ABSTRACT

GENTRY, RUSSELL SPENCER. The Transformation of Nabataea: Economic Transformation in the Late First Century BC and First Century AD (Under the direction of Dr. S. Thomas Parker).

In the first century BC, the Nabataeans faced a challenge: they had subsisted as desert nomads by plying their skills along the caravan route connecting Arabia and the Mediterranean. With the advent of the Roman Empire, Rome gained access the Red Sea, providing an alternate link to the products of the Far East. Archaeological evidence from the Nabataean kingdom suggests that the Nabataeans thrived despite this potential competition, and transformed their kingdom into a more intensively settled landscape. This thesis offers a synthesis of the evidence for this transformation and explains the phenomenon as Nabataea taking advantage of emerging markets in the Pax Romana.
The Transformation of Nabataea: Economic Transformation in the Late First Century BC and First Century AD

by
Russell Gentry

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APPROVED BY:

Dr. S. Thomas Parker  Dr. Jennifer Gates-Foster
Committee Chair

Dr. Julia Rudolph
BIOGRAPHY

Russell Gentry is a North Carolina native whose passion for history and archaeology has led him across classrooms and deserts alike. In addition to history, he enjoys performing live theater, exercising, and collecting books.
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Chapter 1

Introduction

The Nabataeans played a crucial role in the incense trade between the Mediterranean and the southern Arabian Peninsula from the 4th century BC until the 2nd century AD. Relatively little is known about these people from documentary sources, but archaeological evidence for Nabataean civilization abounds after years of fieldwork especially focused around their famous capital of Petra, now in southern Jordan. The splendors of this ancient city draw visitors to this day and the site remains one of the “wonders of the modern world,” yet the elaborate tomb façades of Petra whisper only hints of ancient Arab elites. These great people of antiquity clearly evolved in significant ways over the course of these centuries. Furthermore, it now seems apparent that the structures and society of Nabataea were fundamentally transformed in the late first century BC.

In this period Nabataea changed from a nomadic, decentralized tribal society to a more bureaucratic kingdom with an elite ruling class which experienced the phenomena of sedentarization, economic transformation, territorial expansion, and greater cross-regional engagement as a major economic player connecting the Arabian Peninsula with the Mediterranean world. Documentary sources hint at this great transformation, but archaeological evidence, much of it only recently recovered through surface surveys and excavations, reveals a kingdom-wide picture of transition that warrants a synthesis and above all an explanation of the available evidence; therefore, this thesis aims to synthesize the evidence for this transformation and offer explanations for its causes as well as its effects.
This analysis will begin with a review of the evidence available, followed by a historiographical overview, including a brief review of the origins of the Nabataeans and their historical development down to the first century BC. This will contextualize the research within the framework of current scholarship about the Nabataeans in the broader Near East, focusing especially on the external influences on the Nabataean kingdom. Next, this thesis will synthesize the evidence for changes in Nabataea in the late 1st century BC. In order to address the many excavations and surveys relevant to this analysis, it is necessary to break the kingdom down into smaller regions to observe some patterns. This regional analysis will explore a changing kingdom and in some cases beyond to discern its evolving role in the wider region.

The journey will begin in the northwestern portion of the kingdom: the Negev desert. Recent archaeological evidence from this region has led one scholar, Tali Gini-Erickson, to conclude that Nabataea was in fact transformed by the early first century AD.¹ This provides a working model which can be tested for its validity by synthesizing survey and excavation evidence from other regions. Next the tour of Nabataea will hone in on the much-discussed capital: Petra. Here, extensive archaeological evidence published over many decades of fieldwork will form the next step of this analysis, looking at evidence from the city itself and the surrounding plateau. Next, Wadi Araba, Hisma, and Hijaz regions will be treated. These were zones of high aridity but, like much of the Nabataean kingdom, they witnessed a period of intensification in the late 1st century BC. Next, this analysis will turn north of Petra to explore the plateau east of the Dead Sea, which experienced widespread agricultural settlement beginning in the late first century BC. Finally, the last Nabataean area will be far to the north—in the Wadi

Sirhan region, where sparse Nabataean pottery may suggest that ethnic, non-elitist Nabataeans were reluctant to migrate north. In conclusion, the analysis will illustrate and attempt to explain these changes within the Nabataean kingdom around the first centuries BC and AD.

Traditionally, there has been a tendency for scholars to designate King Aretas IV (9 BC-AD 40) as the major agent of change in the Nabataean Kingdom, but the evidence suggests that the transformation of Nabataea began much earlier and instead developed over a series of reigns, likely beginning under Malichus I (62-30 BC) and Obodas III (30-9 BC) with the foundation of the ports at Aila and Leuke Kome. Aretas IV played a major role, but was neither the first nor the sole architect of the transformation of Nabataea, based on the evidence from various parts of the kingdom pointing to earlier intensification of settlement. Possible explanations for this transformation of Nabataea include the emerging stabilized Mediterranean market unified by the Roman empire as well as the vigorous and ultimately successful Nabataean response to an effort by the Romans to circumvent the traditional caravan route to Arabia by revitalizing Egyptian ports along the Red Sea.
Chapter 2

Primary Sources

The last few decades have witnessed a veritable explosion of new evidence, mostly but not entirely archaeological, about the Nabataeans. Even Bowersock’s *Roman Arabia*, a landmark publication now nearly thirty-five years old, relied primarily on the few well-known scattered literary sources, the small corpus of laconic and largely undated Nabataean inscriptions, Nabataean coinage, and the excavation of Petra and a few other sites, mostly in the Negev. Bowersock had little access to regional surveys, apart from early pioneers such as Nelson Glueck. But Glueck’s surveys, although comprehensive in geographic scope, were conducted before the development of a refined chronological typology of Nabataean pottery, the crucial dating tool of such regional surface surveys. Glueck and others could certainly identify pottery as “Nabataean.” This enabled him to date hundreds of sites in Jordan and the Negev to the Nabataean era and draw his now famous “Dead Sea - Madaba line” demarcating one limit of Nabataean settlement, but Glueck and other early scholars had no means to subdivide the centuries of Nabataean history into discrete periods between their appearance in the historical record in the late 4th century BC to their annexation into the Roman Empire in AD 106. Furthermore, it was already clear to such scholars as Peter Parr that the Nabataean ceramic tradition clearly continued well beyond the Roman annexation, perhaps even into the 3rd or 4th century, although its end was as mysterious as its origins.

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All this changed in the late 1970s with the initiation of new, intensive regional surveys covering much of the kingdom, especially in Jordan and the Negev. Above all was the work of Burton MacDonald, who directed a series of methodologically sound and promptly published regional surface surveys of the plateau (Biblical Edom) from Wadi al-Hasa to Ras en-Naqb.\(^5\) They underscored Glueck’s conclusions about the density of Nabataean settlement across the entire plateau which was the heart of the Nabataean kingdom. The herculean scale of their achievements cannot be denied, but they also reflect two serious limitations in our understanding of the history of the Nabataeans. First, MacDonald rightly published a selection of all evidence recovered from all periods from Paleolithic to Late Islamic, which meant that only a tiny sample of artifacts was actually published from each of his several thousand sites. These usually meant at best only a handful of diagnostic Nabataean sherds from each site. Second, MacDonald’s earlier surveys were published before the appearance of the groundbreaking Nabataean ceramic typology, discussed below. Further, even his later published reports make no effort to subdivide chronologically his collected Nabataean pottery. Therefore, although our understanding of the extensive scope of Nabataean pottery and thus settlement was advanced significantly by MacDonald’s survey, it was not possible to discern patterns of intensification and abatement of settlement within the Nabataean period.\(^6\) The same criticism can be raised about other valuable regional surveys from the same era, such as Miller’s survey of the Kerak Plateau and Parker’s Limes Arabicus Project and Roman Aqaba Project.\(^7\)

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MacDonald’s work and other regional surveys also encouraged excavations of newly discovered sites in the Nabataean hinterland, such as Khirbet edh-Dharih.8 Other important new excavations included extended work at Humayma, a Nabataean village halfway between Petra and Aqaba9 and extensive excavations at Aqaba (ancient Aila) itself, which demonstrated its foundation by the Nabataeans.10 Israeli archaeologists continued work on Nabataean sites in the Negev.11 At long last, excavations have begun at Nabataean sites in northwestern Saudi Arabia, especially Villeneuve’s work at Meda’in Salih.12 Excavations have also resumed at several sites within Petra itself, providing a much more nuanced picture of the development of the Nabataean capital.13 These more recent excavations and surveys are now exploiting the pioneering work of Stefan Schmid, who developed a chronological typology of Nabataean fine ware that permits dating many diagnostic sherds of this ubiquitous pottery within a few decades.14 His typology provides a crucial tool to reconstruct the occupational sequence of many Nabataean sites from surface survey alone (Figure 1).

Although this new tool represents a breakthrough for researching the history of Nabataea, several caveats must be stressed. First are the usual problems posed by surface ceramic evidence such as ambiguous sample sizes and uncertainty of pottery from all periods of a site’s sequence of occupation appearing on the surface. Second is the fact that excavation of Schmid’s type site, the domestic complex or “villa urbana” atop Jabal ez-Zantur overlooking the Petra city center, revealed a gap in occupation between the early 2nd century (when the complex witnessed a violent destruction) and reoccupation at the turn of the 4th century. Therefore there remains considerable uncertainty about the terminus of Schmid’s Dekorphase 3c (sometime after ca. AD 100) and the appearance of Dekorphase 4 (sometime before ca. AD 300). This “gap” is currently being addressed by the ongoing excavations on the Petra North Ridge, which is producing considerable stratified evidence from domestic contexts dating to the 2nd and 3rd centuries but which is not yet published. Nevertheless, this latter issue does not pose a problem for the current thesis, which is primarily concerned with the history of Nabataea well before this period.

In short, the plethora of new archaeological evidence now permits a much more nuanced picture of the historical development of the Nabataean kingdom, particularly when combined with existing documentary evidence. But before delving into the archaeological evidence in detail, a review of the primary historical documents covering Nabataea is necessary. These sources include: Diodorus Siculus, Strabo, the author of 1 Maccabees, Flavius Josephus, Paul of Tarsus, and the Babatha papyri. These sources are relatively sparse, granting even more importance to the archaeological data available from Nabataea, but they are nevertheless important to our understanding of Nabataean lifeways.

Diodorus of Sicily was a Greek historian from the first century BC who wrote a universal history that included information on the Nabataeans. Although Diodorus never observed the Nabataeans firsthand, his work incorporates observations made by an earlier historian: Hieronymus of Cardia. He was a general and contemporary of Alexander the Great, so his work was already centuries old when it was reused by Diodorus. Hieronymus relates the story of a battle in 312 BC between the Nabataeans and Athenaeus, a general of Antigonus I, the One-Eyed. This means that the testimony of Diodorus Siculus represents a secondhand account of events that occurred many years before the first century BC but based on a contemporary source.

Strabo (ca. 63 BC- ca. AD 23) was a near contemporary of Diodorus whose Geography also included information on the Nabataeans. Like Diodorus, Strabo did not observe the Nabataeans directly, but relied on eyewitness testimony. Strabo’s account of the Nabataeans differs significantly to that of Diodorus. Athenodorus, Strabo’s friend and source, visited Petra himself, which makes this a good source for a depiction of Nabataea in the late first century BC. Nevertheless, there are some bizarre aspects to the report on Nabataea seen in Strabo—in particular Strabo’s discussion of Nabataean burial practices, which appear wholly unlike anything actually attested at Petra.

1 Maccabees mentions the Nabataeans as well. This work was originally written in Hebrew but only survives in the Greek translation of the Septuagint. Nevertheless, it is significant that it mentions an encounter between the Maccabees and the earliest known

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Nabataean king: Aretas I in the 160s BC. This source does not, however, provide a detailed account of the Nabataeans nor provide any clues about their lifeways.

The Jewish historian Josephus, writing in the late 1st century AD, includes many references to the Nabataeans in both the *Jewish War* and *Antiquities of the Jews*, but only insofar as they relate to the Jews. For example, he describes an episode ca. 100 BC in which Gaza, the crucial terminus of the Incense Road on the Mediterranean, was besieged by the Jewish Hasmonean King Alexander Jannaeus. The defenders were expecting aid from “Aretas, King of the Arabs” (probably Aretas II of Nabataea). This was a reasonable expectation given the importance of the port to the Nabataean economy, although such aid ultimately failed to materialize. Although Josephus attests the prominence of the Nabataeans in the Negev and their relationship to other regional rulers, he does not offer much detailed information about Nabataea.

Another brief mention of the Nabataeans appears in the New Testament. The Apostle Paul wrote that a warrant was issued for his arrest ca. AD 40 by the Nabataean governor (ethnarch) in Damascus, representing “Aretas the King” (presumably Aretas IV). Once again, the source lacks details about Nabataea itself, but sheds some light on the political structure of the kingdom, including some form of Nabataean control over Damascus, one of the largest and most important cities of the Roman Levant, with a Nabataean bureaucrat serving as governor. The nature and extent of Nabataean control over Damascus, however, remains cloudy at best. In any event, it appears to have been brief.

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18 For a detailed analysis of this passage, see Bowersock, *Roman Arabia*, 1983: 18-20.
20 For a discussion of 2 Corinthians 11.32-33 and Galatians 1.15-17. see Bowersock, *Roman Arabia* 1983: 68.
Finally, some valuable insights about Nabataean administration and the economy may be gleaned from the famous “Babatha Archive” of papyri found in a cave near the Dead Sea. Babatha was an affluent Jewish woman who owned property, including date palm plantations, near the southern end of the Dead Sea. The documents range in date from the late 1\textsuperscript{st} to the early 2\textsuperscript{nd} centuries AD, i.e., the transition from Nabataean to Roman rule. The documents were deposited in the cave during the Jewish Revolt of 132-135.\textsuperscript{21}

The historical evidence to be gleaned from most of these sources will be outlined in more detail in the historical summary in chapter 4.

Figure 1: NPFW Chart (Schmid, 2000).

Chapter 3

Historiography

“Clearly, between the late fourth century [BC] and the late first, the Nabataean way of life had changed dramatically.”

– G.W. Bowersock, *Roman Arabia*, 17

Before diving into an analysis of the evidence, a historiographical review will place this inquiry within the context of Nabataean scholarship and the study of ancient Arabian trade. Though many works relate to Nabataean economic history, this overview represents a selection intended to illustrate the evolving scholarly understanding of Arabian trade in the first centuries BC and AD. Observations by current researchers in the field, such as Tali Erickson-Gini and S. Thomas Parker, working in a variety of archaeological contexts have begun to shed light on details of a transformation of the Nabataean economy beginning in the first century BC. Before turning to these works, earlier scholarship which informed the current state of the field will contextualize the more recent research on this topic. To that end, authors such as Nigel Groom and G. W. Bowersock will provide a foundation for research on the Nabataean incense trade with their works from the 1980s. Finally, studies of South Arabian kingdoms have begun to provide more nuanced information about the Arabian incense trade as a whole, and recent work by R. McLaughlin will set the historiographical stage for the final portion of this thesis, following the historiography of the Nabataean kingdom. Finally, analysis of recent surveys and excavations summarized above and which will follow throughout also provide helpful observations in the body of this thesis, but they are too numerous to include in this historiographical overview.

Nigel Groom’s 1981 study of ancient incense trade covers Nabataea in some detail and touches on the roles of Red Sea and caravan trade in the kingdom. Groom briefly discusses the
history and various overland connections of Nabataean Aqaba (Aila), as well as its role as a Nabataean port. Although his work appeared before the excavations at Aqaba, Medinet-el Haras (Berenike), and Al-Qusayr (Myos Hormos), Groom suggests that the Ptolemaic harbor foundations on the Egyptian Red Sea coast constituted an attempt to wrest some of the lucrative incense traffic from the Arabian overland caravans to Egypt. Furthermore, Groom downplays the role of Aila as a port, suggesting that most sea traffic flowing into Nabataea arrived at Leuke Kome (exact location uncertain but clearly farther south on the Arabian Red Sea coast), then traveled north overland, avoiding the difficult sailing conditions in the Gulf of Aqaba. Groom treats these ports only in brief and avoids discussing the considerable changes which may have occurred through historical events such the Roman annexation of Egypt in 30 BC. Regardless, he succeeds in creating the seminal work on the Arabian incense trade and he provides a strong base from which to begin an inquiry into ancient Red Sea commerce and Nabataean economic history in the first century.  

G. W. Bowersock’s *Roman Arabia*, published in 1983, in fact covers the Nabataeans from their origins through the Roman annexation of AD 106 and into the early fourth century. For example, he discusses the economic motivations for Aelius Gallus’s attempted conquest of Arabia Felix (southern Arabia) ca. 25 BC which highlights Rome’s initial interest in the region. Bowersock also notes the difficulties of studying Nabataean history because of the paucity of written evidence; however, he offers a bold suggestion about the kingdom during the reign of Aretas IV (9 BC- AD 40), i.e. the possibility of a temporary Roman annexation of Nabataea in 3-1 BC. Bowersock’s suggestion has not received wide acceptance, but it remains one possible

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22 Groom, N., *Frankincense and Myrrh*, 1981: for the author’s discussion of Aila, see 205-206; for his discussion of Red Sea trade and the role of Leuke Kome, see 208-209.
explanation for a peculiar gap in Nabataean numismatic evidence, as well as the claim by Strabo (Geography 16.4.24) that Rome controlled Nabataea in the late first century BC. Finally, Bowersock considers the long reign of Aretas IV, as “the flowering of Nabataea”, and suggests that this is the crucial period of growth and urbanization for the Nabataean kingdom. As more archaeological evidence has come to light, Bowersock’s view of a dramatically changed Nabataea under Aretas IV has gained wide support, but this thesis will argue that Aretas IV was neither the first nor the only agent of transformation in Nabataea’s history, which actually began decades earlier.

Steven Sidebotham’s 1986 monograph on Roman economic policy in the Red Sea from 30 BC to AD 217 reconsiders broader implication about regional commerce in this period. For example, Sidebotham argues that the Emperor Augustus, after his annexation of Egypt in 30 BC, built upon earlier economic policies established in the Ptolemaic period (323-30 BC). However, prior to the Roman annexation of Egypt, the Ptolemaic kings did not wield enough regional power to dominate Red Sea markets, particularly in competition from Nabataea, whose caravan connections were more secure than traffic via the Red Sea during the Hellenistic Period. While acknowledging the economic motivations for the campaign of Aelius Gallus (ca. 26-24 BC), Sidebotham suggests that the regional economic trends shifting in Rome’s favor were incidental,

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23 Huth, M., “Some Nabataean questions reconsidered,” 2010: 224. In a more recent publication, numismatist Martin Huth points out that this coinage gap around the turn of the first century AD remains as the corpus of Nabataean coinage grows, and this phenomenon still lacks a sufficient explanation. Nevertheless, Huth agrees with most scholars that a temporary annexation (or even punitive recall of minting privileges) is unlikely. Additionally, Huth notes that the absence of coinage extends to the year AD 3, which further harms Bowersock’s earlier hypothesis about Aretas IV’s resumption of autonomy in AD 1.

24 Bowersock, Roman Arabia, 1983. For the author’s discussion of Gallus’s expedition, see 46-47, for his theory about the brief annexation of Nabataea in the midst of Aretas IV’s reign, see 54-56; for his discussion of Nabataean growth and urbanization under Aretas IV, see 59-61; also see Chapter 3 for a further discussion of the evidence from Strabo.
but had an important effect on Nabataea, offering the first postulation that the kingdom which once thrived on trans-regional trade had to turn to new lifeways. Sidebotham stressed the importance of Roman policy, particularly in their new province of Egypt, as a critical factor in influencing the relationship between Rome and the Nabataean kingdom in the first century. This remains an important topic of debate.²⁵

David Johnson's 1989 article, “Nabataean Piriform Unguentaria”, discusses the emergence of a major perfume industry at Petra in the late first century BC. The buildup of this industry so soon after the Roman annexation of Egypt, during a period of apparent economic transformation underscores two key points: 1) Nabataea still received copious incense imports in this period from South Arabia, regardless of the new transshipment opportunities presented by the revitalization of Egyptian Red Sea trade; 2) the Nabataeans transitioned from simply transporting and taxing incense products to using incense as a raw material to create value-added products of their own. Johnson also offers the important insight that with renewed security by the unification of the Mediterranean under the Principate, the Roman world suddenly emerged as an enlarged and stable market for incense products around the turn of this era.²⁶

Walter Ward’s 2002 M.A. thesis studied the classical Red Sea ports of Berenike, Myos Hormos, Clyisma, Leuke Kome, and Aila. He offered a synthesis of the evidence from these sites, providing some important conclusions. For example, he noted that Egyptian ports were connected to a larger network of overseas trade, which included India, while the Nabataean ports of Aila and Leuke Kome did not seem to connect directly with regions beyond South Arabia.

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²⁵ Sidebotham, S.E., Roman Economic Policy, 1986: For the author’s discussion of Ptolemaic and Augustan economic policy on the Red Sea, see 175; for his suggestion that Nabataea had to adapt to Red Sea economic shifts caused by direct Roman control of Egypt, see 179.
Gaza, and Syria. Ward admits that the relationship between the ports of Aila and Leuke Kome is somewhat obscure, particularly during Aila’s late first century BC foundation. Nevertheless, Ward makes a strong case for locating Leuke Kome at modern Aynunah, just east of the mouth of the Gulf of Aqaba, now in Saudi Arabia. Ward also argues for Aila’s role as a land transport hub rather than as a seaport until the turn of the 4th century, an important argument to consider when analyzing the complex relationship between the Red Sea ports around the time of the Roman annexation of Egypt. Ward suspects that Aila’s primary function until ca. AD 300 was to facilitate land transport rather than sea traffic and that most sea traffic into the Nabataean kingdom arrived at Leuke Kome. This argument is supported by the position of Aila between the important caravan cities of Meda’in Saleh (Hegra) and Avdat (Oboda), and the difficult sailing conditions in the Gulf of Aqaba.27

Björn Anderson conducted a broad study of the Nabataean kingdom for his 2005 dissertation. Anderson utilized the Jordanian Antiquities Database and Information System (JADIS) to treat the topic of Nabataean intensification. He concluded that there was a flurry of intensified settlement broadly between 100 BC and the annexation of Nabataea in AD 106. Unfortunately, because of the nature of the survey evidence in JADIS, as Anderson points out, he could not narrow the chronology more tightly nor look at areas beyond the relatively arbitrary borders of modern Jordan. Therefore, Anderson treats the Negev and Hejaz regions of Nabataea

separately, but his dissertation provides helpful ideas about the Graeco-Roman conceptualization of these hinterland regions in textual evidence. The breadth of Anderson’s work necessarily excludes some details about the Nabataean settlements of this region between the late first century BC and the Roman annexation. Nevertheless, he posits an interesting theory regarding the identity of those who occupied the marginal regions of the Hejaz. He argues that these individuals were nomadic, localized groups disconnected from each other and the wider Nabataean kingdom, particularly compared to the Negeb.\(^{28}\)

Tali Erickson-Gini’s article on Nabataean colonization in the Negeb examines this desert in southern Israel which connects Petra with the Mediterranean Sea. She summarizes Nabataean archaeological evidence in the Negeb from the Hellenistic to Late Roman and Byzantine Periods. She argues that prior to the late 1\(^{st}\) century BC Nabataean settlement was essentially restricted to the Petra-Gaza road, implying that Nabataean interest in the Negeb was largely confined to securing the lucrative commercial traffic through the region. But the late 1\(^{st}\) century BC, she argues, witnessed not only the revitalization of existing Nabataean settlements on the Petra-Gaza route but also significant expansion of Nabataean settlement beyond this route, i.e. the development of agro-pastoral communities in the more well-watered portions of the Negeb.\(^ {29}\)

This parallels conclusions by recent scholarship on Wadi Arabah.\(^ {30}\) Furthermore, by incorporating the Nabataean Fine Ware typology she offers a tight chronology that is readily comparable to research from Wadi Arabah. Erickson-Gini’s synthesis will serve as a model for

this thesis, which will test her reconstruction of settlement patterns when considering evidence from the rest of the Nabataean kingdom.

Roberta Tomber’s *Indo-Roman Trade* offers a diachronic look at the maritime connection between the Roman world and India beginning in the first century BC. It includes an overview of Roman activity on the Red Sea. She raises important questions about the chronology and purpose of ports in Egypt and Nabataea. She suggests that the revitalization of the Egyptian ports of Berenike and Myos Hormos in the late first century BC forced drastic change in the Nabataean economy by threatening their control over the lucrative luxury traffic from the southern Arabian Peninsula. Her focus necessarily precludes close examination of the Nabataean heartland, but Tomber nevertheless provides a useful synthesis of Red Sea trade in the Roman era.³¹

The results of S. Thomas Parker and Andrew M. Smith’s recent publication of their Southeast Wadi Araba Survey (SAAS, part of the Roman Aqaba Project) largely parallel the conclusions of Erickson-Gini for the Negev. Their survey north of Aila provides detailed economic data for the region linking the Red and Dead Seas. Their most important contribution for this thesis is their argument for intensification of settlement in the BC/AD transition roughly corresponds to that of the Negev.³² Their survey offers more quantification than many other surveys—most published only in preliminary form. Further, their use of Schmid’s typology of Nabataean Fine Ware provides tighter dating of sites and allows more detailed comparison with the Negev. For these reasons, this thesis will provide more detailed consideration of the Southeast Wadi Araba Survey than other areas.

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Finally, this thesis will look beyond Nabataea to the Hadrawmat kingdom in South Arabia. This region has received less attention from scholars compared to Nabataea and the broader Roman East, but because it was the source for frankincense during the BC/AD transition, changes in Hadrawmat at this time reflect the consequences of shifting regional economies. The most recent monograph on the Hadrawmat kingdom in this period is Raoul McLaughlin’s *The Roman Empire and the Indian Trade*. His work provides a helpful summary of the documentary evidence. McLaughlin notes the Hadrawmat king’s careful regulation of trade through the region, as well as the prominence of the ports at Qana and Khor Rori. Fortunately, recent publications of archaeological evidence from this region provide an opportunity to expand on his summary of the documentary evidence for the Hadrawmat kingdom. This thesis will note the changes evident in the Hadrawmat kingdom to provide a broader context for developments in the Nabataean economy.

This examination of the historiographical tradition surrounding Nabataean economic history, particularly leading up to the turn of the first century AD, points to the next logical step: an analysis of change in the Nabataean kingdom during the BC/AD transition. It will be argued that the beginning of Roman domination of the region, especially the Roman annexation of Egypt, presented serious challenges to the Nabataean economy and thus to the Nabataean polity as a whole. An examination of the Nabataean kingdom holistically and in its international context will suggest a kingdom-wide economic transformation as manifested by urban and especially rural expansion. This thesis will then address possible explanations for this apparent transformation of Nabataea. In short, it appears that the Nabataean kings of this period responded

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33 McLaughlin, R. *The Roman Empire and Indian Trade*, 2014: 140-149.
to the challenges posed by intrusive Roman power by implementing policies that transformed Nabataea. The fact that Nabataea continued to thrive following the establishment of the *Pax Romana* in the late 1st century BC suggests that the Nabataeans were up to the challenge.
Chapter 4

Historical Setting

“For [the Nabataeans], the habit is neither to sow grain, nor to plant a single fruit giving tree, nor to use wine, nor to build a house. And if one should be found behaving contrary to these [customs], death [is] to be the punishment for him. (νόμος δ᾽ ἐστὶν αὐτῶι μήτε σῖτον σπείρειν μήτε φυτεύειν μηδὲν φυτὸν καρποφόρον μήτε οἶνῳ χρᾶσθαι μήτε οἰκίαν κατασκευάζειν: δὲ δ᾽ ἂν παρὰ ταῦτα ποιῶν εὑρίσκηται, θάνατον αὐτῷ πρόστιμον εἶναι.)”

—Diodorus Siculus, Bibliotheca Historica, 19.94.3

Before moving to the archaeological evidence, this thesis will turn to the documentary sources which establish a historical setting for the Nabataean kingdom. Although much of Nabataean history is obscure (particularly in the early Hellenistic Period) and there are no extant literary works by the Nabataeans themselves, the documentary sources available still offer important evidence about the origins and history of the kingdom. It will proceed chronologically from the early Hellenistic Period (323-63 BC) to the reign of Aretas IV (9 BC-AD 40).

Most scholars argue for a transformation of Nabataea between the late fourth and late first centuries BC from a pastoral, nomadic tribal society to a monarchial, bureaucratic state with a largely sedentary population, prosperous mixed economy, standing professional army, and a critical role in international relations. The problem remains precisely when this occurred over the course of these three centuries. This chapter will explore some of the causes of this transformation and will argue that the evidence points to a key political transition in the emergence of a Nabataean monarchy in the second century BC. But the crucial economic transition seems to have begun a later, i.e. in the late first century BC. Written records of Nabataea’s international relations in this period suggest that the continuous threat of conflict and episodes of actual warfare between the Nabataeans and Hasmonaean, Herodian, and Roman
forces necessitated the kingdom’s adoption of carefully orchestrated foreign policies. Therefore, by the reigns of Malichus I (62-30 BC) and Obodas III (30-9 BC), Nabataea was ruled by a strong central authority which balanced military, diplomatic, and economic concerns. This paved the way for dramatic change in the once nomadic population of the kingdom.

The Nabataeans emerged from the opaque depths of historical obscurity in the writings of two late first century BC/early 1st century AD Greek authors: Diodorus Siculus and Strabo. As discussed above, neither the historian Diodorus nor the geographer Strabo observed the Nabataeans firsthand. But both apparently relied on eyewitness testimony of others. Strabo for example had a personal friend who had actually visited Petra. Diodorus synthesized earlier accounts from all over the known world to produce a “universal history.” His treatment of Nabataea relied heavily on Hieronymus of Cardia, who served in the Hellenistic East under Antigonus I, the One-Eyed, founder of the Antigonid dynasty of Macedonia. In 312 BC Antigonus sent Athenaeus, one of his generals, with force of 4600 troops against the Nabataeans. Athenaeus launched a successful surprise attack against “a certain rock” (widely assumed to be Petra) and seized a quantity of silver, frankincense and myrrh. But en route home the Nabataeans launched a surprise attack on the camp of Athenaeus and wiped out most of his force. Antigonus then ordered a second attempt to invade Nabataea, led by his son Demetrius. It is notable in this account that the Nabataeans communicated intelligence about Greek movements through use of fire signals (presumably from elevations within their territory) and dispersed their flocks into the desert and other remote locations. Demetrius was forced to withdraw without taking “the rock,” having to be content with some “gifts” and hostages from the Nabataeans (Diodorus Siculus, 19.94-97). Antigonus attempted to profit from the failed excursions into Arabia by collecting
asphalt from the Dead Sea, placing this expedition under Hieronymus, Diodorus’s source for these events. The Nabataeans emerged from the desert in force and “shot nearly all of them dead (σχεδόν ἃπαντας κατετόξευσαν)” (Diodorus Siculus, 19.100.1-2). Fortunately, Hieronymus dodged the arrows and lived to write his account. Thus Diodorus, although writing nearly three centuries after these events, could rely on the eyewitness account of Hieronymus.

Diodorus portrays the Nabataeans as pastoral nomads living in the inhospitable environment of the desert in order to protect their freedom from outsiders like the Antigonids. Furthermore, Diodorus even claims that for any Nabataean who plants crops or establishes a permanent dwelling (οἰκίαν), “the punishment is death (θάνατον αὐτῶπρόστιμον εἶαι)” (19.94.3). In addition to their nomadic desert lifeways, the Nabataeans further protected themselves from external invasion by maintaining a refuge referred to simply as the “rock (πέτρα),” a natural bulwark requiring no wall which likely refers to the site of Petra (19.95.1). This natural fortress failed the Nabataeans only once, when Athenaeus took them by surprise during a festival. A subsequent attempted Antigonid deception failed both because the Nabataeans anticipated a second attack and their natural citadel surrounded by harsh desert proved impervious to further assault (Diodorus 19.95-97). The presence of quantities of frankincense and myrrh collected at Petra surely implies that the Nabataeans were already deeply engaged in long distance caravan traffic with south Arabia and the emphasis on their herds underscores the pastoral nomadism of their economy. However, this snapshot of Nabataea from the late fourth century BC contrasts sharply with account of life in the Nabataean kingdom three centuries later.

34 All translations are by the author unless otherwise stated.
Strabo’s *Geography* was written in the early first century AD and portrays a different kind of Nabataea. Athenodorus, Strabo’s personal friend, informed the geographer about the Nabataeans by actually visiting Petra about this time and thus furnishes a firsthand account of their capital. Nabataea had changed significantly in the three centuries since they set arrows and ambushes against the Antigonids. The Hellenistic armies had faltered in the deserts where arid expanses protected the nomadic Nabataeans from subjugation. But by the time of Strabo “those Nabataeans and Syrians are obedient to the Romans (κάκεῖνοι Ρωμαίοις εἰσίν ὑπήκοοι καὶ Σύροι)” (*Geography*, 16.4.21).

Three centuries after the Antigonid campaigns, Strabo’s confidant Athenodorus witnessed a transformed Nabataea. The kingdom now boasted a “metropolis:” Petra, which functioned only as a meeting place and defensive strongpoint in centuries past, but now the city hosted a royal bureaucracy, “and it was extraordinarily well-managed (σφόδρα δ᾽ εὐνομεῖται)” (*Geography*, 16.4.21). This centralized authority governed relatively peaceful Nabataean subjects who acquired property with such skill, “that there was even a public fine for one decreasing his property, and accolades for one who increased [his possessions] (καὶ δημοσίᾳ τῷ μὲν μειώσαντι τὴν οὐσίαν ζημία κεῖται, τῷ δ᾽ αὐξήσαντι τιμαί)” (*Geography*, 16.4.26). Further, Athenodorus reports, these properties included expensive stone houses wherein the Nabataeans engaged in frequent drinking contests and enjoyed an array of plentiful fruits: a far cry from their roots as self-reliant pastoral nomads. Perhaps a vestige of the former Nabataean pastoral egalitarianism survived in the custom of the king, who was “so democratic that besides serving himself it even happened that he occasionally served the others also (δημοτικὸς ὡστε πρὸς τῶν αὐτοδιακόνων καὶ ποτ᾽ ἀντιδιάκονον τοῖς ἄλλοις καὶ αὐτὸν γίνεσθαι)” (*Geography*, 16.4.26).
Strabo’s *Geography* offers an important contrast to the image of Nabataea encountered by Antigonid generals, but his work suffers from problematic references beyond the uncertain statement about Rome’s control of the kingdom. For example, according to Strabo, the Nabataeans interred their kings not in the magnificent rock-cut tombs still drawing crowds to gaze at the cliffs of Petra, but instead they purportedly deposited royal corpses (along with all others) “beside piles of dung, (*παρὰ τοὺς κοπρῶνας*)” (*Geography*, 16.4.26). This hyperbolic report sharply contrasts archaeologically attested Nabataean burial customs, throwing into question at least this portion of the credibility of Strabo’s report. Nevertheless, the juxtaposition of the accounts of Diodorus Siculus and Strabo shows a sharp enough contrast to reveal a changed landscape from the fourth to first centuries BC. This timespan produced no direct historical sources to hint at the pace or reasons for changes in the Nabataean kingdom, so interpretations of this regional metamorphosis must rely on archaeological evidence grounded in its historical context. This thesis suggests that the transformation of Nabataea occurred relatively rapidly from the late first century BC through the first century AD.

The nature of this transformation was murky and the early history of the Nabataeans remains obscure. Nevertheless, Aryeh Kasher has suggested that the Nabataeans actually prospered in the periods of relative unrest in the Hellenistic world from the turn of the third century until the mid-second century BC. Furthermore, Kasher argues that the Nabataeans thrived during periods of conflict among the Hellenistic states. Their knowledge of desert-ways allowed Nabataean trade to continue, especially in the Hauran to the north.\(^{36}\) Though his argument is circumstantial, the premise makes sense: While conflicts disrupted the economies of

the Hellenistic Levant, the Nabataeans continued to operate their trade routes, which were otherwise inaccessible to those unfamiliar with the desert. In fact, the Nabataeans and their trade networks may have continued to survive precisely because they were more nomadic in this period, with a less centralized government. The free nomads of Nabataea portrayed in the account of Diodorus Siculus beat back early Hellenistic incursions; their nomadic traditions could have continued uninterrupted while centralized Hellenistic powers fought just to the west. Kasher’s theory has important implications for this thesis. If in fact nomadism allowed the Nabataeans to survive and even prosper through periods of regional instability, then the establishment of the Pax Romana likely presented new challenges. That is, while early Nabataea was a product of its environment, and appeared to endure because of nomadic adaptation to the desert, the transformed Nabataea which appeared around the BC/AD transition was likewise a product of a changing geopolitical environment.

By the mid-second century BC, the earliest known Nabataean king (Aretas I) appears (1 Maccabees 9.35), but it is not clear if there were earlier kings. Furthermore, in the late second century BC, an inscription from modern Turkey attests diplomatic relations between Nabataea and that region, though the nature of these relations is obscure. At the end of the second century BC, the Jewish Hasmonean King Alexander Jannaeus laid siege to the city of Gaza. It is not known whether Gaza was formally part of the Nabataean kingdom at this time, but Josephus reports that they appealed (without success) to an Arabian king (ὁ Ἀράβων βασιλεὺς) named Aretas for assistance (Antiquities of the Jews, 13.360). Bowersock points out that, regardless of the Nabataeans’ formal control over Gaza, the kingdom had a strong presence in the Negev, so it

37 Bowersock, G.W., Roman Arabia, 1983: 22.
would have been in the interest of Aretas II to keep Gaza open as a point of access to the Mediterranean world.⁴⁸

There are a couple possible explanations for Aretas II’s neglect of Gaza. First, the Nabataeans may have simply lacked the military strength to face Alexander Jannaeus. Second, because the Nabataeans used desert routes otherwise inaccessible to non-nomadic Hellenistic peoples, they could have continued to maintain their trade economy by skirting the Jewish Kingdom by traveling north through Jordan and Syria or to the south of Gaza, through the Negev to the Mediterranean port of Rhinocolura. A certain “Rhinocorura” (likely the same site) is mentioned by Strabo (Geography 16.2.31-32) as a desert port along the Mediterranean coast of eastern Egypt, possibly at the modern site of al-Arish. The name Rhinocolura is a bit mysterious, and the site could in fact correspond to several coastal towns mentioned by Pliny and Josephus. Pliny writes ambiguously: "and the two towns of Rhinocolura, inland Raphia, Gaza and inland Anthedon" (Pliny, Natural History, 5.14). Furthermore, Josephus mentions a coastal Rhinocolura near Gaza, Anthedon and Raphia. (Antiquities of the Jews, 13, 15.4; Book 24, 11:5). Josephus also mentions Rhinocolura in connection with Pelusium at modern Port Said (Antiquities of the Jews, 14, 14.2; The Jewish War, Book 1.14). Regardless of whether Rhinocolura is to be identified with modern El-Arish, this port likely provided the Nabataeans with a sufficient alternative to Gaza, especially if they were not strong enough to challenge Alexander Jannaeus at that time.

Early in his reign, Aretas III did gain some successes against Alexander Jannaeus, but the Hasmonaean king quickly retaliated and Gaza remained under his control (Josephus, Antiquities

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of the Jews, 13.392-393). Nevertheless, Aretas III successfully took Damascus in 85 BC, and he later began minting Hellenistic-style coins there (Josephus, Antiquities of the Jews, 13.392). Roughly two decades later, the Romans appeared in the region when Pompey annexed Syria as a Roman province (64 BC) and reduced all the other polities in the region to the status of autonomous client states, including Nabataea. The Nabataean kingdom was able to maintain its autonomy by paying off the Roman governors of Syria, Scaurus and Gabinius (Appian 14.16.106). It may not have been a particularly hard sell, given that Pompey’s military forces were occupied with other conflicts in the region and the Syrian governor sent to Nabataea struggled in the desert environment. Nevertheless, the Nabataeans’ ability to pay significant amounts of money to preserve their autonomy suggests that they possessed considerable economic power by the mid-first century BC. More importantly, this episode shows that Nabataean wealth was concentrated in an authority with sufficient power to amass such sums.

On September 2nd, 31 BC, the forces of Octavian triumphed over Mark Antony and Cleopatra at the Battle of Actium. The following year Octavian invaded Egypt and annexed it as a new province. After over a century of political turmoil within the Roman world, this brought peace to the Mediterranean. By 27 BC Octavian, now styled Augustus, was the first emperor of Rome. The Nile’s reliable and abundant production of grain fed the city of Rome and the confiscated wealth of the Ptolemaic dynasty funded military discharges. Augustus recognized the unique importance of Egypt by creating a special equestrian position, the praefectus Aegypti, to govern Roman Egypt, preventing any senator from raising a revolt among the three Roman legions permanently based there.
Furthermore, Roman control of Egypt brought additional opportunities beyond the Nile: a direct link to the Red Sea and the maritime trade route which stretched to the horn of Africa, South Arabia, and India. The Nabataeans under Malichus I (62-30 BC) aided the Romans in their conquest of Egypt by burning Cleopatra’s fleet near Suez (Josephus, Antiquities of the Jews, 69.3). Nevertheless, the Nabataeans may have harbored an ulterior motive: Knowing that the annexation of Egypt would bring the Roman Empire directly to the Red Sea, it could have been in the Nabataeans’ best interest to eradicate the ships of Cleopatra to insure that the Romans could not capture them for use in the Red Sea. This assertion may also be supported by the fact that Nabataean relationships with Augustus remained strained, especially after the unauthorized ascension of Aretas IV in 9 BC; but, if the account of Cassius Dio is fully accepted, then the act of burning the ships was actually a suggestion of the Roman governor of Syria (51.7.1). Regardless, the Nabataeans must have had serious concerns about the Roman Empire’s acquisition of the western Red Sea coast.

In fact, the next logical step for the Augustan policy of continued expansion was the invasion of South Arabia to gain direct control over the sources of frankincense. In 26 BC Aelius Gallus, the prefect of Egypt, led a sizeable force, largely drawn from the Roman provincial garrison of Egypt but which included 1,000 Nabataean troops, launched his expedition from Egypt. The campaign was chronicled by Strabo, a personal friend of the prefect. The Romans employed a Nabataean guide and advisor named Syllaeus, who suggested that they bring their army across the Red Sea to Leuke Kome, then march down the western Arabian coast to Arabia Felix (South Arabia). Gallus reached South Arabia but the campaign ended in disaster. The army suffered heavy casualties, not so much in combat but from illness and the harsh arid
environment. Gallus had to retreat before reaching his destination. Strabo suggests that this was the result of treachery on the part of Syllaeus, who Aretas IV later handed over to the Romans for execution (Geography, 16.4.24). Strabo also suggested that Syllaeus himself wanted to benefit by sabotaging the expedition and taking over Arabia Felix, but he could not have done this by dragging the army through the desert until the soldiers collapsed. Nevertheless, the Nabataeans had to be concerned about the dramatic change in the regional geopolitical situation. Roman provinces, both with substantial armies, were now permanently based on their northern and western borders (in the provinces of Syria and Egypt, respectively) and Herod’s client kingdom of Judaea posed another potential threat to the west. The conquest of Arabia Felix would have given Rome complete control of the incense trade, the main source of Nabataea’s wealth, from its source in the Hadrawmat kingdom to its Mediterranean terminus via Egypt. It is possible that Syllaeus himself intentionally lead Gallus astray, because Roman control of Arabia Felix would have been a massive blow to the kingdom’s economy.39

Although Augustus’ attempt to gain direct control of the sources of frankincense had failed, he quickly developed an alternative strategy. He founded or revitalized ports along the Egyptian Red Sea coast, such as Myos Hormos and Berenike, to divert trade from the overland route across the Arabian Peninsula to trade by sea. Incense, as well as other eastern luxury products would be borne from South Arabia by sea to these ports, then overland across the eastern desert of Egypt to the Nile, and thence to Alexandria, completely bypassing the Nabataean overland caravan routes. Recent excavations of these ports clearly date their revitalization in this period. Some measure of its success is suggested by Strabo’s observation

39 For an alternate argument see Bowersock, Roman Arabia, 1983: 47-49.
that by his day (i.e., ante AD 23) the bulk of the eastern trade was now moving through Myos Hormos. In short, this was a direct threat to the heart of the Nabataean economy.

The Nabataeans had to worry about more than just the expansion of Roman power. Relations between Obodas III (Malichus I’s successor, reigned 30-9 BC) and Herod the Great (37-4 BC) had deteriorated. At the beginning of the reign of Aretas IV in 9 BC, Herod gained approval from Augustus to invade Nabataea. The emperor probably based his decision on the fact that Aretas had not waited to gain approval from Augustus before taking up his kingship. Nevertheless, Nabataean envoys to Rome eventually won Augustus over and he retracted his earlier imperative for Herod to conquer Nabataea (Josephus, Antiquities of the Jews, 16.10.351). This episode illustrates that, even with the establishment of the Pax Romana, the Nabataeans were forced to play a careful political game with the Roman Empire to maintain their autonomy. Note that in this case Aretas IV was able to negotiate successfully with Augustus and thereby end the assault of Herod, a testament to Aretas’ diplomatic skill. Furthermore, by the early first century AD, an epistle by the Apostle Paul of a Nabataean governor in Damascus, shows that Aretas may have actually expanded his territory farther north into southern Syria (2 Corinthians 11.32).

This chapter has assessed the origins and early history of the Nabataean kingdom. Despite the obscurity of much of Nabataea’s early history, the primary sources offer important insights about rise of the kingdom and especially of the Nabataean kings. In considering the kingdom’s history from the early Hellenistic Period to the late 1st century BC, it becomes clear

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that the political landscape of the region changed dramatically, particularly after the arrival of the Romans. The role of the Nabataean kings increased in importance, especially for the management of foreign policy. It seems that early in their history, the Nabataeans were a nomadic people shaped by their physical environment, but by the time of the Pax Romana, the Nabataean social and political system had evolved to accommodate changing international challenges. With threats from Hasmonaean, Herodian, and Roman, the Nabataeans realized their vulnerability as a territorial state economically dependent on international trade. Therefore, by the reigns of Malichus I, Obodas III, and Aretas IV, the Nabataean kings developed policies to maintain a traditional root of the Nabataean economy, international trade, while also seeking to diversify its economy by developing new industries and greatly expanding its agro-pastoral production. These policies seem clear upon a close examination of the archaeological evidence from various regions within the Nabataean kingdom.
Chapter 5

The Negev

“The people of Gaza held fast and gave up neither from lack of supplies nor from the great number of their fallen, because they were prepared to endure anything and everything rather than to fall to the enemy. Furthermore, the likelihood of Aretas [II] to come fighting to their aid roused their zeal. (τῶν δὲ Γαζαίων ἀντεχόντων καὶ μήτε ὑπὸ τῆς ἐνδείας μήτε ὑπὸ τοῦ πλήθους τῶν ἀναιρουμένων ἐνδιδόντων, πάν γὰρ ὠτιοῦν ὑπέμενον παθεῖν ἢ ὑπὸ τῷ πολεμίῳ γενέσθαι, προσεπήγειρεν δ᾽ αὐτῶν τὴν προθυμίαν καὶ Ἀρέτας ὁ Ἀράβων βασιλεὺς ἐπίδοξος ὓπερ ἧξειν αὐτοῖς σύμμαχος)’”

– Flavius Josephus, Antiquities of the Jews, 13.356

The Negev is an appropriate starting point for this thesis because it represents the entry point into the Nabataean kingdom from the Mediterranean and Tali Erickson-Gini has already compiled a synthesis of relevant archaeological evidence from this region. The Negev Desert stretches from the southeastern Mediterranean coast to the western edge of Wadi Araba, connecting the Nabataean and Roman economies through ports at Gaza and Rhinocolura (Figure 2). This desert bridge corresponds to the southern region of modern Israel and has received extensive archaeological investigation in the past century. Archaeologists have long ventured here, often in search of ancient biblical sites. The evidence from these surveys and excavations provides the opportunity to create a detailed history of the region based in part on some 501 Nabataean and Roman sites thus far identified in the Negev.

Through a synthesis of this evidence, Erickson-Gini formed an interpretation of the Negev’s history in the classical periods. Exploiting the recent typology of Nabataean Painted Fine Ware created by Stefan Schmid, her research provides a more nuanced analysis with higher historical resolution than earlier surveys in the Nabataean kingdom. Nevertheless, she dealt with the same issue that plagues the analysis of archaeological material throughout the Nabataean
kingdom: especially differing levels of published detail that make quantified comparisons among sites and surveys difficult. Therefore, in order to draw broad historical conclusions about the Negev, Erickson-Gini had to sacrifice some site-specific details for her synthesis of Nabataean Negev archaeology. This thesis follows a similar method to draw conclusions about the changing nature of Nabataea throughout the entire kingdom, with results generally similar to what Erickson-Gini concluded about the Negev. She argued for a considerable intensification of Nabataean activity in the Negev desert around the first centuries BC and AD. However, after a short summary of her evidence (with particular focus on sites along trade routes), I will propose that, under the direction of Malichus I, Obodas III, and Aretas IV, the Nabataeans improved the trade route to Gaza by creating a circular rather than linear option for travel through the region. This option would have allowed caravans to avoid steep ascents, reach a greater number of sites, and end their circuit at Aila for a return journey down the Arabian coast. This trade route would have also given caravans the added benefit of selling South Arabian products at Petra and Gaza, then carrying Mediterranean products to the Red Sea and South Arabia via Aila.

There was clearly some early Hellenistic occupation of the region, suggested for example by third century BC coins recovered from sites along the Petra-Gaza road, but this dropped off dramatically following a third century BC earthquake. Based on documentary evidence discussed above, Nabataean activity in the region must have continued throughout the Hellenistic period. But Nabataean settlement in the Negev seemingly was restricted to the well-established Petra-Gaza route, with little evidence of any sedentary occupation elsewhere in the Negev. These

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regions of course were likely not uninhabited but exploited by nomadic tribes, even when the rest of the Hellenistic world was in conflict.⁴²

Some of the earliest evidence for intensified Nabataean settlement of the Negev began sometime in the first century BC, with evidence of the foundation of Avdat (Oboda) in this period (Figure 3). This site’s central position in the region connected Gaza to the Nabataean heartland and their capital, Petra. In the late first century BC, another road (constructed during the reign of Aretas IV) connected Oboda with the Arabah valley and sites in the southern Nabataean kingdom, such as Aqaba (Aila) and Meda’in Saleh (Hegra). The construction of this new overland route required considerable effort on the part of the Nabataean king, because it passed through the formidable geographic obstacle of the Ramon Crater (Figure 4). In order to make this a viable caravan route, the Nabataeans were forced to cut a pass, known as the Ma’ate Mahmal, through the crater’s steep northern cliff face.⁴³

In the first century AD Nabataean settlement of the Negev expanded more rapidly. Further evidence of increasing traffic and settlement along the Petra-Gaza highway comes from the following sites, which were founded, re-founded, or expanded in the early first century AD: Oboda, nearby Horvat Ma’agurah, and Haluza, in the west-central Negev. These sites show the prominence of the Petra-Gaza route during the BC/AD transition, which is unsurprising given that Petra remained a hub for goods from the north, west, and south. Additionally, the Nabataeans rebuilt a Hellenistic fort at ‘En Rahel and constructed another at ‘En Ziq in the Negev highlands along the Petra-Gaza route during this period. These fortifications must have

⁴³ Erickson-Gini, T., “Recent Advances in the Research of the Nabataean and Roman Negev,” in Rosenthal-Heginbottom, R., 2003: for the Hellenistic occupation, abandonment, and first century BC reoccupation of the Negev, see 9; for a discussion of the Ma’ate Mahmal pass, see 10.
made larger caravans feel safer passing through the newly intensively settled regions of the Negev, whereas in the past the greatest defense in the desert may have been the Nabataeans’ own knowledge of the otherwise foreboding terrain. In the early first century, the Nabataeans also established Nessana southwest of Oboda, near the modern Egyptian border, and this settlement probably serviced increased caravan traffic to the ports of Rhinocolura and Gaza with the advent of the *Pax Romana*.

By the mid-first century AD, the sites of Mampsis, east of Oboda and Mezad Yeruham, near a well in the central Negev, also emerged. Additionally, excavations of a later (i.e., Tetrarchic) Roman fort at Oboda yielded residual evidence of mid-first century AD Nabataean pottery, showing further expansion of the city in this period. These sites illustrate the success of Nabataean trade routes passing through the heart of the Negev throughout the first century AD. Finally, the Nabataeans established Sobota northwest of Oboda (toward Nessana) as well as Rehovat, between Oboda and Gaza, in the late first century AD, further intensifying their agro-pastoral exploitation in the Negev.44

It is not surprising that the Nabataeans attempted to reinforce their connection with the Mediterranean world following Rome’s annexation of Egypt. In order to compete with the new trade route provided by Rome’s Red Sea ports, Nabataea needed to ensure safe and efficient passage through the Negev, especially if they hoped to increase the volume of settlement and traffic through the region. The more interesting aspect of Nabataea’s activity in the late-first century BC Negev is their establishment of a connection between Oboda and the southern

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Nabataean kingdom. This may have created a route which passed through Petra on the exit from Arabia and then swung south through Aila on the return.

There are two advantages to a caravan route which travels to Gaza through Petra and returns south through Aila: 1) This circuit would have allowed caravans to return to the primary source of their wealth in the south more directly, bypassing Petra after they sold their incense products. 2) This circuit would have provided much more favorable elevation changes. Large ascents over short distances slow down caravans and force them to consume greater resources per km (especially in terms of water). Furthermore, rapid increases in elevation add greater stress for the travelers and especially their pack animals and may have increased the odds of damaging their goods.

With the establishment of the Oboda-Aila route, a caravan circuit could have minimized steep accents by leading from Hegra to Petra, then to Oboda and on to Gaza, returning via Oboda to Aila through the Ramon Crater. This route avoids the steepest rises in elevation by spreading out the ascents and allowing caravans to descend from Petra to the Wadi Araba and through the Ramon Crater Pass without having to return up those steep passes. Furthermore, from Aila the caravans could have engaged in sea commerce at the port, and followed a route back through the Arabian Peninsula that was less-far inland carrying Mediterranean goods south from the Nabataean Kingdom along routes that would remain active into the modern era thanks to the Hejaz railway and other modern roads.

There is one more important consideration regarding the Nabataeans’ establishment of the Oboda-Aila route. This route allowed return traffic to bypass Petra, which suggests that the Nabataean kings had secured enough political and economic control of the southern and western
portions of the kingdom that they felt comfortable regulating larger volumes of traffic outside Petra. The Nabataean capital appears not to have suffered from this new route, however, because it continued to expand in size and wealth and the Petra-Gaza route continued to thrive through the first century AD.

Erickson-Gini’s synthesis of the first century archaeological evidence from the Negev provides a model in order to bring together archaeological evidence from across the Nabataean Kingdom. Unfortunately, this archaeological evidence is published with less consistency in detail, so the challenge is to undertake a synthesis of the evidence to allow for some detailed exploration of areas with more quantified information, while also accounting for publications, which offer only general conclusions. Nevertheless, the broad synthesis provided by this thesis shows that the dramatic intensification of settlement in the Nabataean Negev was not unique to this region but was a kingdom-wide phenomenon. The evidence from the Negev suggests that the Nabataean kings expanded their trade networks in this region during the BC/AD transition. Furthermore, creation of a viable travel circuit leading from Petra to Gaza to Aila provided a new way for caravans to reach more Nabataean settlements while minimizing the difficult terrain of the journey. Using this route, caravans could have brought South Arabian goods through Petra and to Gaza, and then returned to ports at Aila and Leuke Kome with Mediterranean products. This suggestion is not meant to downplay the significance of the many other arteries of trade leading through Nabataea and the Negev; however, it appears that Nabataean intensification of Negev settlement was aimed in part to draw more traffic through the region. Furthermore, it appears that the Nabataean kings made a conscious effort to create a trade triangle between Petra,
Gaza, and Aila which also serviced tributary routes throughout the region, including traffic to Rhinocolura and settlements around the heart of the Negev at Oboda.

Figure 2: Map of the Nabataean Kingdom with Major Sites (Nehmé, L., et al., 2010).
Figure 3: Avdat, the site of Oboda in the Negev (Photo by Author).

Figure 4: The Ramon Crater in the Negev (Photo by Author).
Chapter 6

Petra and Its Environs

“The Nabataean’s metropolis is called Petra; for it lies upon a place otherwise even and flat, and is protected by a stone ring; steep and precipitous on the outside while offering bounteous flowing water on the inside, both for public distribution and gardens (μητρόπολις δὲ τῶν Ναβαταίων ἐστὶν ἡ Πέτρα καλουμένη: κεῖται γὰρ ἐπὶ χωρίου τάλα γραμματίδοι καὶ ἐπιπέδου, κύκλῳ δὲ πέτρᾳ φρουρουμένου τὰ μὲν ἐκτὸς ἀποκρήμνου καὶ ἀποτόμου τὰ δ’ ἐντὸς πηγὰς ἀφθόνους ἔχοντος εἰς τε ὕδρείαν καὶ κηπείαν).”

–Strabo, Geography, 16.4.21

Moving southeast from the Negev, one enters the northern hinterland of the Nabataean capital at Petra (Figure 5). The prominence of Petra is obvious from its numerous references in primary sources such as Diodorus Siculus, Strabo, and Pliny the Elder. Furthermore, over six hundred Nabataean rock-cut tombs pepper the cliff faces of Petra and its environs, with further Nabataean domestic and monumental architecture illustrating the importance of this Nabataean metropolis. This site contains some of the oldest Nabataean archaeological evidence, which is not surprising given that the earliest documentary references to Nabataea (contained in the works of Diodorus Siculus) include references to Petra as a place of refuge for early nomadic Nabataeans (19.95.1). As seen above, when attacked by Hellenistic rulers, the Nabataeans of the fourth century BC leveraged their skill at desert survival as well as their bastion at Petra to fend off the assaults, but by the BC/AD transition, Petra had changed. The site was no longer merely a seasonal gathering place for nomads, but a thriving city with luxurious architecture and expanding urban and rural populations.

Because Petra was the seat of Nabataean power, investigating changes in the site’s archaeological history around the BC/AD transition is particularly significant to an overall understanding of the kingdom’s transformation in this period. Additionally, Petra offers a unique
opportunity for a detailed archaeological understanding of the core of the Nabataean kingdom and the site and its hinterland have received more archaeological attention than anywhere else in Nabataea. Therefore, in order to explore the Nabataean heartland, this chapter will first look at surveys north of Petra, from the Wadi Silaysil, Jebel Shara, and Bayda areas. Next, the chapter will move into the city itself and look at its archaeological history in chronological order by analyzing information from studies of Petra’s architecture (including elite buildings such as those at ez-Zantur), as well monumental structures such as the Qasr al-Bint, the Garden and Pool complex, the so-called “Great Temple” complex (Figure 6), elite structures atop Umm al-Biyara, and a temple on Jebel Numayr. Finally, this chapter will move east and south, looking at hinterland surveys of the Wadi Musa, Udhruh, Jebel Haroun, and Wadi Sabra areas.

Investigations of the material cultural history of Petra reveal some of the earliest known Nabataean archaeological evidence, as well as the most magnificent monuments in the kingdom. It is important to note that, while the early Nabataean occupation of Petra seems a bit more extensive than other regions in the kingdom, the hinterland of the capital did not witness intensive settlement until the time of the transformation. Furthermore, the vast majority of the monumental architecture in the metropolis was constructed during or after the first century BC. In short, the capital and its environs appear to evolve and expand roughly alongside, rather than ahead of, the rest of the kingdom. This suggests that the first century BC/AD transformation of Nabataea occurred at roughly the same rate throughout the kingdom, and did not necessarily “radiate” from the seat of royal authority. This in turn may suggest that relatively wide-spread Nabataean elite actors took part in the transformation of the kingdom, rather than just a singular authority. Nevertheless, in the absence of documentary evidence, the nature of authority and
Nabataean social structure remains a matter of conjecture. In any case, the heartland of the Nabataea transformed along with the rest of the kingdom, and this area offers the most detailed look at Nabataea during the first century BC/AD transition.

The first area to examine in the Petra hinterland is Wadi Silaysil (Figure 7), just north of the capital and only recently surveyed. Broadly speaking, the term “Early to Middle Roman Period” (the terminology employed by this project) reflects the great intensity of occupation in this hinterland but, unfortunately, this survey treats the period from the first century BC to the mid-third century AD uniformly. Therefore, while this era had significantly more occupation than the preceding and following periods, it is not clear whether this trend represents a steady growth or sudden change in the landscape. Nevertheless, the period of hinterland intensification began during a time roughly contemporary with the expansion attested elsewhere in the kingdom.45

Moving northeast of Petra, Nabataean settlement of the Jebel Shara mountain range appears to have drastically increased around the BC/AD transition. According to a recent analysis of older survey materials, there was almost no pottery on Jebel Shara prior to this period (with the exception of some Iron II material and three sites identified as “Hellenistic”). The 78 sites of first century BC/AD date therefore dwarfed all earlier occupation and the settlements along this mountain declined steadily from the Late Roman to Medieval Islamic Periods.46

Moving west from here to the northwest escarpment leading into Petra is Bayda. The site lies in the next valley only a few kilometers north of the capital, with a large structure (of possible religious significance) and associated vineyards dated to the late first century BC.

Interestingly the structure was dismantled in the following century when the Nabataeans filled the structure and removed a few architectural pieces for unknown reuse.\footnote{Bikai, P.M., \textit{et al.}, “Gods and Vineyards at Beidha,” 2007: 373-374.} This provides a rare example of Nabataean settlement which appears to grow in the early BC/AD transition but then was abandoned in the first century AD.

Petra itself is nestled in the mountains east of the deep valley running between the Dead and Red Seas, roughly midway between the two bodies of water. Petra emerged in historical sources as a sometime meeting place and defensive bastion for the early Nabataean Arabs, who used the refuge to ward off Hellenistic invaders. Violence along the edges of the Nabataean world—a domain which can be a nebulous concept in its own right\footnote{Tews, S., “Understanding the Nabataean House,” 2014: 7-8.}—drove the Nabataeans to hunker within the defensible natural formations at Petra. This well-watered and naturally fortified gathering place made an ideal choice for the seat of Nabataean power as the kingdom became increasingly sedentarized and gained more formal organization. The Nabataeans also constructed their most monumental structures at this site, showcasing its prominence in the lives of elite Nabataeans.\footnote{Nabataean elites also built many such tombs at the site of Meda’in Saleh to the south, but these were fewer and generally smaller in scale.} Finally, Petra’s obvious prominence and its spectacular tombs have drawn more concentrated archaeological attention than any other location in the Nabataean kingdom. Entering the city of Petra, the monumental rock-cut tomb façades are today the most striking feature. The earliest tombs in Nabataea appeared around and just before the first century BC.\footnote{Sachet, I., “Libations Funéraires aux Frontières de l’Orient Romain: le Cas de la Nabatène,” 2010: 157-174. See also McKenzie, J. \textit{The Architecture of Petra}, Oxford: Oxford University, 2005.} The Nabataeans may also have built other important but somewhat mysterious monuments in this period, such as the prominent but enigmatic snake monument overlooking the southern route.
into Petra, but its association with the early funerary monuments is tenuous at best.\footnote{Wenning, R., “Snakes in Petra,” 2012: 238.}

Additionally, of the 628 façade tombs at Petra, the current understanding of their chronology places the date of construction for most of these prominent monuments between the first century BC and AD. This expansion of the various funerary monuments of Petra occurred alongside domestic growth, and with literal and figurative overlap, a first century AD house was built over a tomb constructed in the preceding century. Also, the reuse of tomb spaces, even monumental ones, illustrates an interesting phenomenon: Over the course the first century AD, particularly approaching AD 100, some tombs received a monumental expansion, attesting that reuse of tombs did not reflect economic constraint, but topographic concerns. That is, rather than build additional tombs in less prominent positions, first-century Nabataean elites chose to invest resources into further aggrandizing Petra’s more conspicuous tombs.\footnote{Wadeson, L., “The Funerary Landscape of Petra,” 2012a: for the general dating of Petra’s tomb complexes, see 99; for the discussion of the building overlying a tomb, see 114; for the discussion of upgrading Petra’s monumental tombs, see 117.}

The earliest stratified remains at Petra come from layers underneath the impressive mid-first century BC temple known as Qasr al-Bint, as well as underneath the paving of the city’s central colonnade. According to numismatic evidence, this early phase of occupation must have occurred before the reign of Aretas III (\textit{ca.} 86-62 BC), probably during the reigns of either Aretas II (\textit{ca.} 100-96/92 BC) or Obodas I (\textit{ca.} 96/92-86 BC).\footnote{Parr, P.J., “The Urban Development of Petra,” 2007: 275-277.} Further work on the earlier \textit{strata} below this context may also provide evidence for the occupation of this central location in Petra as early as the third century BC.\footnote{Graf, D.F., “Petra and the Nabataeans in the Early Hellenistic Period,” 2013: 38.} This date is contemporaneous with the earliest Nabataean
structures found in stratified contexts under Qasr al-Bint, where these complexes were leveled to make room for the temple in the first century BC.55

Moving into the first century BC at Petra, a structure identified as a domestic building rests atop a terrace overlooking Wadi Musa, the water source which runs east to west through Petra, yielded evidence of relatively early occupation. Pottery (including early but unspecified forms of Terra Sigillata and Nabataean wares), as well as a coin of Obodas the II or III (ca. 30-9 BC) in an early context, dates this structure to the first century BC.56

A domestic area on the ridge between the ez-Zantur complex and the colonnaded street has also yielded evidence of early occupation. Interestingly, sparse remains of early structures in this area provided dates around the turn of the first century AD, but many soundings around the ridge also turned up first century BC ceramics without associated architecture. The paucity of early structures to coincide with the first century BC pottery has led to an important, but somewhat controversial, theory: Perhaps up to the late first century BC, the occupation of this portion of Petra consisted of nomadic tent camps. The reinterpretation of some cuts into bedrock (presumably for tent pegs) uncovered in these early strata, as well as the possible discovery of some occupation antedating the late first century BC occupation at ez-Zantur itself, suggest a mixture of built structures and tent dwellings in the first century BC.57 If correctly interpreted, this evidence is significant, for it suggests that the transition from nomadic tent-dwellers to sedentary folk was still underway in this period, even in the Nabataean capital.

In central Petra, a garden and pool complex occupies conspicuous real estate on the main thoroughfare. Skilled Nabataean masons hewed the pool itself out of the bedrock and then built a pavilion in the center of the pool. A coin of Aretas IV found underneath the pavilion provides a terminus post quem for construction around the turn of the first century AD. The associated garden terrace contained Nabataean pottery from the late first century BC through the reign of Aretas IV, suggesting a foundation roughly contemporary with the rest of the pool complex.58

An enormous monumental structure of first century AD, but of uncertain function, rests next to the garden and pool complex. Traditionally referred to as the “Great Temple” of Petra, recent discoveries and reinterpretations have complicated our understanding of its function. Importantly, its columns ran inside the structure rather than forming an exterior portico typical of other large temples. Additionally, the temple features a possible early second century AD expansion of its main complex: a semicircular theatron inserted into its central space (perhaps serving a political function). Finally, the temple has no obvious parallel to any other monumental cult structure in the region.59 Regardless, its late first century BC date of construction and first century AD expansion are significant.

At Jabal Numayr in southern Petra the Nabataeans built a temple with an inscription dated to AD 20, but contexts beneath the temple show that there was an earlier Nabataean presence, dated by some as early as the third century BC. While the assemblage of ceramics from this context is similar to those of the same period under Qasr al-Bint, Schmid has argued that

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59 Butcher, K., Roman Syria and the Near East, 2003: 357.
these should date no earlier than the second century BC. In either case, there was Hellenistic-era occupation of this site before the construction of the Obodas temple in AD 20.

The monumental landscape of Petra continued to expand in the mid-to-late first century AD, when the Nabataeans carved a series of conspicuous monuments near the *siq* featuring obelisks. This series comprised a tomb and a monument of three spires incorporating an inscription indicating construction under Malichus, though it is not clear to which of these two kings the inscription referred, either Malichus I (62-30 BC) or Maichus II (AD 40-70). Nevertheless, parallels with other architecturally similar tombs from *al-Khubthah* with more secure dating evidence suggests that the Nabataeans carved the obelisk tomb as well as the obelisk triclinium during the reign of the latter king.

One of the most important points about Nabataean monumental architecture of this period is their implication for the overall prosperity of the Nabataean economy: The fact that agricultural expansion throughout the kingdom coincides with monumental construction—most readily visible at Petra, strongly suggests that the transformation of the Nabataean world was not merely a desperate adaptation to Roman seizure of Red Sea trade, rather Nabataea changed and flourished along with rest of the classical world after the establishment of the *Pax Romana*.

Turning back to domestic architecture, Parr has observed an important change in the late-first century BC, when ashlar masonry first appears in domestic structures. This change in construction style is likely related to the broader BC/AD transformation of Nabataea. It remains important to remember that the excavated domestic structures of Petra provide only a few

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glimpses into a much larger developmental process in the evolution of Nabataean lifeways. Furthermore, despite the paucity of early evidence, it is reasonable to assume some early occupation of the site extending at least as far back as the mid-third century BC, where products such as Hellenistic amphorae made their way to the Petra vicinity. In addition, the lack of reliable population estimates for Petra’s history further complicates the contextualization of the city’s domestic occupation through time.

In the region southwest of the city lies the imposing summit of Umm al-Biyara (Figure 8), a steep-sided mesa which looms over above the city center. Here the Nabataeans constructed a series of structures around the first century BC. The most prominent of these structures is an apparent royal palace. Floored with limestone slabs and walled with decorative marble paneling, this structure clearly served the Nabataean elite—likely the kings. The earliest pottery at the site provides a late first century BC date for the structure’s foundation, suggesting that it may have been erected by Obodas III.63 From this vantage point, a Nabataean king would have a panoramic view of the capital below from a religiously significant “high place.”

Before venturing into the southern hinterland of Petra, it is important to note archaeological evidence for important changes in the capital beyond architecture: industrial expansion. David Johnson has demonstrated that Petra was home to a perfume industry which began in the late 1st century BC.64 More recent examination of ceramic perfume-flasks from Aila shows that Petra’s perfume industry expanded around the first century AD.65 The perfume

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industry’s appearance in the late first century BC and its growth in the following century fits neatly into the general picture of the transformation of the Nabataean economy in this period and suggests that, despite growing maritime traffic on the Red Sea, incense imports continued to flow through Petra, likely increasing in quantity, through the BC/AD transition.

Outside the city, portions of Petra’s eastern, southern, and western hinterlands have been surveyed and these projects offer further evidence for first century AD intensification of rural settlement in the Nabataean kingdom. The publication of these surveys includes a combined tally of sites, dated by pottery, from surveys around Wadi Musa (flowing through Petra from the east), Udhruh (further east of Petra), and areas to the south and west, around Jebel Haroun and Wadi Sabra. It is of the greatest significance that all these surveys identified only one settlement dating to the second century BC and just eight in the first century BC. The number of settlements then increases dramatically to 119 in the first century AD, rising slightly to 127 in the second century before dropping to 59 during the third century. Most of the sites are interpreted as “small” settlements (though this designation is not entirely clear) and appear largely concentrated in the vicinity of Udhruh (67 out of 119 or 56.3%). It is not surprising to find more sites in this relatively flat and well-water highland region just east of Petra compared to the far more rugged areas around Jebel Haroun and Sabra. What is significant is how relatively late this settlement appears, i.e., primarily in the 1st century AD. Furthermore, it is difficult to assess to what degree a survey may reflect an accurate sample size of settlement in a given area, especially when there are significant gaps in the survey coverage which may have hosted hinterland populations at varying times. Nevertheless, this apparently dramatic increase in settlement in the first century

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AD strongly suggests considerable intensification in Petra’s hinterland in this period, even if some earlier sites were overlooked by possible regional sampling biases.

One more key aspect of Petra’s hinterland remains: agricultural development. Radiocarbon dates suggest that the Nabataeans around the capital began to intensify their farming activity around the final decades of the first century BC and that there was an “almost explosive increase of rural settlement” and agricultural intensification in the first century AD.67 The fact that Nabataean agricultural terraces seemingly only appear in the first century AD is also striking, for it shows that the Nabataeans were not just farming the hinterland, but they were altering the landscape to suit their changing economy.68

From Petra were routes leading west into Wadi Araba to reach the Negev or south to the port at Aila. Other passages south from Petra included a route through the highlands (the later via nova Traiana) and a passage directly south from Petra between the highlands to the east and the valley to the west. One of the only settlements along this latter route is the site of Sabra, ca. nine kilometers south of Petra. Survey of the Wadi Sabra region, discussed above, suggested an increase in population in the first century AD, but relatively little is known about the settlement itself, which included two monumental structures of unknown function (possibly temples) and a small theater. A complicated water catchment system, mapped by M. Lindner, served the site.69

Interestingly, although the site appears to have been relatively prosperous during the first century AD, its location seems somewhat odd. In order to reach the site from Petra, camel and donkey caravans would have encountered a steep, narrow decent into Wadi Sabra. Furthermore,

from there the only options to travel farther south included an even steeper ascent up to the highlands or a passage through the desert between the highlands and Wadi Araba, likely descending into the Araba at Wadi Gharandal. In the absence of further investigation at this site, one can offer only preliminary explanations of this puzzling location.

Perhaps the settlement in Wadi Sabra functioned as a waystation for merchants who had originally traveled from the south through the Araba and liquidated their bulk commodities in Petra. These merchants may have then sought a return itinerary through the well-developed site at Sabra with their lighter burden. It is also likely that moving directly from the Wadi Sabra to Wadi Gharandal would have provided a faster, entirely down-hill route to Aila; however, passing through the desert between Sabra and Gharandal could have been untenable for larger, slower caravans absent further waystations in this desert region—perhaps further survey of this area will reveal new information about this route connecting Petra to the south.

Looking at the Nabataean heartland as a whole, it is clear that Petra formed the core of the Nabataean kingdom. Some of the earliest Nabataean sedentarization occurred here, which was likely the most significant place in the Nabataean world from the kingdom’s earliest days, even before Petra’s references in Hellenistic sources. Nevertheless, Petra did not transform ahead of the rest of the kingdom during the first centuries BC and AD: The capital was the throne of the Nabataean kingdom but it appears to have developed more or less contemporaneously and in tandem with the rest of Nabataea, as reflected by its monumental architecture and rural settlement. Had Petra clearly developed ahead of the rest of the Nabataean realm, then one might expect a pattern of radial transformation spreading from the core to the periphery of the kingdom. But the rapidity with which the entire kingdom changed suggests a different kind of
transformation. No doubt the Nabataean kings, probably beginning in the mid- to late first century BC during the reign of Malichus I, had a significant influence in changing the socioeconomic structure of Nabataea. But perhaps other Nabataean elites—acting either as part of a royal bureaucracy or privately as a wealthy merchant class—took part in this kingdom-wide transformation as well.

Figure 5: Map of Petra (Hoffman, 2012)
Figure 6: Plan of the Garden and Pool Complex with the Great Temple (Dumbarton Oaks).[^70]

Figure 7: The Wadi Silaysil Survey (Alcock, 2012).

[^70]: https://www.doaks.org/research/garden-landscape/resources/petra-garden-feasibility-study/petras7
Figure 8: plan of Umm al-Biyara (Bienkowski 2011)
Chapter 7

Wadi Araba, the Hisma, Hejaz, and Southern Nabataea

“From [Gaza], a route of 1,260 stadia is attested [leading] to Aila, a polis lying on the innermost part of the Arabian Gulf (ἐντεῦθεν δ᾽ ὑπέρβασις λέγεται χιλίων διακοσίων ἑξήκοντα σταδίων εἰς Αἴλανα πόλιν ἐπὶ τῷ μυχῷ τοῦ Αραβίου κόλπου κειμένη).”

–Strabo, Geography, 16.4.4

The investigation of the region and the routes south of Petra, which connected the capital to Aila and the southern portion of the kingdom, includes evidence from surveys of Wadi Araba as well as the eastern highlands as far as Ras an-Naqb and the descent into the Hisma to Humayma and Aila. The ‘Ayl to Ras an-Naqb survey (Figure 9) covered the highland plateau between Udhruh and Ras an-Naqb, whose steep cliffs mark the descent into the Hisma desert. South of Ras an-Naqb the route (later the via nova Traiana) continues to Humayma, a substantial village and the largest settlement in the Hisma, and thence to Aila. Wadi Araba will be considered in light of two surveys, Umm Rattam in the north, and the area between Aila and Gharandal to the south. The vicinity of Umm Rattam is included in this chapter in order to treat the Wadi Araba surveys together.

Although the evidence from this area of Nabataea broadly reflects the pattern of first century expansion and intensification seen elsewhere in the kingdom, there is an important point of contrast: Apart from Aila, this region lacks urban centers. Humayma expanded from an apparent campsite (Figure 10) to a substantial village with complex water management systems, but it lacks the monumental tombs and temples seen elsewhere around the kingdom. Furthermore, in the northern Wadi Araba, the site of Qasr Umm Rattam appears to have been little more than a caravanserai.
The ‘Ayl to Ras an-Naqab survey covered the region south of Udhruh, encompassing a rural Nabataean landscape which experienced an increase in settlement that fits the general pattern throughout the kingdom. Unfortunately, the dated evidence retrieved by the survey includes some overlap for the “Nabataean” versus “Early Roman” periods, but it is clear that these two designations indicate a time between ca. 63 BC and ca. AD 135. Furthermore, the survey team noted an expansion in rural settlement in these periods compared to the preceding Hellenistic period. Finally, B. MacDonald, the director of this survey, concluded that, “when the direction of the incense trade shifted to Egypt (first century BC – early first century AD), the Nabataeans lost their monopoly on trade and became agriculturalists. This is probably correct but may be an oversimplification. The intensification of rural settlement, particularly in fertile areas throughout the kingdom, does indeed suggest a considerable increase in agricultural activity from the first century BC into the first century AD, but this is only part of the story. The expansion of Nabataean settlement in this period also included construction and renovation of monumental structures and expansion and establishment of new settlements with elite populations as well, such as those at Oboda in the Negev, Khirbet edh-Dharih in the north, and Wadi Sabra as a suburb of Petra. Furthermore, the southern Syrian site of Bostra expanded into an urban center of some size with monumental structures (possibly to accommodate Nabataean elites) during the first century AD. This strongly suggests that expansion of Nabataean economic activities was not limited to the rural hinterland.

Humayma, 50 km south of Petra and just below the steep descent of Ras an-Naqab, is the most extensively excavated site in the Hisma, although the early Nabataean occupation is

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somewhat obscured by later Roman, Byzantine, and Umayyad occupation. Excavators identified a “Nabataean campground,” which may represent the earliest occupation at the site in the beginning in the first century AD. This interpretation of an early campsite is based on the presence of a cistern fed by a small drainage system, as well as the lack of any associated structures other than small stone piles paralleled by roughly contemporary campsites in the Negev. The excavators suggest that these early inhabitants of the campsite farmed nearby fields and supplied provisions and water to travelers along this major caravan route.73

Additionally, the excavators identified a necropolis on the western margins of the site. These were mostly simple shaft tombs, unlike the monumental rock-cut façades of Petra or Hegra, but two chamber tombs at Humayma may have had similar monumental features. Unfortunately, their façades were disturbed by modern reuse. The associated ceramic evidence suggests that the tombs came into use in the first century AD and were periodically reused through the medieval Islamic period.74

The earliest closely datable sherds recovered from the site date to the late first century BC.75 Moreover, the aqueduct and reservoir—key features of Humayma’s water management system—dated to the turn of the first century AD. The excavators suggest that these features may have been prestige projects by Aretas IV, paralleled by the Petra Pool and Garden complex discussed above.76 Any conspicuous display of water in the desert environment surely impressed travelers in the Nabataean kingdom and the reservoir surely also served an economic purpose.

74 Oleson, J.P. and Somogyi-Csizmazia, J., “The Necropolis,” 2013: for a discussion of the façades, see 51; for dating see the individual tomb descriptions 55-90.
Travelers between Petra and Aila obviously required water and other services in these arid lowlands. The lack of monumental structures at Humayma during the first century AD contrasts other developing sites such as Khirbet ed-Darih and Meda’in Saleh and may suggest a comparatively less elite population. Perhaps Humayma’s location discouraged elites who might have otherwise developed the site: Humayma was close to Petra, but too distant to be a “suburb,” so perhaps elite families living along this portion of the incense route chose to move to the capital as they became successful.

Southwest of Petra, the Araba valley constituted the other key north-south route to southern Nabataea. Furthermore, this route intersected the Petra-Gaza road at Umm Rattam, in the Araba west of Petra. The evidence from the Umm Rattam survey also fits broadly within the pattern of first century BC/AD expansion and intensification. Nabataean Fine Ware pottery dated by the Schmid typology suggests the beginning of Nabataean settlement of this region during the late first century BC with continued expansion through the first century AD. Qasr Umm Rattam was a caravanserai, probably built during the first century; however, while this structure has several construction phases, none are closely dated. The surveyors attribute the success of intensified settlement to improvements in water management techniques as well as growing traffic along the Petra-Gaza trade route around the BC/AD transition.

The Southeast Araba Archaeological Survey (SAAS) covered the portion of the valley extending from the port at Aila for ca. 70 km northwards to ‘Ayn Gharandal. Its recent publication includes extensive quantified evidence which allows for a more in-depth analysis of

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77 Lindner, M., et al., “Umm Rattam Survey,” 2007: for a discussion of the early Nabataean fine ware found at Umm Rattam, see 247; for the preliminary synthesis of the material from Umm Rattam, see 255.
this region (Figure 11). The report incorporates 23 discrete survey areas and includes evidence from the Paleolithic through modern periods; this analysis will only examine evidence from the Nabataean/Early Roman period. In total, 88 sites dated to Nabataean/Early Roman period versus only 77 sites for all other earlier periods combined. Following the Iron Age, it appears that there was a virtual abandonment of sedentary settlement in the southern Araba. It is noteworthy that only one site dated to the Persian/Hellenistic period. But suddenly, around the BC/AD transition, the area witnessed greater levels of settlement than at any previous point in history. This of course coincides with the foundation of the port at Aila—dated to the late first century BC.

Various lines of evidence suggest that the city of Aila was founded in the late first century BC. There is copious evidence thereafter for Aila’s prominent position in regional and international trade networks: Eastern Sigillata A from the northern Levant, glass from Egypt and the Levantine coast, incense burners for aromatics from South Arabia, as well as a variety of amphorae, including some from the Aegean. There is also stratified evidence for industrial activity at Aila as early as the 1st century AD in the form of ceramic and metal slag. The ceramic industry at Aila produced its own amphorae (so-called “ribbed neck jars”), which were distributed as far north as the Negev and Dead Sea littoral. It is not clear what these vessels contained, but one possibility is garum, a kind of fish sauce possibly produced at Aila itself in

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the 1st century AD. Excavation has revealed several domestic complexes and other structures of the Nabataean period. Unfortunately, extensive modern development of Aqaba masks much of the ancient site, so only small portions of Nabataean Aila were revealed by the Roman Aqaba Project. This makes it difficult to compare Aila to other cities with more visible architecture, but it is likely that Aila was home to at least some relatively elite Nabataeans, based on the fact that Strabo already refers to the site as a “polis” in the early 1st century AD (Strabo Geography 16.2.30), and its prominent position along the caravan route and on the Red Sea via the Gulf of Aqaba.

The ‘Ayl to Ras an-Naqab survey, the Southeast Araba Survey, and the extensive excavations of Humayma and Aila all suggest that settlement of the rural landscape of southern Nabataea intensified along with the rest of the kingdom in the first century. Nevertheless, with the notable exception of Aila, the Nabataeans did not develop large urban centers along the caravan routes leading south from Petra. Humayma expanded from a campsite to a sizeable village dependent on mixed agro-pastoralism and servicing caravans rather than as an urban center with an elite population. This relative lack of elite settlement is paralleled in the Wadi Araba, although the port and caravan city of Aila likely received further development than can be readily observed because excavation of this city was limited to pockets within the modern city of Aqaba. Although these trade routes must have been extremely active well before the first century AD, it appears that Nabataean elites focused their attention either on the capital at Petra or more distant cities of the kingdom such as Bostra.

Most problematic is the extreme southeastern portion of the Nabataean Kingdom, now in northwestern Saudi Arabia. Unfortunately, the evidence from this area is sparse largely due to the region’s broad stretches of uninhabitable desert and lack of systematic investigation. This region does contain a disproportionately large number of Nabataean inscriptions, especially at Meda’in Saleh and at the Dumat al-Jandal oasis in al-Jawf.

East of Aqaba, in the beautiful sandstone landscape of Wadi Rum, the Nabataeans constructed a temple with some sort of associated structure as well as a structure interpreted as a “villa.” Sadly, the evidence from early excavations of these structures has disappeared, but new excavations offer a more detailed look at the history of these buildings. The villa, located west of the temple complex, featured plastered ashlar construction, two courtyards, and a small bath with a hypocaust system. Pottery from probes under various rooms of the palatial complex indicates a mid-to late first century AD date for the structure, which is also consistent with the style of the hypocaust system. Earlier, unstratified pottery around the complex suggests some kind of occupation as early as the first century BC. Based on the current evidence, Wadi Rum did not host a large Nabataean settlement; therefore, the structures possibly belonged to a small elite community. The villa and temple may have served as a kind of “retreat” for wealthy Nabataean merchants and/or served as a cultic center for the Thamudic tribes of nomads who have left large numbers of inscriptions in this isolated area.

Moving much farther northeast, a settlement at the Dumat al-Jandal oasis at the southeastern end of Wadi Sirhan, near modern al-Jawf, likely marks the eastern edge of the Nabataean kingdom. The long, shallow Wadi Sirhan has long served as a natural migration route

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between southern Syria and the interior of the Arabian Peninsula. Recent excavation and reexamination of existing evidence from this oasis have revealed fewer finds traditionally identified as “Nabataean,” such as the distinctive painted fine ware. Nevertheless, epigraphic evidence strongly points to Nabataean governance at least by the first century AD. Nabataean inscriptions from the al-Jawf region attest the presence of a temple and some kind of Nabataean garrison early in the reign of Malichus II (AD 45). Furthermore, the earliest examples Nabataean graffiti in the vicinity of al-Jawf date to Aretas IV (9 BC-AD 40) although these texts do not specify exact regnal years. Most of the recent re-examination of the Dumat al-Jandal settlement focuses on the necropolis and its associated grave goods. The excavator concluded that its tombs were in use from the first century BC until at least the second century AD. Although the heterogeneous mix of tomb styles and grave goods suggest some cultural diversity, the use of Nabataean language, Nabataean regnal years for dating, and a mid-first century Nabataean garrison virtually proves that the Nabataeans controlled al-Jawf around this time. Furthermore, the region experienced architectural expansion at this point, largely in the form of monuments and possibly an (undated) triclinium. Finally, the graffiti from the reign of Aretas IV in the rural hinterland around al-Jawf may suggest increased activity in the late first century BC—though these Nabataean graffiti are a poor substitute for proper archaeological surveys.\footnote{Charloux, G., et al., “Nabataean or not: the Ancient Necropolis of Dumat,” 2014: for a discussion of the finds dissimilar to those of typical Nabataean site, see 205: 186; for the dating of the inscriptions and graffiti around the al-Jawf region, see 186-187; for the dating of the necropolis, see 202; for a discussion of the cultural heterogeneity of the finds at this site, see 204.} This settlement is therefore similar to Bostra in the north, in that it appears to have had a non-Nabataean indigenous population which fell under Nabataean control around the BC/AD transition. The presence of a Nabataean garrison suggests that this area was economically important. Perhaps
there was conflict with the non-Nabataean Arabs who had already settled al-Jawf and/or threats posed by the nomadic tribes of the region.

Far to the south, somewhere on the Red Sea coast, was Leuke Kome (“White Village”)—the port where Aelius Gallus landed his ill-fated expedition. Nevertheless, archaeological evidence around modern Wadi Aynunah in northwestern Saudi Arabia, just east of the mouth of the Gulf of Aqaba, suggests that this was the site of Leuke Kome. Unfortunately, no excavations have been conducted, though a regional survey yielded some evidence for occupation in the early first century AD and possibly the late first century BC. These conclusions are based solely on surface collections of pottery from a series of buildings and a necropolis at the settlement, which included no façade tombs but boasted at least one monumental structure (presumably based on the size and quality of the masonry). Nevertheless, it is significant that the intensification of regional settlement around Wadi Aynunah occurred around the time of the founding of Aila to the north and the general transformation of the rest of the Nabataean kingdom. Thus, if this was Leuke Kome, its history began during the BC/AD transition. Further evidence for its importance as early as the reign of Obodas III (30-9 BC) comes from Strabo, who describes Leuke Kome in 26 BC as “a large trading center (ἐμπόριον μέγα)” (16.4.23). If so, the “large market” must have cropped up quickly under Obodas III.

The last portion of Nabataea to be considered in this thesis is the southeastern region, essentially the northern Hejaz, a sparsely occupied desert now within northwestern Saudi Arabia. The main significance of this region to the Nabataeans was the Incense Road, which extended through the plateau well east of the Red Sea coast, ultimately extending to South Arabia. Little is

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known of the stations along this route. One of the more important seems to have been Tayma. A late Nabataean inscription dating almost a century after the Roman annexation at least suggests a Nabataean presence at this site.\footnote{Al-Najem, M., and Macdonald, M.C.A., “A New Nabataean Inscription from Tayma,” 2009: 208.}

At the southeastern border of the Nabataean kingdom is Meda’in Saleh, a key oasis with evidence of substantial ancient occupation. Recent French excavations of the site have revealed many intriguing insights, both in terms of excavated structures as well as funerary inscriptions, many which are closely datable. The following summary will focus on the Nabataean period remains, first treating the excavation evidence, then the epigraphic corpus.

Excavation Area 1 revealed a large residential complex but constructed only in the Byzantine period, without evidence of earlier occupation. Area 2, another residential area, contained some Iron Age material but with a gap in occupation until the late first century BC. Occupation continued in Area 2 until the fourth century AD. Areas 3 and 32 exposed segments of the mud brick fortification wall surrounding the settlement, constructed in the first century AD, maintained through the second century, and an inscription suggesting repairs around the end of the second century. Area 5 was one of the many monumental tombs with an inscription which dot the site, to be assessed in the following section. Some unidentified structures lie on a massif which overlooks the settlement. But excavation (as Area 6) unfortunately did not yield stratified evidence and thus the function of the structures remains obscure. Associated ceramics recovered points to use from the late first century BC to the Byzantine Period. Area 7, another domestic complex, was founded in the first century AD and remained in use through the “Roman Period” (i.e., after AD 106). Area 8 revealed another complex, presumably residential. Most associated
ceramics (admittedly unstratified) dated to the first century AD with some later material through the Byzantine Period. Area 9 was also identified as a residential complex that yielded some second century BC artifacts, constituting the only finds from the site dating before the late first century BC apart from the few Iron Age remains in Area 2. Finally, a small structure of obscure function rested atop the nearby Jabal Ithlib, founded in the first century BC and occupied through the following century. Therefore, of the ten published excavation areas, only two yielded evidence of occupation before the late first century BC: Area 2, with Iron Age artifacts in addition to Nabataean and Roman remains, and Area 9, with evidence from the second century BC.  

The 38 datable Nabataean inscriptions, for which Meda’in Saleh is justifiably famous, stand in stark contrast to the capital of Petra, which boasts only one of the first century AD, although another, bilingual in Nabataean and Greek, dates to the same period just north of Petra. These texts grace the rock-cut tomb facades at Meda’in Saleh. The 31 closely datable inscriptions range from 1 BC to AD 75, with the remaining seven more broadly dated to the first century AD. Of all these, 21 inscriptions date to the reign of Aretas IV (9 BC-AD 40), seven to Malichus II (AD 40-70), and 5 to Rabbel II (AD 70-106). Note that none of the inscriptions predate Aretas IV although ceramics from Area 6 suggest some first century BC occupation.

It seems clear from the evidence at Meda’in Saleh in the southern Nabataean kingdom that this region developed along similar lines with the rest of Nabataea. Given the location of

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Meda’in Saleh on the main Incense Road, one might expect more early evidence and would certainly account for the 2nd century BC occupation. Yet most evidence from the extensive French excavations dates to the first century AD, including construction of its fortifications. This aligns with the epigraphic evidence which suggests that the monumental tombs also date to this century. Above all, this evidence from Meda’in Saleh clearly suggests that the overland route from South Arabia witnessed continued intensive use, despite the foundation of Nabataean ports of Aila and Leuke Kome, presumably around 30 BC, and additional competition from the Egyptian Red Sea ports. This further emphasizes the key roles of Malichus I and Obodas III as major agents of change within the kingdom.

Figure 9: The ‘Ayl to Ras an-Naqab survey (MacDonald, 2012)
Figure 10: Planned remains of the Nabataean campground at Humayma (Olson, 2013).

Figure 11: Wadi Araba Survey (Smith, 2014).
Chapter 8

The Plateau East of the Dead Sea

“We believe that sometime early in the first century BC, a temple with an inner shrine was constructed at Khirbet Tannur, probably replacing a simple Nabataean altar in an age old sacred clearing that existed on the unique mountain top, whose sanctity probably went back to immemorial times.”

–Nelson Glueck, The Other Side of the Jordan, 239

East of the Dead Sea is an elevated plateau that also formed an integral part of the Nabataean kingdom. The Kerak Plateau is bounded on the north by Wadi Mujib and on the south by Wadi al-Hasa. Both wadis have cut deeply into the plateau and drain into the Dead Sea. Two major urban centers (Rabba/Areopolis and Kerak/Characmoba) lie on the fertile and well-watered plateau. South of Wadi al-Hasa is another plateau that extends south towards Petra and which is also cut by several wadis which ultimately drain into Wadi Araba to the west. The plateau south of Wadi al-Hasa has been surveyed by MacDonald’s teams. Key excavations in this region include Khirbet et-Tannur (a Nabataean temple) and Khirbet edh-Dharih (a Nabataean village). Wadi Faynan, which was one of the major copper-producing regions of the Mediterranean world, has also witnessed intensive survey and some excavation.

Continuing the pattern seen in the Negev and southern Nabataea, a survey of the Wadi al-Hasa showed that, among the 1,074 sites identified by the project, the “Nabataean/Roman Period” saw a significant increase in population from the Hellenistic and previous periods. The survey also recorded 240 sites in the southern Ghors and northeast Wadi Araba, the mouth of Wadi al-Hasa. Unfortunately, like many other publications of archaeological surveys, the report lacks sufficient quantification and more nuanced analysis of the ceramics to illustrate more

discrete changes within the Nabataean through Roman periods. The author at least argues for the significant expansion of several economic practices in the Nabataean/Roman period: the mining of bitumen, more intensive exploitation of regional water sources, and increased copper mining and smelting beginning in the first century AD. This research also provides quantification for another area surveyed by MacDonald farther south from Tafila to Busayra, along the old King’s Highway south of Wadi al Hasa. This survey revealed that among the 290 sites in this region, Nabataean sites were much better represented than Hellenistic ones.92

Sometime following the Hellenistic era but probably during the second half of the first century BC, the Nabataeans expanded their resource exploitation in the vicinity of Wadi al-Hasa. Tapping additional water sources allowed the Nabataeans to expand rural settlement both for agriculture (as elsewhere in the kingdom) and, in the case of this region, several industries. The harvesting of bitumen from the Dead Sea is attested as early as 312 BC, when Antigonus I attempted to seize control of this resource from the Nabataeans (Diodorus Siculus, 19.100.1-2). Bitumen had many uses in the ancient world, primarily as an adhesive and sealant, and the Nabataeans likely exported bitumen through their many expanding trade routes during the BC/AD transition. The kingdom could have also used the bitumen in their industrial activities, such as the perfume manufacturing at Petra in this period. Furthermore, evidence of a copper industry in this region during the BC/AD transition is unsurprising, given its proximity to the copper mines of the Wadi Faynan, which also expanded during this period.

92 MacDonald, B., “Four Archaeological Surveys in Southern Jordan,” 2007: for the Wadi al-Hasa, see 162; for Southern Ghors in the Nabataean and Roman period, see 164; for the Tafila to Busayra survey results, see 165; also note that while four survey projects appear in this report, only three receive coverage here because the fourth is focused on the environment with historical chronological information provided.
The copper veins at Wadi Faynan were exploited as early as the Chalcolithic Period, but the settlement of Wadi Faynan and its mining activity resumed during the Iron Age before resurging in the Nabataean/Early Roman Period. Surveyors of Wadi Faynan found a few hints of Hellenistic occupation, almost entirely concentrated around the settlement of Khirbet Faynan, and they provide several helpful graphics to illustrate the change and expansion of settlement from this period into the first centuries BC and AD. Interestingly, Strabo reported that the Nabataeans imported copper and only worked with gold and silver in their industries, but the archaeological evidence for extensive mining of copper as well as copper-working activity sharply contradicts this claim (Geography, 16.4.26). Because Strabo’s information came from a late first century BC informant, it is possible that Nabataean copper exploitation only reached significant intensification after the turn of the first century AD. Without tighter dating of the pottery of the Wadi Faynan Survey as well as Nabataean copper-working sites, the rate of Nabataean expansion of this industry remains obscure. Nevertheless, although the surveys of Wadi Faynan and Wadi al-Hasa attest some earlier Nabataean settlement—perhaps in the form of camp sites like those suggested at Humayma—they also suggest that these regions fit into the context of rural intensification and resource exploitation in the BC/AD transition.

Khirbet et-Tannur lies at the confluence of Wadi al-Hasa and Wadi La’aban. The site’s main feature is a Nabataean temple atop the imposing Jabal et-Tannur, the highest point south of the Wadi al-Hasa. This location is unsurprising given the apparent significance of “high places” in Nabataean religion and other ancient Arabian cultures. Khirbet et-Tannur seemingly served as a place of Nabataean religious significance as early as the late second century BC. A small

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cistern on the northern slope serviced the site with a meager water supply but this was insufficient to sustain a settled population. The closest Nabataean settlement was at Khirbet edh-Dharih, about 7km south on the “King’s Highway,” which utilized tributaries of Wadi La’aban.94

The Nabataean temple at Khirbet et-Tannur was built over an earlier structure that included a rubble foundation and an altar dated to the second century BC. The temple represented by the extant architectural remains was built in 8/7 BC, early in the reign of Aretas IV, based on a dedicatory inscription found at the site, or at least a century after the original structure. The temple at Khirbet et-Tannur included an impressive sculpted façade with a variety of religious motifs (Figure 12). The temple expanded through the first century AD. Quantitative analysis of closely dated Nabataean painted fine ware suggests an eight-fold increase in the first century AD compared to the first century BC. The rate of expansion continued to increase toward the turn of the second century, as the amount of Nabataean painted fine ware at the site peaked in the final quarter of the first century AD. The site was damaged sometime in the early second century AD, possibly in an altercation with Romans during the annexation and /or by a seismic event, but the temple was rebuilt soon after. Unfortunately the pottery evidence for this phase is incomplete, but the excavators could roughly date this restoration based on architectural comparisons with Khirbet edh-Dharih roughly 7 km to the south.95

Recent research suggests something about the relationship between Khirbet edh-Dharih and Khirbet et-Tannur. While Khirbet et-Tannur was only an isolated temple and lacked any significant settled population, Khirbet edh-Dharih was a large village surrounded by smaller

villages exploiting the tributaries flowing from Wadi La’aban. It is therefore probable that many Nabataeans who frequented and maintained the religious center at Khirbet et-Tannur actually resided in Khirbet edh-Dharih. The site also boasted a villa and a monumental tomb, dated by coins from the turn of the second century AD. Additionally, even with the site’s proximity to the temple at Khirbet et-Tannur, Khirbet edh-Dharih had its own sanctuary. The Nabataeans constructed the latter sanctuary sometime in the first century AD and, although it was not destroyed, they expanded the sanctuary at roughly the same time as the Khirbet et-Tannur refurbishment in the early second century AD. Finally, artifacts from Khirbet edh-Dharih, including pottery, lamps, figurines, coins, and statuary, all suggest that occupation began in the first century AD.

Unfortunately, the rural sites around Khirbet edh-Dharih remain relatively unexplored. Nevertheless, it is interesting that, although there is some evidence of at least transient use of the site in the late second century BC (perhaps explained by its location along the major route through the region, later the via nova Traiana), the Nabataeans did not establish the settlement at Khirbet edh-Dharih until roughly a century later. Its proximity to Khirbet et-Tannur as a “high place” of religious significance likely drew the attention of nomadic Nabataeans by the second century BC. Furthermore, in this period of relative instability, the hilltop and cistern at Khirbet et-Tannur may have served as an emergency refuge. Finally, given increasing evidence for a violent Roman annexation of Arabia, the Nabataeans of Khirbet edh-Dharih and neighboring sites may have chosen to seek sanctuary at this site. This provides one possible explanation for the early second century destruction of the temple at Khirbet et-Tannur. This relationship likely tightened during the period of intensification and stability around the BC/AD transition, as the
temples at both locations saw increased traffic along the roads and a larger agro-pastoral population.

Excavations of Khirbet et-Tannur and Khirbet edh-Dharih, as well as archaeological surveys of the Wadi al-Hasa and Wadi Faynan regions, have important implications for this synthesis of the Nabataean transformation. Aside from fitting into the broader pattern of kingdom-wide intensification around the BC/AD transition, this region also boasts two other important elements: harvesting of key natural resources and the foundation of Nabataean settlements with elite populations. Khirbet edh-Dharih suggests that Nabataeans, including some elites, established themselves in new settlements in this period of transition in addition to well-established cities. This fits patterns seen in the Negev as well as Meda’in Saleh, but the differences in settlement types (relatively new settlements vs. well established urban centers) may have reflected variation among elite sub-classes. A thorough comparison and contrast between the monumental and elite structures at new Nabataean settlements versus those at pre-existing Nabataean urban centers, such as Bostra or Petra, may reflect variation within the Nabataean elite. Nevertheless, it appears that during the transformation of Nabataea, elite and non-elite Nabataeans alike settled throughout the kingdom, reoccupying old settlements where possible, but also establishing new settlements when necessary with the goal of bolstering trade routes and maximizing resource exploitation. It is tempting to attribute the transformation of Nabataea to the royal authorities, though the widespread settlement of relatively wealthy Nabataeans, presumably merchants or aristocratic landowners, suggests that they may also have had agency in the changing Nabataean landscape.
Before moving on, it is important to consider the region of Hesban (the classical city of Esbus), south of modern Amman (Philadelphia), because this represents a region and urban center just beyond the Nabataean realm. A regional survey revealed 21 sites, roughly 14% of the total, dated to the Hellenistic period. 93 sites (63% of all sites) dated broadly to the “Roman” period, with 57 (39%) designated as Early Roman and 45 (30%) designated as Late Roman. In terms of settlement patterns, the Hesban region reflects a broadly similar picture to the Nabataean kingdom, the north in particular. While the Hauran—and many of the otherwise marginal zones investigated in this analysis—show little Hellenistic or even pre-first century BC Nabataean occupation, in the more fertile land just outside Nabataea, Hellenistic occupation is better represented. An increase from 21 Hellenistic sites to 57 “Early Roman” sites is significant, but less than the rate of contemporary settlement expansion in the Kerak plateau under Nabataean control just south of Hesban. The evidence from the Hesban region suggests that, while rural settlement expansion was a regional phenomenon extending beyond the borders of the Nabataean realm, this perhaps was less dramatic outside the kingdom. Many regions of the Nabataean kingdom appear to have witnessed a sudden “explosion” from a near total absence of sedentary population in the Hellenistic Period to extensive and intensive permanent settlement following the BC/AD transition. This contrast suggests that Nabataean expansion in this period was exceptional and perhaps suggests that the Nabataean authorities were actively engaged in this transformation.

Miller, covered the land between Wadi Mujib and Wadi al Hasa which drains into the Dead Sea to the west. The ceramics report by R. Brown distinguished between “Nabataean” and “Early Roman” ceramics and this settlement, but the difference between the two is not entirely clear. Regardless, both the Nabataean and Early Roman sites date to either the first century BC or the first century AD; therefore, all sites of either category can provide at least a broad point of contrast with Hellenistic occupation in the region.\(^{97}\) The Kerak Plateau recorded 67 sites dating to the Hellenistic period. This number jumps to 284 for the period designated “Nabataean” with a further 140 sites dated “Early Roman.” Thus it is worth noting that the sites from the first century BC to first century AD represent a 632.8% increase from the Hellenistic period.\(^{98}\) This is significantly higher than the 271.4% increase seen just outside the kingdom in the Hesban region, further suggesting a phenomenal intensification of settlement in this portion of the Nabataean Kingdom.

A more recently published survey of the Kerak Plateau comes from the final report of the *Limes Arabicus* Project by S. Thomas Parker. The western margin of this survey overlapped slightly with the eastern edge of the Kerak Plateau Survey discussed above, but basically covered the eastern plateau up to and slightly beyond the desert fringe. Of 536 sites surveyed by this project, none yielded any clear Hellenistic pottery, while Early Roman/Nabataean sites accounted for 59.6% of the total (320 sites). This was the best-represented period by far of any recorded by this survey and dramatically attests the exceptional rate of intensification of rural settlement in this region of Nabataea following the Hellenistic Period.\(^{99}\)

It is important to point out that the rate of rural intensification was not uniform for all areas of the kingdom. For example, the area of the Dhiban Plateau, on the northwestern edge of the Nabataean realm, exhibited intensification of settlement at a slower rate than the nearby Kerak Plateau. A survey of the Dhiban Plateau reported 78 Hellenistic sites and 110 Roman sites (it is not clear from the publication when in the “Roman Period” these sites were occupied). Once again, this is a significant increase, but comparable evidence from the Kerak Plateau shows a much higher rate of intensification than the Dhiban region. This slower rate of intensification surely reflects the fact that the region already had significant Hellenistic settlement. It is also important to point out that the Dhiban region lies on the very edge of Nabataean control.

Finally, moving southward toward Wadi al-Hasa along the road that would eventually become the via nova Traiana, the site of Khirbet at-Tuwana also showed considerable expansion in the first century AD, according to surface finds. A corpus of 1,200 sherds collected from at-Tuwana’s surface yielded examples of Eastern Sigillata A (ESA) from the BC/AD transition as well as copious Nabataean fine wares from the first through fourth centuries AD. Furthermore, the site features architecture both monumental and mundane, and analysis of these features in light of the surface ceramics has led to the suggestion that at-Tuwana began as a small village around the first century AD and grew as its agriculture expanded. One key aspect of this site, besides its obvious relation to the BC/AD expansion, is the apparent character of at-Tuwana’s sedentary population. Nabataean fine and coarse wares were found all over the site, not just among elite structures such as at Bostra, and there is an apparent absence of non-Nabataean coarse ware. In other words, the village was likely “Nabataean” including an elite and non-elite

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population (in contrast to Bostra, in the Hauran to the north, in which a non-Nabataean population predominated).

Figure 12: Sculpture of a possible Nabataean deity from Khirbet et-Tannur (Photo by Author).
Chapter 9

Wadi Sirhan and the North

“In Damascus, King Aretas [IV]’s governor set up a guard in the city to imprison me. (ἐν Δαμασκῷ ὁ ἐθνάρχης Ἁρέτα τοῦ βασιλέως ἐφρούρει τὴν πόλιν Δαμασκηνῶν πιάσαι με)”

—Paul of Tarsus, 2 Corinthians 11:32

The northern portion of the Nabataean realm extended along the desert highlands east of regions closer to the Jordan valley, such as Jewish Peraea and the Decapolis cities, which remained outside Nabataean control. In order to explore the evidence for transformation under Nabataean rule in this region, this chapter will cover survey and excavation evidence from the following regions: the Hauran, which included the city of Bostra, and Wadi Sirhan. The evidence from the Hauran does not lend itself to quantitative comparison in terms of intensification and abatement of settlement, since this information is lacking from publications of this region. Quantitative comparison of such evidence farther south suggests that settlement on the Kerak plateau increased at roughly double the rate of the Hesban region. This is important because Hesban lay just outside the Nabataean kingdom while the Kerak plateau was under Nabataean control—implying that intensification of Nabataean settlement was exceptionally fast compared to neighboring regions just beyond their borders during the BC/AD transition. It seems likely that the Nabataean kings began a policy of intensified settlement in these northern hinterlands in the late first century BC, which could have exploited the volcanic soil found in the Hauran Plateau. The addition of greater food sources in the region would have supported the foundation of new settlements as well as the expansion of pre-Nabataean settlements such as Bostra. The analysis of these sites and surveys will proceed geographically from north to south, beginning with the Hauran and the northernmost city of the Nabataean kingdom: Bostra.
The fertile and well-watered volcanic plateau of the Hauran formed a peripheral part of the Nabataean Kingdom. Archaeological surveys allow for a glimpse into the changing landscape of the region around the turn of the first century AD. Surface collections of pottery at the following settlements: Bostra, Suwaida, and Shahba—all clustered in southwestern Syria near the modern Jordanian border—suggest that these Nabataean sites began to receive permanent foundations in the late first century BC.\(^{102}\)

Additionally, the settlement of Si’ in the Hauran highlands also witnessed increased occupation during the BC/AD transition. A corpus of 293 coins from this site included only four Hellenistic coins but 110 Nabataean coins. The largest and earliest group of closely datable Nabataean coins (n=35) derived from Aretas IV, followed by ten of Malichus II and eleven of Rabbel II.\(^{103}\) Thus, the numismatic evidence strongly suggests the foundation of this settlement around the turn of the first century AD.\(^{104}\)

An epigraphic survey from the same region reported that the two earliest inscriptions also dated to the first century AD and included dedications to Dushara (head of the Nabataean pantheon) upon construction of a theater and a temple. While the context of these texts remains obscure, they do suggest the growth of Nabataean wealth and power in the Hauran in the first century AD.\(^{105}\)

Additional evidence for prosperity in the Hauran during this period comes from Bostra. At some point in the late first century AD the city expanded. This new quarter contained a palace and temple and dates to the reign of Rabbel II (AD 70-106) based on Nabataean fine ware

\(^{103}\) Another 54 coins were broadly dated to the Nabataean period but could be assigned to a particular king.
\(^{104}\) Auge, C. “Les monnaies de fouilles de Si’,” 1985: 204-205.
pottery associated with the monumental structures. However, the project’s ceramologists arrived at another important conclusion about the Nabataean pottery at Bostra. They observed a long tradition of indigenous ceramics from the region, the production of which continued well into the Nabataean period. Notably, Nabataean ceramics were generally associated with Nabataean architecture at the site. This implies an indigenous non-Nabataean population who came into contact with a growing immigrant Nabataean population in the first century but maintained cultural continuity in their ceramic tradition. Some of the new Nabataean settlers were presumably elites, given that the Nabataean artifacts were associated with monumental structures during the late first century AD expansion of the city. Perhaps the indigenous population of Bostra rejected Nabataean cultural influence since they continued to hold on to their local ceramic traditions into the first century AD. Nevertheless, this site suggests the presence of an elite Nabataean population in the first century AD. Unlike many settlements in other areas of the kingdom, especially those closer to the Nabataean heartland which were founded or expanded during this period, Bostra probably retained an indigenous population which was likely not Nabataean, though they came under Nabataean rule. In fact Bostra may have even flourished as the Nabataean capital, superseding Petra under Rabbel II.

Looking at the region as a whole, it is unfortunate that the evidence from the Hauran does not lend itself to quantitative comparison with the Hesban and Kerak Plateau surveys. Nevertheless, it is clear that the Hauran underwent significant expansion of settlement during the first centuries BC/AD. Surveys of Hesban and the Kerak Plateau, the former just outside

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108 Bowersock, G.W., Roman Arabia, 73.
Nabataea, the latter inside its borders, also suggest expansion in the first centuries BC and AD, but at different rates. The rate of settlement expansion in the Kerak Plateau around the turn of the first century AD was more than double that of the Hesban region, perhaps suggesting that the Nabataean authorities were more effective at encouraging rural settlement of their landscape. Since surveys of these regions represent analyses compiled before advent of more nuanced ceramic typologies, particularly of Nabataean Painted Fine Ware, a thorough reexamination of this survey material may yield more detailed understanding of the region, possibly shedding further light on rates of change through the first centuries BC/AD. Furthermore, it would be especially significant to examine the rates of foundation between rural areas and settlements such as Bostra, which appeared to expand the most in the late first century AD. Perhaps rural intensification needed to occur first to support an expanded urban population. It is likely that the Nabataean kings exploited the hitherto underused fertile soil of the Hauran. Finally, the larger pre-existing settlements of the far north, such as Bostra, contained significant non-Nabataean populations; these sites flourished and expanded under Nabataean rule around the BC/AD transition.

The Nabataeans may have felt it unnecessary to establish their own urban centers in the north because of the existence of such sites such as Bostra. Nevertheless, rural settlement of Nabataea seems to have been relatively limited until the first centuries BC/AD when it is clear that a tremendous amount of intensification occurred. After establishing a stronger rural economy in their kingdom, Nabataean elites seemed to transplant elements of their culture onto existing non-Nabataean urban centers— as at Bostra. One wonders about cities such as Rabba (later Areopolis) and Kerak (later Characmoba) east of the Dead Sea, but there is simply no
available evidence from such sites. By contrast, in other areas of the kingdom, such as the Negev, the Nabataeans created entirely new and ultimately substantial villages in the first century AD.
Chapter 10

Historical Conclusion

Despite the fact that relatively little is known about the Nabataeans from documentary sources—especially compared with the more prominent Jews in Palestine in this era—archaeology can shed light into the dark corridors of their history. Various surveys and excavations from across the Nabataean realm suggest a clear pattern of transformation beginning in the late first century BC. This trend continued through the reign of Aretas IV into the first century AD and transformed the nature of the connection between the Mediterranean world and Arabia.

Once a loose band of nomadic tribes linking the Red Sea and the Roman world, by the first century BC the Nabataeans inhabited a landscape much more similar to the rest of the contemporary Levant, dotted with hundreds of villages based on agro-pastoralism interspersed with some sizeable, if still relatively modest, urban centers. Scholars such as G. W. Bowersock had long recognized the era of Aretas IV as the “flourishing” of Nabataea, but the extent of explosive growth in Nabataean rural settlement beginning in the late first century BC was not really understood until the work of Tali Erikson-Gini in the Negev. Using her analysis as a model, this thesis has traced similar patterns of intensification in archaeological evidence from throughout the Nabataean kingdom to show that dramatic change was already underway somewhat prior to the reign of Aretas IV (9 BC- AD 40) and should be credited to Malichus II (62-30 BC) and especially Obodas II (30-9 BC).

From the old nomadic tribal structure a new Nabataea came forth as a much more sedentary and agricultural society, ruled by kings minting coinage and overseeing a bureaucratic
administration and a professional standing army. The transformed Nabataea saw the foundation of more urban settlements, such as the new port at Aila which functioned as an important hub for both sea and land trade. Nabataea witnessed a veritable explosion of rural settlement in most parts of the kingdom, even in more peripheral regions such as the Negev. The Nabataeans more intensively exploited a wider range of natural resources throughout their kingdom, from the copper mines in Wadi Faynan to the asphalt of the Dead Sea. They began to develop new industries, such as fine ware ceramics and perfume production in Petra. Long reliant on international luxury trade, evidence from the newly founded port of Aila and caravan stations such as Meda’in Salih strongly suggest that the Nabataeans maintained significant levels of international trade despite new competition from Egyptian ports on the Red Sea. In other words, Nabataea began to appear much like other autonomous Hellenistic polities serving as Roman client states in the Levant. This pattern of evidence for expansion and intensification is characteristic of the Nabataean heartland and implies that, while Nabataean elites spread throughout the kingdom during this period of transition, non-elite Nabataeans also settled in large numbers in the heartland but perhaps less so in more peripheral regions such as the Hauran in the far north. Further, the prosperity involved in the remaking of Nabataea in the first centuries BC and AD seems to have extended, at least in some part, to lower class people who could apparently afford Nabataean fine ware pottery imported from Petra.

What can explain this radical transformation? In order to understand the changes within the Nabataean kingdom around the first century, it is necessary to recall the historical context. The establishment of the Pax Romana inaugurated an extended era of peace, security, and prosperity in the Mediterranean world. This likely increased demand for luxury products from
the east, such as frankincense from South Arabia. The annexation of Egypt provided the Romans with the opportunity to profit from this traffic. After a failed attempt to seize direct control of the sources of frankincense, Augustus decided to establish or revitalize ports on the Egyptian Red Sea ports to circumvent the overland caravan trade through the Arabian Peninsula, posing a direct threat to Nabataean economic interests.

The Nabataean response to this threat was multi-faceted. The overland caravan traffic was not abandoned but the Nabataeans quickly founded their own port, Aila (and possibly Leuke Kome, if not already in existence) on the Arabian side of the Red Sea. The very fact of the Pax Romana itself likely increased overall demand for such luxury imports at such a scale to incur the wrath of contemporary commentators such as the Elder Pliny (Natural History 12.41). The creation of entirely new industries, such as perfume, or intensification of existing ones, such as fine ware ceramics, copper, salt, and bitumen, likely further spurred economic growth. But perhaps most important was the explosive spread of rural settlement throughout Nabataea. It is unclear to what degree this represented the sedentarization of nomads versus natural population growth. The seemingly rapid appearance of hundreds of villages throughout the kingdom perhaps suggests that the former was at least initially the more important factor. All this must have resulted in significantly increased revenues for the Nabataean kings to support the increased costs of their professional army, expanding royal bureaucracy, and the impressive program of monumental building so visible today at Petra and elsewhere across the kingdom. In short, the policies that transformed Nabataea, motivated largely by the threat posed by Rome, the new intrusive imperial power in the region, were successful and insured the survival and prosperity of the Nabataean state for over a century.
In fact, the very success of these Nabataean policies, which continued for over a century, might well have also spelled the eventual doom of the autonomous kingdom, since this economic transformation eventually made the kingdom a tempting target for eventual Roman annexation as their new province of Arabia in AD 106.
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