcity of western soldiers. The negative tones of William against the Syrians suggests that this had several times caused the Franks to lose castles, but that it was probably necessary to hire the Syrian Christians for this purpose.

Finally, it can be noted that when during the first expedition to Transjordan in 1100 Baldwin I's party arrived in Wadi Musa, in addition to commenting on the fertility

⁹³⁹ See chapter 4.

⁹⁴⁰ See below.

⁹⁴¹ Prawer 1980, 110.

⁹⁴² Pringle 2012, 120-121.

⁹⁴³ William of Tyre, 22.15, Huygens 1986, 1026-1028

of the site, which clearly made the area very appealing, Fulcher, who was a direct witness, also comments on the sanctity of the place because of the proximity of Jabal Harun;⁹⁴⁴ this supports the idea that, at least during this first phase, there was an intention of settling in places not only with a Christian population in need of protection but also of Christian religious significance. At this early stage, this may also have included perhaps a plan to protect pilgrims during their travel to sites like Jabal Harun, although archaeology has shown that in practice if there was some pilgrimage at this site at this date it was minimal.

5.2. The Armenian Communities in Transjordan⁹⁴⁵

An inscription, currently in the Mardigian Armenian Museum in Jerusalem, mentions the construction of a church in Karak dedicated in 1257 to St James by King Het'um of Cilicia. This inscription being of doubtful authenticity,⁹⁴⁶ this church may not have any basis in the sources. However, a more solid evidence for the presence of an Armenian community in Karak is a colophon now in the Armenian Patriarchate library in Jerusalem which records the donation of a Bible to the Armenian church of St George in Karak by King Leo IV of Cilicia after his visit to Jerusalem in 1329. Moreover, it has been pointed out that the fact that King Leo had donated an expensive manuscript to the Armenian church in Karak means that the community must have had a certain importance.⁹⁴⁷

The historical significance of the Karak plateau during the Middle Islamic period and before has been attributed to both the agricultural productivity in the region and the position in relationship to the urban centres of Bilad al-Sham and Arabia. The 13th and 14th centuries, the time when the Armenian communities are documented, were perhaps the most flourishing period for Karak, prosperous in particular for the trade of sugar produced from the Jordan valley and largely exported to Palestine and Damascus.⁹⁴⁸ The intense contact with Jerusalem at this time is also clearly witnessed with objects such as the glazed relief-decorated bowls produced in Jerusalem⁹⁴⁹ whose remains are very frequent in the Karak castle and plateau and found for example at Hisban, a

⁹⁴⁴ Fulcher of Chartres, II.5, RHC, Occ., III, 381-382; Fink 1969, 147

⁹⁴⁵ This section draws information from a paper entitled: "Christian and Armenian Christian communities in Medieval Transjordan" that I have presented at the conference: *Armenian Studies: Multi-disciplinary Dimensions*, organized by the Gulbenkian Library of the Armenian Patriarchate, Jerusalem (July 2013).

⁹⁴⁶ Pringle 1993, 295; Sanjan 1965, 13. Prof. Pringle has discussed the inscription with Prof. Dowsett and R. Thomson, who both thought that the inscription is of doubtful authenticity, as it looks written in Modern Armenian.

⁹⁴⁷ Manuscript n. 1822; Sanjan 1965, 13, 323, n. 62.

⁹⁴⁸ Milwright 2008, 4.

⁹⁴⁹ Milwright 2008, 370-372; 310-318.

military site of the 13th-14th centuries. Today, several Armenian families from Jerusalem trace their origin back to Karak,⁹⁵⁰ although now the Armenians of Jordan live mainly in Amman.

There are proven connections between Karak and the Armenian community in the 12th century. The daughter of Raynald of Châtillon married Prince Ruben of Cilicia⁹⁵¹ and the settlement of an Armenian community in Karak after this is apparently reported by a continuation of William of Tyre.⁹⁵² It has been suggested that upon his return to Cilicia, Prince Ruben encouraged his fellows Armenians to settle in Karak as traders, as the business was very prosperous, especially in view of the facilities provided by the Latin authorities.⁹⁵³ The privileged relationship between Franks and Armenians is well known during the Crusader period; this frequently included intermarriage and political and military cooperation,⁹⁵⁴ and in terms of religious belief Latins and Armenians are considered by Richard “almost a single people”,⁹⁵⁵ so the hypothesis of encouraging some movement of this specific group in Karak is very feasible.

It seems therefore reasonable to hypothesize that the important Armenian community documented in 14th-century Karak was significantly developed in the Crusader period, and benefited from the largely Christian population in Karak and from the new opportunities of trade and safety thanks to the newly constructed castle. It is possible also that it was the Palestinian Armenian communities who were particularly advantaged to move here, given the intense trade relationships with this region.

There is still no study of ceramics from stratified contexts at Karak, but the Christian community may still have been significant in the 15th and 16th centuries, as witnessed by the interesting finds of *graffita* bowls from northern Italy belonging to this period,⁹⁵⁶ this is a luxurious good normally associated with Christian pilgrimage sites in Palestine.

Denys Pringle, who has done some recent work on pilgrimage, suggests that some Armenian communities of Transjordan may have actually existed to cater to pilgrims going to Sinai and notices that Armenian pilgrims to Sinai are well attested by several inscriptions.⁹⁵⁷ Although the route through Transjordan became largely abandoned by

⁹⁵⁰ Hintlian 1989, 21.

⁹⁵¹ Sanjan 1965, 13.

⁹⁵² Book 19, 25 in Paulin, Guillaume de Tyr et ses continuateurs, Paris 1879, cited in Hintlian 1989, 21. I have been unable to check this reference.

⁹⁵³ Sanjan 1965, 322, n. 60.

⁹⁵⁴ Hintlian 1989, 18; Prawer 1972, 222, 227; Colbi 1988, 31; Dadoyan 2001, 180.

⁹⁵⁵ Richard 1979, 137.

⁹⁵⁶ Milwright 2008, 200-201.

⁹⁵⁷ Personal communication.

Christian pilgrims after the Mamluk conquest in the mid-13th century, the road through Karak, the King's Highway, which was also the route of the Hajj road, was used even more intensely by Muslim pilgrims, but this would probably not stop Christians from conducting business with these travellers.

King Thoros of Armenia in the mid-1160s suggested that he send 30,000 Armenians Christians to the Latin Kingdom of Jerusalem in order to populate the country with Christians and ensure its safety; this plan never succeeded because the king refused to accept the control of the Latin clergy over the Armenians, stating that they were not part of the Roman church.⁹⁵⁸

The main reason for encouraging the movement of the Armenian population in Karak was certainly not to populate the town, which was already largely Christian. On the contrary, if an Armenian community already existed in Karak before the construction of the castle, as it is possible, this could well have been involved in the movement of Christians to Jerusalem, which could be the reason for the fact that several Armenian families in Jerusalem originate from Karak.

In summary, whether the Armenian community in Karak started or just became more important during the Crusader period, perhaps trade opportunities created in the Crusader period included an increased passage of Christian pilgrims, because pilgrimage was encouraged by the Franks as part of their mission during the first Crusade. After the Crusader period, enough conditions for staying in Karak as an Armenian community appear to have still been present through the Mamluk period.

In al-Salt, a small church dedicated to St George is documented in the 12th century.⁹⁵⁹ We know from Ibn al-Athir that in 1118/1119 Tughtigin demanded that the Franks surrender the revenues from several areas and towns north of the River Zarqa, including Salt (the Ghawr, Jabal Awf, Jabanja, and al-Salt).⁹⁶⁰ However, this area was never under the control of the Franks except for some levying of taxes, therefore the Franks would not have much influence on the Armenian community in al-Salt. Al-Salt in the Middle Age was a town in a fertile area and in an advantageous position, as it was well connected to Damascus, Jerusalem and Nablus.⁹⁶¹

In 1257 the forces of King Het'um I of Cilicia and the Mongols occupied the area east of the Jordan, which therefore stayed under Mongol control during the years 1257-

⁹⁵⁸ Prawer 1975, 571.

⁹⁵⁹ Pringle 1993, 278, n. 222; Sanjian 1965, 13, n. 63. Source: Aghavnouni 1931, 438-439.

⁹⁶⁰ Ibn al-Athir, RHC, Or. I, 315; Richards 2006, 160.

⁹⁶¹ See chapter 3.

1264 until retaken by the Mamluks.⁹⁶² Since there was an important Armenian community in Karak after 1329, this means that the community in Karak did survive the Mamluk conquest, and perhaps also that the community in al-Salt also still existed at this time.

5.3. The Relationship with the Nomadic Population

Sources related to the Muslim population are very scarce in general, since most Muslim chroniclers lived outside the boundaries of the kingdom, and the description of the relationship with the subjected Muslims was presumably of little interest to the Frankish chronicles, apart from the time when these areas were conquered.⁹⁶³ It is therefore interesting that Transjordan can offer some material for discussion about the relationship with the Bedouin population.

The Bedouins were legally the king's property; in 1183, Guy of Lusignan revenged himself against King Baldwin IV by killing the Bedouins near Ascalon.⁹⁶⁴ They were ruled directly by the king and not by a particular lordship unless a special royal grant was issued; for example, King Baldwin IV granted the Order of St John in Belvoir the privilege of attracting 100 Bedouin families into their territory, only from those who did not formerly belong to the king.⁹⁶⁵ The king owned them because the crown was the only institution which could ensure them both protection and freedom of movement, since often the temptation to attack them for their flocks or horses tempted the Frankish lords.⁹⁶⁶ They could also be sold for a very substantial price by the crown,⁹⁶⁷ so certainly the king understood well their value.

In Transjordan around Shawbak and Karak were the Bedouin tribes of Banu 'Uqba and the Banu Zuhair, while around 'Ajlun were the Banu 'Awf.⁹⁶⁸ Interesting information comes from the textual sources about the Bedouins of Transjordan.

According to Ibn al-Furat, the monks in Karak were also often kidnapped by the Bedouins, so they fortified the place over time until it became a fortress. They then invited some Franks and asked to settle there, so they could control anyone wanting to attack them,⁹⁶⁹ starting therefore settlement in the castle of Karak.

⁹⁶² Sanjan 1965, 13.

⁹⁶³ Kedar 1993, 137.

⁹⁶⁴ Richard 1979, 135.

⁹⁶⁵ Delaville le Roulx, 1894, I, 271-272, n. 398, cited in Prawer 1972, 51.

⁹⁶⁶ Richard 1979, 135; Prawer 1972, 51.

⁹⁶⁷ Prawer 1980, 214.

⁹⁶⁸ Prawer 1972, 50.

⁹⁶⁹ Ibn al Furat, 1971, II, 51.

There is evidence that the Bedouins were hired by the Muslims against the Franks. For example in 1156, after the truce between the Franks and the vizir of Egypt (Ibn Ruzayq) was broken, and on an expedition which ended up successfully against Shawbak and Tafilah, the vizir equipped both his troops and Arab nomads in order to ravage Frankish territories.⁹⁷⁰ At the beginning of the year 1187, Saladin recruited both Muslim soldiers and Bedouins against the Franks.⁹⁷¹ Later on, other episodes are known of this collaboration, for example in 1250/1251, when the Bedouin collaborated with the Muslim army in order to cut off the Franks from Damietta.⁹⁷²

However, episodes of Bedouin collaboration with the Franks against the Muslims are also very frequent. Ibn al-Furat tells us for example that when Sultan Baybars came to Syria and sent a detachment to raid the land of the Franks in 1260–61, he had heard that the Bedouin were associating with the Franks, showing them the weak points of the Muslims.⁹⁷³ There is also an episode specifically about Transjordan; in 1154, Usama Ibn Munqidh was travelling with the vizir Abbas, escaping from Egypt, and the group was attacked at a place called al-Muwailih by the Franks who killed some of them and took others prisoner. The remainder of the party then entered the mountains in the territory of the Banu Fuhayd, a bedouin tribe in Wadi Musa, who killed all those who were not together with the main group. Usama obtained help from the amir of the tribe of Banu Tayyi', whom he already knew from before, and who in return for 1,000 Egyptian dinars guided the group towards Damascus.⁹⁷⁴ This passage is instructive. It shows that the Bedouins would ask for money in exchange for granting passage through the area of Wadi Musa, which at this time was under Frankish control. It seems therefore that this area in practice was under the joint control of both the Franks and the Bedouins. This implies that there was some sort of agreement between the Bedouins and the Franks, which included certainly the Bedouins letting the Franks settle in the area, and not collaborating with the Muslims. In return, this may have included either the right of the Bedouins to attack caravans or ask for money in exchange for the right to pass through the territory in the Frankish-controlled area, or at least to share the gains with the Franks. It is also interesting to see from this episode that the Franks themselves actually attacked caravans in a similar way to the Bedouins, in a Bedouin-controlled area which is between Egypt and Petra.

⁹⁷⁰ Ibn Kallikan; RHC; III; 470-471.

⁹⁷¹ 'Imad ad-Din al-Isfahani, 1972, 13.

⁹⁷² Ibn al Furat, 1971, II, 28.

⁹⁷³ Ibn al Furat, 1971, II, 44.

⁹⁷⁴ Ibn Munqidh, 53-54.

In summary, there is evidence that both the Bedouins and the Franks were both attacking caravans and asking money in order to grant the passage through the territories that they controlled. It is possible that there was a system where it was agreed in which areas each would be able to make money in either way from travellers. The evidence supporting the fact that the Franks did attack caravans fits with the repeated, worried reports from the side of the Muslims that it was not possible without great danger to pass through the roads in Transjordan after the construction of the castles.

Probably the Bedouin would have controlled passage through their lands, whether the Franks were there or not. The agreement with the Franks was probably that they would be allowed to continue to do attack caravans in return of some payment to the Franks. This probably added to the economic value of the Bedouin which they already had to the king.

The charter of 1161 that granted Transjordan to Philip of Nablus includes some limitations to the control of Philip over Transjordan: the king specifies in the charter that he will keep the revenues collected from the caravans travelling through Transjordan between Alexandria and Baghdad, and also the Bedouins.⁹⁷⁵ Although to want the control of the Bedouins and therefore of their payments was apparently normal since they were normally considered royal property, it has been noticed that the king was in this way keeping for himself some of the most important financial resources produced by Transjordan, without however covering the expenses necessary to defend the Frankish settlements from the Bedouins.⁹⁷⁶

The fact that both Franks and the Bedouins would need more financial income from this region may also have contributed to the episodes of the Franks attacking caravans, which culminated at the time of Raynald of Châtillon who made this a regular policy.

The charter of 1161 when Baldwin III invested Philip of Nablus with the whole of Transjordan, also gives more information. The king carefully specified that the grant did not include “his Bedouins” who are not born in Transjordan,⁹⁷⁷ which means that he renounced the right to control those which had land in Transjordan, since these belonged, therefore, to the lord of that land.⁹⁷⁸ The episode of Baldwin I in 1108 capturing al-Wu‘ayra from the Damascenes talks about “Arabs”, as opposed to the Turks and the Christians, who hid in caves with their belongings, including donkeys,

⁹⁷⁵ Strehlke 3-4, n. 3.

⁹⁷⁶ Barber 2003, 69.

⁹⁷⁷ Strehlke 3-4, n. 3; Prawer 1980, 214.

⁹⁷⁸ Richard 1979, 136.

oxen, sheep and goats. The fact that oxen were included among their belongings seems to suggest that they were not all nomads, or all completely nomads, and that some of them may have owned some land in Wadi Musa.

It is also apparent that Reynald of Chatillon's expedition into the Hijaz in 1182-3 would not have been possible without the co-operation of the Bedouin. According to 'Imad al-Din, Reynald of Châtillon "was the most evil, greedy, willing to hurt, to break his promises and to swear the fake. He had with him a troop of Arabs without religion, horror of our religion, widespread on the Hidjaz route and for which pilgrimage was nothing more than a metaphor".⁹⁷⁹ It is clear that the Arabs without religious belief described here, connected to the episodes of 1182/1183, when Reynald tried to threaten the holy cities of Arabia, are the Bedouins. Interestingly, another account of Abu Shama makes even clearer what the role of the Bedouins was on this occasion as it states that the Franks who managed to penetrate all the way to Rabigh and al-Hawra kept on attacking caravans and that "some Arabs, more insidious and hypocritical than the Franks themselves, guided them towards the pride of our country".⁹⁸⁰

A very clear source about this kind of relationship between the Bedouins and the Franks is a letter from Saladin to Nur al-Din in 1172/73, where he writes: "[In order to chase the infidels], among the measures to reach this aim, the most effective is to not leave even one nomad among them; we need to take away the Arabs from the shame of infidelity and attract them to the honour of Islam. I therefore committed seriously to one of the most important actions of the Holy War: to move away the highest number of those Arabs and try to inspire the desire to change the country. This way, the enemy cannot find a guide to help his marches; his tricks are discovered and he does not know where to direct his steps".⁹⁸¹ If this kind of association was worrying Saladin so much, it must have been a well-organized and well-known system already by the time he wrote the letter.

William of Tyre also reports an episode of courtesy between the Franks and the Bedouins. In 1101, on the way back from its expedition in Transjordan, Baldwin had attacked a Bedouin camp and took slaves. A woman married to a chief of high rank was due to give birth, and Baldwin released her with all the necessary things she needed,

⁹⁷⁹ Livre des Deux Jardins, RHC, Or., IV, 258-259.

⁹⁸⁰ Abu Shama, Le Livre des Deux Jardins, RHC, Or., IV, 234.

⁹⁸¹ Livre des Deux Jardins, RHC, Or., IV, 156-157.

including a woman to help her;⁹⁸² later on, the husband of the woman helped the king to escape from Ramla and saved his life.⁹⁸³

5.4. Conclusions

Although some parts of Transjordan were Muslim, the region was largely Christian and Bedouin and this ethnic composition is different to other areas of the Latin Kingdom of Jerusalem. The textual and archaeological sources give clear indications about the fact that some parts of Transjordan, in particular Karak, Shawbak and Wadi Musa, were largely Christian in the Middle Age, and during the Crusader period.⁹⁸⁴

The textual sources for Transjordan presented in this chapter communicate the idea that the relationship between Franks and local Christians was convenient on both sides, which is to say, in exchange for protection against the Muslims, the Franks would ask the local Christians for services such as scouting for them, populating towns and taking charge of strategic castles, although they clearly could not always be trusted completely. It seems that the people the king chose to give them land in Shawbak, and perhaps also the garrison for castles in Transjordan, however, was not simply local, but selected from other Christian communities.

While therefore the sources may contain an element of ideology behind the idea that the Franks had a good relationship with the Christians, this relationship was clearly necessary for the Franks, on the one hand because of the scarcity of Franks in the region, and on the other because of their poor knowledge of the territory. The aspect of proximity of Frankish settlements to the local Christian communities is clear and this can be paralleled with a situation recorded in Palestine by a recent study showing that the distribution and intensity of Frankish settlements was dependent on the presence of local Christians. Ellenblum wonders if this was also the reason why this caused the failure by the Franks to settle in the northern parts of eastern Transjordan.⁹⁸⁵ Judging from the description of political events in the sources, it seems that the main problem which caused the inability to keep the castles in the north, such as Jarash, was rather the proximity to Damascus, which could easily threaten possible Frankish settlements. However, it is also true that settlement in the same form as it occurred in the Christian areas of Transjordan, which is by supporting the existence of a castle with the relationship with local rural communities, would not have been possible because of the

⁹⁸² William of Tyre, 10. 11, RHC, Occ., 415.

⁹⁸³ William of Tyre, 10. 21, RHC, Occ., 431-432.

⁹⁸⁴ See chapters 3 and 4 for more historical references to the Christian communities at these sites.

⁹⁸⁵ Ellenblum 1998, 283.

lack of Christian population. Prawer notes also that one of the elements making it easy for the Franks to settle into Galilee was the large Christian population.⁹⁸⁶ The importance of the presence of a Christian population for Frankish settlements can be also supported for the area of Transjordan. The construction of the new castle of Montreal in 1115, according to William of Tyre, was started “in the interest of the Christians”,⁹⁸⁷ meaning probably in the interest of the Christendom, of both Franks and local Christians.

Prawer has made the point that local Christians were never treated equally to the Franks and as part of their community, and that they missed the important opportunity to mobilize them on their side.⁹⁸⁸ However, it has been pointed out that there was also a difference in the relationship between different groups of Christians, as the Greeks, for example, often had tense relationships with the Latins.⁹⁸⁹ Kedar has argued that the relationship with Armenians and Jacobites was privileged compared to that with the other Christians, not only in the county of Edessa and the principality of Antioch, where the communities were large, but also in the Latin Kingdom. Moreover, although the Franks regarded themselves as liberators and turned themselves into rulers of those whom they were supposed to liberate, they also felt relatively at ease among them.⁹⁹⁰ The evidence from Transjordan appears to support this last view.

The subjected Muslims in the Latin Kingdom would be often enslaved, especially since the Franks sometimes would want to use them as skilled craftsmen who played a clear role in the economy, but they would normally be allowed to practise their religion.⁹⁹¹ Slavery may have existed for Transjordan, since in some areas of Frankish settlement there was a Muslim population, such as Amman or Aqaba.

According to Kedar, the Bedouin tribes who came under the Frankish rule, on the contrary, were probably left relatively intact during the conquest,⁹⁹² and this seems confirmed for the case for Transjordan, if the relationships of collaboration were established since a relatively early stage. The episode of courtesy between Baldwin I and the Bedouin chief in 1101 does not necessarily mean that there was already collaboration at this early stage, but it does mean that the Bedouins at this time were sometimes at least pictured in a good light. The nomads probably paid the king for their

⁹⁸⁶ Prawer 1975, 256.

⁹⁸⁷ Fulcher of Chartres, II.55, RHC, Occ., III, 431; Fink 1969, 215

⁹⁸⁸ Prawer 1972, 219.

⁹⁸⁹ Richards 1979, 138.

⁹⁹⁰ Kedar 2006, 210-213; 221.

⁹⁹¹ Kedar 1993, 143, 152-153, 161.

⁹⁹² Kedar 1993, 151.

pasture rights with horses, sheep and camels,⁹⁹³ just as they had done with previous lords,⁹⁹⁴ so apparently the arrival of the Franks did not create a huge impact on them.

The collaboration with the Bedouin was probably absolutely necessary for the survival of the Franks in certain areas of Transjordan. According to Gibb, “The main opposition to the Fatimids in their attempt to establish their rule in Syria was by the shaykhs of the seminomadic Arab tribes who had taken possessions of various parts of the country. Transjordan and the western fringes of the Syrian desert were held by the tribe of Tayy which were a perpetual thorn in their side in Palestine”.⁹⁹⁵ Although it is therefore very clear why the Franks would seek a collaboration with the Bedouins, including for their important knowledge of the territory, it is perhaps less obvious what the Bedouins got from collaboration.

The fact that some Bedouins may held land in Wadi Musa or somewhere else, as hypothesized above, is consistent with the conclusions reached by scholars about the fact that the nomadic and settled lifestyle is not necessarily one of competition and it is not even strictly separated. Historically the dynamics between nomad and farmer, and the higher or lower number of settlements in history has been understood as depending on a more or less important phase for agriculture. However, the problem is more complex than it appears. Along the areas where the rainfall is barely sufficient for agriculture, but more than enough for rich pasturages, the two lifestyles converge. Villagers raise sheep and goats and in the summer may move to tents in search of pasturage, and a nomad may also cultivate the land during the growing season. So, in transitional periods, villagers are often sedentarised nomads and vice-versa. Moreover, the relationship between the two is symbiotic along the desert frontier and not just competitive. For example, the nomads although traditionally threatening the villages, also depended on them as they needed them to purchase specific products. Farm land provided grazing for animals and animals fertilized the land. They also protected villages in exchange of money or other kinds of payment, but sometimes in the past the constituency has included both non-sedentary nomads and villagers.⁹⁹⁶ These complex traditional dynamics should be taken into account when considering the relationship with the Franks that the Bedouins found satisfying and efficient, in such a way that Saladin considered them responsible for the persistent present of the Franks in certain areas. Part of this relationship with the settled community was certainly already

⁹⁹³ Prawer 1980, 214.

⁹⁹⁴ Richard 1979, 135.

⁹⁹⁵ Gibb 1932, 17.

⁹⁹⁶ Miller 1991b, 5.

established before the arrival of the Franks, who now ended up controlling some elements such as the pastures and the villages. In addition, the Franks were maybe able to share some of the advantages of controlling the King's Highway and getting some revenues out of it.

Prawer believed that the Franks established a uniform policy on all non-Franks inhabitants of their conquered territories,⁹⁹⁷ and assumed that about three quarters of the population living in the Latin Kingdom was hostile to the Franks.⁹⁹⁸ He thought also that the impact of the Frankish conquest on the local population was mainly a generalization of the already existing serfdom, and that the *villanus* (villein) under Frankish rule was in fact a *servus*.⁹⁹⁹ However, the case of Transjordan seems to contrast with this view. The Franks charged local Christians in Transjordan with the important responsibility to take care of some of their castles, and as shown from the episode of 1154 in Wadi Musa, they may have relied on the Bedouins to control who was passing through their territories.

While the relationship with the Christian community was important because it provided the population necessary to build and manage a military, economic and administrative system necessary to control the territory, the Bedouins were also important for the control of the roads and for the economic contribution to the lordship, as there was surely an agreement who allowed the Frankish lords to take revenues from the caravans.

In summary, probably the control of Transjordan presented specific challenges for the Franks, as it was more far away from the more urban areas of the coast and from help from the army when it was necessary. For these reasons, and because the Franks were probably in very small numbers in Transjordan, bonding with both the Bedouin and the Christian communities was probably vital to their survival in this region.

⁹⁹⁷ Prawer 1980, 201.

⁹⁹⁸ Prawer 1975, I, 570.

⁹⁹⁹ Prawer 1980, 203-205.

Chapter 6

Conclusions

The analysis of the textual and archaeological sources has shown that settlement in Transjordan in the Crusader period developed in a planned, gradual manner, that it was prepared by a careful phase of exploration and that it involved considerable efforts from the Franks in establishing and preserving it. It also developed in different forms in different parts of the region, according to their geographical position and ethnic composition.

Settlement was started by an exploration phase lasting about 15 years, when the potential for settling was considered over time; this plan was in the beginning clearly subordinated to populating Jerusalem with Christians (chapters 2 and 5). The process involved testing different areas from north of the River Yarmuk to 'Aqaba, some of which proved to be too close to the Muslim territories to be held safely (chapters 2 and 3). The ideal territory for establishing a lasting stable settlement was found in the Sharat al-Jibal, where the Franks could concentrate their efforts in settling permanently and intensively without major disruption, from 1115 to 1189.

On the other hand, settlement between the River Yarmuk and the River Zarqa always remained limited to a few fortifications. It also seems to have been sparse in the Balqa', where there were possessions already since the 1120s, but where, apart from 'Amman, there is no indication in the sources of intensive settlement. This contrasts with the more complex forms of settlement that took place south of the Wadi Mujib (chapter 3).

After the establishment of new castles in Shawbak in 1115 and the Petra area around 1130, Karak Castle was founded in 1142, some forty years after the first explorations. Its foundation may be seen in part as reflecting a new policy of King Fulk for consolidating the borders and tightening control over the King's Highway, as well as for moving closer to Jerusalem the main administrative centre of Transjordan. The building of Kerak from 1142 onwards marks clearly the strategic, economic, and political importance of the region of Transjordan, and shows that it was an integral part of the Latin Kingdom of Jerusalem.

From the 1160s, the lordship reached its maximum geographical extent. It included a castle on Jazirat Fara'un, 15 km kilometres from the coast of 'Aqaba, built with the various purposes of controlling the Egyptian Muslim pilgrimage road, protecting the Christian pilgrimage to Sinai, and defending the kingdom's borders (chapter 3).

There was now in fact an increasing awareness on the part of the rulers of the kingdom of the strategic importance of Transjordan, and an even bigger investment was made in defending its borders (chapter 2).

The response of the Muslims to the phases of Frankish settlement varied over time, in proportion to the efforts made by the Franks to define and control the territory. The sources show isolated reactions to the phases of raids and exploration by the Franks and, later on, to the construction of settlements in the south. These were finally concentrated on Karak, the main threat to the Hajj road, in particular from the 1170s, when Saladin no longer had any interest in preserving Frankish Transjordan as a wedge separating Cairo and Damascus. In this last phase Saladin aimed specifically at reconquering the Hajj road, by concentrating on the sites of Karak, Shawak and 'Aqaba (chapter 2).

The process of settlement would have been impossible without the successful strategies adopted in dealing with the local population, both Christian and Bedouin. Without this cooperation, the relatively small number of Franks present in the territory, as we learn from the sources, would never have been able to control it.. Local Christians were employed by the Franks to run castles (although in some of the main castles, like Karak and Shawbak, there was also some Frankish population) and to scout the territory, in addition to supporting the Franks with a whole agricultural system supplying their settlements. The Bedouins were used as guides in territories normally known only to the Muslims. They also provided payments not only for the use of pasture, but also for being able to continue attacking non-Frankish caravans in the now Frankish territories. One of the guiding elements in choosing where to settle was in fact the presence of a Christian population, therefore reflecting the tendencies already recorded in other areas of the Latin Kingdom,¹⁰⁰⁰ and the case study of Transjordan can support the statement according to which the relationship with the local Christians was of a different kind to that with the local Muslims.¹⁰⁰¹ Relationships with the Christians and the Bedouins, however, appear to have been more intense in Transjordan than in other areas, and were integral parts of the conquest and preservation of the territory. The successful relationship that the Franks had with the Bedouins was probably largely built on the previous experience that the Bedouins had in dealing with the different rulers of this territory. However, according to Saladin himself, this was one of the main points of strength of the Franks in the territory and had come about because the Franks in this

¹⁰⁰⁰ Ellenblum 1998

¹⁰⁰¹ Kedar 2006

period had a much more immediate presence in Transjordan than the rulers of Cairo or Damascus (chapter 5).

Another strategy which the Franks adopted successfully throughout their occupation of Transjordan was the building of almost untakable castles, which could hold out until help arrived (chapter 2). Despite the numerical weakness of the Franks, Transjordan had a certain institutional and financial importance to the Kingdom, as appears from the fact that it owed 40 knights and from the king's unwillingness to alienate his personal control of the Bedouins in favour of the lords of Transjordan (chapters 2 and 5).

The success of settlement relied, therefore, at least partially on the capacity of adaptation to an already existing situation, not only to the local populations but also to a new living environment. The Franks demonstrated themselves able to take advantage of some of the local building techniques and to make skillful use of the topography of the territory in fortifying their castles, although they also did this in other areas of the Kingdom (appendix B).

Concerning the forms of settlement in the various areas, after founding Shawbak in 1115, where land was given to Franks and local Christians in order to attract them to live in the area, from about 1130 al-Wu'ayra and Hurmuz were also controlling their own territories (in the areas of Wadi Musa and Baydha). At al-Wu'ayra the inhabitants, drawn from local Christian communities, relied on the local Christian population of Wadi Musa to supply the castle, and the same probably happened in Hurmuz and Baydha. An arrangement with the local Bedouin tribes was also made during the early years, for the control of the territory and its financial revenues. The settlement in the south included several types of settlement; besides Shawbak, which was the main castle of the Lordship until 1142 and also had the function of controlling the King's Highway, there were other important castles (al-Wu'ayra, Hurmuz) controlling Christian territories and villages involved in agricultural activities, as well as smaller forts between Baydha and Shawbak. In addition, some castles seem to have had the function of controlling the main roads from the Wadi Arabah to the agricultural settlements (such as al-Habis, Hurmuz itself, and maybe a smaller connecting fort in Baydha), perhaps built after the Egyptian attacks in the 1150s. It is possible that the fortified settlement in the Wadi Farasa, a refuge built in a hurry, reflects the last phase of occupation when the Franks were forced to evacuate the area in 1188, or before the settlement process took place in a planned manner. It is likely that in the first phase of settlement in Petra, the idea of assisting pilgrims to reach Jabal Harun was at least contemplated, since later on

there was a desire to include under the control of Transjordan the monastery of St Catherine in Sinai (chapter 4). That considerable efforts were employed in this area can be seen by the work invested in the castles of al-Wu‘ayra and al-Habis in Petra, which involved some specialized, imported workmanship (appendix B). It is possible that the arrangement of settlements had similar forms in Tafilá and as-Silá, the latter being listed as having its own territory (chapter 3). It seems that the number of settlements in the area of Petra and the Jabal Shara during the 12th century cannot be safely determined on the sole basis of ceramics derived from surveys, since the difficulty in identifying pottery of this period inevitably results in a low score of inhabited settlements. The same problem has also been noted in other areas of Transjordan.¹⁰⁰²

As in the case of Petra and the Jabal Shara, Karak Castle was built through a gradual process of planning, which included considering proximity to the local Christian population and dealing with the local Bedouin tribes, (chapter 5) and choosing a location in an economically promising area. Here, the castle not only controlled local agricultural production and the King’s Highway, as at Shawbak, but also the main trade routes to the west (south of and across the Dead Sea) and the production and distribution of sugar and other products in villages such as as-Safí in the Ghawr. Karak controlled areas such as the Ghawr differently to the way in which it managed the area of the Jabal Shara, and perhaps the areas closer to the castle, perhaps only through commercial agreements with Muslim inhabitants, rather than by assigning land to Christians, who were probably here in a minority.. This economically prosperous situation probably attracted also an Armenian community in Karak, perhaps to take advantage of the pilgrimage routes (chapter 5).

Karak castle was now also the most important military centre of the lordship and this was well understood by the lords, who continuously invested in increasing the castle defences (chapter 3). To the Franks, Karak was important for three main reasons: military, economic and political. First of all, while the *Via Maris* to the west was still controlled by the Franks, its position allowed it to block the only remaining route between Damascus and Cairo. Secondly, it was well placed to control the movement of pilgrims and merchants on the King’s and Desert Highways and levy taxes on them, as well as to control the production and export of local products to Palestine. And thirdly, it was a residence of political power outside Palestine, as witnessed by both the ceramic imports and the historical sources.

¹⁰⁰² Johns 1994, 3-9

The differences between the Karak area and the other regions and between the Karak plateau and the areas south of Wadi al-Hasa are highlighted by the greater quantity of ceramic imports from Palestine around Karak and the more intense presence of economic activities, while the area of the Jabal Shara is also clearly distinguished in character by the high number of fortifications concentrated between the Wadi al-Hasa and Petra. However, both historical and archaeological sources plainly contradict some current theories, which argue that Petra and Shawbak were at the centre of the political picture.¹⁰⁰³ The importance of Karak during the 46 years that the Franks held the castle had an impact on both the organization of settlement and trade in Transjordan and the military behaviour of Franks and Muslims alike. It has been possible to observe that the construction of Karak castle had an influence on the military strategy of both Franks and Muslims, who consistently mention Karak as the main military centre in Transjordan and the main threat to travellers crossing the country (chapter 2), as well as on trade patterns (chapters 3 and 4).

To what extent the new role of Karak influenced the rest of Transjordan is harder to assess because of the lack of excavations at the castle, but it can be hypothesized. It can probably be assumed, for example, that Shawbak had the most significant role for the presence of pottery imports in Petra. The effect of the construction of Karak Castle, patterns of trade, and the relationship with the Petra settlements, the relationships with Egypt and 'Aqaba and other important research questions would be greatly clarified by the study of the site of Shawbak, largely unstudied for the Crusader phases. It is even possible that the manufacture of local handmade pottery was influenced by the intense circulation through Karak of materials from Palestine from this period onwards (Appendix A).

Although the presence of Karak Castle created some changes in the organization and directions of the trade, especially with Palestine, the results of this study conclude that the aspects of continuity are also very important in 12th-century Transjordan, especially for settlements other than Karak. Thus the flourishing economic conditions do not imply that living standards were significantly raised everywhere during the Crusader period or because of the Frankish presence in Transjordan. The local Christian inhabitants of the castles of Shawbak and al-Wu'ayra probably enjoyed a higher living standard than the local community, as appears from their dietary habits, but some patterns of trade, such as the importation of fish from the Red Sea and pottery from 'Aqaba, were already well established at the time of the arrival of the Franks. Petra

¹⁰⁰³ Vannini 2012

continued to be characterized by a more or less self-sufficient economy. Although Shawbak, being located directly on the King's Highway, probably had access to a larger variety of ceramic imports, the castle inhabitants of al-Wu'ayra did not purchase a high proportion of luxurious ceramic imports (chapter 4 and appendix A), which stands in contrast with some of the other castles of the Latin Kingdom, located closer to the routes where imports were normally circulating, such as the Red Tower.¹⁰⁰⁴

All these elements contribute to revealing patterns of continuity and adaptation rather than change during the Crusader period in Transjordan. Studies on the settlement patterns on the Karak plateau¹⁰⁰⁵ have pointed out that during the 12th century both historical and archaeological sources represent a picture of relative economic prosperity, appropriate to a relatively peripheral area, in continuity with the period before the arrival of the Franks (chapter 3). This continuity is reflected by the situation in the south, since excavation in Wadi Musa reveal a similar situation of standards of living and ceramic imports for the time span before and during the Crusader period. My analysis of ceramics from the Petra valley proves, contrary to the current theories,¹⁰⁰⁶ that the Crusader phase did not bring any major changes in the population of the valley, and that the Franks did not move the centre of settlement back into the valley from the areas outside it. On the contrary, it is possible that it was the Mamluk period that was characterized by a higher number of settlements inside the Petra valley. At rural sites like Gharandal, the 12th century was not characterized by any specifically higher standard of living or qualitative difference in the use of ceramics. The same can be said for Faris and other villages of Transjordan, where a continuity of settlement through the 12th century has been observed. This confirms the theory that the Crusader period did not bring any particular improvement in the level of rural settlement, but rather, as textual sources reveal, in pre-Crusader Transjordan there was a similar scenario, an economy based on a mixed settled and nomadic population and equally prosperous. Moreover, the general rising importance of citadels in Transjordan was a process already under way at the moment of the arrival of the Franks. Finally, many recent excavations on the middle Islamic period can definitely prove that at no time between the Abbasid and the early Mamluk period in Transjordan was there ever a gap in settlement, as has traditionally been assumed mainly because of the scarce knowledge of the material culture of this period.¹⁰⁰⁷ Material culture and textual evidence, in

¹⁰⁰⁴ Pringle 1986

¹⁰⁰⁵ Johns 1995

¹⁰⁰⁶ Vannini 2012

¹⁰⁰⁷ Walmsley 2001

summary, reveal a very clear picture, where patterns of continuity and adaptation are much stronger than those of change and of imposition of a different culture.

Despite the fact that the growing importance of citadels was a process already under way, the castles built by the Franks did have an impact, which can be seen in the long-term of the history of Transjordan. As mentioned above, the proximity to the King's Highway provided the castles with access to a higher variety of specialized ceramic products. In her analysis of the pottery from the survey, Brown observed a sharp difference in the presence of glazed pottery between the villages located close to the King's Highway and those located some distance from it, and interpreted this as reflecting a difference in their socio-economic situations resulting from their proximity to the road. This pattern was evident for the Middle Islamic period in general.¹⁰⁰⁸ An important point has been made that during the Crusader period the Hajj road may have temporarily shifted east of the two main castles of Karak and Shawbak,¹⁰⁰⁹ including the route corresponding to the present Desert Highway, and this point deserves to be developed. While there is evidence in the textual sources that this had happened at least for isolated episodes, (chapter 2) a more precise answer to this question would require more research, including the availability of archaeological data from excavations from Crusader-period contexts from Karak and Shawbak and from other sites located east of this route. The foundation of the two main castles, Karak in particular, appears to have created an impact which has lasted well after the Crusader period. It was the location of these castles, controlling the main caravan route on the Hajj Road, which made them very convenient for the Ayyubid and Mamluk rulers to keep, and which has therefore created lasting patterns of settlement for centuries. Because of its excellent position, Karak remained a much valued castle during the 13th century from both the military and administrative points of view, which explains why the Muslims consistently refused to give it back to the Franks.¹⁰¹⁰ The Armenian community, for example, attracted or increased by the Franks was still flourishing in Karak during the early Mamluk period. Shawbak, had a very similar role, although to a lesser extent.

In conclusion, the scarcity of historical sources on the subject, the fragmentary nature of the archaeological sources and the concentration on the study of castles have encouraged an image of Transjordan as a peripheral region performing merely the function of a 'frontier', and experiencing only a temporary revival during a time of

¹⁰⁰⁸ Brown 1991

¹⁰⁰⁹ Mayer 1990, 128-129

¹⁰¹⁰ Mayer 1987

economic stagnation.¹⁰¹¹ A frontier is traditionally understood as meaning a series of forts strategically placed to protect an area against an external enemy; however, the present study has proved that this was only part of the function of the Frankish castles in Transjordan. Settlements were placed strategically not only for military reasons, but also for economic ones, aimed in particular at the revenues from the King's Highway, at trade with Palestine and at permanent agricultural settlements. Castles therefore served many more purposes than a purely military one. Karak and Shawbak were strong castles but also were centres for the collection of agricultural taxes and therefore administrative centres; they were also centres for the taxation of caravans and sites for settlement for local Christians (chapters 2, 3 and 4). Moreover, settlement included a variety of settlement types, not only castles.

In summary, an image of Transjordan as a "frontier" in the traditional sense cannot therefore be maintained anymore, and neither can that of it being merely a peripheral region. In fact, while it is true that Transjordan was relatively far away from the centres of power, such as Jerusalem, this distance has maybe appeared greater than it really is also because of modern political boundaries. The importance of the King's Highway and of agricultural products also created a clear identity for the region and played an important role for the economy the Kingdom. The aims of settling in Jordan were broader than just establishing a south-eastern frontier for the Latin Kingdom of Jerusalem and the investment made in them was evidently intended more than just for military defence. In this, both historical and archaeological sources co-operate and the picture reconstructed is very clear.

¹⁰¹¹ Vannini 2009

Appendix A

Pottery in 12th century Transjordan

1. Introduction

A detailed study of the characteristics of 12th-century pottery in Transjordan is currently based almost exclusively on the assemblage from al-Wu‘ayra, because this is so far the only group of sufficient size and from a primary deposition context in a stratigraphically excavated site that can be dated safely to the 12th century. The site is currently also the only one excavated in Jordan whose occupation is both dated with relative precision (1127/40-1188) and which was also did not undergo any significant phase of later reoccupation. For this reason, specific observations on the characteristics of 12th-century pottery in Transjordan for the moment are necessarily limited to the area of Petra.

Other sites in Jordan offer a smaller amount of data, or are more difficult to date safely to the 12th century, and the contribution of these sites is also listed in this appendix. Each of the sites discussed in this appendix is also listed in the gazetteer of sites and discussed in chapters 3 and 4.

2. Pottery of the 12th Century from Petra

2.1. Methodology of research

In addition to the site of al-Wu‘ayra, some 12th-century pottery is also presented here from excavations at other sites of the Petra region (assemblages from Wadi Farasa, Baydha, Khirbat al-Nawafila), on the basis of a direct comparison with the ceramics from al-Wu‘ayra.

However, it is important to point out that I have conducted this study of the 12th-century ceramics from Petra not only on the basis of analysing the ceramics from al-Wu‘ayra, but also on the basis of comparing the assemblage of al-Wu‘ayra with nine other assemblages that I have had the opportunity to view or study over the past years. These assemblages include a wide chronology within the Islamic period, although not all periods are equally well represented, and some come from projects in which the pottery has been documented in different ways or in which the stratigraphy is of variable value.. This comparison, however, especially those involving sites with stratified contexts, has been crucial in order to correct some previous chronological interpretations that have tried to connect chronologically ceramics from Petra with the al-Wu‘ayra assemblage. Past observations of scholars based only on the comparison of

ceramic assemblages from Petra with the al-Wu‘ayra assemblage (the only one partially published and the only one safely dated) have led to the premature conclusion that several sites are of Crusader date. This connection has been made simply on the basis of general similarities of the entire class of handmade pottery from Petra, so far almost completely unpublished and therefore still not fully understood in terms of its more specific characteristics and diagnostic aspects and their changes over time. This problem is further exacerbated by the fact that even some very specific traits have great longevity; for example, the type of cooking pot with ledge handles and an applied band on the widest part of the body, which was continually in use between at least the mid-12th century (al-Wu‘ayra, Vannini’s phase I), although probably since much earlier and perhaps as early as the 10th century, and the Ottoman period.¹⁰¹² One of the fragments lining a cistern at al-Wu‘ayra is a ledge handle and wall of a cooking pot of this well-known type in Petra;¹⁰¹³ this is interesting as it proves the presence of this ceramic type at the site already in the mid-12th century. Some scholars have based their identification of a Crusader phase simply on the presence of these ledge handles, which belong to a type produced until the 20th century.¹⁰¹⁴ The fact that no significant variations in form have been observed through the several Crusader phases,¹⁰¹⁵ incidentally, is perfectly consistent with the much more general aspect of longevity of some forms in Petra through the Islamic period.

Another example, this time concerning painted decorations, is a sequence of three patterns, including a net pattern, curved lines and little hooks, which again appears in exactly the same sequence in the region between the 12th century (al-Wu‘ayra, Vannini’s phase I) and the Mamluk/Early Ottoman period (Shawbak castle);¹⁰¹⁶ the decorative patterns with the small hooks continue until even later in the Ottoman period at Baydha.¹⁰¹⁷ In summary, some extremely long-lived elements (covering more or less the whole history of the use of handmade pottery in the region during the Islamic period) have frequently led scholars to attribute several sites in Petra to the Crusader period, simply because comparisons with assemblages from different chronological periods were not available to them.

My preliminary work on the handmade pottery in Petra has allowed me to observe on the one hand some specific elements of continuity over very long periods in Petra,

¹⁰¹² Sinibaldi 2009a, 460-462.

¹⁰¹³ Personal observation from an on-site survey.

¹⁰¹⁴ See the case of the Petra Pool Complex excavations, discussed in chapter 4.

¹⁰¹⁵ Vannini and Tonghini 1997, 379.

¹⁰¹⁶ Sinibaldi 2009b, 99, n. 41.

¹⁰¹⁷ Personal observation from my analysis of ceramics from excavations at Islamic Bayda (2010).

and on the other, to isolate some of the elements of change, thereby limiting the chance of an incorrect chronological attribution. In addition, my hypothesis of a 12th-century occupation on a site has been limited to those situations of co-existence in the same phase of several diagnostic aspects or types among those that are subject to changes in time, and not to only one of them. The implications of this new study for the identification and review of 12th-century sites in Petra are outlined in chapter 4. Despite the different nature of the sites they originate from, and the different aims and methodologies used by the projects that have documented them,¹⁰¹⁸ the analysis of these assemblages has allowed me to suggest a 12th-century chronology for some of the Petra sites when compared to al-Wu‘ayra.¹⁰¹⁹ In addition, another important aspect of working on assemblages of other sites and other periods in Petra has been to put into context some of the trends observed in the al-Wu‘ayra ceramics, such as for example the presence of imports and the suspected presence of different industries compared to other periods, which will be discussed in the conclusions.

A further note of caution is necessary to clarify that this chronological attribution is necessarily tentative, since it still cannot be confirmed by well-dated assemblages of a considerable size dating to the Ayyubid and Fatimid periods from the Petra region (i.e. before and after the Crusader period), and the largest assemblages belong to the Mamluk and Ottoman periods.

The diagnostic aspects used to identify characteristics of 12th-century pottery are described here under general categories of fabric, manufacture, form, firing, surface treatment, painting colour, and painting style.¹⁰²⁰

At a more general level, the analysis of those aspects subject to change over time in handmade pottery from the whole Islamic period in Petra, when put in a context, has also allowed the formulation of hypotheses about the chronology of these aspects in the region, thereby preparing a basis of observations to build a local chronology.

It is important to point out also the limits of this more general study on ceramic chronology. The most obvious limitations are its still preliminary nature and the great longevity of many aspects characterising the local pottery. Longevity tends to involve in particular fabric, form, firing and painting patterns, some of which have been often

¹⁰¹⁸ Khirbat an-Nawafra excavations by the Department of Antiquities, Wadi Farasa excavations by Humboldt University, Jabal Harun surveys and excavations by Helsinki University, Bayda surveys and excavations by Brown University and American Center of Oriental Research, Djinn Blocks excavations and Thughrah Tomb 303 excavations by the Institut Français du Proche Orient.

¹⁰¹⁹ See chapter 4 for a description of the sites mentioned below including a 12th-century phase.

¹⁰²⁰ See Sinibaldi 2013, c. 170-174 for an analysis of the significance of these aspects for a chronological interpretation of the handmade pottery of the Islamic period from Petra.

relied upon in order to determine chronology. It is likely, therefore, that future research may extend the chronology of at least some of those aspects which it has not been possible to observe fully in the analysed assemblages. Although these limitations are normally to be expected, since they depend on a relatively low number of assemblages analysed, they are exacerbated by the common practice of discarding unpainted pottery and fragments that are “undiagnostic” (in terms of form). That has involved all the assemblages analysed here to different extents, apart from the surveys and excavations run by BUPAP (whose organization I was responsible for). This means that, for example, one of the aspects I have identified as diagnostic in terms of chronology – the proportions of painted and unpainted pottery in an assemblage – cannot be used in those cases when most of the unpainted pottery has been discarded and the statistics of the different groups have not been recorded. Fortunately, surface treatment, including painting and slipping, has proved to be one of those aspects bearing some of the most significant information for chronology. In addition, the reconstruction of forms has been naturally less significant in those cases where occupational, stratified contexts were analysed in order to observe the characters of their pottery.

Despite all these limitations, a crucial, central result to emerge from this preliminary study is the demonstration that, despite many strong elements of continuity, it is now possible, operating on both a combination of the identified most significant diagnostic aspects and their associated ceramic material, to frame chronologically handmade ceramics in Petra for the whole Islamic period, and thereby challenging the commonly assumed idea that there are no variations through the centuries.¹⁰²¹

2.2. The al-Wu‘ayra assemblage

On the basis of the previous work on the other assemblages mentioned above and of a close observation of the assemblage excavated by Robin Brown at al-Wu‘ayra, whose stratigraphy and archaeological results are reported in chapter 4, it has been possible to hypothesize some of the characteristics of 12th-century pottery at the castle that can presumably be extended to the Petra region.

In Brown’s excavations, 1355 fragments were recovered in total for phase I (1163 for phase IA and 193 for phase IB)¹⁰²², of which I had the opportunity to analyse personally and in detail a selection of 151 “diagnostics” over three days. The observations drawn from this assemblage rests on a solid basis because of the clear and

¹⁰²¹ See Sinibaldi 2013, c, 174, for a summary of my study on the changes of surface treatment of handmade pottery in Petra between the Fatimid and the Ottoman periods.

¹⁰²² Brown 1987b, 279.

advantageous situation (an occupation level) of the stratigraphy, which has been carefully documented. However, the small size of the assemblage must be noted.

The ceramic material analysed here (from excavations in square 4, the north-east tower) has already been published in detail by Brown, who has also provided statistics and illustrations of some of the most diagnostic sherds,¹⁰²³ but the analysis proposed here approaches the assemblage by taking into account recent developments in the study of handmade ceramics in Petra from my own study. Selected fragments are illustrated by a description and some photos, which can be used as additional documentation to that published by Brown. In addition, a programme of petrographic analysis is planned in 2015 at the Freie Universität, Berlin, in order to compare the composition of the clays in different classes and groups (unpainted, painted, cooking pots, different fabrics).

The following observations have been made with the significant limitations that: 1) the assemblage is particularly both small and very fragmentary and 2) not all fragments were kept after excavation, but only a selection of “diagnostics”, the statistics not being available at this moment for further comments. Clearly, in addition to those observed here, several other aspects may well characterize 12th-century pottery in Petra, which it may not be possible to observe in the limited size of the analysed assemblage, and future research may add new elements in this respect. Finally, it can be observed that the material available to comment on concerns phase IA more than phase IB, which included less ceramic material, and this should also be taken into consideration when a comparison is offered for the two different phases.

The much larger assemblage excavated by Vannini has not been included in this study as it has not been made available to me for this purpose, although I originally hoped to include it in my PhD study. I made some preliminary observations at an early stage of the PhD, when this material was still available to me for analysis, especially concerning general statistics of ceramic groups and a comparison with the assemblages from Wadi Farasa and Baydha, especially concerning observations on specific ceramic types.¹⁰²⁴ I have also had the opportunity to analyse and publish some specific ceramic objects from the Vannini excavations as part of an exhibition catalogue.¹⁰²⁵ Some observations have also been published by the ceramic specialists Tonghini and Vanni Desideri¹⁰²⁶ and are included in this discussion. In this respect, as noticed elsewhere, it should be mentioned that there are discrepancies in the data collected by the two teams,

¹⁰²³ Brown 1987b.

¹⁰²⁴ Sinibaldi 2009, a.

¹⁰²⁵ Sinibaldi, 2009, b, 97 and 99, n. 38 and 41.

¹⁰²⁶ Vannini and Vanni Desideri 1995, Vannini and Tonghini 1997, Tonghini and Vanni Desideri 2001.

which probably originate at least partially from the different working methods; some may also originate from the different size of the Brown assemblage.¹⁰²⁷

In the present study it was possible both to describe the general characteristics of the assemblage and to identify some specific aspects, which at the current state of research appear to be characteristic of a 12th-century assemblage. While the first group is a description based on the Brown's assemblage and therefore may be expanded by possible future studies on the larger assemblage excavated by Vannini, the second group is susceptible to being both expanded and narrowed down by studies on assemblages of a different chronology. The general characteristics of the so-called handmade production in the al-Wu'ayra assemblage from Brown's phases IA and IB, as analysed by my own research, can be summarized as follows.

1) Fabric

- A constant or at least dominant use of fabric A1, characterized by chaff (in medium or high quantity), minerals and limestone inclusions. This fabric appears to be almost exclusive in Petra through the whole Middle and Late Islamic periods.¹⁰²⁸
- In fabric A1, a high percentage of chaff is used in some cases, perhaps associated with lower quality manufacture.
- In addition, the possible use also of other fabrics, which could, however, be at least partially residual from earlier periods. These include three different fabrics: a fabric with minerals, chaff and limestone inclusions but with very little chaff, often wet smoothed (called A2, used in several fragments, for example for a burnished spout of high manufacturing quality); a sandy fabric (for a roughly manufactured cup); a fabric characterized by minerals, limestone but no chaff (used in a thin wall decorated by a raised band belonging to a cooking pot as well as a thick wall of a large form).

2) Manufacture

- Manufacturing quality varies greatly. The assemblage is characterized by the occasional presence of more finely formed and smaller pieces; these include for example the spout and the bowls that look derived from wheel-thrown forms (fig.). Low-grade manufacture is also present in phase A, for example in an open form with thumb impressions.

¹⁰²⁷ Sinibaldi 2013, c, 172.

¹⁰²⁸ Sinibaldi 2013, c, 170.

- This higher quality manufacture may be connected in particular to painted forms and to smaller forms. A lower quality may be associated in particular to unpainted pottery and to larger objects.
- Pieces of higher quality have been noticed in phase IA but not in phase IB.
- Manufacturing techniques identified are hand-forming (for some but not all of the bowls) and the use of a turning tool in all other cases. In addition, sometimes the construction is by coiling before use of the turning tool, a process which is especially evident on open forms.

3) Form

- An almost equal number of closed and open forms, but with a slight dominance of closed forms (between 55 and 60 percent).
- Forms are both large and small, but there is in both phases a dominance of small forms (both jugs/jars and cups).

4) Firing

- Black to light grey cores are present through the assemblage in both phases, but black cores occur less often than in the later periods in Petra. This difference is apparently not connected to forms being painted, but rather to the fragment thickness, and this is probably the reason why forms with finer walls, often painted, are also better fired. This means that if there were different productions, which did not necessarily imply different firing systems.

5) Surface treatment

- Smoothing: this was a standard procedure for most pieces, and occasionally was executed very carefully and uniformly. This action normally results in a uniform surface which may at first look like a light slip, from which it is hard to distinguish, but since it also occurs on the whole internal surface of closed forms, it clearly is not. Smoothing did not necessarily imply the addition of liquid clay, and occurred before firing.
- Slipping: this action was rare in terms of a thick slip of a colour contrasting with the surface; there is an example of a thick white slip with poor adherence on a dark and particularly coarse fabric. This is however very different from the much more common thin slip, in cream, white, orange or red, both on painted or unpainted fragments by the application of a liquid clay solution. Sometimes there is no substantial difference from those applied on unpainted surfaces, but cream-colour slips seem to be more often associated with painted surfaces. There does not seem to be, however, always an intention to change the colour of

the surface, because the colour difference is not always evident; often it is a thin layer of the same clay colour as the pot. In fact, the main intention often seems to provide a surface with a uniform colour.

- Burnishing: occasional, but a characteristic element of this period; on both unpainted (for example for the spout) and painted (red-painted pieces) pottery, and associated with objects of higher quality; it was found only in phase IA.
- Wet smoothing: occasional, associated often with fabric A2, only in phase IA.
- Painting: concentrated on some but not all of the smaller forms, both open and closed, normally those of higher manufacturing quality, and occasionally carefully executed. Associated sometimes with the thin type of slip, but never with the thick type. It is also associated with the smoothed surfaces without slip.
- Other plastic treatments: these include applied bands in cooking pots, which should be considered a long-term tradition. In addition, in phase IB there is a jar with an applied band with thumb impressions (4-6-11-11).

6) Painting colour

- In both phases, painting can be brown, red or brown/red. There is often an intermediate colour or even variations of colour on the same vessel, depending on the firing variations on the same object.
- Orange paint only occurs in phase IA and most of the painting in this phase is orange; and disappears in phase IB; in phase IA the second most present colour is red. In phase IB brown is dominant.

7) Painting style

- A “free style” appears only in phase IA.
- In phase IA, “linear” and “free” styles are dominant while in phase IB, a more “complex” style is dominant.
- Linear patterns are associated especially with the use of red colour and to bowls.
- More complex patterns are associated with closed forms in both phases and especially with brown colour.¹⁰²⁹

Some specific ceramic types from Brown’s excavations are also discussed here.

- **Cooking pots** exist throughout both phases IA and IB; in phase IA they are neckless and include the use of an applied plastic band. In phase III in Vannini’s excavations, which is the equivalent of Brown’s phase IB, cooking pots¹⁰³⁰

¹⁰²⁹ For example, a fragment from phase 1A has a geometric pattern and the same style as one illustrated in Vannini and Vanni Desideri 1995, 536, fig. 20, 4 and 7.

¹⁰³⁰ Vannini and Tonghini 1997, 380, fig. 16; Sinibaldi 2009b, 97, n. 38.

appear to be copied from the popular wheel-thrown and glazed types produced in Beirut.¹⁰³¹

- **Small bowls** in phase A look also derived from wheel-thrown forms and are in use together with **small deep bowls** with rounded rim and **larger bowls with flattened rim**.
- In phase B, **hand-formed bowls and cups** appear; the flat-rimmed bowls are now decorated with red linear patterns.
- **Basins** of a very low quality appear already in phase A and have a flattened rim and thickness that varies widely.
- **Small closed forms covered with complex patterns** are present in particular in phase B.
- **Large forms with flat base** are present in both phases.
- In phase A there are **spouted juglets** of at least two different models, **a bowl/cup with a repair hole**, **jars with long necks** and **jars with an out-turned rim** and thick walls and a **small jar with a ring base**, none of which are found again in phase B.
- In phase B, appear a **jar with a thumb impressed band** and **glazed bowls** (which are therefore present here in the range of c. 1140-1188).¹⁰³²

A comparison with the published work by the University of Florence

A limited selection of the ceramics from the excavations by the University of Florence has been published; some observations will be offered in comparison with Brown's assemblage.

The assemblage excavated by the University of Florence seems to confirm that the majority of forms are closed forms.¹⁰³³

The Italian team recorded that unpainted handmade pottery is the most significant of the groups,¹⁰³⁴ which is what Brown had observed in her assemblage,¹⁰³⁵ and that in phases II and III painted pottery was more common than in phase I;¹⁰³⁶ the proportions of painted and unpainted were not calculated by Brown by phases. It has also been

¹⁰³¹ Compare for example Avissar and Stern 2005, 93, Fig. 39:2 for this wheel-thrown type and Stern 2012, I, 41-44 for a more detailed description of the type. I thank Edna Stern for her comment on this point.

¹⁰³² See also Brown 1987, b, 284.

¹⁰³³ Tonghini and Vanni Desideri 2001, 711.

¹⁰³⁴ Vannini and Tonghini 1997, 379.

¹⁰³⁵ Brown 1987, b, 277.

¹⁰³⁶ Vannini and Tonghini 1997, 381.

observed that the group of unpainted handmade pottery occasionally has incised/carved decorations (phase unspecified),¹⁰³⁷ which were not present in the Brown assemblage.

In terms of painted handmade pottery, differently from Brown's findings, geometric and linear patterns were both found in phase I,¹⁰³⁸ and this may be explained both by the presence of objects like the small jug from Vannini's phase I,¹⁰³⁹ containing, among other things, some "geometric" patterns, but also by a misunderstanding of terminology. There is a problem in understanding terminology of painting patterns, specifically Brown's terms linear and geometric as highly defining a difference between the two phases; for example, Vannini and Vanni Desideri¹⁰⁴⁰ describe as geometric what may also be defined as a linear-painted bowl. Instead, it seems that by linear, Brown means "simpler", and this may include for her both the "linear" and the "free" style. This misunderstanding led to the assumption that some of the linear style consists of linear-painted fragments of the geometric-style pots. While this may certainly be true, it is necessary to clarify this confusion, which may have also contributed to the statement that a geometric style is already present in what corresponds to Brown's phase IA.¹⁰⁴¹ A new definition of the decorative patterns may be useful when using them for chronological purposes; for example, one bowl from phase III of Vannini's excavations is perhaps harder to define in terms of either linear or geometric, since it is decorated with lines and dots on the interior, and lines and triangles on the exterior.¹⁰⁴² The pattern characterizing more intensely phase IB, rather than "geometric", may be called instead with a name expressing the fact that it is more complex than the "linear" one, composed mainly of straight, differently combined lines, although not necessarily forming geometric patterns. This other pattern, as well as being more complex, also tends to cover more of the surface of the vessel, when compared to the linear one.¹⁰⁴³ It is important to notice also that a "linear" pattern is not characteristic only of phase IA, but rather continues to exist in Petra through the whole Islamic period and persists in particular on bowls of a specific type, which are often decorated with lines along the rim patterns;¹⁰⁴⁴ this type starts at least in phase IB at al-Wu'ayra.¹⁰⁴⁵

¹⁰³⁷ Vannini and Tonghini 1997, 379.

¹⁰³⁸ Vannini and Tonghini 1997, 380.

¹⁰³⁹ Sinibaldi 2009, b, 99, n. 41; Sinibaldi 2009, 460-461, fig. 21.

¹⁰⁴⁰ Vannini and Vanni Desideri 1995, 536, fig. 20.6.

¹⁰⁴¹ Vannini and Tonghini 1997, 380.

¹⁰⁴² Vannini and Vanni Desideri 1997, 381.

¹⁰⁴³ A recurring pattern seems to be for example the one with squares, which is in phase IB and is similar to Vannini and Vanni Desideri 1995, 536, fig. 20.12.

¹⁰⁴⁴ See Sinibaldi 2013, c, 180.

¹⁰⁴⁵ Brown 1987, b, fig. 10.29.

The team has also observed that bichrome paint occurs in phases I, III and IV and that there seems to be no chronological significance in this.¹⁰⁴⁶ This was not recorded in Brown's assemblage, and generally speaking this aspect seems to be contradicted by the currently available evidence in Petra, which has recorded it mainly in a later period.

The team wondered about how much the presence of wheel-thrown pottery in the assemblage was affected by residuality,¹⁰⁴⁷ but Geber has now ruled out that this class played an important role in the 12th-century assemblage,¹⁰⁴⁸ and this point seems to be confirmed by Brown's assemblage. Moreover, the extensive presence of handmade pottery in this period is proved clearly not only by its large use when observing the Khirbat al-Nawafla assemblage of the 12th century and the former phase, but also by the fact that a large cistern at al-Wu'ayra belonging to Crusader construction was lined completely with handmade pottery or wheel-thrown pottery of the earlier periods, which was what was apparently available at the site at the moment of their construction, because there would not have been a good reason for not using wheel-thrown pottery for this function. However, there was wheel-thrown pottery at Gharandal in the 12th-century phase,¹⁰⁴⁹ and we can therefore suspect that there was probably some small quantity of it at al-Wu'ayra.

Several finds of glazed pottery were recorded in phase I (equivalent to Brown's phase IA); these include one fragment of slipped and green-glazed pottery.¹⁰⁵⁰ It is not clear if this is the same type found by Brown in phase IB, but in general, this would witness the presence of this class of imports in Petra already in the mid-12th century. It is also interesting that in phase I there is a glazed cooking pot and an unslipped turquoise-glazed fragment.¹⁰⁵¹

In phase III several examples of fritware from Syria were recorded; this has been interpreted as a direct connection of Petra with this region.¹⁰⁵²

Many examples of monochrome slipped glazed wares and some graffita were recorded in the post-Crusader phases, and in general a constant presence of glazed wares was observed in the last phases of occupation.¹⁰⁵³ Imports whose relationship to phases is not specified include a fragment of lustre ware, from either Egypt or Syria, a

¹⁰⁴⁶ Vannini and Tonghini 1997, 380.

¹⁰⁴⁷ Vannini and Tonghini 1997, 382.

¹⁰⁴⁸ Sinibaldi 2013, c, 174.

¹⁰⁴⁹ See below.

¹⁰⁵⁰ Tonghini and Vanni Desideri 2001, 711.

¹⁰⁵¹ Vannini and Tonghini 1997, 382.

¹⁰⁵² Vannini and Tonghini 1997, 382.

¹⁰⁵³ Vannini and Vanni Desideri 1995, 535-537; Vannini and Tonghini 1997, 382.

fragment of graffita and some Raqqa ware.¹⁰⁵⁴ It can be noted that several types of Byzantine graffita reached the Levant during the 12th century including Syria and Palestine,¹⁰⁵⁵ but also that others were already circulating in the region in the third quarter of the 11th century, such as the Serçe Limani type,¹⁰⁵⁶ of which one example was found at Khirbat al-Shaykh ‘Isa.¹⁰⁵⁷

Parallels for some of the forms listed above from the Brown assemblage have been observed in the University of Florence assemblage. These include, among the unpainted group: bowls with a flattened rim,¹⁰⁵⁸ pierced lids or filters for jugs,¹⁰⁵⁹ spouted jugs/bowls,¹⁰⁶⁰ neckless cooking pots,¹⁰⁶¹ large jars decorated with a thumb-impressed band,¹⁰⁶² and painted or unpainted deep bowls.¹⁰⁶³ In the painted group, small closed forms decorated with complex patterns¹⁰⁶⁴ and small bowls painted in “linear” patterns.¹⁰⁶⁵

2.3. Some distinctive characteristics of mid to late 12th-century handmade pottery in Petra

The regular use of several fabrics in addition to fabric A1 is an aspect so far not observed in the later periods in Petra and it has not been recorded by the Italian team at al-Wu‘ayra. However, it has been recorded by my analysis of other assemblages that fabric A2 was very likely used at an earlier period than the 12th century. This is apparent from several examples in the assemblages of Jabal Harun, dated as early as the 10th century,¹⁰⁶⁶ and it may be also the case at Khirbet Mu‘allaq,¹⁰⁶⁷ also dated to around the same time. It is therefore safe to hypothesize that fabric A2 may have been used in the early 12th century, possibly as late as the mid-12th century.

It seems that the 12th century was characterized by the presence of more carefully formed, normally smaller objects than in the later periods; this trend may gradually decrease with time in the course of the 12th century. On the basis of the observation of

¹⁰⁵⁴ Vannini and Vanni Desideri 1995, 529, table 1; 535.

¹⁰⁵⁵ Avissar and Stern 2005, 40-44.

¹⁰⁵⁶ Avissar and Stern 2005, 6.

¹⁰⁵⁷ See below in this appendix.

¹⁰⁵⁸ Vannini and Vanni Desideri 1995, 534, fig. 19. 5-6; Tonghini and Vanni Desideri 2001, 713, fig. 8. c.

¹⁰⁵⁹ Vannini and Vanni Desideri 1995, 532, fig. 17.8-9 and 533, fig. 18.8, 534, fig. 19.2.

¹⁰⁶⁰ Vannini and Vanni Desideri 1995, 534, fig. 19.8.

¹⁰⁶¹ Vannini and Vanni Desideri 1995, 532, fig. 17.1.

¹⁰⁶² Vannini and Vanni Desideri 1995, 531, fig. 16. 2-3.

¹⁰⁶³ Vannini and Tonghini 1997, 381, fig. 17. b; Tonghini and Vanni Desideri 2001, 713, fig. 8.d; 712, fig. 6.c.

¹⁰⁶⁴ Vannini and Tonghini 1997, 381, fig. 17.c.

¹⁰⁶⁵ Vannini and Vanni Desideri 1995, 536, fig. 20.6.

¹⁰⁶⁶ Sinibaldi, in progress, b.

¹⁰⁶⁷ Sinibaldi, in progress, b.

other assemblages, it has been concluded that low-quality manufacture is more or less present from the Crusader to the Ottoman period in Petra without major gaps, but also that from some time in the Ottoman period high-quality manufacture is not present anymore. This has allowed me to hypothesize the presence of different productions, one being less specialized or standardized than the other. However, this aspect is much more evident for the Mamluk period and it needs to be researched further before concluding that there were already different productions during the Crusader period. However, it can be said in general terms that the co-presence of different quality standards and perhaps different productions in the same assemblage is not a characteristic of the Crusader period, but is rather a more general trend involving a longer time from the Crusader to the Mamluk period at least. Because data from assemblages for the early 12th century and earlier are currently not available, it is not possible to establish when this trend first started. However, the presence of objects of low manufacturing quality at Khirbat al-Nawafra in the Fatimid period¹⁰⁶⁸ and of objects of a rather fine quality in the 10th-century phases at Jabal Harun probably suggests that this coexistence may have started before the Crusader period.¹⁰⁶⁹

It is possible that already in the 12th century cooking pots (such as the one from Vannini's phase III),¹⁰⁷⁰ characterized by particularly thin walls and regular profile, and apparently unspecialised products such as unpainted pottery came from different handmade production centres. In summary, although there are differences in the quality of painted objects, the material is insufficient to allow one to comment on the proportions of each group and it is premature to say if they may belong to two separate production centres, and in any case, there are no reasons to suggest that a possible introduction of a more specialized production may be connected to the Frankish conquest of the area. However, it is very interesting that several objects through the whole Crusader phase appear to be copied from wheel-thrown forms, and it is likely that this period saw the coexistence of both wheel-thrown and handmade at the same sites. Differences in the basic manufacturing techniques used in the 12th century have not been observed.

The forms are mainly closed forms, but generally speaking these seem to be in a lower percentage than in the later periods compared to open forms.

In general, observing the results on the pottery, the firing technique does not appear to differ significantly from that observed in the later periods and this therefore

¹⁰⁶⁸ See 'Amr et al. 2000.

¹⁰⁶⁹ Sinibaldi, in progress, b.

¹⁰⁷⁰ Vannini and Tonghini 1997, 380, fig. 16; Sinibaldi 2009b, 97, n. 38 and above.

does not suggest that there was a different firing method between the Crusader and the Ottoman period, or a higher standard connected to a higher level of manufacture.

In terms of surface treatment, the aspects which may be distinctive of the 12th century as opposed to the later periods appear to be in particular the rarity of a thick slip, the uniformly applied thin slip and the occasional fine quality of the painting. Burnishing has not been observed in other assemblages in Petra.

Although normally the paint colour seems to be the result of the firing and not necessarily of an intention to create patterns in brown or red, it has been observed that red is more common in phase IA and brown in phase IB, which may originate from a different composition or technique of applying the painting. Painting resulting in an orange colour may be highly characteristic of the 12th century, as it is not known in later periods, and has so far been observed only in phase IA.

Brown's observations about a chronological development of patterns can be confirmed, although they would be more securely based if observed in a larger, less fragmentary assemblage. However, some variations to her model are proposed here. It is proposed that a "free style" is present, which looks characteristic of the 12th century and perhaps in particular of phase IA, which does not appear in any other period, and which probably corresponds to the "linear style" by Brown, in order to distinguish it from the more complex one.

In summary, chronologically distinctive of the 12th century seem to be in particular a "free style," probably especially used before the end of the century, while the other patterns appear to have, in general, a much more extended longevity, and caution should be used in classifying these styles chronologically. We may define "free" style by those features characterizing fragments from Brown's excavation illustrated in phase IA, which have decorations in non-rectilinear patterns, such as curvy lines, dots and the result of painting with brushes of a varying thickness and irregular direction.¹⁰⁷¹ However, it is necessary to exercise great caution in using this aspect as diagnostic, and always draw conclusions on the basis of a presence of several fragments, like in the case of Brown's phase IA, but also to beware of very fragmentary assemblages. This is demonstrated by a small jug, one of the fragments in better condition from the first phase of occupation at al-Wu'ayra (corresponding to Brown's phase IA), which allows making observations on decoration patterns. Its upper part is thickly covered with a sequence of decorations, including both linear/geometric (the grid patterns on the neck) and a more "free" style (the wavy lines and the little hooks). Not only is this an example

¹⁰⁷¹ Brown 1987, b, 283, fig. 9.20-22.

of the co-existence of the two different kinds of patterns in the same, first occupation phase, but the whole sequence in this exact order lasts until at least the Mamluk period. Therefore, it is proposed here that some decoration patterns are more diagnostic than others. For example, the linear/geometric patterns (such as the grid pattern/lattice) are not particularly diagnostic since they are already present in phase IA (mid-12th century) and continue without interruption; this pattern is also very hard to distinguish at times when fragments are small. However, a diagnostic element of the 12th century compared to the later periods, although perhaps not in use after the mid-12th century, is the regular use of non-linear/geometric patterns, such as the little hooks and wavy lines (a kind of “free style”), which seems typical of this period, although sometimes co-existing on the same object together with the linear/geometric patterns.

It has been possible as part of this study to isolate aspects which so far have not been noticed in later assemblages in Petra and which may be distinctive of handmade 12th-century assemblages of the second half of the 12th century. Given the fact that earlier assemblages (pre-mid-12th century) are not available in their entirety for study, it is also possible that these characteristics also involve earlier periods. What is safer to observe, therefore, is that these aspects are very likely to characterize this early chronology and not a later one. In particular, it is phase IA which is both richer in elements to observe since it is a larger assemblage, and more distinctive. Distinctive characteristics of the assemblage which may be extended to 12th-century assemblages in Petra are:

- 1) the use of handmade fabric A2 involving a very low percentage of chaff, often associated with thin walls and small objects.
- 2) occasionally, a high manufacturing quality which can be described as resulting in regular wall thickness, regular profile and identifiable rim form, which is characteristic of wheel-thrown forms.
- 3) a higher percentage of small forms compared to the later periods.
- 4) a higher percentage of open forms compared to the later periods.
- 5) the use of forms clearly imitating wheel-thrown ceramic objects, including specific types of cooking pots and bowls, through the mid-12th century until the late 12th century.
- 6) a very low percentage of painted forms compared to unpainted.
- 7) at least until the mid-12th century, occasionally carefully executed painting.

- 8) painting colour resulting in orange (perhaps already not in use at the end of the 12th century) and the use of red more often than brown around the mid-12th century.
- 9) “free” painting style, perhaps already out of use at the end of the 12th century.
- 10) burnishing on both painted and unpainted wares, perhaps already out of use at the end of the 12th century.

All the listed aspects of surface treatment (carefully executed painting in free style resulting in an orange colour, and burnishing of the surface) are represented in a small jug from Vannini’s phase I (Brown’s phase IA).¹⁰⁷² Surface treatment is especially diagnostic in this case, since the possibility to see the forms is further limited because of the small and fragmented assemblage.

In terms of elements of continuity or change between the two phases, phase A includes higher quality pieces that are not in phase B. There are also orange paint, free style and burnishing, which are not found in phase IB. Also, linear style and red paint are dominant compared to brown paint and geometric style in phase IA.¹⁰⁷³ An aspect of continuity is, however, the presence in both phases of forms directly derived from wheel-thrown ones.

2.4. Ceramics from other Petra assemblages

Wadi Farasa

I analysed the ceramics from Wadi Farasa in 2010/2014; a preliminary publication includes comments on a selection of stratigraphic units and a comparison with the al-Wu‘ayra assemblage, the study of which I was originally charged with in 2008/2009. These preliminary observations have not completely answered the question of the chronology of the whole assemblage, which had been hypothesized as Crusader by the excavators.¹⁰⁷⁴ Beside the fact that it was necessary to carry out a complete study of the ceramic group, it also became clear that a parallel study of other assemblages was important, among all obvious reasons, specifically to frame the problem of longevity of so many diagnostic aspects more thoroughly. Petrographic analysis of some fragments is also planned, in order to compare the fabrics with those from the al-Wu‘ayra assemblage. Samples include a selection of ten fragments of one specific, recurrent type

¹⁰⁷² Sinibaldi 2009, b, 99, n. 41; Sinibaldi 2009, 460-461, fig. 21.

¹⁰⁷³ This is one of the reasons why a possible 12th-century phase at Wadi Farasa is more likely to be attributed to a chronology closer to phase IB rather than IA. See below in this appendix and chapter 4.

¹⁰⁷⁴ Sinibaldi 2009, a.

at the site, as well as selected fragments which are suspected as not having been manufactured in Petra. In addition, if possible, it will be attempted to obtain data for chronology from the treatment of a fragment with OSL techniques.

In the light of my study of the Petra assemblages, it is now possible to answer this chronological question in part and in particular to confirm the hypothesis of a Crusader-period settlement at the site, which can currently be supported by the ceramic evidence. This has been possible after my direct analysis of the assemblage excavated from Robin Brown at al-Wu‘ayra in 2013. On the basis of this comparison, the following forms have been identified as parallels within the “handmade” group, and their phase in Brown’s excavation is listed, together with their location at Wadi Farasa:¹⁰⁷⁵

- Large bowls with flattened rims (Brown’s phase IA). In all areas, including the large cistern.
- Deep, small bowls with out-turned rim (Brown’s phase IA). From the large cistern on the upper terrace and from the lower terrace. This type is also present in Vannini’s assemblage, phase III.¹⁰⁷⁶
- Basins with low-quality manufacture and coarse fabric (Brown’s phase IA). In all areas (73 examples were found in total), including some from the upper terrace.
- Spouted bowls/jars (Brown’s phase IA). Found in a lower manufacturing quality than at al-Wu‘ayra. In the small cistern two different types are found together (the one with the cylindrical spout and the one with the open spout). Spouts of different models exist also on the lower terrace. The exact same form of bowl with an open spout is also at al-Wu‘ayra.¹⁰⁷⁷
- Neckless cooking pots (Brown’s phase IA). Found in the north porch of the lower terrace.
- Necked forms with a long, flaring neck (Brown’s phase IA),¹⁰⁷⁸ also in the corresponding phase (I) from Vannini’s excavations.¹⁰⁷⁹ Found in the lower terrace, the large cistern in the upper terrace and Renaissance Tomb.
- Holemouth jars (Brown’s phase IA),¹⁰⁸⁰ also in the corresponding phase (I) from Vannini’s excavations.¹⁰⁸¹ Found in the lower terrace and in the Renaissance Tomb.

¹⁰⁷⁵ Publication of all the material is currently in progress.

¹⁰⁷⁶ Vannini and Tonghini 1997, 381, fig. 17.b.

¹⁰⁷⁷ Vannini and Vanni Desideri 1995, 534, fig. 19.8.

¹⁰⁷⁸ Brown 1987, 281, 8.11.

¹⁰⁷⁹ Tonghini and Vanni Desideri 2001, 713, 8.a.

- Large forms with a flat base (Brown's phase IA).¹⁰⁸² From all areas at Wadi Farasa.
- Large jars decorated with a thumb-impressed band (Brown's phase IB), also recovered from Vannini's excavations.¹⁰⁸³ Found in the large cistern in the upper terrace.
- Jugs with a flat base (Brown's phase IB). Found in sondage 1 and room 6 in the lower terrace.
- Hand-formed bowls of medium depth (Brown's phase IB).¹⁰⁸⁴ Found everywhere at Wadi Farasa.
- Jars with short neck and straight rim (Brown's phase II).¹⁰⁸⁵ From the lower terrace and Renaissance Tomb.

As mentioned above, however, it is important to expand beyond the mere aspect of form when looking for chronologically significant parallels, since when considered alone from has already led several times to incorrect attributions. For example, neckless cooking pots are known to have had a long life during the Islamic period, and simple forms such as roughly manufactured basins and deep small bowls could have had a very long duration as well.

In terms of parallels with the other diagnostic aspects, the following similarities to the al-Wu'ayra assemblages have been observed in some stratigraphic units at Wadi Farasa:

- 1) occasionally, a high manufacturing quality which can be described as resulting in regular wall thickness, regular profile and identifiable rim form, and is characteristic of wheel-thrown forms.
- 2) a high percentage of small forms.
- 3) a high percentage of open forms.
- 4) the use of forms clearly imitating wheel-thrown ceramic objects, including specific types of cooking pots and bowls.
- 5) a low percentage of painted forms compared to unpainted.
- 6) occasionally carefully executed painting.

Stratigraphic units excavated in the north front of the terrace and in its northeast corner contain pottery with similar decorations to Brown's phase IB, with a similar

¹⁰⁸⁰ Brown 1987, 283, 9.16 and 9.18.

¹⁰⁸¹ Tonghini and Vanni Desideri 2001, 713, 8.b.

¹⁰⁸² Brown 1987, 283, 9.14.

¹⁰⁸³ Vannini and Vanni Desideri 1995, 532, 17.5.

¹⁰⁸⁴ Brown 1987, 286, 10.26.

¹⁰⁸⁵ Brown 1987, 286, 10.37.

surface treatment to her phases IB and II, and small forms with dimensions comparable to Brown's phase IA. The occupation may well, therefore, have extended in this area during the 12th century. Pottery of small dimensions also characterizes an occupation level/phase in the northwest corner of the stoa, which was marked by the use of a kiln/oven. It is along the north side of the terrace that most building evidence of the medieval period was also recorded by the team, including fortifications and the construction of a tower.¹⁰⁸⁶

Clearer, better stratified and more abundant evidence, however, comes from the upper terrace, where pottery with generally similar characteristics to al-Wu'ayra (corresponding to the all six criteria listed above) was found in both the small and the large cistern. The small cistern may have been filled at the time of the occupation of the upper terrace and of the Garden Tomb, and if so, it reflects its chronology. The pottery here is characterized by thin walls (as thin as 5 mm) and a considerable number of forms of small dimensions, one of which is clearly inspired by a wheel-thrown form. These forms come mainly from the bottom layer of the small cistern.

The filling of the large cistern is stratigraphically the most important of the whole site, as its upper part is sealed by the construction of the medieval walls used during the occupation of the Garden Tomb. Since filling the cistern, or at least finishing the filling, was essential to the construction of these walls, and since the fill of both cisterns is generally similar, it seems reasonable to date them to more or less the same period of the occupation of the upper terrace. Ceramics here are also characterized by small dimensions, thin walls, and good manufacturing quality, and by one fragment of a very good manufacturing quality, a fabric with very little chaff and painted in brown, linear patterns.

The fact that a large amount of pottery was found in both, however, implies that the area was occupied for a while before the construction of the defensive wall. An even earlier occupation or frequenting of the site may also be represented by two pieces, probably from the same object, of exceptional quality compared to all the handmade pottery viewed until now in Petra.

Parallels can be observed also with Vannini's published material. In addition to the types mentioned above, these include:

- Basins with handles,¹⁰⁸⁷ found in the large cistern on the upper terrace.
- Deep bowls with flattened rim (including from phase I),¹⁰⁸⁸ found in all areas.

¹⁰⁸⁶ See the Wadi Farasa excavation reports in *ADAJ* by S. Schmid, project director.

¹⁰⁸⁷ Vannini and Vanni Desideri 1995, 534, fig. 19.1.

- Large, deep bowls with out-turned rim (including from phase I),¹⁰⁸⁹ found in room 6 in the lower terrace.
- Large bowls with thinned lip,¹⁰⁹⁰ found in the large cistern.
- Neckless jars with out-turned rim,¹⁰⁹¹ in sondage 3.
- Jugs with straight neck and straight rim,¹⁰⁹² on the lower terrace.
- Filter jugs,¹⁰⁹³ one example of which was found in the small cistern.

Both the general diagnostic aspects listed above as characterizing the 12th century and some more specific parallels are mainly from the upper terrace; it is therefore this context which is most likely to be 12th century and which is illustrated in the plates of this appendix. In addition, other fragments with characteristics identified for the 12th century are also illustrated here from other contexts at Wadi Farasa.

All the described evidence, together with that outlined in chapter 4, supports the hypothesis outlined previously of the presence of a 12th-century settlement at the site,¹⁰⁹⁴ although it is now clear, after the study of the whole assemblage, that settlement was not limited to this period. Fragments of exceptional quality may represent an early occupation or frequentation (10th/early 12th century) and smoking pipes witness that this lasted until at least the 18th/19th centuries. Solid evidence of settlement at the site comes from the Mamluk period, more easily identifiable because of the presence of several ceramic imports. At this time, the site was extensively occupied in particular on the lower terrace, and the Renaissance Tomb was used as a dump, therefore expanding outside the lower terrace. The work on ceramics still in progress will try to establish if there was a gap in occupation between the Crusader and the Mamluk period.

The comparison with the al-Wu‘ayra material from Brown’s excavations highlights mainly occupation of the upper terrace, although some occupation clearly also involved the lower terrace. While the presence of small objects was recorded mainly in phase IA, the forms inspired by wheel-thrown pottery and the high quality of the manufacture and painting were also present in phase IB. It is important to remember that the already small assemblage from al-Wu‘ayra is particularly small in phase IB and therefore the presence of small objects may well continue in phase IB. On the other hand, none of the typical surface treatments of phase IA, such as the “orange” paint, the

¹⁰⁸⁸ Vannini and Vanni Desideri 1995, 534, 19.5; Tonghini and Vanni Desideri 2001, 713.c.

¹⁰⁸⁹ Tonghini and Vanni Desideri 2001, 713, 9.d.

¹⁰⁹⁰ Vannini and Vanni Desideri 1995, 534, fig. 19.9.

¹⁰⁹¹ Vannini and Vanni Desideri 1995, 532, 17.1-2.

¹⁰⁹² Vannini and Vanni Desideri 1995, 533, 18.3.

¹⁰⁹³ Vannini and Vanni Desideri 1995, 533, 18.7.

¹⁰⁹⁴ Sinibaldi 2009, a.

free style and the burnishing appear at Wadi Farasa, and a fabric with a lower amount of chaff does not appear regularly either. An exception is also associated with a piece of exceptional quality, probably belonging to an earlier period. It must be remarked again, that this chronology is tentative and can be reasonably proposed mainly because of the fortified nature of the site, which is hard to interpret as an Ayyubid-period position. Ayyubid-period and Fatimid-period pottery in the Petra region is still understudied and therefore direct parallels that would exclude these later or earlier chronologies do not currently exist.

It is reasonable to hypothesize, therefore, that the assemblages of the upper terrace, and presumably those from the lower terrace, may be dated together toward the end of the 12th century rather than to the mid-12th century. This would support my hypothesis that the settlement was not built in the same phase as the Petra castles, but at a later stage.¹⁰⁹⁵ Because Brown's assemblage from phase IB is very small, and her phase II (Ayyubid, and currently the only assemblage clearly dated to this period in Petra) is even smaller, it is currently hard to say if the lower terrace included later occupation in the Ayyubid period. However, similarities have already been noticed in the manufacturing quality and in some morphological aspects of cooking pots with Vannini's material from phase III.¹⁰⁹⁶ Further study of the material by phases may be able to establish if after the Crusader phase there was a gap before the Mamluk occupation.

Khirbat al-Nawafra

Huge quantities of ceramics were recovered at Khirbat al-Nawafra in the late 1990s from salvage excavations for the construction of a new tourist complex in the outskirts of Wadi Musa. Thanks to the efforts of the excavation directors (K. 'Amr and A. Momani) the decision was made to keep a large part of the Islamic-period pottery, although some pottery, particularly unpainted pottery, was discarded and no specific record was made of the statistics. Another difficulty has been the fact that glazed pottery and special finds have been kept separate from the rest and I have been unable to access any information about them. The difficult conditions of storage of the pottery and its documentation have put some limits to its study; however, some squares have been selected specifically for my study, based on two criteria. On the one hand I have selected those which revealed a longer sequence of occupation through the Islamic

¹⁰⁹⁵ See chapter 4.

¹⁰⁹⁶ Sinibaldi 2009a, 457-461.

period, hoping to gain a better understanding of the evolution of diagnostic aspects through time. On the other hand, according to the excavators, square V had the most likely presence of 12th-century pottery.

That square has revealed some similarities with the ceramics from al-Wu‘ayra, but it is also important to remark that, although the loci appear homogeneous, they only contain a small amount of pottery. Despite this, it has been possible to make some interesting observations on four specific loci from squares 7 and 8. One locus in particular (V.8.20) contained interesting finds. These included a fragment of glazed cooking pot, apparently of the same type as the others found in Baydha, and perhaps at al-Wu‘ayra. This was found in association with small forms characterized by thin walls and finely made, including: a fragment of a closed form with an applied band; a thin fragment of a closed form with a red-painted, burnished surface on a hard fabric with little chaff; and a fragment of a bowl decorated in brown with lines and dots, characterized by a sharp profile, thin walls and painted with very regular lines which makes it hard to decide whether the object is wheel-made or wheel-thrown. In addition, there is a fragment of a bowl decorated with dark squares alternating with white squares with a central dark dot, obtained by painting in brown over a cream slip, laid over a reddish fabric (exactly the same pattern and surface treatment as the one found by Brown in phase IB). Another locus (V.7.24) contains thin fragments of a cooking pot reminiscent of the one found by Vannini in phase III, and decorated with a thumb-impressed fine band. A third locus (V.8.23) contains a “linear-painted bowl” which has thin walls comparable to those becoming more popular in the late Mamluk period.

In summary, locus V.8.20 provides the opportunity to observe the association of burnishing, wheel-made or wheel-inspired “handmade” forms and surface treatment and decoration patterns identical to those encountered at al-Wu‘ayra. On this basis a 12th-century date may be proposed for this context. Two points can be made on the evidence from Nawafla: the presence of the same glazed cooking pot type present elsewhere in Petra (Baydha and perhaps al-Wu‘ayra) and the presence of the same general characteristics of the handmade pottery found at al-Wu‘ayra, and probably even for a specific type (the handmade cooking pot with the thumb impressed band).

Baydha

Evidence of 12th-century frequentation at Baydha, investigated mainly by surveys and test trenches, has been hypothesized on the basis of a few fragments of ceramic imports covering the 12th century and some ceramic objects with possible parallels at al-

Wu'ayra, although the very low proportion of painted pottery compared to unpainted found in excavations in 2010¹⁰⁹⁷ seemed to indicate that settlement was predominantly Ottoman-period. Since 2010, the village has been excavated and its most extensive part has proven to belong to the late (Ottoman) period.¹⁰⁹⁸ Surface finds from the BUPAP survey also suggest strongly that this late phase is dominant at the village, even accounting for the obvious aspect that a late chronology would be more represented on a survey, but also that a general continuity of occupation is revealed by finds from the early Islamic period onwards. The presence of a Crusader-period village is only an hypothesis, which will be further tested in the coming years, but which is based on considerations connected to the use of the territory by the Franks and, more importantly, to the general favourable agricultural conditions of the area.

Specifically, ceramics covering the 12th century include few fragments, probably all residual. A fragment of Egyptian monochrome incised ware,¹⁰⁹⁹ also called *Fustat Fatimid Sgraffiato*, is a particularly interesting find.¹¹⁰⁰ The production of this type is securely recorded at Fustat, where several wasters have been discovered.¹¹⁰¹ The fragment corresponds to the type description for the general technological characteristics: the ware is pale yellow, sandy clay; the glaze is deep green, covering the ware without a slip; stylized vegetal designs are finely incised.¹¹⁰² The most popular form by far of this type is a bowl with several variations,¹¹⁰³ although other forms are also recorded, including jars, ewers and dishes. The fragment, unlike most of the recorded bowl examples, is not incised on the internal surface, but on the external one, although both surfaces are glazed. It may therefore belong to a closed form. The chronology of this type is between about AD 1025, when it was first introduced, and the late 12th century, but perhaps even later, to the end of the Ayyubid period in the early 13th century.¹¹⁰⁴ The use of this specific tone of yellow clay suggests strongly its manufacture in Cairo.

Another residual fragment is a small one belonging to an open form type similar to (or indeed, the same as) the Beirut-manufactured cooking wares, dated to the second

¹⁰⁹⁷ Sinibaldi 2010; Sinibaldi 2009, a.

¹⁰⁹⁸ Sinibaldi and Tuttle 2011.

¹⁰⁹⁹ Type I.3.3.1 in Avissar and Stern 2005, 37.

¹¹⁰⁰ Mason 1997, 228.

¹¹⁰¹ Scanlon 1967, 75-76.

¹¹⁰² Similar kinds of incised decorations are in Poulsen 1957, fig. 437; Avissar 2005, p. 60, fig. 2.16.1; and particularly Philon 1980, fig. 584; PL. XXIX A, B.

¹¹⁰³ Philon 1980, p. 263.

¹¹⁰⁴ Mason 1997, 229; Philon 1980, p. 266 ; Avissar and Stern 2005, 37.

half of the 12th century to the end of the 13th century.¹¹⁰⁵ Without a more specific analysis it is hard to identify such a small fragment, but with the elements available on the characteristics of the clay and glaze, it may well correspond to the earlier type of the two, the one which includes a 12th-century date (Avissar and Stern's type II.2.3.1).

A fragment of underglaze painted fritware was also recovered from excavations. It corresponds to a type lasting from the second half of the 12th century to the end of the 14th century, from either Egypt or Syria.¹¹⁰⁶

Jabal Harun

Excavations by the Finnish Jabal Harun Project led by Z. Fiema have resulted in a question mark regarding the Crusader-period occupation at the monastery and in the conclusion that only a part of the monastery was used in the Crusader period, although not the chapel and the church, which went out of use before this time. However, some ceramic fragments published from the last phase of occupation of these two structures have left the question partially open because their published ceramics include the range of the 12th century.¹¹⁰⁷

My recent analysis of part of the pottery, carried on at the University of Helsinki, has allowed some revision of the published evidence, in the light of my later studies of ceramics from Petra.¹¹⁰⁸ It was not possible to detect, among the ceramics I have viewed, possible 12th-century pottery at the Western building, which has been hypothesized to be the part of the monastery occupied during the 12th century, although this does not make this interpretation less plausible. Rather, it can be probably attributed at least in part to the difficulty in identifying 12th-century pottery in Petra, as demonstrated above.

One aspect which has been reviewed, however, is the fact that there are no clues as to the use of the church and chapel after the 9th/10th century. The evidence suggested by Gerber for the possible extension of phase 11 (the last occupational phase) into the 12th century is both from handmade ware and from glazed ware, but it is here revised. Phase 11 (the last major occupational phase) has been interpreted as dating to the 9th century with a possible extension into the 10th century. It was an occupational phase

¹¹⁰⁵ Avissar and Stern 2005, 96-97, types II.2.3.1 and II.2.3.2. I wish to thank Edna Stern for confirming that this small fragment of difficult identification may belong to this type.

¹¹⁰⁶ Tonghini 1998, 46-55 (fritware 2 or fritware 3).

¹¹⁰⁷ See chapter 4 and Gerber and Holmquist 2008, 307 (phase 11: possibly until the 10th-12th century and Fiema 2008, b, 434-436).

¹¹⁰⁸ Results will be published in Sinibaldi, in progress, b.

during which both the church and the chapel were not yet abandoned, although they ceased to have an ecclesiastic function.¹¹⁰⁹

An interesting fragment from this phase has been published in volume I. This fragment, part of the profile of a handmade bowl with well smoothed interior and exterior surfaces, has a form parallel to a sherd from excavations at al-Wu‘ayra from phase IA (castle foundation) excavated by R. Brown.¹¹¹⁰ However, as outlined above, as a result of my recent study of pottery from Petra in the Islamic periods, several aspects should be taken into account when trying to attach some chronology to a handmade pottery fragment, and form alone should not be accepted as a safe parallel because of its great longevity. This simple form also has a parallel from Wadi Farasa, unfortunately from a superficial context, where it is found in association with material ranging from the 12th century to the Late Islamic period.¹¹¹¹ Another parallel of this form comes from an assemblage excavated at Mu‘allaq, where the group has been dated with radiocarbon analysis to between 785 and 1015 A.D.¹¹¹² A photo in the excavation report shows its fabric, which appears rather similar to the example from Jabal Harun.¹¹¹³ the fabric is here defined as fabric A2 (characterized by minerals, chaff and limestone, but with very low content of chaff). The examples from al-Wu‘ayra and Wadi Farasa are in fabric A1 rather than fabric A2. Interestingly, several fragments of fabric A2 are present in the stratigraphic units of the al-Wu‘ayra castle foundation, perhaps belonging to the same phase, or perhaps residual from an earlier phase, but not in the later occupational phases, dated to after 1144.¹¹¹⁴ Fabric A2 is also completely absent in the handmade ceramic assemblages of Wadi Farasa and Baydha, where a chronology ranging from the later 12th century to the Ottoman period has been so far identified. Moreover, at Khirbat al-Nawafra, some handmade pottery characterized by fabric A2 has been found in an early context, certainly not later than the 11th century, and most likely towards a date in the 10th century.¹¹¹⁵ Therefore, although of course the data are based only on few assemblages, it can be reasonably hypothesized at the current stage of research that fabric A2 had generally speaking an earlier use than fabric A1, although there may have been some overlapping with A1.

¹¹⁰⁹ Mikkola et al. 2008, 160.

¹¹¹⁰ Gerber 2008, 299, fig. 5. 114; Gerber and Holmquist 2008, 319, n. 114.

¹¹¹¹ Observations drawn from my study in progress of the Wadi Farasa assemblage.

¹¹¹² The association of the radiocarbon samples with the pottery assemblage is not explained in detail in the preliminary publication, but the report let the readers assume that the *tabun* from which samples have been taken was associated to a large ceramic group in good conditions and apparently in primary deposition (Lindner 1999, 480).

¹¹¹³ See Lindner et al. 1996, 124, fig. 23.11 for the form parallel and 120, fig. 12 for the fabric.

¹¹¹⁴ See above in this chapter.

¹¹¹⁵ Observations drawn from my own study of the Khirbet an-Nawafra ceramic assemblage.

Although handmade pottery in Petra is so far not dated on solid ground from stratification dated to before the 11th century (Khirbat al-Nawafla),¹¹¹⁶ it is very likely that it was already largely in use at this time. In Aqaba, handmade pottery is also widely documented in the 11th century and is suspected to possibly extend back to the 10th century.¹¹¹⁷ In addition, the decoration of painted lines visible on the vessels from Mu‘allaq¹¹¹⁸ is somehow reminiscent of the extremely simple decorations recorded at Khirbat al-Nawafla from around the 11th century,¹¹¹⁹ and may therefore support an early chronology for this assemblage.

The closest parallel to the fragment from Jabal Harun, matching both form and fabric, may therefore be currently the one from Mu‘allaq; if its radiocarbon dating is reliable, it may be dated to within the 10th century. In summary, the fragment may well be just consistent with the chronology of the rest of the assemblage, rather than a late intrusion.

A published fragment from phase 11,¹¹²⁰ with a close parallel from phase 12/14 (see below) is found in a stratigraphic unit dated in the publications within the 10th century. It is characterized by a pink fabric pierced by a repair hole and covered by a white slip, traces of black paint under a green glaze and perhaps traces of yellow glaze. The two fragments are hard to classify with clarity under a specific type not only because of their poor state of preservation, but also due to different opinions of the classification itself, and about the current debate of scholarship on the definition of Fayyumi wares and Coptic Glazed Ware. In any case, the fragments appear to have similar characteristics to examples which have been classified by Donald Whitcomb in past years as Coptic Ware.¹¹²¹ While the chronology of Fayyumi ware is hard to state within the current debate, if the fragments can be classified as Coptic Ware and not as Fayyumi ware, it can be noticed that Coptic ware in recent excavations in Aqaba has been dated to no later than the 9th century.¹¹²²

Another published fragment from phases 12/14 deserves some further comments.¹¹²³ This fragment is a pink-fabric bowl covered with a matt green and yellow lead glaze on a white slip. It is almost identical to the one mentioned above from phase

¹¹¹⁶ Amr et al. 2000, 243-244.

¹¹¹⁷ Whitcomb 1988, 212.

¹¹¹⁸ Lindner 1996, 125 and 120, fig. 12.

¹¹¹⁹ ‘Amr et al. 2000, 244; 247, fig. 18.3.

¹¹²⁰ Gerber 2008, 306, fig. 8.169; Gerber and Holmquist 2008, 323, n.169.

¹¹²¹ Whitcomb 1989.

¹¹²² Personal communications by Donald Whitcomb and by Kristoffer Damgaard, former and current directors of the Ayla excavations.

¹¹²³ Gerber 2008, 299, fig. 5.98; Gerber and Holmquist 2008, 318, n. 98.

11. In this case, this fragment is likely to be residual in phase 14, and possibly originally belonged to phase 11, where the very similar fragment was found. This identification rules out the chronology range extending into the 12th century proposed by the authors.

Finally, the profile of a handmade open form with ledge handles from phase 2-4 or 12-14¹¹²⁴ can be defined as currently one of the best examples of longevity of forms in Petra. I have not examined the fabric of this form, but it is described by the pottery analyst as without straw temper. The fabric, therefore, appears not to be the one associated with the usual well-known Middle to Late Islamic fabric, A1. The form has many examples from Baydha (excavations by the American Center of Oriental Research, directed by Patricia Bikai), where all handmade pottery is in fabric A1, from two stratigraphic units undated as they are from the filling of two wine presses.¹¹²⁵ In summary, this form cannot be taken by itself as an element on which to base absolute chronology.

3. Pottery from other areas of Transjordan

Amman

Several examples of cooking pots from level III (the collapse that caused the abandonment of the site) at the Amman citadel have similarities with the 12th-13th century type well recorded in Israel as being produced in Beirut, although affinities are in particular with the earlier 12th-century type.¹¹²⁶ Similarities to these earlier variations occur in several examples,¹¹²⁷ although some of these cooking pots examples are certainly earlier than the Crusader period.¹¹²⁸ It has been observed not only that the early (12th century) type is globular, thin-walled and with an out-turned or straight rim (as opposed to the later type, thick-walled and deep in form), but also that an evolution observable in the 12th century is that at this moment the handles become more pulled up and narrower.¹¹²⁹

A cooking pot from group 8, building 1 in particular clearly belongs to this type, whose dating covers the second half of the 12th century and the first half of the 13th

¹¹²⁴ Gerber 2008, 295, fig. 4.91; Gerber and Holmquist 2008, 317, n. 91.

¹¹²⁵ Publication of the assemblage is in progress.

¹¹²⁶ Avissar and Stern 2005, type II.2.1.1., II.2.1.2. and II.2.1.2.

¹¹²⁷ Northedge 1992, Fig. 151.2-3 (cfr. Avissar and Stern 2005, 91, type II.2.1.2., fig. 39.2); Northedge 1992, fig. 141.2 (cfr. Avissar and Stern 2005, 92, type II.2.1.3., fig. 39.5.); Stern 2012, 41, pl. 4.15. 10, 12); (cfr. Avissar and Stern 2005, fig. 39.4-6).

¹¹²⁸ Northedge 1992, fig. 137. 5-6. I thank Edna Stern for providing this comment personally.

¹¹²⁹ Avissar and Stern 2005, 91.

century.¹¹³⁰ The hypothesis of an earthquake was supported in particular by the recovery of this object, which judging from its position and almost perfect preservation, apparently fell from a cupboard or niche.¹¹³¹ The cooking pot has an applied indented band, which is a very common element of this type,¹¹³² a straight rim and glaze on the interior. The same phase includes types which have a very long duration and were in use in the 12th century, such as the large bowls with thumb-indented bands and comb decorations that are attested for the 12th century and later.¹¹³³

Unfortunately, the chronological separation between the late Fatimid and the early Crusader periods for this type is difficult, as the variations throughout these periods seem to be very minor.¹¹³⁴ A problem in isolating pottery of the 12th century is the fact that 11th-century pottery is not well known especially in Jordan, both for this specific type and in general. However, the possible evidence of 12th-century pottery in this specific context allows for an hypothesis that if the citadel was seriously damaged by an earthquake, it was during the 12th century or later, although probably not much earlier than around mid-century.

It is interesting that handmade pottery is almost absent in the assemblage of level III, and seems to appear only in the Ayyubid phases, dated by coins to the late 12th century-early 13th century.¹¹³⁵ There appears to be a gap between the abandonment and the reoccupation of the site, during the 11th/12th century; the gap cannot however be so long to justify this sudden introduction of handmade pottery. As it is well known, handmade pottery is already present in the 12th century in Transjordan. It is possible, therefore, that the presence of handmade pottery reflects rather the different function of settlement rather than chronology, i.e. it could have been more open to the import of ceramic products during the Crusader period, while after it, the site may have only attracted local pottery. However, it can also be noticed that no stratified glazed imports of the 12th century have been found.

Karak

Some observations can be made on the pottery from Brown's excavations at the "Mamluk" palace. One example is a fragment of an underglaze painted bowl from a context before the construction of the floor of the palace (which is perhaps

¹¹³⁰ Northedge 1984, fig. 77.1 (cf. Avissar and Stern 2005, fig. 39.4-6, type II.2.1.3).

¹¹³¹ Northedge 1992, 159.

¹¹³² Stern 2012, 41, pl. 4.15. 10, 12.

¹¹³³ Avissar and Stern 2005, 84-85, fig. 36.2, type II.1.2.1.

¹¹³⁴ Stern 2012, 44.

¹¹³⁵ Northedge 1984, 281.

Ayyubid);¹¹³⁶ this is painted in brown and glazed in pale green and has parallels from Syria in the 12th/13th century. More locally known glazed wares include monochrome glazed slipped bowls of the general class dated generally to the 12th-15th century but most common in the Mamluk period (and found also at al-Wu‘ayra in the second half of the 12th century in stratigraphic deposits), sugar pots best known from the Ayyubid to the Mamluk periods and handmade pottery from the 12th/20th century.¹¹³⁷

In addition to the study of the material from Brown’s excavations at the “Mamluk” palace, the analysis of ceramics at Karak castle includes also the one by Milwright on an assemblage of about 8200 unstratified fragments. Milwright’s study of unstratified pottery from the castle and Miller survey’s assemblage around the castle walls has analysed ceramics from area A and F, from the area of the south keep of the castle, while the other areas (B-E) are around the castle walls. The study reported no types specifically associated with the Crusader period in Karak; Milwright’s assemblage has been interpreted as predominantly Mamluk-period pottery with some continuity into the Ottoman period,¹¹³⁸ but admittedly Milwright proposed this dating knowing that there is a scarcity of parallels for the period before 1200.¹¹³⁹ Milwright’s study has therefore resulted mainly in the observation of general trends rather than in the attempt to relate pottery to a specific chronology.¹¹⁴⁰ Because of the current ability to date ceramics of this period, the identification of specifically 12th-century types outside a stratified context is rarely possible. Specific observation on the presence of types at Karak can only originate from stratigraphic excavations connected to structures dated to the Crusader period.

For handmade pottery, Milwright suggests that some fragments may date to the 12th century on the basis of comparanda, but does not offer specific parallels.¹¹⁴¹ At Karak handmade pottery, which was only about six percent of the assemblage and whose chronology in Jordan is still largely understudied, appears to have different characteristics from the one found in Petra, where some attempt to establish a local chronology has been recently started. As a matter of fact, handmade ceramics in Petra during the Mamluk period have strong similarities to those in Karak and Palestine, but this trend is not apparent during the Crusader period. The pottery from Karak seems to

¹¹³⁶ Brown 1989. However, recent observations by Brown may result in interpreting the palace as Ayyubid rather than Mamluk as originally thought (personal communication by R. Brown).

¹¹³⁷ Brown 1988c, 12-38..

¹¹³⁸ Milwright 2008, 137-383; Mason and Milwright 1998, 175-176.

¹¹³⁹ Milwright 2008, 138-139; See Miller 1991a.

¹¹⁴⁰ Milwright 2008, 137-139.

¹¹⁴¹ Milwright 2008, 145-146.

have much closer similarities with that from Tall Abu Ghurdan, where manufacturing techniques included the use of bags (according to my study, not known in Petra), and, differently from Petra, painted pottery is made in a variety of fabrics (which may also suggest a variety of original places of production) and firing conditions.¹¹⁴² Therefore, it seems particularly incautious to attempt to propose a chronology on the basis of a parallel with areas in Transjordan that are geographically distant. Unfortunately, at **Tell Abu Ghurdan** those handmade ceramics, which according to Sauer come from Abbasid or Fatimid-period layers (750-969 and 969-1071),¹¹⁴³ appear to be mainly intrusive from a later period and are therefore not a useful point of reference for understanding the character of handmade pottery from the 12th century from this area. A recent reassessment of the ceramic evidence from the site, however, suggests that the 12th century is included in phases F and G from Franken and Kalsbeek's excavations.¹¹⁴⁴

Types from the Karak assemblage that are better dated and whose range includes the 12th century include sphero-conical vessels, slipped and monochrome-glazed bowls, glazed cooking vessels (including both frying pans and cooking pots), slip-painted wares (although the loose designs appear to be typical of the Ottoman period), underglaze black-painted fritwares (including an example perhaps as early as the mid-12th century), underglaze polychrome-painted fritwares (probably from Syria and dated from the second half of the 12th century), lustre wares and blue-green-glazed celadon.¹¹⁴⁵

A large quantity of sugar vessels was found at the castle but they mainly look Mamluk in chronology,¹¹⁴⁶ and the current typology of sugar cones and jars does not currently allow for narrowing down types to the 12th century, when the forms may have been present at the castle; at the moment, the shorter range available corresponds to the 12th-13th century.¹¹⁴⁷

Hisban

Sauer's study of the Hisban pottery was the first systematic attempt to obtain a chronological separation of ceramics of the Islamic period in Jordan based on stratigraphy. Sauer managed to isolate Fatimid from Ayyubid and Mamluk-period pottery at the site on the basis of a favourable stratigraphic situation (a cistern filled

¹¹⁴² Milwright 2008, 145-146 and Franken and Kalsbeek 1975, 38-39.

¹¹⁴³ Franken and Kalsbeek 1975, 174, fig. 53.1-28; Sauer 1976, 93.

¹¹⁴⁴ Walmsley, unpublished. I thank Alan Walmsely for providing this unpublished report.

¹¹⁴⁵ Milwright 2008, 177-181, 188, 190-192, 195-196, 216, 373 (fig. 26.14), 221, 237, 239.

¹¹⁴⁶ Milwright 2008, 158-164.

¹¹⁴⁷ Avissar and Stern 2005, 86; 103.

with pottery associated with coins). His published ceramic groups named as Fatimid (AD 969-1171) and Ayyubid (AD 1171-1263) suggest that he may have recorded a gap between the Fatimid pottery, which consists mainly of wheel-thrown, light-coloured wares, and the Ayyubid, which is mainly composed of handmade painted pottery.¹¹⁴⁸ In addition, coins provided some evidence for settlement during the Ayyubid period, but not for the Crusader period; it was concluded that the site was re-occupied after a gap about AD 1200.¹¹⁴⁹ Publication of a selection of the pottery corpus from the Middle Islamic period material does not allow one to identify specific 12th-century types.¹¹⁵⁰ Informal conversations with Bethany Walker have also confirmed that 12th-century types circulating in the Levant more commonly have not been encountered at the site.

Faris

Although some fragments have parallels with 12th-century pottery from al-Wu‘ayra in terms of their decoration (linear decorations and dots),¹¹⁵¹ some of them come from an Ottoman context, and this actually provides a good proof of the danger of relying solely on decoration patterns for chronology, as discussed in this appendix about case of the Petra region.

Being located at a short distance from the King’s Highway, and moreover on the Karak plateau, important for the connection with Palestine, it would not be surprising to learn that Faris had access to several ceramic objects travelling on long-distance routes, and the fact that the proximity of the King’s Highway may have played a role is supported by the finding of a Crusader *denier*.¹¹⁵² Although, as appears from the preliminary reports, the range and percentage of imported ceramic material are much more limited at Faris than at Karak. At Faris, in addition to locally made pottery (handmade painted ware), the presence of several types manufactured in other areas including perhaps Hebron has been revealed by petrographic analyses.¹¹⁵³ A large quantity of ceramics has been excavated from Faris and is still currently under study; it is anticipated in the reports that the material looks promising for building a ceramic sequence. Ceramics of the 11th-12th centuries include examples of wheel-thrown utilitarian pottery.¹¹⁵⁴ However, a consistent assemblage of Islamic-period pottery is not

¹¹⁴⁸ Sauer 1994, 267-269.

¹¹⁴⁹ Sauer 1973, 50-63.

¹¹⁵⁰ Sauer 1973, fig. 4; Walker 2012, 542, fig. 4.13.

¹¹⁵¹ Johns et al. 1989, 92, fig. 27.55; Johns, Mc Quitty and Falkner 1993, 58, fig. 21, 46-47.

¹¹⁵² See Karak in chapter 3.

¹¹⁵³ Abu-Jaber and al Saa’d 2000, 179; 187-188.

¹¹⁵⁴ Johns et al. 1989, 88-89 fig. 24, 18-24.

available for the 12th century, although it is for other periods, such as the fortunate situation of a cistern fill from the Mamluk period.¹¹⁵⁵

It would be particularly interesting to see if there are types from Karak at the site, given its proximity to the King's Highway, and to know more about the kind of associated structures.

Khirbat al-Shaykh 'Isa

After my viewing of the ceramic material from excavations at the site of Khirbat al-Shaykh 'Isa, it became clear the assemblage has important potential for understanding Jordan's communications with the areas west of the Jordan. The assemblage, currently under study,¹¹⁵⁶ includes important evidence of the volume and range of pottery entering Jordan during the Islamic period.

The assemblage includes ceramics currently dated to a chronological span that includes the 12th century. The presence of a settlement at the site during this time is almost certain, in view of the general evidence of more or less uninterrupted occupation during the whole Islamic period.

Important types in the 12th century include several examples of cooking ware, similar to or, very likely, corresponding to the Beirut type, dating to the 12th century/early 13th century. The type includes glazed globular cooking pots with thin walls and out-turned rims, and thin walled frying pans.¹¹⁵⁷ There are also several examples of the Serçe Limani type, documented between the 11th to the early 12th century. The presence of a bowl with a rather simple decorative pattern may belong to the 12th century.¹¹⁵⁸ Slip-painted bowls were also found in several examples glazed both in yellow and green, the type being very common in the 12th and 13th century. This type was especially popular during the Mamluk period, but started already during the second half of the 12th century. It is very well documented in the Israel/Palestine area, including Jerusalem.¹¹⁵⁹ The Serçe Limani type belongs to a broader category that is widespread on the coast of Israel and present in Jerusalem.¹¹⁶⁰ Slip-painted bowls are also

¹¹⁵⁵ Mc Quitty et al. 1997, 185-189.

¹¹⁵⁶ I wish to thank Anthony Grey, encharged with the study of pottery at the site, and Konstantinos Politis, project director, for making the material available for reference for my PhD. I am also grateful to Edna Stern for confirming the identification of the types discussed here, on the basis of her direct viewing of the assemblage.

¹¹⁵⁷ Stern 2012, 42, pl. 4.14:1-6, 4.15: 3-12 and 4.16:1-2 (type BE.CW.1); Avissar and Stern 2005, 91-93, type II.2.1.2 and 96, type II.2.3.

¹¹⁵⁸ Avissar and Stern 2005, 6, type I.1.1.

¹¹⁵⁹ Avissar and Stern 2005, 19, type I.1.6.1 and I.1.6. 2.

¹¹⁶⁰ Avissar and Stern 2005, 6.

widespread in Palestine/Israel and Jerusalem, and appear to be present at Karak, as mentioned above.

Gharandal

The Gharandal project has been one of the very few ones whose main original aim was to understand the development in time of ceramic types. Since most of the assemblage dates to the 8th-15th/16th century and the sequence appears to be without major gaps, it is also one of the best ones available for trying to identify the characteristics of 12th-century pottery at the site,¹¹⁶¹ although precise isolation of the 12th century as opposed to the periods before and after is of course not possible. At the site, the introduction of coarse handmade wares was recorded sometime between the end of the 9th century and the 11th century, and what is interesting is that here wheel-thrown pottery was never completely replaced, and it actually continued to be a significant part of the corpus. The earliest type, which here appears to be short-lived, is distinguished by thin walled forms, which are often wet smoothed in a self-slip, interestingly, an aspect also recorded in Petra. Different from the early pottery in Petra is the lightweight fabric, and here it is not noted that the quality may be higher in some pieces. The painted type with the same ware includes tableware (jugs and bowls) and is mainly painted in red; it includes some of the decoration patterns found also at al-Wu'ayra, such as hooks, grid patterns, triangles, wavy lines and dots. Incised and painted decorations are also present on the same object, and this is also recorded at al-Wu'ayra. The dominance of similar decoration patterns to those found at the castle ("freestyle" and "geometric", such as those described here, or very simple red lines, reminiscent of the simple linear red decorations at Nawafra in Wadi Musa) and of red paint may well indicate a chronology in the region of the 11th but also the 12th century for some of this early type. It is not possible, of course, to distinguish this time period from the 11th century, especially since there is a gap in our knowledge of early 12th century pottery. The Plain Handmade Coarse Ware includes cooking pots clearly imitated by wheel-thrown types, just as in Petra, and the type of cooking pot with an applied plastic band is already present in the early type. However, at Gharandal the imitation of wheel-thrown types seems to include also the later period, i.e. it is noted that some bowls imitate the wheel-thrown forms of the 13th/14th century. Surface treatment generally includes descriptions which fit with Brown's phase IB and II, and

¹¹⁶¹ Walmsley and Grey 2001, 147-148.

therefore this type may also include the later 12th century.¹¹⁶² However, some regional differences are clear, as became evident from my viewing of the Gharandal assemblage.¹¹⁶³ Forms of Handmade Ware include also some with parallels with al-Wu‘ayra, such as the large basins with about 40 cm diameter and a flattened rim, painted bowls with a flattened rim,¹¹⁶⁴ jars with a flaring rim,¹¹⁶⁵ and among the Early Handmade Ware, small forms with an out-turned rim, deep bowls¹¹⁶⁶ and necked jars with out-turned rim.¹¹⁶⁷

Glazed wares were rare in all Islamic periods at the site, suggesting that this scarcity was not bound to a specific period and that the economic status was relatively low.¹¹⁶⁸ Two cooking pots, wheel-thrown and not glazed, belong to the long-standing tradition of the Byzantine cooking pots, and may well be in use between the 11th and the 12th century.¹¹⁶⁹

Aqaba

Ceramics from the Mamluk fort has not produced evidence of a 12th-century occupation.

The presence of glazed cooking pots (however, which type is not specified) makes it possible that there is some 12th-century pottery, especially since the form has an out-turned rim, but this continues into the 13th century. Also included in the assemblage are fragments of lustre ware, interpreted as 11th-12th-century products of Fatimid Egypt. The presence of underglaze painted pottery from Syria or Egypt, dated to the 13th-14th centuries can however be extended into the late 12th century.¹¹⁷⁰

Ayla

Ceramics from excavations at Ayla also do not show similarities with 12th century pottery known elsewhere in Jordan. Whitcomb pointed out that the city was probably abandoned at the latest early in the 12th century.¹¹⁷¹

¹¹⁶² Walmsley and Grey 2001, 153-159.

¹¹⁶³ I wish to thank A. Walmsley, project director, and A. Grey for giving me access to his ceramics from the excavations at Gharandal in order to make these observations for my PhD research.

¹¹⁶⁴ Walmsley and Grey 2001, 160, fig. 12. 4 and 9.

¹¹⁶⁵ Walmsley and Grey 2001, 160, fig. 10. 12.

¹¹⁶⁶ Walmsley and Grey 2001, 160, fig. 10. 4-6.

¹¹⁶⁷ Walmsley and Grey 2001, 154, fig. 9. 8.

¹¹⁶⁸ Walmsley and Grey 2001, 153.

¹¹⁶⁹ Walmsley and Grey 2001, 154, fig. 9.5.

¹¹⁷⁰ Pringle, in progress. I thank D. Pringle for providing the unpublished report of the pottery from excavations at the Mamluk fort.

¹¹⁷¹ Whitcomb 1988, 222.

I have had the opportunity to view some of the ceramics from Whitcomb's excavations at Ayla, during three days in October 2009 at the Oriental Institute in Chicago, and my aim, in addition to being interested in seeing Fatimid-period handmade pottery in southern Jordan, was to inspect the possibility of finding 12th century fragments in the last levels of occupation (which was dated to after 1071), in particular handmade. It is interesting that there are several kinds of handmade pottery from Ayla, one of which proved to have deep differences from the one in Petra and in part from the one known from other areas. However, a constant aspect seems to be the wet smoothing, which is encountered in both Petra and Gharandal during the same early period of handmade pottery making.

However, similarities of another kind have been recorded with the Early Handmade Ware at Gharandal (roughly the same period, i.e. at Gharandal ranging from the 10th to the early 12th century), especially in the decoration patterns (simple patterns often limited to lines and dots or a "free" style, the painting colour (mainly red), and the ceramic technology (the use of textiles for forming some vessels). The Aqaba group, however, is characterized by a very high quality of manufacture, which reminds some of the early handmade pottery from Petra.

The appearance of the grid pattern motif in the Ayla 11th-century ceramics, which is so popular in Petra, shows that this pattern has a life basically as long as the handmade pottery of the Islamic period. Another interesting aspect is that in the 11th/early 12th century phase handmade pottery and wheel-thrown (glazed and unglazed) pottery co-exist. This includes a cooking pot with a fabric rich in limestone inclusions, which is technologically between wheel-thrown and handmade; it is a holemouth cooking pot and it belongs to the same traditional form of the cooking pots widespread in Petra through the whole Islamic period, although this one does not have an applied clay band.¹¹⁷²

This assemblage is very interesting material from the 11th century (perhaps including the beginning of the 12th century) would be of central importance for a study on the understanding regional variations in handmade pottery.

4. Conclusions

A method for the study of handmade pottery and the Petra case study

The evidence presented from Petra demonstrates the importance of stratigraphic excavations when attempting to identify pottery of a limited archaeological horizon.

¹¹⁷² Whitcomb 1988, 216, fig. 5.

Ceramics of the 12th century from surveys are virtually invisible to archaeologists, not only because the time span that we try to identify is indeed very short, but mainly because an assemblage of this specific time period reveals itself in its association of several diagnostic aspects. My viewing of ceramics from the Petra area, including the Jabal Harun and in the Baydha region,¹¹⁷³ have demonstrated that the observations on surveys of 12th-century pottery is very difficult. On the other hand, Petra may not be an isolated area in this respect. Brown's pottery reading from Miller's archaeological survey of the Karak plateau has identified ceramics classified as Early Islamic (Umayyad to Fatimid, where Fatimid includes the mid-10th to the 12th centuries), and stated that the period from the latter 10th to the 12th centuries in particular was poorly represented. Fatimid-period identified forms were mainly cooking pots; admittedly part of the problem of commenting on the assemblage was the lack of parallels for this period in Transjordan.¹¹⁷⁴ However, it can be noticed that parallels with the materials at al-Wu'ayra were at the time possible, but none have been found. While this is probably due at least in part to the regionality of the handmade pottery in Jordan, which has therefore different characteristics in Petra and Karak, the identification of 12th-century pottery on surveys is a general problem also encountered in the south; therefore, these results should not necessarily be interpreted as representing a lack of 12th-century settlement on the plateau.¹¹⁷⁵ It is likely that the same problem occurs when analysing other areas of Transjordan characterized by the large use of handmade pottery. If this is the case, it is not possible at the moment to say more about the presence of a specific chronological horizon in the many surveys which have identified "Ayyubid-Mamluk pottery".

This is the reason why, in addition to relying on stratified assemblages, it is also necessary to deal with an assemblage of a certain size, unless very specific fragments are found, such as a fragment painted in orange. This originates from the fact that only some of the elements of this handmade class change over time. For example, surface treatment and form do change in time, but only in some cases. Moreover, often several elements on the same fragment need to be observed in order to be able to hypothesize a chronology, and this means for example that it is very hard to assess this from publications where ceramics are described in very general terms and photos are not included. For example, decoration patterns alone are not enough to establish a

¹¹⁷³ Sinibaldi 2013, c; in progress, c. The surveys were conducted by the Finnish Jabal Harun Project, Helsinki University, and the Brown University Petra Archaeological Project.

¹¹⁷⁴ Brown 1991, 224-232.

¹¹⁷⁵ See chapter 4.

chronology, and they need to be matched with observations on surface treatment as well (closed forms decorated in red with little hooks are both at al-Wu‘ayra and Baydha, Ottoman period). Form alone may be not enough without seeing fabric and surface treatment (as in the case of the bowl from Jabal Harun, which is probably earlier than the 12th century). Form, surface treatment and fabric together may not be enough in other cases, as seen for the cooking pots with ledge handles and *taenia* band, but it is their frequency in the assemblage compared to other cooking pots models which seems to be meaningful in terms of chronology (at Wadi Farasa and al-Wu‘ayra, they seem not to be as common as in Baydha). Surface treatment is one of the most diagnostic aspects, but red-painted pottery at Nawafila in the Mamluk levels is present and some fragments cannot be distinguished from the Crusader-period ones; however, it is their proportion compared to the brown-painted fragments that may tell the difference in chronology. The same is true for manufacturing and painting quality, which may vary a lot in the same assemblage, but the presence of several objects of higher quality has a chronological value.

Working with handmade pottery, the dominant class in Petra and in many sites of Jordan for this period has therefore shown that a different method of work is required compared to the one used for other classes. In Petra, longevity appears to involve mainly form and decoration patterns, while firing and fabric have almost no variations through centuries. Technology, on the other hand, has both aspects of change and stability, and surface treatment provides the richest chronological information, but not in all objects.

This system has allowed rejecting the absolute confidence of some theories proposing that some sites in Petra belong completely to the Crusader period, but since the state of research is so preliminary, it does not always necessarily allow identifying a Crusader-period site with certainty. Although complex and time consuming, this method applied to the Petra case study has however demonstrated that it is possible to distinguish a chronological horizon, and therefore gradually prepare a basis for commenting on the subject of settlement. A methodology of study will be refined with time and ideally it will involve the same method of study for each assemblage, not discarding any sherd, and published descriptions of the fragments with photos.

Regional variations are certainly present in handmade pottery in Jordan, but it has been possible to notice that there are also general similarities in the same chronological horizon. For example, handmade pottery before the 12th century may have some similar

characteristics at Gharandal,¹¹⁷⁶ Petra (Khirbet Mu‘allaq, Jabal Harun) and Aqaba, for being wet smoothed and often thin walled. These general similarities allow hypothesizing a similar chronology. For example, the group called Early Handmade Pottery at Gharandal could well include the early 12th century, because elements such as the hook decorations, the style with wavy lines and the “orange” paint are reminiscent of the characters of phase IA from Brown’s excavations.¹¹⁷⁷

Local ceramic production in Petra

These similarities confirm that there was, of course, some contact between Petra and other regions. This is supported by the idea that both before and after the 12th century there was a limited but constant flow of imports, including fish from the Red Sea.

However, regional differences are very clear. My viewing of handmade assemblages from several areas of Jordan (such as Hisban, Aqaba, and Khirbat al-Shaykh ‘Isa) allowed, for example, a better definition of the generally assumed idea that at least a large part of the pottery from Petra was probably produced in the region. Petrographic analysis will help in better defining this impression, but it is almost certain that at least occasionally imports from other areas reached Petra in form of handmade pottery, as it seems clear from the presence of very different fabrics. The assemblage from Gharandal seems to be characterized by frequent reed mat impressions and fabric traces used for manufacturing pots,¹¹⁷⁸ recorded also in several sites of the Karak plateau but never noticed at Petra, showing that technological aspects were different according to regions. It has been noticed that Faris pottery looks far richer in terms of variety of forms of painted pottery when compared to al-Wu‘ayra¹¹⁷⁹ and viewing published pottery from Karak shows some clear differences in form and decorations. The fact that ceramics with the same characteristics (and even the same ceramic types) are found both at Nawafra and al-Wu‘ayra during the 12th century is supporting evidence for the fact that the castle purchased at least most of the ceramics products, including glazed cooking pots, from Wadi Musa.¹¹⁸⁰

My hypothesis, to be tested with further research, is that during the Mamluk period there was a stronger influence on handmade pottery by models from Palestine and the north than there was before this time. Although more data would be necessary

¹¹⁷⁶ Walmsley and Grey 2001, 153.

¹¹⁷⁷ For example, Walmsley and Grey 2001, 156, 10.6.

¹¹⁷⁸ Walmsley and Grey 2001, 158.

¹¹⁷⁹ Tonghini and Vanni Desideri 2001, 713.

¹¹⁸⁰ Sinibaldi 2013, b.

from a Mamluk-period settlement in Petra, it seems that decoration patterns and surface treatment tend to be more similar to those from north and west of Petra. Whether this involved a movement of pots rather than a movement of potters and the dynamics of this pattern are still not clear. However, it is likely that the King's Highway had an important role in this movement, and presumably also the castles of Karak and Shawbak, which may have been centres of production and exchange, but which during the 12th century may still not have involved such an intense trade of goods as they did in the Mamluk period. This may be confirmed by the number of settlements in Petra belonging to this period, which at a preliminary assessment seem to be numerous.

Petra, Shawbak, Karak and their trading networks

There are scarce but continuous imports in Petra through the whole Islamic period. Imports during the Middle Islamic period in Petra have been recorded at the sites of al-Wu'ayra, Wadi Farasa, Baydha and Nawafila. The several examples of monochrome glazed wares in the post-Crusader phase at al-Wu'ayra suggest that a Mamluk-period occupation was included at the site, since these wares may be those known as circulating in the 13th-15th centuries. These data also show that a connection with a trade network in the region was certainly not limited to the presence of the Franks in Petra. However, Tonghini suggests that fritware in the last Crusader phase illustrates the importance of the castle through its connection with the Syrian markets, while the more regional products in the later periods illustrate that this was not a strategic place anymore.¹¹⁸¹ Given the general scarcity and limited types of imports in Petra recorded so far during the whole Islamic period (i.e. no fragments of lustre and graffita have been recorded at other sites apart from al-Wu'ayra, and certainly not several fragments of fritware in the same phase), and the fact that several fragments of fritware have been found in phase III, this hypothesis can be supported. What is reflected, however, seems to be not so much the importance of al-Wu'ayra itself in its direct strategic connections with Syria, but most likely its connection to Shawbak castle during the Crusader period, and therefore indirectly to the King's Highway. It would not be surprising to discover that Shawbak castle was crucial in its role to deliver ceramic objects to Petra during the Crusader period, being only about 20 km away. In the light of recent, preliminary research at Shawbak castle, it is possible to state that finds at Shawbak in the early Mamluk period included a rich variety of imports, including

¹¹⁸¹ Vannini and Tonghini 1997, 382-383.

fritware, slip-painted wares and monochrome glazed bowls,¹¹⁸² so the fact that these imports are not reflected in the al-Wu‘ayra Mamluk phases could actually show a difference between the Crusader and the post-Crusader phase in terms of connections between the site and Shawbak castle. While the connection with Shawbak to the King’s Highway and the Hajj road certainly continued to exist in the later periods, and was in fact strengthened from that originally created by the Franks themselves, after al-Wu‘ayra was abandoned by the Franks, although it was still inhabited, it was apparently not connected to Shawbak castle in the same way. This may well reflect the presence of a population at the castle that was different in some way from the one of the later phases; in the later periods, it was probably a rural site with only a domestic function.

As for the differences noted in the imports between the foundation phase and the last phase of occupation, it is possible that the fritware in phase III may indicate a different requirement from the castle’s inhabitants as compared to phase I, but it could also just reflect different connections of Shawbak castle with Syria or in general more or better organized long-distance trade. In any case, the presence of imports from the region in phase I may not be surprising, since Shawbak castle at this time had been already placed on the King’s Highway for more than 10 years.

However, in addition to the connection of Petra with Shawbak, there was possibly a separate connection of Petra with Aqaba, where a castle on Jazirat Fara‘un was under Frankish control for a short period. More importantly, however, is that at the moment of the construction of Shawbak castle it had already existed for centuries. Lustre ware (found at al-Wu‘ayra) and underglaze-painted pottery (found at Baydha) were also found in Aqaba in the excavations at the Mamluk fort.¹¹⁸³ Incised Egyptian ware, found at Baydha, may well have come directly from Aqaba, too.

Interestingly, but probably not surprisingly, several of the ceramic types found at Karak have also been found in Petra. These include slipped and monochrome-glazed bowls found at al-Wu‘ayra (from the castle foundation phase and the last phase of occupation) and Wadi Farasa (from a Middle Islamic context); glazed frying pans (from a superficial context in Baydha and dated to the 12th-13th century) and glazed cooking pots (from al-Wu‘ayra castle’s foundation phase and from a 12th century in Nawafila), slip-painted wares (of which a fragment comes from Wadi Farasa). Moreover, several Syrian fritware fragments were found at al-Wu‘ayra in the last phase of occupation and a fragment of underglaze black-painted fritware comes from Baydha’s superficial

¹¹⁸² Sinibaldi 2009, b; Walker 2009.

¹¹⁸³ Pringle, in progress; see chapter 3.

stratigraphy, dated to between the end of the 12th century to the end of the 14th century; finally, a fragment of lustre ware comes from al-Wu‘ayra (stratigraphy unspecified).¹¹⁸⁴ In the surveys of the Finnish Jabal Harun Project, many fragments of glazed imports (although difficult to identify) have been found from the Middle and Late Islamic periods although it needs to be taken into account that frequentation at the site probably involved more complex and unusual patterns than those encountered in other Petra sites.¹¹⁸⁵

These imports are extremely scarce if compared to the relative proportion of handmade pottery, but the fact that all the described ceramic types have been found both at Karak and at al-Wu‘ayra and in other post-Crusader sites in Petra suggests that the materials arrived through the King’s Highway and that the connection between Shawbak castle and Petra continued well after the Crusader period, through at least the early Mamluk period.

A moulded slipper lamp from the late 12th-14th century, well documented in Palestine, produced in Jerusalem and found in several examples in Transjordan at sites such as Karak, Khirbat al-Shaykh ‘Isa and Tawahin al-Sukkar in the Ghor as-Safi and Hisban suggests precisely that Karak was an important connection between the Palestinian region and Transjordan,¹¹⁸⁶ and again it would be no surprise to find examples of the lamp at Shawbak castle.

As noted above, handmade Petra ceramic production started showing similarities to the one of Karak and Palestine probably starting from the Mamluk period; this was probably due to the presence of a trading network along the King’s Highway and Karak which communicated with the area west of the Jordan. The fact that the construction of Karak castle had a large role in this network is certain, given the variety of pottery of Palestinian origin found at the castle; this trend is however more evident for the Mamluk period and is much less evident, so far, for the Crusader one, a period which has still not been investigated stratigraphically. However, it is clear that it was the construction of Karak castle in the Crusader period which created this trading network.

A more solid answer to all these questions is likely to come only from excavations of 12th-century stratified layers at Shawbak castle, and this may also clarify how much the connection of Petra with Aqaba occurred through Shawbak castle and how much more directly, as it seems to be demonstrated by the more or less uninterrupted presence of fish from the Red Sea since at least the Byzantine period in Petra.

¹¹⁸⁴ For Karak, see Milwright 2008, 184-243.

¹¹⁸⁵ Sinibaldi 2013, c.

¹¹⁸⁶ Sinibaldi, in progress, a.

The exceptional richness of ceramic finds from a great variety of areas of the Mediterranean world found at Khirbat al-Shaykh 'Isa would suggest not only that in addition to Karak, the Ghor al-Safi area played an important role in the circulation and distribution of ceramics in Transjordan from the Palestinian region, but also, more specifically, that a key connection existed between this site and Karak castle on the King's Highway, and that this channel would also be the one supplying the Petra region.

Glazed cooking pots probably belonging to the Beirut type are found not only in Petra and Karak; they are associated with Ayyubid coins in layer D 6.33 from the cistern at Hisban¹¹⁸⁷ and at Aqaba and they have also been found at Khirbat al-Shaykh 'Isa and Qasr az-Zuwaira/ Mezar Zohar¹¹⁸⁸ on the other side of the Jordan, where an Ayyubid/Mamluk settlement was probably organized in order to better connect with Transjordan, specifically with Karak castle. There is no evidence that the site was already inhabited in the 12th century, but it is interesting that the same types of glazed cooking pots of the 12th-13th century mentioned above were in the assemblage,¹¹⁸⁹ and it is very likely that at this later period, the site was very well connected with Khirbat al-Shaykh 'Isa. This confirms that by the Ayyubid period trade between Palestine and Transjordan, specifically Karak castle, was already well established through the route south of the Dead Sea. It is the importance of the position of Karak castle established in the Crusader period which clearly led to this trade route in the following periods. It is still unclear which role Khirbat al-Shaykh 'Isa played exactly in the 12th century, but it certainly was already important in this period for communications with Palestine. For this reason, the fact that only a small quantity of these types was found at Karak, often associated with Frankish sites,¹¹⁹⁰ is perhaps surprising, since it is very likely that Karak played an important role in the circulation of these wares. However, the unstratified nature of the pottery analysed at Karak should be taken into account as the assemblage does not necessarily reflect the proportions of stratified materials.

The slipped, monochrome bowls from Karak of the same type found at al-Wu'ayra support the likely possibility that most of those objects coming to Petra would go also through Karak castle. However, until this large, ubiquitous and much diversified group is studied more closely, it is unlikely that we will be able to identify specific parallels just from general descriptions in publications. In any case, some observations

¹¹⁸⁷ Sauer 1994, 269.

¹¹⁸⁸ Pringle 1997, 114, P21.

¹¹⁸⁹ Observations from my direct viewing of the site, of the pottery from the excavations at the site, and following conversations with D. Pringle and E. Stern and T. Erickson-Gini, pottery analyst and excavator at the site for the Israel Antiquities Authority.

¹¹⁹⁰ Milwright 2008, 190.

may be offered about the presence of this type in Karak. As observed by Milwright, its presence in large quantities in the Karak plateau suggests that those were rather cheap products; in addition, its diversification in terms of fabrics, glaze and quality standard indicates a variety of production centres, including, probably, Karak itself.¹¹⁹¹ One interesting aspect is the possible production of glazed and unglazed pottery in Karak, as witnessed by some production remains.¹¹⁹² Some fragments from Milwright's assemblage have been analysed petrographically and many petrofabrics are compatible with a production in Karak itself.¹¹⁹³ All this would indicate that the fragments found in Petra (including the late 12th century one at al-Wu'ayra, from Brown's phase IB) do not reflect specifically a request for luxury objects at the castle.

Production of glazed wares in Jordan is documented at Tawahin al-Sukkar and Khirbat al-Shaykh 'Isa, and possibly at Shawbak, Faris and Karak itself, on the basis of the finding of kiln tripods.¹¹⁹⁴ This means that the presence of these "imports", often thought in the past as coming from outside Transjordan, can now be revised. However, Brown's work suggested that the presence of wheel-thrown and glazed pottery at sites on the Karak plateau was clearly heavily dependent on the proximity to either Karak castle or the King's Highway,¹¹⁹⁵ and this would also confirm, as probably expected, that both the castle and the King's Highway were important for the trade of these products along the communications from Palestine to Transjordan (with direction west-east) and from Damascus to Cairo (with direction north-south). At Karak there is a group of graffita wares, which are normally associated rather with the 13th-14th century rather than with a 12th-century occupation;¹¹⁹⁶ graffita is also present at al-Wu'ayra in Vannini's phase IV, Ayyubid. This is also supporting evidence for the important role that these two castles played in the trade of ceramics to Petra itself and other wares from other areas of the Bilad al-Sham. The presence of these widely circulating types in the foundation phase of al-Wu'ayra indicates that these networks were already established at this time.

We still do not know enough about the Crusader phase at Karak, but, as observed by Milwright, during the Ayyubid period the imports were not very abundant, both at Karak and Shawbak and in Jordan;¹¹⁹⁷ if this is confirmed by stratigraphic excavations

¹¹⁹¹ Milwright 2008, 189-190.

¹¹⁹² Mason and Milwright 1998, 185-186.

¹¹⁹³ Mason and Milwright 1998, 187-188.

¹¹⁹⁴ Milwright 2008, 194-195.

¹¹⁹⁵ Brown 1991.

¹¹⁹⁶ Milwright 2008, 196-201.

¹¹⁹⁷ Milwright 2008, 261.

at these sites, a scarce presence of imports at the main castles should therefore not be associated specifically with the Crusader phase.

Although the type of glazed cooking pot found at al-Wu‘ayra seems to be often associated to Frankish sites,¹¹⁹⁸ of all the sites where the cooking pots were found in Transjordan, only a few were controlled by the Franks and therefore, it is not possible to associate this type with a Frankish influence in Jordan. The fact that a fragment of cooking pot has been found at Nawafra, as in many other locations in Jordan, seems to demonstrate that this type circulated very widely and that it was probably relatively cheap—therefore, it did not represent a luxury item responding to specific requests from an elite at al-Wu‘ayra castle. Since this cooking pot seems to derive from a Byzantine model that continued through the 20th century,¹¹⁹⁹ and since in Transjordan glazed cooking pots are known since the early Fatimid period (late 10th to late 11th)¹²⁰⁰ it seems possible that this represented a new specialized production which was widely distributed across the region at a relatively cheap price, and not necessarily dependent on the Frankish presence on a site.

Sugar production in 12th century Transjordan

Within the ceramic study by Milwright on pottery from clearance and surveys at Karak castle¹²⁰¹ interesting evidence is provided for several themes over the broader Middle Islamic period, including sugar production. In this context, probably the Mamluk period is very significant, since specific evidence for sugar production and trade in the 12th century is currently lacking both at Karak and in Ghawr al-Safī. There is still much to be understood on the complex production and distribution of this item, but we know that the sugar consumed at Karak in the Mamluk period was the *musciatto*, the middle one of three kinds of sugar of different qualities.¹²⁰²

We know from this Francesco Pegolotti’s mention during the 14th century of the sugar from the *Cranco (or Cracco) de Montreal*.¹²⁰³

¹¹⁹⁸ See Stern 2012, 41-44.

¹¹⁹⁹ Walmsley and Grey 2001, 153, 154, fig. 9.5.

¹²⁰⁰ Sauer 1982, 334.

¹²⁰¹ Milwright 2008.

¹²⁰² Milwright 2008, 160-161.

¹²⁰³ Francesco Balducci Pegolotti, *La Pratica della Mercatura*, ed. Allan Evans, Cambridge, Mass., 1933: p. 296 (Polvere di zucchero del Cracco (deleeraccho); p. 363: Polvere di zucchero sono di molte maniere, cioè di Cipro e di Rodi e di Soria e del Cranco di Monreale e d’Alessandria (i.e. not traded in pani di zucchero, because not sufficiently cooked and the pani fall apart); p. 365: Appresso quella di Soria si è quella del Cranco, ma è bruna ed è panosa, cioè che à pezzi di pane di zucchero convenevolmente. (Better than Alexandria, but not as good as Cyprus, Rhodes or Syria). I thank D. Pringle for this reference.

One interesting point is that both molasses jars and cones are present in the assemblage, and were actually found at a ratio of 1:9 in favour of sugar cones;¹²⁰⁴ molasses jars may have had a longer life than sugar cones because they were reusable (each jar was used for several cones in the process of producing the molasses).¹²⁰⁵ The presence of cones seems to suggest that a part of the production process, the one that involved creating the molasses dripping from the cones and breaking the cones to retrieve the sugar paste, may have well occurred in Karak castle. This therefore fits with the fact that the castle had a specific role in the sugar distribution, since the cones filled with sugar were travelling to Karak and were broken there, where the sugar was organized for transport and distribution at the castle itself.

The textual evidence about the name of the sugar from “Cranco de Montreale”, (Karak) would justify the distribution being organised by the castle. Also, it does show that both molasses jars and cones were travelling with their products, and therefore that the recovery of fragments from these vessels does not prove that the first stage of production occurred there. Interestingly, such an amount of sugar pots (and specific evidence even of a few fragments is still currently unpublished) has so far not been found at Shawbak, which is supporting evidence for the fact that sugar was not processed or distributed at this site.

In terms of where at least this first stage of production may have occurred, some petrographic analysis of sugar pots from Karak has allowed one to conclude that some of it occurred in Ghawr al-Safi, where vessels coming from very different clay sources were found, suggesting that there was a variety of places where the sugar pots were manufactured;¹²⁰⁶ Safi, therefore, well known for its Mamluk-period sugar production centre, was probably not the only centre active in this period. This opens the question as to how wide the production network of sites controlled by Karak castle would have been, since al-Safi is quite far from the castle. By the 1340s the Balqa’ was no longer part of the administration of Karak, which no longer controlled the sugar production in the Jordan valley, because this was done from Damascus,¹²⁰⁷ so a hypothetical control by Karak castle of the sugar production in the Balqa’, started during the 12th century by the Franks, was not maintained through the whole Mamluk period, although the name of Karak in sugar product was apparently maintained after this moment.

¹²⁰⁴ Milwright 2008, 159.

¹²⁰⁵ Milwright 2008, 159.

¹²⁰⁶ Milwright 2008, 161-163.

¹²⁰⁷ Milwright 2008, 163-164.

Some of the observations above may reflect the situation, or part of it, in the 12th century, although unfortunately the archaeological data are still missing for a solid identification to this specific period. Karak in the 12th century was probably, however, a distribution centre for sugar produced in the whole eastern Jordan valley.

Handmade and wheel-thrown production

One of the most interesting forms on which to reflect on trade, chronology and technology in the 12th century are cooking pots. Manufacture and use of cooking pots seem to have been given special attention in Petra through the Middle Islamic period, and during this time some types appear to imitate more closely than others the wheel-thrown models both in form and in the higher manufacturing quality. Brown had already noticed this possible general similarity of cooking pot forms in phase IA and at the Amman citadel in phase III (11th-12th centuries),¹²⁰⁸ the examples from Amman all have a globular body and everted rim.¹²⁰⁹ The cooking pot excavated by Vannini in phase III (i.e. Brown's phase IB) reinforces further this hypothesis.

The evidence in Petra seems to suggest that, although handmade pottery almost completely replaced wheel-thrown examples during the 12th century and the Middle Islamic period, these were also in use at the same time. Glazed fragments of cooking pots and handmade cooking pots have been found at al-Wu'ayra and Khirbat al-Nawafra in the same phases. Another fragment was found in Baydha, a rural village.

Petrographic analysis would be necessary for a correct identification, but all the several examples of cooking pots found in Petra may well belong to the same type. The date of this thin-walled type (type BE.CW.1 at Acre) as well as at other sites, is documented between the second half of the 12th century and the beginning of the 13th century; it was commonly widespread in Lebanon and Israel, and for the whole 12th century it followed the cooking pot type from the Fatimid-period with only minor changes.¹²¹⁰

The example from Vannini's phase III appears to be imitated from this type. The presence of a thumb-impressed band, and apparently always in the form of a short rather than a long one going around the whole body, is well documented, and this suggests that the example illustrated by the Italian team¹²¹¹ originally had a short rather than a long

¹²⁰⁸ Brown 1987, b, 279.

¹²⁰⁹ Northedge 1984, figs. 76.2 and 77.1; Northedge 1992, fig. 137.5, 141.2, 151.2-3.

¹²¹⁰ Avissar and Stern 2005, 91; Stern 2012, 41-42.

¹²¹¹ Sinibaldi 2009, a, 462, fig. 22.

band,¹²¹² like is the case in an example published from the same phase.¹²¹³ Examples of the short applied thumb-impressed ledge handles on cooking pots are well known since the 11th century and until the 13th century¹²¹⁴ and in Jordan appear also at the Amman citadel. In the Amman assemblage there are two cooking pots which also have thumb-impressed bands defined as decorative. However, it is likely that those were functional ledge handles, in continuity with a long established tradition. The main difference between the form from al-Wu‘ayra and the Beirut type appears to be the handles, which in the Beirut type are normally strap handles and in the al-Wu‘ayra type are horse-shoe handles.

The fact that a handmade version of this type circulated in Petra during the second half of the 12th century is consistent with the chronology of the phase where it was found. It also implies that at the moment of its production there was a knowledge of the wheel-thrown type where it had been manufactured. This would make it very interesting to investigate whether this type was manufactured in Petra (as it seems very feasible, because of the wheel-thrown models circulating widely) or not. It also means that it is possible that during the 12th century some locally made forms, such as the bowls seen at al-Wu‘ayra, were used at the same time as wheel-thrown bowls.

This theme is interesting for better understanding the significance of the introduction of handmade pottery and of its relationship to the use of wheel-thrown pottery.

The aspect of imitating wheel-thrown examples seems to have been left behind sometime during the Ottoman period, as seen at Baydha, and it was already very present in the Crusader period, although it is probably reasonable to hypothesize that this trend had started before this moment, together with the widespread introduction of handmade wares. At sites like Ayla of the 11th-12th century, both handmade and wheel-thrown wares were in the same assemblage. The aspect of imitation from wheel-thrown forms was not limited to cooking pots in Petra (as seen from the ceramics at al-Wu‘ayra), but it is in this form which is much more evident, as clear from several examples from Wadi Farasa.¹²¹⁵ As is clear from the pottery at Gharandal from roughly the same period,¹²¹⁶ this aspect of imitation from wheel-thrown wares was not at all limited to Petra. Since Gharandal was not a site of particularly important connections at the time, it is likely

¹²¹² See Stern 2012, II, 41, Pl. 4.15:12; I and Avissar 2005, 63-65, fig. 2.18.1 for examples with the applied thumb impressed applied bands.

¹²¹³ Sinibaldi 2009, b, 97, n. 38.

¹²¹⁴ Arnon 2008, 301, 302, 370, 371, 433, pl. XLIII.2.

¹²¹⁵ Sinibaldi 2009, a, 458-452.

¹²¹⁶ Walmsley and Grey 2001, 159.

that the coexistence of wheel-thrown and handmade pots in Petra was not a sign that the site was particularly exposed to trade or belonging to a certain status.

Patterns of continuity and change through the 12th century

One of the main research questions to be addressed is the impact of the Crusader period on society compared to the earlier period and its consequences in the later periods. At Khirbat al-Nawafra the possibility to separate the stratigraphy of the 12th century from the earlier period has been limited by the methodology of documentation of an emergency excavation. There are no sites specifically dated to the 11th and the 13th centuries in the Petra region where the impact of the 12th century on the region could be seen in detail, and Brown's phase II, Ayyubid, is small. Observations on the rest of Transjordan clearly are heavily influenced by the absence of excavations and publication of 12th-century levels at Karak and Shawbak. However, some general observations can be attempted.

The occasionally higher level of manufacture of the 12th century is not a specific characteristic of this period, since it appears to have been even higher before this time. It seems that during the 12th century the manufacturing quality varied a lot in the same assemblage, indicating that there may have been many production centres locally; it is not sure if more specialised production was present, but it could well be that pieces with a higher quality were exclusively dependent on the better skills of the individual potter. Some objects required scarcely any skill at all, like the hand-formed bowls, while for others, such as for some cooking pots and for painting decorations, a turning tool was used. The fine objects found in this period are not present anymore by sometime in the Ottoman period, and the same is also true for some aspects of the surface treatment, such as burnishing. This may be due at least partially to the absence of circulation of wheel-thrown models. There was still some experimentation on painting which is not there anymore in the Mamluk period, as it seems to be the case for the freestyle which partially gives place to a more geometric style.

The fact that there were more open forms than in the following periods and more tableware may have to do with diet habits. Spouted jugs/bowls, jugs and bowls are popular, but there is a clear separation between these and some utilitarian vessels, such as the basins of very low quality. It can be noted that jugs with filter are already used in this period, but they seem to become more popular in later times. Bowls are very common and they can be very small, while at Ottoman-period Baydha small bowls have

not been recorded. Forms are smaller and this may mean that consumption of individual meals was more important.

In conclusion, Petra did not witness big changes because of the Crusader period. The many elements of continuity with the earlier periods are clear in the already established patterns of handmade pottery dominance, of its substitution over time to wheel-thrown pottery in a gradual manner, of the continuous trade with Aqaba, and in the continued use of mainly locally purchased pottery. Elements of change consist mainly in the arrival in Petra of types like the Syrian fritware found at al-Wu‘ayra, probably thanks to the already established role of Shawbak castle, and which probably caused the increased presence of imports in Petra in the later periods, although this always remained scarce.

The situation seems not very dissimilar in other areas of Transjordan not located directly on the King’s Highway, like Gharandal, where handmade, local pottery was probably dominant. Fritwares and other objects of luxury have all proved to be very rare in Gharandal compared to al-Wu‘ayra, so in some way at the castle there was a higher status.¹²¹⁷ Very different was, most likely, the situation at Karak and Shawbak, but an answer to this will have to await future research at these two key sites.

¹²¹⁷ Walmsley and Grey 2001, 162.

Building techniques in Crusader-period Petra: a preliminary study from al-Wu‘ayra and al-Habis

1. Introduction

The subject of building techniques in Petra and Transjordan has scarcely been explored so far by scholars, especially in terms of its usefulness for defining the characteristics of the Crusader period and therefore its potential for dating. Robin Brown has generally described the building techniques at al-Wu‘ayra castle and the team from the University of Florence have done some work on this topic at Shawbak and the Petra castles, but this is still mostly unpublished.

The process followed in the study presented here is comparable to that used for the pottery from Petra in Appendix A; it has led, like it did for the pottery, to a revision of the chronology of some sites of the Petra region.

Building techniques have been analysed from 17 different locations at the two castles. Those considered safe for their Crusader chronology and used for this analysis are the following: from al-Wu‘ayra, (1) the vaulted cistern, (2) the northern wall of the southwestern tower, (3) the southern wall of the church, (4) the eastern wall of the church, (5) the western wall of the church, (6) the external northern wall of the northeast tower, and (7) the internal facing of the ravelin; and from al-Habis, (8) the vaulted passage within the upper bailey, (9) the external facing of the encircling west wall of the upper bailey, (10) an east–west wall in the lower bailey, and (11) a north–south wall in the lower bailey. Although this is certainly a limited number of samples from which to draw conclusive observations, the work has been useful to advance a number of points.

In addition, some observations on rock-cutting features have been made at al-Wu‘ayra castle, specifically on the rock-cut access gate and on the cave overlooking the entrance to the barbican, which although earlier in date were reused in the Crusader period.

¹²¹⁸ The observations presented in this appendix are a result of the surveys that I have conducted in the Petra region specifically for my PhD thesis work. I am extremely grateful to the staff of the Department of Antiquities of Jordan and to the Petra Archaeological Park for allowing me to conduct surveys and record my observations at the sites mentioned in this appendix and for their constant administrative and logistic support. In addition, I am extremely grateful to those project directors who have invited me to make observations about structures at their sites and to comment on their possible chronology and characteristics, since this has made an important addition to my observations on ceramics at those sites. The surveys were conducted while I was a fellow at the American Center of Oriental Research; I am also indebted to the staff of this Institution for all the administrative and logistic support that they provided while I was conducting this part of the fieldwork.

Building techniques have also been analysed at the two castles from buildings suspected, for different reasons, to be earlier than Crusader; these include five more locations.

Some additional observations have also been made on the architecture and construction of the individual buildings analysed in this appendix. At al-Wu‘ayra, the church¹²¹⁹ is partially founded on bedrock and the cemetery in front of its southern entrance door appears to have been carved in the rock after its construction and respecting its southern wall. Therefore, the remains of the burials appear to belong safely to the period between the construction of the Crusader church and its abandonment. Bini and Bertocci recorded that the church had a floor made of irregularly shaped stone slabs.¹²²⁰

The southwestern tower has a sloping wall lining the lower part of the external facing of the northern wall, which is completely made of limestone. It is one of the best structures in which to observe building techniques, since the conservation of the interior of the tower and of the mortar facing the western wall appears to be in particularly good condition compared to other parts of the castle. Internally, the room was covered by a cross-vault, whose height and width can be reconstructed, and some architectural details are very finely tooled. This suggests a residential function; Hugh Kennedy observed that the southwest tower was possibly the castle donjon.¹²²¹ The northeast tower is bonded with the wall excavated during the excavation carried out by Robin Brown and can be considered as belonging to the same phase. In contrast to the southwest tower, it appears to have had a more military function, as is suggested by its smaller dimensions, thicker walls and the presence of a small cistern inside it. The vaulted cistern was constructed by lining the vault with a thick layer of mortar and then with pottery fragments, covered again with a hard plaster facing which still survives in patches. The vault is made of semi-hewn elements and reused dressed elements, especially Nabataean, bonded with a lime mortar. If in general the quality of the mortar is not high, still there was a certain general effort in providing some quality of construction, because the plaster appears well smoothed in its surface. The technique of lining the cistern with pottery is found in the earlier periods in Petra. However, in the earlier cisterns (especially Byzantine, Roman and Nabataean, an example of which is also present at al-Wu‘ayra) tended to be lined with finely crushed pottery; in this case the cistern is lined with roughly broken

¹²¹⁹ For a detailed description of its architecture, see Pringle 1998, 375-376.

¹²²⁰ Bini and Bertocci 1997, 410-411.

¹²²¹ Kennedy 1994, 26.

pottery of all dimensions.¹²²² In fact, one of the fragments lining the cistern is a ledge handle and wall of a cooking pot, of a very well-known type in Petra; this is interesting as it proves the presence of this ceramic type already in the mid-12th century or possibly earlier.¹²²³

Moreover, the extensive presence of handmade pottery in this period is clearly confirmed by its presence in this structure, and the fact that almost all of the excavated assemblage from the Crusader phases appears to consist of handmade pottery should not therefore be suspected in any way as being due mainly to residuality. In addition, no medieval wheel-thrown pottery, which would presumably have been at least as good for this function, appears to have been used to line the cistern; this may well confirm the scarcity of use of wheel-thrown pottery in the 12th century, already revealed by the analysis of the assemblage from the excavation. The arrow slits of the ravelin are characterized by different angulations, arranged in such a way that the focus of archery fire from them would have been on a point beyond the wadi east of the castle, where the castle could be attacked from the Shara mountains, the most vulnerable spot for the castle. The rock-cut access gate and the cave overlooking the entrance are rock-cut structures already used before the Crusader period. The entrance gate was modified by the Franks, although it is not easy to distinguish their work from the previous work. It has been interpreted originally as one of the several *hypogea* present in the south-east area of the site, and attributed to a period between the Neolithic to the Bronze Age, when the site was already occupied and the rock was modified as a cultic area; cup-shaped and quadrangular features were then carved in the bedrock.¹²²⁴ The access gate has been reworked by the Franks with pointed tools in order to smooth it over and make it harder to climb. Some of the plaster lining it is still surviving. Marino observed that the entrance was possibly too narrow to allow the entrance for horses.¹²²⁵ There is also a space carved for fitting a draw bridge, which would be thrown from the castle entrance across the wadi. Other authors also comment upon the fact that the moat at al-Wu‘ayra has in the rock-carved gate one of the most unique solutions to the entrance of a castle in the Latin East. However, this was also a weakness, since de fact narrowed down the space of the moat at the only point of access to the castle.¹²²⁶

The later cutting marks are done with a pointed tool, most likely a pick-axe. Similar rough tooling of the stone executed with a pick-axe is found at Wadi Farasa in

¹²²² This was also the case, for example, at Belvoir castle (personal communication by Denys Pringle).

¹²²³ See pottery appendix.

¹²²⁴ Frau 2012, 126.

¹²²⁵ Marino 1990, 13.

¹²²⁶ Biller et al. 1999, 54.

the rock-cut window in the northern wall of the Garden Tomb overlooking the lower terrace. Moreover, at Wadi Farasa, the window is carved in a similar fashion to the one employed for creating the one in the prehistoric cave used at al-Wu‘ayra to oversee the entrance to the barbican.

At al-Habis, the vaulted passage under the upper bailey uses the rock foundation as part of the structure and has a thick, low-quality plaster covering it, which resembles closely the plaster of the southwestern tower at al-Wu‘ayra. The walls of the upper bailey have no fill since they are very thin (c. 60 cm). The lower bailey includes walls of different constructional quality and type, especially as concerns the mortars; this may be due to different phases or to different groups of masons working at the castle.

2. Crusader-period building techniques

Some general observations on the character of Crusader-period building styles at al-Wu‘ayra can be advanced, on the basis of the analysis of the structures mentioned above (the church, the two towers and the ravelin, while the cistern is considered a building with a more specialised function). These have been recorded on a form that I have specifically designed for the study of building techniques, after my own experience in the field and the interaction with team members of six different projects. These common characters can be summarized as follows:

- 1) Towers, ravelin and church are all constructed with a high percentage of limestone blocks, sandstone is always present at about 15–25 percent.
- 2) The building style used in all cases has a facing in horizontal or sub-horizontal courses of irregular stones with galleting.
- 3) In the external faces of the towers, the building elements are blocks with roughly square proportions; they are small blocks in the ravelin, and medium and small blocks in the church. Pebbles are used for galleting.
- 4) The building elements are mainly dressed stones for the towers, while in the ravelin and the church they are both dressed and semi-hewn. The areas including semi-hewn stones were probably completely covered by plaster (such as in the western facing of the southwestern tower).
- 5) The towers’ building stones include at least ten percent of reused material, while the church includes a lower percentage or reused materials.¹²²⁷

¹²²⁷ The percentage is here calculated on the basis of the number of elements employed in the construction.

- 6) The two towers and the ravelin have corners built in a different style, probably to strengthen the corners, with a tendency for them to have been built with reused Nabataean sandstone blocks.

An exception to these building characteristics is the church apse, which is still preserved for four courses (although a good idea of its original state can be obtained by the illustrations of the early explorers).¹²²⁸ Built with limestone ashlar cut for the specific purpose, the tooling used for its surface treatment has left traces about 4 cm long and 2-3 mm wide, is very fine. The limestone blocks are about 25 cm high and about 40 cm long, and do not display any masons' mark. The blocks were bonded with a hard lime mortar with a very good adherence.

On the other hand, the wall where the apse itself was built was covered with plaster about 0.3-2 cm thick, and included what has been interpreted as a plastered aumbry¹²²⁹ to the right of the apse.

Another part of the church built showing a similar degree of care as the apse is the door frame in the western wall of the church, which is built in ashlar with thin diagonal tooling marks (about 1-3 cm long and about 2 mm thin), bonded with a strong lime mortar. A similar quality of workmanship is also found on the limestone bases of the pilasters in the southwestern tower. The surrounds of the door in the southern wall is also built partially in limestone, but without the fine tooling of the western door.¹²³⁰

Another constant element of construction of the Crusader-period phases at the castle is the fact that buildings are not only founded (at least partially) directly on the bedrock (such as the church vault under the southern wall; the towers, the ravelin, the access gate), but that the rock itself has been carved in order to be an integral part of the architecture, in a similar way to the local Nabataean architecture, which is also present at the castle. For example, in the northeast tower, the bedrock is part of the northern wall elevation; in the church, it is part of the western part of the underground vault and it is the walking level in the ravelin. Moreover, important elements of the defence system are almost completely composed of the bedrock itself, such as the access gate (which has been lined on its eastern side with masonry), the artificially deepened eastern wadi, the rock-cut northern ditch and the cave above the entrance to the barbican, perforated with openings in order to control the access to the castle.

¹²²⁸ See chapter 3.

¹²²⁹ Pringle 1998, 375.

¹²³⁰ After the excavations of the University of Florence in the 1990s, new parts of the church have been exposed, including the southern entrance to the church and the cemetery just out of it (Vannini and Tonghini 1997, 374-373, fig. 5. This is an update, therefore, compared to the published plan of the church visited before this moment (Pringle 1998, 376).

At al-Habis, the building material in the areas analysed for the Crusader period is always sandstone, arranged always in irregular blocks with galleting of small irregular stones. but in one case (the north/south wall inside the entrance of the lower bailey) the mortar still covers the galleting completely, so they are not very visible.

It is often harder to distinguish the proportion of reused material at al-Habis, since the sandstone is often corroded by the elements to which it has been exposed. However, it is clear, thanks to several former surveys, that, as at al-Wu‘ayra, a Nabataean settlement formerly occupied the site.¹²³¹ At al-Habis, structures are also built directly on the rock, which is used for example to carve the lower walls of the passage and of the baileys themselves.

Differences and similarities between the Crusader-period building techniques in two castles’ analysed parts can be summarized as follows: at both sites, many structures are made with a facing in horizontal courses of irregular stones with galleting and with larger elements used in some parts of the castle (such as the church). At al-Wu‘ayra, dressed stones are sometimes used for the facing of some structures, such as in the towers, while other walls did include also semi-hewn stones, but these would probably be covered with a thick plaster. At al-Habis, the building stones appear to be mostly dressed; this is probably due to a much larger proportion of reused material at al-Habis than at al-Wu‘ayra. At al-Wu‘ayra, it seems that the castle structures needed new material for construction in addition to material already present on the site, notably Nabataean-period dressed sandstone blocks. This is most likely the reason for the higher percentage of reused material at al-Habis and the reason for the difference in building materials: at al-Habis the castle is completely built in sandstone, while at al-Wu‘ayra a larger proportion of limestone is employed in the towers, ravelin and church. However, it would be normal to expect that at least some of the new building material would come from the excavation of the sandstone moat. At al-Wu‘ayra parts of some buildings are constructed with a special attention, such as the architectural details of the church and towers; it can also be noticed that here the quoins of the towers are built using stones of a higher quality of workmanship, often reused Nabataean ashlar.

However, the most useful element for defining the building techniques of the Crusader period in Petra is perhaps the mortars and plasters.

Crusader-period mortars and plasters

¹²³¹ Hoffmann 2013, 97-102.

In addition to the above-mentioned observations, macroscopic analysis of construction mortars and plasters has been done on site at the two Petra Crusader castles of Habis and al-Wu‘ayra. Twenty-five examples have been analysed from 16 different locations at the two castles, 18 examples from al-Wu‘ayra and 7 from al-Habis. They came from the locations analysed above for the study of masonry, both safely Crusader-period and those which have been suspected to be earlier. The study has made it possible: (1) to make some observations on the use and character of mortars and plasters in the Crusader period in Petra; (2) to draw a comparison in their use between the two Crusader-period castles in Petra; (3) to propose a hypothesis on the contribution of the Frankish presence to the use of mortars and plasters in Petra; and (4) to review an earlier theory concerning the reuse of Byzantine fortifications in Petra in the Crusader period.

At al-Wu‘ayra, the southwest tower was completely rendered or plastered or lime-washed on its west external facing, the mortar being finished with a herringbone pattern, which was normally used to anchor a layer of finishing, appears to have been plastered over the joints only. It seems that the eastern facing of the northeast tower was also completely rendered or plastered or lime-washed, and it is difficult to see which treatment exactly was used;¹²³² some other walls were probably also completely plastered, especially when the building stones were not well dressed. Wall plaster has been lost in most cases, and it is not clear which walls were actually plastered originally, and how. The herringbone pattern which has been observed in the southwest tower is usually a way to anchor another level of plaster on top of it, and although it is found in medieval Europe and on Crusader-period constructions in the Latin Kingdom, including Shawbak castle, it is not exclusively of this period. It is also found for example at Jabal Harun in the Byzantine-period construction of the chapel.¹²³³

Additional characterizing elements have been identified in the frequent use of different mortars on the same wall for bonding stones in the filling and in the facing and the prevalent presence of lime mortars. These are both common elements in European medieval walls, but appear to be uncommon in the Byzantine-period buildings in Petra analysed so far, in which walls are more commonly bonded with mud mortar both in the fill and the facing.¹²³⁴ In contrast, the Crusader-period walls are sometimes built with the same, lime-composed mortar both in the fill and the facing (such as on the N–S wall in the lower bailey at al-Habis and the internal wall of the southwestern tower at al-Wu‘ayra); at other times these two parts are bonded with different lime mortars (such as

¹²³² See Bini and Bertocci 1997, 408, figs. 3–4.

¹²³³ Danielli 2008 and col. fig. 65.

¹²³⁴ Communication from Christina Danielli.

for the ravelin or for the church's eastern wall at al-Wu'ayra), and occasionally the fill is bonded with mud mortar, while the facing is bond with lime mortar (southern and western walls of the church at al-Wu'ayra). In general, mud mortar fills appear therefore to exist in a minority of cases, and are normally not associated with the most important parts of the castle's defence, such as walls and towers. Incidentally, it can be observed that the medieval sloping wall on the Jabal Harun monastery, which has a lime mortar in the facing but a mud mortar in the fill, is not necessarily a defensive wall; the possibility has been raised that it may have been built for protection against earthquakes.¹²³⁵

This suggests that another element characterizing the Crusader-period use of mortars may be the use of different types of it according to the building's function and prestige. The mortars used in the church at al-Wu'ayra, for example, are different from those used in the towers and fortification walls, since in the church the fill is composed of mud mortar, but the facing is lime-based. The eastern wall of the church has an especially high-quality building technique, where a finely built apse is bonded with a hard lime mortar and the same wall is filled with a different kind of lime mortar. This may be due to the specialized aspect of workmanship required by this specific part of the church, where the quality of the building technique stands out for its quality compared to the rest of the castle.

As far as the characterization of the Crusader-period mortars in Petra are concerned, some interesting elements have been noticed thanks to a preliminary macroscopic analysis undertaken on site with the advice of Christina Danielli, a conservator specializing in construction mortars and an expert in the use of mortars in Petra. It should be borne in mind, however, that even the study of Byzantine mortars in Petra is very preliminary and that the Nabataean-period ones are still currently lacking a wide study; her observations are based, therefore, on the analysis of only a few buildings.

One element that Danielli has observed has been the generally good quality of the lime preparation in the Crusader constructions and its better quality compared to those used in the Byzantine period. Specifically, lime mortars used in the Byzantine period often tend to include lumps of "*grassello*", or partially hydrated lime not yet ready to be used in the mortar; this results in a low-quality mortar being produced. The presence of "*grassello*", as a matter of fact, has also been identified in the Crusader-period mortars (in the northern wall of the southwestern tower and ravelin at al-Wu'ayra and the north-

¹²³⁵ Fiema 2008, 93, fig. 12.

south wall in the lower bailey at al-Habis), but in her opinion this occurs more rarely than in the Byzantine period.

At the same time, there are also some similarities between the Crusader-period mortars and those of the Byzantine period. In particular, the composition of both is generally of a rather low quality, due to the low proportion of aggregates used in them. The proportion of aggregate used in both periods, for example, is far lower than the proportion of two parts aggregate to one part of lime used in the high-quality mortar of the Roman period. There are also similarities also in the composition of inclusions, such as pottery and ash. Danielli suggests that ash could be an aggregate; Pringle comments that while it is often found as a by-product of the lime-burning and slaking process, if present in large proportions, it might have been added as a kind of pozzolan. In Ascalon there is almost no ash in the Fatimid and Crusader periods, while the ash is in high proportion in the Late Roman/Byzantine periods.¹²³⁶

As observable in the southwestern tower, the Crusader-period mortar sometimes includes very large pieces of pottery, while the dimension of those found in the Byzantine mortars is normally smaller.

At al-Wu‘ayra, the quality of mortars in the Crusader period is equally low when used for bonding the pottery fragments to the walls of the vaulted cistern before it was plastered and for the plastering of the northern wall of the southwestern tower.

An interesting point are also the general similarities between the two Petra castles in terms of mortar use and composition, its generally good quality,¹²³⁷ and the good quality of the lime preparation, which also supports the use of similar building techniques in these two 12th-century castles. A clear example is the use of exactly the same mortar in the vaulted passage at al-Habis and at the southwestern tower at al-Wu‘ayra.

Further observations on the character and use of mortars in the Crusader period

The observations exposed above on mortars allow one to observe that during the Byzantine period even prestigious buildings, on which considerable resources had been invested, displayed a quality of building mortars lower than that of some Crusader-period fortifications. Although the character of building techniques in Petra is not clear during the time between the Byzantine and the Crusader periods and it is therefore not possible to define types of mortar currently the use at the time of the castles’

¹²³⁶ Personal communication.

¹²³⁷ The described variations in the quality of the mortar can in any case be interpreted as normal when part of the same technical environment (personal communication by Christina Danielli).

construction, it may be observed that in general the types of mortar in use in the Early Islamic period in the Middle East were of a lower standard to those in Europe, which particularly in France from the early 12th century onwards were more advanced than others.¹²³⁸ A better understanding of the degree of continuity or change that the Crusader period may have contributed to mortar production and building techniques more generally would involve analysis of buildings of the Fatimid period in Jordan. However, the paucity of such buildings in Jordan, or in Palestine and Syria more generally makes any such comparisons quite tentative.

Of course, it would be very interesting, from this point of view, to be able to locate the Damascene fort at al-Wu‘ayra conquered by the Franks at the beginning of the 12th century, to make a comparison between building techniques before or after the arrival of the Franks. The supposed Byzantine building phases identified by the University of Florence at al-Wu‘ayra castle may be in fact a candidate for the remains of the Fatimid castle.¹²³⁹

In more general terms, the most important parallels for the use of mortars in the 12th century would be with the rest of the territories conquered by the Franks in the 12th century, in particular the better studied Latin Kingdom of Jerusalem, but studies on mortars are not well developed yet.

Summary of the characteristics of Crusader-period building techniques and mortars at the Petra castles

On the basis of what has been outlined above, elements present in the Crusader-period building techniques in Petra may be identified in some of the following. It is stressed that since building techniques have only been sampled in a few areas of the castles, the characteristics outlined below are not meant to be comprehensive.

Rock-cut elements: the foundation of the buildings on the live rock is normally obtained by a thin foundation of mortar; there is a general reliance on the bedrock to integrate or even substitute built structures. The bedrock is often roughly cut with a pointed tool.

Building material: in general, the percentage of reused materials seems to depend on how much is readily available at the site; the use of limestone has been recorded as a choice when reused sandstone from the Nabataean period is not available at the site.

¹²³⁸ Communication by Christina Danielli.

¹²³⁹ See below for the earlier phase at al-Wu‘ayra.

Building style: the facing is in horizontal courses of irregular, often almost square stones with galleting between the courses; small stones in non-horizontal courses also occurs, probably because in this case always covered by wall plaster.

Stone dressing: dressed stones or a mix of dressed and semi-hewn stones, probably this second solution occurring when completely covered by wall plaster.

Wall fill: the walls have a fill whenever the thickness of the walls themselves allows this, but how the fill was poured between the two external facings has not yet been analysed.

Cisterns: a use of large pottery fragments to line cisterns, bonded with a poor-quality mortar, and covered with a well-smoothed plaster.

Mortar composition: a generally low quality of mortar, not different from the Byzantine one: common are the use of ash and large fragments of pottery as aggregates, but characteristics are their low proportion. Occasionally, some *grassello* is included. However, a higher level of lime preparation is characteristic when compared to the Byzantine one. Mud mortars are also common and sometimes mud and lime are mixed.

Use of mortars for construction: the frequent use of a different mortar for the fill and for the facing of the wall; the extensive use of lime mortars, probably preferred in building parts with a military function.

Covering of the external facings: in some buildings, plastering with a mortar treated with a herringbone pattern, rendered over it.

Cistern vaults lining: with a hard, well smoothed plaster.

Wall plasters: covering of internal wall facings and of vaulted passages with a plaster of a low quality.

Architectural details: Some extra level of care is used in some buildings such as the differentiated corner in towers (where often the reused Nabataean material is concentrated) and the use of professionally worked limestone architectural details with the aid of an instrument with a flat, thin cutting edge.

3. Identification of earlier phases at the two Crusader castles

A few structures at the two castles have been suspected, for different reason, to belong to a pre-Crusader phase, and are analysed here in the light of the observations made above. Building techniques have been analysed from buildings suspected to be earlier than the Crusader constructions. From al-Wu'ayra these are the following: (1) the wall of entrance to the castle barbican, internal facing; (2) the wall of entrance to the castle barbican; external facing; (3) the lining on the eastern side of the rock-cut

structure giving access to the castle. From al-Habis these are: (4) the fortification at the highest point of the castle; and (5) the external wall of the cistern.

At al-Wu‘ayra, some structures have been identified by the University of Florence as Byzantine in chronology, including numbers 1-3 as well as three other walls not analysed here, while at al-Habis, the same team has interpreted as Byzantine one building, a tower at the highest point of the mountain. The team has also hypothesized that building on Byzantine-period fortifications is a constant pattern found in all the three Crusader-period castles of Shawbak, al-Wu‘ayra and al-Habis.¹²⁴⁰ A definition of the building techniques and in particular of the character of Crusader-period mortars and their clear separability from those belonging to the Byzantine period in Petra, which have been better studied than others, have made it possible to review these conclusions in part. From this point of view, the use of mortars has been a significantly important aspect of the building techniques, because other diagnostic aspects, such as the masonry tooling, are sometimes harder to detect both because of the extensive secondary use of materials and of the difficulty in identifying them and their tooling as a result of corrosion of the sandstone exposed to the natural elements.

The walls interpreted as Byzantine by the University of Florence at al-Wu‘ayra clearly display a different building technique from most of the rest of the castle; this may well indicate an earlier construction date.

One of the walls has been analysed specifically for this purpose, the external facing of the wall at the entrance of the barbican; this wall is covered by a later phase characterized by a very different kind of masonry. It consists of large building elements, almost exclusively of limestone rather than sandstone, arranged in a stones in horizontal courses and galleting over the mortar and with a similar mortar bonding the fill and the facing, a hard lime mortar with good adherence and large aggregates. As said above, better awareness of building techniques in Petra at the time of the arrival of the Franks would greatly assist one in dating the building. However, as noticed above, a lime mortar for both the facing and the fill is not considered a common technique for the Byzantine period. Although a Byzantine fort may be perhaps explained by the need to control the entrance to Petra, there is no reason to think of a Byzantine-period fort before considering first the hypothesis that these may be the remains of the Fatimid fort destroyed by the Crusaders in 1107, since there is a specific mention of this castle in the sources. It is also possible, of course, that this wall may belong to an earlier phase of the Crusader castle, in which for some reason different building techniques were used and

¹²⁴⁰ Vannini and Nucciotti 2003.

on whose ruins most of the castle was later built. However, the sources do not record a Muslim conquest of the castle before 1144, and it is therefore not feasible to suppose that most of the castle, built in a different style, would have been built after this event. The most logical hypothesis therefore seems to be that these are the remains of the Fatimid fort.

Two other walls have been interpreted as Byzantine by the University of Florence: the internal facing of the wall of entrance to the castle and the external facing of the defence gate. The first wall, constructed over the early wall commented on above is characterized by similar building techniques to the rest of the castle in terms of choice of building materials, their dimensions and their relatively high proportion of reused elements; finally, the lime mortar bonding the facing has been commented upon by Danielli as of a generally better quality than that used in the Byzantine period, while mud mortar bonds the wall core. In addition, the mortar is very similar to that used in the ravelin and in the northeast tower. The similarities to the Crusader-period wall characteristics described above and the lack of any specific rationale put forward to support a Byzantine date make it difficult to accept the University of Florence team's suggestion that the wall may be Byzantine.

The second wall, particularly well preserved perhaps because less exposed to the elements, lines the access gate externally. The most evident element is perhaps the good conservation of the mortar plastered over the galleting. The facing mortar is a lime mortar of poor quality because it has little aggregate; because this is actually a lining of the rock gate, there is no fill. It is therefore harder to interpret this part of the wall, but the mortars and building techniques do not, in general terms, look different enough from the rest of the castle to allow one to propose a different chronology.

At al-Habis, the "keep" on top of the mountain has been interpreted by the University of Florence team as one of the Byzantine structures at the castle, together with a cistern.¹²⁴¹ It can be observed that the keep is constructed in a generally similar way to the Crusader-period structures at al-Wu'ayra, the main difference being that this has a thicker wall (about 1 m as opposed to about 0.60-0.70 m). As for the mortars, those from the fill and from the facing are different; however, they are both lime-based, hard and strongly adherent.

However, Danielli states that no known mortar of the Byzantine period analysed in Petra can be currently matched with this one, and a Byzantine chronology is in fact quite unlikely. More importantly, there are clear, strong similarities in the mortar from

¹²⁴¹ Vannini and Nucciotti 2003, 522-523.

the fill with a mortar from a Crusader-period phase wall at al-Wu‘ayra, the fill of the eastern wall of the church. The observations raised by the University of Florence’s team on the differences in the building techniques between the keep and the other walls at al-Habis, in particular the fact that the keep has a different kind of fill technique,¹²⁴² should be regarded cautiously, since the wall is only preserved for three courses. A reason for the presence of a Byzantine fort on top of Habis would not be clear, since a more suitable position for one would perhaps be the higher mountain of Umm al-Biyara, located very close to al-Habis.

The large cistern at al-Habis has been considered Crusader by the University of Florence in their survey of masonry at the site.¹²⁴³ The lower portion of it is clearly characterized by its masonry’s different state of conservation, is covered by a black, thin superficial formation and looks different on account not only of the larger dimensions of the building stones, but also of the mortar used in bonding it; it seems likely, therefore, that there are differences in construction between the lower and the upper part. The mortar in the lower part seems to be hydraulic mortar, which is particularly hard, with an excellent adherence, and includes big aggregates in high proportion, such as shells, crushed pottery and gravel. Danielli has observed that there may be similarities in the composition with Byzantine hydraulic mortars recorded at al-Humayma. It is worth noting also that this mortar is very different to that found in the vaulted cistern at al-Wu‘ayra. The wall includes an inscription in Greek; as this portion of the wall is hardly accessible, it is hard to see if the inscription was originally part of the lower part of the cistern, and therefore if it has been only partially but not completely reused in the construction of the upper part, as it actually seems. The inscription was translated and dated to between the 2nd and the 4th century A.D.;¹²⁴⁴ this could therefore well be the date of the lower part of the cistern.¹²⁴⁵ In any case, it is very likely that, if the inscription, was instead found and reused by the castles’ constructors, it would have

¹²⁴² Vannini and Nucciotti 2003, 523-524.

¹²⁴³ Vannini and Nucciotti 2003, 522-524.

¹²⁴⁴ Strano and Torre 2009.

¹²⁴⁵ It is also possible that the inscription was found somewhere near by, as suggested by the University of Florence team, and reused by the Franks in the construction of the upper part of the cistern. However, the inscription is placed at the centre of the wall and in a position where it is still readable, on the external facing of the cistern. This is however possible, and if this is the case, the chronology of the lower part would be uncertain. Elements witnessing an earlier occupation at the site include the mentioned inscription and the remains of Nabataean remains. Hoffmann (2013, 101) has recently identified a very large number of earlier sherds on top of the mountain during a surface survey, in particular concentrated on a chronology of the in the range to the 2nd to early 1st century B.C. in addition to some Hellenistic-period sherds; it is therefore possible that the cistern may be connected to the cult structures identified earlier at al-Habis (see Hoffmann 2013, 99) which may perhaps justify the need for availability of water for religious rituals. The proportion of mortar aggregates is very high and may be in accordance with the tradition of the Roman period.

been found nearby and therefore that there was a phase at the castle belonging to the Byzantine period (5th-7th century).

However, what matters the most for the purpose of this study is that the difference in the mortar and construction of the two parts of the cistern is clear, as it is the difference from the mortars employed at cistern at al-Wu‘ayra, and caution should therefore be exercised before considering this building completely Crusader. In general, it can be noticed also that the presence of a sloping wall in the earlier construction of the cistern does not necessarily indicate a military structure; like that at Jabal Harun, it may have been constructed to protect the building against earthquakes.¹²⁴⁶

It seems reasonable in the current state of research to hypothesize that the original construction of the cistern may be pre-Crusader, although it certainly had been modified and used in the Crusader period, and to suggest that associating the building techniques of its lower part to 12th-century construction be taken with caution; to answer the question about a more specific chronology for the cistern’s original construction, some further analysis would have to be done on the structure and on the other Nabataean cultic buildings at the site, as well as on the analysis of the ceramics and surface finds.

4. Discussion of structures considered as being of the Crusader period in Petra

The study has contributed some elements of discussion to the current debate on the chronology of some structures in Petra and has proposed rejecting some hypothesized identifications of Crusader-period sites. Sites where this chronology is discussed are listed here, and have all been included in my surveys; a complete discussion of the chronology and historical and archaeological context of the sites is presented in chapter 4.

Jabal Harun

Excavations at the Byzantine monastery on Jabal Harun included parts of the building which have been interpreted by the excavators as in use until at least the Crusader period, when the sources mention that the monastery was still in use in some form. The sloping wall external to the southwest quarters, which does not need to necessarily be interpreted as an element of fortification,¹²⁴⁷ would be compatible with a 12th-century chronology, because of the lime mortar facing the wall and the mud mortar bonding the wall core. In addition, it is built with stones in horizontal courses and

¹²⁴⁶ Fiema 2008, 93 and 96, n. 37.

¹²⁴⁷ Fiema 2008, 93.

galleting between the joints. Unfortunately, specific data are not available in the region to clarify whether this specific use of mortar can be chronologically placed in an earlier or later period, or if it should be characterized as non-local and therefore attributed to Frankish constructors. A study of mortars at Shawbak castle may give some answers to these questions.

Wadi Farasa

Some observations on the site during the medieval phase have been made by the excavator, Stephan Schmid. The new dwellers restored the retaining wall in the lower terrace and extended it in sandstone blocks in a straight line rather than with a zig-zag trace, which is what the Nabataeans had done on this wall previously. Some of the points were hit by the pressure of the soil, required repairs and were corrected. The character of the structures is defensive as the former staircase was reused to create a tower; they narrowed down the already small entrance to the Soldier's Tomb with some reused architectural elements. On the upper terrace, stone blocks were reused to fill the gap between columns and access to the tomb was through a narrow passage and a separate room; this wall was built on top of the fill of a cistern, which was therefore not in use any more.¹²⁴⁸

During my visit I was able to add further information. Walls at Wadi Farasa are built mainly reusing the construction material from the former Nabataean funerary complex, and it is therefore not possible to make observations on the structures from the point of view of the selection of construction materials, their tooling and building style. However, it is possible to observe that the mortar is always a mud mortar, and that there is no distinction between the fill of the wall and its facing. It is friable and has a scarce adherence and is often used sparingly because of the fact that the reused stones are often well dressed and do not have large gaps between them. This is therefore the main element of comparison with the known Crusader castles of al-Wu'ayra and al-Habis, where the use of mortar is clearly different, since the same mud mortar both in the fill and in the facing has not been recorded; especially mud mortar in the core seems not to be present in fortified structures. The general building style stands in clear contrast also, as it does not seem to include much planning in the construction of walls, which are often not rectilinear. The only element in common, apart from a large reuse of the material already present on site, seems to be the carving of the window in the Garden Tomb, which looks similar to the one obtained in the cave overlooking the entrance to

¹²⁴⁸ Schmid 2012, 83.

the barbican at al-Wu‘ayra, and the modification of the Tomb space, which was obtained by pick-axing the sandstone walls in different directions.

It is clear therefore that the constructions do not have much in common with those at the Crusader castles apart from the rock-carving techniques, and that the building of the structures here was the work on unspecialized workmanship.

Baydha

The building techniques of the domestic structures at Baydha have been briefly analysed by myself in the course of excavations for the project Islamic Baydha, based on the form that I have designed and used for the study of structures analysed in this appendix. Building characters can be summarized as follows: large reuse of earlier material; hewn to semi-hewn building elements arranged in irregular stones with galleting between the joints and laid in sub-horizontal to horizontal courses; consistent use of mud mortar, undifferentiated in its facing and wall core. Walls are rectilinear in some cases, but more often they are non-rectilinear and show a great degree of casual arrangement, even more so than at Wadi Farasa.¹²⁴⁹

No elements in common with the building techniques at the Crusader castles are present, and all elements indicate local, non-professional workmanship involved.

Al-Naq‘a

In general, there are no similarities with the castles of al-Wu‘ayra and al-Habis, apart from the technique of building walls right on the edge of the bedrock, which appears to be a way of building developed locally through time, including the Nabataean period. The building techniques used here are very different from those at al-Wu‘ayra and al-Habis. There are no horizontal courses and galleting between the joints. Mud mortar is used instead of lime, and the building stones are flat, rectangular and larger than those at the two Crusader castles, which are square and not flat despite the fact that they are both cut from sandstone. Finally, the rock spur where the castle has not been cut further to improve the natural defence. Overall, the quality and solidity of the walls construction is lower and their very poor conservation proves it.

Jabal Madbah

This large fortification, which has been traditionally interpreted as a Crusader structure, still survives in good condition. The whole fortification has the specific

¹²⁴⁹ Sinibaldi and Tuttle 2010, 447.

character of having several obtuse angles which result in a polygonal building, not a common element in Crusader-period architecture, but much more likely for the Byzantine period.¹²⁵⁰

There appear to be no obvious traces of secondary use of an earlier fortification; most of the construction appears to belong to one phase only and if reuse of earlier materials is present, it is not a significant component. This consistency in the building style and apparent homogeneity suggest that the structure's building material may come from the excavation of the nearby Obelisks, dated to the Nabataean period.

The building style is characterized by ashlar rather than irregular stones only occasionally are there small gallets between blocks. The blocks have been worked to obtain a smooth surface with a pointed tool. Most of them are rectangular rather than sub-square. The mortar used is a mud mortar, which is only visible in the fill, while the facing has no mortar between the elements. Bellwald¹²⁵¹ observed that the walls in question do not belong to a closed structure, but to a polygonal line running along the southern end of the Place of Sacrifice, and argued that it is a containing wall enlarging the surface of the Place of Sacrifice; for this reason the walls do not have an internal facing. The tooling of the stones is typical of the Nabataean period, characterized by parallel striations.

Jabal al-Khubtha

The structures on the western edge of the mountain are preserved to a much less extent than at Jabal Madbah, and therefore, a description of building techniques is harder. However, what is very evident is the rock-cutting to obtain some structures, while others are made of regularly laid rectangular building elements which look typical of the Nabataean period in their dressing and building style. One of the elements observed is for example the diagonal tooling of some masonry which can be easily seen in Petra in Nabataean-period buildings. A team led by Laurent Tholbeq has surveyed the area recently and did not notice any secondary use of the structures in the surveys or any possible traces of a medieval structure.

Aslah Triclinium

The wall interpreted as Crusader in date is founded on the bedrock by preparing a thin layer of earth and small stones and pebbles between the rock and the lowest course

¹²⁵⁰ See chapter 4 for a comment on the architecture of the building.

¹²⁵¹ Bellwald 1996, 73.

of the wall. The wall's building technique is characterized by a construction in large limestone elements, in a building style that is unknown in medieval Petra. This is characterized by a very thick bed of mortar directly on the bedrock (about 30 cm) and with the same mortar bonding (from bottom to top) a row of large stones (about 40x60 cm), under a row of smaller stones (about 20x40 cm), under a row of irregular stones (about 10x20 cm). The style very clearly does not correspond to any known Crusader building analysed so far, and there is therefore no reason to associate it with this period.

The hypothesis that this could be a medieval tower controlling the access to the city, moreover, does not look acceptable because this would not be an efficient building technique for this purpose: the thickness of the wall (about 70 cm) is not suitable for a tower; the foundation of small stones and the mortar bond also does not appear suitable, especially if the tower, as the authors suggest, would have been several metres high and made use of the rock spur opposite, which would host a high point of observation on the Bab al-Siq.

5. Some observations on building techniques at al-Shawbak castle

Finally, in terms of parallels with other sites in the region, some observations can be made regarding Shawbak. Although, the potential of a parallel here with the castles of al-Wu'ayra and al-Habis is obviously very promising, this potential has still not been exploited much. A complete survey of the castle's building techniques would be important, as well as some observations on mortars.

Some observations have been made by the University of Florence team on the internal fortified entrance to Shawbak castle.¹²⁵² A general difficulty has been acknowledged in making a distinction between Crusader-period construction and later ones.¹²⁵³ This is understandable since the parallels for building techniques in the region are very scarce; the closest available comparison for the Crusader period is actually al-Wu'ayra. It has also been hypothesized by the team that the Crusader phase makes use of an earlier one at the site, which has been interpreted as Byzantine, or Roman/Byzantine, on the basis of a parallel with the pre-Crusader phase at al-Wu'ayra, but no specific reasons have been exposed so far for suggesting this chronology at either of the two sites.¹²⁵⁴

¹²⁵² Nucciotti 2007.

¹²⁵³ Nucciotti 2007, 29.

¹²⁵⁴ Nucciotti 2007, 28; Vannini and Nucciotti 2003, 522-524. For a comment on this point, see chapter 4, Shawbak; al-Wu'ayra.

On the basis of my survey at al-Wu‘ayra and my brief survey of Crusader-period structures at Shawbak, this second phase appears similar to some parts of the external masonry of the northeast tower at al-Wu‘ayra, where herringbone-pattern-threated mortar is also present on the western external facing of the southwestern tower. It can also be noticed that differences in quality, to a certain extent, should be considered normal for the same technical environment.

Parallels between Shawbak and al-Wu‘ayra include the similar tooling in the al-Wu‘ayra chapel and the under-arch of the gate of the inner wall at Shawbak (with a tool with a flat end, and worked without margins) and the use of the same herringbone pattern in the mortar for external and internal facings, which implies the use of an additional plaster.

At both the lower church of Shawbak and the al-Wu‘ayra church, the quality of the wall construction is generally low: at Shawbak, the chapel is characterized by roughly cut elements, including reused Nabataean masonry, bonded with mud mortar. The Shawbak church is built with larger stones at the bottom, set directly on bedrock. The walls are of diverse quality and plastered. Even the east wall had galleting both under and between stones, a sign of choosing less regular building elements. The apse at Shawbak is tooled with an instrument leaving parallel tooling marks. The manufacture of the apse is very similar to that at al-Wu‘ayra, in the mortar bonding it, the quality of the stones cutting and the tooling with an instrument with a flat end. The apse of the Shawbak chapel was plastered, although it is tooled in a very fine way, and it is likely that the one at al-Wu‘ayra was plastered, too.

The upper church has a higher quality of construction, which is expressed mainly in the fine tooling of the ashlar used for details such as door frames, windows and pilasters, both those against the walls and the freestanding ones, which are mainly worked with a pointed tool leaving fine traces, whose elements are bonded with white hard mortar. However, the side walls, which were certainly plastered, had a low-level building technique, resembling some parts of the al-Wu‘ayra towers or of the church.

In conclusion, the very limited evidence observed at Shawbak shows that there are close parallels in the details of building techniques between the lower church and the al-Wu‘ayra chapel, specifically in the use of mortars, the tooling of the apse and the building style of the walls. Close similarities are also in the building styles of the gate to the inner wall enceinte at Shawbak and the towers at al-Wu‘ayra. Therefore, it is possible to state that some parts of the two castles involved a very similar level of specialized workmanship. Pringle has suggested that the similar building quality at the

two churches, including the identical cornice mouldings in the apse of the two chapels, may be associated with the fact that both churches have been planned by the same architect, or perhaps used by local Christians.¹²⁵⁵

Conclusions

The observations presented above can be summarized as follows. A preliminary analysis of building techniques at the sites described above in Petra, in particular at the two castles of al-Wu‘ayra and al-Habis has allowed the redefinition of two main aspects: some earlier conclusions about the construction of these Crusader castles by reusing earlier Byzantine fortifications, and the identification of several Crusader-period buildings in the Petra region; the implications of these results, in particular the second point, are better framed in chapter 4, where Petra is analysed.

Another point highlighted by this study is that the two castles of al-Wu‘ayra and al-Habis were not built in a substantially different way, although their function may have been different. This further confirms the already widely accepted Crusader-period chronology for al-Habis castle and provides more evidence for the definition of the characters building techniques of Crusader-period castles in Petra.

The results obtained offer additional data to discuss two currently accepted theories: the one about the Petra castles being always constructed over Byzantine forts, and a second currently accepted theory according to which Frankish castles in Transjordan were constructed in a faster and less careful way than in other areas at the same time, the reason being a severe shortage of manpower.

Although the aspect of building techniques has been scarcely approached until now despite its great importance,¹²⁵⁶ some scholars have advanced some hypotheses on the subject. Regarding the castles in Transjordan, Brooker and Knauf have stated that “perpetual manpower shortages, the lack of skilled workers and the task’s immensity dictated that the fortified desert line be built economically”.¹²⁵⁷ They specify that the castles of Karak, Shawbak, al-Habis and al-Wu‘ayra are characterized by several elements indicating economy of construction, including the restriction of labour-intensive finishing techniques to areas of specific significance, the minimal decorative

¹²⁵⁵ Pringle 2004, 35; Pringle 1998, 376.

¹²⁵⁶ The use of building materials in connection with Crusader-period castles, for example, has been commented upon by Marino and Coli as one of the few examples of an interest in this subject; the authors note that in addition to the availability of monuments of the Crusader period, there are also references to this topic in textual sources, including William of Tyre (Marino and Coli 2012, 101, reference not specified). See also Marino 1990.

¹²⁵⁷ Brooker and Knauf 1988, 186.

programme and the intense reuse of earlier materials. The first two aspects may certainly be an indication of building in economically stringent conditions, although in order to verify this statement better a closer parallel with structures of the same period in the Latin Kingdom of Jerusalem would be necessary. Moreover, other aspects need to be taken into consideration. Transjordanian castles, which have often not been reused afterwards, show well through their state of conservation their good quality of construction; this is clearly the case with some parts of al-Wu‘ayra castle, such as the towers, still partially preserved, at least in part thanks to the good quality of the building mortars. Brown recorded that building of phase I (Crusader) at al-Wu‘ayra, were solidly and regularly built, with a better quality than structures related to phase II (Ayyubid).¹²⁵⁸

According to William of Tyre, for the building of Banyas (*Belinas*) Baldwin III called from everywhere in the Kingdom constructors with experience in architecture.¹²⁵⁹ It seems from this passage that there was not an immediate availability of specialized constructors in the Kingdom, since they normally had to be called from far away. Since from the data presented above it seems that specialized workmanship had been called to work at al-Wu‘ayra, in particular on some architectural details and probably on the mortar preparation, this means that a certain effort had been employed in its original construction by calling specialized masters. This effort is absent, for example, on the structures, probably of the 12th-century phase, of Wadi Farasa, but can be seen at al-Habis castle.

Another element advocated by Brooker and Knauf as representing economy in the Jordanian castles, such as the large quantity of reused material, should not be accepted necessarily as an element of building economically. The intensive reuse of building material is a common characteristic, of Frankish architecture in the rest of the Latin Kingdom of Jerusalem, where the presence of a former settlement affording a supply of construction material was often one of the main elements guiding the choice of the location for a new Frankish settlement.¹²⁶⁰ William of Tyre, for example, witnesses that one of the main motivations for the choice of the foundation place of Darum was the presence of remains of earlier buildings.¹²⁶¹ The reuse of earlier materials, moreover, was a characteristic of the Palestinian region, where stone has been the constructing

¹²⁵⁸ Brown 1987a, 32-33.

¹²⁵⁹ Cited in Marino and Coli 2012, 102, note 16, without a reference.

¹²⁶⁰ This was the case for example at al-Ram, Jifna, Khirbat al-Marjama, Iribbin, Saffuriya, al-Affula, Qaqun, Ramla, ‘Abud, ‘Amwas (Sinibaldi 2002).

¹²⁶¹ Quoted in Deschamps 1934, 56, n.4.

material for centuries;¹²⁶² this aspect needs not to have a specific significance even for Frankish building techniques. Marino thinks that reuse appears to be more intense in settlements on the borders, where there was a need for faster construction and because of the most articulated functions of castles in these areas.¹²⁶³ However, the Transjordanian castles were not necessarily in a more vulnerable position than the ones on the other borders.

Brooker and Knauf observed that the fosse excavation at al-Wu‘ayra required immense effort and that it must have reflected urgent strategic needs.¹²⁶⁴ However, again, when the Franks encountered a situation where the bedrock was easy to cut, they normally took advantage of it, in order to make it an element of architecture and as an alternative to construct walls, as it happens at al-Wu‘ayra and al-Habis, two castles constructed on a sandstone bedrock which is relatively easy to carve; at al-Wu‘ayra, in addition, the natural defence of the rock spur where it was built has allowed the constructors to save the effort not to build a moat; this character is again not unique of al-Wu‘ayra.¹²⁶⁵ The choice of a location with a rock spur, often used by the Franks for fortifications as it was the case at al-Wu‘ayra, had the advantage of making it necessary to isolate artificially the site only on one side.¹²⁶⁶ Therefore, this element is not unique to Transjordan and was used in other parts of the Latin Kingdom in order to save time and workmanship.

It has been noticed as a recurring element at Crusader castles that the original quarry of the building materials may be located at the site itself, and also that often rock-cutting for obtaining building materials was used in order to increase the castle’s passive defenses themselves, such as at Sahyun in Syria.¹²⁶⁷ Therefore, at al-Wu‘ayra and al-Habis, reliance on rock-cutting as an element of the architecture is again a character not unique of this castle; it is a practical element encountered at many other sites of more or less the same period. In fact, it has been noticed that the moat of al-Wu‘ayra and Karak have similar depth (between 20 and 30 metres) to the one at Sayun.¹²⁶⁸ The quarry for the materials at al-Wu‘ayra is not currently identified, but it makes sense to think that at least part of the sandstone which was not reused from

¹²⁶² Pringle 1989, 14.

¹²⁶³ Marino 2012, 102, note 13.

¹²⁶⁴ Brooker and Knauf 1988, 186.

¹²⁶⁵ It has also been used for example at several Frankish sites such as Banyas (Sinibaldi 2002).

¹²⁶⁶ This system was used for example at Beaufort, Qal‘at al-Dubba, Qal‘at Jiddin and Montfort, and for Caesarea and ‘Atlit, where a rock spur was also selected to construct the castle, with the difference that here the sea was used to isolate the site (Sinibaldi 2002, 372).

¹²⁶⁷ Marino and Coli 2012, 101, note 11.

¹²⁶⁸ Biller et al. 1999, 54.

existing buildings was coming from the rock-cut parts, including the east or the north moats.

In conclusion, while the Franks have certainly made a successful effort in adapting to the local environment, and while certainly the element of building walls on the bedrock is a locally well developed element, this is not a unique character of the Petra castles.

These results presented in this appendix can be commented upon by noticing that there seems to have been a presence of masters working at the castle construction who had been trained in an environment influenced by some western input, and who were probably responsible for the introduction of specific building elements, such as cross vaults, the work of detailed architectural elements, the plaster's composition and superficial treatment and the stones tooling, which are currently not recorded in the local architecture. This means that the Petra environment received new input in terms of the technical results of construction, and probably also in technical expertise, although it does not seem to have been communicated to the local technical environment, at least so far as our current knowledge of construction methods of the later period in Petra is concerned. There may have been, however, a local component in the building techniques, such as the local tradition in mortar preparation. Other aspects, such as the ability to build masonry directly on to bedrock and to use it as part of the architecture can be considered partially an aspect of adaptation to the local environment, but are present in other castles of the Crusader period as well.

While, in summary, it may be true that the Transjordanian castles involved an element of economy, the opinion that the resources employed in their construction were very different from those used in castles in other areas of the Latin Kingdom at the same chronology should be taken cautiously.

It is possible to hypothesize also that some specialists not trained locally, who most likely arrived to plan and build structures like the church or the cross-vaulted tower, did also contribute to the training of locals in the preparation of lime mortars as well as in some building techniques. It is difficult to comment on the possible introduction of new elements in a technical environment, since we know virtually nothing of what this was at the arrival of the Franks in Petra; it would be useful for this purpose to identify more securely the Fatimid fort at al-Wu'ayra, which perhaps is the one now classified as Byzantine-period structure. But there are no indications in the known later buildings that any of these elements have been communicated to the local builders.

For what concerns the architectural elements adopted by the Frankish castles from the local environment, Biller and his collaborators propose that the salients in the enceintes of Karak and Shawbak are an element drawn from late antique, local architecture.¹²⁶⁹

Finally, since some characteristics of construction are so recurrent in the three castles of the Crusader period (al-Shawbak, al-Wu‘ayra and al-Habis), the elements observed have a certain value for the definition of well identifiable Crusader-period building techniques in the area of Petra and Jabal Shara.

¹²⁶⁹ Biller et al. 1999, 53-54.

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Abbreviations:

<i>ADAJ</i>	<i>Annual of the Department of Antiquities of Jordan.</i>
<i>AJA</i>	<i>American Journal of Archaeology.</i>
<i>AOL</i>	<i>Archives de L'Orient Latin</i>
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research.</i>
<i>BCBRL</i>	<i>Bulletin of the Council for British Research in the Levant,</i>
<i>JARCE</i>	<i>Journal of the American Research Center in Egypt.</i>
<i>JRAS</i>	<i>Journal of the Royal Asiatic Society</i>
<i>PEFQS</i>	<i>Palestine Exploration Fund Quarterly Statement</i>
<i>PEQ</i>	<i>Palestine Exploration Quarterly.</i>
<i>QDAP</i>	<i>Quarterly of the Department of Antiquities in Palestine</i>
<i>RHC Lois</i>	<i>Les Assise de Jerusalem, 2 vols. Paris (1841-3)</i>
<i>RHC Occ.</i>	<i>Historiens Occidentaux, 5 vols. Paris (1844-95)</i>
<i>RHC Or.</i>	<i>Historiens Orientaux, 5 vols. Paris (1872-1906)</i>
<i>SHAJ</i>	<i>Studies in History and Archaeology of Jordan</i>
<i>ZDPV</i>	<i>Zeitschrift des Deutschen Palästina-Vereins.</i>

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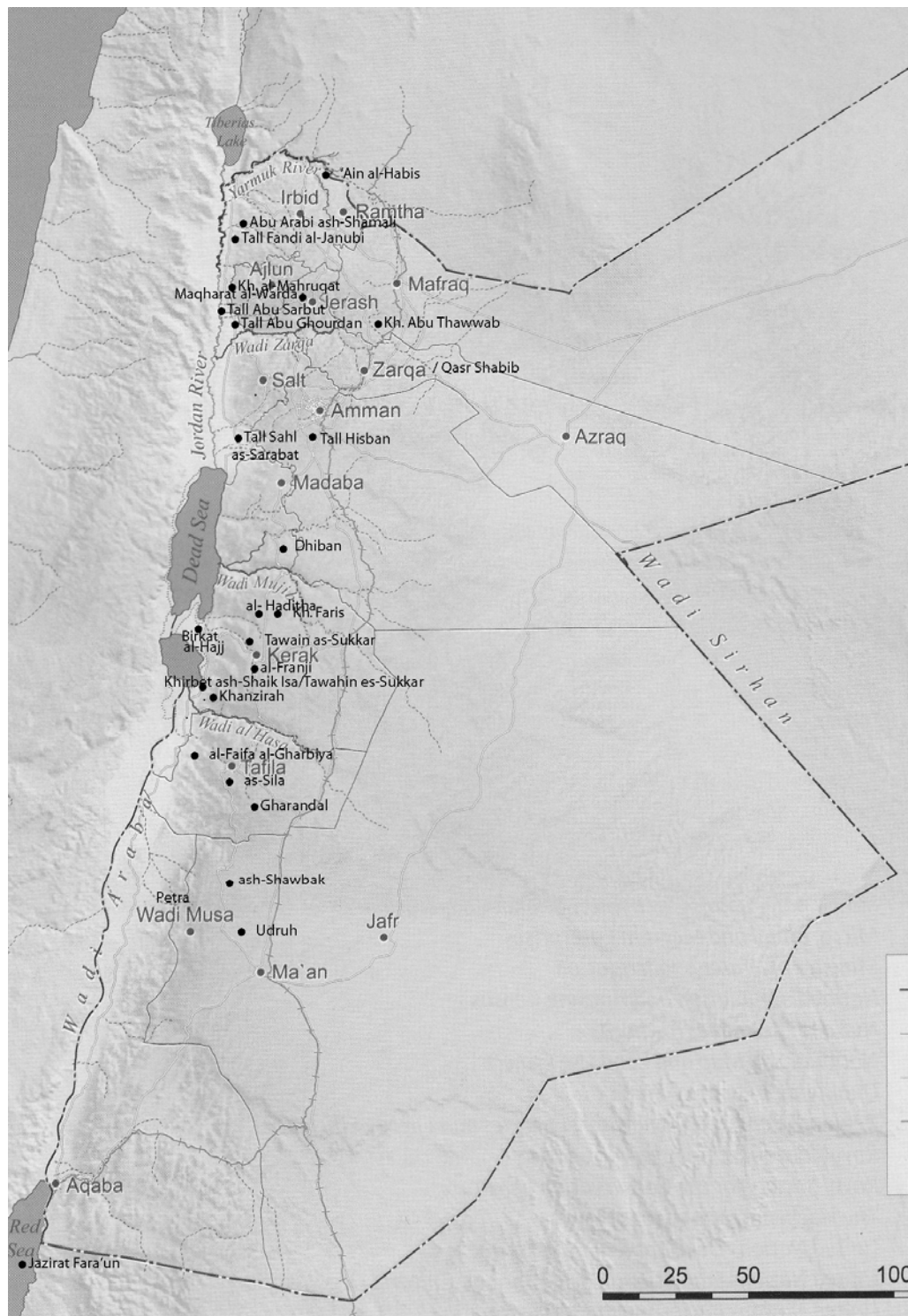


Fig. 1: Location of the sites mentioned in the text (adapted from Ababsa 2013a).

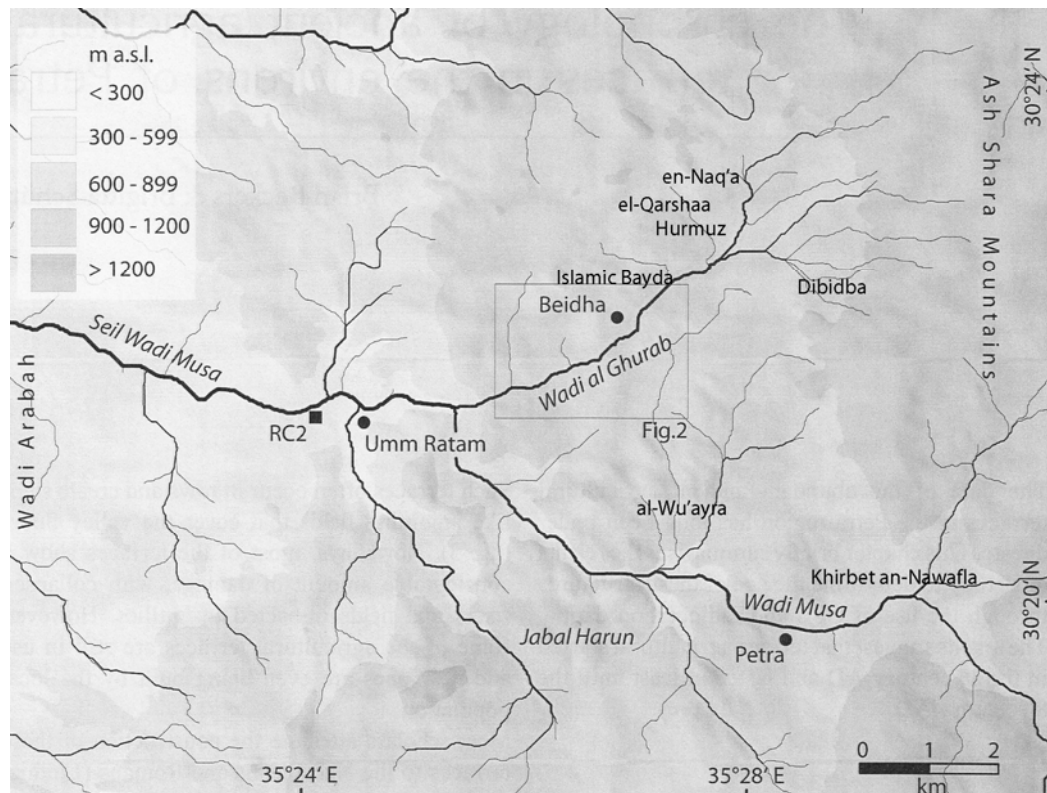


Fig. 2: Location of sites in the Wadi Musa and Baydha area (adapted from B. Beckers and B. Schutt, *The Chronology of Ancient Agricultural Terraces in the Environs of Petra*, in M. Mouton and S. Schmid 2013).

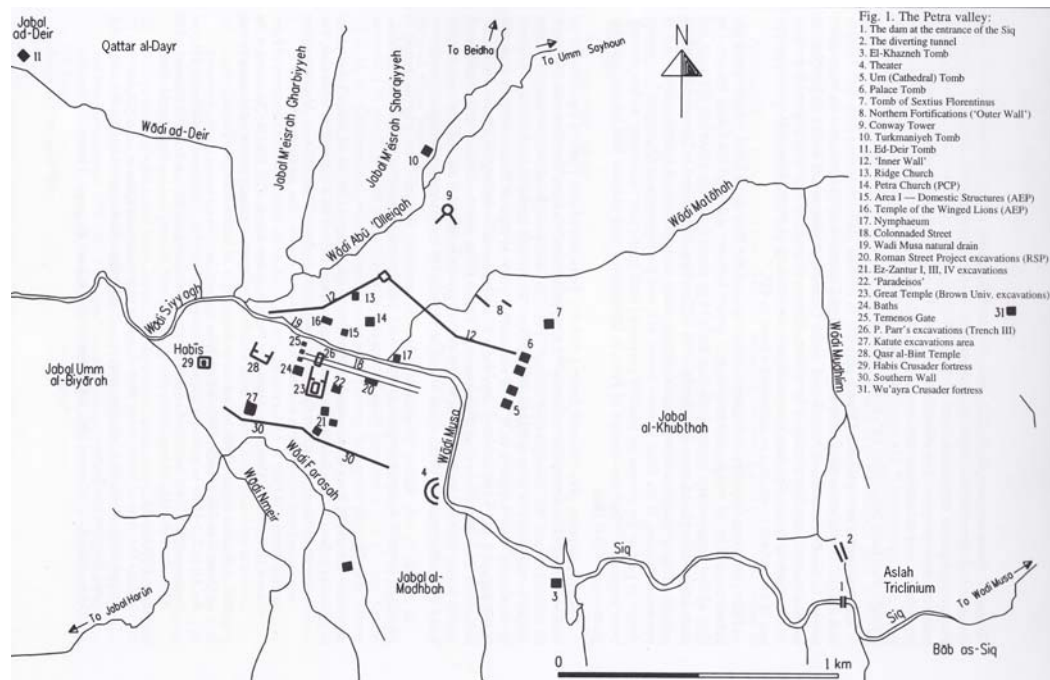


Fig 3: Location of sites in the Petra center (adapted from Fiema 2002).

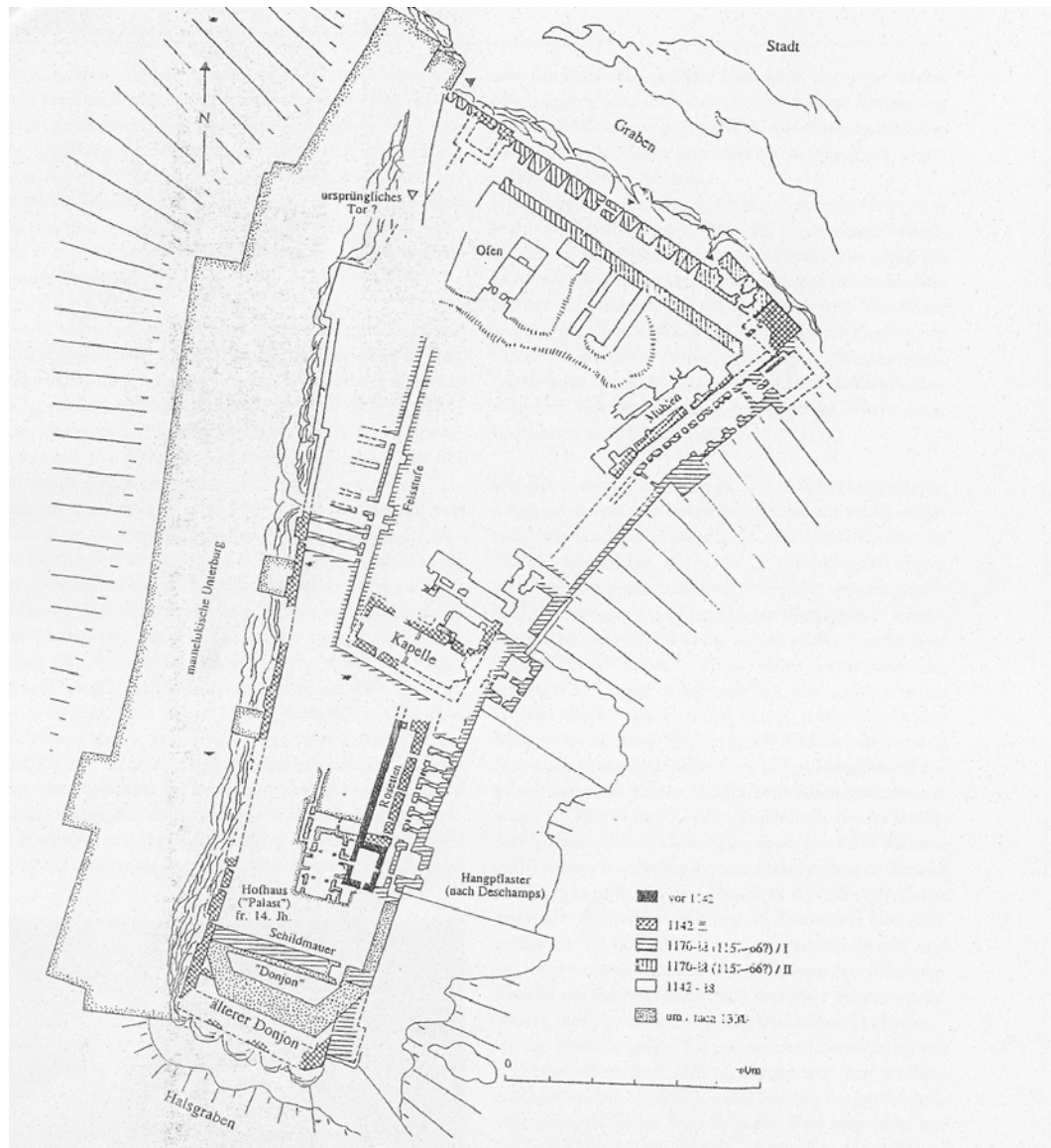


Fig. 4: Phasing of construction activities at Karak castle (reproduced from Biller et al. 1999).



Fig. 5: The fort at Islamic Bayda, aerial photo (photo by I. LaBianca, courtesy of C. Tuttle).



Fig. 6: Masonry tooling in the upper church at Shawbak, tool with pointed end (photo: M. Sinibaldi).



Fig. 7: Masonry tooling in the church at al-Wu'ayra, tool with flat end, subparallel striations (photo: M. Sinibaldi).



Fig. 8: Masonry tooling in the church at al-Wu'ayra, tool with flat end, non-parallel striations (photo: M. Sinibaldi).



Fig. 9: Building style of the north-east tower at al-Wu'ayra, looking south (photo: M. Sinibaldi).



Fig. 10: Slaistering treated with herringbone patterns on the northwest tower at al-Wu'ayra, looking east (photo: M. Sinibaldi).

Fig. 11.1-5 : ceramics from al-Wu'ayra; Fig. 11.6-10: ceramics from Wadi Farasa

1. Handmade bowl. (Phase IA). Fabric: A1. Primary manufacturing technique: slow wheel. Surface treatment: red-slipped and smoothed.
2. Glazed wheel-thrown bowl. (Phase IB). Fabric: brick-red. Slip: white. Glaze: yellow, glossy.
3. Handmade cup. (Phase IA). Fabric: B. Primary manufacturing technique: hand-formed. Surface treatment: none
4. Handmade jar. Fabric: (Phase IA). A1. Primary manufacturing technique: slow wheel. Surface treatment: smoothed.
5. Handmade jug/jar. (Phase IA). Fabric: A1. Primary manufacturing technique: slow wheel. Surface treatment: smoothed.
6. Handmade cup. (from the upper terrace). Fabric: A1. Primary manufacturing technique: slow wheel. Surface treatment: smoothed.
7. Handmade spout. (from the upper terrace) Fabric: A1. Primary manufacturing technique: slow wheel. Surface treatment: red-slipped and smoothed.
8. Handmade jug. (from the upper terrace). Fabric: D. Primary manufacturing technique: slow wheel. Surface treatment: red-slipped and smoothed.
9. Handmade bowl. (from the upper terrace) Fabric: A1. Primary manufacturing technique: hand-formed. Surface treatment: none.
10. Handmade basin. (from the upper terrace) Fabric: A1. Primary manufacturing technique: handformed. Surface treatment: none.

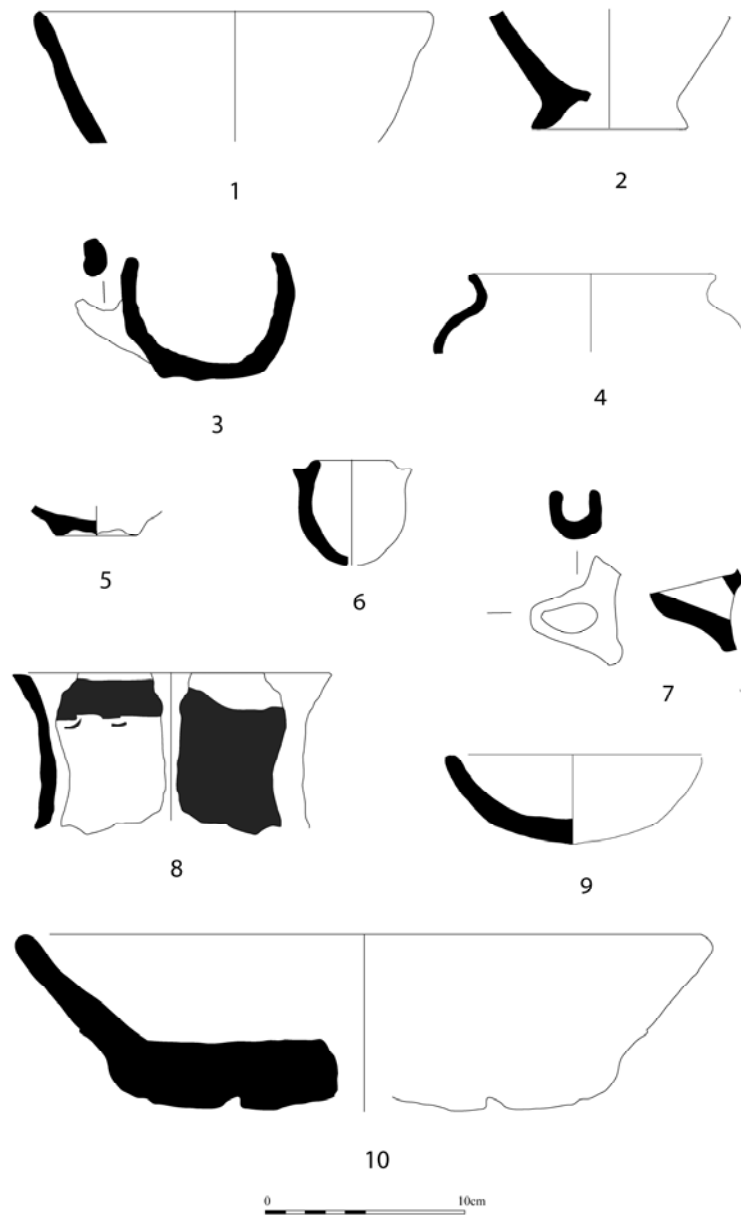


Fig. 11: Selection of ceramics from al-Wu'ayra and Wadi Farasa (ill. M. Sinibaldi).

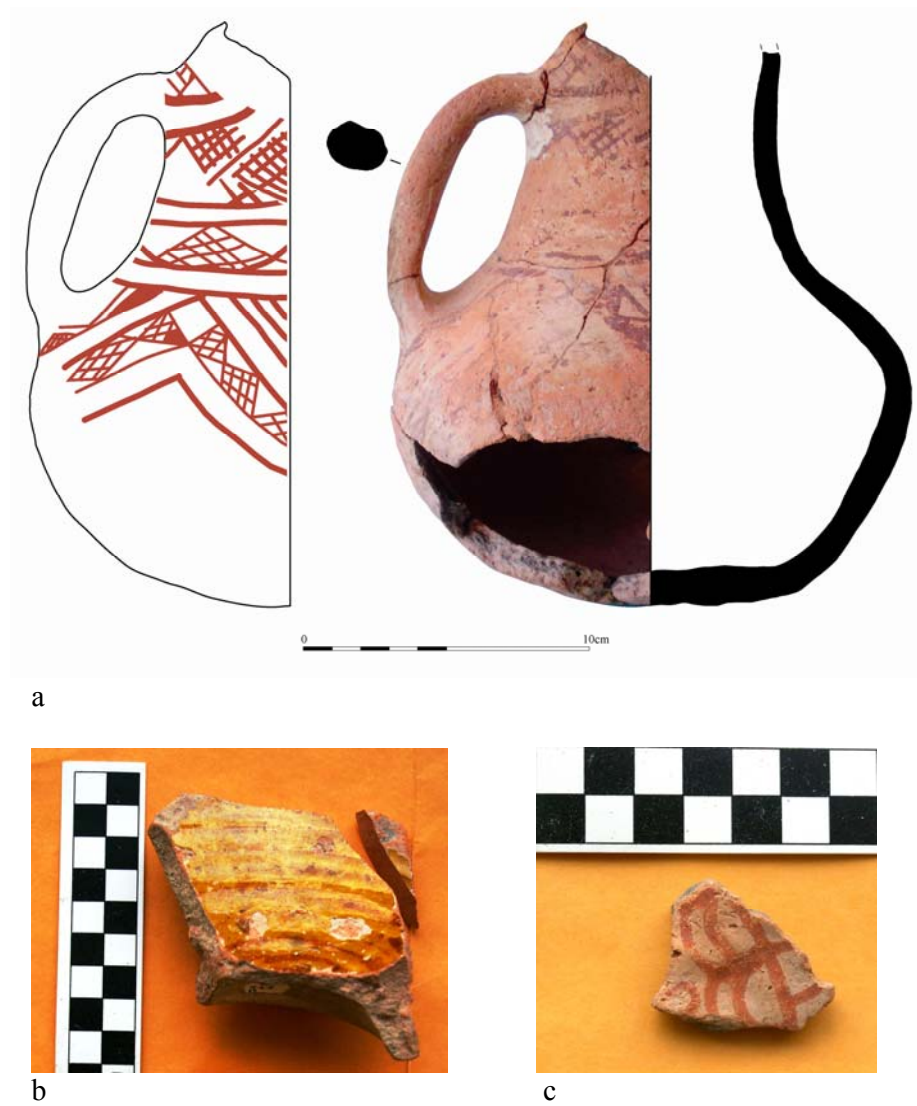


Fig. 12: a) painted jug from Wadi Farasa, upper terrace. b) Glazed bowl from Brown's excavations at al-Wu'ayra, phase IB.. c) Fragment of orange-painted, handmade pottery from Brown's excavations at al-Wu'ayra, phase IA (illustration and photos: M. Sinibaldi);

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Calibri 11

Artifacts Inventory

NI: 921 YEAR_OF_COLLECTION: 2002 SU: 103 SONDAGE: 5 AREA: UPPER TERRACE DEPTH/LEVEL: PHASE: TU: CA: CF: KIND_OF_MATERIAL: UNSTRATIFIED

SITE_ID: WF DESCRIPTION: PAINTED JUG FROM SMALL CISTERN

FORM: 11

Handle ☐ Wall ☐ Other: ☐ P ☐ Base ☐ Rim ☐

QUANTITY: 15 MFN: 1

GROUP: A SUBGROUP: B SURFACE: B4

Fabric type: A1 Fabric inclusions: CML Fabric colour: O Fabric firing: BC Fabric hardness: 2

Chaff quantity: 2 PETROGRAPHIC_GROUP: PET_SAMPLE_NUMBER: CHEMICAL_ANALYSIS: CHEM_SAMPLE_NUMBER:

Slip kind: THIN Glaze kind: Glaze colour: WHITE Glaze area: ALL EXTERIOR Slipping technique: Slipping thickness:

Painting colour: DARK RED Painting area: INCLUDES UNDER HANDLE Painting pattern: GEOMETRIC Finishing kind: SMOOTHED Finishing area: Finishing tools: Primary forming technique: SW Forming quality: 2 Other decorations: Marks: Restorations: YES

PHOTO ☒ MEASURES: ☐ N_DRAWING: 340 ☒ DRAWING ☐

FILM/FILE: SHOT: Rim diameter: Max diameter: 18 Base diameter: 7

Handle thickness: 8 Handle width: 10 Height: 19.5

Minimum wall: 10

Chronology: mid/late 12th century Compilation place and date: Type: 4D

COMPARANDA: PARALLEL FOR GEOMETRIC PATTERNS: SEE BAYDA DOCUMENTATION, PROJECT: GRID PATTERNS: AL WUAYRA.

NOTES: PAINTED IN DARK RED. STAINES OF PLASTER FROM DEPOSITION. SMALL CHUNKS OF LIME IN THE FABRIC. TRACES OF RED PAINT IN THE INTERNAL SURFACE OF THE NECK. CONSERVED. THE SURFACE SHOWS THAT THE FIRING IS NOT HOMOGENEOUS. RIM IS MISSING (NECK DIAMETER UNDER HANDLE: 5. 50). SENT FOR EXHIBITION IN FLORENCE, NOW IN THE PETRA MUSEUM (JP 7705).

Record: 1 of 1 (Filtered)

Form View

start

6:43 PM

Fig. 13: The database used for the analysis of pottery from Petra.

	Project	Year	Area	Trench	Sector		ARCHITECTURAL STRATIGRAPHIC UNIT
	Topographic Unit	Architectural Complex	Building Unit	Functional Unit	Spacial Unit	Elevation	

DEFINITION:

1. STRATIGRAPHY

<i>Physical Relationships</i>		<i>Stratigraphic Sequence</i>	
abutted by		Anterior to	
covered by			
filled by			
cut by			
equals		Contemporary with	<div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin-right: 5px;"></div> <div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin-right: 5px;"></div> <div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin-right: 5px;"></div>
bonded with			
abuts		Posterior to	
covers			
fills			
cuts			

2. DESCRIPTION

DESCRIPTION:

<i>Location</i>	<i>Orientation</i>	<i>Levels</i>		<i>Maximum Measurements</i>		
		max	min	length	width	height

PRESERVATION			SEPARABILITY		
complete <input type="checkbox"/>	robbed <input type="checkbox"/> recent collapse <input type="checkbox"/> conserved <input type="checkbox"/>	leaning <input type="checkbox"/>	clear <input type="checkbox"/> unclear <input type="checkbox"/> arbitrary <input type="checkbox"/>		
+ 50% <input type="checkbox"/>		degrees			
+/- 50% <input type="checkbox"/>		direction			
- 50% <input type="checkbox"/>					
foundation <input type="checkbox"/>					

MATERIAL		MASONRY			
Sandstone <input type="checkbox"/>	%	<i>Wall Stones</i>		<i>Chinking Stones</i>	
Limestone <input type="checkbox"/>	%	Cobbles <input type="checkbox"/>	%	Pebbles <input type="checkbox"/>	%
Chert <input type="checkbox"/>	%	Boulders: sm <input type="checkbox"/>	%	Cobbles <input type="checkbox"/>	%
Basalt <input type="checkbox"/>	%	med <input type="checkbox"/>	%	Other	%
Bricks <input type="checkbox"/>	%	lg <input type="checkbox"/>	%		
Other	%	v lg <input type="checkbox"/>	%		

Total percentage of materials in secondary use: _____ %		Legend for stone sizes A: pebble (2-6 cm) B: cobble (6-25 cm) C: boulder (25 cm and more): small: 25-50 cm medium: 50-75 cm large: 75-100 cm very large: more than 1 m
<i>Bricks</i>		
average length		
average width		
average thickness		

Fig. 14a: The documentation form created to analyze building units in Petra.

STONE DRESSING						STONE TOOLING					
unhewn	<input type="checkbox"/>	%	ashlar	<input type="checkbox"/>	%	mark width	photo	<input type="checkbox"/>	instrument:		
semihewn	<input type="checkbox"/>	%	bossed	<input type="checkbox"/>	%	mark length	drawing	<input type="checkbox"/>			
dressed	<input type="checkbox"/>	%	margins	<input type="checkbox"/>	%	Comments:					
CONSTRUCTION											
Style				Corner				Courses			
boulder + chinking	<input type="checkbox"/>		rubble	<input type="checkbox"/>		differentiated	<input type="checkbox"/>	uncoursed	<input type="checkbox"/>	no. of identified courses _____	
ashlar-fit	<input type="checkbox"/>		rubble-filled	<input type="checkbox"/>		undifferentiated	<input type="checkbox"/>	irregular	<input type="checkbox"/>		
header + stretcher	<input type="checkbox"/>			<input type="checkbox"/>				sub-horizontal	<input type="checkbox"/>		
				foundation present				<input type="checkbox"/>	horizontal		<input type="checkbox"/>
MORTAR											
Facing				Filling				Wall Facing			
dry-laid	<input type="checkbox"/>		Colour			dry-laid	<input type="checkbox"/>	Colour		unfaced	<input type="checkbox"/>
clay	<input type="checkbox"/>		Munsell			clay	<input type="checkbox"/>	Munsell		plaster	<input type="checkbox"/>
mud	<input type="checkbox"/>		verbal			mud	<input type="checkbox"/>	verbal		mud	<input type="checkbox"/>
cement	<input type="checkbox"/>		Consistency			cement	<input type="checkbox"/>	Consistency		Consistency	
plaster	<input type="checkbox"/>		friable	<input type="checkbox"/>		plaster	<input type="checkbox"/>	friable	<input type="checkbox"/>	friable	<input type="checkbox"/>
lime	<input type="checkbox"/>		medium	<input type="checkbox"/>		lime	<input type="checkbox"/>	medium	<input type="checkbox"/>	medium	<input type="checkbox"/>
_____	<input type="checkbox"/>		hard	<input type="checkbox"/>		other	<input type="checkbox"/>	hard	<input type="checkbox"/>	hard	<input type="checkbox"/>
Adherence				Adherence				Adherence			
scarce	<input type="checkbox"/>		good	<input type="checkbox"/>		scarce	<input type="checkbox"/>	good	<input type="checkbox"/>	very good	<input type="checkbox"/>
Thickness under stones			Thickness between stones			Thickness of facing					
min	max	average	min	max	average	min max average					
_____	_____	_____	_____	_____	_____	_____					
3. INTERPRETATION											
Comments											
Interpretation											
Other relationships											
similar to:											
similar function to:											
identical to:											
Chronological elements considered:											
Chronology:											
Phase:											
Activity:											
4. DOCUMENTATION											
Drawings				Photos				Other			
No.	Type of drawing			Photo log no.	Date	Camera					
5. OTHER DATA											
Data verified by:				Excavation start:				Form completed <input type="checkbox"/>			
				Excavation end:							

Fig. 14b: The documentation form created to analyze building units in Petra.