Abstract

BREZNAI, MATTHEW JAMES. Central Jordan in the Classical Period. (Under the direction of Dr. S. Thomas Parker.)

This thesis attempts to reconstruct the human landscape of the region east and southeast of the Dead Sea during the Classical Period (332 BC-AD 640). The reconstruction relies primarily on the results of four major archaeological surveys, as well as other archaeological and historical sources. The thesis also considers and discusses such factors as the natural environment, settlement patterns, and agricultural systems. The thesis develops a history of the region by examining historical events and their subsequent impact on human settlement in central Jordan. In addition, the study discusses the five ‘transforming factors’ proposed by LaBianca as the stimuli for settlement in central Jordan. LaBianca argued that after the introduction of these stimuli, a gradual intensification of the settlement around Tell Hesban started in the Hellenistic period, continuing through the Byzantine period. Although these five factors possibly influenced settlement, this thesis argues that the presence or absence of regional security was the major factor in determining patterns of settlement in central Jordan. Based on security levels settlement was cyclical, not gradual.

This thesis is the first attempt at combining several major archaeological surveys and physical regions into one historical synthesis of central Jordan during a specific era.
Central Jordan in the Classical Period

by

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A thesis submitted to the Graduate Faculty of North Carolina State University in partial fulfillment of the requirements for the Degree of Master of Arts

History

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Dedication

To Mom and Dad,

I finally did it.
Biography

Matthew James Breznai was born in Cleveland, Ohio on May 3, 1979 to Ted and Julie Breznai. He is the oldest of four children—Katie, Nora, and Ned. Matthew grew up in Rocky River, a suburb in the West Side of Cleveland.

Matthew graduated from Saint Edward High School in 1997 and attended the College of Wooster. He graduated from the College of Wooster in 2001 with a double major in Classical Studies and Archaeology. In 2000, Matthew joined the Roman Aqaba Project where his love for history, archaeology, and travel was unlocked. He supervised J 29 in the church. Following graduation, Matthew returned home to Cleveland.

In 2002, Matthew applied and was accepted into North Carolina State University to pursue a Master’s Degree in Ancient History under the guidance of Dr. S. Thomas Parker. Matthew received an ACOR-CAORC Fellowship during the summer of 2004 and returned to Jordan to further study his developing thesis at the American Center of Oriental Research in Amman and other various sites in Jordan. He visited several neighboring countries to gain a better grasp of the wider Middle Eastern world and its history. Matthew then joined the 2006 field season of the Wadi ath-Thamad Project outside of Madaba, Jordan to supervise three squares in the Nabataean villa. He received an MA from North Carolina State University in 2007.
Acknowledgements

I would like to thank my parents for pushing me to pursue this degree. Without their constant support, I would never have made it this far. Katie, Nora, and Ned—even though you are so far away, you have always been there for me, especially when I whined and moaned during this long process. Without my family’s love and support, I would have crumbled long ago.

Dr. Parker, thank you so much for sticking with me these long years. I do not think you realize how much I have learned from you—I could have never asked for a better mentor. You started all of this in 2000 in Aqaba. I only hope to be as good a scholar.

To my brothers in the 5th section, even after Wooster you are still here. I would like to also thank Brian Strahine, who has always been a font of wisdom since high school. Pete, Dan, Justin, Lauren, Seel, Beav, Nick Shiva, Youngblood, Joey, Mack the Jerk—and all you other bar bums I worked with over the years—we created quite a family at Rush Lounge, I am lucky to have people like you. Marty, I finished before you got back from Iraq—I win the bet.

Finally, I would like to thank the Department of History for everything they have helped me with, especially Norene Miller. I would also like to thank Dr. Talbert and Dr. Riddle for participating as members of my committee. The American Center of Oriental Research in Amman provided an essential portion of this thesis—the ACOR-CAORC Fellowship advanced my study infinitely and I am very grateful.
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<td><em>Annual of the American Schools of Oriental Research</em></td>
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<td>AD AJ</td>
<td><em>Annual of the Department of Antiquities of Jordan</em></td>
</tr>
<tr>
<td>ASOR</td>
<td><em>American Schools of Oriental Research</em></td>
</tr>
<tr>
<td>BA</td>
<td><em>Biblical Archaeologist</em></td>
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<tr>
<td>BASOR</td>
<td><em>Bulletin of the American Schools of Oriental Research</em></td>
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<tr>
<td>IEJ</td>
<td><em>Israel Exploration Journal</em></td>
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<tr>
<td>JRA</td>
<td><em>Journal of Roman Archaeology</em></td>
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<td>KPS</td>
<td><em>Kerak Plateau Survey</em></td>
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<tr>
<td>LAP</td>
<td><em>Limes Arabicus Project</em></td>
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<td>TAPA</td>
<td><em>Transactions of the American Philological Association</em></td>
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<td>WHS</td>
<td><em>Wadi el-Hasa Survey</em></td>
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<td>ZDPV</td>
<td><em>Zeitschrift des deutschen Palästina-Vereins</em></td>
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Chapter 1: Introduction

Using the results of four recent major archaeological surveys and other evidence, this thesis attempts to reconstruct the human landscape of the region east and southeast of the Dead Sea during the Hellenistic, Roman, and Byzantine Periods from the late 4th century BC to the early 7th century AD (Map 1). This reconstruction will consider such factors as the natural environment, settlement patterns, road systems, and agricultural systems. In essence, the study focuses on how humans modified the natural landscape. This entails interpreting the cultural evidence that remains and assumes that the ‘natural’ landscape has been reorganized for a variety of purposes. The thesis will develop a history of the region in this period. The thesis will also consider the five so-called “transforming factors” proposed by LaBianca and their supposed influence on settlement in central Jordan. LaBianca argued for a gradual intensification of the settlement around Hesban from the Hellenistic through Byzantine periods. Although these five factors possibly influenced settlement, this thesis argues that the presence or absence of regional security was the major factor in determining patterns of settlement in central Jordan. In short, it appears that central Jordan experienced a series of intensification/abatement cycles during the Classical period.

This thesis employs the methods of landscape archaeology in assessing the evidence. Landscape archaeology studies various human remains—field systems, farms, industrial sites, roads, and the generally more ephemeral traces of non-sedentary peoples in an attempt to reconstruct landscape in various ancient periods. A landscape is the

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1 Wilkinson, p. 3-4.
2 Ashmore and Knapp, p. 2.
backdrop against which archaeological remains are plotted. Landscapes also provide elements that impel and impact on human actions and situations. People also perceive, experience, and contextualize landscapes. Landscape as palimpsest is a fundamental notion to landscape archaeology, with the progressive superposition of one landscape on another and sometimes the selective removal of parts of the earlier landscapes by later landscapes. This thesis takes individual layers in the form of each subdivision within the Classical period to create an analysis of human settlement in central Jordan.

This thesis, then, will attempt to reconstruct the landscape of central Jordan during the Classical period. These periods are Hellenistic (332-63 BC); Early Roman/Nabataean (63 BC-AD 106); Late Roman (AD 106-324); Byzantine (AD 324-640). The Hellenistic period begins with the conquest of Alexander the Great in 332 BC and ends with the arrival of Pompey to Arabia in 63 BC. The Early Roman/Nabataean period extends from the arrival of Pompey to the annexation of Arabia as a province in AD 106. The Late Roman period spans AD 106 to 324. The triumph of Constantine over his rival Licinius in AD 324 inaugurates the Byzantine period, which ends in AD 640 with the Muslim conquest. The Byzantine period in some instances is subdivided into Early Byzantine (AD 324-491) and Late Byzantine (AD 491-640) periods.

The remainder of this section introduces the key elements to the settlement of central Jordan. It will first consider the environment of central Jordan as the crucial backdrop for settlement in central Jordan. Next will be a summary of the available documentary sources and archaeological evidence. An introduction to each of the four surveys, their locations, methodologies, and purposes follows. Issues with analyzing

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5 Wilkinson, p. 7.
survey evidence will be discussed. A working definition of a site and a site hierarchy will be established. Finally will be a summary LaBianca’s five transforming factors and introduction of the alternative explanation of this thesis, arguing instead for security as the determining factor.

The Environment of Central Jordan

The natural environment of central Jordan played a crucial role in settlement. Jordan lies within the Levant, which is divided into four North-South zones—coastal plains, western highlands, Jordan rift, and the eastern plateau (Jordan)—and four East-West depressions—Aleppo-Euphrates, Homs-Palmyra corridor, Galilee-Basham, and Beersheba-Zered.6 These zones and depressions combine to form four realms: the Northern realm, the Syro-Phoenician realm, the Palestinian realm, and the realm of the Southland.7 The Palestinian realm, which is also subdivided into the Cisjordan hills and valleys and the tableland of Jordan, includes central Jordan.8 Within the Palestinian realm, Moab separates into three regions. Northern Moab covers the land north of the Wadi Mujib.9 This region (known as the Belqa) extends about 80 km long and 30 km wide with Tell Hesban almost in the center.10 The eastern Belqa is a plateau whereas deep wadis alternating with high ridges typify the central Belqa (fig. 9,10, 11).11 The low-lying and flat western Belqa extends from the Jordan River to the foot of the central Belqa.12 Several wadis drain off the plateau (Western Belqa), through the central ridge, to the plain, emptying into the Jordan River and the Dead Sea.

6 Mattingly, p. 597, 599.
7 Mattingly, p. 599.
8 Mattingly, p. 599.
9 Miller, p. 3.
10 Geraty, p. 3.
11 Geraty, p. 3.
12 Geraty, p. 3.
Central and Southern Moab make up the Kerak plateau, and extend from the Wadi Mujib (fig. 13, 14) to the Wadi el-Hasa (fig. 24). The Dead Sea forms the dramatic western border of the Kerak plateau and the desert borders to the east. The Kerak plateau, the tableland of Jordan, presents a gently rolling, unbroken skyline—Jebel Shihan stands out from the level plain (fig 25, 26, 27, 28, 29). The only major breaks in the topography of the rolling plateau are several graben or down-dropped blocks that have exposed younger and weaker rock formations. A graben is a block of land pushed down by geologic forces, producing a valley. These grabens often form depressions on the plateau, such as the Fajj el-‘Usikhir—a wide trough about 100 m deep southeast of Kerak that extends northwest to southeast along a fault. The Kerak plateau emerges as a relatively isolated geographic region on the margin of the desert, protected by natural barriers on three sides with the eastern portion changing abruptly into desert. The Wadi el-Hasa highlands slope gently to the east toward the Al Jafr Basin; bedrock units of sandstone and limestone also gently dip to the east. A series of northward flowing tributaries typify the lowland areas of the Wadi el-Hasa, creating a more drastic topography than the Kerak plateau and the Hesban region. From north to south, then, central Jordan goes from a rugged, slightly mountainous region to an elevated tableland to highlands cut by wadi tributaries (fig. 33, 34, 35, 36).

Central Jordan experiences mild, wet winters and dry, hot summers creating a Mediterranean climate. Rainfall provides the primary source of water in these regions, not only for human consumption but also for agriculture. The winter rains, therefore,

13 Mattingly, p. 601.
14 Parker, 2006, p. 12.
15 Parker, 2006, p. 3.
16 Donahue and Beynon, p. 38.
17 Donahue and Beynon, p. 29.
determine the survival of agricultural communities, as they already inhabit marginal land for dry farming.\textsuperscript{18} The average rainfall on the Kerak plateau ranges from 200-400 mm a year with about 350 mm a year on the western plateau. The Dead Sea escarpment, the Wadi Mujib, the northern ridge of the Wadi el-Hasa, and the desert frontier receive much less rain than the plateau itself.\textsuperscript{19} The highlands of the Wadi el-Hasa receive an average 280 mm annual rainfall (recorded at At Tafila).\textsuperscript{20} The deeper parts of the wadis receive much less, with Ghor es Safi at the mouth of the Wadi el-Hasa receiving about 65 mm a year.\textsuperscript{21} Springs, wells, and moisture stored in the soil provide a secondary source of water, determined by the water table of the individual region and the winter rainfall. The climate of central Jordan, then, forced the human occupants to control sources of water with terraces, cisterns, and other irrigation techniques.

The Mediterranean climate and human activity determined the flora of central Jordan.\textsuperscript{22} The Kerak plateau falls within two distinct phytogeographical zones: the Mediterranean nonforest and the Irano-Turanian steppe.\textsuperscript{23} The Mediterranean nonforest features deciduous and evergreen trees, such as Tabor oak, Aleppo pine, Mediterranean oak, carob, terebinth, and pistachio, mainly on the western plateau. However, human occupation has denuded the Kerak plateau of much flora, leaving only a few small stands of these trees today.\textsuperscript{24} The western plateau receives more annual rainfall than the eastern plateau. Irano-Turanian steppe typifies the eastern plateau, characterized by an absence

\textsuperscript{18} See Mattingly and also Harlan for detailed explanations.  
\textsuperscript{19} Miller, p. 3.  
\textsuperscript{20} Harlan, p. 40.  
\textsuperscript{21} Harlan, p. 41.  
\textsuperscript{22} Mattingly, p. 604.  
\textsuperscript{23} Parker, 2006, p.13.  
\textsuperscript{24} Parker, 2006, p. 13.
of trees but abundant steppe vegetation such as dwarf shrubs, brush, and grasses.\textsuperscript{25} The Kerak Plateau, in spite of thin soils and few springs, is potentially productive land for dry farming, permitted by the abundant rainfall spread over four or five months and the absorbent character of the soils.\textsuperscript{26} Within the deeper wadis of the plateau, micro-environments flourish with flora featuring reeds and sedges.\textsuperscript{27} The Wadi el-Hasa is natural grassland which becomes sparser and more open moving east, where \textit{Artemesia} desert shrub vegetation appears.\textsuperscript{28} Open woodland vegetation covers parts of the eastern Wadi el-Hasa. Most trees are found in the western portion of the survey area, near At-Tafila and farther south near the well-developed region around Buseira.\textsuperscript{29} The woodland features juniper, oak terebinth, wild almond, and other trees.\textsuperscript{30} At its best, however, this woodland typically displays open stands of nearly pure oak-juniper with grasses between the trees.\textsuperscript{31} The soils are generally open and friable and receive, store, and yield moisture from the rainfall (about 300 mm annually) sufficient for marginal dry-farming.\textsuperscript{32} As on the Kerak plateau, deep wadis with permanent water feature abundant riverine trees and shrubs including oleander, willow, the occasional Christ’s thorn, acacia, and dates.\textsuperscript{33}

\textbf{The Primary Sources}

Ancient evidence relevant to this thesis may be divided into two categories: documentary and archaeological. This section will first consider the former category,

\begin{itemize}
  \item \textsuperscript{25} Parker, 2006, p. 13.
  \item \textsuperscript{26} Miller, p. 3.
  \item \textsuperscript{27} Parker, 2006, p. 13.
  \item \textsuperscript{28} Harlan, p. 42.
  \item \textsuperscript{29} Harlan, p. 43.
  \item \textsuperscript{30} Harlan, p. 43.
  \item \textsuperscript{31} Harlan, p. 43.
  \item \textsuperscript{32} MacDonald, p. 41.
  \item \textsuperscript{33} Harlan, p. 43.
\end{itemize}
such as ancient authors and inscriptions, then the latter, especially the four major surveys that have covered much of central Jordan.

The Jewish historian Josephus is the main literary source for the Hellenistic and Early Roman/Nabataean periods in his *Antiquities of the Jews* and *The Jewish War*. Although his focus is the Jews of Palestine, his information on the Arabs and Nabataeans is vital. He describes political events, violent clashes, territory, and specific locations in central Jordan.

The Late Roman sources provide scanty but important information. Ptolemy lists sites in central Jordan in his *Geography*. The Babatha archive records the importance of Areopolis and the business of agriculture in central Jordan at the time of the Bar Kochba revolt (132-135) during the reign of Hadrian. Seal impressions from ancient Mampsis imply that the cities of Areopolis and Charachmoba were of some importance during the reign of Hadrian.34

The primary written sources for the Byzantine period are the *Onomasticon* of Eusebius (ca. AD 275-ca. 340) and the *Notitia Dignitatum*. The *Onomasticon* mentions many sites within central Jordan at the beginning of the Early Byzantine period (AD 324-491). Eusebius also details information on distances between sites, as well as the extent of *territoria* of various urban centers. The *Onomasticon*, however, gives a list of holy sites, not a history of the region. There were probably more settlements than Eusebius leads us to believe. The *Notitia*, specifically chapters 34 and 37, list the military units and their locations in Arabia and Palestine ca. AD 400.35 The 5th century is poorly

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34 Miller, p. 12.
35 Parker, 1986, p. 5.
attested in the literary sources, although church historians and other ecclesiastical writers supply some evidence.\textsuperscript{36} The most important source for the 6\textsuperscript{th} century is Procopius.\textsuperscript{37}

Mosaics also provide an important component as historical sources. Nearly all mosaics occur north of the Wadi Mujib, possibly explained by the lack of excavated Byzantine sites in southern Jordan.\textsuperscript{38} The golden age of mosaics in Jordan begins around AD 530, and therefore most of the evidence gathered from these mosaics follows suit.\textsuperscript{39} Mosaics play an important role as historical sources, not only from the significance of architectural representation, but also from their dedicatory inscriptions. Mosaics help identify many of the \textit{poleis} of Byzantine Jordan, gathered from the mosaics at Madaba, Khirbet al-Mukhayyat, and Khirbet al-Maqati. Perhaps the most famous of these is the Madaba mosaic from the 6\textsuperscript{th} century, which has representations of several \textit{poleis} of central Jordan—Charachmoba and Zoara in particular.

Numismatics provide another source of important evidence. Coins served not only as a medium of exchange, but also a form of mass media.\textsuperscript{40} Substantial numbers of coins have been recovered from a wide variety of sites, including major urban centers, smaller towns, rural settlements, monasteries, military sites, and small caravanserais in remote areas.\textsuperscript{41} Coins attest the ‘monetarization’ of a region and the spread of trade.

Inscriptions also provide an important source, though many of these inscriptions occur outside of central Jordan. Military building inscriptions are comparatively plentiful only in the northern part of the province.\textsuperscript{42} These inscriptions provide information on

\textsuperscript{36} Parker, 1986, p. 5.
\textsuperscript{37} Parker, 1986, p. 5.
\textsuperscript{38} Parker, 1999, p. 160.
\textsuperscript{39} Piccirillo, p. 22.
\textsuperscript{40} Parker, 1999, p. 166.
\textsuperscript{41} Parker, 1999, p. 166.
\textsuperscript{42} Parker, 1986, p. 5.
troop placement as well as dates of construction and repair. In addition to Greek and Latin inscriptions, a large number of pre-Islamic Semitic graffiti from the region provide evidence about the nomadic tribes of the region, though difficult to date.\textsuperscript{43} Another important epigraphic source can be found in milestone texts. In his larger study of the Levant, Thomsen (1917) published all milestones inscriptions known in his day along the \textit{via nova Traiana} and secondary roads of central Jordan. Additional milestone inscriptions have appeared in the intervening century.

**Archaeological Research in Central Jordan**

Prior to the four archaeological surveys executed from the late 1970s to the late 1980s, other scholars and explorers visited central Jordan. Previous exploration in the region was relatively limited, except for two brief flurries of activity—the first at the turn of the 20\textsuperscript{th} century when the Ottoman government reasserted control and the second in the 1930s after the discovery of an ancient Moabite inscription (the “Mesha Inscription”) at Khirbet Balu.\textsuperscript{44} The first modern Western explorers visited central Jordan in the early 19\textsuperscript{th} century. The first was Seetzen in 1806 who traveled along the \textit{via nova Traiana}. Burckhardt also followed the route of the \textit{via nova} when he explored the region in 1812. Irby and Mangles made the third major exploration in 1818, also taking the path of the \textit{via nova Traiana}. De Saulcy explored the southern portions of the Dead Sea and ascended the Kerak plateau in 1850-1851. Rev. F.A. Klein discovered the Mesha Inscription while exploring Dhibon. Alois Musil visited central Jordan in 1896 following the Wadi el-Hasa to Jebel el- Masfara and then along the \textit{via nova Traiana} as he traveled north. Musil published \textit{Arabia Petraea} after subsequent visits to locations in central Jordan.

\textsuperscript{43} Parker, 1986, p. 5.
\textsuperscript{44} For a detailed review of these early explorers, cf. Miller, p. 17.
Jordan. Brunnow and Domaszewski, who visited in the region in the late 1890s, published a compilation of major surface remains recorded to that point in addition to their own observations, called *Die Provincia Arabia*, in 1904-09. Perhaps the most important visitor to central Jordan prior to the late 20th century surveys was Nelson Glueck, who began exploring the region in 1933 and published the results of his surveys in three volumes as *Explorations in Eastern Palestine*. Glueck found Nabataean sherds throughout the Wadi el-Hasa and Kerak Plateau, also noting fortresses and other military installations of the Classical Period were farther east than those of the Iron Age.45 The focus of the early explorers, barring Glueck, was the surface remains of architectural features owing to the lack of a ceramic chronology for the region. Glueck was the first explorer of central Jordan to base his site dates on ceramic remains.

Stratified evidence, taken from archaeological excavation, provides the major means of corroborating scattered surface remains with a controlled chronological scheme. Extensive excavations at the site of Dhiban, the location of the Mesha Inscription, began in the 1950s (Morton 1957; 1989; Winnett and Reed 1964; Tushingham 1972).46 On the north bank of the Wadi Mujib, Olavarri conducted soundings at Aro’er (Olavarri 1965; 1969) and at Khirbet el-Medeinet el-Mu’arrajeh (Olavarri 1977-78; 1983). The long term excavations at Tell Hesban also provided important evidence (Boraas and Horn 1969; 1973; 1975; Boraas and Geraty 1976; 1978; Mitchel 1980; Storfjell 1983; LaBianca 1990). Villeneuve directed excavations at Khirbet edh-Dharih, south of the Wadi el-Hasa (Villeneuve 1984; 1990; Villeneuve and Muheisen 1988). Excavation also revealed the location of the monastery of St. Lot at the mouth of the Wadi el-Hasa, at modern Deir

45 Glueck, p. 164-166.
46 The list of excavations is taken from Parker, 2006, p. 19-20

The Four Regional Surveys

In addition to these projects, our knowledge of the region has been transformed above all by four regional surveys that have recorded information on over 2,000 sites. The results from these surveys form the heart of the evidence synthesized in this thesis. Each is briefly described below.

Hesban Survey

During the early 1970s, a survey began around Tell Hesban in conjunction with ongoing excavations at Tell Hesban. The survey meant to shed light on Late Bronze Age settlement associated with the supposed Israelite Exodus.\(^{47}\) The overriding purpose of the survey was to understand Tell Hesban in its wider geographical context.\(^{48}\) There were four additional objectives of the Hesban Survey:

1. To locate all antiquity sites of the ceramic cultures.
2. To establish accurately the location of each site by plotting it on a map.
3. To examine each site.

\(^{47}\) Ibach, xiii.
\(^{48}\) Ibach, p. 3.
4. To collect artifacts, especially representative sherds, for analysis.49

The original boundary of the survey was a 10 km radius around Tell Hesban (Map 1). However, the presence of modern military installations and the omission of certain regions prevented the full coverage of the survey zone. At the end of the 1973 season, the boundaries of the survey were the Jerusalem/Amman highway on the northwest, the Naur/Umm el-Amad road on the northeast, the Umm el-Amad road on the southeast, and on the southwest the Wadi Ayun Musa and south along the Madaba road.50 These boundaries were also later extended to include three sites on the western edge of the survey area, south to include Jalul, and northeast beyond the Naur/Umm el-Amad road, with the boundary there becoming a line between Umm es-Summaq and Khirbet es-Suq.51

Kerak Plateau Survey

The survey of the Kerak Plateau in the late 1970s and early 1980s covered the area east of the Dead Sea, between Wadi el-Mujib and Wadi el-Hasa, and the desert fringe to the east (Map 1). The objectives of the survey were:

1. Develop an accumulative and comprehensive gazetteer of the archaeological sites on the plateau.

2. Search for sites which earlier investigators had missed.

3. Develop a ceramic history for the region.52

The team therefore relocated known sites, explored the areas between the known sites, and sampled the ceramic evidence from each site. Four to five member teams traveled in

49 Ibach, p. 3.
50 Ibach, p. 5.
51 Ibach, p. 5.
52 Miller, p. 18-19.
vehicles through assigned sub-regions. This systematic coverage of the region began at sites previously recorded and was followed by an examination of the territory between these sites.53 The survey of the plateau recorded finds from the Prehistoric to modern periods. However, as Miller notes, there was no prehistoric specialist associated with the team, making the coverage of Paleolithic and Neolithic sites uneven.54 In fact, no lithics are reported from any site surveyed, nor are any of these Paleolithic or Neolithic sites "reported" in the publication (and no Neolithic pottery is mentioned by Brown in her chapter on the ceramic evidence from the survey).

**Limes Arabicus Survey**

The *Limes Arabicus* survey, as part of a larger project, attempted to address the reasons behind the military buildup along this sector of Rome's Arabian frontier in the Late Roman period (ca. AD 300), as well as its abandonment about two centuries later, in the early 6th century.55 This survey too falls into the burst of archaeological survey work in central Jordan in the late 1970s through the mid-1980s. The survey focused on the eastern edge of the Kerak Plateau (Map 1). The goal of the survey was to provide some overview of human habitation in the region during the historic periods.56 Within the *Limes Arabicus* Project there were two surveys—one of the frontier zone (in Latin, a *limes*) and another of the desert fringe. Both attempted to place the Roman military frontier into a regional context. The main goal of the desert survey was to gain greater understanding of the local nomadic tribes.57 However, the team collected all types of surface artifacts at the sites visited, from Prehistoric to Modern. The frontier survey

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53 Miller, p. 18.
54 Miller, p. 19.
55 Parker, 2006, p. 5.
56 Parker, 2006, p. 6.
57 Parker, 2006, p. 6.
covered the area of the eastern Moab (Kerak plateau) to the modern Desert Highway. The desert survey sampled two limited areas east of the desert highway in the desert fringe.

A single team (two or three persons) surveyed the frontier zone in one vehicle, visiting all the surrounding area and obvious structures that could be seen from the trails or located on maps or aerial photographs.\textsuperscript{58} Much of the region could be previewed from higher elevations and from aerial photographs.\textsuperscript{59} The desert survey used similar techniques as the frontier survey—purposive vehicular survey. As the majority of the survey is located along the eastern Kerak plateau, the previous work in the region is similar to that described earlier from Miller’s survey. The eastern plateau, for the most part, had received even less attention by previous scholars than the western.

\textbf{Wadi el-Hasa}

The Wadi el-Hasa survey was also conducted in the late 1970s and early 1980s. The survey explored the south bank of the Wadi el-Hasa—the southern border of the Kerak Plateau survey. This wadi served as the northern border of the Wadi el-Hasa survey. The western border was the modern road running from At Tafila towards `Aima, though several sites west of this border were surveyed, as they were pointed out by local informants.\textsuperscript{60} The southern boundary is an artificial line that runs about 15 km south of the western segment’s northern border and about 1 km south of the eastern segment’s northern border.\textsuperscript{61} The objectives of the project were:

1. A systematic and intensive survey of the defined survey zone.

\textsuperscript{58} Parker, 1987, p. 50.
\textsuperscript{59} Parker, 1987, p. 50.
\textsuperscript{60} MacDonald, p. 2.
\textsuperscript{61} MacDonald, p. 2.
2. Check and complete previous archaeological work in the area and to complement work done or in progress in neighboring areas. The survey area was divided into three portions—west, central, and east. The survey used three types of location techniques—purposive pedestrian survey, purposive vehicular survey, and pedestrian transects. The transects followed, for the most part, a north-south axis, except where the landscape did not permit this.

Analysis of Survey Evidence

The interpretation of archaeological surveys poses various difficulties. In Jordan, most archaeological surveys are ‘inventory surveys’ intended to catalog sites. Each of the four surveys mentions the cataloging nature of its evidence. The completeness of the sampled evidence presents another major problem with archaeological survey. As Banning mentions, it is virtually impossible and not expected that any survey will record every single artifact and archaeological feature. Each investigator has to create, at the very least, a consistent form of sampling that can be relatively accurate. The Wadi el-Hasa survey, for example, used a pedestrian transect system for its survey. The Tell Hesban survey could not survey some areas, albeit for reasons beyond their control. Probability sampling allows very accurate generalizations based on very small sampling fractions. An investigator needs to define a sample, whether the sample represents one or 50 percent of the universe (boundary), or whether the sample is biased in favor of sites on hills, in valleys, or on roads.

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62 MacDonald, p. 2.
63 MacDonald, p. 17.
64 Banning, p. 25.
66 Banning, p. 27.
Though archaeological survey provides valuable data, several problems accompany archaeological survey. The limitations of survey include incomplete coverage, which leads to partial data and site retrieval, the material’s lack of stratigraphic context, and the fluidity of interpretation.\textsuperscript{68} Obtrusiveness (material’s physical traits hampered by the environment) and visibility (environmental factors obscuring archaeological material) are the key factors that permit the detectability of archaeological remains.\textsuperscript{69} The definition of a site, as well as the universe of the survey area should also be described.\textsuperscript{70} Site definition varies from survey to survey, since the definition accommodates the goals of a particular survey. Sampling also creates a problem. Every collection of archaeological data constitutes a sample but in many cases the nature of the sample is not described.\textsuperscript{71} The amount of coverage, or sites within the defined universe, depends on the above factors.\textsuperscript{72} These problems are inherent with every archaeological survey, but the results of the survey, if carefully monitored in the field, can produce important results, mainly in the form of quantifiable data. The resulting corpus of raw data supplies an important aspect of archaeological survey since the data can be quantified and analyzed for specific research models. The four surveys alone provide over 2,000 sites, with hundreds of these being newly discovered sites.

Dating sites by associated artifacts, usually from surface collections, generates more issues with archaeological survey. The dates are derived from field readings of artifactual material.\textsuperscript{73} The vast majority of such artifacts tend to be lithics and ceramics.

\textsuperscript{68} Magness, p. 6.
\textsuperscript{69} Banning, p. 74.
\textsuperscript{71} Banning, p. 28.
\textsuperscript{72} Banning, p. 28.
\textsuperscript{73} Banning, p. 35.
The field readings are probably accurate with ranges of about 100 to 300 years, while lithics tend to have much larger ranges.\textsuperscript{74} Occasionally, other evidence such as inscriptions or coins from the surface of sites provides a date. Ideally, published sequences of lithics, pottery, or both from excavated sites in the surveyed region offer good comparative collections for dating survey finds. Although some reliable lithic and ceramic chronologies exist, these are often inexact and not always wholly representative of the site itself, as Miller notes.\textsuperscript{75} The inexactness of ceramic chronologies results when a ceramic chronology is placed within a political framework.\textsuperscript{76} This means that the material culture relies on a political framework for periodization, even though elements of a material culture often are not affected by a political framework. In addition, the number of sherds presented for a period bears no correlation to the proportion of sherds from that period within the total corpus.\textsuperscript{77} Ceramic chronology depends heavily on the location of diagnostic sherds, usually rims and handles. For sites where no diagnostic sherds or other artifacts were visible on the surface, the chronological problem is much more serious.\textsuperscript{78} Lithics and ceramics provide most information on dating a site, and this gives warning against drawing overly precise conclusions based on such evidence.\textsuperscript{79}

**Site Definition and Hierarchy**

According to Banning, it is of primary importance to record the operational definition of a site.\textsuperscript{80} The Kerak plateau defined a site based on architectural evidence and sherd scatter. On the other hand, the Wadi el-Hasa defines a site as all scatters of

\textsuperscript{74} Banning, p. 35.  
\textsuperscript{75} Miller, p. 19-20.  
\textsuperscript{76} Miller, p. 170  
\textsuperscript{77} Miller, p. 169.  
\textsuperscript{78} MacDonald, p. 24.  
\textsuperscript{79} Miller, p. 20.  
\textsuperscript{80} Banning, p. 26.
sherds or artifacts and all architectural remains which appeared to date earlier than AD 1918.\textsuperscript{81} The Limes Arabicus survey also decided on a similar definition for a site. The frontier survey defined sites as man-made structures, man-used features (rock shelters, campsites, etc.), or scatters of artifacts.\textsuperscript{82} The Hesban survey generated a definition similar to the Kerak survey, labeling a site according to artifacts or amount of discernable architectural remains recovered from a particular site. For this study, several attributes from each of these site definitions provides the working definition of a site. It could be a sherd scatter, structural remains, or both. A site, then, demonstrates evidence of past human activity. However, for the purpose of this study, sites with 5 or less sherds do not demonstrate enough evidence for past human activity and are therefore regarded as isolated finds or “background noise” and are not included in the synthesis. For the Hesban survey, which did not give actual sherd counts, sites with possible or few sherds for a particular period will be discarded. If a site is known from historical sources but does not have more than 5 sherds from a specific period, it will be included since the sources reveal a site existed there at a certain point in time.

There are two broad categories of sites: sedentary and nomadic. However, a site could be used by both groups in different periods or even simultaneously. The sedentary population produces two types of sites—civilian and military. Civilian sites may be either a settlement or reflect some form of agricultural activity. Settlement sites include (in descending order of size) cities or towns, villages, and farmsteads. Agricultural sites are portions of the landscape altered by human activity for agricultural purposes. These include terraces, field walls, cisterns, and olive or grape presses. The city tops the

\textsuperscript{81} MacDonald, p. 15.
\textsuperscript{82} Parker, 2006, p. 50.
hierarchy for civilian sites. The problem differentiating a city versus a village must be noted. A "city" (especially in the Hellenistic, Roman and Byzantine periods) should administer a surrounding rural hinterland (Latin *territorium*, Greek *chora*) that usually includes several villages. A city is typically a center of trade and industry, although it may also include an agricultural element in its population. In the middle of the hierarchy, villages are a common feature of the region under investigation. These typically support an agricultural population. A "village" does not administer an extensive rural hinterland, in addition to its much smaller size. At the bottom of the civilian hierarchy are isolated farmsteads. Several other types of specialized sites reflect the activities of the sedentary population, such as caravanserais, monasteries, quarries, and roads.

Military sites were created with specific functions, but these might have changed over time or may not necessarily even be apparent to the modern scholar. One possible function is to protect and control populations. There are several types of military sites. At the top of the chain are legionary fortresses, with a large garrison of men. Auxiliary forts are more common than fortresses and contain a significantly smaller garrison of soldiers. Fortlets are even smaller, both in size and garrison. The smallest and most common type of military site in central Jordan is the tower, presumably manned by a handful of men. Another type of military site is a temporary camp, for units of varying size. Roads, another key human construction, presumably served both soldiers and civilians as vital lines of communication and trade. Many military sites are located very near roads, suggesting the strategic value of roads. Caravanserais and other sites of a commercial nature are predictably found along roads.

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83 For more information on fort typology see Parker's article “The Typology of Roman and Byzantine forts and Fortresses in Jordan,” in *Studies in the History and Archaeology of Jordan, V.*
Finally, the other broad category of sites mentioned earlier, nomadic sites, are also among the most difficult to trace archaeologically. These sites prove elusive and difficult to discern by archaeological surveys. Nomadic sites, then, tend to be campsites, cemeteries, or caves. Another testament to nomadic presence is epigraphic evidence. Nomadic sites, if they survived, can be considered as small sherd scatters with possible impermanent structural remains such as stone rings and post holes.

Having discussed how the four surveys defined sites and described the types of sites recorded, we can now construct a working site hierarchy for this study. There are some issues with a site hierarchy that need to be addressed. Of primary concern are the visible remains of a site. The absence of stratified evidence or datable inscriptions makes dating a structure difficult. Therefore, establishing the period of construction and subsequent periods of use becomes problematic. The visible remains of a site (if abandoned) often indicate the last occupational phase of that site which can only be confirmed by stratified excavation. What one sees on the surface may have little overall bearing on the overall archaeological profile of the site.\(^{84}\) The visible remains, therefore, may date to several different periods or one specific historical period. Therefore, a site in reality may be of varying size in individual historical periods.

On the other hand, as in the Hesban survey, the site type is created based on an intuitive judgment of the following factors: extent of ground surface occupied by the site, density of material remains, and apparent depth of debris.\(^{85}\) Each site is categorized to create an overall impression of its size during the Classical period. After examining the material described by the survey team, based on the above criteria, a site is given a

\(^{84}\) Miller, p. 26.
\(^{85}\) Ibach, p. 9.
certain size for the entire Classical period (332 BC-AD 640). Sites with 5 or less sherds do not demonstrate human occupation, and are not counted in the settlement pattern of that particular Classical period. The survey evidence will be incorporated into the following hierarchy of site size: small, medium, large, or major sites.

Small sites consist of only a few structures and/or cover a small area (fig. 37). This type of site could represent an individual farmstead and associated buildings, an individual structure (fig. 31), a watchtower (fig. 24), a fort (fig. 12), an agricultural feature such as a winepress or a terrace (fig. 8), or a scattering of milestones (fig. 32). Most nomadic campsites qualify as small sites mainly because of their limited geographic extent.

Medium-sized sites include villages of varying sizes, from small hamlets to large villages. A village is composed of many visible structures. A medium-sized site could be several farmsteads in close proximity. An extensive or large nomadic campsite will be counted as a medium-sized site. The function of a medium-sized site would be to service the primarily agricultural occupation of the village.

Both small and medium-sized sites are particularly affected by cycles of intensification and abatement. The quantity and placement of these sites during these cycles will be readily apparent. Fewer small sites and medium-sized sites appear in periods of abatement. Factors that affect the number of these sites include the presence or absence of security to allow isolated farmsteads and villages to survive in fringe areas.

Most large sites (fig. 38) represent towns and also could have provided administrative services to the surrounding villages and farmsteads (fig. 15, 16, 23, 39). A
large site could also be a cultic center, such as Khirbet edh-Dharih (fig. 30). A large site would most likely but not always have been occupied throughout the Classical periods. A large site will encompass a considerable area and possess significant visible architecture, and may even possess a surrounding wall. Some historical sources mention large sites, such as the large site Eleale (modern El’Al in the Hesban region) mentioned by Eusebius (fig. 7) (Onom. 84).

The final category of sites is a major site. Major sites are the urban centers of central Jordan during the Classical period (332 BC-AD 640). At least one source from each period mentions the major sites (barring el-Lejjun which was built in the Late Roman period), whether from a written source or some other form of material evidence such as numismatics. These urban centers served as administrative units and had a territorium. The major sites of central Jordan are Esbus (Hesban) (fig. 1, 2, 3, 4) and Madaba (fig. 5) for the Hesban survey, and Areopolis (Rabba) (fig. 17, 18, 19, 20) and Charachmoba (Kerak) (fig. 6) for the Kerak plateau. The other major site is the legionary fortress at el-Lejjun (fig. 21, 22).

LaBianca’s Synthesis: The Five Transforming Factors

The only previous attempt to explain settlement patterns in central Jordan during the classical periods was offered by LaBianca. Nomadization and sedentarization, according to LaBianca, present the key explanation for periods of abatement and intensification in settlement. Non-sedentary peoples play a vital role in the settlement patterns of central Jordan. Sedentarization is the process whereby a group of people gradually adopts a settled mode of existence; nomadization is the process whereby a

group adopts a nomadic mode of existence. A sedentary group creates food system intensification, while a nomadic group usually leads to abatement of food system intensification.

Nomadism involves the regular migration of a community together with much of its productive base within a single ecological niche. Groups (or individuals) may therefore be ranked along an agricultural-pastoral continuum according to different criteria such as the overall level of pastoral production or the extent to which their livelihood is met through pastoral as opposed to other modes of subsistence. LaBianca identifies three levels along such a continuum. The first level is animal-based migrations, either vertical (transhumance) or horizontal (plains), which involve the seasonal movements of people and animals in search of pasture and water, sometimes also practicing limited agriculture. The second is mixed agro-pastoralism, including raising field crops on arable plains and grazing sheep and goats on stubble fields, nearby mountain slopes, and desert pastures. The final level combines moisture maximization and the careful management of seasonal plantings of fast maturing varieties, scattered plantings of drought resistant crops, the use of moist bottomlands, the construction of terraces, dams, and other irrigation devices to impound water runoff. Commercial agribusiness represents the most sedentarized activity.

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87 LaBianca, p. 31.
88 LaBianca, p. 31.
89 Cribb, p. 20.
90 Cribb, p. 18.
91 LaBianca, p. 36.
92 LaBianca, p. 36.
93 LaBianca, p. 35.
Nomads, semi-nomads, or settled villagers are stations on a temporal continuum along which successive generations of households have moved back and forth.\textsuperscript{94} People need to protect their crops and fields for food system intensification. Perennial crops require constant protection and tending, which means that a continuous program of cultivation rights needs to be enforced.\textsuperscript{95} Ideally, local or central authorities provided security for the indigenous population and encouraged their individual economic production in central Jordan. LaBianca interprets the impetus of the central authority as a series of overlapping and progressing socio-political transforming influences that affected regions and people in varying degrees.

According to LaBianca, the developments were not on parallel footing in terms of impacting the way of life of the indigenous population.\textsuperscript{96} LaBianca lists five transforming factors leading to intensification and/or abatement: Hellenization, Nabataean sedentarization, Romanization, Christianization, and the expansion of long distance trade.\textsuperscript{97} Hellenization is the process of the assimilation of Greek cultural elements by various Oriental populations. Nabataean sedentarization followed the Nabataean rise to power in central Jordan resulting from their control of trade routes in Arabia. Nomads settled in hinterlands to support a growing population. Romanization followed the arrival of Pompey to Arabia in 63 BC, but Nabataean Arab and Hellenistic traditions remained dominant. The effects of Romanization likely intensified after AD 106, when the Romans annexed Arabia as a province under direct Roman rule. The concerns of the Roman elite came to the forefront: the network of paved roads,

\textsuperscript{94} LaBianca, p. 38.
\textsuperscript{95} LaBianca, p. 37.
\textsuperscript{96} LaBianca, p. 159.
\textsuperscript{97} LaBianca, p. 159. The following explanations of each factor can be found in LaBianca, p. 161-166.
maintenance of the limes, development of urban centers, and the urban dominance of a rural hinterland stemming from Hellenistic culture. Christianization of the pagan population likely intensified after the conversion of Constantine in AD 312 and the adoption of Christianity as the official religion of the Empire. Finally, long distance trade was the fifth transforming factor. This began with Nabataean control of this trade between the southern Arabian Peninsula and the Mediterranean. But this traffic clearly continued in later periods.

LaBianca argues that the introduction of these transforming factors emphasized an urbanized, sedentary lifestyle resulting from a gradual process of intensification of the food system.\(^{98}\) In essence, these five factors provided the stimuli for sedentarization, resulting in settlement intensification. Following the introduction of a transforming factor to a region, the settlement totals should increase. These transforming factors, apart from sedentarization, especially impact urban sites—these factors increase the prosperity of urban sites.

The prosperity of an urban center affects the prosperity of its hinterland.\(^{99}\) The more an urban center prospers the more developed its surrounding territorium needs to be. Following LaBianca, when transforming factors are introduced, an urban center prospers and its hinterland begins a period of intensification. This model provided by LaBianca for Tell Hesban and its hinterland will be tested against the historical sources and the archaeological evidence gathered from the four surveys.

However, it appears that there are instances when this model does not work. Setlements independent of the urban centers also developed in the rural landscape, such

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\(^{98}\) LaBianca, p. 200.

\(^{99}\) Butcher, p. 136.
as the limitanei of the Byzantine period. In the Late Roman period, for example, the urban centers prosper, but the hinterlands are in a period of abatement. This is also readily apparent in the Byzantine period, when abandonment of most sites in some parts of the region in the Late Byzantine period followed a period of dense settlement in the Early Byzantine period. The Hellenistic period was also a period of settlement abatement. Wider historical events also affected periods of settlement in central Jordan. In periods with more security, for example, second and third generation farmers also felt safe enough to strike out and settle in the marginal areas.

The sedentarization of nomadic groups, though a very important contributor to settlement intensification, is not the only explanation for new sites. How much did these five factors actually influence the settlement of central Jordan? What other factors might have affected settlement in the hinterlands? This thesis will review the historical and archaeological evidence and suggest that the primary stimulus for settlement was security, much more than the five transforming factors of LaBianca. In short, when security was present, settlement in the rural hinterlands greatly intensified. When security was absent, rural settlement witnessed a period of abatement.

Having reviewed the regional environment, the sources, the four major archaeological surveys, issues with archaeological survey, creation of a site hierarchy, LaBianca’s synthesis, and the issue of security, we can now move to a detailed analysis of the evidence. Chapter 2 will examine the Hellenistic period, as the impact of Hellenization, and how rising local kingdoms shaped central Jordan. Chapter 3 will explain how the settlement of the Early Roman/Nabataean period was affected by the
Nabataean client-kingdom and Nabataean sedentarization. Chapter 4 discusses the Late
Roman period and the effects of Romanization. Chapter 5 investigates the Byzantine
period and the impact of Christianization on settlement. Finally, Chapter 6 summarizes
the arguments about the trends in the overall settlement pattern of central Jordan during
the Classical period.
Chapter 2: Hellenistic Period (332-63 BC)

According to LaBianca, the first transforming factor of settlement was Hellenization. Two Hellenizing influences who ruled central Jordan were the Ptolemies (301-198 BC) and the Seleucids (198-164 BC). After the decline of the Seleucid kingdom in the late 2nd century BC, the rising local Semitic kingdoms of the Levant supposedly absorbed and diffused Hellenism. However, this chapter will conclude that the Hellenistic period was a period of abatement caused by a lack of security. For central Jordan, the Hellenistic period witnessed the growing pains of several local kingdoms struggling to gain a foothold on territory outside of their original boundaries. This struggle created insecurity that prevented the spread of settlements in rural areas. However, prior settlement needs to be considered to introduce the landscape of the Hellenistic period.

Central Jordan in Iron Age II and the Persian Period (10th-4th centuries BC)

Before the conquests of Alexander, there were several groups of people in central Jordan. Iron Age II (10th-6th centuries BC) in central Jordan witnessed the emergence of several kingdoms—Ammon, Moab, and Edom. In the 8th and 7th centuries BC these kingdoms controlled most of central Jordan: the Ammonites around modern Amman, Moabites around Dhibon and Al-Kerak, and the Edomites south of Wadi el-Hasa. The best archaeological evidence for the identification of these peoples based on material culture—and thus these Iron Age kingdoms—appears in the 7th-6th centuries BC, lasting into the Persian period, possibly into the 5th century BC. The material culture of the Ammonites spread from the Madaba plains to the Wadi Wala in the south, east of the

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1 For more detail on Iron Age Jordan, see Herr and Najjar “The Iron Age” in The Archaeology of Jordan, ed. by MacDonald, Adams, and Bienkowski, 2000.  
2 Herr and Najjar, p. 335.
Jordan River, north of the Wadi az-Zarqa’, with the desert providing a natural boundary to the east. Each of these kingdoms is recorded in the Bible. For example “the Lord said to me [Jeremiah]. . .Send word to the king of Edom, the king of Moab, the king of the Ammonites” (Jer. 27.3). In addition, various books of the Bible mention several important sites of central Jordan. For example Isaiah (8th century BC) mentions Nebo (Mt. Nebo, Hesban survey); Medeba (Madaba); Heshbon (Ebus); Elealeh (el’Al, Hesban survey); Luhith (possibly modern Kathrabba, Kerak plateau); the Arnon (Wadi Mujib); Kir-hareseth (Charachmoba) (Isa. 15; 16). Some memory of the territories of these kingdoms survived at least until Eusebius composed his Onomasticon at the turn of the 4th century AD (Onom. 24, 72, 124). The eventual fate of these kingdoms, however, presents another issue.

Glueck thought that the Persian period (539 BC-332 BC) represented a gap in the occupational history of central Jordan. The independent kingdoms of Ammon, Moab, and Edom most likely did not survive into the Persian period. Rather, they probably had earlier been absorbed into the Neo-Assyrian and then the Neo-Babylonian province later called ‘Beyond the River’ (the area from the Euphrates River to southern Palestine) used by the Persian king Cyrus when he created a single administrative province from

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3 Herr and Najjar, p. 338.
4 Herr and Najjar, p. 338-339.
5 Bienkowski, p. 347.
Babylonia to ‘Beyond the River.” Very little is known about the territorial divisions of Jordan in the Persian period, including the former territories of Moab and Edom. When describing the fifth province of the Persian Empire, administrators are “always omitting the Arabians, who were not subject to tax” (Herodotus *Hist.* 3.91). On the other hand, the possibility of an Ammonite province lingers. Tobiah is called an “Ammonite official” (Neh. 2.19) and the discovery of Aramaic stamps used in the Persian provincial tax system imply the possibility that Ammon was a province in the Persian period. This gives only a partial answer to the supposed occupational gap from Iron II to Hellenistic periods.

It is impossible to know if central Jordan was under continuous Persian control during the entire Persian period (539-332 BC). The regional surveys of central Jordan reported very little diagnostic Persian period pottery in the region. The Hesban survey collected Iron II/Persian Period ceramics (ca. 900-500 BC) from 63 sites; only one site—Tell Jalul—showed Late Persian Period (ca 500-250 BC) pottery. The Kerak plateau survey recorded only 20 sites (of the more than 443 surveyed) with Iron IIC/Persian (540-332 BC) and or Persian ceramics. Without larger samples, attempts to distinguish Iron IIC/Persian ceramics and ceramics that are more specifically characteristic of the Persian period may be premature, but this evidence agrees with results of other nearby surveys. The Wadi el-Hasa survey found no Persian period ceramics. The possibility that this paucity of diagnostic Persian pottery means continued use of Iron II pottery well into the

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6 Bienkowski, p. 347.
7 Avi-Yonah, p. 26; Bienkowski, p. 348.
8 Bienkowski, p. 348.
9 Ibach, p. 163, 168
10 Brown, p. 205.
11 Brown, p. 205.
12 MacDonald, p. 291-292.
Persian period cannot be ignored.\textsuperscript{13} In addition, several public buildings at several sites, including some in the wider region, have been dated to the Persian period: at Tell as-Sa’idiyya (Stratum III), Tell al-‘Umayri, Tell Jalul, al-Dreigat, and Busayra.\textsuperscript{14} These are some examples of the growing body of evidence suggesting continued occupation from Iron II through the Persian Period, and possibly into the Hellenistic period.\textsuperscript{15}

\textbf{The Hellenistic Period}

After Alexander died in 323, the eastern Mediterranean experienced war, diplomatic complexities, and the establishment, by 281 BC, of the monarchies of the Hellenistic world.\textsuperscript{16} Ptolemy and his successors controlled Egypt and much else. Seleucus and his successors controlled most of the Asian portions of the former Persian Empire. Both sides vied for control of Palestine, with the region changing hands several times. The Ptolemies aimed to preserve their rule in Egypt against the rival Hellenistic powers of Macedonia and Syria.\textsuperscript{17} The holdings of the Ptolemies beyond Egypt—Syria, Cyprus, Cyrene, in Asia Minor, and the Aegean—were intended as a perimeter or forward line of defense protecting Egypt.\textsuperscript{18} The Ptolemies and Seleucids fought a series of six so-called Syrian Wars between 274 and 168 BC. The Syrian border between the Ptolemaic and Seleucid empires was a point of friction in these Syrian Wars.\textsuperscript{19}

The death of Ptolemy IV in 204 BC revived territorial desires in the other Hellenistic powers. Ptolemy V was only five years old when he ascended the throne and

\textsuperscript{13} Bienkowski, p. 349, 352.
\textsuperscript{14} Bienkowski, p. 354.
\textsuperscript{16} Braund, p. 33.
\textsuperscript{17} Avi-Yonah, p. 33.
\textsuperscript{18} Ager, p. 38.
\textsuperscript{19} Ager, p. 37.
the kingdom of Egypt became the object of dynastic disputes.\textsuperscript{20} This provided an opportunity for the Seleucid Antiochus III to attack Ptolemaic possessions.\textsuperscript{21} Thus, the Fifth Syrian War (202-200 BC) ended with Seleucid control of Palestine, but the peace proved short-lived.\textsuperscript{22} The Romans defeated both the Macedonian and Seleucid kingdoms between 200-188 BC and began establishing their control over the Greek East.\textsuperscript{23}

In the 160s BC, both the Ptolemaic and Seleucid kingdoms fell under indirect Roman control and both faced serious internal issues, such as the formation of local kingdoms like the Hasmonaeans and Nabataeans. Ptolemy VI put down two native revolts and Antiochus IV faced uprisings both in his eastern territories as well as a Jewish revolt led by the Maccabees.\textsuperscript{24} The continued rise of the Hasmonaean kingdom led to conflict between the Nabataeans and Jewish Hasmonaean kingdom until the arrival of the Romans in the region in 63 BC. Much of this conflict involved cities and towns in central Jordan. There are several accounts of the Maccabees encountering the Nabataeans in northern Jordan and outside of Madaba (1 Macc. 5.24-44 and 9.32-36; \textit{Ant.} 12.8.3).

At its greatest extent under Alexander Jannaeus (103-76 BC), the Hasmonaean kingdom encircled the Dead Sea, including Essebon (Esbus), Medeba (Madaba), Lemba, Oronaim, Agalain, Thona, Zoara, the Valley of the Cilicians, and Pella (\textit{Ant.} 13.15.4).\textsuperscript{25} Hyrcanus II, to gain Nabataean support for his claim on the throne, ceded Medeba (Madaba), Libba (Livia), Dabalo, Arabatha (Areopolis), Agalla, Athone, Zoara, Oronain, Gobolis, Arydda, Alusa (Elusa), and Orybda (\textit{Ant.} 14.1.4).

\textsuperscript{20} Chamoux, p. 105.
\textsuperscript{21} Chamoux, p. 105.
\textsuperscript{22} Chamoux, p. 106; Thompson, p. 115.
\textsuperscript{23} Derow, p. 65.
\textsuperscript{24} McGing, p. 74.
\textsuperscript{25} Avi-Yonah, p. 70.
In 66 BC, the Roman general Pompey invaded the East. He reorganized Asia Minor, reached a territorial agreement with the Parthians who controlled Mesopotamia, and then moved into Syria. The greatly weakened Seleucid kingdom fell when Pompey deposed Antiochus XIII, creating the new Roman province of Syria in 64 BC. The following year Pompey moved into Palestine. The Jews, split by civil war, encouraged Roman military intervention. Judaea henceforth became a Roman client state. Pompey then turned east to Nabataea in 63 BC, ordering their king to make a financial contribution and become a Roman client, ending the Hellenistic period.

**The Rise of the Nabataeans**

The origin of the Nabataeans remains obscure. Their first historical appearance is in 312 BC at Petra where Diodorus describes their nomadic lifestyle. “They live in the open air, claiming as native land a wilderness that has neither rivers nor abundant springs. . .It is their custom neither to plant grain, set out any fruit-bearing tree, use wine, nor construct any house. . .Some of them raise camels, others sheep, pasturing them in the desert” (Diod. 19.94.3-4). Some scholars have seen the Nabataeans as descendants of the Edomites. Others, such as Graf, suggest that the Nabataeans migrated from north or northeast Arabia during the 1st millennium BC. Graf argues for the existence of the Nabataeans within the Qedarite realm (which assumed control of Jordan after the eclipse of the Edomites) based on linguistic evidence drawn from their religious pantheon. When the kingdom of Edom collapsed, “proto-bedouin” filled the power vacuum, making

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26 Chamoux, p. 151.
29 For continuity between Edomites and Nabataeans, see Bartlett, J. “From Edomites to Nabataeans: the Problem of Continuity” Aram 2, p. 25-34.
30 Schmid, p. 367.
31 Graf, p. 47.
their living by breeding sheep and camels, by trade, and by pillaging. However, archaeological evidence from the 4th century BC shows Edomites and Arabs living side-by-side, even outside the territory of Edom—the Edomites, then neither vacated the region nor were they transplanted by Arab migrants.

The Nabataeans, then, comprised a separate people within North Arabian society, migrating from North Arabia during the Persian Period and installing themselves in Jordan around Petra. Diodorus also makes clear the importance of the Nabataeans to the Levant: “the Nabataeans far surpass the others in wealth although there are not much more than ten thousand of them; for not a few of them are accustomed to bring down to the sea frankincense and myrrh and the most valuable kinds of spices, which they procure from those who convey them from what is called Arabia Eudaemon (Arabia Felix)” (Diod. 19.94.4-6). Diodorus chronicled the famous spice trade of the Nabataeans, who by 312 BC were already wealthy and well-known middlemen of this trade. The spices, mainly frankincense and myrrh, were harvested and shipped from locations in the southwestern Arabian peninsula along the Red Sea coast into modern Jordan.

Presumably, the major switching station to the port of Gaza would have been at Petra, which Diodorus calls literally, “the rock” (Diod. 19.95.1). “Petra is the location of the national assembly, a place where those who dwell nearby are accustomed to meet, a place to sell and purchase goods, is in an exceedingly strong defensive location that does not have a wall” (Diod. 19.95.1). From Petra, as Diodorus makes clear, the Nabataeans conveyed the goods to the Mediterranean. Diodorus is describing the Petra-Gaza road, which ran from the caravan city at Petra, across the Negev and eventually terminated at

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32 Bartlett, p. 34.
33 Graf, p. 51.
34 Graf, p. 67.
the port of Gaza. The archaeological record suggests that the Nabataeans had a secure route through the Negev. Surveys and excavations have shown that by the 3rd century BC, Nessana, Elusa, Oboda, and Moyat ‘Awad were at least guard stations or stopovers on the route from Petra to Gaza.35 This would place Nabataean interest south of central Jordan at least as early as the 3rd century B.C., as the aromatics trade provided their main source of wealth. The major axis of settlement, then, would have been near the routes which conveyed these luxury goods (Map 2). The majority of Hellenistic settlements on the Kerak plateau occurred south of modern Kerak (barring Areopolis), meaning that the southern portions of the plateau, which also trace the Wadi el-Hasa, were preferred for settlement. The Wadi el-Hasa survey found that most of its Hellenistic sites were located along the Wadi el-Hasa itself (Map 2). The focus of Hellenistic settlement, then, appears to have been along the Wadi el-Hasa, both on the north and south ridges. Perhaps it was not the aromatic trade alone that promoted Hellenistic settlement on the Kerak Plateau and along the Wadi el-Hasa.

Diodorus also mentions that the Nabataeans engaged in other commercial tasks. One of these involved extracting a massive amount of asphalt each year from the Dead Sea (Diod. 19.99). The Nabataeans apparently controlled the harvest of this asphalt and defeated a Greek army after a battle on the Dead Sea (Diod. 19.100). The Wadi el-Hasa empties into the Dead Sea and perhaps the settlements along the north and south ridges of the wadi reflect the harvest and transport of the asphalt.

Whatever their origin, the sources make clear that by 312 BC the Nabataeans were established in south and central Jordan. Unfortunately, little material evidence dates

35 Berlin, p. 6.
from the 3rd to the early 2nd centuries BC. A nomadic lifestyle leaves little artifactual evidence in the archaeological record. The Zenon papyri from the reign of Ptolemy II Philadelphus (285-246 BC) and an encounter between the Maccabaeans and the Nabataeans, c. 163 BC (1 Macc. 5:25) both suggest a Nabataean presence in central and northern Jordan. By the early Hellenistic period they were also settled, according to some historical sources, in southern Syria. However, surveys and excavations in northern Jordan rarely uncover Nabataean pottery—the Hesban survey found two Nabataean sherds. The fact that the Hesban team found almost no Nabataean ceramics helps define their main zone of habitation. The Jewish kingdom, therefore, apparently was able to block the Nabataeans from settling the area around Esbus. This ‘hiccup’ in Nabataean influence, which extended from the Red Sea into northern Jordan also created a frontier between the Jewish and Nabataean kingdoms. Herod the Great apparently reinforced this frontier with several military garrisons, including one at Esbus. There is also some evidence of the Nabataeans in the Hauran in southern Syria, which seems to have been part of their realm.

The Nabataeans, prior to the mid-2nd century BC, were a nomadic or semi-nomadic people. Following their appearance in the archaeological record, the Nabataean material culture developed rapidly over the next century.

Excavations at ez-Zantur in Petra has pushed the earliest phases of the distinctive Nabataean Fine-Painted Wares to ca. 150 BC. This would advance the sedentarization

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36 Schmid, p. 367.
37 Schmid, p. 370.
38 Graf, p. 54.
39 Graf, p. 67.
40 Ibach, Table 2.1, p. 33-39.
of the Nabataeans to the middle of the Hellenistic period. The first Nabataean pottery displays many Hellenistic traits, though there is a possible link with similar painting styles based on Mesopotamian and North Arabian prototypes. From ca. 50 BC to about 25 BC another change occurred with ceramic styles clearly borrowed from Iranian or Mesopotamian prototypes; after 25 BC, the Nabataeans then began developing their own distinctive ceramic style. The first Nabataean coins depict Aretas II (120/110-96 BC) and Aretas III (87/84-62 BC) with Hellenistic traits and with legends in Greek. Minting of coins also suggests at least minimal administration or bureaucracy—another indicator of sedentarization. In fact, the first coins were minted at Damascus, precisely when the Nabataeans assumed control of this region and the first Nabataean ceramics appear in Petra. Their coinage changed in the middle of the 1st century BC, when the Nabataeans switched from Greek to Aramaic legends. By the end of the 1st century BC, the Nabataean material culture suddenly passed to a stage of architectural monumentalization—houses, temples, rock-cut tombs facades, and architectural decoration. It appears, then, that Nabataean culture was typified by initial adoption of ‘international fashion,’ mainly Hellenistic styles, before the development of a distinct Nabataean style.

The Nabataeans also appear to be major opponents to the Hasmonaeans of Judaea throughout the late 2nd century BC. The power vacuum created by the decline of the Seleucids during the latter half of the 2nd century BC accelerated the sedentarization of

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42 Schmid, p. 368.
43 Schmid, p. 373.
44 Schmid, p. 373.
45 Schmid, p. 373.
47 Schmid, p. 374.
the Nabataeans. They were forced to create a more permanent infrastructure to counter the Hasmonaeans and to challenge the recent increase in Ptolemaic trade, boosted by the discovery of a direct sea route from South Arabia to India. Considering the rapid expansion of the Nabataeans in the later Hellenistic period, it might not be unreasonable to question the chronology of the ceramics, possibly placing denser Nabataean settlement in the Late Hellenistic period.

Central Jordan in the Hellenistic period (332-63 BC)

<table>
<thead>
<tr>
<th>Table 1: Hellenistic Sites</th>
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<tr>
<td>Small</td>
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<tr>
<td>Hesban Survey</td>
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<td>Kerak Plateau Survey</td>
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<td>Limes Arabicus Survey</td>
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<td>Wadi el-Hasa Survey</td>
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The Hellenistic period is the most poorly represented period overall in terms of settlement (Map 2). In toto, the various surveys recorded only 35 Hellenistic settlements, or less than 2% of all sites surveyed (2,202 total). Fourteen of these are small sites, six are medium-sized, eleven are large sites, and four are major sites—Ebusus, Madaba, Areopolis, and Charachmoba. The majority of Hellenistic sites are either along the ‘King’s Highway,’ the Esbus-Livias road, or the ridges of the Wadi el-Hasa. Of the large or major sites, Josephus mentions Hesban (Ant. 13.15.4) and Madaba (Ant. 13.9.1) with certainty. Tell er-Rama (Site 95) has been linked with Livias, called Libba, by Josephus (Ant. 14.1.4).

Excavations at Tell el-‘Umeiri (Site 149) in 1989 suggested very limited Late Hellenistic occupational activity. The site was abandoned in the late 5th or early 4th

48 Schmid, p. 370.
49 Schmid, p. 370.
centuries BC, but resettled in the late Hellenistic period. Stratum 15 (ca. 198-63 BC) at Tell Hesban suggests the reoccupation of the site at this time after a long period of abandonment. The summit of the tell was stripped to bedrock (at least near Area A) and then surrounded by a massive fortification wall two meters thick. At some distance from this wall a succession of soil layers and/or surfaces, along with a few other walls, were excavated. In addition, military objects occur frequently within Stratum 15. The evidence suggests that Hellenistic Esbus was re-founded as a border fort with a small settlement outside its walls. Given the power struggles between the Jews and Nabataeans late in the Hellenistic period, the construction of a fort at Tell Hesban is not surprising, given its location at the junction of the Esbus-Livias-Jericho-Jerusalem road and the King’s Highway.

Josephus mentions one major site—Arabath, modern er-Rabba and another name for Areopolis (Ant. 14.1.4). The other major site on the Kerak plateau was Charachmoba, most likely Kir-Hareset, earlier the southern capital of the kingdom of Moab. Charachmoba, then, was already an important site by the Hellenistic period and is mentioned several times in the Old Testament (II Kings 3:25; Isa. 16:7, 11; Jer. 48:31, 36). As mentioned earlier, most of the Hellenistic sites on the Kerak plateau are south of Charachmoba, mostly on the north ridge of the Wadi el-Hasa. This settlement pattern suggests Nabataean settlement expanding from the south.

51 Herr, Clark, Geraty, Younker, LaBianca, p. 17.
52 Mitchel, p. 38.
53 Mitchel, p. 38.
54 Mitchel, p. 38.
The settlement patterns of the Hellenistic period around tell Hesban indicate few, evenly scattered sites. On the Dhiban Plateau, the region between the Hesban survey and the Kerak Plateau, 13.95% of sites yielded Hellenistic sherds. This percentage is comparable to the Hesban and Kerak plateau surveys. In a survey of the area around Iraq el-Amir (18 km west of Amman), the Hellenistic period was one of the best represented periods overall. Iraq el-Amir was probably the fortress of Tyre mentioned by Josephus built by the Tobiads (Ant. 12.4.11). In a survey of the Wadi ash-Shkafiya, the connecting wadi between the Dhiban Plateau and the Kerak Plateau, no Hellenistic sites were found. A random survey conducted by the Madaba Plains Project found Hellenistic sites represented 18.9% of total sites. This percentage roughly parallels the Hesban and Kerak plateau surveys.

Given the frequency of warfare in this period, the lack of small, isolated sites and the preference for village and town sites is not surprising. Some of these areas, especially around Esbus, served as a military frontier east of the Jordan between the expanding Jewish and Nabataean kingdoms. Perhaps a lack of security for isolated small and medium-sized sites discouraged settlement throughout central Jordan. As the history of the region indicates, some areas of central Jordan witnessed conflicts between these two local powers. The Nabataeans at this point specialized in commercial activities (mainly trade in aromatics and asphalt from the Dead Sea). Most of the Hellenistic sites within the boundaries of the Nabataean kingdom lie either on the ‘King’s Highway’ or near the ridges of the Wadi el-Hasa. Though the Nabataeans preferred the Petra-Gaza road farther

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56 Ibach, p. 168; MacDonald, p. 190.
59 Ninow, p. 155.
60 Geraty, 1997, p. 252.
south, the ‘King’s Highway’ (later the *via nova Traiana*) was also used to move goods north into Syria. The Hellenistic border fort constructed at Esbus sat at the crossroads of the ‘King’s Highway’ and the Esbus-Jericho road—no doubt a strategic location. As on the Petra-Gaza road, many of these village and town sites probably contained inns, stables, and other amenities for facilitating commerce. The Hellenistic period, then, appears to be a period of “abatement” in terms of settlement, but this conclusion is advanced cautiously. Issues with the ceramic chronology of the Hellenistic and Nabataean traditions might alter the impression of this period.

Hellenization of Central Jordan

Central Jordan fell under the control of two major Hellenistic monarchies—first the Ptolemies (301-200 BC) and then the Seleucids (200 BC-164 BC). Avi-Yonah states that the spread of Hellenism to the Ptolemies was of secondary importance to protecting Egypt.61 The Ptolemies founded relatively few new Greek cities, but granted many existing communities a Greek name and some rights of a Greek city. The only literary evidence for Ptolemaic urbanization near central Jordan is the city of Ammon (modern Amman), re-founded as Philadelphia by Ptolemy II Philadelphus (282-246 BC).62 Esbus was reoccupied as a border fort in the Late Hellenistic period. The book of Isaiah implies that Esbus, Madaba, and Charachmoba were already important sites by the Iron II period that continued to be occupied throughout the Hellenistic period (332-63 BC). Josephus mentioned Areopolis as one of the sites taken by Alexander Jannaeus (103 -76 BC). The

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61 Avi-Yonah, p. 33.
62 Holbl, p. 60.
major urban centers of central Jordan, then, do not appear to be re-founded as Hellenistic centers.

The Seleucids accepted the status quo, respecting local institutions already in place. However, just as with the Ptolemies, they identified themselves as Greeks, the official language was Greek and their currency was Greek in style. The Seleucids relied on immigrant Greek colonists and soldiers, however, these policies were meant to serve imperial purposes rather than to promote Hellenization. They also renamed cities: Gerasa in northern Jordan became “The city of the Antiochenes on the Chrysorrhoas, formerly the city of the Gerasenes.” Greek-style cities formed a key component of Hellenization. Yet, neither the Seleucids nor the Ptolemies re-founded cities in central Jordan. If there were no Greek cities in central Jordan, how could there be Hellenization?

Without active Hellenizing by the monarchies, the local elites might have adopted Hellenistic traits. As mentioned above, the sudden appearance of Hellenistic style in monumental architecture at Petra demonstrates the Hellenization of the Nabataean elites—though not in the Hellenistic period. Tobias the Ammonite constructed the fortress at Iraq el-‘Amir (Josephus Ant. 12.4.1). The territory of Tobias encompassed a relatively large tract of land west of Philadelphia (modern Amman) just northeast of the Hesban survey. The sculptural panels adorning the fortress are first and foremost representational art in the Greek tradition. These sculptures represent some of the most graphic evidence of the taste of one Jewish Hellenizer. The Nabataeans, as we have seen, did not adopt too many Hellenistic traits until the Early Roman/Nabataean period

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63 Austin, p. 128.
64 Austin, p. 129.
65 Avi-Yonah, p. 51.
66 Berlin, p. 12.
67 Berlin, p. 12.
(63 BC-AD 106). Therefore, there is little evidence for the Hellenization of local elites in central Jordan during the Hellenistic period. What then accounts for the relative paucity of rural settlement in the Hellenistic period? The historical sketch of the Hellenistic period suggests that the rising local powers were not able to secure their holdings, and this lack of security created the period of abatement in the evidence suggested by the four surveys.

**Conclusion**

The Hellenistic period did not see much settlement activity in central Jordan until Seleucid power declined. Although Hellenistic Hesban itself began as a (Seleucid?) border fort, re-founded around the beginning of the 2nd century BC, the rise of the Hasmonaeans and the Nabataean kingdoms in the late 2nd century and early 1st century BC that really spurred a growth of resettlement in central Jordan. Josephus, in numerous passages, chronicles the desire of both sides to acquire territory in central Jordan. On the other hand, the evidence also reveals economic growth in the region. Nabataean merchants controlled international trade routes through the region, especially the Petra-Gaza route south of central Jordan. Settlement on the Wadi el-Hasa might also indicate the growing commercial power of the Nabataeans, as this wadi empties into the Dead Sea, from which the Nabataeans harvested asphalt. Sites farther north are associated with the route of the ‘King’s Highway’ and other routes, such as the Esbus-Jericho road. The location of these sites on trade routes shows the economic interest of the Nabataeans (Map 2). On the other hand, current knowledge suggests that most of this settlement occurred late in the Hellenistic period (332-63 BC). The issue of ceramic continuity from Iron II through the Persian Period to the early Hellenistic Period and the

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68 Mitchel, p. 38.
rise of the Nabataeans, however, suggest that better understanding of the ceramic
chronology might require a rethinking of the early Hellenistic period. The region was not
Hellenized, with the nearest examples at Iraq el’ Amir and Philadelphia. The focus of
this study, however, is not only on urban centers but also the surrounding rural areas.
After the introduction of Hellenism, the settlement of central Jordan did not change.
Rather, the local Semitic kingdoms, constantly squabbling over the territory of central
Jordan, were not able to provide the necessary security for isolated farms and settlements
to spring up in marginal regions. Settlements started to appear after the Jews and
Nabataeans consolidated and secured their borders near the end of the Hellenistic period.
Chapter 3: Nabataean/Early Roman Period (63 BC-AD 106)

The Early Roman/Nabataean period dates from 63 BC, when Pompey extended indirect Roman control over the region, to the annexation of Nabataea by Trajan in AD 106. Although this period was by no means untroubled, the Nabataean kingdom as well as other local kingdoms reached their zeniths during this period. These client kingdoms established by Pompey—Nabataea and Judaea—were sometimes forced to choose sides in the Roman civil wars at the end of the Republic with serious consequences in mind. Often, these two kingdoms clashed as a result of these choices or over local issues. As the Romans resolved their issues, Octavian, taking the name Augustus, created the Principate and the Pax Romana spread over the region, probably affecting the settlement patterns of central Jordan. This chapter will examine the Nabataeans as a client-kingdom, the rivalry between Nabataea and Judaea, the sedentarization of the Nabataeans, and the impact of these developments on settlement in central Jordan from 63 BC-AD 106.

Pompey in the East

Pompey’s reorganization of the East had long-standing consequences for the Levant. The new province of Syria was garrisoned with 4 legions which oversaw—and ensured the loyalty of—the client-kingdoms established by Pompey. A native ruler appointed by Rome governed each client-kingdom. The client was expected to obey Rome on all matters of foreign policy and provide military support to the Romans when needed.¹ In return, the client-kingdom enjoyed considerable internal autonomy and Roman protection from external threats. The client-kingdoms of central Jordan were Nabataea and Judaea (because it included the district of Peraea east of the Jordan River).

¹ Scullard, p. 103.
In addition to establishing client-kings, Pompey also strengthened local communities, in particular the Greek cities.\textsuperscript{2} The Decapolis of northern Jordan and southern Syria formed a group of such Greek cities. The Decapolis was not a league but probably a loose geographic term applied to an administrative unit.\textsuperscript{3} These cities were placed under the direct supervision of the proconsul of Syria.\textsuperscript{4} The border of the \textit{territorium} of Philadelphia, the southernmost Decapolis city, bordered the \textit{territorium} of Esbus. After completing the reorganization of the East, Pompey returned to Rome and left Aemilius Scaurus as governor of Syria.

Scaurus, no doubt with personal motives in mind, led an expedition into Nabataea in 62 BC against Petra and ravaged the country around it. After the Nabataeans paid him 300 talents, he renewed recognition of Nabataea as a client-kingdom at the end of this campaign (\textit{Ant.} 14.5.1). Gabinius, the next governor of Syria, led another expedition against the Nabataeans in 55 BC and defeated them in battle, although the brief reference by Josephus contains no other details of this operation (\textit{Ant.} 14.6.4). Both of these incursions presumably marched along the King’s Highway, through the heart of central Jordan. Unfortunately, Josephus did not chronicle the damage inflicted by these expeditions.

\textbf{The Nabatean Client-Kingdom}

The Nabatean king Malichus I (62-30 B.C.), coming to power before the invasion of Gabinius, had the difficult task of leading his people during the turbulent years of the Roman civil war.\textsuperscript{5} In 44 BC, the assassins of Caesar fled to the East to

\begin{itemize}
  \item \textsuperscript{2} Sartre, p. 42.
  \item \textsuperscript{3} Ball, p. 181.
  \item \textsuperscript{4} Avi-Yonah, p. 81.
  \item \textsuperscript{5} Bowersock, p. 37.
\end{itemize}
buildup support against Antony. One of Caesar’s former generals, Labienus, encouraged the Parthians to invade the East —thus introducing havoc and confusion to the region.\textsuperscript{6} The Parthians reached Jerusalem in 40 BC, plundering “all the possessions of the people of Jerusalem….the Parthians were not satisfied with what they found in the city, and so they went out and ravaged the Jews’ country as well” (\textit{Ant.} 14.13.9). Herod, the son of Antipater (who had ceded captured territory in Moab to the Nabataeans on behalf of Hyrcanus) turned to Malichus demanding aid (\textit{Ant.} 14.14.2). Malichus refused and Herod fled to Rome. Herod returned from the west with full Roman support and embarked on a career which earned him the name Herod the Great. Malichus now found himself alienated from the Jews and lacking secure Roman recognition (as shown by the prior invasions by Roman generals). Malichus gave his support to the Parthians, resulting in a severe fine after the Parthians were driven back across the Euphrates (\textit{Ant.} 15.5.1).\textsuperscript{7}

The Second Triumvirate was formed in 43 BC, including Antony and Octavian. Antony soon fell under the sway of Cleopatra, and the remnants of the alliance crumbled. Part of the reason for the tear in the alliance occurred when Cleopatra “asked Antony for Judaea and Arabia, requesting him to take them away from their royal rulers” (\textit{Ant.} 15.4.1). Antony did not oblige Cleopatra totally, knowing the repercussions of such an act, but she received “some parts of either’s territory. . .he also gave her the cities between the Eleutherus River and Egypt [coastal cities of Phoenicia and Palestine] with the exception of Tyre and Sidon” (\textit{Ant.} 15.4.1). In addition, Antony required Herod to collect tribute from Malichus—an act intended to sow enmity between the two—and

\textsuperscript{6} Bowersock, p. 39.
\textsuperscript{7} Bowersock, p. 39.
invade Nabataea per Antony’s orders.8 “And after equipping a force of cavalry and infantry, he came to Diospolis, where the Arabs met him. . .A fierce battle took place, and the Jews were victorious. But afterwards, a large army of Arabs gathered at Kanata, which is a region in Coele Syria, and Herod. . .came to meet them with the largest part of his force” (Ant. 15.5.1). Herod was ultimately routed by the Arabs under Cleopatra’s representative Athenion, who switched from Herod’s side because he disliked the Jewish leader.9 Herod sought terms but Malichus killed the envoys and Herod therefore was obliged to reopen hostilities.10 Herod sought battle near Philadelphia (Amman) and defeated the Arabs, under general Elthemus, in such great number (Josephus claims over 12,000 killed in action and 4,000 taken prisoner) that Herod, “[having] punished Arabia and broken the spirit of its people, gained such a reputation with them that the nation chose him for its Protector” (BJ 1.19.5-6). This was the last attested battle near central Jordan until Roman troops crossed the Jordan in the First Jewish revolt. In the meantime, Octavian had defeated Antony and Cleopatra at Actium in 31 BC.

The two client kings immediately secured the good will of Octavian. “The Arabians. . .burned the ships [of Cleopatra’s remaining fleet] in the Arabian Gulf which had been built for the voyage to the Red Sea, and the peoples and princes without exception refused their assistance to Antony” (Dio, 51.7.1). By securing the goodwill of Augustus through this attack against Antony and Cleopatra, Malichus remained ruler of the Nabataea.11 Their kingdom now included most of central Jordan. Herod, on the other hand, used his past loyalty to Antony as evidence of future loyalty to Octavian: “if you

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8 Bowersock, p. 41-42.
9 Bowersock, p. 42.
10 Bowersock, p. 43.
11 Bowersock, p. 43.
[Octavian] disregard the outward appearance and examine how I behave towards my benefactors and what sort of friend I am, you can find out about me from what you learn concerning my past actions” (Ant. 15.6.6). Herod secured the goodwill of Octavian, now Augustus (after 27 BC). Malichus died soon after Cleopatra. Both kingdoms, however, continued under Roman authority as client kingdoms. Any territorial changes in the future were effected not by conquest but by subtle maneuvering at Rome. The king with more political skill and cunning could secure more land. On the other hand, if one of the kings sidestepped Roman authority and took action without the approval of Rome, he would meet serious imperial displeasure.

Herod’s kingdom included the whole of Judaea, Samaria, Peraea, and Galilee. Peraea, Herod’s holdings in central Jordan, extended: “in length from Machaerus to Pella, in breadth from Philadelphia to the Jordan. The northern frontier is Pella. . .the western frontier is the Jordan; on the south it is bounded by the land of Moab, on the east by Arabia, Heshbonitis (Hesban), Philadelphia, and Gerasa” (BJ 3.3.3). After Actium, Octavian granted Herod not only land he had lost to Cleopatra, but also several Greek cities including Gadara and Hippus of the Decapolis, and the coastal cities of Gaza, Anthedon, Joppa, and Strato’s Tower (Ant. 15.7.3). Strato’s Tower would become Herod’s capital, Caesarea (Ant. 15.9.6). Herod, though a growing threat to the Nabataeans after these land grants, was experiencing major difficulties of his own in Judaea (Josephus Ant. 15.8). As a result, Herod fortified his territory by constructing fortresses throughout the kingdom: his own palace and the fortress Antonia adjacent to the temple in Jerusalem, Sebaste (Samaria), Strato’s Tower (Caesarea), Gaba (in Galilee),

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12 Avi-Yonah, p. 87.
13 Avi-Yonah, p. 86.
and in Peraea, where he rebuilt Esebonitis (Ebus/Hesban) \( (\text{Ant. 15.8.5}) \). The colony of veterans at Ebus and the fortress of Machaerus may have served to protect his frontier with the Nabataeans.\(^\text{14}\)

Augustus in the later 20s BC greatly expanded Herod’s territory in Trachonitis, Batanaea, and Auranitis (Jebel Druz, the area along the modern border of southern Syria and northern Jordan) \( (\text{Ant. 15.10.1}) \). This area would be the source of dispute between the Nabataeans and Jews throughout the Early Roman/Nabataean period \( (\text{Ant. 15.10.1-3}) \). Following the intrigues of a certain Nabataean minister, Syllaeus, the accession of the Nabatean king Aretas IV (9 B.C.-A.D. 40), and the death of Herod in 4 BC, Augustus seemed dissatisfied with the situation in Arabia and Judaea \( (\text{Ant. 16.9-10}) \).

The solution to the issues in Arabia was a possible short-lived Roman annexation of Arabia between 3 and 1 BC.\(^\text{15}\) Cases of kingdoms annexed but then returned to client status are by no means absent from Roman imperial history. Tacitus \( (\text{Ann. 2.56}) \) and Suetonius \( (\text{Vesp. 8}) \) write of emperors temporarily annexing kingdoms until a situation more to their liking occurred. In addition, Aretas IV was the most prolific minter of Nabataean coins in the kingdom’s history and it is conspicuous that no known coins of Aretas IV date to 3, 2, or 1 BC.\(^\text{16}\) In AD 1, Augustus’ adopted son Gaius carried out an expedition to Arabia, the same year that Aretas’ coinage begins again \( (\text{Pliny \textit{NH} 6.141; 6.160}) \).\(^\text{17}\) The possibility exists, then, that Augustus annexed Arabia briefly (3-1 BC) until the state of affairs met his approval, at which point Aretas IV could feel secure on his throne. On the other hand and more likely, the \textit{expeditio Arabica} of Gaius in AD 1

\(^{14}\) Avi-Yonah, p. 101.
\(^{15}\) Bowersock, p. 54.
\(^{16}\) Bowersock, p. 55.
\(^{17}\) Bowersock, p. 56.
may have been a response to problems with nomadic tribes near the Gulf of Aqaba. These problems could have created enough instability for coinage not to be struck as well as require Roman military aid. The campaign of Gaius Caesar reached the Gulf of Aqaba in AD 1, not to fight the Nabataeans, but against nomadic invaders pushing north from the Arabian peninsula. The Roman expedition provided the necessary security for Aretas IV to renew issuing coinage in AD 1.

Sedentarization of the Nabataeans

Aretas IV (9/8 BC-AD 40) pursued a deliberate and energetic policy of transforming the Nabataeans into a settled people with an agricultural economy which supported a network of strategically placed urban centers. This may have been a calculated response to the discovery of the monsoon winds at the end of the 2nd century BC, which allowed vessels to ply open waters sailing directly from India to the Red Sea (Periplus 57) and thus diverting much of the aromatic trade away from the land routes long dominated by the Nabataeans to the Red Sea ports in Egypt. This probably reduced the amount of revenue flowing into the Nabataean kingdom. The overland routes, however, did not go out of use, as the Periplus tells us that some trade continued along the old routes (Periplus 19). Further, the forts and way-stations along the Petra-Gaza road remained occupied into the 3rd century AD. But decreased profits from trade probably forced the Nabataean kingdom to seek other economic avenues, i.e. agriculture. The dramatic increase in settlement in central Jordan, especially the region of the Nabataean kingdom, from the Hellenistic period (332-63 BC) to the Early

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18 Romer, p. 205.
19 Bowersock, p. 64.
Roman/Nabataean period (63 BC-AD 106) suggests the sedentarization of the Nabataeans (Map 2; 3). The overall settlement pattern, including all sites, of the Hellenistic period (332-63 BC) was about 13%. The Early Roman/Nabataean period (63 BC-AD 106) witnessed, on average, more than double the Hellenistic period—a total of about 30% of sites surveyed within each region (Map 3). In Petra especially, there are hardly any traces of architecture prior to the late 1st century BC. However, as mentioned above, the absence of archaeological material does not indicate lack of human presence. The sudden appearance of monumental architecture suggests an increasingly sedentarized Nabataean population. A sudden burst of pottery and coins during the reign of Aretas IV (9/8 BC-AD 40) also suggests a sedentarizing population. The earliest houses at Petra excavated thus far date to the reign of Aretas IV, (e.g., the villa of az-Zantur ca. AD 20). Perhaps most notable is the sudden appearance of monumental temple construction at the end of the 1st century BC and the beginning of the 1st century AD. Qasr al-Bint (in Petra), the temple in Wadi Ramm, the ‘Temple of the Winged Lions,’ and the so-called South Temple all have proposed construction dates in the waning years of the 1st century BC. The famous al-Khazna Faraoun, better known as “The Treasury”, is also dated to ca. 50-25 BC, a bit earlier than the abovementioned structures. In addition, the colonnaded street along the Wadi Musi in Petra, the pavement of the as-Siq (entrance to Petra) and its water channels and dams can be dated

22 Schmid, p. 374.
23 Schmid, p. 374.
24 Schmid, p. 374.
25 Schmid, p. 382.
26 Schmid, p. 382.
27 Schmid, p. 388.
to the same period, i.e. the late 1st century BC.\textsuperscript{28} In short, many of the monumental structures in Petra date to the late 1st century BC.

**The End of the Nabataean Kingdom**

The survey evidence strongly suggests the increasing sedentarization of central Jordan by the Nabataeans in the Early Roman period (63 BC- AD 106), specifically under Aretas IV (9/8 BC-AD 40). But did this development continue after the reign of Aretas IV to that of the last Nabataean king, Rabbel II (AD 70-106)?

In about AD 27, Herod Antipas, a son of Herod the Great who ruled Galilee and Perea, sent his Nabataean bride back to Aretas IV.\textsuperscript{29} Aretas mustered his troops and Herod Antipas promptly wrote the governor of Syria—Vitellius—to declare war on Aretas (\textit{Ant.} 18.5.1). “Vitellius got himself ready for war against Aretas with two legions. . .he pushed toward Petra and occupied Ptolemais (near modern Haifa). . .when he received a letter notifying him of the death of Tiberius (March 15, AD 37). . .he now recalled his army” (\textit{Ant.} 18.5.3). Aretas had narrowly avoided open conflict with the Roman army. Aretas IV, using his daughter as an excuse, apparently aimed to gain the lands ceded to Herod by Augustus in order to duplicate the size of Aretas III’s kingdom (85-62 BC), undoubtedly the most extensive of any Nabataean king.\textsuperscript{30} Aretas IV may have briefly controlled Damascus in the waning years of his life. Paul the Apostle relates that “in Damascus, the governor under King Aretas guarded the city of Damascus” (2 Cor. 11.32). Either Aretas—per his ethnarch—was in control of Damascus, or this officer was in charge of the Nabataean community of Damascus.\textsuperscript{31} If Aretas controlled

\begin{footnotes}
\footnotetext{28}{Schmid, p. 390.}
\footnotetext{29}{Bowersock, p. 65.}
\footnotetext{30}{Bowersock, p. 67.}
\footnotetext{31}{Bowersock, p. 68.}
\end{footnotes}
Damascus, he most likely relinquished it as soon as the governor of Syria launched the expedition against the Nabataeans in AD 37. At any rate, Aretas IV died a few years later in AD 40, and his son, Malichus II (AD 40-70), smoothly succeeded him.

From all indications Malichus II continued Aretas IV’s policy of urbanization, sedentarization, and a peaceful transition from commerce to agriculture.\textsuperscript{32} The \textit{Periplus of the Red Sea} (usually dated to the reign of Malichus II) suggests that the Nabataeans continued using the old trade routes through Petra. It mentions “a way inland up to Petra [from Leuke Kome on the Red Sea], to Malichus, king of the Nabataeans” (\textit{Periplus}, 19). Malichus aided the Romans during the 1\textsuperscript{st} Jewish Revolt (AD 66-70) by sending 1,000 cavalry and 5,000 infantry to Vespasian (\textit{BJ} 3.4.2). Rabbel II (AD 70-106) succeeded without apparent difficulty as the last Nabataean king after Malichus II died. Rabbel’s reign is noted for the increased use of irrigation in the Negev and the movement of the royal capital from Petra to Bostra in southern Syria.\textsuperscript{33}

It has also been postulated that, just prior to the annexation of Arabia, the region experienced a sort of Nabataean cultural revival.\textsuperscript{34} One scholar has argued for a rejection of Hellenistic and other ‘western-oriented’ motifs by Nabataean culture in the Early Roman/Nabataean period and a return to a more indigenous ‘Nabataean’ style during the reign of Rabbel II (AD 70-106).\textsuperscript{35} However, Schmid has noted that any presumed earlier “indigenous Nabataean style” does not actually exist in the archaeological record.\textsuperscript{36} Further, the ‘western-oriented’ cultural traits had already

\textsuperscript{32} Bowersock, p. 69.
\textsuperscript{33} Bowersock, p. 73.
\textsuperscript{34} For a more detailed look at the proposed Nabataean cultural revival, see Wenning, R. 1993: Das Ende des nabataischen Königreiches. In Invernizzi and Salles, 1993: \textit{Arabia Antiqua: Hellenistic Centers around Arabia}. See also Wenning, R. and H. Merklein, 1997: Die Gotter in der Welt der Nabataer.
\textsuperscript{35} Schmid, p. 400.
\textsuperscript{36} Schmid, p. 400.
reached into the lowest levels of society throughout Nabataea. On the other hand, the Nabataeans originally lived as nomads and their growing dependence on imported goods and trade negated the need for self-sufficiency. The increased agricultural activities under Rabbel II might indicate a return to a greater level of self-sufficiency, and it is here that Schmid sees any cultural revival. Perhaps the Nabataeans attempted a return to a greater level of self-sufficiency by turning to agriculture in this period. This presumed renaissance in Nabataean identity, if in fact true, might have also alarmed the Romans. It therefore could also be another reason why Trajan annexed Arabia as well as explaining the apparent Nabataean resistance to the Roman annexation discussed in the next chapter.

Central Jordan in the Early Roman/Nabataean Period

<table>
<thead>
<tr>
<th></th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
<th>Major</th>
<th>Total</th>
<th>Percentage</th>
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<td>24</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>44</td>
<td>29%</td>
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<tr>
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<td>61</td>
<td>67</td>
<td>30</td>
<td>2</td>
<td>160</td>
<td>36%</td>
</tr>
<tr>
<td><em>Limes Arabicus</em> Survey</td>
<td>159</td>
<td>27</td>
<td>1</td>
<td>0</td>
<td>187</td>
<td>35%</td>
</tr>
<tr>
<td>Wadi el-Hasa Survey</td>
<td>124</td>
<td>23</td>
<td>5</td>
<td>0</td>
<td>152</td>
<td>14%</td>
</tr>
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The Early Roman/Nabataean witnessed one of the densest periods of settlement in central Jordan (Maps 3, 4, 5). Though a Nabataean cultural presence was not detected in the environs of Esbus, Early Roman settlement increased dramatically compared to the Hellenistic period. The Hesban survey found 44 occupied Early Roman sites, or 29% of all sites. The Kerak plateau showed 160 sites occupied in the Early Roman/Nabataean period, or 36% of all sites. The *Limes Arabicus* survey recorded 187 occupied Early Roman/Nabataean sites, or 35% of all sites. The Wadi el-Hasa survey found 152 Early

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37 Schmid, p. 401.
38 Schmid, p. 401.
39 Freeman, 1996, p. 100.
Roman/Nabataean sites, 14% of all sites. The total number of occupied Early
Roman/Nabataean sites of the four surveys is 543 sites, or 26% of all sites surveyed. 368
sites were small sites, 127 were medium-sized sites, 44 were large sites, and four were
major sites—Esbus, Madaba, Areopolis, and Charachmoba.

The Nabataean kingdom did not include the region of the Hesban survey (Map 5).
Both the lack of Nabataean pottery in the Hesban survey and historical sources indicate
that the region was not under Nabataean control but part of the Roman province of
Syria.\textsuperscript{40} It should be noted that Ibach dates the beginning of the Late Roman period to
AD 130, a quarter century later than the date used for this study—AD 106.\textsuperscript{41} Early
Roman Esbus (Stratum 14; 63 BC-AD 130) was perhaps little more than a fort with at
most a small village.\textsuperscript{42} Josephus corroborates this description of Hesban when describing
fortresses rebuilt by Herod: “in Peraea (he rebuilt) Essebonitis” (\textit{Ant.} 15.8.5). In the
hinterland of Tell el-‘Umeiri north of Esbus some new settlements appeared in the Late
Hellenistic period.\textsuperscript{43} Excavations at Tell el-‘Umeiri itself suggest limited occupational
activity in the Early Roman period, interpreted as a solitary farm in the Early Roman
period.\textsuperscript{44} The inhabitants of the farm could have been Jewish, inferred from a small
plaster pool which was possibly a ritual bath similar to those found near Jerusalem.\textsuperscript{45} If
the inhabitants of this solitary farm were Jewish, this site might be indicative of the
Herodian settlement of the Hesban region recorded by Josephus (\textit{Ant.} 15.8.5). Ironically,
the survey evidence gathered by the Madaba Plains Project (carried out simultaneously

\textsuperscript{40} Ibach, p. 174.
\textsuperscript{41} Ibach, p. 180.
\textsuperscript{42} Mitchell, p. 71.
\textsuperscript{43} Geraty, Herr, LaBianca, Younker, 1987, 1997.
\textsuperscript{44} Herr, Clark, Geraty, Younker, and LaBianca, 2000, p. 17.
\textsuperscript{45} Herr, Clark, Geraty, Younker and LaBianca, 2000, p. 17.
with excavations at ‘Umeiri) found that 78.3% of the total surveyed sites yielded Roman sherds.\textsuperscript{46} However, Early Roman and Late Roman sherds were not differentiated by the survey, so this evidence should be used cautiously. On the other hand, this farm was constructed in the apparent wave of land intensification surrounding the Early Roman site.

Excavations on the Kerak plateau reaffirm extensive occupation of the region during the Early Roman/Nabataean period. Excavations at Khirbet Faris, near Kerak, revealed Early Roman/Nabataean occupation, based on 1\textsuperscript{st} century BC/1\textsuperscript{st} century AD pottery and coins of Malichus II (AD 40-70).\textsuperscript{47} The large Nabataean site of Nakhl (Site 420) included several important features of this same period (fig. 23; 39). The ‘acropolis’ has a Nabataean temple as well as a complex irrigation system including floodwater dams, cisterns, and lateral catchment walls.\textsuperscript{48} In addition, the foundations of many buildings surround the wadi on which the inhabitants of Nakhl constructed the irrigation system.\textsuperscript{49} At Khirbet el-Balu on the Kerak plateau is evidence of major rebuilding of monumental structures in the Nabataean and Roman periods namely a large tower and Qasr el-Balu (fig. 15).\textsuperscript{50}

The fact that much of the Limes Arabicus survey followed the desert fringe at the 200 mm rainfall line suggests that the Nabataeans exploited even marginal land on the fringe of the desert. An interesting common site in the region is the enigmatic ring structure—the most common site type found by the LAP.\textsuperscript{51} There are several types of

\textsuperscript{46}Herr, Clark, Geraty, Younker and LaBianca, 1997, p. 252.
\textsuperscript{47} Johns and McQuitty, p. 249, 250.
\textsuperscript{50} Worschech, 1987, p. 111.
\textsuperscript{51} Parker, 2006, p. 29.
rings: a simple ring of stones with no internal structure, a ring of stones set on edge, a central rectangular structure surrounded by several concentric rings, a ring with several concentric rings around it, and a masonry ring. 52 53% (114 of the 215 rings) had some Early Roman/Nabataean pottery. 53 These rings were the majority of occupied site types in the Limes Arabicus survey zone during the Early Roman/Nabataean period, though not necessarily occupied permanently. The exact purpose of these rings remains elusive, but there are several suggestions. Modern bedouin use circular rings as animal corrals. 54 Bedouin have also been observed threshing grain with camels and donkeys within a stone circle. 55 In antiquity, these rings possibly served multiple functions: animal corrals, foundations for less permanent dwellings such as tents or huts, threshing floors, and burial sites. 56 Considering that the modern correlations between the ring structures and the ancient stone rings is with bedouin, the ancient rings might be evidence for nomadic and semi-nomadic groups living on the fringes of the Kerak plateau in the Early Roman/Nabataean period. With the burst of small sites all over the Kerak plateau during the Early Roman/Nabataean period, the desert margins might have been settled by pastoralists pushed off the newly sedentarized landscape. At any rate, the use of marginal lands means that the Nabataeans, or other occupants of the area, exploited all available lands.

Within the Limes survey area, excavations at several sites also revealed Nabataean/Early Roman occupation. Khirbet el-Fityan, site of a later Roman castellum, yielded significant numbers of Early Roman/Nabataean sherds in the soundings of the

52 Parker, 2006, p. 29-30.
53 Parker, 2006, p. 31.
56 Parker, 2006, p. 31.
fort, suggesting the likelihood of Nabataean occupation.\(^{57}\) The earliest stratified evidence from the fortlet of Rujm Beni Yasser dates to the 1st century BC or 1st century AD.\(^{58}\) Near Qasr Bshir, a small tower was erected during the Early Roman/Nabataean period as part of the Nabataean watchtower system along the eastern fringe of the desert (other apparent Nabataean towers in this region include sites 110, 106, 104, and 109).\(^ {59}\)

On the Kerak plateau, 61 Early Roman/Nabataean sites were classified as small whereas the Wadi el-Hasa had 124 small sites. There were 23 Early Roman/Nabataean medium-sized sites south of the Wadi el-Hasa, while 67 medium-sized sites were found on the Kerak plateau. Just as along the *limes*, the Wadi el-Hasa is more of a marginal area than the Kerak plateau. Perhaps the large number of small sites suggests the inability of the region to support villages as densely as the Kerak plateau. However, we should keep in mind that the Wadi el-Hasa survey did find more than twice the number of sites than the Kerak plateau survey.

On the Kerak plateau, the majority of the defended sites ringed the edge of the plateau and protected the plateau from external threats. The ascent from Luhith, a road leading from the Dead Sea up to the Kerak plateau through modern Kathrabba presents an interesting example. A Nabataean inscription from Madaba, dated ca. AD 37, mentions a garrison of troops stationed at a military camp in or near Luhith (probably modern Kathrabba).\(^ {60}\) Miller identified two strongholds (Sites 260 and 263) which probably guarded both this western (Luhith) entrance to the plateau but also the eastern

\(^{57}\) Richard and Parker, p. 435.
\(^{58}\) Bloom and Parker, p. 449, 455.
\(^{59}\) Bloom and Parker, p. 491.
\(^{60}\) Mittman, p. 177.
entrance to the plateau (via the Fajj el-‘Useikir). The Fajj is a broad depression providing the only easy passage between the desert to the east and the plateau. In the Nabataean period, a series of watchtowers lined both sides of the Fajj. At the north edge of the Kerak Plateau, a fort guarded the ascent across Wadi Mujib along the route of the ‘King’s Highway.’ This is Site 18, Mhattat el-Hajj/Karakun, a fort (ca. 45 m. sq.) immediately east of the road where it begins its descent from the northern edge of the plateau into Wadi Mujib (fig. 12; 13).

Josephus writes that the fortress of Machaerus “was on the boundary between the territory of Aretas (IV) and that of Herod. . .which was at that time subject to [Aretas IV]” (Ant. 18.5.1). Machaerus lies on the western edge of the Dhiban plateau, between Hesban and the Kerak plateau. Farther north, the Hesban survey found almost no Nabataean sherds, thereby suggesting the Nabataeans did not control that region. However, Herod rebuilt Hesban as a fortress, presumably against the Nabataeans to the south (Ant. 15.8.5).

Other excavations and surveys also suggest increased settlement of the Wadi el-Hasa region in the Early Roman/Nabataean period. At-Tuwana (possibly Ptolemy’s Thana/Thoana) experienced relative prosperity during the Nabataean period, reflected in the pottery collected at this intensively surveyed site. There was also evidence for a possible town wall and monumental architecture, and at least three caravansary complexes attest to the importance of the site, though some of these architectural features

62 Koucky, p. 16.
63 Parker, 2006, p. 540.
64 Miller, p. 35.
65 Ibach, p. 174.
66 Fiema, p. 315.
may not date to the Early Roman/Nabataean period. Soundings and survey at Khirbet al-Megheidah revealed an irrigation system for the substantial Nabataean village, as well as 3 large enclosures with massive walls and the remains of several buildings. A village was founded in the 1st century AD at Khirbet edh-Dharih, an important Nabataean cultic center located on the Wadi La’ban (a tributary of the Wadi el-Hasa) (fig. 30). The team did not find any material connections between the Iron II period and the 1st century AD, meaning that the site, or at least the previous agricultural settlement, experienced a period of abatement from the Persian period, through the Hellenistic period, and into the Early Roman/Nabataean period. In addition, the team found the remains of an olive oil factory, constructed between AD 40 and 70 and occupied well into the 2nd century AD. The remains of a domestic unit were also excavated, with a tentative 1st century AD date of construction based mainly on the method of construction. The foundation of a new village and an oil factory at Khirbet edh-Dharih suggests an agricultural economy, likely supplemented by income from its Nabataean temple. However, the excavators could not determine whether the temple was constructed before the Nabataean village. The excavations at Khirbet edh-Dharih definitely show the importance of agriculture to the growing sedentary population in the Wadi el-Hasa region. Excavations at Khirbet Ishra show that the visible remains of the small fortress, which guarded a nearby water source, are mostly Nabataean.

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67 Fiema, p. 314, 315.
68 Hart, p. 39, 41.
69 Villeneuve, p. 463.
70 Villeneuve, p. 463.
71 Villeneuve, p. 464.
72 Villeneuve, p. 466.
73 Villeneuve, p. 476.
74 Hart, p. 42.
Conclusion

In conclusion, the Nabataean/Early Roman period (63 BC-AD 106) witnessed settlement intensification brought about by several factors. The development of the Nabataean kingdom as an increasingly sedentarized society encouraged settlement of central Jordan on a large scale (Map 2; 5). The diversion of trade routes from Nabataea to Egypt also encouraged the sedentarization of the Nabataeans. The long reigns of several Nabataean kings allowed stability necessary for the development and exploitation of central Jordan. Sedentarization is one of the five transforming factors that impacted the rural settlements of central Jordan. But this was possible only because of the security provided by the Nabataean authorities that allowed the rapid sedentarization of the Nabataeans. The contested regions of the Hellenistic period were secured and protected by the respective kingdoms. Second and third generation farmers, who lived on their family plots, felt safe enough to strike out into the wilderness, so to speak, and establish the isolated farmsteads represented by small sites in the survey record. In addition, nomads and semi-nomads settled, and the remains of this could very well be the ring structures dotting the eastern Kerak plateau. Sedentarization on this scale, as discussed earlier, can only occur if there was sufficient security to develop marginal lands. Though there were conflicts between the Nabataeans and Jews, for the most part they seem to have been few, brief, and fairly limited in scope, probably because of the ever watchful eye of the Roman authorities over the two client-kings. 
Chapter 4: Late Roman Period (AD 106-324)

In 106 Trajan annexed the kingdom of Nabataea, forming the Provincia Arabia. This began the Late Roman period which ended in 324. As a province, Arabia received imperial visitors, such as the emperor Hadrian. The province became an important military frontier, primarily against an evolving nomadic threat. The annexation of Nabataea not only shifted control of central Jordan from the Nabataean rulers to far-off Rome, it also changed settlement patterns in the region. The latter part of the period witnessed political strife throughout the Empire, rippling into the provinces. Most notable is the mid-3rd century crisis.

Why Trajan annexed Nabataea remains unclear. Various explanations include a Roman desire to control more of the luxury trade or the threat posed by nomadic tribes. Trajan must have understood that the Nabataean kingdom represented the final piece—the missing piece—in securing Roman control throughout the entire Mediterranean. Its absorption into the Empire provided a much broader zone of security for the Palestinian land bridge that connected the two most important provinces of the East: Egypt and Syria. In addition, the region also served as a stepping-stone for Trajan’s future campaigns against Parthia: the organization of Arabia with the great road linking Syria to the Gulf of Aqaba and the establishment of Roman authority at Bostra may well have been part of his master plan. Trajan may also have wanted, with the death of the last Nabataean king, Rabbel II, to control the kingdom’s internal affairs. The kingdom may have become less effective in controlling the tribes moving within its borders, yet the

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1 Parker, 1986, p. 123.
2 Bowersock, p. 82.
3 Parker, 1986, p. 123.
4 Bowersock, p. 84.
new province prospered long after the annexation.\textsuperscript{5} The final explanation to consider is economic: Roman control of the luxury trade (as well as the developing agriculture) that made the Nabataeans prosperous. Within the former kingdom, the luxury trade routes, some valuable raw materials, and an increasingly prosperous agricultural and urban population doubtless influenced Trajan’s decision to annex Arabia.\textsuperscript{6}

**The Annexation of *Provincia Arabia***

To effect the annexation, Roman forces moved into Nabataea. *Legio III Cyrenaica* from Egypt and *Legio VI Ferrata* from Syria, as well as auxiliary units, conducted the initial invasion.\textsuperscript{7} In addition, two cohorts (*I Hispanorum* and *I Thseaeorum*), transferred to Judaea on the eve of the annexation, presumably also took part in the operation.\textsuperscript{8} Unfortunately the sources provide little detail on the Roman takeover of Arabia. Dio (68.14) states that Cornelius Palma, the governor of Syria, led the operation. The transition from Nabataean to Roman rule is generally thought to have been relatively peaceful. Trajan never took the title *Arabicus*, as he did with Dacia (*Dacicus*).\textsuperscript{9} Also, coinage commemorating the event announced *Arabia adquisita*, not *Arabia capta*.\textsuperscript{10} On the other hand, the movements of the Roman forces, which in effect hemmed in the Nabataeans on three sides (from Egypt, Syria, and Judaea), suggests awareness of possible resistance.\textsuperscript{11} Some evidence suggests at least some resistance to the Roman annexation. Two Safaitic inscriptions, unfortunately undated, mention ‘the year of the Nabataean war’ and another one reports ‘the year when the Nabataeans revolted

\textsuperscript{5} Parker, 1986, p. 124.  
\textsuperscript{6} Parker, 1986, p. 124.  
\textsuperscript{7} Bowersock, p. 81.  
\textsuperscript{8} Schmid, p. 401.  
\textsuperscript{9} Bowersock, p. 81.  
\textsuperscript{10} Bowersock, p. 81.  
\textsuperscript{11} Schmid, p. 401.
against the people of Rome.'\textsuperscript{12} Dio notes (68.14) that Cornelius Palma “subdued the part of Arabia around Petra” and Ammianus, in the 4\textsuperscript{th} century, states (14.8.13) that Arabia was “compelled to obey our laws by the emperor Trajan, who, by frequent victories crushed the arrogance of its inhabitants.” In addition, archaeological excavations in the Negev (at Oboda, Sbaita, and Moje Awad) and in southern Jordan (Khirbet edh-Dharih, Dhibon, and Petra itself) suggest destruction at the turn of the 2\textsuperscript{nd} century.\textsuperscript{13} The archaeological evidence above all suggests that the Nabataeans put up some sort of fight throughout the kingdom as the Romans moved in. But perhaps this fighting was low intensity, explaining the nature of literary references as well as Trajan’s failure to take any honorific titles.\textsuperscript{14}

To what degree did the annexation and occupation by the Roman army impact settlement of central Jordan? Even limited resistance to the invasion possibly forced the Romans to destroy some Nabataean settlements. Occupants in some marginal or less secure areas perhaps felt threatened and withdrew to more secure locations. Thus, historical events in the very first decades of the 2\textsuperscript{nd} century might have altered the settlement of central Jordan. On the other hand, the continuity of Nabataean ceramics into the 2\textsuperscript{nd} century presents a possible problem. Just as in the Hellenistic period, changes in ceramics do not necessarily correspond to political changes. It seems likely that some pottery dated ‘Nabataean’ by the regional surveys might date to the 2\textsuperscript{nd} or even the 3\textsuperscript{rd} centuries.\textsuperscript{15} A rather debased style of Nabataean painted pottery even continued into the

\textsuperscript{12} Schmid, p. 401.
\textsuperscript{13} Schmid, p. 401.
\textsuperscript{14} Freeman, 1996, p. 101.
\textsuperscript{15} Parker, 2006, p. 542.
4th century at Petra. However, this rarely occurs in central Jordan, where archaeological excavation confirms that the Nabataean ceramic tradition disappeared by the end of the 3rd century. If the Nabataean ceramic tradition in central Jordan continued into at least the 2nd century, settlement in the early Late Roman period could have been denser. Furthermore, the apparent absence of major resistance may have had only limited impact on settlement in the early years of the Late Roman period. Some sites were abandoned. But the Romans soon established a new security system in the new province.

**Provincia Arabia**

The new province included the Sinai, Negev, Hisma, Edom, Moab, the southern portion of the Decapolis (the only territory not previously Nabataean), and the Hauran. The cities of the Decapolis were redistributed among the provinces of Judaea, Arabia, and Syria. Philadelphia, Capitolias, Abila, Pella, Gadara, and Gerasa probably fell within Arabia. In addition, it seems that the southernmost part of Nabataea, the Hejaz in the northwestern Arabian peninsula, formed part of the original province.

The Nabataean army was incorporated into the Roman army as the **cohortes Ulpiae Petraeorum** and redeployed in other eastern provinces. The first garrison legion of Arabia was the **III Cyrenaica** stationed at Bostra in the far north of the province, but after a temporary replacement by the **VI Ferrata** from about 117-119 (perhaps due to the Jewish uprising of 117), the Third Legion returned. The **III Cyrenaica** was probably

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16 Schmid, p. 404.
17 Parker, 2006, p. 542.
19 Bowersock, p. 91.
20 Freeman, 2001, p. 434.
22 Parker, 1986, p. 125.
supported by about ten *alae* and cohorts, or a total of ca. 10,000 troops in the province.\(^{24}\) Several of these auxiliary units are known from inscriptions. Most of these units appear to have been stationed in the north of the original province but some units garrisoned central Jordan, which appears lightly defended during this period.\(^{25}\) Presumably the Romans occupied preexisting Nabataean fortifications and likely garrisoned the urban centers of central Jordan. An inscription dated to the 2\(^{nd}\) or 3\(^{rd}\) century from Madaba mentions a centurion from the *III Cyrenaica* performing some type of action at Madaba, earning the gratitude of its citizens.\(^{26}\) A papyrus from the Babatha archive of 4 December 127 states that an *eparchos hippeon* was in Areopolis, implying that an *ala* was also there.\(^{27}\) Furthermore, various detachments of the *III Cyrenaica* were placed throughout the province. The inscription from Madaba above supports this, as well as the Karanis papyrus of 107 which states that two cohorts were at Petra preparing to march through central Jordan to Bostra.\(^{28}\) In conclusion then, the scanty Late Roman evidence—as far as troop placement—indicates a legion stationed at Bostra and, at least in central Jordan, auxiliary units and legionary detachments garrisoning urban centers and several posts along the *via nova Traiana*. This could possibly be the manner in which Arabia was garrisoned until the final decades of the Late Roman period, probably until ca. 270, following the Palmyrene invasion and the reorganization of the frontier by Diocletian.

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\(^{24}\) Parker, 1986, p. 125.

\(^{25}\) Parker, 1987, p. 127.

\(^{26}\) *Inscriptions grecques et latines de la Syrie* 26:117 (*IGLS*, Paris, 1929-).


\(^{28}\) Kennedy, p. 176 gives an abridged Greek segment of the original and an English translation. The original papyrus is found in the Papyrus Collection at the University of Michigan, inventory # 5903. It can also be viewed online at [http://www.lib.umich.edu/pap/index.html](http://www.lib.umich.edu/pap/index.html), electronic inventory # PMich VIII, 466.
Changes to *Provincia Arabia*

The reign of Septimius Severus (193-211) brought territorial changes to provincial Arabia. After consolidating his power, Septimius enlarged Arabia by adding the old Nabataean holdings north of Bostra.\(^\text{29}\) This addition of land was perhaps a reward to Arabia and its legion for their loyalty to Severus during his civil war against Niger, governor of Syria and a serious rival for the throne until his defeat in 195.\(^\text{30}\) Apparently, everything was functioning normally in Arabia until about 250—the road system was maintained and the military frontier saw limited construction.\(^\text{31}\) However, the appearance of a new threat to the east in the 1\(^{\text{st}}\) half of the 3\(^{\text{rd}}\) century presented new problems to the Roman authorities. In 224, Ardeshir overthrew the last Parthian king, Artabanus V, proclaiming the new Sassanian Empire.\(^\text{32}\) The Sassanids, with a more centralized government, a national religion based on Zoroastrianism, and a professional army with sophisticated siege capability, were a more serious danger to the eastern frontier than the Parthians had ever been.\(^\text{33}\) In 259, the Sassanian armies invaded Roman Mesopotamia, defeated Roman troops and captured the emperor Valerian.\(^\text{34}\) The Palmyrene army under Odenathus expelled the Parthians, and in the decade that followed, the emperor Gallienus, under enormous pressure from other internal and external threats, seemed content to leave Palmyra as the principal protector of the Roman Near East.\(^\text{35}\) After Odenathus was assassinated in 267/68, his queen Zenobia rebelled and conquered all

\(^{29}\) Parker, 1986, p. 130.  
\(^{30}\) Bowersock, p. 113.  
\(^{31}\) Parker, 1986, p. 132.  
\(^{32}\) Ball, p. 22.  
\(^{33}\) Parker, 1986, p. 132.  
\(^{34}\) Bowersock, p. 130.  
\(^{35}\) Bowersock, p. 130.
Syria, Cappadocia, Palestine, Egypt, and at least northern Arabia. The Palmyrene armies crushed the provincial army of Arabia and killed its military commander. Bostra fell to the Palmyrene army, which destroyed the temple of Jupiter Hammon. Zenobia’s army of (allegedly) 70,000 then moved into and occupied Egypt. Whether Zenobia moved through and ravaged central Jordan en route to Egypt is not known. It is known that Palmyrene troops ravaged the northern portions of the Arabia. In 273, the emperor Aurelian defeated Zenobia and destroyed Palmyra, with the aid of the Tanukh—an Arab tribe. However, the East was in a shambles: the eastern armies were decimated, several eastern provinces had been overrun and devastated, and the major Roman client in the east, Palmyra, had been destroyed. The Romans could not provide the necessary security against the Persians who seriously threatened the East, including central Jordan. Aurelian replenished the garrison of Arabia, seriously depleted after Zenobia, with 2 cohorts and possibly up to 4 units of equites (though these 4 units may have been added by Diocletian). Though Aurelian strengthened the garrison and repaired the via nova Traiana, there are no military building inscriptions dating to his reign. This program of military rebuilding would be undertaken by Diocletian (284-305), who initiated major changes in provincial Arabia.

In about 294, Diocletian partitioned Roman Arabia. The region south of the Wadi el-Hasa was combined with the Negev and Sinai and named Palaestina Salutaris (later Palaestina Tertia) with its capital at Petra; the region north of the Wadi el-Hasa remained

36 Parker, 1986, p. 132.
37 Parker, 1986, p. 132.
38 Sartre, p. 356.
39 Ball, p. 80.
40 Parker, 1986, p. 132.
41 Parker, 2006, p. 549.
42 Parker, 1986, p. 132-133.
43 Parker, 1986, p. 133.
Arabia. The military garrison of Palaestina Salutaris was about a dozen units of equites and cohorts each, several units of alae and legio X Fretensis at Aila (N.D. Or. 34). The garrison of Arabia was 9 units of equites, 5 cohorts, 6 alae, and two legions—III Cyrenaica at Bostra and IV Martia at Betthorus (N.D. Or. 37).

This buildup of the frontier during the late 3rd-early 4th century, is suggested by the regional surveys, which demonstrate an overwhelming military use of the region—61% of Late Roman sites in the frontier zone served some sort of security purpose. The military zone included smaller forts and watchtowers to supplement the legion at Lejjun. Castella erected in this period include Qasr Bshir (dated epigraphically to 293-305), Qasr eth-Thuraiya, and Khirbet es-Zona. The Diocletianic date of the latter two forts is based on their architectural plans and datable surface pottery. On the Kerak plateau to the west, the number of defended sites is 12%. The Notitia, however, places some military detachments in civilian settlements. For example, the Equites Mauri Illyriciani were stationed at Areopolis and the Equites scutarii Illyriciani were at Motha, probably Imtan in southern Syria (N.D. Or. 37.17, 14). Muhattet el-Hajj (Site 18; fig. 12; 13) lies on the south bank of the Wadi Mujib, possibly the station of the Cohors tertia felix Arabum or the Cohors tertia Alpinorum—Eusebius’ military detachments based around the Arnon River (N.D. Or. 37.34; Onom. 10).

Cohors tertia felix Arabum was in ripa Uade Afaris fluii in castris Arnonensibus, “on the bank of the river in the Wadi Afar at Castra Arnonensibus” (N.D. Or. 37.34). The Alpinorum was based apud Arnona, “near Armona” (N.D. Or. 37.35). The exact location of these two garrisons is not known, but a site near the River Arnon, the modern Wadi

45 Parker, 2006, p. 553.
46 Parker, 2006, p. 553.
Mujib, seems clear. Two forts, Muhattet el-Hajj (Lower) and Muhattet el-Hajj/Karakun (Miller’s Site 18) (fig. 12) lie at the crossing of the Wadi Mujib by the *via nova Traiana*. Muhattet el-Hajj (Lower) was constructed at the base of the south bank of the Wadi Mujib. Muhattet el-Hajj (Karakun) lies on the southern rim of the Wadi Mujib where the *via nova Traiana* ends its ascent from the wadi floor. The Wadi Afar probably relates to a tributary of the Arnon River (Wadi Mujib) (fig. 14). The lower Muhattet el-Hajj could be the *Castra Arnonensibus* on the bank of the river, meaning the *Cohors III Arabum* would be posted there. The *Alpinorum*, then, could have been stationed at Muhattet el-Hajj/Karakun near the Arnon. A single unit, however, could have garrisoned both castella. At any rate, the upper and lower forts of Muhattet el-Hajj effectively controlled the key crossing of the Wadi Mujib. This military buildup in Arabia was paralleled in Syria, where Diocletian constructed the *Strata Diocletiana*, which extended from southern Syria to the Euphrates.

**The *via nova Traiana* and Secondary Roads of Arabia**

Construction on the *via nova Traiana* could have started as early as 107, as the papyrus from Karanis tells of legionaries involved in stone-cutting in the southern part of the province. But this is tentative as the actual job of the soldiers is not given. As a milestone inscription tells us, the road ran *a finibus Syriae usque ad mare rubrum*: “from the borders of Syria to the Red Sea”. The road was completed between 111 and 114 and followed the route known as the King’s Highway—a previously existing route used

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47 Kennedy, p. 145.
48 Kennedy, p. 145.
49 Kennedy, p. 144.
50 Parker, 1986, p. 58.
51 Bowersock, p. 144.
52 Bowersock, p. 81.
53 Thomsen, p. 37 #71.
by the Nabataeans to transport spices from *Arabia Felix*. The Wadi el-Hasa team explored over eight miles of one of the best-preserved sections of the *via nova Traiana*.\(^5^4\) At each mile (sites 435, 394, 398, 384, 406, 409, 411, and 413), up to 10 milestones were still visible (fig. 32).\(^5^5\) The road itself is 3 meters wide and made of hard and durable field stones, with raised curbs on either side.\(^5^6\) A number of associated structures were surveyed along the road (fig. 31).\(^5^7\)

Milestones on the Kerak Plateau also show the route of the *via nova Traiana* farther north (fig. 17). The dates range from 111 into the 360s.\(^5^8\) Of the inscriptions recorded by Thomsen, only one gives the name of an urban center on the plateau. There is also evidence of secondary roads on the plateau. The existence of a Roman road from Zoara (south of the Dead Sea) to Areopolis (Rabba) via Kathrabba is implied by Eusebius: “[Loueith] is a village. . .between Areopolis and Zoor” (*Onom.* 122:17).\(^5^9\) Worschech, in his survey of the Kerak Plateau, found 5 sections of secondary roads connecting the western hinterlands of the plateau with the *via nova Traiana*.\(^6^0\) The roads found (2,920 m in total length) were about 4 meters wide and had either subsurfaces and/or curbstones.\(^6^1\)

The Hesban survey did not find a trace of the *via nova Traiana*, nor the only milestone earlier attested along the road between Amman and Madaba.\(^6^2\) Thomsen dated

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54 MacDonald, p. 224.
55 MacDonald, p. 226.
56 MacDonald, p. 226.
57 MacDonald, p. 226.
58 Thomsen, p. 50-51.
59 Mittman, p. 178.
60 Worschech, 1985, p. 173.
62 Ibach, p. 176.
the milestone to 114. The Hesban team located about 2/3 of the road between Esbus and Livias, constructed just prior to 135. Esbus (Hesban) must have been important during the Late Roman period as the junction between the via nova Traiana and the road to Livias, which continued west across the Jordan to Jericho. The road stretches about 17.5 kilometers and follows the ridgeline south of the Wadi Hesban. Khirbet el-Mahatta is an impressive fortress most likely constructed during the building process of the road. Thomsen found a series of milestones at roughly the same location, ranging in date from 111 into the mid-4th century. The associated sites along the road included watchtowers, milestone stations, and the fortress of Khirbet el-Mahatta.

This discussion of the via nova Traiana and secondary roads highlights several points. First, maintenance of the provincial Roman road system continued throughout the Late Roman period, ending in 324. There were 56 datable milestones in central Jordan, both on the via nova Traiana and secondary roads. Eight milestones date to the reign of Trajan, 111-114, during initial construction. Four milestones date to 162, the reign of Marcus Aurelius and Lucius Verus during the latter’s campaign in Armenia and Mesopotamia against the Parthians, which concluded in 166.

The next major group of milestones (n=16) falls within the Severan period. Five date to Septimius Severus (193-211), specifically to 193-194, prior to his campaign in Syria against his rival Niger in 195. There are also three milestones of Caracalla (211-217), five of Elagalabus (218-222), and two of Severus Alexander (222-235) and reflect

63 Thomsen, p. 47, # 113.
64 Ibach, p. 176.
65 Ibach, p. 178.
66 Ibach, p. 178.
67 Thomsen, p. 67-8.
68 Ibach, p. 178-179.
69 Wells, p. 216.
the continued activity during the Severan period. Two other milestones date to the reign of Maximinus (235-238) and one to that of Gordian III (238-244). One milestone is from the reign of Aurelian (270-275), presumably after his defeat of Palmyra. Three milestones date to the reign of Diocletian (284-305).

The reign of Constantine (306-337) provides another large group of datable milestones (n=12). Seven date prior to the defeat of his rivals, from 306-324. The remaining five date from his sole reign in 324-337. The latest milestones might reflect preparations for his projected Persian campaign or perhaps suggest local concerns. Interestingly, eight milestones dated from the short reign of Julian (361-363), perhaps suggesting preparations for his disastrous Persian invasion, in which he was killed. The latest milestone dates to the reign of Valens (364-378). Roman maintenance of the road system for over 250 years demonstrates its importance to the authorities.

**Urbanization in Late Roman Jordan**

Another method of Romanization was urbanization, a process begun by the Nabataeans that continued in the Late Roman period. The major urban sites of Late Roman central Jordan were Esbus, Madaba, and Areopolis. The sources suggest that Areopolis was the major city of the Kerak plateau during the Late Roman period. A milestone on the south bank of the Wadi Mujib, *a Rabba milia passuum XVI*, 16 Roman miles from Areopolis, dates to AD 194. This tells us that the northern border of the *territorium* of Areopolis reached the Wadi Mujib. In addition, Eusebius says that for the country called Moab (Kerak plateau) “the city [is] Rabbath Moab,” another name for Areopolis (*Onom.* 124). Eusebius also describes the deep ravine of the Arnon (Wadi

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70 Parker, 2006, p. 569.
71 Thomsen, p. 50, #126 c1.
Mujib), north of Areopolis, as guarded by military detachments (*Onom. 10*) (fig. 12; 13;14). Other natural borders were the Dead Sea to the west and the desert to the east. Unfortunately, the inscriptions do not tell how far south the *territorium* of Areopolis extended during this period, as the milestones up to the Wadi el-Hasa to the south are measured from Petra.\(^\text{72}\) A milestone dated to 193 and found near modern Mota, south of Charachmoba (the other major urban center on the Kerak Plateau), on what Thomsen labels a secondary road reads *a Rabba milia passuum XIII*, 13 Roman miles from Areopolis.\(^\text{73}\) The importance of Areopolis is clear since Trajan raised the town to municipal status.\(^\text{74}\) Coins of Septimius Severus (193-211) and Elagabalus (218-222) minted at Areopolis attest to the city’s municipal status.\(^\text{75}\) The importance of Areopolis is also suggested by the presence of a Roman official there to whom Babatha had to declare her property, which was located around the southern end of the Dead Sea.\(^\text{76}\)

The status of the other major urban center on the plateau, Charachmoba, is a much thornier problem. Seal impressions from the time of Hadrian at Mampsis in the Negev mentioning Charachmoba among other provincial cities suggest the importance of the site in the early 2\textsuperscript{nd} century.\(^\text{77}\) Elagabalus (218-222) likely raised Charachmoba to municipal status, as attested by its coins.\(^\text{78}\) Charachmoba must have been an urban center of regional importance and therefore would have also had its own *territorium*. The Madaba Map of the 6\textsuperscript{th} century depicts Charachmoba as one of the most splendid on the whole mosaic. However, at the beginning of the Late Roman period and despite its

\(^{\text{72}}\text{Thomsen, p. 52.}\)
\(^{\text{73}}\text{Thomsen, p. 58.}\)
\(^{\text{74}}\text{Avi-Yonah, p. 117.}\)
\(^{\text{75}}\text{Miller, p. 12.}\)
\(^{\text{76}}\text{Polotsky, p. 258-260.}\)
\(^{\text{77}}\text{Bowersock, p. 87.}\)
\(^{\text{78}}\text{Avi-Yonah, p. 117; Miller, p. 12.}\)
commanding location (at a major crossroads and on a commanding height), it may not yet have been a major Roman administrative center. The territorium of Charachmoba, likewise, was likely smaller than that of Areopolis. The location of the northern border of Charachmoba presents the most difficulty. Eusebius, at the end of the Late Roman period (ca. 290), gives sites south of Charachmoba (Kerak) to Areopolis (Rabba). Aie is a site well south of Charachmoba yet Eusebius places it within Areopolis (Onom. 10). Even Jerome, in the 380s, places Aie within “the province of the former Moab, now Areopolis” (Liber Locorum 11). Between modern Rabba and Kerak several wadis could have served as natural borders to the territoria. If Charachmoba had a sizeable territorium then its southern border would have been at the Wadi el-Hasa, as the milestones suggest that Petra’s territorium extended to the south bank of the wadi.

The situation is slightly different for the area of the Hesban survey. Here, the two cities were Madaba and Esbus (fig. 1-5). The northern border of Esbus was the territorium of Philadelphia, whose control extended south to Yaduda. The territorium of Esbus included Eleale (El’Al) one milestone away, Mt. Nebo 6 milestones west, Beelmaous 9 milestones from Esbus, Maanith 4 milestones towards Philadelphia, and at least 6 milestones on the Esbus-Livias road from Esbus (Onom. 84; 136; 46; 132). Peraea, whose territory extended as far south as Machaerus, was the western border of the territorium of Esbus (Josephus, BJ 3.3.3).

The territory that comprised Peraea also encompassed some of the Hesban survey zone, and it might be worthwhile to discuss briefly the borders of the region. Josephus provides the dimensions of Peraea, which “extends in length from Machaerus to Pella, in

79 Bowersock, p. 184.
80 Avi-Yonah, p. 177.
81 Avi-Yonah, p. 178, Thomsen, p. 67-68.
breadth from Philadelphia to the Jordan. The northern frontier is Pella. . .the western frontier is the Jordan; on the south it is bordered by the land of Moab; on the east by Arabia, Heshbonitis (Esbus), Philadelphia, and Gerasa (Jerash)” (BJ 3.3.3). Peraea also reached to the *territorium* of Madaba, in the time of Josephus.

The *territorium* of Madaba bordered Esbus to the north and Peraea to the west. According to Eusebius, sites within the *territorium* of Madaba were Maschana, 12 miles east of Madaba on the Arnon (Wadi Mujib) (*Onom.* 126), and Karaiaatha, 10 miles west of Madaba (*Onom.* 112). The *territorium* was more extensive than Esbus and it covered most of the Dhiban plateau, outside of the survey areas used for this study. At the north bank of the Wadi Mujib, a milestone dated to 219 states that Madaba lay 20 Roman miles distant, limiting its southern border to the north bank of the Wadi Mujib.83

The sources provide little detail of the region south of the Wadi el-Hasa. Eusebius writes that Edom “is near Petra, and called Gebalene” (*Onom.* 102). The milestones support this, indicating as many as 64 Roman miles to Petra at the bed of the Wadi el-Hasa.84 At the time of the *Onomasticon* (ca. 290) the southern bank of the Wadi el-Hasa, then, fell within a region called Gebalene with its center at Petra.

**Central Jordan in the Late Roman Period (ca. AD 106-324)**

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<td>1</td>
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<td>1</td>
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The Late Roman period follows the annexation of Nabataea as *Provincia Arabia* in 106 (Maps 6, 7). 28 Late Roman settlements lay in the Hesban area, or 19% of all sites

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82 Avi-Yonah, p. 179.
83 Thomsen, p. 50.
84 Thomsen, p. 52 #133.
in this region. The Kerak plateau survey recorded 30 Late Roman sites, or 7% of all sites. The *Limes Arabicus* Project recorded 6 Late Roman sites. However, sherds described as “Late Roman/Early Byzantine” (ca. 284-500) were found at 37 sites (7% of all sites), suggesting that occupation probably began in the last decades of the Late Roman period, roughly when the legionary fortress at Lejjun was constructed (Map 7). The Wadi el-Hasa recorded 45 Late Roman sites, or 4% of all sites. The total number of Late Roman sites from all four surveys is 109, or 5% of all surveyed sites (minus the LAP sites with Late Roman/Early Byzantine sherds) (Map 6). Adding the sites with Late Roman/Early Byzantine sherds, the number of Late Roman sites increases to 146, or 7% of all surveyed sites (Map 7). This total represents settlement in central Jordan in the last decades of the Late Roman period. Without counting Late Roman/Early Byzantine sites, 58 sites are small sites, 21 sites are medium-sized sites, 27 are large sites, and four are major sites—Ebus, Madaba, Areopolis, and Charachmoba. Adding Late Roman/Early Byzantine sites, there are 92 small sites, 23 medium-sized sites, 27 large sites, and five major sites—Ebus, Madaba, Areopolis, Charachmoba, and Lejjun.

Excavations at Hesban suggest accelerated urbanization of Arabia during the Late Roman period, and serve as a case study for other major cities of the region. During the Late Roman period (Stratum 13, AD 130-193 and Stratum 12, AD 193-284), Esbus evolved from a commercial center and/or road station into a ‘city’ with municipal status.85 Stratum 13 uncovered a broad plaza surrounded by enclosed rooms—a possible market with attached shops and an inn for travelers.86 In stratum 12 the inn remained in

85 Mitchel, p. 86, 105.
86 Mitchel, p. 86.
use and a Roman temple and other public buildings were constructed on the acropolis, accessed by a monumental staircase with an extensive plaza at its foot (fig. 2). 87

Late Roman settlement on the Kerak plateau is characterized by the virtual absence of small sites. The vast number of farmsteads and villages of the Early Roman/Nabataean period (63 BC-AD 106) disappeared almost entirely during the Late Roman period (Map 3; 6). Most of the Late Roman sites on the plateau are associated with the road system. The urban development of Areopolis and Charachmoba is suggested by the fact that both sites received municipal status in the Late Roman period. Although the physical remains of Charachmoba were probably obliterated by later construction in the Islamic period (including the Crusader castle), the surviving remains at Areopolis include a temple and colonnaded street where the via nova Traiana passed through the city (fig. 17, 18). 88 Also, there are traces of dozens of other structures within the site, including three reservoirs, which may represent visible remains of the classical city (fig. 19, 20). 89 Outside the urban centers, however, the eastern plateau was virtually abandoned until the Diocletian’s reorganization of the empire.

A somewhat different settlement pattern emerges south of the Wadi el-Hasa. Although Late Roman sites again appear most frequently along the via nova Traiana, the vast majority of these are small, with only a handful of settlements that could equate to villages or towns. 90 Of the six large sites, four were occupied in the Late Roman period. The excavations at Khirbet edh-Dharih, suggest a partial abandonment of the site during the Late Roman period. The Early Roman/Nabataean oil factory fell into disuse during

87 LaBianca, p. 173.
88 Kenedy and Dewley, p. 162.
89 Kennedy and Dewley, p. 162.
90 MacDonald, p. 229.
the 2nd century AD. On the other hand, a domestic unit constructed during the 1st century AD remained in use until the early 4th century.  

**Conclusion**

The Late Roman period began with the annexation of the Nabataean kingdom as the province of Arabia. The initial takeover of the province witnessed limited resistance by the Nabataeans and might have resulted in destruction of some sites and perhaps displaced some groups from marginal areas. On the other hand, the possibility of continuity of Nabataean ceramics into the 2nd or even the 3rd century in the region might imply that the apparent abatement of settlement might have been less pronounced than suggested by the various regional surveys. If this period did witness widespread abandonment of small sites, these folk may have moved from the marginal areas to areas with more security. With the annexation, the needs of the empire superseded those of the local inhabitants. The Roman authorities focused on a good road system and the development of local urban centers for administration. The settlement pattern suggested by the surveys shows that a few major urban sites developed in this period. Settlement thus clustered around these cities and the Roman road system maintained throughout the period (Map 6; 7). The decline in total settlement, then, might not necessarily reflect depopulation. Rather, it might provide an example of a local population adapting to the security provided by the central authority. Excavations at Esbus and surviving remains at Areopolis suggest rapid growth of the urban center. Romanization arrived in the form of roads, administrative urban centers, and the Roman military. However, according to LaBianca, the prosperity of the urban centers should have increased rural settlement, or at

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91 Villeneuve, p. 464.
92 Villeneuve, p. 465.
least maintained settlement levels from the Nabataean period. Instead, the opposite occurred, even with the Roman military providing security for the region. The placement of garrisons along the roads and in urban centers influenced the settlement pattern of the Late Roman period. But the collapse of the military frontier and the invasions of Arabia in the late 3rd century doubtless created unsettled conditions and perhaps accelerated the abandonment of sites. Local population in smaller sites probably sought shelter in larger, more secure villages, towns, and urban centers. This settlement pattern for Late Roman central Jordan might have been largely shaped by the 3rd century crisis. Diocletian, who reestablished order in the East, also reestablished a new level of security that began a new period of settlement intensification that continued into the Byzantine period.
Chapter 5: Byzantine Period (AD 324-640)

The Byzantine period began in 324, when Constantine gained control of the entire Empire after his victory over Licinius. It ended with the Muslim conquest of the region by 640. These three centuries are usually subdivided into Early Byzantine (ca. 324-491) and Late Byzantine (ca. 491-640) although two of the four surveys used in this study did not differentiate ceramics to this degree. However, some of the surveys did identify ceramics as Early or Late Byzantine, allowing a more nuanced analysis of settlement in parts of central Jordan in this period. Many of the administrative and military reforms of Diocletian continued well into the Byzantine period. Major documentary sources for this period include the Onomasticon of Eusebius, the Notitia Dignitatum, Procopius, the episcopal lists of the various church councils, inscriptions, mosaics, and the Petra Papyri.

The Reforms of Diocletian

Although the reign of Diocletian (284-306) falls near the end of the Late Roman period for this study, he is often called the first Byzantine emperor.¹ One of his administrative reforms, which subdivided existing provinces into smaller units, included the province of Arabia: the southern portion of the old province was added to Palaestina, leaving a much truncated Arabia now extending only from southern Syria to the Wadi el-Hasa while. Later in the 4th century the region south of the Wadi el-Hasa, plus the Negev and Sinai, were detached from Palaestina as the new province of Palaestina Salutaris. By the late 4th century, the region was further subdivided into four Roman provinces: Palaestina Prima (Judea, Samaria, Idumaea, Peraea, and the northern coastal plain), Palaestina Secunda (Galilee, the Golan, and several of the western Decapolis cities), Palaestina Tertia (the old Palaestina Salutaris), included the Negev, Sinai, and the area

¹ Parker, 1999, p. 135.
south of the Wadi el-Hasa), and *Arabia* (from the Hauran to the Wadi el-Hasa). A final change occurred sometime between 451 and 535 when the region between Wadi Mujib and Wadi el-Hasa was transferred from Arabia to *Palaestina Tertia*.

Therefore the provinces of *Arabia* and *Palaestina Tertia* covered the area of modern central Jordan. Each province had a capital: *Prima* at Caesarea Maritima, *Secunda* at Scythopolis, *Tertia* at Petra, and *Arabia* at Bostra. Each province had a civilian governor (generally a praeses). Military command resided in two duces, one for the three Palestines and another for Arabia. The *Notitia Dignitatum* of the early 5th century lists the military postings of each province. The *Dux Arabiae* led 21 military units stationed in the province (Or. 37). The *Dux Palaestinae* commanded 30 military units (Or. 34). Within each province, cities provided local administration within extensive territories that appear little changed from the Roman period.

These city territories are reconstructed from a variety of sources, including mosaic inscriptions mentioning bishops of various cities. Mosaic inscriptions from several villages, for example, mention the bishop of a nearby city. This allows one to assign this village to the diocese of that specific city. Madaba has yielded many of these mosaics, whose inscriptions allow an almost complete reconstruction of the list of bishops for that see from the end of the 5th to the mid-7th centuries—an invaluable dating tool. The most famous is the Madaba mosaic map, depicting many sites in Jordan and Palestine in the 6th century (fig. 6). In *Arabia* the episcopal sees within the area of the present study were Madaba and Esbus; in *Palaestina Prima* was Livias; in *Palaestina Tertia* were Areopolis,

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2 Parker, 1999, p. 137; Watson, p. 480.
3 Watson, p. 480.
4 Piccirillo, p. 43.
5 Piccirillo, p. 44.
Charachmoba, and Zoara. The territories of the dioceses encompassed the same areas as the *territoria* of the urban centers discussed in Chapter 4.

**Christianity in Central Jordan**

Christianity was legalized in 311 by the Edict of Toleration. The only pagan emperor of the Byzantine period was Julian (361-363). Constantine’s conversion to Christianity in 312 and his control over the East by 324 suddenly converted Palestine from a minor province to the birthplace of the new state religion. Imperial patronage on a grand scale was extended to the region for construction of churches and monasteries and to facilitate pilgrim traffic to sacred sites, all of which contributed to the economic prosperity of Byzantine Jordan. Although the only holy site in central Jordan was Mt. Nebo, the region would still have benefited to some degree from this imperial patronage, pilgrim traffic, and construction. However, it appears that Christianity may have had little actual impact on central Jordan as a determinant in settlement pattern during the Byzantine period.

A bishop of Esbus was at the Council of Nicaea in 325. The first church at Esbus identified by excavation was constructed sometime between 408 and 551 (fig. 3). However, various lines of evidence suggest that the Kerak plateau, despite its proximity to Palestine, was relatively slow to convert to Christianity. It is notable that the earliest bishop from the region is attested only in the mid-5th century: Anastasius of Areopolis was present at the Council of Ephesus in 449. The earliest attested bishop from

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6 Piccirillo, p. 43.
7 Watson, p. 464.
8 Parker, 2000, p. 136.
9 LaBianca, p. 178.
Charachmoba is even later: a certain Demetrius at the synod of Jerusalem in 536.\(^{10}\) A Greek building inscription of 597-598 at Areopolis refers to the restoration of a building under a bishop named John.\(^ {11}\) Although a number of Byzantine churches are known on the Kerak plateau, most cannot be reliably dated.\(^ {12}\) One exception is the church in the legionary fortress at Lejjun, constructed about the turn of the 6\(^{th}\) century.\(^ {13}\) These dates point to a later date for the Christianization of the plateau.

Further evidence of the pace of the conversion is suggested by dated Christian tombstones of the Kerak plateau. Though most of the tombstones came from Kerak and Muhai (on the southeastern Kerak plateau), others derive from various other sites on the plateau. No Christian tombstones date earlier than the 5\(^{th}\) century.\(^ {14}\) Most of the tombstones in Kerak date to the 6\(^{th}\) century.\(^ {15}\) At Muhai, the earliest tombstone dates to 505, suggesting that the population remained predominately pagan into the 6\(^{th}\) century.\(^ {16}\) Areopolis apparently remained a stronghold of paganism. After Theodosius I (379-395) issued a series of anti-pagan laws, Areopolis is recorded as one center whose population vigorously defended paganism.\(^ {17}\) In conclusion, the evidence points to a relatively late date of conversion to Christianity even in the cities of central Jordan, especially considering Christianity had been the official religion since the late 4\(^{th}\) century.

Churches and monasteries appeared all over central Jordan. The Hesban survey area is dotted with churches and other religious buildings with two known churches on

\(^{10}\) Parker, 2006, p. 579.
\(^{11}\) Parker, 2006, p. 579.
\(^{12}\) Parker, 2006, p. 579-580.
\(^{13}\) Parker, 2006, p. 579, 580.
\(^{14}\) Parker, 2006, p. 580.
\(^{15}\) Parker, 2006, p. 580.
\(^{16}\) Parker, 2006, p. 581.
\(^{17}\) Watson, p. 493.
Tell Hesban itself. At least twelve churches are known at Madaba, as well as the remains of a church at nearby Khirbet Musah (Site 100). Egeria, a pilgrim who visited Palestine in the late 4th century describes a church at ‘Ayun Musa (Site 108). Remains at this site might correspond to the church described by Egeria. The Hesban survey also found the remains of possible churches at sites 73, 138, and 103. Survey of the Kerak plateau also revealed the remains of several churches. As noted above, the bishop from Charachmoba listed at the synod of Jerusalem in 536 implies at least one church at that city. There is also evidence for several churches at Areopolis. There are remains of 16 possible churches (Sites 34, 36, 56, 72, 85, 185, 192, 227, 316, 394, 419, 420, 423, 427, and 436) spread over the Kerak plateau. The church excavated at el-Lejjun indicates Christian presence near the desert fringe. The Wadi el-Hasa survey, on the other hand, found remains of only one hermitage at site 104. The Nabataean temple at Khirbet edh-Dharih was converted into a church during the Byzantine period. The presence of at least 40 churches in the Byzantine period represented a new and prominent feature of the landscape of central Jordan. But since these churches for the most part simply appeared within existing settlements, it seems doubtful that they altered regional settlement patterns to any significant degree.

18 Ibach, p. 183, 187.
19 Ibach, p. 187.
20 Ibach, p. 187.
21 Parker, 2006, p. 579.
22 Parker, 2006, p. 579.
23 Miller, p. 23-167.
24 Parker, 2006, p. 579.
25 MacDonald, p. 242.
26 Villeneuve, p. 476.
Nomads and the Byzantine Period

Perhaps the most significant of Diocletian’s reforms in this region was the reorganization of the Roman military frontier into a defense in depth. This system may be compared to the Strata Diocletiana (in Syria south of the Euphrates) with alae and cohorts garrisoning castella at intervals on a road along the edge of the Syrian Desert.27 Mobile units of equites were stationed in towns and other strategic points well behind the strata forming a fortified zone nearly 70 km in depth.28 The army itself was also reorganized by dividing the forces into two basic groups: the comitatenses (a mobile field army under command of the emperor) and the limitanei (frontier forces under the command of the duces).29 The exact nature of the limitanei has remained somewhat clouded. However, the establishment of limitanei on the Arabian frontier apparently resulted in some intensification of settlement. The limitanei received tracts of land surrounding their forts or other garrisons.30 Although specific documentary evidence for limitanei begins only in the early 5th century AD, archaeological evidence from the Limes Arabicus Project suggests their emergence on the Arabian frontier under Diocletian.31

Given the apparent paucity of settlement on the desert fringe of the LAP area during the 2nd and 3rd centuries, the apparent resurgence in small settlements from the end of the Late Roman and through the Early Byzantine periods (ca. 284-491), might be explained by the presence of the limitanei (Map 6, 7). But the Romans also used others as defenders of the eastern frontier.

29 Watson, p. 489.
30 Parker, 2006, p. 563.
31 Parker, 2006, p. 563.
By the 4th century both the Romans and Persians used powerful nomad tribes to defend their desert frontiers. The resulting defense-in-depth system paired individual Roman *duces* and their *limitanei* with Arab *foederati* (“Saracens”) under native phylarchs. However, the Romans had long used nomad Arabs as allies on the southeastern frontier.

Such relationships between the Romans and nomad tribes date to the reign of Marcus Aurelius. The Ruwwafa inscriptions (AD 166-169) from the northwestern Arabian peninsula documents ties between the Roman authorities and a Thamudic tribal confederation. In 273, the Roman destruction of Palmyra was greatly aided by another nomadic tribal confederation, the Tanukh. This tribe had migrated from northeastern Arabia into the northern Syrian desert west of the Euphrates, infiltrated the Hauran and formed some sort of tribal confederation. The Tanukh would remain Roman federates until the late 4th century. The Lakhmids, another Arab tribe who aided Aurelian in defeating Palmyra, were led in the early 4th century by a certain Imru al-Qays who styled himself ‘king of all the Arabs.’

It is also during this period that the terminology describing the nomadic Arab tribes shifts, as Ammianus tells us that the “tent-dwelling Arabs” (i.e., nomads) were now called *Saraceni*—Saracens (23.6.13). The exact origin of the word Saracen has been linked by some scholars to the Arabic *sirkat*, “confederation,” but others doubt this. Without any doubt, though, the importance of these tribes increased as the Byzantine

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32 Watson, p. 465.
33 Parker, 2006, p. 578.
35 Parker, 1986, p. 132.
36 Parker, 1986, p. 132.
37 Parker, 1986, p. 137.
period progressed. The Salih filtered into the Belqa region around Esbus throughout the 4th century. By the late 4th century, the Salih tribe replaced the Tanukh and remained the dominant phylarchs until the early 6th century in southern Syria and northern Jordan. The eventual settlement of the Salih likely included the territorium of Esbus. The replacement of the Tanukh by the Salih is possibly represented in a Latin panegyric from 389 referring to a “polluted” and thus presumably broken treaty with the Saracens (apparently the Tanukh) after a revolt in 383. The leader of the Salih tribe then became the principal Roman phylarch along this sector of the frontier, an arrangement that lasted into the early 6th century.

At the end of the 5th century, the Kinda tribe (from the central and northern Arabian Peninsula) began raiding Palestine and southern Syria—a region dominated by the Salih. The Kindite War (498-502) ended when Anastasius formed a treaty with Harith the Kindite, making him phylarch of Palaestina Tertia. Farther north, the dominance of the Salih was also tested at the same time by another newly emerging but powerful tribe—the Ghassanids. They had begun filtering into provincial Arabia via the Wadi Sirhan around AD 300 and eventually settled south of Amman. The original settlement area of the Ghassanids lay in the Belqa district around ancient Esbus, where was the first encounter between the Ghassanids and the Salih. The Ghassanids joined the anti-Roman forces in the Kindite War. Yet, the Romans apparently recognized the strength of the new arrivals, for the terms of the treaty of 502 not only created a Kindite

40 Watson, p. 464.
41 This and Arab sources testifying the change in Arab leadership can be found in Shahid, I, 1984, Byzantium and the Arabs in the 4th Century, Dumbarton Oak, Washington, DC, p 196-7; 214-216, as well as in Shahid, 1989, p. 242-244.
42 Watson, p. 465.
43 Watson, p. 465.
phylarchy, but also replaced the Salih by the Ghassanids as the dominant Saracen federates in this sector of the frontier.45

The 5th century witnessed only limited conflict between Rome and Persia, but in the 6th century Justinian fought 3 major wars with the Sassanids in 527-532, 540-545, and 549-562.46 In addition, barbarian incursions along the Danube forced Justinian to devote more military resources to that frontier. Justinian’s westward-looking eyes aimed at regaining lost western provinces. Justinian recovered Italy and North Africa, but in doing so drained the military and financial resources of the empire.47 Procopius claims that by the early 6th century the old method of pairing the limitanei with Saracen foederati was also not working. Al-Mundhir, the Lakhmid king now allied to the Persians, ravaged a large swath of the eastern frontier because the regular Roman troops could not defend against al-Mundhir’s mobile tactics nor could the Roman federate forces field sufficient numbers, mainly because al-Mundhir “holding the position of king, ruled alone over all the Saracens of Persia” (BP 1.17.40-48). In short, neither the divided Roman troops nor their Saracen allies could stand against a united phylarchy of Persian federates. The Persian supreme phylarchy, with all pro-Persian Saracens under one phylarch served as a model for Justinian.

Therefore, around 530, Justinian, in the midst of his first Persian war, organized a large number of Saracen tribes in southern Syria and Arabia under Harith the Ghassanid (BP 1.17.47). Harith became the supreme phylarch, king of all the Arab tribes allied to Rome. The Ghassanid phylarchy protected the frontier from Palmyra to the Wadi el-

45 Watson, p. 490.
46 Watson, p. 465.
Hasa, with Harith’s brother, Abu Karib, as phylarch of Palestine III. Justinian shifted primary responsibility of securing the frontier from the *limitanei* to the Arab *foederati* under the Ghassanids. With the defense of Arabia and Palestine now largely the responsibility of the Saracens, Justinian demobilized many garrisons of regular Roman forces on the southeastern frontier, including east of the Dead Sea, following the conclusion of the Eternal Peace with Persia in 532. This assertion in Procopius (*BP* 1.17.40-48) is supported both by archaeological evidence from the frontier itself and the fact that the latest military building inscription from this frontier dates to 529 from Qasr el-Hallabat. The *Limes Arabicus* Project found that most military sites had been abandoned by the early 6th century, suggesting increased imperial reliance on Saracen allies. In addition, Procopius does not mention any military construction projects for central Jordan in his work on public buildings (*De Aedificiis*). This does not mean that all imperial forces left the region, as the Petra papyri mention individual soldiers in the 6th century, only that the number of regular Roman forces in the region had been sharply reduced. At any rate, the Ghassanids remained the primary line of defense against Persian and Saracen incursions into the 7th century.

The Eternal Peace signed by the Byzantines and Persia proved to be a farce and after a third Persian War (549-562), Justinian signed a 50 year peace treaty with the Persians.

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49 Watson, p. 465.
50 Parker, 2006, p. 577.
51 Parker, 2006, p. 578.
52 Gagos and Frösén provide a translation of the Petra Papyri.
53 Watson, p. 465.
Justinian’s reliance on the Ghassanids seems to have worked well for about a half century (ca. 530-580). But Justinian’s successors grew suspicious of the power wielded by the Ghassanids, beginning with the withdrawal of Ghassanid forces during a conflict with the Persians in 581. The Ghassanid leader, Al-Mundhir, was eventually exiled but in revenge his son ravaged Syria, Palestine, and Arabia over the next two years. The weakness of this frontier was now all too apparent. By the late 6th century the vast majority of military sites along the *Limes Arabicus* had been abandoned and the supposed defenders of the territory, the Ghassanids, had been alienated from Constantinople. This left the region vulnerable to the subsequent Persian and Muslim Arab invasions of the early 7th century.

Heraclius (610-641) ended the Persian invasion and occupation of much of the East (613-628). Heraclius restored the status quo before the war but had no time to restore the frontier before the Muslim invasion of the Levant. In 629, the initial Muslim advance was halted at Mo’ta, south of the Wadi Mujib. Significantly, the only forts occupied in this region were along the Wadi Mujib but the Romans seemed committed to an active defense of the southeastern frontier. The surrender of both Aila and Udruh in 630 followed in 633 by the annihilation near Gaza of a Roman garrison dispatched from Caesarea—the only apparent imperial military presence in southern Palestine—left the entire Levant open to the Muslims. Subsidies to most federates had already ceased, prompting these tribes to aid the Muslim advance. In 636, the Muslims defeated the

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54 Watson, p. 465.
57 Watson, p. 466.
Romans at the decisive Battle of Yarmuk and by 640 the final pockets of resistance in Palestine had fallen.\(^58\)

Central Jordan in the Byzantine Period

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The Byzantine period overall is well attested in central Jordan (Maps 7, 8, 9, 10). The Hesban survey recorded 70 Byzantine sites, or 47% of all sites. The Kerak plateau survey found 84 Byzantine sites, or 19% of all sites. The Kerak plateau survey reported 36 Early Byzantine sites (8% of all sites) and 49 Late Byzantine sites (11% of all sites). However, the nature of Byzantine ceramics made it difficult to at times to distinguish between Early or Late Byzantine sherds, leaving many sites dated as simply “Byzantine”.

The *Limes Arabicus* survey recorded 46 Early Byzantine sites (including Late Roman/Early Byzantine sites), or 9% of all sites. The Late Byzantine period witnessed a marked site decrease, with only 6 occupied sites. The Wadi el-Hasa reported 96 occupied Byzantine period sites, or 9% of all sites. The total number of sites in central Jordan during the whole Byzantine period is 297 sites, or 13% of all surveyed sites (Map 8). 164 sites were small, 91 sites were medium-sized, 37 sites were large, and five were major sites—Ebus, Madaba, Areopolis, Charachmoba, and Betthorus (el-Lejjun, until the mid-

\(^{58}\) Watson, p. 466.
The large number of small and medium-sized sites suggests an abundance of isolated farmsteads and villages. The high number of large and major sites also suggests that urban centers continued to thrive.

The Byzantine period represents the peak in settlement for the classical period around Esbus. The large number of small and medium-sized sites suggests an explosion of farmsteads and villages. The sites of this period are well-represented in all parts of the survey territory, even in marginal, agriculturally unproductive areas.\footnote{Ibach, p. 183.} Archaeological evidence at Esbus reveals the continued growth of city. Stratum 11 (AD 284-363) at Esbus included a colonnade added to the temple and other public works, and was a continuation of the increasing activity of Strata 13 and 12.\footnote{Mitchel, p. 105.} No new buildings were constructed in Stratum 10 (AD 365-408).\footnote{LaBianca, p. 178.} But Stratum 9 (AD 408-551) included construction of a Christian basilica with a mosaic floor.\footnote{LaBianca, p. 178.} Even more construction occurred in Stratum 8 (AD 551-614) with the addition of two more churches and the expansion of the city onto the surrounding hills and slopes (fig. 3).\footnote{LaBianca, p. 178.} This stratum is some sort of peak at Esbus because no new buildings were constructed in Stratum 7 (AD 614-661).\footnote{LaBianca, p. 178.} Interestingly, Esbus reached a peak in a supposed period of decline. The problem, however, is corroborating the excavation finds with the survey finds. The survey of Esbus did not distinguish Early or Late Byzantine assemblages, so it is difficult to interpret the beginnings of the settlement explosion around Esbus. One would assume that settlement around ancient Esbus grew as the site itself expanded, providing the
resources and services expected of a *territorium*. This intensification of settlement is confirmed by a subsequent survey of the same region by the Madaba Plains Project in 1984. This project conducted a random square survey and a site survey. They reported 31 Byzantine sites in the random square survey, or 81% of the 38 squares.\(^{65}\) Thirty-seven sites, or 67% of 55 sites, were labeled Byzantine.\(^{66}\)

A survey of ‘Iraq el-‘Amir, 17 km west of Amman (Philadelphia) and just north of Esbus, also found the Byzantine period a peak of occupation. A random square survey revealed 14% of the squares as diagnostic Byzantine and 50% as possible Byzantine sites.\(^{67}\) The site survey found 30 Byzantine sites, the highest number of sites in all periods.\(^{68}\) Excavations at Tell Jawa just south of Amman found the remains of at least 10 collapsed buildings with masonry styles suggesting occupation in the Late Roman or Byzantine period.\(^{69}\) The Dhiban plateau survey also revealed extensive settlement during the Byzantine period. They recorded 75 sites with Byzantine ceramics, 35% of all sites surveyed.\(^{70}\)

The sites are spread over the entire plateau on both sides of the *via nova Traiana*, though a majority of Byzantine sites lay east of the *via nova Traiana*. This settlement pattern should be considered in light of the *Limes Arabicus* survey, whose sites were part of the frontier defense system of Diocletian.

The frontier system created by Diocletian at the turn of the 4th century was maintained through the Early Byzantine period. The legionary fortress at Lejjun, housing

\(^{65}\) Herr, LaBianca, and Younker, p. 188.  
\(^{66}\) Herr, LaBianca, and Younker, p. 188.  
\(^{69}\) Davlau, p. 147.  
the *IV Martia*, was the heart of this defense in depth system for central Jordan. The majority of sites recorded by the LAP, 65% of Early Byzantine sites, were interpreted as military and most likely functioned as part of Diocletian’s system. The renewed stability and security encouraged settlements to spring up behind the frontier and perhaps was even encouraged by the military (since the garrisons required food and other supplies). But this pattern continued only as long as the frontier was secure.

The settlement pattern of the Kerak plateau in the Late Byzantine period differs from the Early Byzantine period (Map 9; 10). Most Late Byzantine sites lie west of or along the *via nova Traiana*, just the opposite of the Early Byzantine period. The Late Byzantine settlement pattern of the *Limes Arabicus* also reflects this shift in settlement. The widespread abandonment of military sites on the eastern plateau probably reflects the military demobilization of the southeastern frontier by Justinian ca. 530. The shift in settlement on the Kerak plateau west of the *via nova Traiana* perhaps reflects the movement of the local population to the remaining better defended sites, such as walled towns or villages, which likely provided better protection than more isolated farmsteads.

A survey of the Wadi Isal, in the descent from the western rim of the Kerak plateau and the Dead Sea, well west of the *via nova Traiana*, found interesting results. Sixty-nine of 90 sites, or 77% of all sites, yielded Byzantine ceramics.71 Fortunately, Early and Late Byzantine assemblages were distinguished. Forty sites yielded Early Byzantine ceramics, 58% of all sites. Sixty-three sites had Late Byzantine sherds, 70% of all sites.72 A detailed reexamination of sites by the Kerak Resources Project looked at 17 previously surveyed sites on the Kerak plateau, the majority of which are east of the

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71 Jacobs, p. 267.
72 Jacobs, p. 267.
via nova Traiana throughout the eastern plateau. The survey reported Byzantine evidence at all these sites, but did not distinguish Early from Late Byzantine assemblages.⁷³ Although the large, triapsidal Byzantine basilica at Nakhl is not closely dated, it presumably belongs to the Byzantine period.⁷⁴ Surveys by Worschech also suggested that the Byzantine period on the Kerak plateau was densely settled, but again failed to distinguish between Early and Late Byzantine pottery.⁷⁵

A few excavated Byzantine sites in the region provide stratified archaeological evidence to aid in interpretation of the survey data. The legionary fortress at Lejjun does provide important information, but what is needed is a civilian settlement site as a case study for the plateau. The excavations at Lejjun suggested construction of the fortress under Diocletian (284-305) and abandonment after Stratum III, the Late Byzantine phase (ca. 502-551) during Justinian’s demobilization of this part of the frontier.⁷⁶ The rich mosaic history of the Byzantine period, as described above, suggests thriving urban centers during and beyond the ⁶th⁷ century AD. Cities such as Areopolis and Charachmoba remained important as the marginal settlements in the eastern periphery of their respective territoria were abandoned. From the evidence of the Kerak plateau, overall settlement during the Byzantine period was relatively dense, with the Early Byzantine period settlements spread over the plateau and the Late Byzantine period settlements concentrated west of the via nova Traiana following the abandonment of the limes.

The Byzantine settlement pattern of the Wadi el-Hasa survey appears in three clusters. The first cluster lies in the western portion of the survey area, along the Wadi
el-Hasa and the plateau of the Wadi ‘Afra. The second follows the plateau of the Wadi el ‘Ali, just east of the center of the survey area. The final cluster appears around the eastern portion of the surveyed area along the Wadi el-Hasa. The majority of Byzantine sites lie in the western sector of the survey. It may be notable that few Byzantine sites were located near the *via nova Traiana*, the location of most Late Roman sites. Not one Byzantine sherd was found at the sites surveyed along the road. Although this might mean that the road fell out of use in the Byzantine period, it is difficult to identify suitable alternatives to north-south movement through the region.

The Tafileh-Ghor survey southwest of the Wadi el-Hasa found 14 Byzantine sites, or 37% of 38 total sites. The survey at At-Tuwana (ancient Thana/Thoana/Thornia) suggested a flourishing Early Byzantine site as reflected by well-developed settlement plans, unparalleled expansion into marginal lands, and intensive agricultural production. But the site was deserted sometime during the Late Byzantine period, before the Muslim invasion of the 7th century, as suggested by the paucity of Late Byzantine sherds and abandoned sites nearby. Khirbet edh-Dharih—apparently in decline during the Late Roman period—remained occupied in the Byzantine period, as the temple at the site was converted into a church. Byzantine Petra, farther south, flourished into the 6th century based on an agricultural economy. The Petra papyri, dated between 528 and 582, also reveal that imperial administration continued and there were at least some Roman troops in the region after the demobilization by Justinian. Just as on the Kerak plateau, the

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77 MacDonald, p. 246.
78 Waheeb, p. 136.
79 Fiema, p. 315.
80 Fiema, p. 315, 316.
81 Villeneuve, p. 476.
82 Watson, p. 470.
Byzantine period was well represented south of the Wadi el-Hasa, with some regions flourishing into the Late Byzantine period. However, the ambiguity in the Byzantine ceramic chronology reported by the southern surveys also makes it difficult to examine changes in the settlement patterns throughout these three centuries.

**Conclusion**

If the conversion to Christianity occurred this late in urban centers south of Esbus, it must have happened even later in the rural *territoria*. Christianity seems not to have had much impact in the region until the 6th century. What then, accounts for the apparent boom in population in central Jordan in the Early Byzantine period? Though pilgrimage had some influence on the economy of central Jordan, most holy sites were located west of the Jordan. In addition, the somewhat ambiguous ceramic evidence creates difficulty in differentiating settlement between the Early and Late Byzantine periods. The unprecedented settlement explosion around Esbus in comparison to the still significant but less dramatic intensification of Early Byzantine settlement on the Kerak plateau and south of Wadi el-Hasa needs explanation (Map 8).

The first question is who settled around Esbus? Throughout the Early Byzantine period, the dominant tribe, the Salih, lived in the vicinity of Esbus and then seemingly encouraged the settlement of other nomadic Arab tribes in the same region, perhaps creating spillover into the neighboring regions, such as the Kerak plateau. The arrival of the Ghassanids, also beginning in the 4th century but continuing into the 6th century, also increased the population of the region. These tribes might account for the many outlying settlements described around Esbus in marginal areas. As for the Kerak plateau, the Early Byzantine period also witnessed dense settlement (Map 9). By the reign of
Justinian, however, the defense in depth of Diocletian fell into decay and could not stop Saracens raids, resulting in demobilization around 530. Since the Saracens lacked siege capability, such raids probably did not affect large urban centers, but would threaten smaller settlements, forcing the inhabitants to move to better protected sites and thus shifting settlement to the western portion of the Kerak plateau (Map 10). The Wadi el-Hasa would have also been victim to the devastating Saracen raids in *Palaestina Tertia*. Perhaps some inhabitants of the three clusters of settlement south of the wadi in the Early Byzantine period moved west to avoid these raids, creating the more densely occupied western region.
Chapter 6: Conclusion

This analysis of the historical and archaeological evidence suggests that rural settlement in central Jordan from the Hellenistic through the Byzantine periods was determined above all by the presence or absence of regional security. Although the five transforming factors proposed by LaBianca likely had some influence on settlement, it seems that security was the crucial factor, especially for rural settlement. The historical and archaeological evidence also permits a reconstruction of differing methods in providing this security for the inhabitants of central Jordan.

The Hellenistic Period (323-63 B.C.)

This period clearly falls into two phases. In the earlier part of this period (ca. 323-150 B.C.), the region was ruled at least nominally by the Ptolemies, then by the Seleucids. Yet neither dynasty seems to have taken much interest in the region. The apparent absence of Hellenistic forces likely meant little effective security for the local population, a situation reflected in the relative paucity of settlement reported by all the regional surveys. But this situation began to change with the decline of Seleucid power in the 2nd century B.C. Local Semitic if somewhat Hellenized powers, such as the Hasmonaeans and Nabataeans, began to fill the resulting power vacuum. Central Jordan became a region of conflict between such rising powers.

The Nabataean System of Defense (ca. 150 BC-AD 106)

The origins of the Nabataeans as nomadic traders initially focused their attention on the Petra-Gaza road in southern Jordan and the Negev. However, they soon expanded northward into central Jordan where they confronted the Hasmonaeans who were pushing eastward from Palestine. The resulting conflict between the Nabataean and Jewish
kingdoms encompassed parts of central Jordan. The absence of evidence for settlement during the Hellenistic period implies that the kingdoms began to expand, but not secure, settlement. The only real evidence for a military site appears to be Esbus, which was re-founded as a border fort in Stratum 15 (198-63 BC) late in the Hellenistic period.\(^1\) The situation would change, however, as the Nabataeans and Jews settled in central Jordan in the Late Hellenistic period.

The Nabataean system of defense, then, that emerged in the 1\(^{st}\) century BC included both military sites with garrisons, as well as other defended sites that could serve as points of refuge for nearby inhabitants. Survey of the Kerak plateau revealed that 15\% of Early Roman/Nabataean sites were defended sites.\(^2\) The *Limes Arabicus* Project reported 37\% of Early Roman/Nabataean sites as defended.\(^3\) 20\% of Early Roman/Nabataean sites south of the Wadi el-Hasa were defended.\(^4\)

On the Kerak plateau, the majority of the defended sites ringed the edge of the plateau and protected it from external threats. These included the ascent from Luhith, a road leading from the Dead Sea up to the Kerak plateau through modern Kathrabba and the eastern entrance to the plateau from the desert via the Fajj el-ʿUseikir.

The Wadi el-Hasa, however, presents a different topography than the Kerak plateau. The Wadi el-Hasa is a major east-west wadi with a series of large northern running tributaries leading into it from the south. Here the majority of sites are within the interior of the survey zone, as opposed to the shell of fortifications around the Kerak plateau. Most of the defended sites of the Wadi el-Hasa survey lie on the high ground of

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1 Mitchel, p. 38.
2 Miller, p. 23-167.
4 MacDonald, Appendix 1, p. 364-387.
the south bank of the Wadi el-Hasa and along the peaks of the north-south tributaries. A major fort (Site 674, er Ruwiehi) guards the eastern region of the Wadi el-Hasa at the confluence of the Wadi el-Hasa and Wadi er Ruweihi, easily monitoring travel from the east and south.⁵

The Roman and Byzantine Military Frontier

The initial occupation of Nabataea did not involve major hostilities but the massive military forces employed and some archaeological evidence suggest some resistance.⁶ In the 2nd century, ten alae and cohorts supported legio III Cyrenaica, creating a provincial garrison of ca. 10,000 troops.⁷ The newly constructed via nova Traiana served as the backbone for the Roman defense system. Presumably the Romans would have initially occupied preexisting Nabataean fortifications. The vast majority of known Roman fortifications lie either directly adjacent to or within 20 to 30 km of the road.⁸ The general impression is that central Jordan was relatively lightly defended during this period.⁹ Roman units also occupied or at least maintained a presence in the urban centers of central Jordan, including an ala at Areopolis.¹⁰ Further evidence indicates that various detachments of the III Cyrenaica were deployed throughout the province. The Karanis papyrus of 107 mentions two cohorts then at Petra, with one cohort preparing to march through central Jordan to Bostra.¹¹ In conclusion then, the scanty Late Roman evidence—as far as troop placement—indicates a legion stationed at

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⁶ Bowersock, p. 81.
¹⁰ Kennedy, p. 153.
¹¹ Kennedy, p. 176 gives an abridged Greek segment of the original and an English translation. The original papyrus is found in the Papyrus Collection at the University of Michigan, inventory # 5903. It can also be viewed online at [http://www.lib.umich.edu/pap/index.html](http://www.lib.umich.edu/pap/index.html), electronic inventory # PMich VIII, 466.
Bostra and, at least in central Jordan, auxiliary and legionary units garrisoning the urban centers and several posts along the via nova Traiana. This could possibly be the manner in which Arabia was garrisoned until the final decades of the Late Roman period, probably until the late 3rd century when the Palmyrene invasion and the reorganization of the frontier by Diocletian resulted in major changes.

The most significant development for the defense of central Jordan was the military construction program under Diocletian (284-305) including the legionary fortress at Lejjun (fig. 21) and a number of smaller fortifications.\textsuperscript{12} The thick concentration of Roman military forces and fortifications seems to have encouraged an expansion of civilian settlement during the 4th and 5th centuries. In short, a high level of security resulted in intensification of regional settlement.

Secure military frontiers led to several other factors that intensified rural settlement in the 4th and 5th centuries. First, security for the sedentary agricultural population might have encouraged nomadic sedentarization, especially if the military frontier might have excluded nomads from traditional grazing lands. Also, some farmers might have moved from the larger and more secure settlements to the west and into more marginal areas closer to the desert fringe. Some new folk may have even entered the region to inhabit the newly secured areas protected by the \textit{limitanei}. Finally, the cities, which seemingly prospered throughout most of the classical period, benefited from the increased productivity from the growing number of farms.

The Late Byzantine period (491-640) witnessed a near complete abandonment of the military frontier on the eastern Kerak plateau. Among the 16 forts of the \textit{Limes Arabicus} survey, only three yielded Late Byzantine sherds and not a single Late Byzantine sherd.

\textsuperscript{12} Parker, 1987, p. 196.
Byzantine sherd was found at sites identified as independent towers.\textsuperscript{13} The fortress at el-Lejjun was abandoned sometime in the mid-6\textsuperscript{th} century AD, presumably as part of the wider demobilization of the limitanei.\textsuperscript{14} In the wake of the demobilization, the Ghassanids probably did not use existing fortifications when they became the primary security force of central Jordan.\textsuperscript{15} The lack of defended sites on the eastern portions of the plateau, many only recently occupied in the Early Byzantine period, encouraged settlement west of the Roman road and closer to defended urban sites such as Areopolis and Charachmoba.

In short, the most intensive period of rural settlement occurred during the Early Roman/Nabataean period (63 BC-AD 106), when the Nabataean system of defense allowed nomads to settle and itinerant farmers to work marginal lands (Map 3). The lowest point of settlement was the Hellenistic period, when the region became a battleground for two rising powers striving to protect their territories (Map 2). The Late Roman period (AD 106-324) demonstrates how a changed security situation—from the Nabataean to the distant Roman authority—reduced the number of rural settlements dramatically (Map 6). In addition, when the system of defense broke down during the tumultuous 3\textsuperscript{rd} century, the lack of security forced the inhabitants to seek shelter wherever the military was present—in urban centers and along the roads. The re-establishment of security by Diocletian created another settlement peak in central Jordan—the strong military frontier allowed the inhabitants to settle in marginal areas not occupied in the Late Roman period (Map 9). The Late Byzantine period witnessed the collapse of security after Justinian’s demobilization of the limitanei and then the eventual

\begin{thebibliography}{9}
\bibitem{13} Parker, 2006, p. 575.
\bibitem{14} Parker, 2006, p. 578.
\bibitem{15} Parker, 2006, p. 578.
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termination of support to the Arab *foederati*. The lack of security not only led to the wide-spread abandonment of sites in the 6th century, it also opened the way for the Muslim invaders, who conquered the region in the early 7th century, ending the classical period in Jordan.
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Map 4: Early Roman Sites

Legend:
- Small Early Roman sites
- Medium Early Roman sites
- Large Early Roman sites
- Major Sites

East

North

Dead Sea

Legend

0 5 10 20 kilometers

-300 m
-40 m
220 m
400 m
740 m
1000 m

Charachmota
Areopolis
Madaba
Esbus
Fig. 1: View from acropolis at Tell Hesban.

Fig. 2: Acropolis of Tell Hesban, with monumental stairway.
Fig. 3: One of the excavated Christian churches on the acropolis of Tell Hesban.

Fig. 4: Depiction of Esbus on a mosaic preserved in Madaba.
Fig. 5: Preserved section of Roman road and associated features (along the right side of the road) at Madaba. The building on the left houses the remains of a Christian church.

Fig. 6: Portion of the Madaba Mosaic showing Charachmoba.
Fig. 7: Khirbet el’Al, mentioned by Eusebius (Onom. 84) Hesban Survey site 7.

Fig. 8: One of a series of small sites on the slopes adjacent to Tell Hesban. This small site is the remnants of a press, either for making olive oil or wine.
Fig. 9: View of landscape from the acropolis of Tell Hesban, facing the west.

Fig. 10: View of landscape taken at the top of a ridge to the west of Tell Hesban.
Fig. 11: Landscape of Hesban survey area.

Fig. 12: Remains of the fort Mahattat el-Haj (Kerak Plateau Survey site 18) facing south.
Fig. 13: View of the Wadi Mujib (River Arnon) from the Mahattat el-Haj (KPS site 18).

Fig. 14: The Wadi Mujib (River Arnon).
Fig. 15: Khirbet el-Balu, with its associated qasr in background.  
(Kerak Plateau Survey site 35)

Fig. 16: Khirbet el-Balu, with Wadi Qurri running through the site.  
(Kennedy and Bewley, p. 115)
Fig. 17: Remains of the *via nova Traiana* at er-Rabba (Areopolis). The Roman road was colonnaded as it passed through Areopolis. Remains of shops are found on the right side of the road, however, modern construction covers whatever remains were on the left side.

Fig. 18: Remains of a Roman temple at er-Rabba (Areopolis).
Fig. 19: Buildings and paved roadway adjacent to the *via nova Traiana*.

Fig. 20: Large cistern at er-Rabba. This is the largest of three remaining cisterns.
Fig. 21: View of legionary fortress at el-Lejjun (Kennedy and Bewley, p. 183).

Fig. 22: Preserved portions of a gate at el-Lejjun.
Fig. 23: A view of the remains at Nakhl, Kerak Plateau Survey site 420.

Fig. 24: Watchtower with its cistern on the northern ridge of the Wadi el-Hasa. The southern ridge of the Wadi el-Hasa is in the background, several kilometers distant.
Fig. 25: View of the Kerak Plateau facing north from Khirbet el-Balu (KPS 35).

Fig. 26: Farmland and rolling landscape typical of the central Kerak Plateau.
Fig. 27: Landscape of Kerak plateau.

Fig. 28: View from Jebel Shihan (Kerak Plateau Survey site 12) facing south.
Fig. 29: View taken from the remains of the crusader castle at modern Kerak (Charachmoba), showing the landscape of the surrounding area.

Fig. 30: View of temple and its sanctuary at the important Nabataean site at Khirbet edh-Dharih, Wadi el-Hasa Survey sites 253, 254, and 255.
Fig. 31: Remains of a probable caravansary along the *via nova Traiana*. The modern roadway, unfortunately, covers most of the sections of Roman roadway surveyed by the Wadi el-Hasa team. However, the cobblestones of the *via nova Traiana* are sometimes visible under the asphalt road.

Fig. 32: Milestones adjacent to modern roadway covering the *via nova Traiana*. 
Fig. 33: Landscape of the eastern universe of the Wadi el-Hasa.

Fig. 34: View of the central universe of the Wadi el-Hasa.
Fig. 35: View of ridgeline to the west of Khirbet edh-Dharih (WHS sites 253-5).

Fig. 36: View of a site and the desert fringe at the eastern extremity of the Wadi el-Hasa, along the Ottoman Hajj route. Note preserved road section at left and the Ottoman fort in the upper right of the picture. This is Wadi el-Hasa survey site 1074.
Fig. 37: Plans of two typical small sites of central Jordan. A small site would have one building or feature and possibly small associated buildings. The site would not encompass a large area. A medium sized site would contain at least several of the features found at a small site (Top plan taken from MacDonald, p. 203. Lower plan from MacDonald, p. 209).
Fig. 38: Plan of a typical large site. A large site would encompass a large area with dozens of buildings and features and a perimeter wall is not uncommon among large sites (Plan from MacDonald, p. 211).

Fig. 39: Aerial view of Nakhl (KPS site 420) showing the complexity of a typical large site (Kennedy and Bewley, p. 212).